CITY OF OCEANSIDE
OFFICE OF THE CITY ATTORNEY
JOHN P. MULLEN, CITY ATTORNEY (SBN 160510)_
BARBARA HAMILTON,
ASSISTANT CITY ATTORNEY (SBN 163806)
300 North Coast Highway
Oceanside, California 92054
Telephone: (760) 435-3981
Facsimile: (760) 439-3877
Email: jmullen@ci.oceanside.ca.us
bhamilton@ci.oceanside.ca.us

PATRICIA J. CHEN (SBN 197719)
MILES • CHEN LAW GROUP
9911 Irvine Center Drive, Suite 150
Irvine, California 92618
Telephone: (949) 788-1425
Facsimile: (949) 788-1991
Email: pchen@miles-chen.com

Attorneys for City of Oceanside

BEFORE THE STATE WATER QUALITY CONTROL BOARD

In the matter of

Appeal of San Diego Regional Water Quality Control Board Order No. R9-2011-0016 (NPDES No. CA0107433)

SWRCB File _____

PETITION FOR REVIEW; MEMORANDUM OF POINT AND AUTHORITIES IN SUPPORT THEREOF; REQUEST TO HOLD PETITION IN ABEYANCE
[Water Code § 13320]

Pursuant to California Water Code Section 13320 and Title 23, Section 2050, *et seq.* of the California Code of Regulations, Petitioner City of Oceanside ("Petitioner" or "City") hereby petition for review of the San Diego Regional Water Quality Control Board's ("Regional Board") adoption of Order No. R9-2011-0016 (NPDES No. CA0107433) (the "Permit"). A copy of the Permit is attached hereto as Exhibit A. A statement of points and authorities in support of this petition is concurrently filed herewith, as required by Title 23, California Code of Regulations, Section 2050(a).[1]

Pursuant to Title 23, California Code of Regulations 2050.5(d), Petitioner requests that the State Board hold the Petition in abeyance while Petitioner assesses whether it is able to comply with the effluent limitations contained in the permit pursuant to Time Schedule Order No. R9-2011-0017 ("TSO"). A copy of the TSO is attached hereto as Exhibit B.

Petitioner further requests the opportunity to file supplemental points and authorities in support of the Petition for Review once the administrative record becomes available. Petitioner also reserves the right to submit additional arguments and evidence responsive to the Regional Board's or other interested parties' responses to the Petition for Review, to be filed in accordance with Title 23, California Code of Regulations, Section 2050.5.

Although the City is attempting to comply with the effluent limitations applicable to the Mission Bay Desalting Facility ("MBDF") through the TSO, it is not clear at this time whether the City will in fact be able to meet the standards without significant modifications to the MBDF at a substantial cost. As such, the City has filed this Petition to protect the interest of its residents and ratepayers to the extent costly modifications are required to meet the standards.

I. NAME, ADDRESS, TELEPHONE NUMBER AND E-MAIL ADDRESS OF PETITIONER

Petitioner owns and holds the NPDES Permit for the Oceanside Ocean Outfall ("OOO"). Petitioner further owns and operates three facilities which discharge to the OOO, the San Luis Rey

[1] The State Water Resources Control Board's regulations require submission of a statement of points and authorities in support of a petition (Cal.Code Regs. Tit. 23, § 2050(a)(7)), and this document is intended to serve as a preliminary memorandum as it is not possible to prepare a complete statement of points and authorities in the absence of the complete administrative record, which is not yet available.

Water Reclamation Facility, the La Salina Wastewater Treatment Plant, and the MBDF.

Petitioner's contact information is as follows:

City of Oceanside
c/o Cari Dale, Director Water Utilities Department
300 North Coast Hwy
Oceanside, CA 92054
Tel: 760.435.5827
Email: CDale@ci.oceanside.ca.us

In addition, all materials in connection with the petition, and the administrative record should be provided to Oceanside's counsel:

John P. Mullen
City Attorney
City of Oceanside
300 North Coast Hwy
Oceanside, CA 92054
Tel: 760.435. 3981
Email: jmullen@ci.oceanside.ca.us

Patricia J. Chen
Miles • Chen Law Group, P.C.
9911 Irvine Center Drive, Suite 150
Irvine, California 92618
Tel: (949) 788-1425
Email: pchen@miles-chen.com

II. THE SPECIFIC ACTION OF THE REGIONAL BOARD THAT THE STATE WATER RESOURCES CONTROL BOARD IS REQUESTED TO REVIEW

Petitioner requests that the State Water Resources Control Board ("State Board") review the Regional Board's adoption of Order No. R9-2011-0016 (NPDES No. CA0107433) with respect to the standards applicable to the MBDF. The Regional Board's actions are described in more detail in the accompanying Points and Authorities in Support of Petition for Review.

III. THE DATE ON WHICH THE REGIONAL BOARD ACTED

The Regional Board adopted the Permit on January 12, 2011. *See* Exhibit A at 2.

IV. THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED IN THE PETITION WERE RAISED BEFORE THE REGIONAL BOARD

The substantive issues and objections raised in the petition were raised with the Regional Board staff in meetings and correspondence, presented to the Regional Board in written comments submitted by Petitioner on or about December 2, 2010, as well as comments submitted by San Diego County Water Authority on or about December 3, 2010 and comments submitted by South Coast Water District on or about January 11, 2011, and in testimony before the Regional Board on January 12, 2011. The details of the substantive issues raised before the Regional Board are described in more detail in the accompanying Points and Authorities in Support of Petition for Review

V. THE PETITION HAS BEEN SENT TO THE REGIONAL BOARD

Pursuant to section 2050(a)(8) of Title 23, California Code of Regulations, a true and correct copy of this Petition was emailed (without the Attachments) and mailed by Overnight Mail on February 11, 2011, to the Regional Board at the following address:

Mr. David W. Gibson
Executive Officer
Regional Water Quality Control Board - San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4353
Email: dgibson@waterboards.ca.gov

VI. A FULL AND COMPLETE STATEMENT OF THE REASONS THE REGIONAL BOARD'S ADOPTION OF THE PERMIT WAS INAPPROPRIATE OR IMPROPER.

A full and complete statement of the reasons the Regional Board's adoption of the Permit was inappropriate or improper is described in detail in the accompanying Points and Authorities in Support of Petition for Review.

VII. THE MANNER IN WHICH THE PETITIONER IS AGGRIEVED.

Petitioner is aggrieved by the adoption of the Permit with respect to the effluent limitations imposed on the MBDF. In addition, Petitioner is aggrieved by the REC-1 Ocean Plan standards for receiving waters imposed by the Permit. The adoption of the Permit was erroneous, arbitrary, capricious, and unsupported by law, and therefore, should not be sustained. A full and complete statement as to the manner in which Petitioner has been aggrieved is contained in the accompanying

Points and Authorities in Support of Petition for Review.

VIII. THE SPECIFIC ACTION BY THE STATE BOARD WHICH PETITIONER REQUESTS

Petitioner seeks an Order by the State Board that will revise the Permit or remand the Permit to the Regional Board with directions for revisions as follows:

1. Delete the effluent limitations for the MBDF; and
2. Revise the Permit to either (1) reinstate the prior standards which allowed compliance with the Ocean Plan Table A standards to be determined at the OOO, or (2) develop and implement more appropriate standards for the MBDF using the State Board or Regional Board's best professional judgment.
3. Revise the Permit to require compliance with bacterial characteristics of water-contact standards to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds.

Date: February 11, 2011

Respectfully submitted,

MILES • CHEN LAW GROUP, P.C.

By: _____
Patricia J. Chen

MEMORANDUM OF POINTS AND AUTHORITIES

IN SUPPORT OF PETITION

I. INTRODUCTION

This appeal raises substantial issues of law and policy that the State Water Resources Control Board ("State Board") is uniquely equipped to handle, particularly in light of the current dire water shortages in Southern California, the need to find long term and sustainable sources of water for the future, and the State Board's policies of recycling and reclamation. In adopting of Order No. R9-2011-0016 (NPDES No. CA0107433) (the "Permit" or the "2011 NPDES Permit"), the Regional Board not only acted inconsistent with the laws and policies of this state, it has potentially left the Petitioner handicapped with respect its operation of the Mission Basin Desalting Facility ("MBDF"). The City of Oceanside ("Petitioner" or the "City") is the second owner and operator of a potable water treatment facility to raise issues concerning the San Diego Regional Water Quality Control Board's (the "Regional Board") application of Ocean Plan Table A effluent limitations to these types of facilities. South Coast Water District ("SCWD") and South Orange County Wastewater Authority ("SOCWA") currently have a petition for review (SWRCB File No. A-2072) pending before the State Board which raises the very same issues.

Petitioner owns and operates the MBDF, a groundwater treatment facility which extracts brackish groundwater for potable use. The City constructed the MBDF in 1993 at a cost of $20 million. The MBDF produces up to 6.37 million gallons per day ("MGD") of potable water and accounts for up to 19 percent of the supply of potable water delivered by the City. If the City is required to install additional (and in the City's view, unnecessary) treatment, the economic feasibility of producing potable water at the MBDF may be compromised.[2]

The MBDF was designed to discharge the brine effluent to the Oceanside Ocean Outfall ("OOO"), and the Regional Board approved this discharge. *See* Water Permit No. 04-14-94P-009 dated October 7, 1994 at 18, attached hereto as Exhibit C. During its 17 years of operation, the

[2] Alternatively, like SCWD, the City may be forced to route its brine discharge from the MBDF to the sewer San Luis Rey Water Reclamation Facility which may compromise the plant's ability to recycle water. This environmental impact would far exceed the negligible impact of the brine at the outfall.

MBDF has never caused the OOO to exceed any effluent limitation attributable to the MBDF.

On or about January 12, 2011, the Regional Board adopted the Permit which for the first time requires the MBDF to comply with California Ocean Plan Table A effluent limitations at the facility rather than at the OOO. No change in the relevant statutes or regulations had occurred to justify this change to the Permit, nor was there any allegation of water quality impact at the outfall resulting from the MBDF. Indeed, this departure from the prior permit requirements resulted from the Regional Board's interpretation of existing regulation. *See* Memorandum dated February 3, 2011 from David W. Gibson to Tim Howard at 1, attached hereto as Exhibit D. Regional Board staff was also persuaded by comments from the United States Environmental Protection Agency ("EPA") on other tentative permit actions which purportedly confirm that technology-based effluent limitations ("TBELs"), including Ocean Plan Table A TBELs apply at the facility prior to any mixing with other effluents or dilution with receiving waters. *See* Memorandum dated December 10, 2009 from Brian D. Kelley to David T. Barker (the "Kelley Memo") at 2-3, attached hereto as Exhibit E.

Petitioner submits that the Ocean Plan Table A standards were never intended to apply to directly to facilities like the MBDF, which is neither a publicly owned treatment works ("POTW") nor an industrial discharger. Indeed, even the Regional Board members expressed concern about rote application of the Ocean Plan standards to facilities like the MBDF rather than at the outfall. They went as far as to direct Regional Board staff to write a letter to the State Board "asking for consideration of alternative ways to work with our Committees to assure water quality which is our ultimate goal, but which is not bound by rules which regulate the quality of water in the pipe before it gets to the receiving water." Transcript of January 12, 2011 hearing at 70, attached hereto as Exhibit F. Regional Board staff subsequently requested clarification from the State Board on "how waste byproducts from desalination facilities are classified." *See* Exhibit D at 2.

Prior to the 2011 NPDES Permit, for 17 years, the Regional Board had concluded that it was unnecessary to place effluent limitations for turbidity, suspended solids, and settleable solids on the brine discharge from reverse osmosis ("RO") treatment of groundwater for the MBDF, presumably because there was no adverse impact on human health or the environment or cause or contribution

to a violation of any applicable water quality objective. This was an exercise of the Regional Board's best profession judgment ("BPJ"). Yet, without reasoned evaluation of the technical basis for a change to that judgment, the Regional Board abandoned that position in 2010. That change placed the Regional Board in conflict with other important policy determinations recommending case-by-case consideration of the appropriate use of wastewater outfalls for brine discharge.

Indeed, in 2003, the Department of Water Resources Water Desalination Task Force (the "Task Force") specifically recommended, "[w]here feasible and appropriate, utilize wastewater outfalls for blending/discharging desalination brine/concentrate."[3] Significantly, the Task Force's members included representatives from the Department of Water Resources, State Board, California Coastal Commission, Department of Health Services, the California Resources Agency, and the California Environmental Protection Agency, environmental groups including Surfrider and Monterey Bay National Marine Sanctuary, and local and regional water agencies. The Task Force also specifically recognized that:

> "The overarching recommendation considered critical to the advancement of desalination is that desalination projects should be evaluated on a case-by-case basis. **Because each facility is essentially unique, given local water supply and reliability needs, site-specific environmental conditions, project objectives, and proposed technology, case-by-case analyses are essential."**

Id. at p.7 (emphasis added).

Apparently, the Regional Board was either unaware of or ignored the Task Force recommendations. In the present case, Petitioner has effectively, in line with the Task Force's (which included the State Board) recommendation, demonstrated that it is both feasible and appropriate to utilize the outfall for the blending and discharging of desalination brine concentrate from the MBDF since it has historically done so without impact to the outfall's compliance with the Ocean Plan for the last 17 years.

In sum, even though the Regional Board clearly recognized the strong policies adopted by the State Board supporting development of local water sources and the fact that there was no

[3] *See* Dept. of Water Resources, *Water Desalination – Findings and Recommendations* (Oct. 2003) ("Task Force Recommendations"), p. 8, at http://www.water.ca.gov/desalination/pud_pdf/Findings-Recommendations.pdf.

practical reason to apply the Ocean Plan standards at the MBDF, it refused to use its BPJ to adopt a more appropriate standard for the MBDF. As such, Petitioner respectfully requests that the State Board issue an order to revise the Permit or remand the Permit to the Regional Board with directions to reinstate the prior standards which allowed for compliance to be determined at the OOO or to use the State Board or Regional Boards BPJ to develop and implement more appropriate standards for the MBDF.

Petitioner further requests that the State Board review the Regional Board's application of REC-1 bacterial standards to receiving waters. Like the requirement of sampling at the MBDF, for the first time, the Regional Board is requiring that compliance with bacterial characteristics of water-contact standards apply throughout **all ocean waters in the San Diego Region**. Because the Regional Board has not designated its REC-1 areas, it believes the default standard is to apply a REC-1 designation to all ocean waters. This is not what the Ocean Plan requires and certainly could not have been what the State Board intended in adopting the Ocean Plan. As such, the State Board should direct the Regional Board to revise the Permit to require compliance with bacterial characteristics of water-contact standards only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds, until the Regional Board designates its REC-1 areas.

II. BACKGROUND

A. City of Oceanside

The City is a municipal corporation which owns and operates the OOO, the San Luis Rey Water Reclamation Facility ("SLRWRF"), the La Salina Wastewater Treatment Plant ("LSWTP") and the MBDF. The SLRWFR and the LSWTP are both publicly owned treatment works ("POTWs") and as stated above, the MBDF is a brackish groundwater treatment facility which produces potable water. The City provides municipal wastewater treatment services and delivers potable water to a population of approximately 180,000.

B. The OOO

The City owns and operates the OOO, which receives treated effluent from its facilities including the SLRWRF, LSWTP and the MBDF. The OOO receives additional treated effluent

from Fallbrook Public Utility District, the US Marine Corps Base Camp Pendleton ("Camp Pendleton") and Genentech (formerly Biogen IDEC Pharmaceuticals Corporation). The total permitted capacity at the OOO is 22.6 MGD. Secondary treated wastewater from the SLRWRF discharges to a 34,000 foot long, 24-26 inch diameter land outfall. Brine discharges from the MBDF and Genenetech commingle with the discharge in the land outfall via a 10-inch diameter pipe, prior to the LSWTP. At the LSWTP, discharges from the SLRWRF, MBDF, and Genentech commingle with the discharge from the LSWTP and the discharge of treated wastewater effluent from the Fallbrook Public Utility District POTW. The flow then commingles with the discharge of treated wastewater from Camp Pendleton at the near-shore end of the OOO.

The OOO is governed by the requirements of the Ocean Plan for protection of the beneficial uses of the State ocean waters.

C. <u>The MBDF</u>

The MBDF was constructed in 1993 at a cost of $20 million and it produces up to 6.37 MGD of potable water which represents up to 19% of the water supply for the City. The remaining demand for potable water is satisfied by the purchase of water from the San Diego County Water Authority. The MBDF pumps groundwater from the Mission hydrologic subarea. The groundwater is treated using cartridge filtration, green sand filtration to remove iron and manganese, reverse osmosis, and granular activated carbon. The cartridge filters are removed and hauled to a landfill. The green sand filters are backwashed using potable water and this backwash water is discharged to the sanitary sewer system. The two reverse osmosis trains discharge up to 2.0 MGD of brine to the OOO.

Prior to the 2011 NPDES Permit, waste brines generated by MBDF were discharged directly to the OOO and monitored for compliance with effluent limitations at M-003 after commingling with other dischargers. *See* 2005 NPDES Permit at E-3 attached hereto as Exhibit G. In other words, compliance with effluent limitations was determined at the OOO, not at the MBDF. The 2011 NPDES Permit however, requires that the City maintain compliance with Ocean Plan Table A effluent limitations at the MBDF. *See* Exhibit A at 14 and F-30.

III. THE REGIONAL BOARD IMPROPERLY IMPOSED OCEAN PLAN TABLE A STANDARDS AT THE MBDF

A. The MBDF Should Not Have Been Treated as a POTW or an Industrial Discharger

According to the Regional Board, NPDES permits must include technology-based effluent limitations ("TBELs") as well as any more stringent limits necessary to meet water quality standards. There are two general approaches for developing TBELs: (1) using national effluent limitations guidelines (ELGs) promulgated by USEPA and (2) using Best Professional Judgment (BPJ) on a case-by-case basis (in the absence of ELGs). Because EPA has not promulgated ELGs for brine discharge, presumably in exercising its BPJ, the Regional Board concluded that the Ocean Plan Table A TBELs apply as the default standard for industrial discharger. See Exhibit E at 2. In applying the Ocean Plan Table A standards to the MBDF, Petitioner submits that the Regional Board erroneously treats the MBDF as a POTW or an industrial discharger.

Table A of the Ocean Plan are the default standards that "apply only to publicly owned treatment works and industrial discharges for which effluent limitations guidelines have not been established pursuant to sections 301, 302, 304, or 306 of the federal clean water act."[4] Ocean Plan, at 1 (emphasis added). The MBDF, however, is neither a POTW nor an industrial discharger.

Unlike a POTW, the MBDF does not treat municipal sewage, storm water runoff or any waste water, whatsoever. Nor is it a method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and sanitary sewer systems. It simply extracts local groundwater, normally unusable due to its brackish nature, and filters and treats the water for potable use.

The MBDF likewise does not qualify as an industrial discharger. The California Porter-Cologne Water Quality Control Act does not provide a definition for an "industrial discharger," however, the regulation implementing NPDES fees provides that:

[4] As of the date of this Petition, such guidelines have still not been set.

NPDES permitted industrial discharger(s) means those industries identified in the Standard Industrial Classification Manual, Bureau of the Budget, 1967, as amended and supplemented, under the category "Division D -Manufacturing" and such other classes of significant waste producers as, by regulation, the U.S. EPA Administrator deems appropriate. (33 U.S.C. Sec. 1362).

13 C.C.R. § 2200, fn 8. This regulation refers to the Federal Clean Water Act ("CWA") which uses the term "industrial users":

(18) The term "industrial user" means those industries identified in the Standard Industrial Classification Manual, Bureau of the Budget, 1967, as amended and supplemented, under the category of "Division D -Manufacturing" and such other classes of significant waste producers as, by regulation, the Administrator deems appropriate.

33 U.S.C. §1362.

Division D – Manufacturing" includes the following groups:[5]

Major Group 20: Food And Kindred Products
Major Group 21: Tobacco Products
Major Group 22: Textile Mill Products
Major Group 23: Apparel And Other Finished Products Made From Fabrics And Similar Materials
Major Group 24: Lumber And Wood Products, Except Furniture
Major Group 25: Furniture And Fixtures
Major Group 26: Paper And Allied Products
Major Group 27: Printing, Publishing, And Allied Industries
Major Group 28: Chemicals And Allied Products
Major Group 29: Petroleum Refining And Related Industries
Major Group 30: Rubber And Miscellaneous Plastics Products
Major Group 31: Leather And Leather Products
Major Group 32: Stone, Clay, Glass, And Concrete Products
Major Group 33: Primary Metal Industries
Major Group 34: Fabricated Metal Products, Except Machinery And Transportation Equipment
Major Group 35: Industrial And Commercial Machinery And Computer Equipment
Major Group 36: Electronic And Other Electrical Equipment And Components, Except Computer Equipment
Major Group 37: Transportation Equipment
Major Group 38: Measuring, Analyzing, And Controlling Instruments; Photographic, Medical And Optical Goods; Watches And Clocks
Major Group 39: Miscellaneous Manufacturing Industries

[5] *See* http://www.osha.gov/pls/imis/sic_manual.html.

None of these groups under Division D apply to the MBDF. The applicable SIC code for the MBDF brine discharge is 4941. This category is "Water Supply" which is under **Division E**: Transportation, Communications, Electric, Gas, And Sanitary Services, Major Group 49: Electric, Gas, And Sanitary Services.[6]

The CWA also refers to "industrial discharges" in the context of municipal and industrial stormwater discharge and requires that the "[p]ermits for discharges associated with industrial activity shall meet all applicable provisions of this section and section 1311 of this title." 33 U.S.C. § 1342(p)(3)(a). The CWA regulations defines an "industrial discharger," as "any source of nondomestic pollutants regulated under section 307(b) of the [CWA] which discharges into a POTW." 40 C.F.R. § 125.58.

The MBDF does not fall within any of the industries identified by the CWA or generate discharge as a result of any "industrial activity." Furthermore, as discussed above, the MBDF discharges its brine effluent to the OOO, and thus, it does not qualify as a "source of nondomestic pollutants . . . which discharges into a POTW." See 40 C.F.R. § 125.58. The MBDF does not add or generate any waste; rather, it simply extracts brackish and otherwise unusable groundwater and filters and treats the water for potable use. The MBDF's brine effluent is merely a concentrated form of the natural constituents in the groundwater that is removed to obtain potable water from an existing resource.

Petitioner does not dispute the fact that some facilities treating contaminated and other groundwater may have historically been considered and/or classified as industrial dischargers. **Petitioner argues that this default classification is simply wrong in this case.**[7]

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[6] *See* http://www.osha.gov/pls/imis/sic_manual.display?id=953&tab=description.

[7] Moreover, the Regional Board's insistence on treating the MBDF brine discharge as an industrial discharge would have implications reaching far beyond this MBDF. According to the United States Department of the Interior, Bureau of Reclamation, there are approximately 37 brackish groundwater treatment/cleanup facilities in Southern California, most of which are ≤ 10 MGD. The current brackish groundwater treatment capacity in the region is about 90 MGD; roughly equivalent to meeting the potable water needs of 1 million people (the region has ~17.5 million people). By 2025 the Bureau of Reclamation projects that there will be 255 MGD of brackish groundwater production capacity in Southern California, which will roughly meet 7.5% of potable water needs. *See* U.S. Department of the Interior Bureau of Reclamation, Reclamation: Managing Water in the West (Oct. 2009), Executive Summary at http://www.usbr.gov/lc/socal/reports/brineconcentrate/1ExecSumm.pdf.

Indeed, the only support the Regional Board can provide for its position is the Kelley Memo wherein Mr. Kelley cites to a **draft** NPDES Permit Development Guide (made available by the State Board in August 2005) which classifies water treatment facilities as industrial facilities. *See* Exhibit E at 2. A draft guidance document, which was never approved or adopted by the State Board, is not sufficient evidence to support the Regional Board's decision to treat the MBDF as an industrial discharger. [8]

The law does not define potable water treatment facilities like the MBDF as industrial dischargers and any such interpretation to that effect is inconsistent with state and federal statutes. Alternatively, to the extent the statutory language is deemed ambiguous, Petitioner submits that an interpretation that classifies potable water treatment facilities as industrial dischargers is repugnant to public policy. *See Bollinger v. San Diego Civil Serv. Com*, 71 Cal. App. 4th 568, 572 (1999) ("When the language is susceptible of more than one reasonable interpretation, however, we look to a variety of extrinsic aids, including the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part.") Given the current water shortage in California and the need for reliable local water sources, the fact that the MBDF discharges brine which is comprised of the natural constituents in the brackish groundwater, and the fact that the MBDF has discharged brine to the outfall for 17 years without impact to the outfall, the Regional Board's treatment of the MBDF as an industrial discharger and application by default of the Ocean Plan standards simply does not make sense and should not be sustained.

In sum, there is simply no indication that potable water treatment facilities like the MBDF which are relatively uncommon types of facilities, were intended to, or should, fall within the definition of an "industrial discharger" subjected to the Ocean Plan. Thus, application of the Ocean Plan standards to the MBDF by the Regional Board is improper, not supported by the law, arbitrary and capricious.

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[8] Petitioner recognizes that the State Board does not strictly follow the Rules of Evidence, however, the Regional Board must still establish that the evidence it relied on was sufficient to support its decision. *See Topanga Association for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515 ("the agency which renders the challenged decision must set forth findings to bridge the analytic gap between the raw evidence and ultimate decision or order.")

B. EPA has Not Confirmed that TBELs Apply at Potable Water Treatment Facilities Prior to Mixing with Other Effluents or Dilution with Receiving Water

The Regional Board has asserted that

> "Based on 40CFR125.3, TBELs including Ocean Plan Table A TBELs, secondary treatment TBELs, and ELGs apply at the facility prior to any mixing with other effluents or dilution with receiving water. The USEPA has repeatedly confirmed this approach in written comments over the years on various Regional Board tentative NPDES permit actions."

Exhibit E at 2-3. While EPA has opined that secondary treatment standards must be met after the treatment process for POTWs, it has not taken a position with respect to potable water treatment facilities like the MBDF. *See* Letter dated January 11, 2011 from Michael Dunbar to David Gibson re: Comments re: Tentative Order N. R9-2010-0120, NPDES CA0107433, attached hereto as Exhibit H; *see also* SOCWA and SCWD Petition for Review (SWRCB File No. A-2072) and Supplemental Memorandum of Point and Authorities in Support of Petition for Review. Indeed, the Regional Board does not (and cannot) specifically cite to any comment by EPA indicating the requirement to implement TBELs at potable water treatment facilities. The change in monitoring location was a Regional Board staff decision made after staff had applied the same arbitrary standard to the groundwater recovery facility ("GRF") owned and operated by SCWD. As mentioned above, SCWD and SOCWA have also filed a petition for review on this very issue and the matter is currently pending before the State Board.

This application of unsubstantiated EPA policy to the MBDF is not supported by law and should not be sustained.

C. The Regional Board Failed to Demonstrate How Applying the Ocean Plan Standards at the MBDF is Protective of Beneficial Use

Water quality standards, as defined in 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 anti-degradation policy. *See* 40 C.F.R. § 131.6. According to Regional Board, NPDES permits must include technology-based effluent limitations ("TBELs") to meet water quality

standards, i.e., "to protect the beneficial uses of the water." *See* Exhibit F at 56. During the hearing on the Permit, Regional Board Member Loveland asked Regional Board staff to explain how applying the Ocean Plan TBEL standard at the MBDF protects the beneficial uses and water quality:

> MR. LOVELAND: And what is your goal, Mr. Kelly?
> MR. KELLY: To protect the beneficial uses and the water quality.
> MR. LOVELAND: At the end of pipe, right? Or the beneficial use in the pipe?
> MR. KELLY: No. No. It's just the end.
> MR. LOVELAND: So your concern is at the end of the pipe. So your argument does not make sense to me.
> MR. KELLY: Well, it could be.
> MR. LOVELAND: I guess, Mr. Chair, part of our responsibility, I think, is to highlight these issues that don't make sense and see if there's a better way. We're not just supposed to adhere to rules to make the permitee spend money.
>
> Our goal is to protect the water quality. And if there are alternative ways to do that, we, at the very least, are not to be suggesting to our regulators that their rules don't make sense.
>
> And we ought to be given some leeway just to blindly go on and say, do it because we've always done it because somebody in Timbuktu said we have to, and there's no benefit. Then why are we continuing to solute and do it without at least saying, hey, can't we do it a different way?
>
> You know, we need future water supplies. We need cost effective ways of treating discharges. We need to work together. And to just meld rules so that the bottom line cost is greater because we're too timid to say this doesn't make sense, I think, is a disservice to our constituents.

Exhibit F at 56-58. The exchange between Mr. Kelley and Mr. Loveland demonstrates the permit writer's failure to analyze how application of the Ocean Plan TBELs at the facility would result in any benefit to water quality. Given that the City has discharged to the OOO without impacting its compliance for 17 years is a good indication that additional TBELs were not necessary to protect the beneficial use of the water. Instead, as Mr. Loveland points out, the City may be required to spend an exorbitant amount to modify its plant with no resulting benefit. In light of the clear benefits of producing potable water from a local water supply, rote application of the Ocean Plan TBEL standards without any resulting benefit simply cannot be sustained.

IV. OTHER NPDES PERMITS ALLOW BRINE DISCHARGES TO BE BLENDED AT OUTFALLS

The arbitrariness of the Regional Board's policy requiring Petitioner to sample at the MBDF is further demonstrated by the fact that it has not been consistently executed by the other regional boards in the state. The Central Coast RWQCB, in particular, has made it very clear that its policy is to promote the benefits of recycled water production by specifically diverting brines directly to POTW outfalls where commingled discharge is monitored for compliance with the Ocean Plan.

The Monterey Regional Water Pollution Control Agency ("MRWPCA") discharges up to 81.2 MGD of secondary treated wastewater and brine waste from its Regional Treatment Plant ("RTP") to the Monterey Bay via the a diffuser approximately 11,260 feet offshore. This discharge is performed under NPDES permit CA004851 (Order R3-2008-0008) issued by the Central Coast RWQCB. According to the NPDES documents, regional, commercial, and industrial wastewater is conveyed to the RTP, which is treated and comprises the majority of the secondary treated wastewater. The MRWPCA also accepts 30,000 to 50,000 gallons per day of brine wastes that include softener regenerant waste, groundwater nitrate removal brine and reverse osmosis brines. This brine is ultimately discharged to the diffuser or blended with secondary treated wastewater from the RTP before being discharged to the diffuser. As such, like the MBDF, the brine wastes are discharged to the outfall.

Moreover, it is not unprecedented for a groundwater recovery facility to be held to a different standard from POTWs and other industrial discharges. For example, Lower Sweetwater River Basin Groundwater Demineralization Plant (NPDES Permit CA0108952, Order No. R9-2004-0111) discharges brine concentrate from a reverse osmosis system and the discharge is considered "innocuous nonmunicipal wastewaters." Clearly, flexibility exists to address situations like this. The brine discharge from a groundwater recovery facility should not be cast in the same category as industrial process waste, and the focus should be on protection of the beneficial uses of the receiving water. Discharge of the brine effluent from the MBDF to the OOO simply does not compromise the beneficial uses of the receiving waters from the outfall and as such, it should have been allowed.

V. THE REGIONAL BOARD IMPROPERLY APPLIED REC-1 BENEFICIAL USE STANDARD

Prior to the 2011 NPDES Permit, the Regional Board required bacterial characteristics of water-contact standards to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds. *See* Exhibit G at 16; Exhibit A at F-45. In the Permit, however, for the first time, the Regional Board requires that the standards apply outside of this zone, i.e., throughout all depths of the State-regulated three mile limit. **Notably, the Regional Board's decision to impose this REC-1 standard was not driven by any issues with the receiving waters.** Rather was driven by language in the 2005 Ocean Plan which states:

> SWRCB Water-Contact Standards
>
> (1) Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Board (i.e., waters designated as REC-1), but including all kelp beds . . .

Ocean Plan at 4. According to the Regional Board, because it "has not completed a process to designate specific areas where the water-contact standards apply, **Ocean Plan Bacterial Standards apply throughout all ocean waters in the San Diego Region.**" Exhibit A at F-38, F-45 (emphasis added). This approach is somewhat extreme and is practically unenforceable. Petitioner submits that requiring the application of Ocean Plan bacterial standards throughout all ocean waters in the San Diego Region could not possibly have been what the State Board intended in adopting this language in the Ocean Plan and the Basin Plan.

The more reasonable interpretation of the Ocean Plan is that if the Regional Board has not designated the REC-1 areas, the default should be that the REC-1 beneficial use designation applies to marine waters within 1,000 feet of the shore, within the 30-foot contour, and within designated kelp beds - not within all depths of all State-regulated waters.

The State Board should note that the Regional Board is currently engaged in its triennial review of the Basin Plan and its Triennial Review Advisory Committee recently suggested that the

Regional Board

> Evaluate and clarify the area to which REC-1 applies in ocean waters. Limit applicability of REC-1 to waters within 1,000 feet of shore and the 30 foot depth contour, and waters within the La Jolla and Point Loma kelp beds.

See 2011 Basin Plan Triennial Review, Suggestions to be considered by TRAC: "R List", January 27, 2011 at 1, attached as Exhibit I.

Imposing the REC-1 receiving water standard to deep offshore waters could result in significant economic and operational impacts to the City without creating any benefit to beneficial uses or improvement to marine water quality. It is also inconsistent with the Regional Board's prior approach in its 35 year history of issuing NPDES permits to other ocean outfall dischargers in Region 9. In fact, the Regional Board's interpretation of the REC-1 standard will impact **all** ocean outfall discharges in Region 9. As such, the Regional Board's interpretation amounts to *de facto* rulemaking and is subject to review. Until the Regional Board designates its REC-1 areas, the Permit should be revised to require compliance with bacterial characteristics of water-contact standards to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds.

VI. CONCLUSION

Regional Board staff's rigid application of the Ocean Plan standards to the MBDF's is short-sighted, impractical, and fails to consider the environmental impact of the potential reduced production of potable and recycled water. Moreover, the Regional Board wholly ignores the Task Force's recommendation to review desalination facilities on a case-by-case basis to determine whether it is feasible and appropriate to utilize the outfall for brine discharge. Finally, it cannot demonstrate that its application of Ocean Plan Table A standards to the MBDF is protective of beneficial use, which completely defeats the purpose of applying the standard. As such, the Regional Board's adoption of the Permit requiring the MBDF to comply with Ocean Plan Table A standards was arbitrary and capricious and contrary to public policy.

The MBDF is neither a POTW nor an industrial discharger. It simply extracts brackish local

groundwater and treats it for potable use. Given the State's severe water shortage, the MBDF is the very type of facility that is encouraged by the Regional and State Boards. The MBDF does not treat wastewater, or create discharge from industrial processes. As such, it should not be treated like a POTW or an industrial discharger, i.e., it should not be subject to the standards set forth in the Ocean Plan. Because the brine effluent from the MBDF does not impact the OOO as evidenced by 17 years of discharge, it is clearly the best facility to receive the brine effluent. As such, the State Board should continue to allow compliance with the Ocean Plan to be determined at the OOO rather than at the MBDF. Alternatively, the State Board or Regional Board should exercise its BPJ and develop TBELs that are more appropriate for potable water treatment facilities like the MBDF.

Finally, the State Board should clarify that the REC-1 standard was never meant to apply to all ocean waters in the San Diego region, and it should order the Regional Board to revise the Permit to require compliance with bacterial characteristics of water-contact standards to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds.

Respectfully submitted,

Date: February 11, 2011

MILES • CHEN LAW GROUP, P.C.

By: _____
Patricia J. Chen

EXHIBIT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Linda S. Adams
Acting Secretary for
Environmental Protection

9174 Sky Park Court, Suite 100, San Diego, CA 92123-4340
Phone (858) 467-2952 • Fax (858) 571-6972
http://www.waterboards.ca.gov/sandiego/

Edmund G. Brown Jr.
Governor

ORDER NO. R9-2011-0016
NPDES NO. CA0107433

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF OCEANSIDE SAN LUIS REY WATER RECLAMATION FACILITY, LA SALINA WASTEWATER TREATMENT PLANT, AND MISSION BASIN DESALTING FACILITY DISCHARGES TO THE PACIFIC OCEAN VIA THE OCEANSIDE OCEAN OUTFALL

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

Table 1. Discharger and Facility Information

Discharger	City of Oceanside	
Name of Facility	Oceanside Ocean Outfall (OOO)	
Facility Addresses	San Luis Rey Water Reclamation Facility	3950 N. River Rd Oceanside, CA 92058
	La Salina Wastewater Treatment Plant	1330 S. Tait Street Oceanside, CA 92054
	Mission Basin Desalting Facility	Fireside & Heritage Street Oceanside, CA 92054
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region have classified this discharge as a **major** discharge.		

Discharges by the City of Oceanside from the Facilities listed in Table 1 at the discharge point identified in Table 2 are subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point No.	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW effluent and waste brine	33º 09' 46" N	117º 23' 29" W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, San Diego Region on:	**January 12, 2011**
This Order shall become effective on:	**March 3, 2011**
This Order shall expire on:	**March 2, 2016**
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on January 12, 2011.

David W. Gibson
Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	City of Oceanside	
Name of Facility	Oceanside Ocean Outfall	
Facility Address	**San Luis Rey Water Reclamation Facility**	3950 N. River Rd Oceanside, CA 92058 San Diego County
	La Salina Wastewater Treatment Plant	1330 S. Tait Street Oceanside, CA 92054 San Diego County
	Mission Basin Desalting Facility	Fireside & Heritage Street Oceanside, CA 92054
Facility Contact, Title, and Phone	Mark Anderson, Water Utilities Division Manager, (760) 435-5957	
Mailing Address	300 N. Coast Highway, Oceanside, CA 92054	
Type of Facility	Publicly Owned Treatment Works (POTW)	
Facility Permitted Discharge Flow Rate (average monthly flow)	• San Luis Rey Water Reclamation Facility (SLRWRF) - 13.5 million gallons per day (MGD) discharge to the OOO through the land outfall; or up to 15.4 MGD if written authorization is obtained from the San Diego Water Board pursuant to section VI.C.5.a.ii. of this Order. • La Salina Wastewater Treatment Plant (LSWTP) - 5.5 MGD • Mission Basin Desalting Facility (MBDF) – 2.0 MGD • Combined discharge to the Oceanside Ocean Outfall, including discharges from the SLRWRF, LSWTP, MBDF, Genentech, Fallbrook Public Utility District (PUD), and US Marine Corps Camp Pendleton[1] – 22.6 MGD; however the permitted combined discharge flow rate to the Oceanside Ocean Outfall from the SLRWRF, LSWTP, MBDF, Genentech, Fallbrook Public Utility District, and US Marine Corps Camp Pendleton may be increased to 23.1 MGD, 23.4 MGD, or 24.4 MGD if written authorization is obtained from the San Diego Water Board pursuant to section VI.C.5.a.i of this Order.	

1. Discharges from Genentech, Fallbrook PUD, and the US Marine Corps Camp Pendleton to the Oceanside Ocean Outfall are regulated under separate waste discharge requirements/NPDES permits.

II. FINDINGS

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

A. Background. The City of Oceanside (hereinafter Discharger) is currently discharging pursuant to Order No. R9-2005-0136 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107433. The Discharger submitted a Report of Waste Discharge (ROWD), dated February 9, 2010, and applied for a NPDES permit renewal to discharge up to 22.9 MGD of treated wastewater to the Oceanside Ocean Outfall (OOO) from the San Luis Rey Water Reclamation Facility (SLRWRF), the La Salina Wastewater Treatment Plant (SLWTP), and waste brine from the Mission Basin

Desalting Facility (MBDF), hereinafter Facility. The application was deemed complete on March 11, 2010.

B. Facility Description. The Discharger owns and operates the SLRWRF and the LSWTP. Both facilities are publicly owned treatment works (POTW) as defined in 40 CFR 403.3. The Discharger provides municipal wastewater treatment services to a population of approximately 180,000 within the boundaries of the City of Oceanside, treating primarily residential and commercial wastewater. Additionally, the SLRWRF serves a population of approximately 1,000 within the City of Vista and a population of approximately 10,000 within the Rainbow Municipal Water District on a contractual basis. There are nine significant industrial users within the City of Oceanside and none within the portions of the City of Vista and Rainbow Municipal Water District that are served by the Discharger.

Wastewater treatment processes at the SLRWRF and LSWTP include preliminary treatment by mechanical bar screens, aerated grit removal, flow equalization, primary sedimentation, biological secondary treatment using activated sludge process, secondary sedimentation/clarification, and secondary effluent equalization ponds (SLRWRF only). SLRWRF and LSWTP screenings and grit are removed and hauled to a landfill. Sludge from the primary treatment facilities is thickened in the clarifiers. Sludge from the secondary treatment facilities is thickened by gravity belt thickeners at the SLRWRF and by dissolved air floatation at the LSWTP. Both sludges are anaerobically digested and dewatered. Dewatered sludge is hauled to a land application site by a contractor. The SLRWRF produces up to 0.7 MGD of tertiary recycled water, the discharge of which is covered under separate waste discharge requirements.

The Discharger also owns and operates the MBDF, which produces up to 6.37 MGD of potable water. The MBDF pumps groundwater from the Mission hydrologic subarea (903.11), of the Lower San Luis hydrologic area (903.1), of the San Luis Rey hydrologic unit (903). The groundwater is treated using cartridge filtration, green sand filtration to remove iron and manganese, reverse osmosis, and granular activated carbon. The cartridge filters are removed and hauled to a landfill. The green sand filters are backwashed using potable water and this backwash water is discharged to the sanitary sewer system. The two reverse osmosis trains discharge up to 2.0 MGD of brine to the OOO.

Secondary treated wastewater from the SLRWRF discharges to a 34,000-foot-long 24-inch-/36-inch-diameter land outfall. Brine discharges from Genentech (regulated under separate waste discharge requirements and NPDES Permit) and MBDF commingle with the discharge in the land outfall via a 10-inch-diameter pipe, prior to the LSWTP. At the LSWTP discharges from SLRWRF, MBDF, and Genentech commingle with the discharge from LSWTP and the discharge of treated wastewater effluent from the Fallbrook Public Utility District POTW (regulated under separate waste discharge requirements and NPDES Permit). The flow then commingles with the discharge of treated wastewater from US Marine Corps Base Camp Pendleton (regulated under separate waste discharge requirements and NPDES Permit) at the near-shore end of the Discharger-owned OOO. As the owner/operator, the Discharger has the ability to

control discharges to the OOO. See Attachment C of this Order, page C-4 for the location of the outfall pipelines and connections at LSWTP.

Treated wastewaters from SLRWTP and LSWTP and waste brine from MBDF are hereinafter collectively referred to as Effluent. Treated wastewaters from SLRWTP, LSWTP, Fallbrook Public Utility District, and US Marine Corps Base Camp Pendleton and waste brine from MBDF and Genentech are hereinafter collectively referred to as Combined Effluent.

Attachment B of this Order provides maps of the area around the Facility, land outfall pipelines, and the OOO. Attachment C of this Order provides flow schematics of the Facility (SLRWRF, LSWTP, and MBDF) and the land outfall pipelines at LWSTP.

Historically the Discharger has had a total flow limitation for the OOO of 22.9 MGD for LSWTP, SLWTP and the MBDF. An additional 6.155 MGD of capacity is allocated to Fallbrook Public Utility District, US Marine Corps Base Camp Pendleton, and Genentech (formerly Biogen IDEC Pharmaceuticals Corporation) (for a total of 29.055 MGD). However, in the Discharger's 2010 Ocean Outfall Capacity Evaluation Report, the Discharger reported that current OOO capacity was 22.6 MGD due to a buildup of muck and sediment within the outfall, and the finding that the internal dimension of the OOO is actually 35.75 inches, not 36 inches. This represents a significant reduction in available flow capacity through the OOO (from 30 MGD). Combined Effluent flow through the OOO must be limited based on its capacity to transfer Combined Effluent safely to the receiving water. Thus, Combined Effluent flow from the Facility (SLRWRF, LSWTP, and MBDF), Genentech, Fallbrook Public Utility District, and US Marine Corps Base Camp Pendleton through the OOO shall be limited to 22.6 MGD.

In the ROWD the Discharger reported that OOO capacity may be increased from 22.6 MGD to 23.4 MGD if the muck from within the OOO is cleaned. The Discharger further stated that preliminary plans to clean the OOO and/or replace a constricting portion of the OOO (the metering section) were being considered. The Discharger stated that the OOO would be cleaned in 2015 which would increase outfall capacity to 23.4 MGD. The Discharger further states that the replacement of the constricting portion of the OOO, where the metering section is located, alone would increase outfall capacity to 23.1 MGD and up to 24.4 MGD when combined with the cleaning of the OOO. As such, Combined Effluent flow to the OOO greater than 22.6 MGD is prohibited until written approval from the San Diego Water Board is provided. Prior to the San Diego Water Board providing written approval to the Discharger to increase Combined Effluent flows to the OOO to 23.1 MGD, 23.4 MGD, or 24.4 MGD, the Discharger must meet the requirements contained in section VI.C.5.a.i of this Order.

In a December 2, 2010 comment to the San Diego Water Board regarding this Order the Discharger stated, "Additionally, the City is planning improvements to the land outfall that will increase the capacity of the land outfall to accommodate the 15.4 maximum 30-day capacity of the SLRWRF. To address the City's current ability to treat more than 13.5 MGD at the SLRWRF using onsite storage, and to address planned improvements to the capacity of the land outfall, [it is requested that the permit allow for an increase of flow from SLRWRF to the OOO through the land outfall from 13.5 MGD to 15.4 MGD]."

Because the overall discharge volume of the OOO would not be increased and the permitted volume of flow from SLRWRF would not increase (Order No. R9-2005-0136 authorized a discharge of 15.4 MGD even though the land outfall capacity was not sufficient to transport this volume to the OOO), the San Diego Water Board has established conditional requirements to ensure adequate capacity is available in the land outfall prior to allowing the discharge of 15.4 MGD from SLRWRF, as specified in section VI.C.5.a.ii of this Order.

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

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

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

F. **Technology-Based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133. 40 CFR Part 133 establishes the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for CBOD5, TSS, and pH. Technology-based effluent limitations contained in Table A of the 2005 *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (hereinafter Ocean Plan), which include grease and oil, suspended solids, settleable solids, turbidity, and pH, are also applicable to discharges from POTWs and the MBDF. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F of this Order).

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

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

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

Table 5. Basin Plan Beneficial Uses of the Pacific Ocean

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

Requirements of this Order implement the Basin Plan.

I. **California Ocean Plan.** The State Water Board adopted the Ocean Plan in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21. 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table 6. Ocean Plan Beneficial Uses of the Pacific Ocean

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

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

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

K. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on 5-day carbonaceous biological oxygen demand ($CBOD_5$), total suspended solids (TSS), pH, oil and grease, settleable solids, and turbidity. Restrictions on these pollutants are discussed in section IV.B of the Fact Sheet (Attachment F of this Order). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs are based on the Ocean Plan, which was approved by USEPA on February 14, 2006. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

L. **Antidegradation Policy.** 40 CFR 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The

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

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

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

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

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

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

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

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

THEREFORE, IT IS HEREBY ORDERED, that Order No. R9-2005-0136 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of waste from SLRWRF and LSWTP not treated by a secondary treatment process and not in compliance with the effluent limitations specified in section IV.A of this Order, and/or to a location other than Discharge Point No. 001, unless specifically regulated by this Order or separate waste discharge requirements, is prohibited.

B. The discharge of waste from MBDF not in compliance with the effluent limitations specified in section IV.A of this Order, and/or to a location other than Discharge Point No. 001, unless specifically regulated by this Order or separate waste discharge requirements, is prohibited.

C. The bypassing of untreated wastes containing concentrations of pollutants in excess of those in Tables A or B of the Ocean Plan is prohibited, except as allowed by Federal Standard Provisions I.G and I.H (Attachment D of this Order).

D. The discharge of wastes from the SLRWRF to the OOO through the land outfall in excess of a monthly average effluent flow of 13.5 MGD is prohibited until written notification is provided by the San Diego Water Board stating that the allowable SLRWRF discharge flow has been increased to 15.4 MGD, consistent with the requirements specified in section VI.C.5.a.ii of this Order.

Written notification to increase the allowable flow rate from the SLRWRF to the OOO through the land outfall from 13.5 MGD to 15.4 MGD shall only be granted by the San Diego Water Board Executive Officer when the requirements of section VI.C.5.a.ii of this Order have been achieved and the San Diego Water Board Executive Officer concludes that the available effluent capacity through the land outfall to the OOO is available and properly certified.

E. The discharge of wastes from the LSWTP in excess of a monthly average effluent flow of 5.5 MGD is prohibited.

F. The discharge of wastes from the MBDF in excess of a monthly average effluent flow of 2.0 MGD is prohibited.

G. Combined Effluent (discharge of waste from SLRWRF, LSWTP, MBDF, Genentech, Fallbrook Public Utility District, and US Marine Corps Camp Pendleton) in excess of an average monthly flow rate of 22.6 MGD through the OOO at Discharge Point No. 001 (Monitoring Location M-005, as specified in Attachment E of this Order) is prohibited until written notification is provided by the San Diego Water Board stating that the Combined Effluent flow to the OOO has been increased consistent with the

requirements of section VI.C.5.a.i of this Order. Once written notification has been provided to the Discharger by the San Diego Water Board, Combined Effluent through the OOO at Discharge Point No. 001 (Monitoring Location M-005, as specified in Attachment E of this Order) in excess of the applicable average monthly flow rate is prohibited.

Written notification to increase the allowable flow rate for the OOO from 22.6 MGD shall only be granted by the San Diego Water Board Executive Officer when the requirements of section VI.C.5.a.i of this Order have been achieved and the San Diego Water Board Executive Officer concludes that the available effluent capacity through the OOO is available and properly certified.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

1. Final Effluent Limitations

a. The Discharger shall maintain compliance with the following effluent limitations at Monitoring Locations M-001 (for SLRWRF) and M-002 (for LSWTP) , as described in the attached MRP.

Table 7. SLRWRF Effluent Limitations at M-001

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C) ($CBOD_5$)[1]	mg/L	25	40	--	--	--	--
	lbs/day[2]	2,814	4,504	--	--	--	--
	lbs/day[3]	3,211	5,137	--	--	--	--
Total Suspended Solids (TSS)[1]	mg/L	30	45	--	--	--	--
	lbs/day[2]	3,378	5,067	--	--	--	
	lbs/day[3]	3,853	5,780	--	--	--	--
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day[2]	2,814	4,504	--	--	8,445	--
	lbs/day[3]	3,211	5,137	--	--	9,633	--
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
pH	standard units	--	--	--	6.0	9.0	--

[1] The average monthly percent removal of $CBOD_5$ and TSS shall not be less than 85 percent.
[2] Applicable when the average monthly permitted flow is prohibited from exceeding 13.5 MGD.
[3] Applicable when the average monthly permitted flow is prohibited from exceeding 15.4 MGD.

Table 8. LSWTP Effluent Limitations at M-002

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C) ($CBOD_5$)[1]	mg/L	25	40	--	--	--	--
	lbs/day	1,147	1,835	--	--	--	--
Total Suspended Solids (TSS)[1]	mg/L	30	45	--	--	--	--
	lbs/day	1,376	2,064	--	--	--	--
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day	1,147	1,835	--	--	3,440	--
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
pH	standard units	--	--	--	6.0	9.0	--

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

b. The Discharger shall maintain compliance with the following effluent limitations for the MBDF at Monitoring Location No. M-003, as described in the attached MRP:

Table 9. Effluent Limitations at M-003

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day	417	667	--	--	1,251	--
Total Suspended Solids	mg/L	60	--	--	--		--
pH	standard units	--	--	--	6.0	9.0	--
Settleable Solids	mL/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--

c. The Discharger shall maintain compliance with the following effluent limitations for the total combined flow from SLRWRF, LSWTP, and MBDF at Discharge Point No. 001, with compliance measured at Monitoring Location M-004 as described in the attached MRP:

Table 10. Effluent Limitations at M-004

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH[1]							
Tributyltin	µg/L	1.2E-01	--	--	--	--	--
	lbs/day[2]	2.3E-02	--	--	--	--	--
	lbs/day[3]	2.3E-02	--	--	--	--	--
	lbs/day[4]	2.4E-02	--	--	--	--	--
	lbs/day[5]	2.4E-02	--	--	--	--	--
TCDD Equivalents[6]	µg/L	3.4E-07	--	--	--	--	--
	lbs/day[2]	6.5E-08	--	--	--	--	--
	lbs/day[3]	6.6E-08	--	--	--	--	--
	lbs/day[4]	6.6E-08	--	--	--	--	--
	lbs/day[5]	6.9E-08	--	--	--	--	--

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

2 Applicable while the Combined Effluent flow to the OOO is prohibited from exceeding 22.6 MGD.

3 Applicable while the Combined Effluent flow to the OOO is prohibited from exceeding 23.1 MGD (meter replacement only).

4 Applicable while the Combined Effluent flow to the OOO is prohibited from exceeding 23.4 MGD (line cleaning only).

5 Applicable while the Combined Effluent flow to the OOO is prohibited from exceeding 24.4 MGD (meter replacement and line cleaning).

6 TCDD equivalents represent the sum of 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 by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.

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 CDD	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

2. Performance Goals

a. Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal constituents and are assigned the performance goals listed in the following table. Performance goal constituents shall be monitored at M-004, but the results will be used for informational purposes only, not compliance determination.

Table 11. Performance Goals

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic, Total Recoverable	µg/L	4.4E+02	2.6E+03	6.8E+03	--
Cadmium, Total Recoverable	µg/L	8.8E+01	3.5E+02	8.8E+02	--
Chromium VI, Total Recoverable[4]	µg/L	1.8E+02	7.0E+02	1.8E+03	--
Copper, Total Recoverable	µg/L	9.0E+01	8.8E+02	2.5E+03	--
Lead, Total Recoverable	µg/L	1.8E+02	7.0E+02	1.8E+03	--
Mercury, Total Recoverable	µg/L	3.5E+00	1.4E+01	3.5E+01	--
Nickel, Total Recoverable	µg/L	4.4E+02	1.8E+03	4.4E+03	--
Selenium, Total Recoverable	µg/L	1.3E+03	5.3E+03	1.3E+04	--
Silver, Total Recoverable	µg/L	4.8E+01	2.3E+02	6.0E+02	--
Zinc, Total Recoverable	µg/L	1.1E+03	6.3E+03	1.7E+04	--
Cyanide, Total (as CN)[2]	µg/L	8.8E+01	3.5E+02	8.8E+02	--
Chlorine, Total Residual[3]	µg/L	1.8E+02	7.0E+02	5.3E+03	--
Ammonia (expressed as nitrogen)	µg/L	5.3E+04	2.1E+05	5.3E+05	--
Acute Toxicity	TUa	--	2.6E+01	--	--
Chronic Toxicity[5]	TUc	--	8.8E+01	--	--
Phenolic Compounds (non-chlorinated)[6]	µg/L	2.6E+03	1.1E+04	2.6E+04	--
Chlorinated Phenolics[7]	µg/L	8.8E+01	3.5E+02	8.8E+02	--
Endosulfan[8]	µg/L	7.9E-01	1.6E+00	2.4E+00	--
Endrin	µg/L	1.8E-01	3.5E-01	5.3E-01	--
HCH[9]	µg/L	3.5E-01	7.0E-01	1.1E+00	--
Radioactivity	pCi/L	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations, Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	--	--	1.9E+04
Antimony	µg/L	--	--	--	1.1E+05
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	3.9E+02
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	1.1E+05
Chlorobenzene	µg/L	--	--	--	5.0E+04
Chromium (III), Total Recoverable	µg/L	--	--	--	1.7E+07
Di-n-butyl Phthalate	µg/L	--	--	--	3.1E+05
Dichlorobenzenes[10]	µg/L	--	--	--	4.5E+05
Diethyl Phthalate	µg/L	--	--	--	2.9E+06
Dimethyl Phthalate	µg/L	--	--	--	7.2E+07
4,6-dinitro-2-methylphenol	µg/L	--	--	--	1.9E+04
2,4-dinitrophenol	µg/L	--	--	--	3.5E+02
Ethylbenzene	µg/L	--	--	--	3.6E+05
Fluoranthene	µg/L	--	--	--	1.3E+03
Hexachlorocyclopentadiene	µg/L	--	--	--	5.1E+03
Nitrobenzene	µg/L	--	--	--	4.3E+02
Thallium, Total Recoverable	µg/L	--	--	--	1.8E+02
Toluene	µg/L	--	--	--	7.5E+06
1,1,1-trichloroethane	µg/L	--	--	--	4.8E+07
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Acrylonitrile	µg/L	--	--	--	8.8E+00
Aldrin	µg/L	--	--	--	1.9E-03
Benzene	µg/L	--	--	--	5.2E+02
Benzidine	µg/L	--	--	--	6.1E-03
Beryllium	µg/L	--	--	--	2.9E+00
Bis(2-chloroethyl) Ether	µg/L	--	--	--	4.0E+00
Bis(2-ethlyhexyl) Phthalate	µg/L	--	--	--	3.1E+02
Carbon Tetrachloride	µg/L	--	--	--	7.9E+01
Chlorodane[11]	µg/L	--	--	--	2.0E-03
Chlorodibromomethane	µg/L	--	--	--	7.6E+02
Chloroform	µg/L	--	--	--	1.1E+04
DDT[12]	µg/L	--	--	--	1.5E-02
1,4-dichlorobenzene	µg/L	--	--	--	1.6E+03
3,3'-dichlorobenzidine	µg/L	--	--	--	7.1E-01
1,2-dichloroethane	µg/L	--	--	--	2.5E+03
1,1-dichloroethylene	µg/L	--	--	--	7.9E+01
Dichlorobromomethane	µg/L	--	--	--	5.5E+02

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Dichloromethane	µg/L	--	--	--	4.0E+04
1,3-dichloropropene	µg/L	--	--	--	7.8E+02
Dieldrin	µg/L	--	--	--	3.5E-03
2,4-dinitrotoluene	µg/L	--	--	--	2.3E+02
1,2-diphenylhydrazine	µg/L	--	--	--	1.4E+01
Halomethanes[13]	µg/L	--	--	--	1.1E+04
Heptachlor	µg/L	--	--	--	4.4E-03
Heptachlor Epoxide	µg/L	--	--	--	1.8E-03
Hexachlorobenzene	µg/L	--	--	--	1.8E-02
Hexachlorobutadiene	µg/L	--	--	--	1.2E+03
Hexachloroethane	µg/L	--	--	--	2.2E+02
Isophorone	µg/L	--	--	--	6.4E+04
N-nitrosodimethylamine	µg/L	--	--	--	6.4E+02
N-nitrosodi-N-propylamine	µg/L	--	--	--	3.3E+01
N-nitrosodiphenylamine	µg/L	--	--	--	2.2E+02
PAHs[14]	µg/L	--	--	--	7.7E-01
PCBs[15]	µg/L	--	--	--	1.7E-03
1,1,2,2-tetrachloroethane	µg/L	--	--	--	2.0E+02
Tetrachloroethylene	µg/L	--	--	--	1.8E+02
Toxaphene	µg/L	--	--	--	1.8E-02
Trichloroethylene	µg/L	--	--	--	2.4E+03
1,1,2-trichloroethane	µg/L	--	--	--	8.3E+02
2,4,6-trichlorophenol	µg/L	--	--	--	2.6E+01
Vinyl Chloride	µg/L	--	--	--	3.2E+03

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

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

[2] If the Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, performance goals may be evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR Part 136, as revised May 14, 1999.

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

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

Actual effluent limitations for total chlorine, when discharging intermittently, shall then be determined according to Implementation Procedures for Table B from the Ocean Plan, using a minimum probable initial dilution factor of 87 and the applicable flow rate.

[4] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

[5] Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100/NOEL, where NOEL (No Observed Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism.

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

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

[8] Endosulfan represents the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.

[9] HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

[10] Dichlorobenzenes represent the sum of 1,2- and 1,3-dichlorobenzene.

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

[12] DDT represents the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

[13] Halomethanes represent the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[14] PAHs (polynuclear aromatic hydrocarbons) represent the sum of acenapthalene; 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.

[15] PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Arolclor-1254, and Arcolor-1260.

3. Interim Effluent Limitations – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications

The Discharger shall continue to comply with reclamation requirements established in Board Order No. 93-07 and any applicable future revised or renewal waste discharge requirements.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and Ocean Plan and are a required part of this Order. The discharge shall not cause the following in the Pacific Ocean.

1. Bacterial Characteristics

a. Within a zone bounded by the shoreline and a distance of 3 nautical miles from the shoreline, including all kelp beds, the following bacterial objectives shall be maintained throughout the water column. The zone of initial dilution for ocean outfall is excluded.

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

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

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

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

Single Sample Maximum:

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.

b. The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

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

2. Physical Characteristics

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

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

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

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

3. Chemical Characteristics

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

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

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

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

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

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

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

4. Biological Characteristics

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

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

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

5. Radioactivity

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

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

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

   a. Compliance with Ocean Plan Discharge Prohibitions, summarized in Attachment G of this Order, is required as a condition of this Order.

   b. Compliance with the Discharge Prohibitions contained in Chapter 4 of the Basin Plan, summarized in Attachment G of this Order, is required as a condition of this Order.

   c. The Discharger shall comply with all requirements and conditions of this Order. Any permit non-compliance constitutes a violation of the CWA and/or the CWC and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of an application for permit renewal, modification, or reissuance.

   d. The Discharger shall comply with all applicable federal, State, and local laws and regulations that pertain to sewage sludge handling, treatment, use and disposal, including CWA section 405 and USEPA regulations at 40 CFR Part 257.

   e. The Discharger's wastewater treatment facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23, Division 3, Chapter 26 of the California Code of Regulations (CCR).

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

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

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

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

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

i. The certification report is received by the Executive Officer,

ii. The Executive Officer has received written notification of completion of construction (new treatment facilities and expansions only),

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

iv. The Executive Officer has provided the Discharger with written authorization to discharge at a daily flow rate in excess of its previously approved design capacity.

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

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

i. This Order expires on March 2, 2016, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR 122.6 and the State's regulations at CCR Title 23, section 2235.4 regarding the continuation of expired permits and waste discharge requirements are met.

j. The Discharger's wastewater treatment facilities shall be operated and maintained in accordance with the operations and maintenance manual prepared by the Discharger pursuant to the Clean Water Grant Program.

k. A copy of this Order shall be posted at a prominent location at or near the treatment and disposal facilities and shall be available to operating personnel at all times.

l. The Discharger shall comply with any interim limitations established by addendum, enforcement action, or revised waste discharge requirements that have been or may be adopted by the San Diego Water Board.

m. The Discharger shall comply with effluent standards and prohibitions for toxic pollutants established pursuant to section 307(a) of the CWA within the time frame set forth by the regulations that establish those standards and prohibitions, even if this Order has not been modified to incorporate the requirements. If an applicable effluent standard or prohibition, including any schedule of compliance, is promulgated pursuant to section 307(d) of the CWA for a toxic pollutant, and that standard or prohibition is more stringent than a limitation contained in this Order, the Executive Officer may institute proceedings to modify or revoke and reissue the Order to conform to the effluent standard or prohibition.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

b. This Order may be reopened for modification of the receiving waters monitoring requirements, as the Executive Officer determines. The modification(s) can include, but is(are) not limited to, recommendations from Southern California Coastal Water Research Project (SCCWRP) or creation of a Regional Monitoring Program.

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

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

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

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

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

d. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated

under section 307 (a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

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

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

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

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

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

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

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Spill Prevention and Response Plans

i. For purposes of this section, a spill is a discharge of treated or untreated wastewater that occurs at or downstream of the Facility headworks in violation of Discharge Prohibition III.A of this Order, or a discharge of other materials related to the Facility. This section does not include sanitary sewer overflows reportable under separate waste discharge requirements.

ii. The Discharger shall maintain a Spill Prevention Plan (SPP) for the facilities owned and/or operated by the Discharger in an up-to-date condition and shall amend the SPP whenever there is a change (e.g., in the design, construction, operation, or maintenance of the sewerage system or sewerage facilities) which materially affects the potential for spills. The Discharger shall review and amend the SPP as appropriate after each spill from the Facility. The SPP and any amendments thereto shall be subject to the approval of the Executive Officer and shall be modified as directed by the Executive Officer.

The Discharger shall submit the SPP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The Discharger shall ensure that the up-to-date SPP is readily available to the sewerage system personnel at all times and that the sewerage system personnel are familiar with it.

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

b. Spill Reporting Requirements

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

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

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

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

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

iii. For spills of material other than treated or untreated wastewater that cause, may cause, or are caused by significant operational failure, or endangers or may endanger human health or the environment, the Discharger shall notify the San Diego Water Board by telephone, by voice mail, or by FAX within 24

hours from the time the Discharger becomes aware of the spill. The Discharger shall inform the San Diego Water Board of the date of the spill, spill location and its final destination, time the spill began and ended, estimated total spill volume, and type of spill material.

iv. For all spills, the Discharger shall include a detailed summary of spills in the monthly self-monitoring report for the month in which the spill occurred.

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

c. Toxicity Reduction Requirements

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

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

Within 30 days of completion of the TRE/TIE, the Discharger shall submit the results of the TRE/TIE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations/performance goals of this Order and prevent recurrence of exceedances of those limitations/performance goals, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer.

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

d. Toxicity Reduction Evaluation (TRE)

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

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

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

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

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

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

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation and Maintenance Specifications – Not Applicable

5. Special Provisions for Wastewater Facilities (POTWs Only)

a. Oceanside Ocean Outfall Capacity

i. Discharges to the OOO are limited to 22.6 MGD based on the available capacity of the OOO at the time of drafting this Order. The Discharger has reported that by cleaning the OOO, the capacity of the OOO will increase 0.8 MGD above the current capacity to 23.4 MGD. If the outfall cleaning is not implemented, the Discharger reports that replacing a constricting 15-inch diameter meter section of the land portion of the OOO at the LSTWP site will increase the OOO capacity by 0.5 MGD above the current capacity. Implementing both the outfall cleaning and meter section replacement will have a cumulative effect on outfall capacity, and would increase the OOO capacity by 1.8 MGD to 24.4 MGD. This Order prohibits the discharge of wastes through the OOO from SLRWRF, SLWTP, MBDF, Genentech, Fallbrook Public Utilitiy District, and US Marine Corp Camp Pendleton in excess of 22.6 MGD based on the reported capacity of the OOO.

(a) The Discharger may obtain written authorization from the San Diego Water Board under this Order to discharge up to 23.1 MGD if the following conditions are met:

(1) The Discharger submits documentation demonstrating that the 15-inch diameter meter section has been replaced, and the OOO has sufficient capacity for 23.1 MGD of waste; and

(2) The Discharger submits a certified statement signed by a California Licensed Engineer that states that the capacity of the OOO is at least 23.1 MGD.

(b) The Discharger may obtain written authorization from the San Diego Water Board under this Order to discharge up to 23.4 MGD if the following conditions are met:

(1) The Discharger submits documentation demonstrating that the OOO has been cleaned and the OOO has sufficient capacity for 23.4 MGD of waste; and

(2) The Discharger submits a certified statement signed by a California Licensed Engineer that states that the capacity of the OOO is at least 23.4 MGD.

(c) The Discharger may obtain written authorization from the San Diego Water Board under this Order to discharge up to 24.4 MGD if the following conditions are met:

(1) The Discharger submits documentation demonstrating that the OOO has been cleaned, the 15-inch diameter meter section has been replaced, and the OOO has sufficient capacity for 24.4 MGD of waste; and

(2) The Discharger submits a certified statement signed by a California Licensed Engineer that states that the capacity of the OOO is at least 24.4 MGD.

ii. Discharges from SLRWRF to the OOO through the land outfall are limited to 13.5 MGD based on the capacity of the land outfall. The Discharger has stated that the land outfall capacity may be increased from 13.5 MGD to 15.4 MGD over the term of this permit. This permit prohibits the discharge of effluent to the OOO through the land outfall in excess of 13.5 MGD unless:

(a) The Discharger submits all documentation, including engineering plans and relevant studies (and all additionally requested documents), to the San Diego Water Board to demonstrate that the capacity of the land outfall to the OOO has been increased to 15.4 MGD.

(b) The Discharger submits a certified statement signed by a California Licensed Engineer that states that the capacity of the land outfall to the OOO is at least 15.4 MGD.

iii. Annually, by March 1st, the Discharger shall provide:

(a) A comparison of the total available capacity of the OOO and highest daily and monthly average flows from all facilities (SLRWRF, SLWTP, MBDF, Camp Pendleton, Fallbrook Public Utilities District, and Genentech) to the OOO for the previous year;

(b) A summary of the dischargers to the OOO and their permitted flow rate, average daily flow rate, and daily maximum flow rate for the previous year from all facilities;

(c) Wet weather standard operating procedures for each discharger (including the City of Oceanside) to the OOO, including any available influent or effluent storage capacity;

(d) Future plans or policies that may impact the total amount of effluent discharged to the OOO for any of the dischargers to the OOO;

(e) A feasibility analysis to maintain compliance with the flow prohibition to the OOO (no more than 22.6 MGD from all facilities or as otherwise allowed if the conditions in section VI.C.5.a.i of this Order are met).

(f) The Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the Oceanside Ocean Outfall and/or to control the flow rate before the flow rate is equal to the current outfall capacity;

iv. No later than 180 days prior to this Order's expiration date, the Discharger shall submit a written report to the Executive Officer regarding capacity of the OOO that addresses the following items:

(a) Most current report on the OOO capacity conducted within 1 year of the expiration date of this Order;

(b) The Discharger's best estimate of when the average daily flow will equal or exceed the OOO capacity;

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

(d) Report on the physical condition of the OOO; and

(e) The report must be signed and agreed upon by each of the parties discharging through the OOO.

b. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer within 90 days after the monthly average influent flow rate equals or exceeds 75 percent of the secondary treatment design capacity of the wastewater treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter in accordance with Standard Provision V.B. (Attachment D of this Order) which transmits that report and certifies that that policy-making body is adequately informed of the influent flow rate relative to the Facility's design capacity. The report shall include the following:

i. Average influent daily flow for the calendar month, the date on which the maximum daily flow occurred, and the rate of that maximum flow.

ii. The Discharger's best estimate of when the average daily influent flow for a calendar month will equal or exceed the design capacity of the facilities.

iii. The Discharger's intended schedule for studies, design, and other steps needed to provide additional treatment for the wastewater from the collection system before the waste flow exceeds the capacity of present units.

c. Pretreatment Program

i. The Discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR Part 403, including any subsequent revisions in 40 CFR Part 404. Where 40 CFR Part 403 or subsequent revisions place mandatory actions upon the Discharger but do not specify a timetable for completion, the Discharger shall complete the mandatory actions within 6 months of the issuance date of this Order, or the effective date of the revisions to 40 CFR Part 403, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies imposed by the USEPA and/or the San Diego Water Board, as provided in the CWA and/or the CWC.

ii. The Discharger shall implement and enforce its approved pretreatment program, and all subsequent revisions, which are hereby made enforceable conditions of this Order. The Discharger shall enforce the requirements promulgated pursuant to Sections 307(b), 307 (c), 307 (d), and 402 (b) of the CWA with timely, appropriate, and effective enforcement actions. The Discharger shall cause industrial users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements, or in the case of a new industrial user, upon commencement of the discharge.

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

(a) Implement the necessary legal authorities as required by 40 CFR 403.8 (f) (1);

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

(c) Implement the programmatic functions as required by 40 CFR 403.8 (f) (2); and

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

iv. By March 1 of each year, the Discharger shall submit an annual report to the San Diego Water Board; USEPA Region 9; the State Water Board, Division of Public Water Quality, Regulations Unit; and the San Diego County Department of Health Services, Hazardous Materials Division, describing its pretreatment activities over the previous calendar year. In the event the Discharger is not in compliance with any condition or requirement of this Order, or any pretreatment compliance inspection/audit requirements, the Discharger shall include the reasons for noncompliance and state how and when it will comply with such conditions and requirements. The annual report shall contain, but not be limited to, the following information:

(a) A summary of analytical results from representative flow-proportioned 24-hour composite sampling of the Discharger's influent and effluent for those pollutants known or suspected to be discharged by industrial users that the USEPA has identified under Section 307 (d) of the CWA, which are known or suspected to be discharged by industrial users. This will consist of an annual full priority pollutant scan. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis required by the Monitoring and Reporting program of this Order (Attachment E of this Order). The Discharger shall also provide influent and effluent monitoring data for non-priority pollutants, which the Discharger believes may be causing or contributing to interference or pass through. The Discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed in Attachment E of this Order. Wastewater sampling and analysis shall be performed in accordance with 40 CFR Part 136.

(b) A discussion of upset, interference, or pass through, if any, at the Facilities, which the Discharger knows or suspects were caused by industrial users. The discussion shall include the reasons why the incidents occurred, any corrective actions taken, and, if known, the name and address of the responsible industrial user(s). The discussion shall also include a review of the applicable local pollutant limitations to determine whether any additional limitations or changes to existing

limitations, are necessary to prevent pass-through, interference, or non-compliance with sludge disposal requirements.

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

(1) Name of SIU and category, if subject to categorical standards;

(2) Type of wastewater treatment or control processes in place;

(3) Number of samples taken by SIU during the year;

(4) Number of samples and inspections by Discharger during the year;

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

(6) A list of pretreatment standards (categorical or local) violated during the year, or any other violations;

(7) Industries in significant non-compliance as defined at 40 CFR 403.12 (f) (2)(vii), at any time during the year;

(8) A summary of enforcement actions or any other actions taken against SIUs during the year. Describe the type of action, final compliance date, and the amount of fines and/or penalties collected, if any. Describe any proposed actions for bringing SIUs into compliance; and

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

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

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

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

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

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

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

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

(a) The names and addresses of all SIUs which violated any discharge or reporting requirements during the semi-annual reporting period;

(b) A description of the violations, including whether the discharge violations were for categorical standards or local limits;

(c) A description of the enforcement actions or other actions taken to remedy the non-compliance; and

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

vi. The Discharger shall continue with its implementation of a Non-Industrial Source Control Program, consisting of a public education program designed to minimize the entrance of non-industrial toxic pollutants and pesticides into the sanitary sewer system. The Program shall be reviewed periodically and addressed in the annual report.

d. Sludge (Biosolids) Disposal Requirements

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

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

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

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

v. The Discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that has a likelihood of adversely affecting human health or the environment.

vi. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.

vii. The solids and sludge treatment and storage site shall have adequate facilities to divert surface water runoff from adjacent areas to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection, at the minimum, from a 100-year storm and protection from the highest possible tidal stage that may occur.

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

ix. The Discharger shall submit an annual report to the USEPA and the San Diego Water Board containing monitoring results and pathogen and vector attraction reduction requirements, as specified by 40 CFR Part 503. The Discharger shall also report the quantity of sludge removed from the Facility and the disposal method. This self-monitoring report shall be postmarked by February 19 of each year and report for the period of the previous calendar year.

e. Collection System

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

6. Other Special Provisions – Not Applicable

7. Compliance Schedules

The Discharger shall comply with the following time schedule to ensure that the discharge from the Facility does not cause or contribute to excursion above the Receiving Water Limitations for Bacterial Characteristics contained in section V.A.1.of this Order:

Table 12. Time Schedule for Compliance with Bacterial Characteristics

Task	Compliance Date
1. Prepare and submit a proposed work plan that outlines the tasks and the approach to be used in evaluating and selecting alternatives for ensuring compliance with Bacterial Characteristics receiving water limitations.	No later than 6 months after the adoption date of this Order
2. Submit plan and alternatives analysis for ensuring compliance with Bacterial Characteristics receiving water limitations outside the Initial Dilution Zone of the Oceanside Ocean Outfall. The proposed plan shall include a schedule for completion that reflects a realistic assessment of the shortest practicable time required to perform each task.	No later than 18 months after the adoption date of this Order
3. Complete financial arrangements for selected alternative	No later than 30 months after the adoption date of this Order
4. Initiate construction of any required facilities	No later than 36 months after the adoption date of this Order
5. Complete construction of required facilities and initiate facilities start-up	No later than 48 months after the adoption date of this Order
6. Identify and implement operational refinements and confirm compliance with Bacterial Characteristics receiving water limitations	No later than 60 months after the adoption date of this Order
7. Achieve full compliance with Bacterial Characteristics receiving water limitations outside the Initial Dilution Zone of the Oceanside Ocean Outfall	No later than 60 months after the adoption date of this Order

The Discharger shall implement the plan identified in Task 2 of the above schedule in accordance with the shortest practicable time required to complete each task, but in no case later than the Compliance Dates listed in the above schedule. The Discharger shall submit to the San Diego Water Board on or before each compliance date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the San Diego Water Board by letter when it returns to compliance with the time schedule.

Progress reports shall be submitted annually by March 1, consistent with the schedule in Table E-16 of the MRP and shall continue until compliance is achieved.

VII. COMPLIANCE DETERMINATION

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

A. Compliance with Average Monthly Effluent Limitation (AMEL)

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

B. Compliance with Average Weekly Effluent Limitation (AWEL)

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

C. Compliance with Maximum Daily Effluent Limitation (MDEL)

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

D. Compliance with Instantaneous Minimum Effluent Limitation

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

E. Compliance with Instantaneous Maximum Effluent Limitation

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

F. Compliance with 6-Month Median Effluent Limitation

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

G. Mass and Concentration Limitations

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

H. Percent Removal

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

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

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

I. Ocean Plan Provisions for Table B Constituents

1. Sampling Reporting Protocols

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

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

i. 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).

ii. 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. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shorted to Est. Conc.").

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

2. Compliance Determination

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

a. Compliance with Single-constituent Effluent Limitations

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

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

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

c. Multiple Sample Data Reduction.

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all

sample results are quantifiable (i.e., greater than or equal to the reported ML). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

d. Mass Emission Rate

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

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

In which Q and C are the flow rate in million gallons per day and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lb/gallon of water). If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

e. Bacterial Standards and Analysis

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

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

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

ii. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 CFU (colony-forming units). The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those listed in 40 CFR Part 136 or any improved method determined by the San Diego Water Board (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure*, listed under 40 CFR Part 136, and any other method approved by the San Diego Water Board.

f. Single Operational Upset

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

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

ii. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in Provision H of Attachment D of this Order.

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

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

J. Chronic Toxicity

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

$$TUc = 100 / NOEL$$

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

ATTACHMENT A – DEFINITIONS

Acute Toxicity

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

$$TUa = \frac{100}{\text{96-hr LC}_{50\%}}$$

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in 2005 California Ocean Plan (hereinafter Ocean Plan) Appendix III. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

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

where:

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

Anti-Backsliding

Provisions in the Clean Water Act (CWA) and USEPA regulations [CWA 303 (d) (4); CWA 402 (c); CFR 122.44 (1)] that require a reissued permit to be as stringent as the previous permit with some exceptions.

Antidegradation.

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

Applicable Standards and Limitations

All State, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the CWA, including effluent limitations, water quality standards, standards of performance, toxic effluent standards

or prohibitions, best management practices, pretreatment standards, and standards for sewage sludge use or disposal under sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of CWA.

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

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

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

Beneficial Uses of waters of the State may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ)
The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

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

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

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

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

Carbonaceous Biochemical Oxygen Demand (CBOD)
The measurement of oxygen required for carbonaceous oxidation of a nonspecific mixture of organic compounds. Interference caused by nitrifying bacteria in the standard 5-day BOD test is eliminated by suppressing the nitrification reaction.

Certifying Official
All applications, including NOIs, must be signed as follows:

For a corporation: By a responsible corporate officer, which 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.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. 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.

Chemical Oxygen Demand (COD)
A measure of the oxygen-consuming capacity of inorganic and organic matter present in wastewater. COD is expressed as the amount of oxygen consumed in mg/L. Results do not necessarily correlate to the biochemical oxygen demand (BOD) because the chemical oxidant may react with substances that bacteria do not stabilize.

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

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

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

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

b. No Observed Effect Level (NOEL)

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

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

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

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

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

arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

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

Daily Maximum Limit
The maximum allowable daily discharge of pollutant. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the 24-hour period. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that 24-hour period.

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

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

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

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

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

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

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

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

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

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

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

Downstream Ocean Waters
Waters downstream with respect to ocean currents.

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

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

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

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

Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by section 12220

of the California Water Code (CWC), Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PCBs (polychlorinated biphenyls)
The sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

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

Publicly Owned Treatment Works (POTW)
The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of the Clean Water Act, which is owned by a State or municipality [as defined by section 502(4) of the Act]. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

POTW Treatment Plant
The term POTW Treatment Plant means that portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste.

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

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

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

1. Overflows or releases of untreated or partially treated wastewater that reach waters of the United States;
2. Overflows or releases of untreated or partially treated wastewater that do not reach waters of the United States; and
3. Wastewater backups into buildings and on private property that are caused by blockages or flow conditions within the publicly/federally-owned portion of a sanitary sewer system.

SSO Categories

1. **Category 1** - All discharges of sewage resulting from a failure in the Discharger's sanitary sewer system that:

   a. Equal or exceed 1000 gallons, or

   b. Result in a discharge to a drainage channel and/or surface water; or

   c. Discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system.

2. **Category 2** – All other discharges of sewage resulting from a failure in the Discharger's sanitary sewer system.

3. **Private Lateral Sewage Discharges** – Sewage discharges that are caused by blockages or other problems within a privately owned lateral.

SSO Reporting System
Online spill reporting system that is hosted, controlled, and maintained by the State Water Board. The web address for this site is http://ciwqs.waterboards.ca.gov. This online database is maintained on a secure site and is controlled by unique usernames and passwords.

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

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

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

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

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

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

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

Technology-Based Effluent Limit
A permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

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

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control

options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests).

Untreated or Partially Treated Wastewater
Any volume of waste discharged from the sanitary sewer system upstream of a wastewater treatment plant headworks.

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

Water Quality Control Plan
consists of a designation or establishment for the waters within a specified area of all of the following:

1. Beneficial uses to be protected.

2. Water quality objectives.

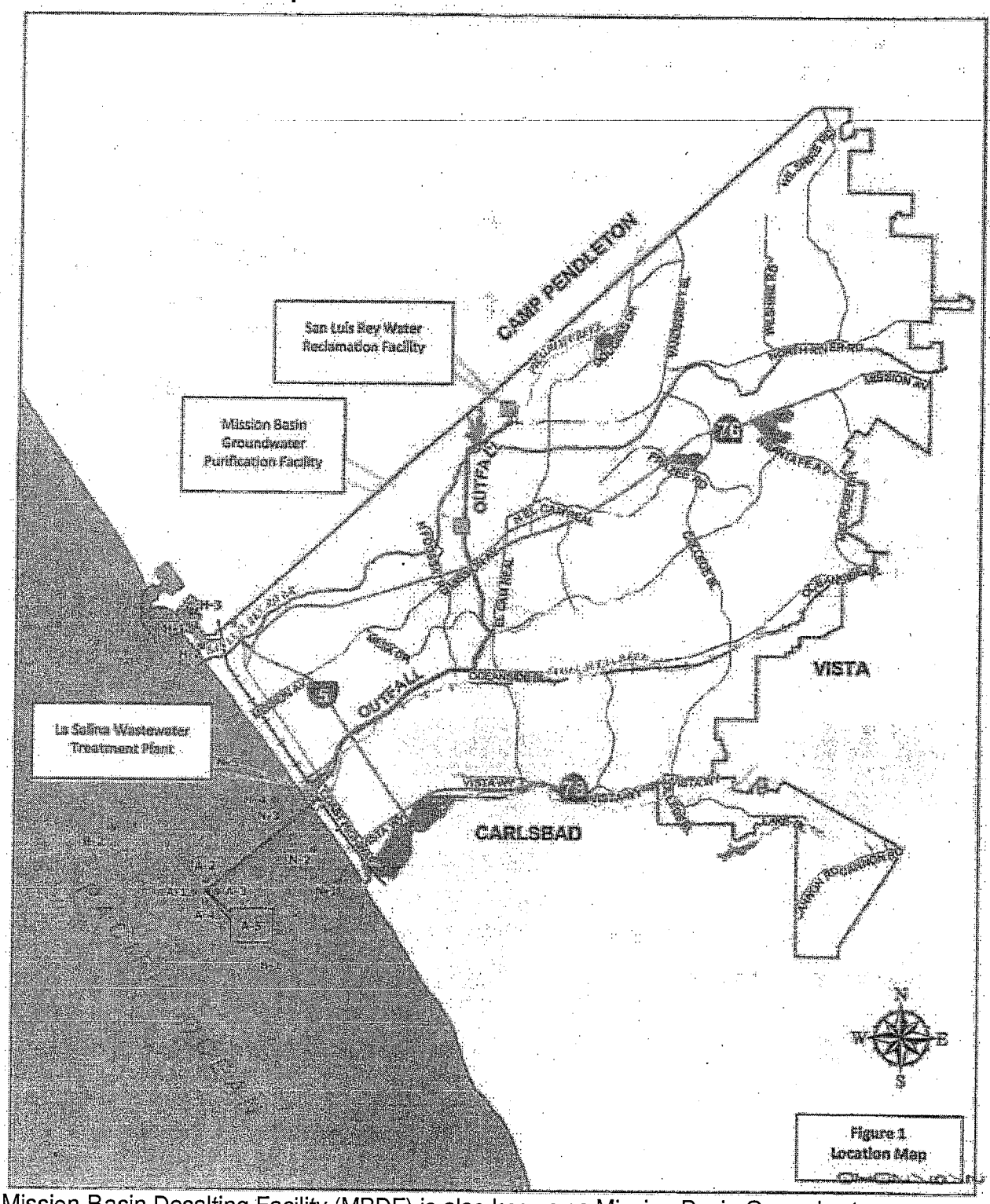
3. A program of implementation needed for achieving water quality objectives.

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

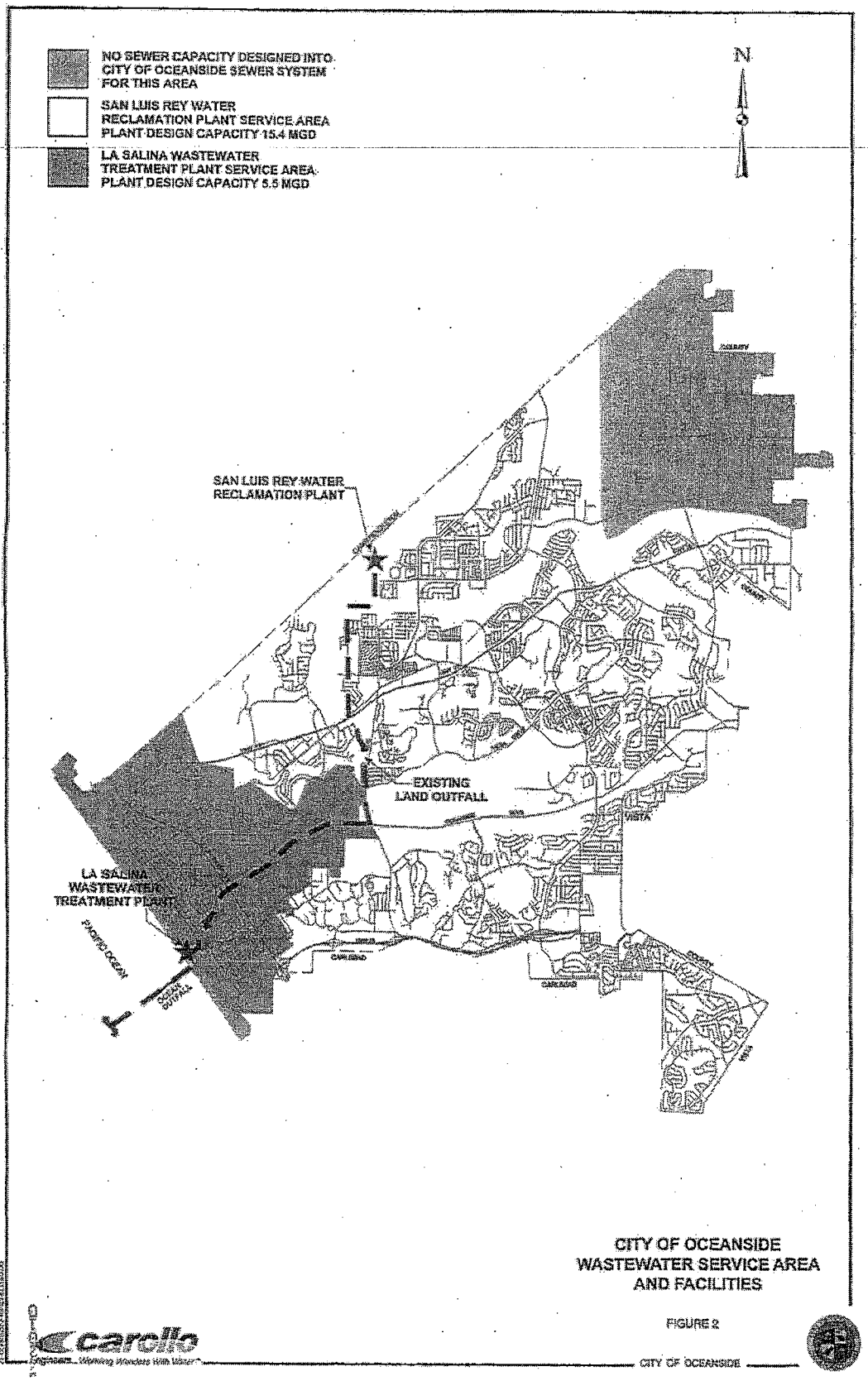
Water Reclamation
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

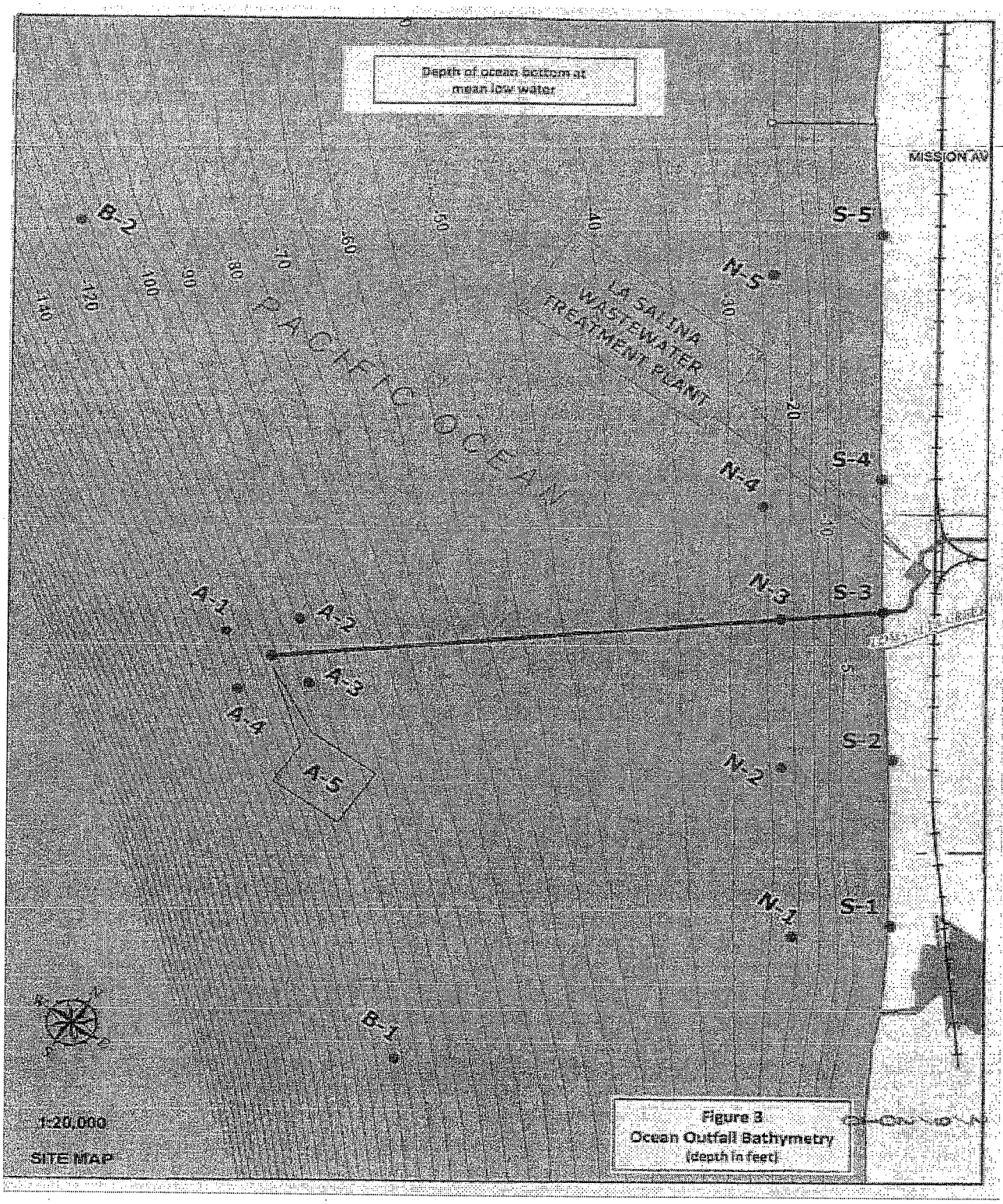
Whole Effluent Toxicity (WET)
The total toxic effect of an effluent measured directly with a toxicity test.

Attachment B – Map

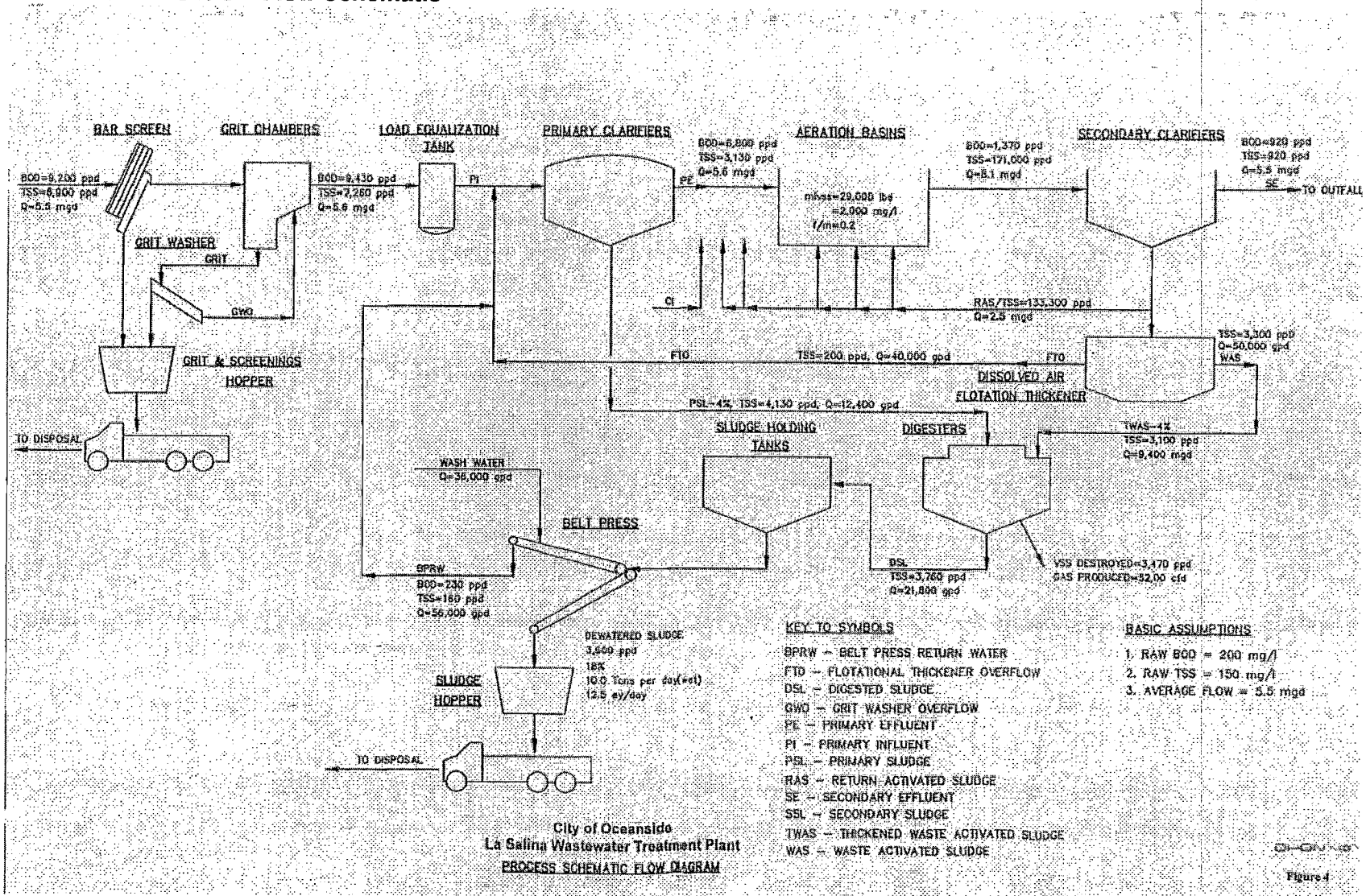


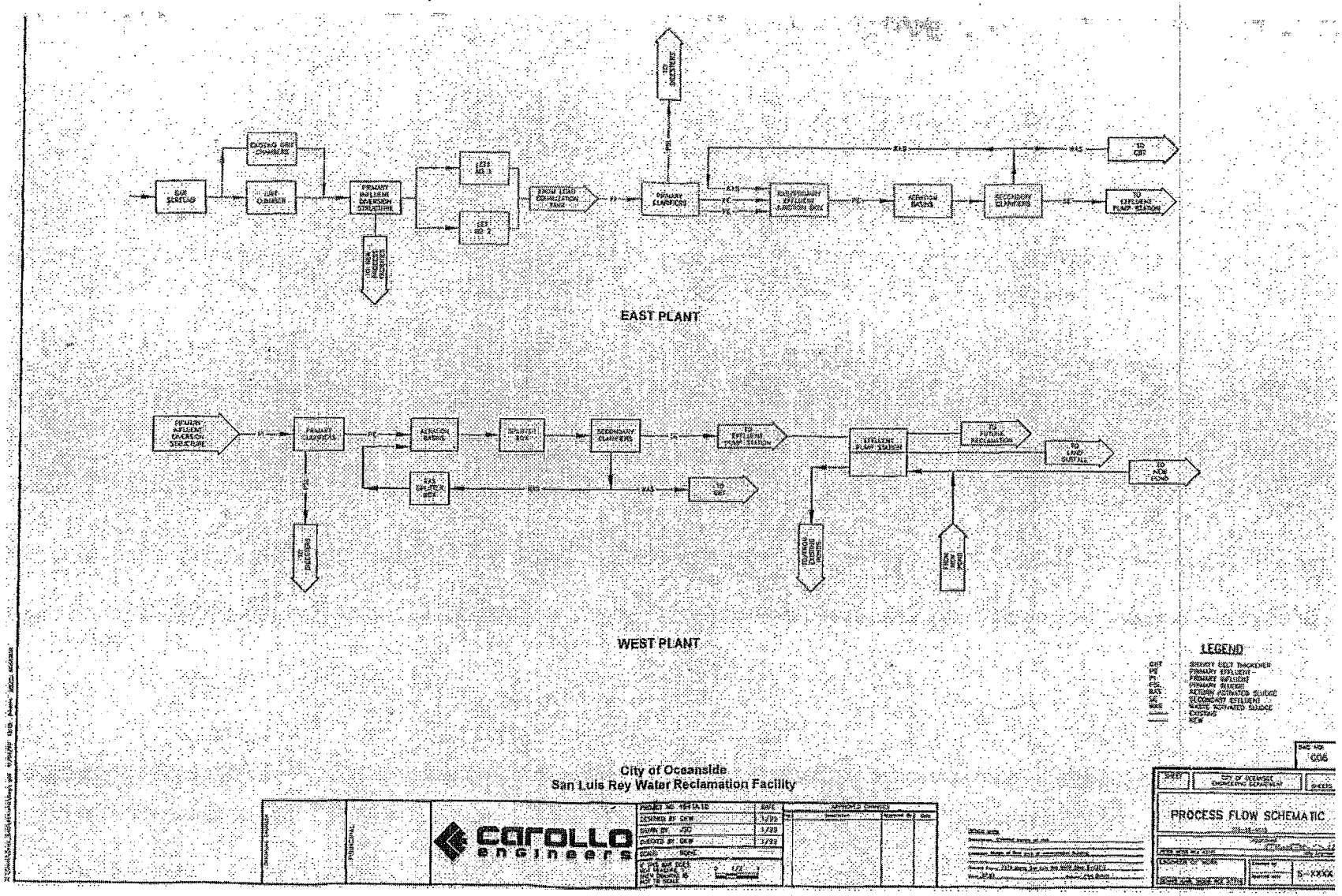
Mission Basin Desalting Facility (MBDF) is also known as Mission Basin Groundwater Purification Facility


NO SEWER CAPACITY DESIGNED INTO CITY OF OCEANSIDE SEWER SYSTEM FOR THIS AREA
SAN LUIS REY WATER RECLAMATION PLANT SERVICE AREA PLANT DESIGN CAPACITY 15.4 MGD
LA SALINA WASTEWATER TREATMENT PLANT SERVICE AREA PLANT DESIGN CAPACITY 5.5 MGD
N
SAN LUIS REY WATER RECLAMATION PLANT
EXISTING LAND OUTFALL
LA SALINA WASTEWATER TREATMENT PLANT
PACIFIC OCEAN
OCEAN OUTFALL
VISTA
CARLSBAD
CITY OF OCEANSIDE
WASTEWATER SERVICE AREA
AND FACILITIES
FIGURE 2
carollo
CITY OF OCEANSIDE

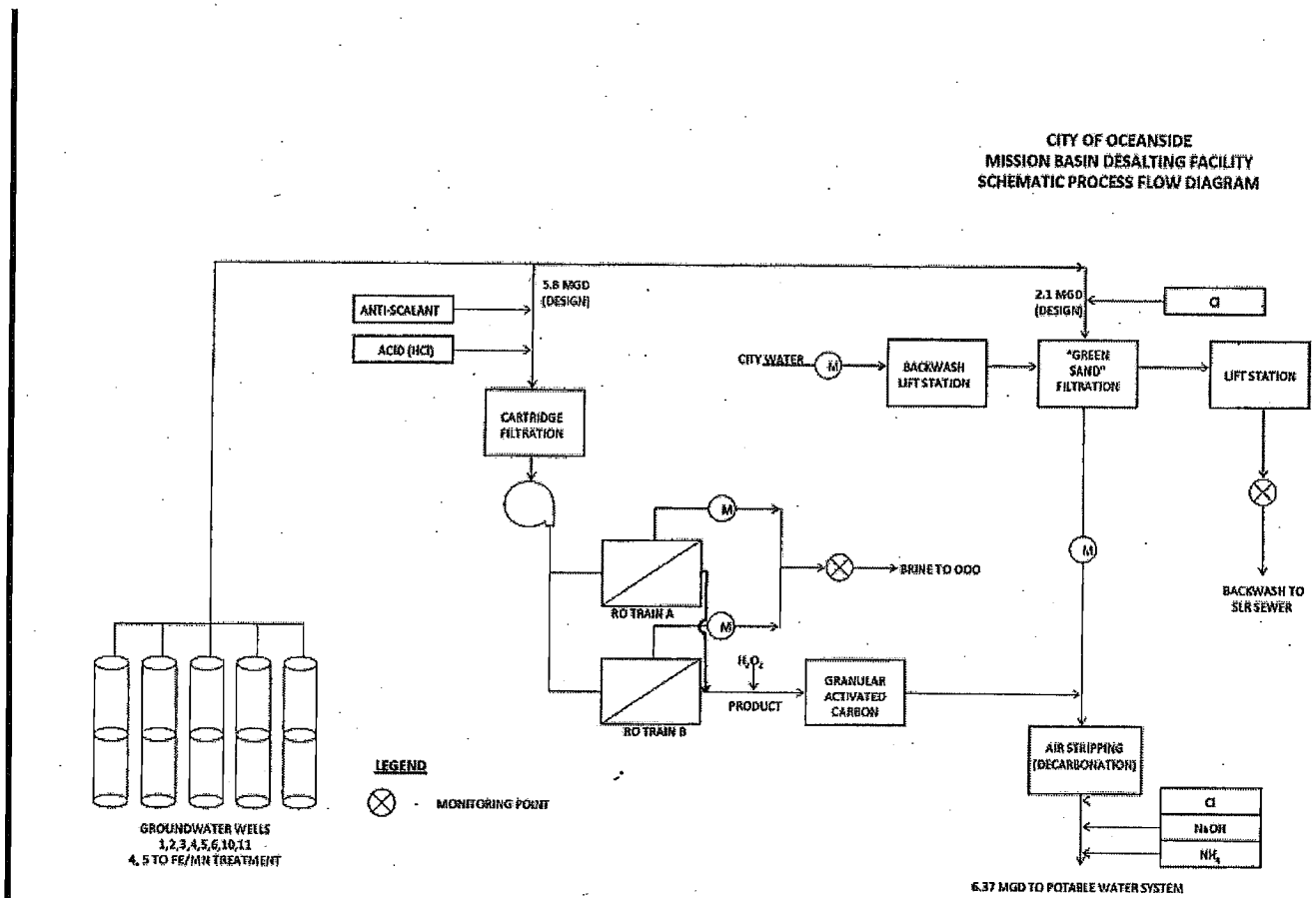

Depth of ocean bottom at mean low water
MISSION AV
B-2
S-5
N-5
-40
-50
-60
-70
-80
-90
-100
-120
-140
LA SALINA WASTEWATER TREATMENT PLANT
PACIFIC OCEAN
-20
S-4
N-4
-10
N-3
S-3
A-1
A-2
A-3
A-4
A-5
S-2
N-2
S-1
N-1
B-1
1:20,000
SITE MAP
Figure 3
Ocean Outfall Bathymetry
(depth in feet)

Attachment C – Flow Schematic




EAST PLANT
WEST PLANT
LEGEND
City of Oceanside
San Luis Rey Water Reclamation Facility
PROCESS FLOW SCHEMATIC
carollo engineers

Mission Basin Desalting Facility



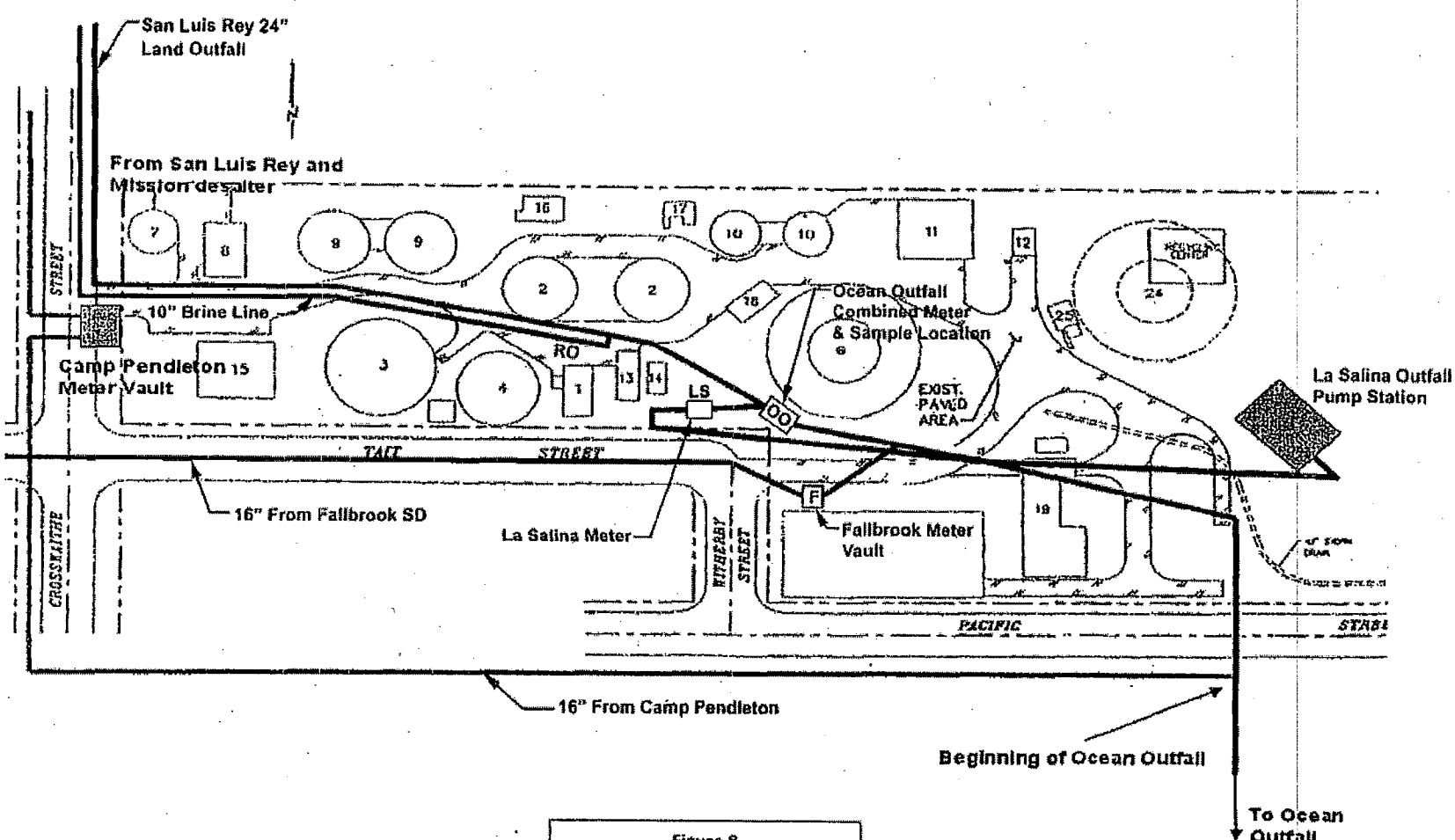


Figure 8
Location of Outfall Pipelines
La Salina WTP

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 122.41(a))

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

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

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

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

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

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

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

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

5. Notice

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

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

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2))

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the San Diego Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); CWC, § 13267)

B. Signatory and Certification Requirements

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

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

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

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

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

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

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

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

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

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E of this Order). (40 CFR 122.22(l)(4))

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

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

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

D. Compliance Schedules

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

E. Twenty Four-Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall

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

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

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

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

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

F. Planned Changes

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

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

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

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The San Diego Water Board is authorized to enforce the terms of this permit under several provisions of the 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 122.42(a)]:

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

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

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

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

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

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

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

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

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

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

B. Publicly-Owned Treatment Works (POTWs)

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

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

List of Tables

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

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitoring discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the San Diego Water Board. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirement of this Order.

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

C. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, or unless other test procedures are specified in this Order and/or in this MRP and/or by the San Diego Water Board.

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

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

F. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices.

G. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples or at least one sample per month, whichever is

greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA or the San Diego Water Board, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger should have a success rate equal or greater than 80 percent.

H. Analysis for toxic pollutants, including chronic toxicity, with performance goals based on water quality objectives of the 2005 California Ocean Plan (hereinafter Ocean Plan) shall be conducted in accordance with procedures described in the Ocean Plan and restated in this MRP.

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	At a location where all influent flows to San Luis Rey Water Reclamation Facility (SLRWRF) are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
--	INF-002	At a location where all influent flows to La Salina Wastewater Treatment Plant (LSWTP) are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
--	M-001	Downstream of any in-plant return flows at SLRWRF where representative samples of effluent treated solely at SLRWRF can be collected.
--	M-002	Downstream of any in-plant return flows at LSWTP where representative samples of effluent treated solely at LSWTP can be collected.
--	M-003	At a location where a representative sample of reverse osmosis brine can be obtained from Mission Bay Groundwater Purification Facility (MBDF), prior to commingling with other wastewaters.
001	M-004	At a location where representative samples of commingled effluent from SLRWRF, LSWTP, MBDF and Genentech can be collected before combining with wastewaters from Fallbrook Public Utility District and US Marine Corp Base Camp Pendleton.
001	M-005	At a location downstream of all wastewaters discharged to the Oceanside Ocean Outfall (OOO) can be obtained or accounted for. Alternatively, the monitoring requirements at M-005 may be achieved using the sum of flow monitoring devices that account for all contributing flows to the OOO.
SURF ZONE STATONS		
--	S1	Surf zone, 5,500 feet south of the outfall.
--	S2	Surf zone, 2,500 feet south of the outfall.
--	S3	Surf zone; at the outfall

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	S4	Surf zone, 2,000 feet north of the outfall.
--	S5	Surf zone, 5,800 feet north of the outfall.
--	S6	To be determined at a later date
--	S7	To be determined at a later date.
NEAR SHORE STATIONS		
--	N1	Opposite S1, at the 30 foot depth contour, MLLW.
--	N2	Opposite S2, at the 30 foot depth contour, MLLW.
--	N3	Opposite S3, at the 30 foot depth contour, MLLW.
--	N4	Opposite S4, at the 30 foot depth contour, MLLW.
--	N5	Opposite S5, at the 30 foot depth contour, MLLW.
--	N6	To be determined at a later date.
--	N7	To be determined at a later date.
OFFSHORE STATIONS		
--	A1-A4	At the corners of a 1,000 ft x 1,000 ft square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall.
--	A5	At the seaward end of the outfall.
--	B1	One mile downcoast from the outfall, and over the same depth contour as Station A5.
--	B2	One mile upcoast from the outfall and over the same depth contour as Station A5.
BIOLOGICAL TRANSECTS		
--	T0	At the 20, 40, 60, and 80 foot depth contours along the transect located 50 feet downcoast of and parallel to the outfall.
--	T1	At the 20, 40, 60, and 80 foot depth contours along the transect located 1 mile downcoast of and parallel to the outfall.
--	T2	At the 20, 40, 60, and 80 foot depth contours along the transect located 1.5 miles downcoast of and parallel to the outfall.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001 and INF-002

1. The Discharger shall monitor the influent at INF-001 and INF-002, respectively, as follows.

Table E-2. Influent Monitoring (SLRWRF and LSWTP)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C) ($CBOD_5$)	mg/L	24-hr Composite	1/Week	[1]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/Week	[1]

[1] As required under 40 CFR Part 136.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001, M-002, M-003, M-004, and M-005

1. The Discharger shall monitor the effluent at M-001 and M-002 as follows.

Table E-3. Effluent Monitoring at M-001 & M-002 (SLRWRF and LSWTP)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
TSS	mg/L	24-hr Composite	1/Day[2]	1,3,4
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hr Composite	1/Month	1,3
$CBOD_5$	mg/L	24-hr composite	1/Day[2]	1,3,4
Oil and Grease	mg/L	Grab	1/Month[5]	1,3
Settleable Solids	mL/L	Grab	1/Day[2]	1
Turbidity	NTU	24-hr Composite	1/Week[5]	1
pH	pH Units	Grab	1/Day[2]	1

1 As required under 40 CFR Part 136.
2 Applies 5 days per week, except 7 days per week for at least 1 week in July or August of each year.
3 The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.2.d of this Order.
4 The Discharger shall calculate the monthly average percent removal for these constituents.
5 The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.

2. The Discharger shall monitoring the effluent from M-003 as follows:

Table E-4. Effluent Monitoring at M-003 (MBDF)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
TSS	mg/L	24-hr Composite	1/Day[2]	1
Oil and Grease	mg/L	Grab	1/Month[4]	1,3
Settleable Solids	mL/L	Grab	1/Day[2]	1
Turbidity	NTU	24-hr Composite	1/Week[4]	1
pH	pH Units	Grab	1/Day	1

1 As required under 40 CFR Part 136.
2 Applies 5 days per week, except 7 days per week for at least 1 week in July or August of each year.
3 The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.2.d of this Order.

[4] The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.

3. The Discharger shall monitor the effluent from M-004 (Discharge Point No. 001) as follows.

Table E-5. Combined Effluent Monitoring at M-004

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
Temperature	°F	Grab	1/Week	1
Dissolved Oxygen	mg/L	Grab	1/Week	1
TABLE B PARAMETERS FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Cadmium, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Chromium (VI), Total Recoverable[5]	µg/L	24-hr Composite	2/Year [3,4]	1
Copper, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Lead, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Mercury, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Nickel, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Selenium, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Silver, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Zinc, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Cyanide, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1,6
Chlorine, Total Residual	µg/L	Grab	1/Day [3,7]	1
Ammonia Nitrogen, Total (as N)	mg/L	24-hr Composite	1/Month [3,4]	1
Phenolic Compounds (nonchlorinated)[8]	µg/L	24-hr Composite	2/Year [3,4]	1
Phenolic Compounds (chlorinated)[9]	µg/L	24-hr Composite	2/Year [3,4]	1
Endosulfan[10]	µg/L	24-hr Composite	2/Year [3,4]	1
Endrin	µg/L	Grab	2/Year [3,4]	1
HCH[11]	µg/L	Grab	2/Year [3,4]	1
Radioactivity	pCi/L	Grab	2/Year [3,4]	1
TABLE B PARAMETERS FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS				
Acrolein	µg/L	Grab	2/Year [3,4]	1
Antimony, Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Bis (2-chloroethoxy) Methane	µg/L	Grab	2/Year [3,4]	1
Bis (2-chloroisopropyl) Ether	µg/L	Grab	2/Year [3,4]	1
Chlorobenzene	µg/L	Grab	2/Year [3,4]	1
Chromium (III), Total Recoverable	µg/L	24-hr Composite	2/Year [3,4]	1
Di-n-butyl Phthalate	µg/L	Grab	2/Year [3,4]	1
Dichlorobenzenes[12]	µg/L	Grab	2/Year [3,4]	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Diethyl Phthalate	µg/L	Grab	2/Year[3,4]	1
Dimethyl Phthalate	µg/L	Grab	2/Year[3,4]	1
4,6-dinitro-2-methylphenol	µg/L	Grab	2/Year[3,4]	1
2,4-dinitrophenol	µg/L	Grab	2/Year[3,4]	1
Ethylbenzene	µg/L	Grab	2/Year[3,4]	1
Fluoranthene	µg/L	Grab	2/Year[3,4]	1
Hexachlorocyclopentadiene	µg/L	Grab	2/Year[3,4]	1
Nitrobenzene	µg/L	Grab	2/Year[3,4]	1
Thallium, Total Recoverable	µg/L	24-hr Composite	2/Year[3,4]	1
Toluene	µg/L	Grab	2/Year[3,4]	1
Tributyltin	µg/L	24-hr Composite	1/Quarter[3,4]	1
1,1,1-trichloroethane	µg/L	Grab	2/Year[3,4]	1
TABLE B PARAMETERS FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS				
Acrylonitrile	µg/L	Grab	2/Year[3,4]	1
Aldrin	µg/L	Grab	2/Year[3,4]	1
Benzene	µg/L	Grab	2/Year[3,4]	1
Benzidine	µg/L	Grab	2/Year[3,4]	1
Beryllium, Total Recoverable	µg/L	24-hr composite	2/Year[3,4]	1
Bis (2-chloroethyl) Ether	µg/L	Grab	2/Year[3,4]	1
Bis (2-ethlyhexyl) Phthalate	µg/L	Grab	2/Year[3,4]	1
Carbon Tetrachloride	µg/L	Grab	2/Year[3,4]	1
Chlordane	µg/L	Grab	2/Year[3,4]	1
Chlorodibromomethane	µg/L	Grab	2/Year[3,4]	1
Chloroform	µg/L	Grab	2/Year[3,4]	1
DDT[13]	µg/L	Grab	2/Year[3,4]	1
1,4-dichlorobenzene	µg/L	Grab	2/Year[3,4]	1
3,3'-dichlorobenzidine	µg/L	Grab	2/Year[3,4]	1
1,2-dichloroethane	µg/L	Grab	2/Year[3,4]	1
1,1-dichloroethylene	µg/L	Grab	2/Year[3,4]	1
Dichlorobromomethane	µg/L	Grab	2/Year[3,4]	1
Dichloromethane	µg/L	Grab	2/Year[3,4]	1
1,3-dichloropropene	µg/L	Grab	2/Year[3,4]	1
Dieldrin	µg/L	Grab	2/Year[3,4]	1
2,4-dinitrotoluene	µg/L	Grab	2/Year[3,4]	1
1,2-diphenylhydrazine	µg/L	Grab	2/Year[3,4]	1
Halomethanes[14]	µg/L	Grab	2/Year[3,4]	1
Heptachlor	µg/L	Grab	2/Year[3,4]	1
Heptachlor Epoxide	µg/L	Grab	2/Year[3,4]	1
Hexachlorobenzene	µg/L	Grab	2/Year[3,4]	1
Hexachlorobutadiene	µg/L	Grab	2/Year[3,4]	1
Hexachloroethane	µg/L	Grab	2/Year[3,4]	1
Isophorone	µg/L	Grab	2/Year[3,4]	1
N-nitrosodimethylamine	µg/L	Grab	2/Year[3,4]	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
N-nitrosodi-N-propylamine	µg/L	Grab	2/Year[3,4]	[1]
N-nitrosodiphenylamine	µg/L	Grab	2/Year[3,4]	[1]
PAHs[15]	µg/L	Grab	2/Year[3,4]	[1]
PCBs[16]	µg/L	Grab	2/Year[3,4]	[1]
TCDD equivalents[17]	µg/L	Grab	1/Quarter[3,4]	[1]
1,1,2,2-tetrachloroethane	µg/L	Grab	2/Year[3,4]	[1]
Tetrachloroethylene	µg/L	Grab	2/Year[3,4]	[1]
Toxaphene	µg/L	Grab	2/Year[3,4]	[1]
Trichloroethylene	µg/L	Grab	2/Year[3,4]	[1]
1,1,2-trichloroethane	µg/L	Grab	2/Year[3,4]	[1]
2,4,6-trichlorophenol	µg/L	Grab	2/Year[3,4]	[1]
Vinyl Chloride	µg/L	Grab	2/Year[3,4]	[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

[1] As required under 40 CFR Part 136.

[2] Applies 5 days per week, except 7 days per week for at least 1 week in July or August of each year.

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

[4] The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.

[5] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

[6] If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, performance goals for cyanide may be met by the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR Part 136, as revised May 14, 1999.

[7] Monitoring of total chlorine residual is not required on days when none of the treatment units that are subject to this Order use chlorine for disinfection. If only one sample is collected for total chlorine residual analysis on a particular day, that sample must be collected at the time when the concentration of total chlorine residual in the discharge would be expected to be greatest. The times of chlorine discharges on the days that samples are collected, and the time at which samples are collected, shall be reported.

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

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

[10] Endosulfan represents the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.

[11] HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

[12] Dichlorobenzenes represent the sum of 1,2- and 1,3-dichlorobenzene.

[13] DDT represents the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

[14] Halomethanes represent the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[15] PAHs (polynuclear aromatic hydrocarbons) represent the sum of acenapthalene; 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.

[16] PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Arolclor-1254, and Arcolor-1260.

[17] TCDD equivalents represent the sum of 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 by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.

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 CDD	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

4. The Discharger shall monitor the effluent at M-005 as follows.

Table E-6. Effluent Monitoring at M-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer[1]	Continuous	--

[1] Total flow for M-005 may be determined either by a single meter, or by the sum of numerous meters that account for all wastewaters discharged to the OOO (discharge from SLRWRF, LSWTP, MBDF, Genentech, Fallbrook Public Utility District, and US Marine Corp Base Camp Pendleton).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall conduct chronic toxicity testing on effluent samples collected at Effluent Monitoring Station M-004 in accordance with the following schedule and requirements:

Table E-7. Whole Effluent Toxicity Testing

Test	Unit	Sample Type	Minimum Test Frequency
Screening period for chronic toxicity	TU_c	24-hr Composite	Every other year for 3 consecutive months, beginning with the calendar year 2011
Chronic Toxicity	TU_c	24-hr Composite	2/Year

Marine Organisms, 5th Edition, October 2002 (EPA-821-R-02-012).

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

A screening period for chronic toxicity shall be conducted every other year beginning with the calendar year 2011. Each screening period shall consist of 3 consecutive months of WET tests, , using a minimum of three test species with approved test protocols, from the following list (from the Ocean Plan). Repeat screening periods may be terminated after the first month if the most sensitive species is the same as the species previously found to be most sensitive. Other tests may be used, if they have been approved for such testing by the State Water Board. The test species shall include a fish, an invertebrate, and an aquatic plant. After the screening period, the most sensitive test species shall be used for the quarterly testing. Control and dilution water should be receiving water or lab water as appropriate. If the dilution water is different from the culture water, then culture water should be used in a second control. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with test results.

Table E-8. Approved Test for Chronic Toxicity

Species	Test	Tier [1]	Reference [2]
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	a, c
red abalone, *Haliotis rufescens*	abnormal shell development	1	a, c
oyster, *Crassostrea gigas*; mussels, *Mytilus spp.*	abnormal shell development; percent survival	1	a, c
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	a, c
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	a, c
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. If first tier organisms are not available, the Discharger can use a second tier test method following approval by the San Diego Water Board.

2 Protocol References:

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

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

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

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

If the performance goal for chronic toxicity is exceeded in any one test, then within 15 days of the exceedance, the Discharger shall begin conducting six additional tests, bi-weekly, over a 12 week period. If the toxicity effluent limitation is exceeded in any of these six additional tests, then the Discharger shall notify the Executive Officer. If the Executive Officer determines that the discharge consistently exceeds a toxicity performance goal, then the Discharger shall initiate a TRE/TIE in accordance with the TRE workplan, Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants (USEPA 833-B-99-002, 1999), and USEPA TIE guidance documents (Phase I, EPA/600/6-91/005F, 1992; Phase II, EPA/600/R-92/080, 1993; and Phase III, EPA/600/R-92/081, 1993). Once the source of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the chronic toxicity performance goal identified in section IV.A.2 of this Order.

Within 30 days of completion of the TRE/TIE, the Discharger shall submit the results of the TRE/TIE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations/performance goals of this Order and prevent recurrence of exceedances of those

limitations/performance goals, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer.

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

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

The receiving water monitoring program required herein is also required by San Diego Water Board Order No. R9-2011-0016, which establishes limitation and conditions for discharges from the City of Oceanside's Facilities. The Discharger may conduct the required receiving water monitoring together with the Fallbrook Public Utility District, US Marine Corps Base Camp Pendleton, and Genentech, as these entities discharge through the OOO.

Receiving water and sediment monitoring in the vicinity of the OOO shall be conducted as specified below. Station location, sampling, sampling preservation and analyses, when not specified, shall be by methods approved by the Executive Officer. The monitoring program may be modified by the Executive Officer at any time.

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

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

A. Surf Zone Water Quality Monitoring

All surf zone stations shall be monitored as follows.

1. Grab samples shall be collected and analyzed for total and fecal coliform and enterococcus bacteria at a minimum frequency of one time per week. As required by implementation procedures at section III.D of the Ocean Plan, measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliform bacteria is required.

   If a single sample exceeds any of the single sample bacterial standards, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued until the sample result is less than the

single sample bacterial standards or until a sanitary survey is conducted to determine the source of the high bacterial densities.

Single sample bacterial standards include:

i. Total coliform density will not exceed 10,000 per 100 ml; or

ii. Fecal coliform density will not exceed 400 per 100 ml; or

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

iv. Enterococcus density will not exceed 104 per 100 ml.

2. At the same time samples are collected from surf zone stations, the following information shall be recorded: observation of wind direction and speed; weather (cloudy, sunny, or rainy); current direction; tidal conditions; and observations of water color, discoloration, oil and grease; turbidity, odor, and materials of sewage origin in the water or on the beach; water temperature (°F); and status of the mouth of the Buena Vista Lagoon (open, closed, flow, etc.).

B. Near Shore Water Quality Monitoring

All near shore stations shall be monitored as follows.

1. Reduced Monitoring

If the Executive Officer determines that the effluent complies with the effluent limitations and performance goals at section IV.A of this Order and the receiving water limitations at section V.A of this Order at all times, only reduced near shore water quality monitoring specified below is required.

Table E-9. Near Shore Water Quality Reduced Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	--	--	1/Month
Total Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Fecal Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Enterococcus	Number / 100 mL	Grab[1]	1/Month

[1] At the surface.

2. Intensive Monitoring

The intensive near shore water quality monitoring specified below is required during the 12-month period beginning November 1, 2013 through October 31, 2014, and must be submitted by December 1, 2014. This monitoring data will assist the San Diego Water Board in the evaluation of the Report of Waste Discharge. The intensive near shore water quality monitoring specified below may also be required if the Executive Officer determines that 1) the effluent does not at all times comply with

the effluent limitations and performance goals of this Order, or 2) the receiving water limitations of this Order are not being consistently achieved.

Table E-10. Near Shore Water Quality Intensive Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	--	--	1/Month
Total Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Fecal Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Enterococcus	Number / 100 mL	Grab[1]	1/Month

[1] At the surface and mid-depth.

C. Off Shore Water Quality Monitoring

All off shore stations shall be monitored as follows.

1. Reduced Monitoring

If the Executive Officer determines that the effluent at all times complies with the effluent limitations and performance goals at section IV.A of this Order and the receiving water limitations at section V.A of this Order, only reduced off shore water quality monitoring specified below is required.

Table E-11. Off Shore Water Quality Reduced Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	--	--	1/Month
Total Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Fecal Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Enterococcus	Number / 100 mL	Grab[1]	1/Month

[1] At surface and mid-depth.

2. Intensive Monitoring

The intensive off shore water quality monitoring specified below is required during the 12-month period beginning November 1, 2013 through October 31, 2014, and must be submitted by December 1, 2014. This monitoring data will assist the San Diego Water Board in the evaluation of the Report of Waste Discharge. The intensive off shore water quality monitoring specified below may also be required if the Executive Officer determines that 1) the effluent does not at all times comply with the effluent limitations and performance goals of this Order, or 2) the receiving water limitations of this Order are not being consistently achieved.

Table E-12. Off Shore Water Quality Intensive Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	--	--	1/Month
Total Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Fecal Coliform Organisms	Number / 100 mL	Grab[1]	1/Month
Enteroccoccus	Number / 100 mL	Grab[1]	1/Month
Conductivity, Temperature, and Depth	Practical Salinity Units, °F, feet	Grab[2]	1/Month
Dissolved Oxygen	mg/L	Grab[2]	1/Month
Light Transmittance	percent	Instrument[2]	1/Month
pH	standard units	Grab[3]	1/Month

1 At the surface and mid-depth.
2 At the surface, mid-depth, and bottom.
3 At the surface.

D. Benthic Monitoring

The intensive monitoring specified below is required during the 12-month period beginning November 1, 2013 through October 31, 2014, and must be submitted by December 1, 2014. This monitoring data will assist the San Diego Water Board in the evaluation of the Report of Waste Discharge. The sediment monitoring specified below may also be required if the Executive Officer determines that 1) the effluent does not at all times comply with Effluent Limitations and Performance Goals of this Order or 2) the receiving water limitations of this Order are not being consistently achieved. Benthic monitoring shall be conducted at all off shore monitoring stations.

1. **Sediment Characteristics.** Analyses shall be performed on the upper 2 inches of core.

Table E-13. Sediment Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Sulfides	mg/kg	Core	2/Year
Total Chlorinated Hydrocarbons	mg/kg	Core	2/Year
Biochemical Oxygen Demand (5-day @ 20°C)	mg/kg	Core	2/Year
Chemical Oxygen Demand	mg/kg	Core	2/Year
Particle Size Distribution	mg/kg	Core	2/Year
Arsenic	mg/kg	Core	1/Year
Cadmium	mg/kg	Core	1/Year
Total Chromium	mg/kg	Core	1/Year
Copper	mg/kg	Core	1/Year
Lead	mg/kg	Core	1/Year
Mercury	mg/kg	Core	1/Year
Nickel	mg/kg	Core	1/Year
Silver	mg/kg	Core	1/Year
Zinc	mg/kg	Core	1/Year
Cyanide	mg/kg	Core	1/Year
Phenolic Compounds	mg/kg	Core	1/Year
Radioactivity	pCi/kg	Core	1/Year

2. **Infauna.** Samples shall be collected with a Paterson, Smith-McIntyre, or orange-peel type dredge, having an open sampling area of not less than 124 square inches and a sediment capacity of not less than 210 cubic inches. The sediment shall be sifted through a 1-millimeter mesh screen and all organisms shall be identified to as low a taxon as possible.

Table E-14. Infauna Monitoring Requirements

Determination	Units	Sample Type	Minimum Frequency
Benthic Biota	Identification and enumeration	3 Grabs	2/Year

E. Additional Biological Monitoring – Demersal Fish and Macroinvertebrates

The intensive monitoring specified below is required during the 12-month period beginning November 1, 2013 through October 31, 2014, and must be submitted by December 1, 2014. This monitoring data will assist the San Diego Water Board in the evaluation of the Report of Waste Discharge, which is required to be submitted by the Discharger within 180 days prior to the Order's expiration date of March 2, 2016.

Table E-15. Demersal Fish and Macroinvertebrates Monitoring Requirements

Determination	Units	Minimum Frequency
Biological Transects	Identification and enumeration	Year 4

In rocky or cobble areas, a 30-meter band transect, 1 meter wide, shall be established on the ocean bottom. Operations at each underwater station shall include: (1) recording of water temperature (may be measured from a boat) and estimated visibility and pelagic macrobiota at each 10-foot depth increment throughout the water column and at the bottom; (2) recording of general bottom description; (3) enumeration by estimate of the larger plants and animals in the band transect area; (4) development of a representative photographic record of the sample area; and (5) within each band, three ¼-meter square areas shall be randomly selected, and all macroscopic plant and animal life shall be identified within each square to as low a taxon as possible, and measured. Sampling techniques will follow those employed by biologist divers of the California State Department of Fish and Game.

In sandy areas, a 30-meter band transect, 1 meter wide, shall be established on the ocean bottom. Operations at each underwater station shall include: (1) recording of water temperature (may be measured from a boat), and estimated visibility and pelagic macrobiota at each 10-foot depth increment throughout the water column and at the bottom; (2) recording of general bottom description; (3) recording of height, period, and crest direction of ripple marks; (4) recording of amount, description, and location of detritus on bottom; (5) creation of a representative photographic record of the area sampled; and (6) within each band, three cores of at least 42.5 cm^2 in area shall be randomly taken to a depth of 15 cm where possible, (the three cores may be taken from a boat) and the material removed sifted through at least a 1 mm mesh screen, and all organisms identified to as low a taxon as possible, enumerated, measured, and

reproductive conditions assessed where feasible. Sampling techniques will follow those employed by biologist divers of the California State Department of Fish and Game.

For each epifauna and infauna, size frequency and distribution shall be shown for at least the three numerically largest populations identified to the lowest possible taxon and appropriate graphs showing the relationship between species frequency and population shall be plotted from each sample.

IX. OTHER MONITORING REQUIREMENTS

A. Kelp Bed Canopy

The Discharger shall participate with other ocean dischargers in the San Diego Region in an annual regional kelp bed photographic survey. Kelp beds shall be monitored annually by means of vertical aerial infrared photography to determine the maximum aerial extent of the region's coastal kelp beds within the calendar year. Surveys shall be conducted as close as possible to the time when kelp bed canopies cover the greatest area. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day.

The images produced by the surveys shall be presented in the form of 1:24,000 scale photo-mosaic of the entire San Diego Region coastline. Onshore reference points, locations of all ocean outfalls and diffusers, and the 30-foot mean lower low water (MLLW) and 60-foot (MLLW) depth contours shall be shown.

The aerial extent of the various kelp beds photographed in each survey shall be compared to that noted in surveys of previous years. Any significant losses which persist for more than one year shall be investigated by divers to determine the probable reason for the loss.

B. Regional Monitoring

The Discharger is required to participate in regional monitoring activities pursuant to CWC 13267, 13383, and 40 CFR 122.48. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated sampling efforts, the Discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of effort will be provided to the Executive Officer and USEPA for approval.

C. Solids Monitoring

The Discharger shall report, annually, the volume of screenings, sludge [biosolids], grit, and other solids generated and/or removed during wastewater treatment and the locations where these waste materials are placed for disposal. Copies of all annual reports required by 40 CFR Part 503 shall be submitted to the San Diego Water Board at the same time they are submitted to the USEPA.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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

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

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

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

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

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

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

3. The Discharger shall report all instances of noncompliance not reported under Attachment D, sections III, V, and VI of this Order at the time monitoring reports are submitted.

4. By March 1 of each year, the Discharger shall submit an annual report to the San Diego Water Board and USEPA Region 9 that contains tabular and graphical summaries of the monitoring data obtained during the previous year. The Discharger shall discuss the compliance record and corrective actions taken, or

which may be taken, or which may be needed to bring the discharge into full compliance with the requirements of this Order and this MRP.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, 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/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. When electronic submittal of data is required, the CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

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

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

Table E-16. Monitoring Periods and Reporting Schedule

Sampling Frequency/ Report Type	Monitoring Period Begins	Monitoring Period	SMR Due Date
Continuous	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month.	All	First day of second calendar month following month of sampling.
1/Day	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month.	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling.
1/Week	First Sunday of the calendar month following the permit effective date or on permit effective date if on a Sunday.	Sunday through Saturday	First day of second calendar month following month of sampling.
1/Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month.	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.

Sampling Frequency/ Report Type	Monitoring Period Begins	Monitoring Period	SMR Due Date
1/Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date.	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
2/Year	Closest of January 1 or July 1 following (or on) permit effective date.	January 1 through June 30 July 1 through December 31	August 1 February 1
Significant Industrial User Compliance Status Report	Closest of January 1 or July 1 following (or on) permit effective date.	January 1 through June 30 July 1 through December 31	September 1 March 1
1/Year Pretreatment Program Biosolids Report Compliance Schedule – progress report	January 1 following (or on) permit effective date.	January 1 through December 31	March 1 (Biosolids Report – February 19)
Intensive Monitoring	November 1, 2013	November 1, 2013 through October 31, 2014	December 1, 2014

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

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

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

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

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the

reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

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

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

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 DNQ or ND, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

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

   a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. 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 waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

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

9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

C. Discharge Monitoring Reports (DMRs)

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

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

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

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

D. Other Reports

1. The Discharger shall report the results of any chronic toxicity testing, TRE/TIE, Oceanside Ocean Outfall Capacity Study, Treatment Plant Capacity Study, Sludge Disposal Report, and Pretreatment Report, as required by Special Provisions – VI.C. of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	9 000000146	
Discharger	City of Oceanside	
Name of Facility	Oceanside Ocean Outfall	
Facility Address	**San Luis Rey Water Reclamation Facility**	3950 N. River Rd Oceanside, CA 92058 San Diego County
	La Salina Wastewater Treatment Plant	1330 Tait Street Oceanside, CA 92054 San Diego County
	Mission Basin Desalting Facility	Fireside & Heritage Street Oceanside, CA 92054
Facility Contact, Title and Phone	Mark Anderson, Water Utilities Division Manager, (760) 435-5957	
Authorized Person to Sign and Submit Reports	Mark Anderson, Water Utilities Division Manager, (760) 435-5957	
Mailing Address	300 N. Coast Highway, Oceanside, CA 92054	
Billing Address	Same as Mailing Address	
Type of Facility	Publicly Owned Treatment Works (POTW)	
Major or Minor Facility	Major	
Threat to Water Quality	1	
Complexity	A	
Pretreatment Program	Yes	
Reclamation Requirements	Producer and Distributor (regulated under separate waste discharge requirements (WDRs))	

Facility Permitted Discharge Flow Rate	• San Luis Rey Water Reclamation Facility -13.5 million gallons per day (MGD) discharge to the OOO through the land outfall; or up to 15.4 MGD if written authorization is obtained from the San Diego Water Board pursuant to section VI.C.5.a.ii. of this Order. • La Salina Wastewater Treatment Plant - 5.5 MGD • Mission Basin Desalting Facility – 2.0 MGD • Combined discharge to the Oceanside Ocean Outfall, including discharges from the SLRWRF, LSWTP, MBDF, Genentech, Fallbrook Public Utility District (PUD), and US Marine Corps Camp Pendleton[1] – 22.6 MGD; however the permitted combined discharge flow rate to the Oceanside Ocean Outfall from the SLRWRF, LSWTP, BMGPF, Genentech, Fallbrook Public Utility District, and US Marine Corps Camp Pendleton may be increased to 23.1 MGD, 23.4 MGD, or 24.4 MGD if written authorization is obtained from the San Diego Water Board pursuant to section VI.C.5.a.i of this Order.
Facility Design Flow	same as Facility Permitted Discharge Flow Rate above
Watershed	Pacific Ocean
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean

1. Discharges from Genentech, Fallbrook PUD, and the US Marine Corps Camp Pendleton to the Oceanside Ocean Outfall are regulated under separate waste discharge requirements/NPDES permits.

A. The City of Oceanside (hereinafter Discharger) is the owner and operator of the Oceanside Ocean Outfall (OOO), the San Luis Rey Water Reclamation Facility (SLRWRF), the La Salina Wastewater Treatment Plant (LSWTP), and the City of Oceanside sanitary sewer system; together these facilities comprise a municipal POTW. The Discharger also owns and operates the Mission Basin Desalting Facility (MBDF). Hereinafter, these facilities are collectively referred to as the Facility.

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

B. The Facility discharges effluent consisting of treated wastewater from the SLRWRF and LSWTP and waste brine from the MBDF through the OOO to the Pacific Ocean, a water of the United States, and is currently regulated by Order No. R9-2005-0136, which was adopted on August 10, 2005 and expires on August 10, 2010.

C. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on February 9, 2010.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The City of Oceanside owns and operates the OOO, the SLRWRF, the LSWTP, and City of Oceanside sanitary sewer system. The Discharger also owns and operates the MBDF. These facilities are collectively referred to as the Discharger's Facilities in this

Order. This Order establishes discharge prohibitions, limitations, and conditions to regulate discharges of effluent consisting of treated wastewater and waste brine from the Discharger's Facilities to the Pacific Ocean; these discharges were regulated by Order No. R9-2005-0136 (NPDES permit No. CA0107433) that expired on August 10, 2010.

Treated wastewaters from SLRWTP and LSWTP and waste brine from MBDF are hereinafter collectively referred to as Effluent. Treated wastewaters from SLRWTP, LSWTP, Fallbrook Public Utility District POTW (regulated under separate waste discharge requirements and NPDES Permit), and US Marine Corps Base Camp Pendleton (regulated under separate waste discharge requirements and NPDES Permit) and waste brine from Genentech (regulated under separate waste discharge requirements and NPDES Permit) and MBDF are hereinafter collectively referred to as Combined Effluent.

1. **Publicly Owned Treatment Works.** The Discharger provides municipal wastewater treatment services to a population of approximately 180,000 within the boundaries of the City of Oceanside. Additionally, the SLRWRF serves a population of approximately 10,000 within the Rainbow Municipal Water District. The Rainbow Municipal Water District owns 1.5 MGD of the City of Oceanside's treatment capacity, and is responsible for its sanitary sewer system up to the point where it connects with the Oceanside sanitary sewer system. To reduce pumping costs, the City of Oceanside has an agreement with the City of Vista for the exchange, treatment, and disposal of equal volumes of nonindustrial wastewater generated in the respective service areas. There are nine significant industrial users within the City of Oceanside and none within the portions of the City of Vista and Rainbow Municipal Water District that are served by the Discharger.

   The LSWTP is located at 1330 South Tait Street in the City of Oceanside, adjacent to the mouth of Loma Alta Creek. Wastewater treatment unit operations and processes at LSWTP consist of preliminary treatment by mechanical bar screening, flow equalization, aerated grit removal, primary sedimentation, and biological treatment using activated sludge followed by secondary clarification. Treated wastewater is discharged to the Pacific Ocean through the OOO. Secondary treatment design capacity at LSWTP is currently 5.5 MGD average daily flow. The annual average daily flow at LSWTP in 2009 was 3.0 MGD.

   The SLRWRF is located at 3950 North River Road in the City of Oceanside, north of the San Luis Rey River. The SLRWRF consists of an East Plant treatment train and a West Plant treatment train. Wastewater treatment unit operations and processes at SLRWRF consist of preliminary treatment by mechanical bar screening, aerated grit removal, flow equalization, primary sedimentation, and biological treatment using activated sludge followed by secondary clarification. Treated wastewater is discharged through the OOO via a 24-inch land outfall pipeline which connects the SLRWRF with the OOO. The SLRWRF also produces up to 0.7 MGD of disinfected tertiary effluent recycled water, the discharge of which is currently covered under Order No. 93-07, Waste Discharge Requirements for the San Luis Rey Water

Reclamation Facility, City of Oceanside, San Diego County. Secondary treatment design capacity at SLRWRF is currently 15.4 MGD as a maximum 30-day average daily flow and 13.5 MGD as an annual design average. The actual annual average daily flow at SLRWRF in 2009 was 9.0 MGD.

As part of the ROWD, the Discharger submitted a report certifying the capacities of the facilities. At the time of adoption, screenings from the headworks and solids from grit removal at LSWTP and SLRWRF are collected on-site and trucked to landfills in Yuma County, Arizona. Sludge from the secondary treatment facilities is thickened by gravity belt thickeners (SLRWRF) and by dissolved air floatation (LSWTP). Both sludges are anaerobically digested and dewatered. Dewatered sludge is hauled to a land application site by a contractor.

2. **Mission Basin Desalting Facility** The MBDF, located northwest of the intersection of Fireside Street and Heritage Street in Oceanside, treats groundwater for municipal potable water supply. The facility extracts groundwater from the Mission Hydrologic Subarea (HSA) (3.11) and provides treatment consisting of pH adjustment, filtration, and demineralization by reverse osmosis. The MBDF consists of two treatment trains. Up to 2.1 MGD of groundwater undergoes iron and manganese removal, air stripping, and disinfection. Wastewaters from these processes are discharged to the sanitary sewer and do not contribute to the effluent discharged to the OOO. Up to 5.8 MGD of groundwater undergoes chemical addition and cartridge filtration prior to being pumped to two reverse osmosis trains. The product water from the reverse osmosis treatment trains then undergoes air stripping and disinfection, prior to potable use. The only discharge from the MBDF to the OOO is brine from the reverse osmosis treatment process. See Attachment C of this Order for a flow diagram of the MBDF.

   Waste brines generated at MBDF are conveyed via a 10" brine line which connects the MBDF and brine from Genentech to the OOO. The MBDF has a potable water production design capacity of 6.37 MGD which results in less than 2 MGD of waste brine per day. The annual average daily flow of waste brine from MBDF to the OOO during 2005 through 2009 ranged from approximately 0.2 MGD to 1.3 MGD. Future brine flows are projected to continue to be below 2.0 MGD.

B. Discharge Points and Receiving Waters

The SLRWRF and LSWTP discharge secondary effluent to the OOO via pump stations and a land outfall system. SLRWRF effluent is pumped to the LSWTP via an effluent pump station that conveys wastewater through a 34,000-foot long land outfall. LSWTP effluent is conveyed to the OOO via an onsite effluent pump station and a 400-foot long land outfall. Separate land outfalls connect discharges from MBDF, Genentech and Fallbrook Public Utility District into the Discharger's land outfalls and discharges from Camp Pendleton into the OOO. As the owner/operator, the Discharger has the ability to control discharges to the OOO.

The original land outfall consists of a 24-inch diameter ductile iron pipeline that has a pressure rating of 150 pounds per square inch (psi). The design capacity of the original 24-inch-diameter land outfall was limited to 13.5 MGD to avoid exceeding this pressure rating. Usable capacity of the land outfall, however, has been constrained by high head losses in the OOO. In 2009, the Discharger completed construction of the first segment of the new 36-inch-diameter land outfall. The newly constructed segment of 36-inch-diameter pipe extends approximately 6,020 feet along Oceanside Blvd. The capacity of the land outfall currently remains below 13.5 MGD.

In a December 2, 2010 comment to the San Diego Water Board regarding this Order the Discharger stated, "Additionally, the City is planning improvements to the land outfall that will increase the capacity of the land outfall to accommodate the 15.4 maximum 30-day capacity of the SLRWRF. To address the City's current ability to treat more than 13.5 MGD at the SLRWRF using onsite storage, and to address planned improvements to the capacity of the land outfall, [it is requested that the permit allow for an increase of flow from SLRWRF to the OOO through the land outfall from 13.5 MGD to 15.4 MGD]."

Because the overall discharge volume of the OOO would not be increased and the permitted volume of flow from SLRWRF would not increase (Order No. R9-2005-0136 authorized a discharge of 15.4 MGD even though the land outfall capacity was not sufficient to transport this volume to the OOO), the San Diego Water Board has established conditional requirements to ensure adequate capacity is available in the land outfall prior to allowing the discharge of 15.4 MGD from SLRWRF, as specified in section VI.C.5.a.ii of the Order.

The Discharger owns and operates the OOO which begins at the LSWTP site just north of the mouth of the Loma Alta Creek and extends southwesterly approximately 8,850 feet offshore to a depth of approximately 100 feet. The OOO contains a 38-inch internal diameter steel pipe with a 1-inch thick cement mortar interior lining and 2.75-inch thick cement mortar outer jacket. The OOO has a 35.75-inch internal diameter. The OOO terminates with a 230-foot diffuser collinear with the rest of the outfall and extends to a depth of approximately 108 feet. The diffuser has fourteen 5-inch diameter ports and ten 4-inch diameter ports. The terminus of the diffuser is located at Latitude 33° 09' 46" North, Longitude 117° 23' 29" W.

Historically, the Discharger has been subject to a flow limitation of 22.9 MGD for the discharge of effluent from the LSWTP, the SLRWRF and the MBDF through the OOO to the Pacific Ocean. The Discharger has a contract with the Fallbrook Public Utility District (FPUD) for the discharge of an average annual flowrate of 2.4 MGD of treated wastewater from the FPUD through the OOO, subject to waste discharge requirements contained in Order No. R9-2005-0137 (NPDES No. CA0108031). The City of Oceanside has a contract with the United States Marine Corp Base Camp Pendleton (USMCBCP) for the discharge of up to 3.6 MGD of undisinfected secondary effluent, treated at USMCBCP Southern Regional Tertiary Treatment Plant to the Pacific Ocean through the OOO. These discharges are subject to waste discharge requirements contained in Order No. R9-2008-0096 (NPDES Permit No. CA0109347) which was adopted by the San Diego Water Board on September 10, 2008. As of 2008, the City of

Oceanside has a contract with Genentech to discharge a wastewater flow up to 1.396 MGD to SLRWRF and to discharge brine flow up to 0.85 MGD to the OOO. Note that the commingling of Genentech brine waste with the discharge flows at Discharge Point No. 001 (Monitoring Station M-004, previously M-003) has the potential to impact the Discharger's ability to comply with effluent limitations. The combined permitted flow rate from all parties discharging through the OOO was 29.055 MGD.

Section II.B of the Fact Sheet for Order No. R9-2005-0136 stated that the design capacity of the OOO is an average daily flow of 30 MGD, with a maximum rated peak-day capacity of 45 MGD. However, during an inspection of the OOO in 2009, the Discharger determined that the outfall interior diameter is 35.75-inches, not 36-inches as shown in the construction drawings and previously recorded in the Fact Sheet for Order No. R9-2005-0136. The Discharger's 2009 inspection also determined that a coating of soft muck is currently coating the entire interior circumference of the outfall pipe, reducing outfall capacity. Further, a sediment survey of the diffuser confirmed a sediment buildup, particularly near the end of the diffuser, also contributing to a loss of outfall capacity. The Discharger submitted these findings to the San Diego Water Board in a 2010 Ocean Outfall Capacity Report. The report concludes that the current available capacity of the OOO is 22.6 MGD, significantly less than the previously reported 30 MGD. However, the Discharger reported that this capacity is sufficient until 2016, when wet weather flows may result in an exceedance of the OOO capacity.

Below is a table provided by the Discharger demonstrating projected peak flows to the OOO if the 30 million gallon effluent storage pond for SLRWRF is not used.

Table F-2. Facility Information

Source	Peak Day Flow (MGD)	Projected Peak Flow (MGD) Under Wet Weather Conditions[1]		
		Current	Projected 2015	Projected 2020
Peak inflow to SLRWRF and LSWTP	15.75[2]	18.22[7]	19.93[7]	20.70[7]
MBDF	1.3[3]	1.26	1.26[3]	1.26[3]
Genentech, Inc.	0.11[2]	0.11[4]	0.2[4]	0.2[4]
Camp Pendleton	2.8[5]	2.8[5]	2.8[5]	2.8[5]
Fallbrook PUD	2.5[6]	2.5[6]	2.5[6]	2.5[6]
Total	21.18	24.89[7]	26.69[7]	27.46[7]

1 From Ocean Outfall Capacity Evaluation Report (Carrollo Engineers, 2010).
2 Observed maximum day flow during 2009.
3 Based on typical peak day brine flow observed in 2009.
4 Based on flow projections from Genentech, Inc.
5 Historic Camp Pendleton peak wet weather discharge to the OOO, which occurred during wet weather period in winter of 2005.
6 Historic Fallbrook PUD peak wet weather discharge to the OOO, which occurred during wet weather period in winter 2005.
7 Combined projected peak inflow to the LSWTP and SLRWRF. Actual wet weather discharge flows from the two plants to the OOO will be lower than these projected values through the use of effluent storage capacity at the SLRWRF.

Prior to 2016, the Discharger plans to clean muck and debris from the interior of the outfall which will serve to increase the outfall capacity to 23.4 MGD and provide sufficient capacity until approximately 2025. The Discharger further states in the ROWD that additional capacity could be obtained until approximately 2030 if the Discharger replaces a short section of metering pipe at the LSWTP that is currently causing back-pressure on the LSWTP effluent pumps. The OOO section replacement alone would increase capacity to 23.1 MGD, and up to 24.4 MGD when combined with the OOO cleaning.

Based on the Discharger's 2010 Ocean Outfall Capacity Report, this Order prohibits the discharge of wastes at a rate in excess of 22.6 MGD from the Discharger's facilities, Genentech, Fallbrook Public Utilities District, and US Marine Corps Base Camp Pendleton. Section VI.C.5.a.i of the Order allows for the Discharger to increase this total OOO flow to either 23.1 MGD, 23.4 MGD, or 24.4 MGD based on the cleaning and/or section replacement of the OOO. The Discharger shall be responsible for managing effluent flows to the OOO to ensure compliance with the flow rate prohibitions established in the Order. As discussed above, the Discharger reports that they can maintain compliance with the flow prohibitions through 2016 with the current outfall conditions, and through approximately 2030 with additional measures.

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

As discussed later in this Fact Sheet, the previous monitoring location for the combined discharge through Discharge Point No. 001 has been revised from M-003 to M-004. Monitoring Location M-003 has been assigned to the discharge of waste brine from MBDF in this permit.

Effluent limitations contained in Order No. R9-2005-0136 for discharges from the Facility and representative monitoring data obtained at Monitoring Location M-001, M-002 and at Discharge Point No. 001 (M-004, previously M-003) are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data at M-001

Parameter	Units	Effluent Limitation			Monitoring Data (July 2005 – February 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C) ($CBOD_5$)	mg/L	25	40	--	6.8	8.0	14
	lbs/day	3,200	5,100	--	540	740	1,200
	% Removal	85	--	--	NR	--	--
Total Suspended Solids (TSS)	mg/L	30	45	--	10	12	35
	lbs/day	3,900	5,800	--	850	1,100	3,100
	% Removal	85	--	--	NR	--	--
pH	standard units	--	--	6.0 – 9.0[1]	--	--	6.9/7.8

[1] Between 6.0 and 9.0 at all times.

Table F-4. Historic Effluent Limitations and Monitoring Data at M-002

Parameter	Units	Effluent Limitation			Monitoring Data (July 2005 – February 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
$CBOD_5$	mg/L	25	40	--	15	52	57
	lbs/day	1,100	1,800	--	150	500	640
	% Removal	85	--	--	NR	--	--
TSS	mg/L	30	45	--	22	60	72
	lbs/day	1,400	2,100	--	190	260	550
	% Removal	85	--	--	NR	--	--
pH	standard units	--	--	6.0 – 9.0[1]	--	--	NR

[1] Between 6.0 and 9.0 at all times.

Table F-5. Historic Effluent Limitations and Monitoring Data at Outfall 001 (M-004, previously M-003)

Parameter	Units	Effluent Limitation			Monitoring Data (July 2005 – February 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Oil and Grease	mg/L	25	40	75[1]	3.9	NR	NR
	lbs/day	4,400	7,000	14,000[1]		NR	NR
Settleable Solids	mL/L	1.0	1.5	3.0[1]	0.2	0.6	2.5
Turbidity	NTU	75	100	225[1]	4.6	13	26
Total Chlorine Residual	µg/L	--	--	700	--	--	[2]
	lbs/day	--	--	130	--	--	[2]
Ammonia (as Nitrogen)	µg/L	--	--	210,000	39,200	--	39,500
	lbs/day	--	--	40,000			4,100
Chronic Toxicity[3]	TUc	--	--	88	--	--	44
Phenolic Compounds (non-chlorinated)[4]	µg/L	--	--	11,000	--	--	2.7
	lbs/day	--	--	2,000	--	--	0.23

Parameter	Units	Effluent Limitation			Monitoring Data (July 2005 – February 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Chlorinated Phenolics[5]	µg/L	--	--	350	--	--	0.86
	lbs/day	--	--	67	--	--	0.097
Endosulfan[6]	µg/L	--	--	1.6	--	--	0.005
	lbs/day	--	--	0.3	--	--	0.00040
HCH[7]	µg/L	--	--	0.7	--	--	0.0092
	lbs/day	--	--	0.13	--	--	0.00076
Tributyltin	µg/L	--	0.12	--	--	--	ND
	lbs/day	--	0.024	--	--	--	ND

ND – Not detected
NR – Not Reported
[1] Applied as an instantaneous maximum effluent limitation.
[2] The discharger does not utilize chlorine disinfection, therefore total chlorine residual was not measured in the effluent.
[3] Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100/NOEL, where NOEL (No Observed Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism.
[4] Non-chlorinated phenolic compounds represent the sum of 2,4-dimethylphenol, 4,6-Dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-Nitrophenol, 4-nitrophenol, and phenol.
[5] Chlorinated phenolic compounds represent the sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2;4,5-trichlorophenol, and 2,4,6-trichlorophenol.
[6] Endosulfan represents the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.
[7] HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

D. Compliance Summary

1. Inspections of the LSWTP were conducted on seven occasions between 2006 and 2010. Compliance issues noted by the inspectors were as follows:

   a. On March 13, 2006, the final effluent composite sampler was not operating at the proper temperature for sample preservation. Additionally, the Facility flow meters had not been calibrated on an annual basis as required.

   b. On March 16, 2007, the inspector found that records documenting the calibration of dissolved oxygen probes were not properly maintained. In addition, the composite sampler, which is used to obtain a representative sample of the LSWTP effluent, was turned off and inoperable.

   c. On January 13, 2009, the inspector determined that flow meters had not been calibrated on an annual basis as required.

   d. On December 14, 2009, 11 pH analyses were conducted beyond the required 15 minutes holding time after collection;

2. Inspections of the SLWRF were conducted on seven occasions between 2006 and 2010. Compliance issues noted by inspectors were as follows:

   a. On March 12, 2008, records documenting the installation and calibration of flow measurement devices were not properly maintained.

3. During the term of Order No. R9-2005-0136, six violations of deficient monitoring reports, one late report and one effluent violations.

   a. The daily maximum mass loading for ammonia was reported as 2.6E+06 lbs/day on October 3 2005. Order No. R9-2005-0136 Discharge Specifications and Effluent Limitations Section B.2, states that the daily maximum mass loading for ammonia shall not exceed 4.0E+4 lbs/day.

E. Planned Changes

The Discharger has a capital improvement program for the Facility designed to replace, renovate, or repair facilities and/or equipment that have outlived their useful lives or are not operating effectively or efficiently. At the OOO, the Discharger plans to undertake cleaning operations to remove sediment buildup from the interior of the diffuser and to replace a short metering section of pipe.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Quality Control Board (San Diego Water Board) adopted a *Water Quality Control Plan for the San Diego Basin* (hereinafter Basin Plan) on September 8, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and

policies to achieve those objectives. The Basin Plan was subsequently approved by the State Water Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

Table F-6. Basin Plan Beneficial Uses

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

Requirements of this Order implement the Basin Plan.

2. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (hereinafter Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table F-7. Ocean Plan Beneficial Uses

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

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

3. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being

used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

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

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

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

On June 28, 2007, USEPA approved the list of impaired water bodies, prepared by the State Water Board pursuant to section 303(d) of the CWA, which are not expected to meet applicable water quality standards after implementation of technology-based effluent limitations for point sources. The 303(d) list for waters in the vicinity of the OOO include:

1. 0.5 miles of the Pacific Ocean at the mouth of the San Luis Rey River for indicator bacteria;

2. 1.1 miles of the Pacific Ocean shoreline at the mouth of Loma Alta Creek for indicator bacteria;

3. 1.2 miles of the Pacific Ocean shoreline at Buena Vista Creek for indicator bacteria.

Impairment has been detected in the above waters. Some of the receiving water monitoring locations may be within the current 303(d) list. The San Diego Water Board will take into account the fact when determining compliance. An applicable Total Maximum Daily Limit has not been adopted for this discharge.

E. Other Plans, Policies and Regulations

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

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

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

This Order retains the discharge prohibitions from Order No. R9-2005-0136, as described below. Compliance determination language is included in section VII of this Order to accurately describe how violations of these prohibitions are determined. Discharges from the Facility to surface waters in violation of prohibitions contained in this Order are violations of the CWA and therefore are subject to third party lawsuits. Discharges from the Facility to land in violation of prohibitions contained in this Order are violations of the CWC and are not subject to third party lawsuits under the CWA because the CWC does not contain provisions allowing third party lawsuits.

1. Prohibitions III.A, III.B, III.C, and III.D of this Order are based on Order No. R9-2005-0136 to clearly define what types of discharges are prohibited.

2. This Order prohibits the discharge of wastes in excess of the design criteria for each of the facilities (including land outfalls). As such, Prohibitions III.E through III.G prohibit the discharge of wastes in excess of the individual design criteria for each facility and the design capacity their respective land outfall.

3. As discussed in section II.B of the Fact Sheet, the available capacity of the OOO has been revised. Prohibition III.G has been established to ensure the total flow to the OOO does not exceed the available capacity of the OOO.

4. CWC section 13243 provides that the San Diego Water Board, in a water quality control plan, may specify certain conditions where the discharge of wastes or certain types of wastes, or certain types of wastes that could affect the quality of waters in the State is prohibited. Order No. R9-2005-0136 included the Basin Plan and Ocean Plan prohibitions as prohibitions. Consistent with Order No. R9-2005-0136, this Order requires compliance with the prohibitions from the Basin Plan and Ocean Plan; however, they are included in this Order as provisions in section VI.A.2 and incorporated in Attachment G of this Order.

Order No. R9-2005-0136 prohibited discharges of waste to Areas of Special Biological Significance and the discharge of sludge to the ocean. Because these prohibitions are expressly included in the Ocean Plan prohibitions, which are included in this Order as a provision in section VI.A.2 and incorporated in Attachment G of this Order, these requirements are not retained in the prohibitions of this Order.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

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

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

2. Applicable Technology-Based Effluent Limitations

a. **Federal Regulations.** 40 CFR Part 133 establishes the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS. 40 CFR 133.102(a)(4) allows for effluent limitations for carbonaceous biological oxygen demand ($CBOD_5$) to be applied in lieu of effluent limitations for BOD_5 where BOD_5 may not provide a reliable measure of the oxygen demand of the effluent. USEPA has determined that a 30-day average effluent limitation of 25 mg/L and a 7-day average effluent limitation of 40 mg/L are effectively equivalent to the secondary treatment standards for BOD_5.

b. 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal of BOD_5 and TSS shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of $CBOD_5$ and TSS over each calendar month.

The secondary treatment regulations at 40 CFR Part 133 also require that pH be maintained between 6.0 and 9.0 standard units.

These technology-based effluent limitations are applicable to each of the POTWs prior to the commingling of their respective effluents with any other wastewater. Thus, compliance with these effluent limitations must be determined at internal outfall locations upstream of the location where these wastewaters commingle with other wastewaters.

Technology-based effluent limitations based on secondary treatment standards for $CBOD_5$, TSS, and pH are summarized in the following table.

Table F-8. Summary of Technology-Based Effluent Limitations Based on Secondary Treatment Standards

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
$CBOD_5$	mg/L	25	40	--	--	--
	% Removal	85	--	--	--	--
TSS	mg/L	30	45	--	--	--
	% Removal	85	--	--	--	--
pH	standard units	--	--	--	6.0	9.0

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

The Ocean Plan establishes water quality objectives, general requirements for management of waste discharged to the ocean, effluent quality requirements for waste discharges, discharge prohibitions, and general provisions. Further, Table A of the Ocean Plan establishes technology-based effluent limitations for POTWs and industrial discharges for which effluent limitation guidelines have not been established (including the discharge of brine from MBDF). Order No. R9-2005-0136 established numeric effluent limitations based on Table A of the Ocean Plan at Discharge Point No. 001 (M-004, previously M-003). Because the Table A effluent limitations are technology-based, the San Diego Water Board finds that the Table A effluent limitations are applicable to each individual contributing facility (SLRWRF, LSWTP, and MBDF), and the Discharger shall be responsible

for achieving compliance with the effluent limitations prior to the contributing wastewaters commingling.

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

Table A of the Ocean Plan requires dischargers to, as a monthly average, achieve a percent removal of 75 percent for suspended solids from the influent stream before discharging wastewater to the Pacific Ocean, except that the effluent limitation to be met shall not be less than 60 mg/L. Because MBDF is not a POTW, an effluent limitation of 60 mg/L is more appropriate and has been established for the MBDF effluent. The technology-based effluent limitations from the Ocean Plan are summarized below:

Table F-9. Summary of Technology-Based Effluent Limitations Based on Table A of the Ocean Plan

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	25	40	--	--	75
TSS	mg/L	60[1]	--	--	--	--
Settleable Solids	mL/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
pH	standard units	--	--	--	6.0	9.0

[1] Applicable only to the discharge of brine from MBDF.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

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

a. Basin Plan. The beneficial uses specified in the Basin Plan applicable to the Pacific Ocean are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes water quality objectives for pH applicable to the receiving water.

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

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

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

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

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

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

iv. Daily maximum objectives for acute and chronic toxicity.

3. Determining the need for WQBELs

Order No. R9-2005-0136 contained effluent limitations for non-conventional and toxic pollutant parameters in Table B of the California Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in Table B of the Ocean Plan was re-evaluated in accordance with 40 CFR 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed an objective, as outlined in the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, 1991) and the Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probable initial dilution) can then be compared to the appropriate objective to determine potential for an exceedance of that objective and the need for an effluent limitation. According to the Ocean Plan amendment, the RPA can yield three endpoints: 1) Endpoint 1, an effluent limitation is required and monitoring is required; 2) Endpoint 2, an effluent limitation is not required and the San Diego Water Board may require monitoring; 3) Endpoint 3, the RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion. Endpoint 3 is typically the result when there are fewer than 16 data points and all are censored data (i.e., below quantitation or method detection levels for an analytical procedure).

The implementation provisions for Table B in section III.C of the Ocean Plan specify that the minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge. Prior to issuance of Order No. R9-2005-0136, the State Water Board had determined the minimum initial dilution factor (Dm), for the OOO to be 87 to 1. This determination was based on flow from the Facility and additional discharges from USMC Camp Pendleton, Fallbrook PUD, and Genentech, yielding a total flow rate of 29.055 MGD. No additions or modifications to the Facility or the OOO have been proposed that would alter the previously determined dilution characteristics. Further, the newly reduced capacity of the OOO is expected to result in more available dilution. Therefore, the previous Dm of 87 to 1 will be retained in the current Order and applied to WQBELs established herein.

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

Using the RPcalc 2.0 software tool developed by the State Water Board for conducting reasonable potential analyses, the San Diego Water Board has conducted the RPA for the constituents in Table F-10. For parameters without reasonable potential a narrative limit statement to comply with all Ocean Plan objectives requirements is provided. This Order includes desirable maximum effluent concentrations for constituents that do not have reasonable potential which were derived using effluent limitation determination procedure described above and are referred to in this Order as "performance goals". The Discharger is required to monitor for these constituents as stated in the MRP (Attachment E of this Order) to gather data for use in reasonable potential analyses for future permit renewals.

Effluent data provided in the Discharger's monitoring reports for the Facility from May 2005 through February 2010 were used in the RPA. A minimum probable initial dilution of 87 to 1 was considered in this evaluation.

A summary of the RPA results is provided below:

Table F-10. RPA Results Summary

Parameter	Units	n[1]	MEC[2,4]	Most Stringent Criteria	Background	RPA Endpoint[3]
Arsenic	µg/L	20	0.005	8[5]	3[6]	2
Cadmium	µg/L	20	<0.002	1[5]	0	2
Chromium (VI)	µg/L	20	2.1	2[5]	0	2
Copper	µg/L	20	4.4	3[5]	2[6]	2
Lead	µg/L	20	5.8	2[5]	0	2
Mercury	µg/L	20	<0.3	0.04[5]	0.0005[6]	2
Nickel	µg/L	20	0.027	5[5]	0	2
Selenium	µg/L	20	9.9	15[5]	0	2
Silver	µg/L	20	4	0.7[5]	0.16[6]	2
Zinc	µg/L	20	36	20[5]	8[6]	2
Cyanide	µg/L	21	40	1[5]	0	2
Total Residual Chlorine[7]	µg/L	--	--	2[5]	0	--
Ammonia	µg/L	75	39,500	600[5]	0	2
Acute Toxicity	TUa	16	2	0.3[8]	0	2
Chronic Toxicity[9]	TUc	21	44.4	1[8]	0	2
Phenolic Compounds[10]	µg/L	33	2.7	30[5]	0	2
Chlorinated Phenolics[11]	µg/L	27	1.17	1[5]	0	2
Endosulfan[12]	µg/L	22	0.005	0.009[5]	0	2
Endrin	µg/L	22	0.03	0.002[5]	0	2
HCH[13]	µg/L	22	0.0092	0.004[5]	0	2
Radioactivity	pCi/L	18	--	[14]	0	2
Acrolein	µg/L	11	<5.7	220[15]	0	3
Antimony	µg/L	17	<0.007	1,200[15]	0	2
Bis(2-chloroethoxyl)methane	µg/L	11	<0.4	4.4[15]	0	3
Bis(2-chloroisopropyl)ether	µg/L	11	<0.4	1,200[15]	0	3
Chlorobenzene	µg/L	11	<0.36	570[15]	0	3
Chromium (III)[16]	µg/L	--	--	190,000[15]	0	--

Parameter	Units	n[1]	MEC[2,4]	Most Stringent Criteria	Background	RPA Endpoint[3]
Di-n-butyl phthalate	µg/L	12	0.44	3,500[15]	0	3
Dichlorobenzenes[17]	µg/L	11	<0.35	5,100[15]	0	3
Diethyl phthalate	µg/L	12	0.86	33,000[15]	0	2
Dimethyl phthalate	µg/L	12	0.39	820,000[15]	0	2
4,6-Dinitro-2-methylphenol	µg/L	32	<0.4	220[15]	0	2
2,4-Dinitrophenol	µg/L	33	2.7	4.0[15]	0	2
Ethylbenzene	µg/L	11	<0.25	4,100[15]	0	3
Fluoranthene	µg/L	11	<0.52	15[15]	0	3
Hexachlorocyclopentadiene	µg/L	11	<0.4	58[15]	0	2
Nitrobenzene	µg/L	11	0.16	4.9[15]	0	3
Thallium	µg/L	17	8.7	2[15]	0	2
Toluene	µg/L	11	<0.36	85,000[15]	0	3
Tributyltin	µg/L	12	<0.004	0.0014[15]	0	3
1,1,1-Trichloroethane	µg/L	11	<0.3	540,000[15]	0	2
Acrylonitrile	µg/L	11	<3.1	0.10[15]	0	3
Aldrin	µg/L	11	<0.011	0.000022[15]	0	3
Benzene	µg/L	11	<0.28	5.9[15]	0	3
Benzidine	µg/L	11	<44	0.000069[15]	0	3
Beryllium	µg/L	17	<0.3	0.033[15]	0	2
Bis(2-chloroethyl) ether	µg/L	11	<0.4	0.045[15]	0	3
Bis(2-ethylhexyl) phthalate	µg/L	11	2.3	3.5[15]	0	3
Carbon tetrachloride	µg/L	11	<0.28	0.90[15]	0	2
Chlordane	µg/L	11	<0.1	0.000023[15]	0	3
Chlorodibromomethane	µg/L	11	0.33	8.6[15]	0	3
Chloroform	µg/L	11	2.2	130[15]	0	2
DDT[18]	µg/L	12	0.026	0.00017[15]	0	3
1,4-Dichlorobenzene	µg/L	11	<0.66	18[15]	0	3
3,3-Dichlorobenzidine	µg/L	11	<4.8	0.0081[15]	0	3
1,2-Dichloroethane	µg/L	11	<0.28	28[15]	0	3
1,1-Dichloroethylene	µg/L	11	<0.42	0.9[15]	0	3
Dichlorobromomethane	µg/L	11	<0.3	6.2[15]	0	3
Dichloromethane	µg/L	11	1.3	450[15]	0	2
1,3-Dichloropropene	µg/L	11	<0.32	8.9[15]	0	3
Dieldrin	µg/L	11	<0.012	0.00004[15]	0	3
2,4-Dinitrotoluene	µg/L	11	<0.21	2.6[15]	0	3
1,2-Diphenylhydrazine	µg/L	11	0.25	0.16[15]	0	3
Halomethanes[19]	µg/L	11	<0.54	130[15]	0	3
Heptachlor	µg/L	11	<0.008	0.00005[15]	0	3
Heptachlor Epoxide	µg/L	11	<0.01	0.00002[15]	0	3
Hexachlorobenzene	µg/L	11	<0.4	0.00021[15]	0	3
Hexachlorobutadiene	µg/L	11	<0.4	14[15]	0	3
Hexachloroethane	µg/L	11	<0.4	2.5[15]	0	3
Isophorone	µg/L	11	0.13	730[15]	0	3
N-nitrosodimethylamine	µg/L	11	<2.1	7.3[15]	0	3
N-nitrosodi-N-propylamine	µg/L	10	<0.5	0.38[15]	0	3
N-nitrosodiphenylamine	µg/L	11	<0.4	2.5[15]	0	3
PAHs[20]	µg/L	11	0.48	0.0088[15]	0	3
PCBs[21]	µg/L	12	<0.47	0.000019[15]	0	3
TCDD equivalents[22]	pg/L	11	0.0026	0.0000039[15]	0	1
1,1,2,2-Tetrachoroethane	µg/L	11	<0.3	2.3[15]	0	2
Tetrachloroethylene	µg/L	11	<0.32	2.0[15]	0	3
Toxaphene	µg/L	10	<3.13	0.00021[15]	0	3

Parameter	Units	n[1]	MEC[2,4]	Most Stringent Criteria	Background	RPA Endpoint[3]
Trichloroethylene	µg/L	11	<0.26	27[15]	0	3
1,1,2-Trichloroethane	µg/L	11	<0.30	9.4[15]	0	3
2,4,6-Trichlorophenol	µg/L	33	0.86	0.29[15]	0	2
Vinyl Chloride	µg/L	11	<0.4	36[15]	0	2

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

[1] Number of data points available for the RPA.

[2] If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.

[3] End Point 1 – RP determined, limit required, monitoring required.
End Point 2 – Discharger determined not to have RP, monitoring may be established.
End Point 3 – RPA was inconclusive, carry over previous limits if applicable, and establish monitoring.

[4] Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a RP (i.e. Endpoint 1).

[5] Based on the 6-Month Median in the Table B of the Ocean Plan.

[6] Background concentrations contained in Table C of the Ocean Plan.

[7] The discharger does not utilize chorine disinfection, therefore does not monitor effluent chorine residual.

[8] Based on the Daily Maximum in Table B of the Ocean Plan.

[9] Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100/NOEL, where NOEL (No Observed Effect Level) is express as the maximum percent effluent of receiving water that causes no observable effect on a test organism.

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

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

[12] Endosulfan represents the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.

[13] HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

[14] Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Radioactivity at levels that exceed the applicable criteria are not expected in the discharge.

[15] Based on 30-Day Average in Table B of the Ocean Plan.

[16] Chromium data was reported as Total Chromium and is summarized under Chromium (VI).

[17] Dichlorobenzenes represent the sum of 1,2- and 1,3-dichlorobenzene.

[18] DDT represents the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

[19] Halomethanes represent the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[20] PAHs (polynuclear aromatic hydrocarbons) represent the sum of acenapthalene; 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.

[21] PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Arolclor-1254, and Arcolor-1260.

[22] TCDD equivalents represent the sum of 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 by the table below. USEPA Method 8280 may be used to analyze TCDD equivalents.

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 CDD	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

Consistent with 40 CFR 122.44(l)(2)(i)(B), effluent limitations from Order No. R9-2005-0136 are not retained for constituents for which the RPA results indicated Endpoint 2. Instead performance goals have been assigned for these constituents. Parameters for which Endpoint 2 was concluded are determined not to have reasonable potential, thus it is inappropriate to establish or retain effluent limitations for these parameters.

For parameters for which Endpoint 3 was concluded, the reasonable potential analysis was inconclusive. For parameters for which Endpoint 3 was concluded and previous effluent limitations had not been established, reasonable potential was not determined. For parameters for which new data is available, and the reasonable potential analysis results are inconclusive, effluent limitations have been retained. Reasonable potential to cause or contribute to an exceedance of water quality objectives was inconclusive for tributyltin. Since the previous Order established an effluent limitation for tributyltin and reasonable potential analysis was inconclusive (i.e. Endpoint 3), the effluent limitation shall be retained in the current Order.

Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e. Endpoint 1) was determined for TCDD equivalents, thus effluent limitations for TCDD equivalents have been established in this Order based on the initial dilution of 87 to 1, as discussed below.

The monitoring and reporting program (MRP) in Attachment E of this Order is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit renewals and/or updates.

4. WQBEL Calculations

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

$$Ce = Co + Dm (Co - Cs)$$ where,

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

b. Initial dilution (Dm) has been determined to be 87 to 1 by the San Diego Water Board through the application of USEPA's dilution model, Visual Plumes.

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

Table F-11. Pollutants Having Background Concentrations

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

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

Water quality objectives from the Ocean Plan for cyanide are:

Table F-12. Example Parameter Water Quality Objectives

Parameter	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Cyanide	µg/L	1	4	10

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

Cyanide

Ce = 1 + 87 (1 – 0) = 88 (6-Month Median)
Ce = 4 + 87 (4 – 0) = 352 (Daily Maximum)
Ce = 10 + 87 (10 – 0) = 880 (Instantaneous Maximum)

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

e. 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

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

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

f. A summary of the WQBELs established in this Order are provided below:

Table F-13. Summary of Water Quality-based Effluent Limitations – Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
BASED ON OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Tributyltin	µg/L	--	--	--	1.2E-01
	lbs/day[1]	--	--	--	2.3E-02
	lbs/day[2]				2.3E-02
	lbs/day[3]	--	--	--	2.4E-02
	lbs/day[4]				2.4E-02
TCDD Equivalents[5]	µg/L	--	--	--	3.4E-07
	lbs/day[1]	--	--	--	6.5E-08
	lbs/day[2]				6.6E-08
	lbs/day[3]	--	--	--	6.6E-08
	lbs/day[4]				6.9E-08

1 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 22.6 MGD.
2 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 23.1 MGD.
3 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 23.4 MGD.
4 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 24.4 MGD.
5 TCDD equivalents represent the sum of concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors.

g. A summary of the performance goals is provided in Table F-15 of this Fact Sheet.

5. Whole Effluent Toxicity (WET)

a. Implementing provisions at section III.C.4.c.(4) of the Ocean Plan require chronic toxicity monitoring for ocean waste discharges with minimum initial dilution factors that fall below 100:1 at the edge of the mixing zone. Using quarterly chronic WET testing conducted between January 2005 and November 2006 to conduct the RPA resulted in Endpoint 2, and an effluent limitation for chronic toxicity is not required. However, consistent with Order No. R9-2005-0136, this Order contains a performance goal and quarterly monitoring for chronic toxicity. Monitoring for chronic toxicity has been reduced from quarterly to semiannually. Based on the methods established by the Ocean Plan, a maximum daily performance goal of 88 TUc is established in this Order.

b. Implementing provisions at section III.C.4.c.(3) of the Ocean Plan states that the San Diego Water Board may require acute toxicity testing in addition to chronic toxicity monitoring for ocean waste discharges with minimum initial dilution factors ranging from 100:1 to 350:1 as necessary for the protection of beneficial uses of ocean waters. The OOO has been granted a dilution ratio of 87:1 and

the results of the RPA do not indicate reasonable potential for acute toxicity, thus monitoring for acute toxicity is not necessary and has been discontinued.

D. Final Effluent Limitations

1. Final Effluent Limitations

The following tables list the effluent limitations established by this Order. Where this Order establishes mass emission limitations, these limitations have been derived based on a flow of 13.5 MGD (and 15.4 MGD, based on the available capacity of the land outfall to the OOO) for SLRWRF to the OOO through the land outfall; 5.5 MGD for LSWTP; and 2.0 MGD for MBDF. Mass emission limitations for the combined flow have been based on the potential available capacity conditions of the OOO.

Table F-14.a. Technology Based Effluent Limitations for SLRWRF at M-001

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C)[1]	mg/L	25	40	--	--	--	--
	lbs/day[2]	2,814	4,504	--	--	--	--
	lbs/day[3]	3,211	5,137	--	--	--	
Total Suspended Solids[1]	mg/L	30	45	--	--	--	--
	lbs/day[2]	3,378	5,067	--	--	--	--
	lbs/day[3]	3,853	5,780	--	--	--	
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day[2]	2,814	4,504	--	--	8,445	--
	lbs/day[3]	3,211	5,137	--	--	9,633	
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
pH	standard units	--	--	--	6.0	9.0	--

1 The average monthly percent removal of $CBOD_5$ and TSS shall not be less than 85 percent.
2 Applicable when the average monthly permitted flow is prohibited from exceeding 13.5 MGD.
3 Applicable when the average monthly permitted flow is prohibited from exceeding 15.4 MGD.

Table F-14.b. Technology Based Effluent Limitations for LSWTP at M-002

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	25	40	--	--	--	--
	lbs/day	1,147	1,835	--	--	--	--
Total Suspended Solids	mg/L	30	45	--	--	--	--
	lbs/day	1,376	2,064	--	--	--	--
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day	1,147	1,835	--	--	3,440	--
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
pH	standard units	--	--	--	6.0	9.0	--

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

Table F-14.c. Technology Based Effluent Limitations for MBDF Based on Table A of the Ocean Plan at M-003

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Instantaneous Maximum	Instantaneous Maximum
Oil and Grease	mg/L	25	40	--	75
	lbs/day	417	667		1,251
Total Suspended Solids	mg/L	--	--	--	60
	lbs/day	--	--	--	1,001
Settleable Solids	ml/L	1.0	1.5	--	3.0
Turbidity	NTU	75	100	--	225
pH	standard units	--	--	6.0	9.0

Table F-14.d. Effluent Limitations for Combined Flow Based on Table B of the Ocean Plan at M-004 (previously M-003)

Parameter	Units	Effluent Limitations[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
BASED ON OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Tributyltin	µg/L	--	--	--	1.2E-01
	lbs/day[2]	--	--	--	2.3E-02
	lbs/day[3]				2.3E-02
	lbs/day[4]	--	--	--	2.4E-02

	lbs/day[5]				2.4E-02
TCDD Equivalents[6]	µg/L	--	--	--	3.4E-07
	lbs/day[2]	--	--	--	6.5E-08
	lbs/day[3]				6.6E-08
	lbs/day[4]	--	--	--	6.6E-08
	lbs/day[5]				6.9E-08

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

2 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 22.6 MGD.

3 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 23.1 MGD.

4 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 23.4 MGD.

5 Applicable when Combined Effluent flow to the OOO is prohibited from exceeding 24.4 MGD.

6 TCDD equivalents represent the sum of concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors.

2. Satisfaction of Anti-Backsliding Requirements

The technology based effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

Effluent limitations from Order No. R9-2005-0136 are not retained for constituents for which RPA results indicated Endpoint 2, or Endpoint 3 when previous effluent limitations had not been established; instead performance goals have been assigned for these constituents. Parameters for which Endpoint 2 was concluded are determined not to have reasonable potential, thus it is inappropriate to establish effluent limitations for these parameters. For parameters for which Endpoint 3 was concluded and previous effluent limitations had not been established, reasonable potential was not determined. For parameters for which new data is available, and a reasonable potential analysis determined that reasonable potential does not exist, effluent limitations have been removed as allowed under 40 CFR 122(l)(2)(i)(B), and performance goals have been established in their place. The MRP for this Order is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit renewals and/or updates.

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

3. Satisfaction of Antidegradation Policy

WDRs for the Discharger must conform with federal and State antidegradation policies provided at 40 CFR 131.12 and in State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the

quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate important economic and social development or consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the State Water Board's Administrative Procedures Update (July 2, 1990), *Antidegradation Policy Implementation for NPDES Permitting.*

a. Technology-based Effluent Limitations

The technology-based effluent limitations are at least as stringent as the previous effluent limitations, and no degradation of the receiving water is expected.

b. Water Quality-based Effluent Limitations

The WQBELs contained in this Order have been modified from previous NPDES permits for the Discharger, including Order No. R9-2005-0136, to remove effluent limitations for some parameters after an RPA was conducted. In accordance with the State Water Board's Administrative Procedures Update (APU) No. 90-004, the San Diego Water Board assessed the potential impact of the modified effluent limitations on existing water quality and the need for an antidegradation analysis.

Effluent limitations were not included in this Order for constituents which reasonable potential to exceed the water quality objectives was not indicated following an RPA although the previous permit included effluent limitations for those constituents. The procedures for conducting the RPA are explained in section IV.C.3 of this Fact Sheet. For constituents for which effluent limitations were not included, performance goals were included which will indicate the level of discharge at which possible water quality impacts may be significant. The removal of effluent limitations by itself is not expected to cause a change in the physical nature of the effluent discharged and is not expected to impact beneficial uses nor cause a reduction of the water quality of the receiving water. Coupled with the inclusion of performance goals and retention of the monitoring program for constituents without effluent limitations, the existing water quality is expected to be maintained. For these reasons, the San Diego Water Board has determined that an antidegradation analysis is not required to consider the possible impacts resulting from the removal of effluent limitations following a RPA.

4. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on $CBOD_5$, TSS, oil and grease, settleable solids, turbidity, and pH. Restrictions on these constituents are discussed in section IV.B of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal

technology-based requirements. These limitations are not more stringent than required by the CWA.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs are based on the Ocean Plan, which was approved by USEPA on February 14, 2006. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Performance Goals

Constituents that do not have reasonable potential are listed as performance goals in this Order. Performance goals serve to maintain existing treatment levels and effluent quality and supports State and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected levels of pollutants in the discharge that should not be exceeded in order to maintain the water quality objectives established in the Ocean Plan. Performance goals are not limitations or standards for the regulation of the discharge. Effluent concentrations above the performance goals will not be considered as violations of the permit but serve as red flags that indicate water quality concerns. Repeated red flags may prompt the San Diego Water Board to reopen and amend the permit to replace performance goals for constituents of concern with effluent limitations, or the San Diego Water Board may coordinate such actions with the next permit renewal.

The following table lists the performance goals established by this Order. A minimum probable initial dilution factor of 87:1 was used in establishing the performance goals.

Table F-15. Performance Goals Based on the Ocean Plan

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Arsenic, Total Recoverable	µg/L	4.4E+02	2.6E+03	6.8E+03	--
Cadmium, Total Recoverable	µg/L	8.8E+01	3.5E+02	8.8E+02	--
Chromium VI, Total Recoverable[4]	µg/L	1.8E+02	7.0E+02	1.8E+03	--
Copper, Total Recoverable	µg/L	9.0E+01	8.8E+02	2.5E+03	--
Lead, Total Recoverable	µg/L	1.8E+02	7.0E+02	1.8E+03	--
Mercury, Total Recoverable	µg/L	3.5E+00	1.4E+01	3.5E+01	--
Nickel, Total Recoverable	µg/L	4.4E+02	1.8E+03	4.4E+03	--
Selenium, Total Recoverable	µg/L	1.3E+03	5.3E+03	1.3E+04	--
Silver, Total Recoverable	µg/L	4.8E+01	2.3E+02	6.0E+02	--
Zinc, Total Recoverable	µg/L	1.1E+03	6.3E+03	1.7E+04	--
Cyanide, Total (as CN)[2]	µg/L	8.8E+01	3.5E+02	8.8E+02	--
Chlorine, Total Residual[3]	µg/L	1.8E+02	7.0E+02	5.3E+03	--
Ammonia (expressed as nitrogen)	µg/L	5.3E+04	2.1E+05	5.3E+05	--
Acute Toxicity	TUa	--	2.6E+01	--	--
Chronic Toxicity[5]	TUc	--	8.8E+01	--	--
Phenolic Compounds (non-chlorinated)[6]	µg/L	2.6E+03	1.1E+04	2.6E+04	--
Chlorinated Phenolics[7]	µg/L	8.8E+01	3.5E+02	8.8E+02	--
Endosulfan[8]	µg/L	7.9E-01	1.6E+00	2.4E+00	--
Endrin	µg/L	1.8E-01	3.5E-01	5.3E-01	--
HCH[9]	µg/L	3.5E-01	7.0E-01	1.1E+00	--
Radioactivity	pCi/L	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations, Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	--	--	1.9E+04
Antimony	µg/L	--	--	--	1.1E+05
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	3.9E+02
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	1.1E+05
Chlorobenzene	µg/L	--	--	--	5.0E+04
Chromium (III), Total Recoverable	µg/L	--	--	--	1.7E+07
Di-n-butyl Phthalate	µg/L	--	--	--	3.1E+05
Dichlorobenzenes[10]	µg/L	--	--	--	4.5E+05
Diethyl Phthalate	µg/L	--	--	--	2.9E+06
Dimethyl Phthalate	µg/L	--	--	--	7.2E+07
4,6-dinitro-2-methylphenol	µg/L	--	--	--	1.9E+04
2,4-dinitrophenol	µg/L	--	--	--	3.5E+02
Ethylbenzene	µg/L	--	--	--	3.6E+05
Fluoranthene	µg/L	--	--	--	1.3E+03
Hexachlorocyclopentadiene	µg/L	--	--	--	5.1E+03
Nitrobenzene	µg/L	--	--	--	4.3E+02
Thallium, Total Recoverable	µg/L	--	--	--	1.8E+02
Toluene	µg/L	--	--	--	7.5E+06
1,1,1-trichloroethane	µg/L	--	--	--	4.8E+07
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Acrylonitrile	µg/L	--	--	--	8.8E+00
Aldrin	µg/L	--	--	--	1.9E-03
Benzene	µg/L	--	--	--	5.2E+02
Benzidine	µg/L	--	--	--	6.1E-03
Beryllium	µg/L	--	--	--	2.9E+00
Bis(2-chloroethyl) Ether	µg/L	--	--	--	4.0E+00
Bis(2-ethlyhexyl) Phthalate	µg/L	--	--	--	3.1E+02
Carbon Tetrachloride	µg/L	--	--	--	7.9E+01
Chlorodane[11]	µg/L	--	--	--	2.0E-03
Chlorodibromomethane	µg/L	--	--	--	7.6E+02
Chloroform	µg/L	--	--	--	1.1E+04
DDT[12]	µg/L	--	--	--	1.5E-02
1,4-dichlorobenzene	µg/L	--	--	--	1.6E+03
3,3'-dichlorobenzidine	µg/L	--	--	--	7.1E-01
1,2-dichloroethane	µg/L	--	--	--	2.5E+03
1,1-dichloroethylene	µg/L	--	--	--	7.9E+01

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Dichlorobromomethane	µg/L	--	--	--	5.5E+02
Dichloromethane	µg/L	--	--	--	4.0E+04
1,3-dichloropropene	µg/L	--	--	--	7.8E+02
Dieldrin	µg/L	--	--	--	3.5E-03
2,4-dinitrotoluene	µg/L	--	--	--	2.3E+02
1,2-diphenylhydrazine	µg/L	--	--	--	1.4E+01
Halomethanes[13]	µg/L	--	--	--	1.1E+04
Heptachlor	µg/L	--	--	--	4.4E-03
Heptachlor Epoxide	µg/L	--	--	--	1.8E-03
Hexachlorobenzene	µg/L	--	--	--	1.8E-02
Hexachlorobutadiene	µg/L	--	--	--	1.2E+03
Hexachloroethane	µg/L	--	--	--	2.2E+02
Isophorone	µg/L	--	--	--	6.4E+04
N-nitrosodimethylamine	µg/L	--	--	--	6.4E+02
N-nitrosodi-N-propylamine	µg/L	--	--	--	3.3E+01
N-nitrosodiphenylamine	µg/L	--	--	--	2.2E+02
PAHs[14]	µg/L	--	--	--	7.7E-01
PCBs[15]	µg/L	--	--	--	1.7E-03
1,1,2,2-tetrachloroethane	µg/L	--	--	--	2.0E+02
Tetrachloroethylene	µg/L	--	--	--	1.8E+02
Toxaphene	µg/L	--	--	--	1.8E-02
Trichloroethylene	µg/L	--	--	--	2.4E+03
1,1,2-trichloroethane	µg/L	--	--	--	8.3E+02
2,4,6-trichlorophenol	µg/L	--	--	--	2.6E+01
Vinyl Chloride	µg/L	--	--	--	3.2E+03

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

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

[2] If the Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, performance goals may be evaluated with the combined measurement of free cyanide, simple alkali metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR Part 136, as revised May 14, 1999.

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

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

Actual effluent limitations for total chlorine, when discharging intermittently, shall then be determined according to Implementation Procedures for Table B from the Ocean Plan, using a minimum probable initial dilution factor of 87 and the applicable flow rate.

[4] Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

[5] Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100/NOEL, where NOEL (No Observed Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism.

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

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

[8] Endosulfan represents the sum of alpha-endosulfan, beta-endosulfan, and endosulfan,sulfate.

[9] HCH (hexachlorocyclohexane) represents the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.

[10] Dichlorobenzenes represent the sum of 1,2- and 1,3-dichlorobenzene.

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

[12] DDT represents the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

[13] Halomethanes represent the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

[14] PAHs (polynuclear aromatic hydrocarbons) represent the sum of acenapthalene; 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.

[15] PCBs (polychlorinated biphenyls) represent the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Arolclor-1254, and Arcolor-1260.

F. Interim Effluent Limitations

G. Land Discharge Specifications – Not Applicable

H. Reclamation Specifications

The Discharger shall continue to comply with reclamation requirements established in San Diego Water Board Order No. 93-07 and any applicable future revised or renewal waste discharge requirements.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations of this Order are derived from the water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan.

The water contact bacterial standards in the previous Order No. R9-2005-0136, which were based on the language in the 2001 Ocean Plan, have changed. The language in the 2005 Ocean Plan now specifies that the Water-Contact Standards apply to ocean waters within California's jurisdiction designated by the San Diego Water Board as having REC-1 beneficial uses. Because the San Diego Water Board has not completed a process to designate specific areas where the water-contact standards apply, Ocean Plan Bacterial Standards apply throughout all ocean waters in the San Diego Region. Thus, the applicable standards are included in this Order. See section VII.B.7 of this Fact Sheet for additional information on compliance with the 2005 Ocean Plan bacterial standards.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 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 following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

Influent monitoring is required to determine the effectiveness of the source control program, to assess the performance of treatment facilities, and to evaluate compliance with effluent limitations. Influent monitoring frequencies and sample types for flow, $CBOD_5$, and TSS have been retained from Order No. R9-2005-0136. Refer to section III.A of Attachment E of this Order for a summary of influent monitoring requirements.

B. Effluent Monitoring

Effluent monitoring is required to determine compliance with the permit conditions and to identify operational problems and improve plant performance. Effluent monitoring also provides information on wastewater characteristics and flows for use in interpreting

water quality and biological data. Effluent monitoring requirements for most of the parameters have been retained from Order No. R9-2005-0136. Effluent monitoring for tributyltin and TCDD equivalents have been increased from semiannually to quarterly based on the results of the RPA and to determine compliance with the newly established effluent limitations.

Effluent monitoring for Combined Effluent discharged through the OOO has been added to determine compliance with the flow prohibitions contained within section III of the Order.

C. Whole Effluent Toxicity Testing Requirements

As described in section IV.C.5 of this Fact Sheet, quarterly chronic WET testing is required by this Order to evaluate compliance with Table B water quality objective and evaluate any potential synergistic effects in the effluent.

D. Receiving Water Monitoring

1. Surface Water

a. Microbiological (Near Shore and Off Shore)

The near shore and off shore water quality sampling program is designed to help evaluate the fate of the wastewater plume under various conditions and to determine if the Ocean Plan standards are being negatively impacted by the discharge. Further, bacterial sampling is required to provide data to help track the wastewater plume in the offshore waters, to evaluate compliance with recreational water standards in the kelp beds, and to address issues of beach water quality at the shoreline stations. Monitoring requirements for total coliform organisms, fecal coliform organisms, and enteroccoccus bacteria have been established in this Order, consistent with Order No. R9-2005-0136.

b. Benthic Monitoring

Sediment and infauna monitoring is required to help evaluate the potential effects of the discharge on the physical and chemical properties of the sediment and biological communities in the vicinity of the discharge, consistent with Order No. R9-2005-0136.

c. Fish and Invertebrate

Fish and invertebrate monitoring is required to assess the effects of the discharge on local fish and megabenthic invertebrate communities in the surrounding area of the discharge location, consistent with Order No. R9-2005-0136.

E. Other Monitoring Requirements

1. **Kelp Bed Monitoring.** Kelp bed monitoring is intended to assess the extent to which the discharge of wastes may affect the aerial extent and health of coastal kelp beds. The aerial extent of the various kelp beds photographed in each survey will provide a baseline for future monitoring to help evaluate any significant and persistent losses to the kelp beds.

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

3. **Solids Monitoring.** The Discharger is required to monitor solids generated at the Facility pursuant to 40 CFR Part 503. The Discharger shall report, annually, the volume of screenings, sludges, grit, and other solids generated and/or removed during wastewater treatment and the locations where these waste materials are placed for disposal.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D to the Order.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

This Order may be re-opened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR Parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements [including, but not limited to, increased/ modified receiving water requirements and participation in the Southern California Coastal Water Research Project (SCCWRP) model monitoring program]. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or San Diego Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Spill Prevention and Response Plans

The CWA largely prohibits any discharge of pollutants from point sources to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. The unpermitted discharge of wastewater to waters of the United States is illegal under the CWA. Further, the Basin Plan prohibitions discharges of waste to land, except as authorized by WDRs of the terms described in CWC section 13264. The Basin Plan also prohibits the unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system. Further, Discharge Prohibition III.A of the Order prohibits the discharge of waste from the Facility not treated by secondary treatment process and not in compliance with the effluent limitations of the Order and/or to a location other than Discharge Point No. 001.

Sanitary collection and treatment systems experience periodic failures resulting in discharges that may affect waters of the State. There are many factors which may affect the likelihood of a spill. To ensure appropriate funding, management and planning to reduce the likelihood of a spill, and increase the spill preparedness, this Order requires the Discharger to maintain and implement Spill Prevention and Response Plans.

b. Spill Reporting Requirements.

To determine compliance with Discharge Prohibition III.A and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in section VI.C.2.b of this Order.

c. Whole Effluent Toxicity (WET)

Implementing provisions at section III.C.4.c.(4) of the Ocean Plan require chronic toxicity monitoring for ocean waste discharges with minimum initial dilution of less than 100:1. Based on methods of the Ocean Plan, a maximum daily performance goal of 88 TUc is established in this Order. Monitoring for chronic toxicity has been established from quarterly to semiannually.

As described further in section IV.C.5.b of this Fact Sheet, this Order does not require acute toxicity testing.

This Order requires the Discharger to develop a Toxicity Reduction Evaluation (TRE) workplan, and submit the TRE workplan within 180 days of the effective date of this Order. The workplan shall describe steps the Discharger intends to follow if the performance goal for chronic toxicity (88 TUc) is exceeded.

If the performance goal for chronic toxicity is exceeded in any one test, then within 15 days of the exceedance, the Discharger shall begin conducting six additional tests, bi-weekly, over a 12 week period. If the toxicity performance goal is exceeded in any of these six additional tests, then the Discharger shall notify the Executive Officer and Director. If the Executive Officer and Director determine that the discharge consistently exceeds a toxicity performance goal, then the Discharger shall initiate a TRE/TIE in accordance with the TRE workplan, *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (USEPA 833-B-99-002, 1999), and USEPA Toxicity Identification Evaluation (TIE) guidance documents (Phase I, EPA/600/6-91/005F, 1992; Phase II, EPA/600/R-92/080, 1993; and Phase III, EPA/600/R-92/081, 1993). Once the source of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the chronic toxicity performance goal identified in section IV.A.2 of this Order.

Within 30 days of completion of the TRE/TIE, the Discharger shall submit the results of the TRE/TIE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations/performance goals of this Order and prevent recurrence of exceedances of those limitations/performance goals, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer.

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

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Wastewater Facilities

a. Oceanside Ocean Outfall Capacity

i. As discussed in section II.B of this Fact Sheet, the capacity of the OOO has been determined to be significantly less than previously reported by the Discharger. The capacity of the OOO has been reduced from 30 MGD to 22.6 MGD. The Discharger reported that a portion of that capacity, up to 23.1 MGD, 23.4 MGD, and 24.4 MGD could be regained through the cleaning of the OOO, the replacement of a portion of the OOO, or the combination of cleaning and replacing a portion of the OOO. This Order allows the Discharger to increase the permitted Combined Effluent discharge to the OOO if the Discharger can demonstrate that the capacity is available.

ii. As discussed in section II.B of this Fact Sheet, the discharge of effluent flow from SLRWRF through the land outfall to the OOO is limited based on the design capacity of the land outfall to the OOO. This Order limits the effluent discharged through the land outfall to the OOO to 13.5 MGD until the Discharger can demonstrate to the San Diego Water Board that the capacity of the land outfall to the OOO has been increased to the Discharger's requested flow value of 15.4 MGD (treatment capacity of the SLRWRF).

iii. This Order requires the Discharger to annually report on the status of the capacity of the OOO, and provided documentation to demonstrate that the Discharger can and will continue to achieve compliance with the flow limitations contained in section III of the Order.

iv. Prior to the expiration of this Order, this Order requires the Discharger to produce a final report regarding the capacity of the OOO to ensure that sufficient capacity is available to accommodate potential growth and any anticipated wastewaters in the future and submit their findings to the San Diego Water Board.

b. Treatment Plant Capacity

Consistent with Order No. R9-2005-0136, this Order requires the Discharger to perform a treatment plant capacity study to serve as an indicator for the San Diego Water Board of the Facility's increasing hydraulic capacity and growth in the service area.

The Discharger shall submit a written report to the Executive Officer within 90 days after the monthly average influent flow rate equals or exceeds 75 percent of the secondary treatment design capacity of the wastewater treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a

letter in accordance with Standard Provision V.B. (Attachment D of this Order) which transmits that report and certifies that that policy-making body is adequately informed of the influent flow rate relative to the Facility's design capacity. The report shall include the following:

- Average influent daily flow for the calendar month, the date on which the maximum daily flow occurred, and the rate of that maximum flow.
- The Discharger's best estimate of when the average daily influent flow for a calendar month will equal or exceed the design capacity of the facilities.
- The Discharger's intended schedule for studies, design, and other steps needed to provide additional treatment for the wastewater from the collection system and/or control the flow rate before the waste flow exceeds the capacity of present units.

c. Pretreatment Program

The federal CWA section 307(b), and federal regulations, 40 CFR Part 403, require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards, or permit limitations. Pretreatment requirements are imposed pursuant to 40 CFR Part 403.

The Discharger shall implement and enforce its approved pretreatment program and is an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the San Diego Water Board, the State Water Board, or USEPA may take enforcement actions against the Discharger as authorized by the CWA.

d. Biosolids

The use and disposal of biosolids is regulated under federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503. The Discharger is required to comply with the standards and time schedules contained in 40 CFR Part 503.

Title 27, CCR, Division 2, Subdivision 1, section 20005 establishes approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. Requirements to ensure the Discharger disposes of solids in compliance with State and federal regulations have been included in this Order.

e. Collection System

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. Public agencies that are discharging wastewater into the Facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules

Prior to this Order, the San Diego Water Board has interpreted the Bacterial Characteristics Water-contact Standards of the Ocean Plan (Receiving Water Limitations section V.A.1) to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds. The Ocean Plan also has language that these standards also apply in areas outside this zone used for water contact sports, as determined by the Regional Board (i.e., waters designated as REC-1). These designations would need to be specified in the Basin Plan. Because the San Diego Water Board has not completed a process to designate specific areas where the water-contact standards apply, Ocean Plan Bacterial Standards apply throughout all ocean waters in the San Diego Region. This interpretation has been confirmed by the USEPA.

In order to ensure that the Discharger is not causing, or contributing to, excursions of the Bacterial Characteristics Water-contact Standards contained in the Ocean Plan,

this Order requires the discharge to comply with a time schedule to ensure compliance with the standards.

The time schedule requires the discharger to: 1) prepare and submit a proposed work plan that outlines the tasks and the approach to be used in evaluating and selecting alternatives for ensuring compliance with Bacterial Characteristics receiving water limitation; 2) submit a plan and alternatives analysis; 3) complete financial arrangements for the selected alternative; 4) initiate construction of any required facilities; 5) complete construction of required facilities and initiate facilities start-up; 6) identify and implement operational refinements and confirm compliance with Bacterial Characteristics receiving water limitations; and 7) achieve full compliance with Bacterial Characteristics receiving water limitations outside the Initial Dilution Zone of the Oceanside Ocean Outfall. Final compliance with the standards is to be achieved no later than 60 months of the adoption date of this Order, unless modified by the San Diego Water Board. The Discharger is also required to implement the plan identified in Task 2 in accordance with the shortest practicable time required to complete each task, but in no case later than the Compliance Dates listed in the schedule.

VIII. PUBLIC PARTICIPATION

The San Diego Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the San Diego Water Board staff has developed tentative WDRs. The San Diego Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was published in the San Diego Union-Tribune on November 5, 2010 and posted on the San Diego Water Board web site on November 5, 2010.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either 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 must be received at the San Diego Water Board offices by 5:00 p.m. on December 6, 2010.

C. Public Hearing

The San Diego Water Board will hold a public hearing on the tentative WDRs during its regular board meeting on the following date and time and at the following location:

Date: January 12, 2011
Time: 9:00 AM
Location: Regional Water Quality Control Board
Regional Board Meeting Room
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Interested persons are invited to attend. At the public hearing, the San Diego Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is http://www.swrcb.ca.gov/rwqcb9 where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the San Diego Water Board regarding the final WDRs. The petition must be submitted within 30 days of the San Diego Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the San Diego Water Board by calling (858) 467-2952.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the San Diego Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Ms. Joann Cofrancesco at (858) 637-5589 or via email at jcofrancesco@waterboards.ca.gov..

ATTACHMENT G – DISCHARGE PROHIBITIONS CONTAINED IN THE 2005 CALIFORNIA OCEAN PLAN AND BASIN PLAN

I. Ocean Plan Discharge Prohibitions

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

2. Waste shall not be discharged to designated Areas of Special Biological Significance except as provided in Chapter III.E. of the Ocean Plan.

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

4. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table A or Table B [of the Ocean Plan] is prohibited.

II. Basin Plan Discharge Prohibitions

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

2. The discharge of waste to land, except as authorized by WDRs of the terms described in CWC section 13264 is prohibited.

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

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

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

secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

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

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

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

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

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

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

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

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

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

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

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

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

18. The discharge of treated sewage from vessels, which do not have a properly functioning USCG certified Type 1 or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

EXHIBIT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Linda S. Adams
Acting Secretary for
Environmental Protection

9174 Sky Park Court, Suite 100, San Diego, CA 92123-4340
Phone (858) 467-2952 • Fax (858) 571-6972
http://www.waterboards.ca.gov/sandiego/

Edmund G. Brown Jr.
Governor

TIME SCHEDULE ORDER NO. R9-2011-0017 REQUIRING THE CITY OF OCEANSIDE MISSION BASIN DESALTING FACILITY DISCHARGE TO THE PACIFIC OCEAN TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R9-2011-0016 (NPDES PERMIT NO. CA0107433)

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

1. On January 12, 2011, the San Diego Water Board adopted Waste Discharge Requirements Order No. R9-2011-0016 (NPDES No. CA0107433), for the City of Oceanside (hereinafter Discharger), for the discharge of up to 22.6 million gallons per day (MGD) of treated wastewater to the Oceanside Ocean Outfall (OOO) from the San Luis Rey Water Reclamation Facility (SLRWRF), the La Salina Wastewater Treatment Plant (SLWTP), and waste brine from the Mission Basin Desalting Facility (MBDF) through Discharge Point No. 001 to the Pacific Ocean, a water of the United States.

2. Order No. R9-2010-0120 includes Final Effluent Limitations in Section IV.A.1.b for the MBDF at monitoring location M-003, which reads, in part, as follows:

Parameters	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Instantaneous Maximum
Turbidity	NTU	75	100	225

3. The above effluent limitations were established to implement Table A of the 2005 *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (hereinafter Ocean Plan). Table A effluent limitations apply only to publicly owned treatment works and industrial discharges for which Effluent Limitations Guidelines have not been established pursuant to Sections 301, 302, 304, or 306 of the Federal Clean Water Act (CWA). At present, concentrate from desalination processes such as that employed by the City of Oceanside at MBDF are regulated through a default classification as an industrial waste under the Ocean Plan as well as the CWA because the Ocean Plan and the CWA do not have a specific separate classification addressing waste by-products such as brine generated by water treatment plants.

The above effluent limitations are being applied at a location (prior to mixing with any other effluent) which was not prescribed in previous Order No. R9-2005-0136, NPDES No. CA0107433, adopted by the San Diego Water Board on August 10, 2005.

4. California Water Code (CWC) section 13300 states: "Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements."

5. The Discharger submitted a request for a Time Schedule Order with a proposed compliance schedule for achieving the final effluent limitations. This compliance schedule has been incorporated into this Time Schedule Order. The Discharger is investigating several methods of achieving compliance. Progress reports shall be submitted semiannually according to the schedule in Table E-16 of Monitoring and Reporting Program No. R9-2011-0016 and shall continue until compliance is achieved.

6. Section 13385(j)(3) states, in part, that mandatory minimum penalties do not apply to a violation of an effluent limitation where the waste discharge is in compliance with a time schedule order issued pursuant to Section 13300; the time schedule order was issued on or after July 1, 2000 and specifies the actions the discharger is required to take in order to correct the violations; and the Regional Board finds that the discharger is not able to consistently comply with the effluent limitations for any one of four reasons set forth in Section 13385(j)(3)(B), including that:

   "The effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days."

7. In accordance with CWC section 13385(j)(3)(B), the San Diego Water Board finds that these effluent limitations shown in Finding No. 2 are new and more stringent because they are being applied differently, in a more stringent manner than in the previous Order. The effluent limitations in Finding No. 2 become applicable after the effective date of the waste discharge requirements (Order No. R9-2011-0016) which will be issued after July 1, 2000. New or modified control measures are necessary in order to comply with the effluent limitation and the Discharger reports that the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

8. Pursuant to CWC section 13267(b), the San Diego Water Board may require the Discharger to furnish, under penalty of perjury, technical or monitoring program reports. Monitoring reports and other technical reports are necessary to determine compliance with the NPDES permit and with this Order.

9. This Time Schedule Order is issued in accordance with CWC section 13300 and establishes a time schedule for compliance.

10. Compliance with this Order exempts the Discharger from mandatory minimum penalties for violations of effluent limitations for the constituents in Finding 2 only in accordance with CWC section 13385(j)(3).

11. CWC section 13385(j)(3)(A) requires this Order to specify the actions that the Discharger is required to take in order to correct the violations that would otherwise be subject to mandatory minimum penalties. This Order requires the Discharger to develop and implement new or modified control measures to comply with the effluent limitations prescribed in Order No. R9-2011-0016 and summarized in Finding 2. This Order requires the Discharger to submit a feasibility study to determine the appropriate new or modified control measures necessary to bring the discharge into compliance, complete the required design, permitting and construction activities, and achieve full compliance with Order No. R9-2011-0016.

12. This enforcement action is being taken for the protection of the environment and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.) in accordance with section 15308, Chapter 3, Title 14 of the California Code of Regulations. The issuance of this Order is also an enforcement action taken by a regulatory agency and is exempt from the provisions of CEQA pursuant to section 15321(a)(2), Chapter 3, Title 14 of the California Code of Regulations. Finally, issuance of this Order is exempt from the provisions of CEQA because the Order does not constitute approval of a project.

13. Any person adversely affected by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action. The petition must be received by the State Water Board within 30 days of the date on which the action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT pursuant to CWC sections 13300 and 13267 that the City of Oceanside shall comply with the following time schedule to ensure compliance with the turbidity effluent limitation at M-003 as contained in Order No. R9-2011-0016:

Table 1. Compliance Schedule

Task	Compliance Date
1. Prepare and submit a proposed work plan for supplemental monitoring to assess compliance with the turbidity effluent limitation at M-003.	No later than 3 months after the adoption date of this Order
2. Implement the proposed supplemental monitoring plan to assess compliance and to evaluate appropriate monitoring program revisions to adequately characterize effluent turbidity at M-003.	No later than 6 months after the adoption date of this Order
3. Prepare and submit report evaluating compliance with the turbidity effluent limitation and submit any requested revision to monitoring and reporting requirements as set forth in Order No. R9-2011-0016.	No later than 12 months after the adoption date of this Order
4. Prepare and submit a proposed work plan that outlines the tasks and the approach to achieve compliance with the turbidity effluent limitation at M-003 as prescribed in Order No. R9-2011-0016 and summarized in Finding 2.	No later than 18 months after the adoption date of this Order
5. Submit plan and alternatives analysis for ensuring compliance with the turbidity effluent limitation at M-003 as prescribed in Order No. R9-2011-0016 and summarized in Finding 2. The proposed plan shall include a schedule for completion that reflects a realistic assessment of the shortest practicable time required to perform each task.	No later than 30 months after the adoption date of this Order
6. Complete financial arrangements for selected alternative	No later than 48 months after the adoption date of this Order
7. Initiate construction of any required facilities	No later than 48 months after the adoption date of this Order
8. Complete construction of required facilities and initiate facilities start-up	No later than 57 months after the adoption date of this Order
9. Identify and implement operational refinements and confirm compliance with the turbidity effluent limitation at M-003 as prescribed in Order No. R9-2011-0016 and summarized in Finding 2.	No later than 60 months after the adoption date of this Order
10. Achieve full compliance with the turbidity effluent limitation at M-003 as prescribed in Order No. R9-2011-0016 and summarized in Finding 2.	December 31, 2015

1. The Discharger shall submit to the San Diego Water Board on or before each compliance date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the San Diego Water Board by letter when it returns to compliance with the time schedule.

   If the Discharger pursues a method other than a treatment system to achieve compliance, the compliance schedule above is not applicable, but progress reports in accordance with Item 2 below are required to document that compliance has been achieved.

2. Progress reports shall be submitted semiannually according to the schedule in Table E-16 of Attachment E to Order No. R9-2011-0016 and shall continue until compliance is achieved.

3. The following interim effluent limitations[1] at Monitoring Location M-003, as described in Order No. R9-2011-0016, shall be effective until **December 31, 2015** or when the Discharger achieves compliance, whichever is earlier:

Table 2. Interim Effluent Limitations for Turbidity at M-003

Parameters	Units	Interim Effluent Limitations[1]		
		Average Monthly	Average Weekly	Instantaneous Maximum
Turbidity	NTU	150	175	225

4. If noncompliance is confirmed through Tasks 1 through 3 above, within 24 months of the adoption of this Order, the Discharger shall develop, implement, and submit to the Regional Water Board, a Pollution Prevention Plan (PPP) pursuant to CWC Section 13263.3 for turbidity.

5. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement or issue a complaint for Administrative Civil Liability. If compliance with these effluent limitations is not achieved by the Full Compliance Date, the discharge would not be exempt from mandatory minimum penalties for violation of the effluent limitations and would be subject to issuance of a Cease and Desist Order in accordance with CWC section 13301.

[1] The Interim effluent limitations are based on effluent performance data from March 3, 2011 through December 31, 2015 for the Discharger.

6. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all technical reports required herein shall be prepared by, or under the supervision of, a California Registered Engineer or Registered Geologist (as applicable) and shall be signed by the registered professional..

7. Any person signing a document submitted under this Order shall make the following certification:

> *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

I, David W. Gibson, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on January 12, 2011.

DAVID W. GIBSON
Executive Officer

EXHIBIT C

Branch

DEPARTMENT OF HEALTH SERVICES

DIVISION OF DRINKING WATER AND
ENVIRONMENTAL MANAGEMENT

DRINKING WATER FIELD OPERATIONS BRANCH

City of Oceanside

WATER PERMIT NO. 04-14-94P-009

System No. 3710014
San Diego County

June 1994

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY
PETE WILSON, *Governor*

DEPARTMENT OF HEALTH SERVICES
DIVISION OF DRINKING WATER AND ENVIRONMENTAL MANAGEMENT
SAN BERNARDINO DISTRICT
1836 SOUTH COMMERCENTER CIRCLE, SUITE B
SAN BERNARDINO, CA 92408
(909) 383-4328
FAX (909) 383-4745

October 7, 1994

City of Oceanside
Water Utilities Department
300 N. Hill Street
Oceanside, CA 92054

WATER PERMIT NO. 04-14-94P-009

By application dated January 4, 1993, The City of Oceanside requested a permit to operate and maintain it's existing domestic water system, and to add two new wells treated by the reverse osmosis process. The City currently operates under a Domestic Water Supply Permit issued by the Department of Health Services 1950. Because the existing permit is no longer considered representative of the current system, a new permit has been issued rather than an amendment to the original permit. Enclosed is a copy of an engineering report, dated June 1994, prepared by the Division of Drinking Water, Field Operations Branch, (DDW-FOB), for the City of Oceanside Water System.

It is the Finding of the State Department of Health Services that Sections 4010 through 4039.6, inclusive, of the California Health and Safety Code can be met by the water system. A domestic water supply permit is hereby granted to the City of Oceanside to operate the existing water system subject to the following provisions:

1. Prior to implementation of an artificial recharge project for the Mission Groundwater Basin, the City shall apply to the Department for an amended domestic water supply permit.

2. The City shall not place Well No. 12A into service without prior notification and approval from the Department.

3. The City shall continuously and reliably disinfect all water from the reverse osmosis and surface water treatment plants prior to delivery to the distribution system.

4. The City shall develop an emergency plan of action and provide associated training of the Weese Surface Water Treatment Plant personnel to ensure that chemical spills discharged to the waste washwater holding ponds are not returned to the headworks of the plant.

5. The City shall develop a program that provides for the routine operation and maintenance of each valve in the system on an annual basis. The valve exercise program shall include a record keeping element that indicates the last time each valve was operated and ensures that the location of each valve is indicated on maps available to field personnel.

6. The City shall take all necessary actions, including the acquisition of land or easements, to prevent future encroachment of all system wells by potential sources of contamination or pollution.

7. Competent, adequate operation of the system shall be provided at all times. All persons operating treatment facilities must be certified by the Department of Health Services in accordance with Title 17, Part 1, Chapter 5, Subchapter I of the California Code of Regulations.

8. The City shall develop a plot plan for City Well No, 12A indicating all potential sources of contamination within a 200 foot radius of the well. The completed plan shall be submitted to DHS-DDW for review and approval no later than November 15, 1994.

9. The only active sources approved for supply of the system are; City Well No. 1 and City Well No. 2 via the San Luis Rey Desalter, treated surface water purchased from SDCWA, and the Weese Surface Water Treatment Plant. No other sources shall be used without prior approval from DHS-DDW.

This domestic water supply permit supersedes all permits previously granted to this water system. If you have any questions regarding this permit, please contact Toby Roy, District Engineer, at (619) 525-4159.

Sincerely,

Gary H. Yamamoto

Gary H. Yamamoto, P.E., Chief
South Coastal Region
Division of Drinking Water
Field Operations Branch

GHY.ERF

cc: SDCDEH

Enclosure

Oceanside/FPer94Ltr.doc

STATE OF CALIFORNIA

DEPARTMENT OF HEALTH SERVICES

Water Supply Permit

The State Department of Health Services Hereby Grants Permission To

The City of Oceanside Water Utilities Department

To Furnish or Supply Water for Domestic Purposes To

The City Oceanside

This Permit Becomes Effective October 7, 1994

and is granted subject to the provisions of Division 5, Part 1, Chapter 7 of the Health and Safety Code of the State of California and the Department of Health Services letter of October 7, 1994.

Water Permit No. 04-14-94P-009

Gary H Yamamoto

Chief, South Coastal Region

Division of Drinking Water Field Operations Branch

93 22814

Department of Health Services
Division of Drinking Water

City of Oceanside

WATER PERMIT No. 04-14-94P-009

System No. 3710014

June 1994

Engineering Report Prepared By

Eric Fraser
Sanitary Engineer

Reviewed By

Toby Roy, P.E.
Associate Sanitary Engineer

Table of Contents

Index of Apendices

ENGINEERING REPORT
for Consideration of the Permit Application from
The City of Oceanside
San Diego County
June 1994

Division of Drinking Water
and Environmental Management
Field Operations Branch
State Department of Health Services
Eric Fraser, Project Engineer

I. INTRODUCTION

A. Purpose of Report

By application dated January 4, 1993, the City of Oceanside requested a permit to operate and maintain it's existing domestic water system, and to add two new wells treated by the reverse osmosis process. The City currently operates under a Domestic Water Supply Permit issued by the Department of Health Services in 1950. Because the existing permit is no longer considered representative of the current system, a new permit is being considered rather than an amendment to the original permit. Section 4013 of the California Health and Safety Code states that upon

receipt of an application, the Department shall make a thorough investigation. The purpose of this report is to document the sanitary engineering review of the existing system facilities and operation, and to make recommendations regarding issuance of a domestic water supply permit.

B. Summary Description of System

Domestic water served by the City is obtained from three sources; The San Diego County Water Authority (SDCWA) treated surface water, treated surface water from the City's Weese treatment plant, and treated groundwater from the City's reverse osmosis treatment plant. The City can also utilize water from City Well No. 12A as an emergency source of supply. Twelve concrete and welded steel reservoirs provide 50.5 million gallons (MG) of gravity storage for the sixteen pressure zone system. The source, storage, treatment, pumping and transmission facilities have adequate capacities to reliably deliver water to the system under normal operating conditions.

The water produced by the reverse osmosis and surface water treatment plants meet all applicable standards. Treated surface water distributed by the SDCWA is obtained from the Metropolitan Water District's Skinner Treatment Plant which operates under a separate permit issued by the Department. This treated water also meets all applicable drinking water standards.

II. ENGINEERING INVESTIGATION FINDINGS

A. Source of Information

Information for this report was obtained from review of system records and reports, existing maps and detailed discussions with City personnel. A complete field survey of the system was conducted in August of 1993.

B. Consumer and Production Data

The City of Oceanside provides water and sewer services to the coastal community of Oceanside. The population of the community is fairly consistent with some seasonal variation during the summer months. The permanent population is

estimated to be 135,000. The system serves 36,784 metered service connections. A system map is on file and a system schematic is included in Appendix A. Total water production for 1993 was 5,209 million gallons (MG). An additional 3,854 MG of treated water was purchased from the SDCWA. Production records indicate that the maximum day demand under present conditions is approximately 38.2 million gallons per day (MGD) or 26,527 gallons per minute (GPM). Present production capacity is approximately 46,855 GPM including the contractually guaranteed 28,725 GPM of treated water from the SDCWA. A total of 110 cfs (71 MGD) of raw water is available from the SDCWA for the Weese Surface Water Treatment Plant. The average consumption per service connection during maximum day demand conditions is 0.72 GPM. An additional 71 cfs (31,867 GPM) of treated water will be available through the Oceanside #6 connection to the SDCWA #1 aqueduct and North County Pipeline Distribution facilities. However, due to periodic service interruptions from the SDCWA for maintenance and repairs, any one of the connections to the SDCWA aqueduct system could be interrupted. This must be taken into consideration when estimating the City's ability to serve additional customers.

Growth in the area has accelerated in recent years with large developments of tract housing communities. Approximately 13,721 service connections have been added to the water system in the past ten years. The service area encompasses level coastal plains to rolling hills that vary from sea level to 900 feet above mean sea level (MSL).

C. Proposed Facilities

The City recently completed construction of the San Luis Rey Desalter which treats local brackish ground water with the reverse osmosis treatment process. Currently the plant is rated at 2.2 MGD and is capable of meeting fifteen percent of the City's average day demand. Plans to expand the plant capacity to 5 MGD by 1997 are being finalized at this time. Ultimately, the plant may be expanded to 15 MGD. Groundwater recharge, via injection wells utilizing raw surface water obtained from MWD, is currently being considered as a viable option to recharge the groundwater basin to support plant expansion. The key feature of the desalter is that it provides a local source of supply that is not dependent upon imported water. A detailed

discussion of the San Luis Rey facility is included in this report under sources of supply.

A 700,000 gallon disinfection contact basin is currently under construction adjacent to the Weese Surface Water Treatment Plant. This basin combined with the one million gallon balancing reservoir and North County Pipeline distribution facilities (which includes the Oceanside #6 connection) to be constructed by the SDCWA, will significantly increase the inactivation (CT) available at the treatment plant. Previously, the plant flow rate was limited by seasonal variations in raw water temperature and pH that reduced the effective capacity of the plant (CT limiting). The construction of the reservoir and contact basin should be completed in 1996.

The City is presently revising its 1989 Water Master Plan. No other facilities are planned at this time.

D. Description of System

Appendix A is a system schematic showing the relationship and routing of water between sources, storage facilities and the distribution system. Appendix B includes data sheets providing detailed information on the sources, treatment, distribution and storage facilities.

E. Sources of Supply

1. Surface supplies

Raw and filtered water from Lake Skinner is available to the City via the San Diego County Water Authority (SDCWA) aqueduct. Five "barrels" are utilized to transport water in the aqueduct to the City and neighboring agencies. The general operating configuration is as follows:

Oceanside #1

Connected to both the SDCWA #1 and #2 barrels (currently the #2 is valved off), the Oceanside #1 connection is a 14-inch concrete transmission main that provides 6 cubic feet per second (cfs) of filtered and treated surface water from the MWD Skinner Surface Water Treatment Plant. In addition to the SDCWA supply, 8 cfs of treated surface water is available to the City from the Rainbow Water District

through the #1 connection (contractually, the City is assured of only 6 cfs from Rainbow, however historically 8 cfs has been delivered). Water from the #1 connection flows directly into the Morro No. 1 and No. 2 reservoirs. According the SDCWA bylaws, all agencies receiving water ordered from the SDCWA must ensure that the flow is continuous and may not "float" on the aqueduct. For that reason, all of the water received by City from the SDCWA is delivered to storage facilities before entering the distribution system. The #1 line will no longer be utilized as a source of supply upon completion of the #6 connection and balancing reservoir facility.

Oceanside #2

The #2 connection provides up to 39 cfs of raw surface water to the Weese treatment Plant from the SDCWA #3 or #4 barrel (the #4 barrel is presently valved off). A detailed discussion of the plant facilities and operation is discussed later in this report.

Oceanside #3

The #3 connection to the SDCWA #3 & #4 barrels (#3 currently valved off), provides up to 40 cfs of treated surface water to the Peacock Hills pressure zone and to the Guajome No. 1 and No. 2 reservoirs.

Oceanside #4

The #4 connection (SDCWA #3 barrel), provides up to 18 cfs of treated surface water to the San Francisco Peak No. 2 Reservoir via an altitude valve and the Leisure Village pressure zone. A significant amount of potential energy is available from the head loss that occurs from the SDCWA line into the reservoir. A hydroelectric generation facility has been constructed at the San Francisco Peak Reservoir site to take advantage of this potential energy.

Oceanside #5

The #5 connection (tied to the SDCWA #5 barrel), is a 36-inch line which provides up to 71 cfs of raw surface water from Lake Skinner to the Weese Surface Water Treatment Plant.

North County Distribution Pipeline

The North County Distribution Pipeline will originate at the regulatory structure and distribute water to four agencies at their respective flow control facilities; the Vista Irrigation District, Vallecitos Water District, Rainbow Municipal Water District, and the City of Oceanside. The City will receive water from the 72-inch line at their flow control facility which will feed directly into the City's 42-inch #6 aqueduct connection supplying the Guajome reservoirs. The connection will be capable of supplying 71 cfs (31,867 GPM).

SDCWA #1 Connection

Upon completion in 1996, the SDCWA #1 Connection will provide up to 132 cfs of treated surface water directly to the one million gallon concrete regulatory structure (1 MG balancing reservoir). This source of supply will be capable of serving the City's entire maximum day demand. This connection provides a redundant source of supply in the event that the Weese Plant is removed from service due to maintenance, construction, or operational failure.

2. Groundwater supplies

Well No. 12A was drilled in 1953 and replaced Well 12 which was drilled in 1938. The well is located approximately one-quarter mile south of the Desalter wells. This well is only utilized as an emergency source of supply in the event of an imported water service interruption. Water from Well No. 12A pumps into the same transmission line that is utilized by the product water from the Desalter which ultimately is boosted into the Buddy Todd Reservoir. The well is 163 feet deep and was constructed using the driven casing, cable-tooled method. A gravel strainer in the lower 58 feet of the bore hole is used to reduce the sanding problems associated with extracting water from a water bearing sand formation. Because the well was constructed using the cable tooled method, and is not gravel packed, there is no sanitary seal. The well is located six feet south of a 6-inch sewer force main and 24 feet north of an 8-inch sewer force main. However, according to City personnel, there is no known history of bacteriological problems with the well. Well No. 12A shall be designated an emergency source of supply and shall not be used without prior notification and approval from the

Department. Special bacteriological monitoring and possible public notification will be required when the well is in service.

RO Well No. 1 and No. 2 were both constructed using the reverse circulation method and drilled to a depth of 210 feet. The finished depth of both completed wells is 200 feet. A 36-inch diameter, 5/16-inch wall, conductor casing was placed to a depth of 50 feet in each well. Both wells are equipped with 15-1/2-inch diameter, 1/4-inch wall, stainless steel blank casing from the surface to the completed depth of the wells with the exception of the screened segments. Well No. 1 is equipped with stainless steel, full-flow louvered screen casing from 100 feet to 140 feet, and from 160 feet to 180 feet. Well No. 2 is screened from 100 feet to 160 feet. The difference in construction is due to the minor variance in the impervious strata (clay) discovered during drilling. Both wells are gravel packed from 50 to 210 feet with 6 by 12 valley sand and gravel. The upper 50 feet of the annulus of each well is sealed with a 10 sac mix of cement, which provides an adequate sanitary seal.

The service area is sewered and all wells (with the exception of Well 12A) are adequately constructed and separated from potential sources of contamination. Well driller's reports and plot plans for each well are included in Appendix D.. Data sheets for all of the wells are included in Appendix B.

F. Water Quality

1. Groundwater

All of the groundwater sources of supply utilize a basin which is predominately coastal alluvial deposits, with some overlying residual soil. Hydrologic studies have indicated two separate water bearing zones in the basin, separated by a layer of impervious clay. The upper zone demonstrates significantly different water quality than that of the surface water in the river, and does not appear to be directly under the influence of the surface water. Well No. 1 and No. 2 were constructed with sanitary seals terminating into the impervious layer, thus extracting water from the lower basin only. Water quality analyses from pilot wells drilled prior to the final construction of the RO plant indicated better water quality in the lower

zone. The groundwater in the lower zone meets all chemical water quality standards with the exception of Iron and Manganese and total dissolved solids which are present in concentrations of ~1.9 mg/l, ~0.54 mg/l, and ~1500 mg/l, respectively. Levels of 1,2 Dichloropropane below the MCL have been found in the upper and lower zones. 1,2 Dichloropropane, also known as propylene dichloride, is used as a lead scavenger in fuels and solvents, and as a soil fumigant. The levels found in all three wells ranged from 0.8 to 2.9 ug/l, less than the current MCL for this constituent of 5.0 ug/l. A high rate of removal is achieved across the RO membranes, thus reducing the probability of any future MCL violations. Quarterly monitoring for 1,2 Dichloropropane is required for both Well No. 1 and Well No. 2. Included in Appendix C are copies of recent raw water quality analyses as well as a copy of the treated water quality for the San Luis Rey Desalter.

Finished water from the treatment plant is consistently negative for coliform bacteria and meets all State Drinking Water Standards.

A vulnerability assessment in accordance with the new phase II/V monitoring requirements has been conducted by the City and reviewed by the Department. A tabulated listing of each constituent is included in Appendix E which indicates the minimum required monitoring schedule for each groundwater source of supply. The City must revise its monitoring plan to include the new constituents and monitoring frequency outlined in the table.

2. Raw Surface Water

Colorado River Water

The Weese Surface Water Treatment Plant and the treated surface water purchased from the SDCWA utilizes Colorado River and State Project water from Lake Skinner as primary sources of supply.

Raw water obtained from the Colorado River is known for its relatively high mineral content due to agricultural discharges to the river. Moderate (approximately 650 mg/l) levels of total dissolved solids are routinely found in this raw water supply. Levels of other inorganic constituents as well as volatile organic and radiological

compounds are within State Drinking Water Standards. Natural organic compounds leading to the formation of Trihalomethanes after disinfection have demonstrated formation potentials from 160 to 170 ug/l at the influent to the MWD Skinner Treatment Plant. A summary of raw water quality monitoring is included in Appendix F.

State Project Water

While lower in TDS than Colorado River Water (CRW), State Project Water (SPW) is higher in asbestos, and THM forming organic compounds. Levels of asbestos in the raw water ranged from less than 0.1 to 1,900 million fibers per liter (MFL) due mainly to storm water runoff containing mining tailings. The amount of fibers greater than 10 microns, which are thought to be a significant health risk were rarely found in raw water supplies and never found in treated water supplies from the MWD Mills and Jensen Surface Water Treatment Plants during a study conducted by the MWD from 1980 to 1988.

As indicated in the analyses included in Appendix G, detectable levels of volatile organic chemicals, other than those noted below, have not been found at the Lake Skinner and Lake Perris effluents. Toluene, benzene, and ethylbenzene have been detected at levels less than the MCL for these constituents on a random basis. The presence of these constituents can be directly attributed to recreational boating activities on the open reservoirs.

Pesticide and herbicide analyses of SPW have been conducted by the MWD and have indicated levels of atrazine, simazine, and Dacthal less than the MCL on occasion. No other pesticides or herbicides have been found at levels above reliable detection limits.

The total THM formation potential of SPW is considered to be relatively high ranging between 300 ug/l to 400 ug/l at the filtration plant influent.

Starting in 1991, the MWD conducted one year of special monitoring for Cryptosporidium (Crypto), Giardia, and enteric viruses in both the CRW and SPW. A total of 18 CRW and 6 SPW/CRW (blended at Lake Skinner) virus samples were collected. Eighteen Crypto and 6 Giardia samples were collected from each source. The results of this program indicated that Cryptosporidium levels were higher than Giardia with 21% of the SPW samples and 33% of the CRW

samples positive for Crypto where only 9% of the SPW and 11% of CRW were positive for Giardia.

The overall level of oocysts per 100 liters was significantly less than that of other sources of supply surveyed across the nation.

G. Treatment

All of the surface water served by the City is treated by the Weese Surface Water Treatment Plant or the MWD Lake Skinner Surface Water Treatment Plant which operates under a separate permit issued by this Department. The San Luis Rey Desalter provides treatment for all ground water entering the system. All three facilities utilize treatment processes approved by the Department.

1. Weese Surface Water Treatment Plant

The Robert A. Weese Water Treatment Plant receives a blend of Colorado River Water (60%) and State Project Water (40%) from Lake Skinner as part of the Metropolitan Water District's (MWD) Southern California importation system.

The plant receives water from the Oceanside Aqueduct #2 and/or #5 which provides an estimated residual hydraulic pressure at the plant headworks of approximately 40 feet of water. This residual head is utilized by the plant for chemical mixing and filtration.

Treatment Plant Operation

The treatment plant is designed to operate as a direct filtration plant with a rated capacity of 25.2 MGD. Primary unit processes at this plant consist of coagulation, flocculation, filtration, and disinfection. Additional supporting processes consist of stand-by power, chemical feed, operations building, backwash water settling ponds, septic tank and leach fields, utility water/surface wash water and recovered wash water pump stations.

Coagulation: The plant utilizes passive mixing techniques for both flash mixing and flocculation. Flash mixing is accomplished in the multijet slide gate influent basin. The seven jet multijet slide gate directs the flow from the plant influent line into the 512 cubic foot basin creating a velocity gradient (G) of approximately 1,000 sec^{-1} for

approximately 15 seconds. Approximately 10-12 mg/l of aluminum sulfate (Alum) is added to the flash mixing basin using two one to fifteen gallon-per-hour (gph) positive displacement pumps (one on standby, one in use). Sulfuric acid and/or carbon dioxide is added as required in the flash mixing basin to maintain an optimum pH of approximately 7.55 to enhance coagulation.

Flocculation: Water leaving the flash mixing basin flows into two flocculation channels. Both flocculation channels are approximately 19 feet wide, 14 feet average depth and 320 feet long. Each channel consists of twenty-two end around baffles spaced at approximately four feet on center. The water depth of the influent side of the basin is less than the depth of the effluent side of the basin which allows for a higher flow velocity on the inlet side and a decreased flow velocity on the discharge side. The design velocity gradient through each flocculation channel varies from 200 sec^{-1} to 20 sec^{-1} at the influent to the effluent channel, respectively. This tapered energy design helps prevent the fragmentation of formed floc. Cationic, nonionic, and anionic polymer may be added in the influent channel of the chemical flocculation channel as a filter aid. Cationic polymer is currently being fed at rate of 0.75 to 0.9 mg/l with two (one standby, one duty) BIF Propsupurb positive displacement pumps capable of feed rates up to 315 gph, each. A trace amount of chlorine is fed in the influent channel of the chemical flocculation basin to aid in coagulation and inhibit bacterial growth in the plant.

Filtration: Following coagulation and flocculation, the water flows into a common distribution channel which feeds the filter influent forebays. Water then flows over the filter influent weirs within the forebay into the eight dual medial filters. The filter influent weir height is set approximately 10 feet above the level of the backwash troughs. Water flows through the filter media, enters a common effluent channel, and flows over the effluent channel weir which is set at approximately 30 inches above the level of the backwash troughs (see Attachment No. 1). A net positive head of approximately eight feet of water is applied to the filters. The position of the effluent control weirs prevents the formation of a vacuum condition under the filters. Each of the eight dual media filters are comprised of approximately 18-inches of gravel, 10-inches of sand and 18-inches of anthracite coal with an effective size of 1.0 mm to 1.1 mm and uniformity

coefficient of not more than 1.70. During the initial plant design, it was estimated that the media for these filters would be capable of maintaining a surface loading rate of approximately 5 to 6 gpm/sf. Currently, the plant is operated at a surface loading rate of approximately 5 to 9 gpm/sf.

Backwashes are initiated by the operator by using a formula to calculate the collective loss of head in conjunction with maintaining a backwash interval which minimizes recovery spike overlap (e.g. two filters in recovery at the same time). When the filter inflow is shut-off, the water in the bed will slowly drain down as filtration continues until it reaches the level established by the effluent weir. The drain gate in the filter forebay is then opened, permitting the water in the bed to drain to the level of the backwash trough lip. As the water level in the filter falls below the level in the filtered-water conduit, a reverse flow of filtered water upward into the bed gradually builds up until the maximum backwash rate is attained when the water in the filter reaches the overflow level into the backwash troughs (see Attachment No. 2). A backwash rate of approximately 20 gpm/sf can be achieved with approximately 29 inches of head established by the plant filter-effluent control weir. The plant filter effluent control weirs are adjustable to provide a range of 20 to 38 inches of head for backwash to account for variances in water density with temperature. The plenums under each filter are large enough to create low flow velocities that minimize variations in head resulting in a uniform distribution of backwash water under the filters. The filter backwash cycle takes approximately 70 minutes from initiation; sixty minutes of draindown, 6 1/2 minutes at full flow backwash, and includes approximately 3 minutes of surface wash. The backwash water is obtained from the plant effluent conduit. Consequently, during backwash, the plant discharge is reduced. Surface wash water is pumped from the plant effluent through a double check-valve assembly at approximately 1,200 gpm. This reduction in plant effluent is currently equalized by using the City's Guajome Reservoir to ensure that the water system demand is meet. Upon completion of the North County Pipeline and Regulatory Structure, the equalization of flow will occur in the 1 M.G. reservoir. Typically no significant reduction in plant effluent flow is noticed at flows greater than 8.4 MGD. The plant is not equipped with filter to waste capabilities. However, historical filter effluent turbidity data has demonstrated turbidity levels

consistently less than 0.5 NTU and more typically less than 0.15 NTU after each interruption event.

Disinfection: After passing over the effluent control weir into the small adjoining afterbay, the water is disinfected and currently routed into the Oceanside #2 and #3 aqueducts. Upon completion of the North County Pipeline and associated facilities, the filter plant effluent will be routed through the Regulatory structure via the 700,000 gallon disinfection contact basin. Chlorine may be injected at the plant influent, flocculation channels, filter headworks, and downstream of the plant effluent afterbay. Two (one duty, one standby with automatic switchover), vacuum system chlorinators capable of delivering up to 1000 pounds per day (lb/day) at any one of the aforementioned injection points. Ten one-ton cylinders are on hand and provide about 35 days of chlorine storage at normal plant flow.

Ammonia is added in conjunction with free chlorine at a 3 to 1 ratio downstream of the post afterbay chlorine injection point. Up to 930 lbs/day of ammonia (as 24.5 %) can be added at the injection point. Under normal operation, a 4 mg/l combined chloramine residual is maintained at the plant effluent. A 5,760 gallon insulated tank is used for ammonia storage and provides approximately 45 days of supply.

The City also maintains a trailer-mounted portable gas chlorinator which is stored on the plant site in the event of a total system failure.

Calculations to determine the inactivation of Giardia and viruses for the current and future flow arrangement are included in Appendix H. All flow calculations assume that sixty-percent of the total plant flow is diverted to the #2 Aqueduct due to the 60 psi of imposed head on the #3 Aqueduct from the Peacock Hills pressure sustaining valve. Inactivation of virus is the controlling factor with the current piping arrangement while using chloramines. To achieve the necessary 3 log virus inactivation with a target maximum combined residual of 3.0 mg/l, plant flow must be reduced to approximately 22 cfs during the winter months due to low raw water temperature. With the addition of new chlorine contact basin, free chlorine will be added at the plant effluent with ammonia addition at the basin effluent. The use of free chlorine is far more effective for virus inactivation. Giardia inactivation then becomes

the controlling factor. One log inactivation of Giardia during the winter months can be achieved with a minimum free chlorine residual of 1.6 mg/l. The contact time values utilized for compliance determination include a 0.7 (superior baffling) correction factor for the contact basin.

Plant Reliability and Process Monitoring: Turbidimeters continuously monitor plant influent turbidity, composite plant effluent turbidity, individual filter effluent turbidity, and multipoint filter effluent turbidity. Multipoint filter turbidity readings are used to evaluate the filter's performance during filter draindowns, backwash, and recovery. The multipoint unit consists of a single turbidimeter that is manually switched by the operator to obtain readings from each point in the process train. The results of the multipoint unit are compared against the continuous monitoring equipment to verify the accuracy of each turbidimeter and to encourage the operator (the switch is located in the filter piping gallery) to make periodic inspections of the plant. The influent turbidimeters are alarmed at 5 NTU and the composite effluent turbidimeter is alarmed at 0.16 NTU.

A summary of plant process alarms are presented below:

Parameter	Location	Grab Sample (frequency)	Continuous Monitoring	Recording	Alarm	Auto Shutdown
Flow	Influent	N/A	Yes	Yes	No	No
Flow	Effluent	N/A	Yes	Yes	No	No
Turbidity	Influent	Every 3 hrs	Yes	Yes	5 NTU	No
Turbidity	Effluent	Every 3 hrs	Yes	Yes	0.16 NTU	No
Chlorine Residual	Effluent	Every 3 hrs	Yes	Yes	Yes	No
Temperature		Daily @ midnight	No	No	No	No
pH		Every 3 hrs	Yes	Yes	No	No
Chemical Feed Flow	Alum/ Polymer	N/A	Yes	No	Yes	No
Low Level Chemical	Alum/ Polymer	N/A	No	No	No	No

Waste Disposal System: Waste washwater flows to a series of four holding ponds. One pond is usually out of service for sludge drying and removal to the onsite permitted landfill. The first two ponds remove the majority of the settleable solids present in the waste backwash water. The

third holding pond allows for further detention time and removal of suspended solids. Water from the third pond is continuously recycled as the supernatant is withdrawn and returned to the flash mixing basin at the treatment plant headworks. The return pumps are operated on a liquid level control system and run automatically. All plant drains with the exception of the maintenance garage and operations building flows into the holding ponds. A septic tank and leach field system receives drainage from the operations building and maintenance garage. The City must amend its Operations Plan to include operator intervention procedures to prevent potential contamination of the influent water from chemical spills in those areas which drain to the holding ponds.

2. San Luis Rey Desalter

The Desalter is located in the Mission Valley area of the system one-quarter mile north of Mission Blvd., west of Fireside Drive. The plant utilizes portable office buildings and a steel framed and sided building to house the membrane vessels.

The nominal design capacity of the plant is 1.5 to 1.7 MGD of permeate plus 0.5 MGD of bypassed feedwater(raw well water), which combines to produce a total plant output of 2.2 MGD. Approximately 25 percent of the feedwater is rejected as brine waste (concentrate) and discharged to the ocean outfall line. The combined flow of both wells is treated with hydrochloric acid and Hypersperse antifoulant prior to the RO process train. Following chemical addition, the water is filtered by one of two full capacity cartridge filters. The water is then pumped from the cartridge filters and into the RO units (pressure vessels) using a high pressure pump that increases the water pressure to 235 psig. The highly pressurized feedwater enters 32 pressure vessels that treat approximately 50 percent of the flow and reject the other 50 percent. The rejected flow is then directed into another 14 pressure vessels where 50 percent of that water is treated and 50 percent is rejected. The combined permeate (total permeate) is mixed with bypassed raw well water and discharged into the top of a 3800 gallon decarbonator tank. The combined flow (product water) is injected with sodium hydroxide and chlorine and ammonium hydroxide prior to being discharged into the Buddy Todd transmission line. A process diagram is included in Appendix I.

Pretreatment: In order to minimize membrane fouling, and lower the potential for carbonate scaling, the raw well water is treated with 16 to 20 gpd of hydrochloric acid and 3 to 4 gpd of Hypersperse threshold inhibitor. Both chemical products are fed utilizing Durco metering pumps that are capable of delivering up to 2600 gpd for the acid and 130 gpd for the inhibitor. Both pumps are electronically controlled by the Programmable Logic Controller (PLC) which automatically adjusts the acid feed rate to maintain an pH of 6.9 based on the data received from a continuous monitoring analyzer located downstream of the injection point. The PLC is also programmed to shut the plant down if the pH is less than 5.0 or greater than 7.5. The initial estimated acid demand was up to 130 gpd. Because of this initial estimate, the storage tank was sized at 5000 gallons. At the current feed rate the amount of acid on hand is in excess of 200 days.

Hypersperse threshold inhibitor is injected into the feedwater following acid injection. Hypersperse is an organic acid, anionic copolymer anti-foulant that both inhibits the crystalline formation of minerals and neutralizes the charges on colloidal particles and prevents them from penetrating, or adhering to, the membranes. The majority of the minerals, colloids and Hypersperse is rejected by the membranes and end up in the waste brine. The Hypersperse is injected at a rate of 2 mg/l from a 250 gallon polybin container. The rate of feed is controlled by the PLC which paces the amount of anti-foulant added in accordance with the plant flow rate. The plant is automatically shut down by the PLC if the feed pump flow rate falls below 9.12 milliliters per minute (ml/m). Each 250 gallon polybin in storage provides approximately 25 days of supply.

Prefiltration: Following pH adjustment chemical addition, the feed water is prefiltered through two full flow cartridge filter units to protect the RO membrane from fouling by suspended particulate matter. Although the normal operation process train utilizes two filters in parallel, each cartridge is capable of handling the full rated plant flow through the 98-inch high by 32-inch diameter filter vessels, thus allowing for filter maintenance without a service interruption. Each unit contains a 10 micron, 40-inch long, polypropylene wound filter. Headloss across each filter is monitored by the PLC. Individual cartridge filter elements are replaced

every 90 days or when a total differential pressure of 10 psi is measured across the filter, whichever comes first.

Feed Pumping System: The well discharge pressure is 45 psi. This pressure is reduced approximately 5 psi across the prefilters resulting in a system pressure of 40 which must be boosted to 230 psi for the water to pass through the membranes and into the decarbonator. Two high pressure centrifugal pumps (one in service, one on standby) utilizing high efficiency, 250 HP constant speed motors provide up to 250 psi at the pump discharge. The PLC monitors the flow rate of the permeate and concentrate and adjusts the well discharge flow rate valve to maintain a concentrate flow rate of 440 gpm and a permeate flow rate of 1370 GPM. The PLC will shut the plant down in the event of low suction pressure or high discharge and high feed pressure. A spare pump is available at the plant site for immediate replacement.

Membrane Filtration Units: The RO filter train consists of 46 pressure vessels each containing seven spiral wound membrane elements set end to end inside each vessel. The 46 pressure vessels are supported in a 3 band array of "T" type frames having 8 vessels on each side of the center uprights. The RO filter train is configured in a two pass process that utilizes parallel flow through two banks of 32 pressure vessels each for the first pass, followed in series by a single bank of parallel flow through 14 pressure vessels for the second pass. The first pass through the 50 pressure vessels filters 50 percent of the feedwater flow and rejects the other 50 percent. The 50 percent reject flow from the first pass is then run through the second array of 14 pressure vessels where 50 percent of that flow is filtered and 50 is rejected. Thus, the feedwater flow through the 46 pressure vessels results in a 75 percent total permeate recovery and a 25 percent concentrate waste brine. The PLC is programmed to signal an alarm and initiate plant shut down if the reject flow (concentrate) of the last array of pressure vessels is reduced below 250 GPM. for more than 2 minutes. Each pressure vessel is fabricated of fiberglass reinforced plastic and is designed to withstand a minimum pressure of 400 psi at 120-degrees Fahrenheit. The membrane elements are spiral wound elements with the feed and reject flow through the element parallel to the product water tube of the element. The membranes have a nominal diameter and length of 8 by 40 inches, respectively, and are a composite of a polyester support with a polyamid barrier layer. The

conductivity of the total permeate is continuously measured and will cause the PLC to signal an alarm after exceeding 1200 umho/1 for more than 20 minutes.

Pressure gauges measure the headloss through the first two bank arrays of 32 pressure vessels and through the second single bank array of 14 pressure vessels. Headloss through the first array is usually attributed to biological accumulation, while headloss through the second array of pressure vessels is typically attributed to mineral and particulate accumulation. The conductivity, flow rate, temperature, and pressure through each of the various plant processes are continuously monitored and evaluated by the PLC and system operators. These four process parameters indicate the degree of fouling of the membranes and are used to indicate the need to initiate membrane cleaning.

Brine Disposal: The waste concentrate is routed through a reduced pressure principal backflow assembly and into the City's ocean outfall line. The Regional Water Quality Control Board has granted the City tentative approval for the discharge. The agency is in the process of preparing the appropriate permit for the discharge.

Blend: Because the permeate is low in minerals and has a low pH it is very aggressive. In order to neutralize the aggressiveness of the permeate, approximately 200 GPM of raw well water is blended with the permeate prior to the degasifier. The blend can be controlled automatically or manually by the PLC. In the automatic mode, the PLC monitors the conductivity of the post degasified blend and adjusts the blend water flow rate to maintain the desired range. In the manual mode, the blend water flow rate is adjusted by the operator to maintain the desired blend percentage. Due to the current levels of Iron(Fe) and Manganese(Mn) in the raw well water, the blend flow rate is presently being operated in the manual mode. A flow rate of 200 GPM is currently being utilized for the blend to maintain product water Fe/Mn levels below the secondary maximum contaminant levels for those constituents.

Decarbonation: The addition of hydrochloric acid at the headworks of the plant to lower the potential for carbonate scaling, converts bicarbonate to carbon dioxide which must be removed prior to distribution of the product water. The combined permeate from the pressure vessel array and blended raw water is discharged into the top of a 3800

gallon degassing tank (decarbonator). The decarbonator is a 21 feet high, 10 feet diameter, bi-directionally wound fiberglass tank, with a liquid loading rate of 17.7 gpm/ft^2. Carbon dioxide is released from the permeate as it cascades down over a 6.3 feet deep (500 cubic feet) bed of 3.5-inch Lanpac polypropylene aeration packing material. Two (one duty, one standby) 7.5 HP electric motors turn individual blowers that each force 4992 standard cubic feet per minute (scfm) of air upward against the cascading flow of incoming permeate. A total reduction of 93-percent (based on 70 mg/l CO_2 in and 4.9 mg/l CO_2 out) is achieved utilizing an air loading rate of 63.61 cfm/ft^2. The air supply for the turbine's intake port is screened through a 1/4 inch wire mesh, and the exhaust port is screened to prevent the ingress of small animals or birds into the permeate. The bottom three feet (~1764 gallons) of the decarbonator is used as a clearwell storage reservoir to maintain a constant head on the discharge piping. The decarbonator reservoir has a high level signal that will shut the RO plant down if exceeded.

Post-Treatment Chemical Addition: The degassed permeate flows out of the decarbonator into a transmission line consisting of 18-inch C-900 PVC, and 16 and 18 inch mortar lined cast iron pipe with a hydraulic grade line (HGL) of approximately 45-feet MSL. The water flows by gravity to the Talamantes booster station (HGL 36 feet). A control valve located at the booster station is throttled to maintain a constant level in the decarbonator tank, thus maintaining a constant head and full-flow conditions in the transmission line. Sodium hydroxide (caustic), sodium hypochlorite, and aqueous ammonia are added at the discharge of the decarbonator for pH adjustment, and to maintain a disinfectant residual. The addition of sodium hydroxide increases the pH of the product water, which stabilizes and reduces the aggressiveness of the water delivered to the distribution system. Continuous monitoring chlorine, conductivity and pH residual analyzers are located downstream of the injection point which sends a signal to the PLC. The PLC adjusts the rate of caustic addition to maintain a positive langlier index by pH of 9.5 and a 1.5 to 1.7 mg/l chloramine residual at the Talamantes booster station.

The Talamantes booster station then boosts the water into the Buddy Todd Reservoir using three 75-HP electric booster pumps with a capacity of 800 gpm per pump at 120 psi. The target water quality characteristics of the RO product

water are set to approximate the treated surface water supplies which blend with the RO product water.

Membrane Cleaning: A membrane cleaning process is utilized when the differential pressure and permeate conductivity across either vessel array demonstrates a degradation in water quality. The PLC tracks these parameters to enable the system operator to evaluate membrane performance. The system does not use any chemical surfactants for membrane cleaning, rather, the pH of the cleaning water is altered to achieve the desired results. Generally, the first bank of membranes experience biofilm fouling which results in a loss of efficiency. To effectively clean the membrane, a high pH caustic solution is used. To remove mineral fouling from the second bank of units, a low pH acidic solution is used. A 1200 gallon cleaning tank is used as a booster forebay for the cleaning system. The system is operated by making the necessary valving changes to supply the tank with first or second pass permeate, depending on which array is undergoing cleaning. The 40-HP, 840 GPM cleaning pump supplies water to the membranes in the same direction as during normal operation through a 10-micron cartridge filter. Because the RO membranes can be damaged by back pressure, a "forward cleaning" process is used rather than "backwashing" as used in conventional filters. The system is allowed to soak overnight, followed by a permeate flush before returning the membrane array to service.

Monitoring and Alarm Systems: The operation of the desalter is automatically controlled by a Programmable Logic Controller (PLC). The PLC monitors and operates all digital and analog control devices, which includes all flow, conductivity, pH, pressure, and chemical feed loops. The plant is equipped with continuous pH, conductivity, pressure, and flow measuring equipment that measure appropriate parameters of the feedwater, the pretreated water, the permeate, the combined product water, and the concentrate. The PLC continuously reads the results of the various operation parameters and adjusts plant flow rates, chemical feed rates, and various unit operations to maintain desired plant performance. The PLC stores all of the above instrument readings on its computer and can download the information to a PC for further data manipulation. The RO treatment plant is equipped with automatic shutdown controls following abnormal system operation. There are two basic types of shutdowns; System and Train. A system shutdown inactivates the wells and

results in an immediate shutdown of the plant. Because the plant is designed for future expansion, a train shutdown process is also incorporated into the design. The train shutdown results in the individual RO process train being removed from service. For example, in the event of a high motor winding temperature alarm on the high pressure pump, the pump would shut down in 30-seconds. The wells would continue to operate and blend with the residual permeate in the process train. As the dilution ratio of the well water decreases, a corresponding increase in product water conductivity would occur. This increase in conductivity would trigger a high conductivity alarm resulting in automatic complete plant shutdown after 20 minutes. The conditions that cause plant shutdown and/or an alarm are tabulated below.

Description	Alarm Limit	Alarm Delay	Shutdown Limit	Shutdown Delay	System/ Train
High cartridge filter diff. pressure	10 psid	1 min	15 psid	5 min	S
Low feed pH	5.0	30 sec	5.0	5 min.	S
High feed pH	7.5	30 sec	7.5	10 min.	S
High feed turbidity	1	30 sec	2	10 min	S
High feed conductivity	5000 uS/cm	5 min	5000 uS/cm	20 min	S
Scale inhibitor low flow	9.12 ml/min	5 min	9.12 ml/min	20 min	S
P-201 A low suction pressure	25 psi	10 sec	25 psi	30 sec	T
P-201 B low suction pressure	25 psi	10 sec	25 psi	30 sec	T
P-201 A high discharge	225 psi	10 sec	225 psi	60 sec	T
P-201 B high discharge pressure	225 psi	10 sec.	225 psi	60 sec	T
P-201 A high motor winding temp	–		D	30 sec	T
P-201 B high motor winding temp	-		D	30 sec	T
Train A high feed pressure	247 psi	60 sec	250 psi	60 sec.	T
Train A 1st stage high diff. pressure	40 psid	60 sec	45 psid	10 min.	T
Train A 2nd sage, high diff. pressure	40 psid	60 sec	45 psid	10 min	T
Train A high recovery	85%	60 sec	90%	60 sec	T
Train A high permeate conductivity	244 uS/cm	2 min	-	-	T
Train A low concentrate flow	250 gpm	60 sec	250	2 min	T
High product pH	9.8	60 sec	-9.8	10 min	S
Low product pH	-7.0	60 sec	-7.0	10 min	S
High product conductivity	1200 uS/cm	10 min	1200 uS/cm	20 min	S
High chlorine residual	-2.7	60 sec	-	-	-
Low chlorine residual	-1.5	60 sec	-	-	-
Degasifier sump high-high level	D	30 sec	D	5 min	S
Acid pump P-501A high discharge press	225 psi	5 sec	-	-	-
Acid pump P-501B high discharge press	225 psi	5 sec	-	-	-
S.1. pump P-601A high discharge press	225 psi	5 sec	-	-	-

S.I. pump P-601B high discharge press	225 psi	5 sec	-	-	-
NaOH pump P-701A high discharge pressure	225 psi	5 sec	-	-	-
NaOH pump P-701B high discharge pressure	225 psi	5 sec	-	-	-
NaOCl pump P-801A high discharge pressure	225 psi	5 sec	-	-	-
NH40H pump P-120A high discharge pressure	225 psi	5 sec	-	-	-
NH40H pump P-120B high discharge pressure	225 psi	5 sec	-	-	-
Acid containment leak	D	30 sec	-	-	-
S.I. containment leak	D	30 sec	-	-	-
NaOH containment leak	D	30 sec	-	-	-
NaOCl containment leak	D	30 sec	-	-	-
NH40H containment leak	D	30 sec	-	-	-
No acid pump or no S.I. pump	-	-	D	90 sec	S
Pretreatment start excess time with no train in service	-	-	D	30 sec	S

D = Discrete
S= System shutdown
T = Train shutdown

The plant is manned 24 hours per day, seven days per week, every day of the year. The contractor has been retained for a one year period to optimize plant operation and provide training to plant personnel.

H. Storage and Distribution

Storage for the system is provided by one welded steel and twelve prestressed concrete reservoirs. The total system design storage capacity is 50.5 million gallons, however the effective (operational) storage of the system is actually 41.49 million gallons due to overflow levels and system hydraulic limiting. The system was designed to be extremely flexible in regards to the ability to move water from zone to zone. There are five primary service areas; Morro Hills, Guajome/San Francisco Peak, Buddy Todd, Fire Mountain-Wire-Talone-Pilgrim-Heritage, and Henie Hills. A detailed zone by zone description follows:

MORRO SYSTEM

Morro Reservoirs

The Morro No. 1 and No. 2 reservoirs are located in the northern portion of the system and are constructed of prestressed concrete and welded steel. The 5 million gallon (MG) reservoirs were constructed in 1963 and 1990, respectively, and are in good condition.

Morro Pump Zone

The Morro Pump zone serves approximately 125 connections and includes the highest elevations of the service area. Water from the two 5 MG Morro reservoirs is boosted into the zone at the Morro and Sleeping Indian booster stations.

The Sleeping Indian booster station is equipped with three 50 HP electric motors each driving a 450 gallon per minute pump. A standby back up generator power source is available at the facility to ensure continuous operation of the pumping equipment in the event of a power grid failure.

The Morro Pump Station is equipped with two 30 HP electric motors that drive 350 GPM pumps. Auxiliary power is not available at the Morro pump station.

Morro Pressure Zone

The Morro pressure zone is gravity fed by the Morro Reservoirs, serving approximately 100 connections.

Morro Heights Pressure Zone

Serving approximately 100 connections, the Morro Heights pressure zone receives water from a 14-inch line through two pressure reducing valves (PRV). Water can also flow into the zone via the Las Tunas PRV depending on demand in the Wilshire Regulator zone.

Wilshire Regulator Zone

The Wilshire zone is served by a single PR station (with a 4 and 8 inch PRV) which receives water from the Morro Heights zone and/or from the Weese Treatment Plant via the #5 aqueduct through the Las Tunas Regulating Station.

Hutchison Pressure Zone

The 300 connection Hutchison zone receives water through a single PRV station served by the 18-inch tie-line. The

station is equipped with 6-inch and 12-inch pressure reducing valves. The operation of each valve is dependent upon the demand in the pressure zone.

GUAJOME/SAN FRANCISCO PEAK SYSTEM

Guajome Reservoirs

The Guajome No. 1 and No. 2 reservoirs are the core of the City's system. The majority of the water served by the City flows through these reservoirs from the Weese Treatment Plant and from the #3 SDCWA filtered water connection. The two 5.0 MG prestressed concrete reservoirs can be isolated from the system allowing water to reach the lower pressure zones served by the reservoirs. The reservoirs are used to stabilize hydraulic flow fluctuations caused by system demand versus the flow rate from water ordered from SDCWA and to conform to SDCWA's 'must break head' policy.

Peacock Hills Pressure Zone

Two pressure sustaining valves, a 12-inch and a 16-inch, located on the Oceanside #3 aqueduct maintain a constant pressure of at least 50 psi into the Peacock Hills pressure zone before allowing water to flow to the Guajome reservoirs. The 14-inch line off of the #3 aqueduct is the sole source of supply for the 2500 connection pressure zone. Water can flow from the Morro reservoirs into the Oceanside #3 line in the event of a service interruption from the SDCWA.

Fire Mountain Regulator Zone

A single regulator station equipped with 3-inch and 8-inch PRVs supplies water to the 100 connection zone.

Guajome/San Francisco Peak Pressure Zone

The Guajome/San Francisco Peak pressure zone is the second largest zone in the system, serving approximately 10,500 connections. The zone is also tied to the San Francisco Peak/Guajome zone, and receives water from that segment of the system during peak flows.

Buddy Todd Regulated Zone

The Buddy Todd Regulated zone receives water from the Guajome and San Francisco Peak Reservoirs through two pressure regulating stations, each equipped with 3-inch and 8-inch PRVs. The zone serves approximately 500 connections.

Rivertree Pressure Zone

The 50 connection Rivertree zone is served by the Guajome Reservoirs by a single PRV and by a booster station off of the Wire Mountain Reservoir. The booster station is equipped with two domestic 7.5 HP, 150 gpm electrically driven pumps and with a 40 HP fire pump capable of providing up to 1100 GPM of flow into the zone.

San Francisco Peak Reservoirs

The 1.5 MG San Francisco Peak No. 1 reservoir is generally not used for routine system storage due to the reservoir overflow hydraulic grade line of 569 feet MSL, which is higher than the Guajome and San Francisco Peak No. 2 reservoirs (511 feet MSL overflow). However, the reservoir does provide a "relief valve" for excess water supplied by the #4 aqueduct during low demand periods. A hydro electric generation station is located at the reservoir site which utilizes the high head from the #4 connection to generate up to 425 kWH of power on a daily basis (normal operation is approximately 200 kWH).

The 5.0 MG San Francisco Peak No. 2 reservoir provides gravity storage to the San Francisco Peak/Guajome Pressure Zone in addition to the other sub zones in the South East portion of the system.

Leisure Village Pressure Zone

The 350 connection Leisure Village pressure zone is solely dependent upon water from the #4 aqueduct during normal operation. A single pressure reducing station equipped with a 4-inch and an 8-inch PRV reduces the high head #4 treated water line to an acceptable pressure range. In the event of a service interruption from the #4 aqueduct, an emergency pump located on Lake Boulevard can pump water from the San Francisco/Guajome system to the San Francisco Peak No. 1 reservoir. Water is then boosted at the hydrogeneration plant into the Leisure Village Zone.

BUDDY TODD SYSTEM

Buddy Todd Reservoir

The 5.0 MG Buddy Todd Reservoir receives water from the Guajome and San Francisco Peak reservoirs in addition to the treated ground water from the San Luis Ray Desalter. The reservoir is the blending point for RO treated groundwater and treated surface water.

Poplar Ridge Pressure Zone

Two 30 HP 700 GPM, and one 15 HP 300 GPM electric boosters provide water to the 25 connection Poplar Ridge Pressure Zone. No other sources of supply serve the zone.

Buddy Todd Pressure Zone

The Downtown area of the City is referred to as the Buddy Todd Pressure Zone. Approximately 3000 service connections are gravity fed by the Buddy Todd Reservoir. An emergency interconnection to the Pilgrim-Talone-Fire Mt.-Heritage zone is available through a normally closed valve. This tie-line would be able to maintain pressure in the zone in the event of a service interruption at the Buddy Todd Reservoir.

PILGRIM-TALONE-FIRE MOUNTAIN-WIRE MOUNTAIN-HERITAGE SYSTEM

Pilgrim-Talone-Fire Mountain-Wire Mountain-Heritage Pressure Zone

Five reservoirs, Pilgrim 5 MG, Talone 5 MG, Fire Mountain 3 MG, Heritage 3 MG, and Wire Mountain 5 MG, provide a total of 21 MG of storage for the 15,000 connection pressure zone. All water entering the zone (with the exception of the Pilgrim Reservoir) must pass through the Guajome reservoirs prior to entering the storage facilities serving the zone. A 10-inch PRV and line ties this zone to the Henie Hills Zone with flow generally moving towards Fire Mountain.

HENIE HILLS SYSTEM

Henie Hills Zone

All water entering the Henie Hills zone flows through the 3.0 MG Henie Hills reservoir which receives water from the Guajome Reservoirs. The zone is located in the center of Miracosta College and serves approximately connections. Three pressure reducing valves (3, 8, and 12-inches in size) connect the zone to the Wire Mountain system. These valves are designed to supplement flow to the downtown area during extreme demand conditions.

All storage facilities are adequately maintained and in satisfactory condition. The available storage capacity for the entire system is in accordance with the California Waterworks Standards. However, the total available storage capacity is slightly over one day during maximum day demand conditions. Because the City depends upon SDCWA water for 95-percent of its total average demand, any interruption in imported water from the SDCWA would significantly impact the ability of the City to ensure a continuous supply of water to the system. Therefore, the City should develop a plan and time schedule to develop additional sources of supply or additional storage capacity.

I. Distribution system

The distribution system is predominantly comprised of 6-inch through 42-inch diameter asbestos cement and cement lined and mortar coated steel pipe which is in good condition. The City has an extensive ongoing mainline replacement program which identifies and schedules areas for replacement (generally over 1.2 million dollars annually). There were 24 leaks in the distribution system in 1993, the majority of which were caused by excavation contractors. AWWA C-900 PVC and ductile iron pipe is used for all replacement mains.

The entire service area is sewered. Adequate separation of water mains from sewers is maintained in most areas throughout the distribution system. The Guidelines for the Separation of Sanitary Sewers and Water Mains is utilized in new water and sewer mainline installations which cannot maintain separation in accordance with the State Waterworks Standards.

Valve covers are raised to grade and the known valve locations are recorded on maps available to operating personnel. System valving is satisfactory, however the City does not have a routine valve exercise program in

which all of the valves in the system are operated at least annually. Records of valve operation are also maintained by City personnel. An updated distribution system map detailing all mainlines, valves and fire hydrants is on file with DHS-DDW. Dead ends are flushed once per year or upon demand due to water quality complaints. There are no low head mains in the system with the exception of the RO treatment plant effluent transmission main which maintains at least 5 psi.

System pressures normally range between 30 and 125 psi in the sixteen pressure zone system.

J. Maintenance and Operation

The system is operated and maintained by properly trained and qualified personnel and is in compliance with Title 17, Article 3, Section 7107 of the California Code of Regulations. The Deputy Water Utilities Director of the City is a Grade V Certified Operator and is responsible for all treatment operations. The plant supervisor positions at both treatment facilities are occupied by Grade IV Certified Water Treatment Plant Operators. Shift personnel at the Weese plant are Grade III operators, and Grade II or above operators are utilized at the San Luis Rey Desalter.

All major main line replacement and other system improvements are performed by licensed contractors. All system pumps are automatically controlled and operated from a central control operating station located at the Weese Water Treatment Plant. Treatment and operational records are maintained daily.

The City's cross-connection control program is adequate. An ordinance regarding cross-connection control has been adopted by the City, and the City has a designated cross-connection control inspector to ensure necessary backflow prevention assemblies are properly installed and tested, and record maintenance is performed. Ongoing system surveys and plan review of each new service to evaluate the need for backflow assemblies are conducted by the City's cross connection control administrator. The City does have a limited reclaimed water program which uses tertiary treated wastewater effluent for golf course irrigation. The tertiary effluent and potable water flow via air gap into an onsite lake which acts as a booster forebay for the irrigation system.

Personnel responsible for operating the treatment facilities are certified in accordance with the "Laws and Regulations Relating to Certification of Water Treatment Facility Operation". Disinfection of new and repaired mains is performed in accordance with the AWWA Main Disinfection Standards. There are several dead-end lines present in the system. These lines are flushed as needed and records are maintained.

Bacteriological and chemical monitoring of the distribution system is conducted as required by this Department. An approved bacteriological sample siting plan dated April 11, 1992, is on file. The system has not failed the bacteriological standard for over ten years. Trihalomethane monitoring results are consistently less than 45 ug/l. Source water quality sampling has been conducted in accordance with the City's source sampling plan. All water quality standards are routinely met by the water system.

A revised Emergency Notification Plan dated April 27, 1993 which has been reviewed and found to be acceptable by this Department is included in Appendix F.

III. ENGINEERING APPRAISAL OF SANITARY HAZARDS AND SAFEGUARDS

The treatment, source and storage facilities were designed and constructed in accordance with good waterworks practices. No physical sanitary hazards are apparent at this time. The water produced by City Well No. 1, No. 2 and No. 12A, exceeds the secondary drinking water standard for total dissolved solids (TDS), Iron, and Manganese. However, the water produced by Well No. 1 and No. 2 is treated by reverse osmosis which results in a high quality product water which meets all drinking water standards. Because of the close proximity of the well to two sewer mains, and the high levels of TDS, Well No. 12A is retained only as an emergency supply and has not been used for several years. The City should notify the Department prior to using the well to ensure that adequate special bacteriological monitoring is conducted and/or public notification is implemented while the well is in service.

An evaluation of the Weese Surface Water Treatment Plant to determine compliance with the Surface Water Filtration and

Disinfection Treatment Regulation was conducted on August 5, 1992. The treatment plant uses direct filtration without sedimentation and was credited with 2 logs of Giardia and 1 logs of virus removal. The total required removal and inactivation of the primary source of supply, Colorado River water, is 3 logs of Giardia and 4 logs of virus. Thus, the treatment plant must be able to inactivate 1 logs of Giardia and 3 logs of virus through disinfection.

During a field survey it was determined that the floor drains within the chlorine storage room, chemical storage/mixing building, outdoor chemical storage containment pad, and the filter plant drains flow into the waste washwater holding ponds (see Attachment No. 3) which is pumped back into the headworks of the plant. All personnel at the treatment plant must be provided with adequate training to ensure that any chemical spills in these areas are isolated in the holding ponds and not returned to the headworks of the plant. Based upon our review of the plant drawings on file in our office, the maintenance garage floor drains adjacent to the chlorine storage room flow into the onsite septic tank and do not pose a sanitary hazard.

The City should develop a valve exercise program to ensure that each valve in the system is in operational condition. The development of this program reduces the potential sanitary hazards associated with depressurization of large segments of mainline during repairs due to inoperative valves. The program should also include a record keeping element that would provide field operations crews with current valve location maps.

IV. CONCLUSIONS AND RECOMMENDATIONS

The Division of Drinking Water and Environmental Management Field Operations Branch finds that the sources, works and operation as described in this report are capable of producing a safe, wholesome and potable water supply. Issuance of a domestic water supply permit by the State Department of Health Services to The City of Oceanside is recommended, subject to the following special provisions:

1. Prior to implementation of an artificial recharge project for the Mission Groundwater Basin, the City

shall apply to the Department for an amended domestic water supply permit.

2. The City shall not place Well No. 12A into service without prior notification and approval from the Department.

3. The City shall continuously and reliably disinfect all water from the reverse osmosis and surface water treatment plants prior to delivery to the distribution system.

4. The City shall develop an emergency plan of action and provide associated training of the Weese Surface Water Treatment Plant personnel to ensure that chemical spills discharged to the waste washwater holding ponds are not returned to the headworks of the plant.

5. The City shall develop a program that provides for the routine operation and maintenance of each valve in the system on an annual basis. The valve exercise program shall include a record keeping element that indicates the last time each valve was operated and ensures that the location of each valve is indicated on maps available to field personnel.

6. The City shall take all necessary actions, including the acquisition of land or easements, to prevent future encroachment of all system wells by potential sources of contamination or pollution.

7. Competent, adequate operation of the system shall be provided at all times. All persons operating treatment facilities must be certified by the Department of Health Services in accordance with Title 17, Part 1, Chapter 5, Subchapter I of the California Code of Regulations.

8. The City shall develop a plot plan for City Well No, 12A indicating all potential sources of contamination within a 200 foot radius of the well. The completed plan shall be submitted to DHS-DDW for review and approval no later than August 15, 1994.

9. The only active sources approved for supply of the system are; City Well No. 1 and City Well No. 2 via the San Luis Rey Desalter, treated surface water purchased from SDCWA, and the Weese Surface Water

Treatment Plant. No other sources shall be used without prior approval from DHS-DDW.

Report Prepared By: _____
Eric R. Fraser
Project Engineer

Report Reviewed By: _____
Toby Roy, P.E.
District Engineer

FPER94ER.DOC

Appendix A

Water Facilities Schematic

EXHIBIT D

California Regional Water Quality Control Board
San Diego Region

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Acting Secretary for Environmental Protection

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http://www.waterboards.ca.gov/sandiego

Edmund G. Brown Jr.
Governor

TO: Tom Howard
Executive Director
State Water Resources Control Board

FROM: David W. Gibson
Executive Officer
SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

DATE: February 3, 2011

SUBJECT: Regulation of Brine Waste Discharges from Desalination Facilities

On January 12, 2011, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) adopted Order No. R9-2011-0016 (Order), an NPDES permit for the City of Oceanside's Ocean Outfall discharge. The point established in the Order for compliance with technology-based effluent limitations (TBELs) for a ground water desalination facility brine discharge was a key issue raised by the City of Oceanside as well as other interested persons in the hearing. At the conclusion of the hearing the San Diego Water Board Members adopted the tentative Order recommended by staff, but requested that I communicate to the State Water Board their concern that the NPDES regulations may not provide sufficient flexibility for setting the point of compliance for TBELs in NPDES permits. The Board Members were particularly concerned that the lack of flexibility may lead to unnecessarily stringent requirements for the discharge of brine and other waste for projects designed to augment local water supply needs.

The Order regulates the combined discharges from three separate facilities including two municipal wastewater treatment plants classified as publicly owned treatment works and a desalination facility classified as an industrial facility. All three facilities are owned and operated by the City of Oceanside. Treated effluent from the three facilities is discharged through the Oceanside Ocean Outfall (Ocean Outfall) to the Pacific Ocean. Under the terms of the Order, discharges from each facility are now regulated under separate TBELs that apply to each discharge prior to mixing with any other wastewater flows directed to the Ocean Outfall.

This is a departure from prior Orders which, contrary to applicable NPDES regulations, implemented TBEL compliance at a single combined discharge point at the Ocean Outfall and not at each individual facility prior to mixing with other wastewater flows

directed to the Ocean Outfall. This change in the application of TBELs in the Order was based on three key NPDES regulations which stipulate that:

1. Technology-based treatment requirements under section 301(b) of the Clean Water Act represent the minimum level of control that must be imposed in an NPDES permit [40 CFR 125.3(a)];

2. Technology-based treatment requirements are applied prior to or at the point of discharge [40 CFR 125.3(e)]; and

3. Technology-based treatment requirements cannot be satisfied through the use of "non-treatment" techniques such as flow augmentation and in-stream mechanical aerators [40 CFR 125.3(f)]

The change was also based on Ocean Plan Table A TBELs which are applicable to 1) publicly owned treatment works discharges and 2) industrial discharges for which effluent limitation guidelines have not been established pursuant to Sections 301, 302, 304, or 306 of the Clean Water Act[1]. Based on these considerations the Order requires that effluent pollutant levels be measured, and compliance with TBELs determined, at the point of discharge following the treatment process at each facility and prior to mixing with discharges from other separate facilities.

In my view, however, the real issue centers on how waste byproducts from desalination facilities are classified rather than the NPDES regulations governing the point of compliance for TBELs in NPDES permits. Waste brine discharges from desalination processes are currently regulated through a default classification as an industrial waste under both the Clean Water Act and the California Ocean Plan because they do not provide specific regulatory distinction for waste byproducts from desalination facilities. While TBELs are indeed appropriate for pollutants associated with industrial wastes, the constituents of concern in brine waste are primarily mineral salts and turbidity. These constituents present a far less significant threat to the ocean than most industrial wastes that are regulated through TBELs. Nonetheless, the San Diego Water Board relied on the default industrial waste classification in its decision to adopt the Order and in recent decisions on regulation of other brine discharges. An appropriate regulatory distinction for brine waste could be provided by the State Water Board through an Ocean Plan amendment establishing a new separate classification for waste byproducts from desalination facilities.

Amendment of the California Ocean Plan is an appropriate means to address issues affecting desalination facilities throughout the state. The 2005 California Ocean Plan Triennial Review and Workplan (State Water Board Resolution No. 2005-2008) identified brine discharge from desalination facilities as a high priority issue. I

[1]. 2005 California Ocean Plan adopted by the State Water Resources Control Board on January 20, 2005 and April 21, 2005, Page 12, Table A Effluent Limitations

understand that work is already underway by State Water Board staff to prepare revisions to the Ocean Plan on various issues common to desalination facilities as part of upcoming planning efforts for Ocean Plan amendment. The Ocean Plan revisions could address issues common to desalination facilities such as brine waste classification, intake water specifications, physical and toxicity characteristics of brine discharges, brine waste blending with other wastewater flows directed to a common ocean outfall, and alternative mixing zones for dense brine waste plumes. Ocean Plan revisions could also address adjustment of the Ocean Plan TBELs to reflect the specific types of waste and pollutants discharged from a desalination facility. Given the ever-increasing importance of water reuse and desalination to meet the drinking water supply and reliability needs of California, the San Diego Water Board strongly supports the State Water Board's on-going planning efforts to facilitate permitting of facilities that discharge brine waste.

At the Management Coordinating Committee meeting of January 25, 2011, you described the need for closer collaboration between the Regional Water Boards and the State Water Board on key, emerging issues of both local and statewide importance. I suggest that this is one such issue the San Diego Water Board and State Water Board could take up together to more efficiently address this important issue.

I would appreciate your consideration of the San Diego Water Board's concerns in this matter. If you would like additional information on the Order or other aspects of San Diego Water Board's regulation of brine discharges please contact me.

cc: John Kemmerer, US EPA

EXHIBIT E

California Regional Water Quality Control Board
San Diego Region

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Secretary for Environmental Protection

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http:// www.waterboards.ca.gov/sandiego

Arnold Schwarzenegger
Governor

DATE: December 10, 2009

TO: David T. Barker
Branch Chief
SURFACE WATER BASINS BRANCH

FROM: Brian D. Kelley
Senior Water Resource Control Engineer
CORE REGULATORY UNIT

SUBJECT: APPLICATION OF TECHNOLOGY-BASED EFFLUENT LIMITATIONS FOR DISCHARGES TO THE PACIFIC OCEAN IN THE SAN DIEGO REGION

Purpose

This memo evaluates the current NPDES permit regulation of discharges to the Pacific Ocean by the San Diego Regional Water Quality Control Board (Regional Board) in the San Diego Region. The following issues are addressed:

1) Discussion of relevant regulations regarding the application of technology-based effluent limitations (TBELs) for discharges to the Pacific Ocean,

2) Consistency of current application of TBELs to various individual NPDES permitted ocean discharges in the San Diego Region, and

3) Consideration of application of Ocean Plan TBELs for brine discharges to bays, estuaries and inland surface waters in the San Diego Region.

Relevant regulations regarding the application of TBELs for discharges to the Pacific Ocean

Regulations governing waste discharges to the Pacific Ocean in California are, in part, contained in the State Water Resource Control Board (State Water Board), Water Quality Control Plan for Ocean Waters of California (Ocean Plan). The Ocean Plan was last updated in 2005 and includes effluent limitations for grease and oil, suspended solids, settleable solids, turbidity, and pH as listed in Table A. These effluent limitations apply to publicly-owned treatment works (POTWs) and industrial discharges for which effluent limitations guidelines have not been established pursuant to Sections 301, 302,

304, or 306 of the Federal Clean Water Act. The *Final Functional Equivalent Document, Amendment of the Water Quality Control Plan for Ocean Waters of California* dated September 1, 2000, refers to the Table A Ocean Plan Effluent Limitations as technology-based effluent limitations (TBELs).

The United States Environmental Protection Agency (USEPA) regulations at 40 CFR 122.44(a)(1) require permits to include TBELs promulgated by the USEPA under Section 301 of the CWA. USEPA promulgated TBELs for POTWs as secondary treatment regulations at 40 CFR Part 133. Secondary treatment is defined in terms of three parameters [5-day biochemical oxygen demand (BOD_5), TSS, and pH] and TBELs are established for these parameters. The TBELs from the Ocean Plan and the secondary treatment TBELs are compared and the more stringent TBEL is included in NPDES permits. The USEPA also issues Effluent Limitation Guidelines (ELGs) which are technology-based regulations to control industrial wastewater discharges. These regulations are established to protect human health and maintain and enhance water quality. The ELGs are TBELs based on the performance of treatment and control technologies.

The Regional Board has historically considered brine discharges to be industrial discharges. Demineralization/desalination for production of a high quality water supply involves a process of removing minerals or minerals salts from a source water, such as groundwater or seawater. Demineralization/desalination most often uses a reverse osmosis (RO) process resulting in a concentrated brine waste. In addition to the concentrated brine waste, the RO process may result in other wastes generated by filter backwashing, cleaning of other process components, or chemical additions used in the treatment process. All of these wastes may contain pollutants that could cause excursions of narrative or numerical water quality objectives including, but not limited to, the Ocean Plan Table A constituents. Also, because USEPA has not promulgated ELGs for brine discharges, the Ocean Plan Table A TBELs are the applicable limitations for such discharges to the Pacific Ocean. The USEPA has ELGs under development for drinking water treatment facilities including desalination concentrates. The potential ELGs are discussed on USEPA's Industrial Regulations web page. The brine discharge from the Poseidon Resources Corporation was determined to be an industrial discharge during the permitting process. Furthermore, the State Water Board has informed the Regional Board that industrial discharges for purposes of the Ocean Plan are broadly defined and that Ocean Plan Table A TBELs would apply to water treatment and brine waste discharges. Also, in August 2005, State Water Board made available a draft NPDES Permit Development Guide which explicitly classifies water treatment facilities as industrial facilities (page 4-2). Based on all of these considerations, the Ocean Plan Table A TBELs are directly applicable to brine discharges.

USEPA has promulgated regulations on technology-based treatment requirements in permits at Code of Federal Regulations Title 40, Section 125.3 (40CFR125.3). Technology-based treatment requirements cannot be satisfied through the use of "non-treatment" techniques such as flow augmentation and in-stream mechanical aerators [40CFR.125.3(f)]. Based on 40CFR125.3, TBELs including Ocean Plan Table A TBELs, secondary treatment TBELs, and ELGs apply at the facility prior to any mixing with other effluents or dilution with receiving water. The USEPA has repeatedly confirmed this

approach in written comments over the years on various Regional Board tentative NPDES permit actions.

Consistency of current application of TBELs among the various ocean discharges in the San Diego Region

The largest volumes of discharges to the Pacific Ocean in the San Diego Region are from sewage treatment plants (or POTWs) and power plants; there are also several other smaller volume miscellaneous discharges including brine discharges. The attached Table 1 summarizes discharges to the Pacific Ocean regulated by the Regional Board through NPDES permits that contain TBELs.

Appropriate TBELs are applied to all ocean discharges for sewage, brine, and power plant cooling water as shown in the attached Table 1. In some cases, multiple facilities discharge through the same ocean outfall. Table 1 identifies the discharges which have TBELs applied to the individual facility effluent or to the co-mingled (or combined) effluent from several facilities.

There are several brine waste discharges resulting from groundwater desalination and recycled water operations regulated in the San Diego Region. Recently, due to water resource development projects spurred by drought conditions, there has been an increase in proposed projects that would produce a brine waste. Most of these facilities discharge brine waste into an existing ocean outfall that is also used for treated sewage discharge.

As shown in Table 1, for the majority of discharges to the ocean, TBELs are applied correctly at the facility prior to mixing with other effluents or dilution with receiving water. There are, however, a few discharges where the compliance point for TBELs is located downstream of a facility after mixing with other effluents discharging to the same ocean outfall.

Some degree of inconsistency between waste discharge requirements for similar waste discharges is not uncommon. This may be due to the fact that permits are not renewed at the same time or the fact that different permit writers prepare each permit and each permit writer has discretion on where to establish a compliance point. Also, with time, policies are revised and their interpretation is refined and there is a time delay when the updated plans, policies, and regulations are incorporated into existing NPDES permits. This development is reflected subsequently in permits as each one becomes due for reissuance. An example of an inconsistency can be seen between the National Pollutant Discharge Elimination System (NPDES) permit for the City of Oceanside (Order No. R9-2005-0136, adopted on August 10, 2005) and two NPDES permits for South Orange County Wastewater Authority (SOCWA; Order Nos. R9-2006-0054 and R9-2006-0055, adopted August 16, 2006).

The City of Oceanside operates the Brackish Groundwater Desalination Facility (BGDF), which is regulated under Order No. R9-2005-0136. Treatment at the BGDF includes cartridge filtration (microfiltration). Solids removed by the filters are disposed

of, along with the filters, as solid waste. Treated sewage from two City of Oceanside POTWs and brine from the BGDF are discharged to the Oceanside Ocean Outfall. At the three Oceanside facilities regulated under Order No. R9-2005-0136, some of the TBELs are applied to the combined City of Oceanside effluent and some to the individual POTWs. The two POTWs have secondary treatment TBELs applied to each facility, but the BGDF has no individual facility TBELs. Ocean Plan Table A TBELs for oil and grease, settleable solids and turbidity are applied to the combined effluent only.

The South Orange County Wastewater Authority (SOCWA) has a number of industrial discharges to their two ocean outfalls in addition to treated sewage discharges. SOCWA's NPDES Order No. R9-2006-0054 for the San Juan Creek Ocean Outfall regulates discharges from the Segunda Deshecha (M02) Flood Control Channel urban runoff treatment system, the City of San Juan Reverse Osmosis Water Treatment Plant, and the South Coast Water District Groundwater Recovery Facility (GRF). SOCWA's NPDES Order No. R9-2006-0055 for the Aliso Creek Ocean Outfall regulates discharges from the Shallow Groundwater Unit and RO brine discharges from the Irvine Desalter Project. Ocean Plan Table A TBELs have been applied correctly at each of SOCWA's facilities individually and not to the combined ocean outfall discharge.

In those few cases where the TBELs are inconsistent with state and federal regulations, the Regional Board will make changes to the NPDES permits to implement the TBELs at each facility during the next permit reissuance process. It is anticipated that there will continue to be an increase in requests for NPDES permits for brine discharges. It is important to consistently apply the Ocean Plan Table A TBELs to all ocean discharges, including brine discharges. In the future, the Ocean Plan Table A TBELs, and all TBELs, will be appropriately applied to each facility's discharge.

Consideration of application of Ocean Plan TBELs for brine discharges to all surface waters in the San Diego Region

The Ocean Plan Table A TBELs for grease and oil, suspended solids, settleable solids, turbidity, and pH were not developed solely to protect the ocean waters. By definition TBELs are based on the technology available to treat the pollutants. This same technology can be used for discharges to inland surface water or other coastal waters. The Water Quality Control Plan for the San Diego Basin (Basin Plan) contains numeric water quality objectives for pH, but only narrative water quality objectives for grease and oil, suspended solids, and settleable solids. There are no ELGs for brine discharges specifically, but the Ocean Plan Table A TBELs can be used to provide a minimum protection for inland surface waters, enclosed bays and estuaries, and coastal lagoons.

Conclusions and Recommendations

Based on a review of the current state and federal regulations, technology-based effluent limitations (TBELs) have been developed that apply to sewage treatment plants and industrial discharges. TBELs include federally promulgated secondary treatment standards and Effluent Limitation Guidelines (ELGs) as well as State Water Board

adopted Ocean Plan Table A effluent limitations. Brine discharges are industrial discharges for which federal standards have not been promulgated and, thus, Ocean Plan Table A TBELs do apply to brine discharges to the Pacific Ocean. TBELs must be applied to the discharge from a facility prior to any mixing with other effluents or dilution with receiving water.

The application of TBELs to ocean discharges in the San Diego Water Board's jurisdiction is consistent with the above interpretation with a few exceptions. In those few exceptions where the TBELs are inconsistent with state and federal regulations, changes to the NPDES permits to correctly implement the TBELs at each facility will be made during the next permit reissuance process.

In order to implement the narrative and numerical water quality objectives for bays, estuaries and inland surface waters in the San Diego Region, use of the Ocean Plan Table A TBELs for discharges to these waters is an appropriate regulatory approach as a minimum level of protection. It is recommended that Ocean Plan Table A TBELs or other similar limitations be included in NPDES permits in the San Diego Region for bay, estuary, and inland surface water discharges as appropriate.

Table 1
Summary of San Diego Regional Water Board Individual NPDES Permit Regulated Discharges to the Pacific Ocean
December 10, 2009

Facility	Waste Type	NPDES Permit Responsible Party	Ocean Outfall Name	NPDES Order No.	Co-Mingled Effluent	Facility TBEL	Co-Mingled TBEL
Joint Regional Plant	Sewage	South Orange County Wastewater Authority	Aliso Creek Ocean Outfall	R9-2006-0055	Yes	Yes	No
Coastal Treatment Plant	Sewage	South Orange County Wastewater Authority	Aliso Creek Ocean Outfall	R9-2006-0055	Yes	Yes	No
Los Alisos Water Reclamation Plant	Sewage	South Orange County Wastewater Authority	Aliso Creek Ocean Outfall	R9-2006-0055	Yes	Yes	No
El Toro Water Recycling Plant	Sewage	South Orange County Wastewater Authority	Aliso Creek Ocean Outfall	R9-2006-0055	Yes	Yes	No
Irvine Desalter Project (Shallow Groundwater Unit)	Treated Contaminated Groundwater	South Orange County Wastewater Authority	Aliso Creek Ocean Outfall	R9-2006-0055	Yes	Yes	No
Irvine Desalter Project (Reverse Osmosis)	Brine	South Orange County Wastewater Authority	Aliso Creek Ocean Outfall	R9-2006-0055	Yes	Yes	No
Jay B. Latham Regional Treatment Plant	Sewage	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
Chiquita Water Reclamation Plant	Sewage	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
Plant 3A Reclamation Plant	Sewage	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
City of San Clemente Reclamation Plant	Sewage	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
Segunda Deshecha (M02) Flood Control Channel Urban Runoff Treatment Facility	Treated Urban Runoff	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
City of San Juan Capistrano Reverse Osmosis Water Treatment Plant	Brine	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
South Coast Water District Groundwater Recovery Facility	Brine	South Orange County Wastewater Authority	San Juan Creek Ocean Outfall	R9-2006-0054	Yes	Yes	No
SONGS Unit 2	Power Plant Cooling Water	Southern California Edison	SONGS Unit 2 Outfall	R9-2005-0005	Yes	Yes	No
SONGS Unit 2	Sewage	Southern California Edison	SONGS Unit 2 Outfall	R9-2005-0005	Yes	Yes	No
SONGS Unit 3	Power Plant Cooling Water	Southern California Edison	SONGS Unit 3 Outfall	R9-2005-0006	Yes	Yes	No
SONGS Unit 3	Sewage	Southern California Edison	SONGS Unit 3 Outfall	R9-2005-0006	Yes	Yes	No
San Luis Rey Wastewater Treatment Plant	Sewage	City of Oceanside	Oceanside Ocean Outfall	R9-2005-0136	Yes	Yes	Yes
La Salina Wastewater Treatment Plant	Sewage	City of Oceanside	Oceanside Ocean Outfall	R9-2005-0136	Yes	Yes	Yes
Brackish Groundwater Desalination Facility	Brine	City of Oceanside	Oceanside Ocean Outfall	R9-2005-0136	Yes	No	Yes
Wastewater Treatment Plant No. 1	Sewage	Fallbrook Public Utility District	Oceanside Ocean Outfall	R9-2006-0002	Yes	Yes	No
Genentech, Inc.	Brine	Genentech, Inc.	Oceanside Ocean Outfall	R9-2008-0082	Yes	Yes	No
Southern Region Tertiary Treatment Plant	Sewage	Marine Corps Base, Camp Pendleton	Oceanside Ocean Outfall	R9-2008-0096	Yes	Yes	No
Encina Power Plant	Power Plant Cooling Water	Cabrillo Power LLC, Carlsbad	Encina Discharge Channel	R9-2006-0043	Yes	Yes	No
Carlsbad Desalination Project	Brine	Poseidon Resources Corporation	Encina Discharge Channel	R9-2006-0065	Yes	Yes	No
Encina Water Pollution Control Facility	Sewage	Encina Wastewater Authority	Encina Ocean Outfall	R9-2005-0219	Yes	No	Yes
Meadowlark Water Reclamation Plant	Sewage	Encina Wastewater Authority	Encina Ocean Outfall	R9-2005-0219	Yes	No	Yes
Shadowridge Water Reclamation Plant	Sewage	Encina Wastewater Authority	Encina Ocean Outfall	R9-2005-0219	Yes	No	Yes

Table 1
Summary of San Diego Regional Water Board Individual NPDES Permit Regulated Discharges to the Pacific Ocean
December 10, 2009

Facility	Waste Type	NPDES Permit Responsible Party	Ocean Outfall Name	NPDES Order No.	Co-Mingled Effluent	Facility TBEL	Co-Mingled TBEL
San Elijo Water Reclamation Facility	Sewage	San Elijo Joint Powers Authority	San Elijo Ocean Outfall	R9-2005-0100	Yes	Yes	No
Hale Avenue Resource Recovery Facility	Sewage	City of Escondido	San Elijo Ocean Outfall	R9-2005-0101	Yes	Yes	No
Industrial Brine Collection System	Brine	City of Escondido	San Elijo Ocean Outfall	R9-2005-0139	Yes	Yes	No
Scripps Institute of Oceanography	Aquaria	University of California	Scripps Institute Outfalls	R9-2005-0008	No	Yes	No
Point Loma Ocean Outfall	Sewage	City of San Diego	Point Loma Ocean Outfall	R9-2002-0025	No	Yes	No
South Bay Water Reclamation Plant	Sewage	City of San Diego	South Bay Ocean Outfall	R9-2006-0067	Yes	Yes	No
International Wastewater Treatment Plant	Sewage	International Boundary and Water Commission	South Bay Ocean Outfall	96-50	Yes	Yes	No

EXHIBIT F

BEFORE THE WATER QUALITY BOARD

OF THE STATE OF CALIFORNIA

GRANT DESTACHE, CHAIRMAN

In the Matter of:	)
	)
WATER QUALITY CONTROL BOARD	)
COUNTY OF SAN DIEGO	)
	)
ITEM 14	)
	)

CERTIFIED COPY

PARTIAL TRANSCRIPT OF PROCEEDINGS

San Diego, California

Wednesday, January 12, 2011

Reported by:

HOPE GOLDSMITH
CSR No. 12794

Job No.:
B6292WQSD(P)

Kennedy
COURT REPORTERS, INC.

Orange County
920 W. 17th St., Second Floor
Santa Ana, CA 92706

Los Angeles
523 W. Sixth St., Suite 1228
Los Angeles, CA 90014

Central Coast
1610 Oak St., Suite 106
Solvang, CA 93463

BEFORE THE WATER QUALITY BOARD

OF THE STATE OF CALIFORNIA

GRANT DESTACHE, CHAIRMAN

In the Matter of:	)
	)
WATER QUALITY CONTROL BOARD	)
COUNTY OF SAN DIEGO	)
	)
ITEM 14	)
	)

PARTIAL TRANSCRIPT OF PROCEEDINGS, taken at 9174 Sky Park Court, San Diego, California, commencing on Wednesday, January 12, 2011, heard before GRANT DESTACHE, Chairman, reported by HOPE GOLDSMITH, CSR No. 12794, a Certified Shorthand Reporter in and for the State of California.

APPEARANCES:

Chairman:	Grant Destache
Vice Chairman:	Mark Luker (Not present)
Executive Officer:	Mr. Gibson
Commissioners:	Mr. Strawn Mr. Anderson Mr. Loveland Mr. Green Mr. Higgison
State Board Staff Counsel:	Catherine Hagan Jessica Newman

I N D E X

San Diego, California, Wednesday, January 12, 2011

(Partial transcript)

MR. DESTACHE: Thank you very much. So then moving on to Item number 14. I believe, 13, we're going to Item number 14.

(Unreported statement read)

(Witnesses sworn)

MR. DESTACHE: When you come to the podium, please state your name, address affiliation, and whether you have taken the oath before testimony. We'll begin with testimony from the staff presentation.

UNIDENTIFIED SPEAKER: Good afternoon, Chairman, members of the Board. My name is (inaudible) I'm a water resource control engineer with the Regulatory Unit, and I have taken the oath. I am here to present Item number 14-A and B.

Agenda, part A, permit issuance for the City of Oceanside discharge into the pacific ocean via the Oceanside ocean outfall tentative Order R9-2011-16.

Agenda part B covers the tentative time schedule order number R9-2011-17.

The tentative time schedule order provides time for Oceanside to comply with the fluid limitation at one of its facilities so that they can continue to discharge without recurring violations and penalties, while the determination, its course of action to comply.

Since part A and part B are closely related, they are being presented at the same time. I will proceed in the following manner:

I will briefly review the facilities that discharge the Oceanside outfall and identify those that are regulated in the Tentative Orders that you are considering today.

Next I'll review the proposed tentative in the MPDS order, including the changes from the current order and other changes made in response to Oceanside's comments on the Tentative Order.

I will specifically identify two key issues where there is a disagreement between staff and Oceanside on the application of bacteriological water quality standards and the compliance point for the three facility discharges.

Although my presentation will address both part A and B together, the Board will need to take a separate action on each Tentative Order.

I would like to stipulate at this time that the Board files concerning these matters are part of the administrative record.

Before delving into the details about the Oceanside facilities, I would like to first provide an overview of what we are trying to accomplish with this item.

The purpose of today's hearing from a broad perspective is to ensure that the discharges of pollutants from the Oceanside ocean outfall are properly regulated as provided in federal and state water quality laws so that the beneficial uses of the Pacific Ocean in terms of their chemical, physical, biological integrity are maintained and protected.

The Pacific Ocean, including the coastal waters in the vicinity of the outfall is a valuable resource that contributes to the local regions, enhances the quality of life, work in, live in, or visit the area.

The discharge point you are considering today is located in southern California which comprises of 400 miles of recess coastline between Point of Conception in Santa Barbara to south of the border, south of Ensinada, to Mexico.

This unique zone contains approximately 500 fish species and more than 5,000 vertebrate species. Human uses of the coastline and waters of the southern California include recreation, tourism, sports, and special fishing.

Over a billion gallons of municipal and industrial treated wastewater is discharged each day from nine major ocean outfalls directly into waters.

The Board's proper regulation of the Oceanside ocean outfall discharge is accomplished through the Federal Clean Water Act program for regulating wastewater discharges known as the National Pollutant Discharge Elimination System or NPDES.

Under the program, all facilities with discharge pollutants from any point source into surface waters of the United States are required to obtain NPDES permits.

The permit stipulates levels of a patrol in terms of technology and water quality based limitations sufficient to provide protection of fish, shell fish, wild life, recreation, and other beneficial uses of the Pacific Ocean.

Now I'll proceed with the brief review of the

facilities that discharge to the Oceanside ocean outfall. This next slide shows a map of the Oceanside facilities and the outfall.

A total of six separate facilities discharge wastewater into the Pacific Ocean through the Oceanside ocean outfall which extends southwesterly approximately one and a half miles offshore to depths of approximately 100 feet.

Two of the facilities, not shown on this map, discharge into the outfall are sewage treatment plants, one owned and operated by the U.S. Marine Corps Base Camp Pendleton, and the other by Fallbrook Public Utilities. These facilities are covered under separate NPDES permits that are not part of today's hearing.

The remaining facilities that are shown on this map are owned and operated by Oceanside and are covered by the tentative orders being presented today.

Two of these Oceanside facilities are publicly owned treatment works referred to by the acronym POTW's. These POTW's provide at least secondary treatment of municipal and industrial wastewater from Oceanside, Vista, and Rainbow Municipal Water District.

As shown on the map, these facilities are called San Luis Rey Water Reclamation Facility and Waste Water Treatment Plant. The third facility is a separate ground water covering facility that produces affordable water.

The reverse osmosis treatment at this facility creates a brine waste product which is discharged to the Oceanside ocean outfall. As shown on this map, the facility is the Mission Basin Desalting Facility.

Now, we'll proceed with the proposed changes made in response to the Oceanside's comments on the Tentative Order.

The Tentative Order, time schedule order and errata sheets for Oceanside discharges are included in your agenda package as supporting documents 3, 4, 10, and 11.

NPDES permits are issued for a fixed term of five years and must be reissued at the end of the five-year term to continue the discharge. The purpose of the periodic reissuance in part is to ensure that the permit provisions are kept up to date, and to appropriate the most recent water quality standards, as well as reflect the requirements of current requirement laws and

regulations. This permit represents the seven issuance of NPDES requirements for the Oceanside ocean outfall discharge for the City of Oceanside.

General permit changes implemented by staff during this reissuance cycle include:

Updated afloat limitations based on the data collected by Oceanside in the past five years; updated facility wastewater characterizations and flow descriptions; incorporation of the latest California statewide NPDES permit template format; incorporation of the latest water quality standards and correction of mistakes made at prior permits discovery during a detailed purview of permit conditions.

I would now like to highlight changes in the Tentative Order that differ from Oceanside's permit, and explain the need for the tentative time schedule order.

As I discuss each change, I will go over the comments received from Oceanside and San Diego county water authority, which are included in your general data package as supported in documents six and seven.

Supporting document number nine provides detailed written responses to the two comment

letters received. The first change involves a crest by Oceanside to increase the permitted discharge flow volumes after improvements have been made to their facilities. Staff concurs with this request and the majority of the errata sheet pages in their package are prepared to accommodate Oceanside's request.

The second change involves Oceanside's request to reduce the monitor and frequency for some constituents.

Oceanside reported that many constituents for the protection of product life had not been protected in the past five years, and monitoring for these constituents reduced. Staff concurred with this request and incorporated the changes of the tentative order in the errata sheet.

This third item involves an issue with the change to the application of bacteria objectives for the pacific ocean. A map has been provided to help explain this change. The bacteria objectives in Oceanside's current NPDES order are based on the language in the 2001 ocean plan, which only implies the objectives within a zone bound by the shoreline, and 1,000 feet from the shoreline. The general location shown here on the map of where the bacteria

objectives apply in Oceanside's current permit.

The State Water Board in consultation with the U.S. Environmental Protection Agency made changes to these criteria in the 2005 ocean planner. Based on these changes, the bacteria objectives now also apply to areas used for water contact sports as determined by each of the nine regional water boards in their basin plans as having the water contact recreation beneficial use, which is referred to by the acronym "Rec 1."

Under the revised ocean plan requirements in conformance with the San Diego region basin plan, Rec 1 beneficial use must be protected throughout the State of California territorial marine waters in the San Diego region, which extends from surface to bottom, out to three nautical miles from the shoreline, with the exception of the area immediately in the vicinity of the outfall as shown on this map. It's commonly referred to as the "Initial Dilution Zone."

The Tentative Order provides provisions and requirements consistent with this interpretation of the 2005 ocean plan in the San Diego basin plan. These new provisions and requirements have already been included and recently

adopted in the ocean outfall permits.

The application of bacteria out to three nautical miles from the shoreline starting in the NPDES region, the City of San Diego to Point Loma ocean outfall in 2007. It continued in the NPDES reissuance in an ocean outfall in 2010.

This compliance schedule has been drafted in such a way as to give Oceanside and other ocean dischargers the time and flexibility to coordinate efforts with other agencies to discharge into the ocean and to evaluate the appropriate approaches to make the 2005 plan coordinated efforts to change the required designated areas in the basin plan.

The last issue, which also involves a change that has been implemented in other NPDES plans in this region is the application. As shown in this slide, a total of six facilities discharged to the Oceanside outfall. Three of them are regulated under separate NPDES permits with their compliance points preferably designated at a point following the treatment process and prior to mixing with other discharges.

However, the compliance points for the Oceanside facility is improperly designated at a point where discharges from four individual

facilities have combined and mixed. Under this scenario it's not possible to determine whether Oceanside complies with federal and state TBALS. To correct this problem, the compliance points for TBALS in the Tentative Order has been moved to a new location so that compliance with TBALS can be determined at each individual facility following the treatment process for that facility.

The chief reason TBALS must be applied directly to each individual facility and not to the combined discharged are as follows:

The Federal PMBS program regulations require that compliance with the TBALS be determined at the point of discharges from other separate facilities. TBALS contained in table A ocean plan are applicable discharges for which applied limitation guidelines have not been established.

Since the Clean Water Act and OSHA plan do not have the specific classification category for brine from water treatment plants. The brine is classified as industrial discharge. The brine is subject to the TBALS contained in the table A ocean plan at the point of discharge and prior to mixing with other discharges.

More details on the communication of table A

ocean plan requirements can be found in the San Diego Water Boards December 10, 2009 report on regulation of brine discharges in the San Diego region in supporting document number five.

The comments and letters received on the Tentative Orders, Oceanside and the San Diego County Water Authority contend that no changes, the current compliance point is necessary. They also contend that the compliance point change recommended by staff would impede the development of new water supply sources cause adverse economic impacts and conflict with the State Water Board's guidelines.

Staff's position is that the ocean plan table A requirement have not been correctly implemented in the past, and the San Diego Water Board is required to properly apply TBALS as in accordance with applicability regulations and policies.

To account for this correction for Oceanside's permit and to provide Oceanside time to implement necessary changes to the water treatment facility, staff is also presented a tentative time schedule order for your consideration. I want to point out that prior to the release of the original Tentative Order, San Diego Water Board staff met

with Oceanside to inform them of the upcoming changes.

And Oceanside, at that time, began looking into whether all three of their facilities would be able to comply with the TBALS what measured at other facilities compliance point.

Oceanside reported back with the exception of one parameter at one facility. Oceanside is already achieving compliance with the proposed TBALS.

I would also like to point out that table A TBALS at minimal treatment levels to be achieved by all facilities and were based on level treatment equivalent of that primary wastewater treatment such as that provided by the City of San Diego, Point Loma sewage treatment plant.

Based on Oceanside's information, staff prepared a tentative time schedule order to accompany the tentative NPDES order that would, if adopted, establish interaffluent limitations for turbidity until full compliance is achieved.

The tentative time schedule order requires compliance no later than five years requiring adoption of the Tentative Order. Oceanside has indicated that they can comply with the interim turbidity limits and would not be in violation of

permits following adoption. The tentative time schedule order has been included in your agenda packet number four.

Furthermore, the San Diego Water Board supports local water supply efforts and acknowledges that the proper disposal brine-related waste is a key part of the strategy management in the San Diego region. However, the disposal of brine must be in performance with applicable federal and state water quality laws, regulations, plans, and policies. The Tentative Order brings the brine into conformance with the applicable regulation.

With regards to the alleged adverse economic impact, neither Oceanside to the San Diego County Water Authority submitted any economic data to support this contention.

Moreover, TBALS contained in the ocean plan have already been established and economics have already been properly taken into account by the State Water Board, and the development of the standards.

In summary, the Tentative Orders have been prepared in accordance with all of the applicable federal, state water quality laws and regulations. Staff has reviewed and considered all of the

comments received and has modified the tentative Orders to accommodate Oceanside's request as it was allowable and appropriate to do so.

The proposed compliance points for TBALS and the Rec 1 bacteria standards are appropriately incorporated, and the tentative NPDES Order, the time schedule provided in the tentative NPDES Order demonstrate with the Rec 1 standards and the separate schedule provided in the tentative time schedule order for compliance with the turbidity TBALS provide ample time for Oceanside to develop strategies and implement actions to demonstrate and/or achieve compliance. The staff recommended adoption of both errata and supplemental errata.

This concludes the presentation for item 14-A and B, and I'm available to answer any questions you may have with regard to these items.

MR. DESTACHE: Thank you.

(Unreported discussion held)

MR. DESTACHE: I have a question for Mr. Gibson on this.

The Time Schedule Order, is it contingent on the permit reissuance?

MR. GIBSON: The Board need adopt it if it wishes. But if it chooses to adopt the NPDES permit

today. It would be advised to consider the NPDES permit question, then consider the TSO. It may not be necessary at this time if you want to send the NPDES permit back to the staff for some reason, if that makes sense.

MR. DESTACHE: So what I'm hearing is that it would be better to hear the NPDES permit testimony first and then the TSO. And that's just so we get -- kind of get the cart before the horse here. Or try not to get the cart before the hours.

So that the reissuance of the permit is the basis of what the Time Schedule Order is going to be put in place eventually.

UNIDENTIFIED SPEAKER: There is a suggestion just to talking about both at the same time.

MR. DESTACHE: However you want to present it.

UNIDENTIFIED SPEAKER: Yes.

MR. DESTACHE: Okay.

MS. HAGAN: I just want the make sure that you can clarify the concern on any part of the discharge about the testimony on both items would be in the record for both, or is that just a matter of convenience in terms of how to present the material?

UNIDENTIFIED SPEAKER: It's just a matter of

convenience how to present the material. It would be logical and easier to understand, and they are related and similar in a lot of ways. But they are separate issues, and you would have to make a judgment on each issue separately, so I just think it would be convenient at one point.

MR. DESTACHE: But with that said, if you could try to present the NPDES information first. And if we get into the TSO as part of that testimony, that'll be fine.

I have a significant number of requests to speak. Are all those people going to speak on this item individually, or as part of your presentation?

UNIDENTIFIED SPEAKER: They'll be speaking individually. I have a list of the people and which issues they would speak on, whether it would be A or B on item 14.

MR. DESTACHE: We're going to give them 20 minutes. I don't know if that's going to be enough time for everybody if we do three minutes each.

UNIDENTIFIED SPEAKER: I guess I'm confused here. Again, I'm already getting confused. So as far as discharge presentation, it's just myself and Mr. Welsh. Then the other people will be the public comments.

MR. DESTACHE: Okay. All right. That's what I was trying to clarify.

UNIDENTIFIED SPEAKER: Okay.

MR. DESTACHE: So you and Mr. --

UNIDENTIFIED SPEAKER: Mr. Welsh.

MR. DESTACHE: Welsh. Are going to give the testimony for the City of Oceanside?

THE SPEAKER: Yes.

MR. DESTACHE: Okay. All right. Very good.

UNIDENTIFIED SPEAKER: All right. There are two issues here. Both are similar and that they are from a new interpretation of the regulations. One is the discharge of brine from our drinking water desalination plant. Now needs to meet table A requirements.

And the other issue is the Rec 1 bacteria standards. Now they are applied to the entire coast out to three nautical miles and the entire water column.

So moving forward on that to address the Rec 1 issues first. Then the previous orders have always issued that the receiving water of the Rec 1 standards are at 1,000 feet. Applied 1,000 feet to a shoreline or 30-feet. And the new permit

designates this Rec 1 body content standard now out to three nautical miles, down to the bottom of the ocean. So this is a significant change in the previous regulations.

For the past 35 years, again, we've been monitoring the ocean out to about maybe -- for Rec 1 standards. And now all the treatment plants and outfalls designed and built over these years to meet those standards. Now that is a significant change, a potentially significant economic, should we have to go to chlorination considerations economic effects to the citizens or the rate payers.

Also this change was not brought about by any problems in the City's water, so we are wondering what is the benefit of changing this? What is the cost benefit for changing?

Also in the proposed permit, there's no indication how compliance is to be achieved or demonstrated. No monitoring has been specified, and no additional modifications have been specified.

So again, imposing these bacteriological standards to deep offshore waters could result in significant economic and operational impact to the City and all their dischargers without creating any benefits or improvement to marine water quality.

So at this point, the City requests that this change be removed from the permit until further guidance and clarification.

Then moving to item B, again, there's a new interpretation on the permit, and moving over to the turbidity on the brine discharge that now our desalination plant, which is reverse osmosis facility, is now required to meet table A requirements.

So this is another similar situation where this plant was built 17 years ago to comply with the discharged requirements that we could discharge the brine to the outfall, and it was commingled and monitored with the other wastewater treatment affluent to demonstrate compliance with table A.

So now all this is significant change. And, again, this may mean possible economic situations to the City and the taxpayers that could result in putting in additional treatment.

So when we heard about this originally, we went and tested the discharge from the brine facility. And the initial test procedures indicated that we could possibly be out of compliance with the turbidity discharge.

Now, we've continued to test that water

through the past couple of months. And we now believe that traditional sample and monitoring techniques really are not applicable trying to pull water out of a brine discharge. What we have found is that as soon as you pull that brine discharge out of the discharge pipe, which is basically reject water from an RO membrane, chemical changes start to occur immediately to that sample. And since it is required that we do a 24-hour composite, basically the sample sits in a bottle for 24 hours. We have oxidation, degassing going on. There's chemistry happening in that bottle.

So you need additional sampling and analytical methods really we're questioning. Whether that demonstrates -- it gives us a representative answer as to what actually is going out into the ocean.

So taking that into consideration, we're investigating several different monitoring methods and different ways to monitor that turbidity. But at this in point in time, we're not convinced that we're out of compliance with that measure.

Again, those four data points that we submitted back to the Board back in October were done using additional sampling and monitoring

methods, but we are finding a lot of trouble or problems with using those methods to test for turbidity from a brine discharge.

So due to these factors, the City at this point has requested a modification to the TSO, not an extension, but a modification to the TSO. We would actually like to have some time to -- oh. And Mr. Kelly has, I think, a copy of that.

But our modification -- basically we would like to give ourselves some time to investigate appropriate waste and test and sample what's actually coming out of the reject from the RO membranes so we can have good data to make a determination on. So at this time, the City does not feel that the data that we gave you originally is representative of what is going out to the ocean.

So our modification to the time schedule simply is to give us a chance to investigate and come up with a better monitoring plan and actually submit data that we feel represents was being discharged into the ocean. And at that point we can make an evaluation whether we need the TSO or not; and if so, then we would continue with the TSO's pretty much as specified by some slight modifications to it. I can go over the

modifications, if you want. I think you may have a copy of that.

MR. DESTACHE: I don't know if it's specifically necessary. We'll probably have questions for you on that, and then the modifications. Then the questions for staff, if they've seen this previously and they've had a chance to review it.

So if you want to, just continue from here.

UNIDENTIFIED SPEAKER: So at this point in time, I'd like to turn this over to Mr. Welsh.

MR. WELSH: Mr. Chair, members of the Board. Dr. Michael Welsh. I've taken the oath. I'm here today representing the City of Oceanside, also representing a work group that's been formed by all the other ocean outfall dischargers within this region.

There are two main issues that the City brought to your attention today that also will affect the number of the other discharge permits over the next year as well. I'd like to address each of those areas. I'd like to point out what the problem is, how this problem arose, what the effects of this problem is, and what the possible solutions are.

First, let's talk about the brine discharge. As Staff had indicated to you, one of the proponents that goes into the City's ocean outfall is waste brine from the City's desalinization treatment facility. Now this and all the other city facilities are required to comply with the ocean plan.

The ocean plan has two sets of requirements if you will. One on the table B standards are water quality based standards that are to protect beneficial uses. There's also table A standards which we call technology based standards, and those are essentially -- think of them like entering into a poker game and the price you have to pay to enter.

The water quality standards are not an issue here. Table A standards have existed in the ocean plan for years and years and years. And finally that this permit, somebody from the State Board or Regional Board, finally got around to recognizing that, "Gee. Maybe things didn't supply to all of your discharging, rather than the combined discharge."

So this is not a new requirement. It is just Staff recognizing that the ocean plan table A limits should be applied to individual components of the

discharge. That's okay.

However, we have recognized that there are one constituent turbidity and which there may be an issue associated with whether or not we comply.

The City has provided you with the suggested change in the Time Schedule Order. And one of the reasons for that is to determine if, in fact, this is a problem or not. Are we violating the ocean plan table A standards? As Mark had indicated, there is an irrigated rush now that we are probably not. That if we were to perform monitoring that actually is characteristic of our discharge, then we might demonstrate that we're in compliance.

And so is the potential solution to this issue here, as reflected in the modified time schedule we are presenting to you, is that we're going to, in the first part of this time schedule, perform monitoring using a series of ways of assessing turbidity and see if the results that you have been reported -- that have been reported to you in past are actually characteristic of a discharge or not.

The problems with automatic samplers is you're essentially taking the sample every hour and agitating it. More water is going in. It then gets

stored a day or so later, and it gets analyzed. And what you're analyzing might not have to do with what's actually being discharged because the differences in water chemistry is between what's sampled and what's in the actual discharge.

The City proposes to perform additional monitoring as part of that time schedule, and we will be providing that information to your Executive Officer. And a potential solution to this problem may be in the form of a request in any future for a change in method of monitoring.

We may, instead of using a 24-hour composite sample, wish to go through a series of grab samples as well, or using automatic turbidity that can actually look at the compliance continuously. It's possible that we monitor in this way that some of the iron and manganese chemical reactions that are taking place in our laboratory samples, we'll see that those are not occurring in the real environment.

So while this is an issue we recognize is one of a potential noncompliance, we would propose as part of our time schedule to perform some alternative monitoring methodologies to, in fact, determine if we're in compliance or not. And as

part of that, we may be requesting a technical change order from your Executive Officer at some point in the future if monitoring shows that, in fact, the procedures that are currently required in our permit are not characteristic of our actual discharge.

With respect to the turbidity requirement, it is a requirement that again Staff has decided that if it needs to be implemented in our permit it is not caused by the change in regulation -- but just them reinterpreting regulations that have been in effect ever since this discharge has been going on for the last 17 years.

The overall effect of this turbidity incidentally on the environment is actually zero. Whether we are putting crystal clear water out from our desalinization plant into the outfall, or whether we have a cloudy or discharge that's more turbid, there is no technology possible that could discern any difference in the ocean environment whatsoever.

So in talking about whether or not we comply with the affluent turbidity standards in technology based turbidity standards, I want to make it clear that all we're really talking about is whether or

not we meet a number on a page. The actual effect on the environment is absolutely indiscernible. And so there is no affect on the environment whatsoever associated with the turbidity that may or may not exist in the brine discharge.

With respect to the second issue, that is the Rec 1 compliance issue, now this has actually been part of a couple of permits that you've seen before. And for various reasons, this was not highlighted. I guarantee you it will be highlighted in not only this, but other permits as well.

But every since I worked with the Regional Board Staff in the 1970's, Rec 1 standards were applied within 1000 feet of the shore, within 30-feet depth contour in areas such as kelp beds, where there was high propensity for recreational activity diving. And the most recent ocean plan, there was a very minor change, in fact, so minor it was in parenthesis, about six words in parenthesis. It says, "The beach chloroform standards will apply in areas within a 1,000 feet of the shore, within a 30-feet depth content in the designated kelp beds and any other areas designated in Rec 1 by regional boards."

Well, guess what? All the regional boards

for the last 30 or 40 years have not really gone into where Rec 1 occurs within the ocean. San Diego region's basin plan is like most of others, and I've reviewed them all, in which it says, "Pacific Ocean, Rec 1 checkmark." It does not distinguish between recreation and tidal pool where we have small children playing or 300 feet off shore at a three-mile distance where even the depth is beyond the ability for a commercial diver to reach. There's no differentiating whatsoever. And so by putting this little parenthetical statement in other areas designated by the Regional Board, EPA has interpreted that as requiring your Staff to implement each chloroform standard throughout the entire three-mile limit at all depths. That's the problem.

As you can recognize, this causes potential problems with every single ocean outfall in this region because currently, with the exception of San Diego which recently started chlorination, none of the ocean outfall dischargers chlorinate.

And as a result, it's causing potential, at least in the supposition on compliance with these discharges, because they're putting unchlorinated affluent into the ocean environment. What is the

solution?

A regional work group faulted in municipal discharges have been formed. We've taken a look at all of the receiving water data that we've collected today from the ocean outfall discharges. And we recognized that actually it looks like we may be conformed with those beach standards, even off shore, and at depth, that almost all of the ocean outfall discharges in this region appear to be in very substantial compliance.

And in the irony of ironies, the degree of compliance in waters hundreds of feet deep, three miles offshore, actually seem to be greater than it is in our beaches and tide pools because our beaches and tide pools are subject to the effects of storm runoff pollution, and offshore we don't have those problems.

So again, it's very ironic that we're in a situation right now where we're going out to demonstrate compliance in an area that doesn't seem to have any degree of recreational body contact whatsoever.

Your Staff in this permit here has chosen to give us a five-year time schedule to assess this issue. In those five years, we will be looking at

both physical solutions to this problem, which may include treatment or disinfection, but also regulatory solutions as well. And regions NPS discharges have formed a joint work group, and we're pleased to say that Mr. Gibson has offered the Staff to attend our meetings. One of the things we're going to be exploring for this region is alternative ways perhaps of modifying the basin plan in a way that protects all beneficial uses, but still recognize that there is a difference in the degree of public body contact in shore waters than there is a 150- or 200-feet depth offshore. It's also interesting to point out that in region eight which has a basin plan, the same thing we have, they have a checkmark next to Rec 1 users for Pacific Ocean. This was chosen for the purpose, this EPA dictate, that we take the Rec 1 standards throughout state waters in such a way, we are assigning each standard only in the surface waters offshore and the deep water.

This may be something that we may want to look at with your Staff as well, so as we move forward here, the regional discharges we'll be working with your Regional Board Staff. And as part of the time schedule that you will be admitted is

included in the NPDES Order today. In addition to assessing physical needs of compliance, we'll also be working with your Staff to see if there are any possible regulatory means of compliance because the Rec 1 standards issue is something that affects literally every ocean outfall in this region.

So we have the solutions that we're working towards the time schedules that are within the NPDES Order and within the Time Schedule Order include activities that we would be using to, number one, assess the degree of the compliance that we have and, number two, work with your Staff to come up with appropriate solutions.

So with that, that's a statement of the problems that we have right now. And also in part, it gets to the rationale behind the modified time schedule that you were given there as we had modified that in a way that helps us better identify compliance with issues and determine means of solving them as well.

Thank you.

MR. DESTACHE: Thank you very much.

We are going to go to testimony by interested persons. And we'll start with Toby Ray.

MR. RAY: Good afternoon -- almost evening.

Chair Destache, members of the Board, Executive Officer Gibson, and Staff, my name is Toby Ray. I'm a Water Resources Manager at San Diego Water Authority.

We worked with the Regional Board Staff on developing the guidelines that helped the management plan in the San Diego region approved by this Board at the last board meeting.

Implementation of the management plans will hinge on the construction and the operation of ground water and recycled water at the Water Authority. The Water Authority is now concerned that applying the ocean plan standards directly to the brine generated from the City of Oceanside's desalter will pose an impediment to management and brine disposal and negatively impact regional local water supplies.

The City of Oceanside has operated their ground water desalter in compliance with their discharge permit for the past 17 years with no adverse impacts to water quality, and that is based on the commingled compliance.

We don't believe that this change in regulatory interpretation will protect or improve beneficial uses, and may, in fact, have an overall

adverse impact if it limits agency ability to dechlorinate ground water or recycled water.

So the Staff talked about the technology based affluent limits, and we believe those are applied to a properly functioning sewage treatment plant, and there definitely is a need to have individual standards on each sewage treatment plant to ensure that it's properly functioning, to a proper path and removal.

However, the turbidity that's present in the brine really has no relation to a properly functioning sewage treatment plant. In this case, it's due to the presence of iron and manganese which is in the ground water that they're pumping out, and ends up in the brine. And actually the turbidity level is going to be based on the oxidation stage. If it's dissolved, you won't see it. If it's oxidized, then it's going to show up as turbidity.

It's our understanding that EPA started looking at affluent guidelines based specifically on what brines are, but they have slowed down on that process due to lack of funding. But at some point we see that EPA will come out with brine affluent limit guidelines.

And based on the lack of any

demonstrative problem at this time with Oceanside's discharge, we would ask the Regional Board to allow compliance with the discharge scanners to continue to be based on the commingled affluent until such time that EPA develops an actual guideline specific to the management of the brine discharge, and that way you can have a scanner that's appropriated to what's going out into the ocean.

And thank you for your time.

MR. DESTACHE: Thank you. Luis Ledesma?

MR. LEDESMA: Good afternoon, Regional Board members, Mr. Gibson, members of the Regional Board Staff, my name is Luis Ledesma, and I work for the Assistant Chief of Staff of Environmental Securities at Marine Corp Base Camp Pendleton.

I'd like to thank the Board for the comment on Oceanside's Tentative Order. As identified in this Order, Camp Pendleton uses the Oceanside outfall to discharge wastewater to the Southern Regional Tertiary Treatment Plant. As a result, the base is directly and indirectly subject to requirements stated in this Order.

Camp Pendleton shares the City of Oceanside's concerns about the Tentative Order's definition of Rec 1 boundaries, which appears to significantly

differ from required standards.

Furthermore the Order does not clearly identify benefits or implications of this change.

Camp Pendleton has used discharge capacity at Oceanside's outfall since 2003. The base considered the outfall to be a much more desirable outfall location than the previous receiving water, which was the Santa Margarita River, which we derive our drinking water from.

Camp Pendleton has already invested in waste water technology to treat wastewater tertiary levels, but as this Board knows, even that level of treatment cannot qualify for discharge to inland surface waters according to the water quality control board for the San Diego basin. We rely significantly on the Oceanside ocean outfall, and we are hopeful that this Tentative Order does not disrupt our continued access to that outfall.

Again, thank you for the opportunity to comment on the City of Oceanside's Tentative Order.

MR. DESTACHE: Thank you. We will go to Brennon Flahive.

MR. FLAHIVE: Mr. Chairman, members of the Board, my name is Brennon Flahive. I'm the compliance administrator for the South Orange County

Waste Water Authority. I'm here today to voice opposition to a couple of the elements in Oceanside's permit.

One, the application of Rec 1, and -- but mostly I'm here to talk about the application of the technically based affluent limits on the brine water desalters and the impacts to these Water facilities. We have three of them in our service area. And I've come today with letters from both Diane Harkey, Assemblywoman from the 73rd District; and a letter from Mimi Walters, from the State Senator of the 33rd District, who represented communities before these ground water desalters.

And I'd like to read into the record, with your indulgence, a letter from the Mimi Walters.

MR. DESTACHE: Just a second. I'd like some counsel.

MS. HAGAN: Sure. It's acceptable to read them into the record. The concern at this point is the introduction of written comments that are not read into the record. So they can be read into the record. That's fine.

And there was also on that point, a SOCWA, I guess. South Coast submitted a letter yesterday afternoon a three-page letter that we need to take

up whether you're accepting the letter, or the content of that should be entered into the record.

MR. FLAHIVE: Okay. The letter is addressed to Mr. Gibson the Executive Officer of the San Diego Regional Water Quality Control Board. It's in regard to Tentative Order #R92010-0120.

"Dear Mr. Gibson, I am writing in regard to the above-cited Tentative Order which the San Diego Regional Board is scheduled to hear on January 12th, 2011.

The Tentative Order's proposed new regulatory restrictions on brine disposal from Oceanside's Mission Basin Salting Facility are similar to restrictions placed on South Coast Water District and the South Orange County Waste Water Authority Ground Water Recovery Facility.

I'm opposed to this action because it jeopardizes the beneficial new local sources of drinking water within my senate district.

South Coast Water District and the South Orange County Waste Water Authority have filed a petition number A2072 challenging the San Diego Region Board's action in this matter which has been pending now before the State Board.

My colleague, Assemblywoman Diane Harkey, has

heard from the State Board's Executive Director Thomas Howard that a petition will likely be resolved within the next few months. Therefore, I respectfully request that the San Diego Regional Board refrain from taking action on the above-referenced Tentative Order until after the State Board considers the petition, as that action may be relevant to the Tentative Order for the Mission Basin Desalting facility.

Should the matter be moved forward despite this request, I respectfully request that the Tentative Order be denied because it is unreasonably detrimental to the much needed new local water source. Respectfully."

Thank you very much.

MR. DESTACHE: Patricia Chin?

MS. CHIN: Good afternoon, Mr. Chair, members of the Regional Board, Mr. Gibson, and Regional Board Staff.

I'm here on behalf of the South Coast Water District, and I do have copies of the letter that we submitted yesterday, and I'm happy to hand them out.

I'm also happy to read the letter into the record.

MR. DESTACHE: I think the only way that we

can accept it is to read it into the record.

MS. HAGAN: Unless you want to take a break to have the Board members read it separately.

It's probably more efficient to have it read into the record.

MR. DESTACHE: Will do.

MS. CHIN: I'm going to read you a letter dated January 11, signed by Michael Dunbar from South Coast Water District.

"Dear Mr. Gibson, we appreciate the opportunity to comment on the Tentative Order #R9-2010-0120, NPDES CA 0102433.

As a threshold matter we support the comments provided by the City of Oceanside. As you know, South Coast Water District is facing the same issues as Oceanside with respect to its ground water recovery facility.

And South Coast Water District, along with South Orange County Waste Water Authority, have requested modifications of their NPDES permit to restore the original terms of the permit which would allow the GRF to discharge its brine affluent to San Juan Creek ocean outfall for the San Diego Regional Quality Control Board has denied" -- I'm sorry -- "which the Regional Board has denied.

The matter is currently pending before the State Board. The Tentative Order demonstrates that the issues raised by South Coast Water District and SOCWA are not unique, and they will continue to be raised by other entities as they strive to develop local sources of ground water.

Like the 2006 NPDES permit issued to SOCWA, the Tentative Order requires Oceanside to comply with ocean plan table A affluent limitations at the mission basin desalting facility without any justification.

Oceanside's commingled desalting facility and wastewater affluent discharge have been subject to table A standards since 1990. There have been no changes to the ocean plan or any other applicable rules or regulations which indicate that compliance should be determined differently from the past. Nor has there been any evidence presented to suggest the recurrent approach in commingling brine affluent is not adequately protecting the ocean water quality.

The Regional Board appears to apply the same rationale to the desalting facility as it has to the GRF, i.e., because no affluent standard has been adopted the default technology based affluent limit at the facility must be the ocean plan.

While the ocean plan may be an appropriate default for traditional industrial dischargers that discharge processed wastewater into the ocean, we submit that it is not appropriate here where the discharge is the separated brine affluent from brackish brown water.

The Regional Board can and should alternatively exercise its best professional judgment to apply a more appropriate water quality standard for facilities like the desalting facility and the GRF.

Indeed, the Water Desalinization Task Force of the Department of Water Resources which included representatives from the Department of Water Resources State Water Resources Control Board, California Coastal Commission, Department of Health Services, the Resource Agency, the California Environmental Protection Agency, environmental groups, including Surf Rider and Monterey Bay National Marine Sanctuary and local and regional water agencies are specifically recommended, "Where feasible and appropriate utilized wastewater outfalls for blending/discharging desalinization brine/concentrate."

We believe that it is both feasible and

appropriate to utilize the outfall for the blending and discharging of desalinization brine concentrate for the desalting facilities as it has been doing so for 20 years without impact to the outfall.

The Regional Board appears to rely on a letter written by EPA in 2004 which states, "We understand the discharger prefers the point of compliance to be determined at the outfall; however, we support the Regional Board's determination that compliance should be determined at the individual treatment plant.

Secondary treatment is a technology based standard and should be met after treatment process. According to the Clean Water Act all "POTW's" must meet affluent communication for secondary treatment. Letter from Douglas Eberhart, dated December 8, 2004."

EPA was clearly focused on POTW's and not like the GRF or desalting facilities. These facilities should not be treated as POTW's or even traditional discharger. They do not manufacture product, nor do they add or generate any waste. Rather, they simply extract brine from ground water and conditions the water for affordable use. In effect, the Tentative Order would require Oceanside to send its brine discharge to a wastewater

treatment plant. As South Coast Water District has found, doing so will significantly increase the total dissolve solids concentration in the recycled water produced at the wastewater plant and render the recycled water beneficial use.

However, neither the City of Oceanside nor South Coast Water District has been able to develop any other cost effective alternatives for brine affluent treatment. As such, the Tentative Order may result in a loss of critical ground water supply for Oceanside. South Coast Water District is certainly facing the same dilemma. If other local suppliers are also unable to dispose of the brine discharge, the collective impact will negatively affect regional water reliability.

We appreciate the opportunity to comment on this important matter. Should you have any questions, please feel free to contact us."

One other point I wanted to just address that was brought up during the Staff presentation, it's the issue of economic impact. And I think Staff stated that there was no economic impact. And it seems that although Oceanside was not -- did not have a number readily available to estimate the potential cost, South Coast Water District does have

a number.

It will cost them $2.5 million to upgrade their plant, and it cost them $5 million to construct the plant to treat for iron and manganese, which are naturally occurring constituents in ground water.

In light of the lack of water quality impact to the outfall and the benefits of developing a local source of water, these exorbitant costs simply do not make sense.

Thank you very much.

MR. DESTACHE: Thank you for your testimony.

Mo Lahsaio?

MS. LAHSAIO: Lahsaio. Thank you very much. My topic has already been covered by Mr. Mark Hammond.

MR. DESTACHE: Thank you very much.

And I think that's the end of any public comments or interested parties. And we'll go to the discharger's closing statement.

MR. WELSH: Thank you, Mr. Chair. Mike Welsh again.

If the City of Oceanside weren't in possession of one of those old Arabian magic lamps, they would conjure up a genie to give them a couple

wishes on this permit.

Wish number one would be that somehow, some way you and your Staff make use of professional judgment. And the fact that there are no water quality impacts and somehow eliminate the turbidity requirement on the desalinization discharge.

Wish number two would be that you can use in some way best professional judgment and make the Rec 1 beach chloroform standards apply only to those waters where there is a high degree of public contact. We present that wish list to Staff and Staff essentially told us there's no genies in the magic lamps. There are regulations. And sometimes the regulations are not always there. Sometimes they don't even make sense. But we as Regional Board staff have to implement. And I think this is paraphrasing Mr. Kelly.

If you find yourself in a similar position and you are in a position to where you are choosing to move forward with the requirements in the Tentative Order and Tentative Time Schedule, we do have three requests or suggestions.

Number one, is that the Time Schedule Order be admitted to include the time schedule that we had presented you earlier if needed.

Number two, that you direct your Executive Officer to continue to work with the Regional Entity as dischargers in assessing appropriate means of regional compliance with Rec 1 standards.

And number three, that you direct the Executive Officer and Staff to diligently review any monitoring information and requested changes in the Demineralization Facility Monitoring Program that might be more consistent with accurately characterizing turbidity affluent discharge of the demineralization project.

So again, you received our wish list in the absence of being able to grant those wishes; however, we would like you to consider the three requests that I've just made.

Thank you.

MR. DESTACHE: Thank you very much. And we'll move to closing statement by Staff.

UNIDENTIFIED SPEAKER: Staff is glad to hear that the ocean discharger is collaborating and look forward to working with them to objectives and receiving water. This is one of the purposes of the compliance schedules that we included in the Tentative Order.

Staff also concurs with Oceanside's request

to change the tentative Time Schedule Order, except for condition number five in there because it meets 30-day public notice for that.

Staff believes the way the Tentative Time Schedule Order is -- it gives the flexibility if needed and can make changes in the future.

Thank you.

MR. DESTACHE: Okay. Now, Mr. Gibson, do you have a recommendation?

MR. GIBSON: I do. But I -- first, I'd like to ask Ms. Hagan to confirm my understanding that if the Board were to consider the revised Time Schedule Order in task number five, would it require preparing an amendment and bring it back to the Board for consideration; am I correct, Ms. Hagan?

MS. HAGAN: Yes. If the monitoring requirements -- it can only be modified by the Board.

MR. GIBSON: I certainly don't object to doing that. I think it's appropriate to open the permits once they answered. That's what would happen in that case. So with that in mind, I would recommend moving the Staffs' recommendation with the changes proposed by the -- with the changes proposed and summarized by Cofranchesco.

To the Time Schedule Order, that would be moving adoption of both the NPDES permit modification and the Time Schedule Order 14A and 14B.

MR. DESTACHE: Thank you. Now, we'll go to -- well, I'm going to close the public hearing and go to Board deliberations.

And, Mr. Loveland?

MR. LOVELAND: Couple of questions: One on the proposed alternative -- well, I'm trying to determine which is number five. The five that's crossed out on the alternative one or the original five.

MR. GIBSON: It would be the next page.

MR. LOVELAND: Oh. Okay. Got you.

MR. GIBSON: That would be page 5 of the new requirement, page 5 -- or page 5, R200100148.

MR. LOVELAND: Thank you. I have one other question.

We've talked about outcome based goals there a little bit, and this issue came up with South Orange County last year on where the measuring point is for the F-1 discharge. And I'm still wondering what the requirement is, and what our desire is, and where the points meet.

If we have affluent at the end of the pipe

that's discharging that complies, why are we so focused on making a comply at each internal discharge point which has no impact then at the end of the pipe? Is that something that you believe we are required to do, or is that something you think we have to do?

And I ask that question based on the quote that Ms. Chin gave from the EPA. Is that quote you're relying upon, which seemed to me to be a less than mandatory requirement.

MR. GIBSON: Thank you, Mr. Loveland. I'd like to ask Mr. Brian Kelly, the senior water resource controller here, to oversee the NPDES to address your question.

MR. KELLY: Good afternoon. Brian Kelly. There are two types of limits. One is the water quality based standards, which does allow delusion, and that's to be met at the end of the pipe.

There's the second type, which are technology based limits. Those are required also to be included in NPDES permits, per the federal regulations, and I'd like to read to you quickly the section out of the federal regulars that requires those, and it gives you a little bit of context that technology based requirements under Section 301(B)

of the Act represents the minimum level of control that must be imposed in a permit issued under Section 402 of the Act.

And in this case, the applicable limitations are those contained in the ocean plan table A. San Diego Water Board has not developed their own, and we don't have staff or the time to go through that process to come up with our own, so those are the minimum standards that apply, and they have to be included in the permit.

MR. LOVELAND: And it says, "At the compliance point."

MR. KELLY: Right. One additional part here is that "Technology based treatment requirements cannot be satisfied through the use of nontreatment techniques such as flow augmentation and in stream mechanical aerators."

So that essentially means prior to any dilution with any other waste stream has to be met by each treatment facility, and that's where we're coming from.

MR. LOVELAND: Is this the case? I would ask Staff for an honest opinion. Is this something to make a rule or something that actually benefits us? Where does it benefit us if at the end of the pipe

we're in compliance?

MR. KELLY: So the way the technology based -- to protect the beneficial uses of the water, but it establishes a level playing field for all facilities so that they cannot incur economic benefit by treating to less than these standards.

Everyone's on the same playing field. They're minimum standards --

MR. LOVELAND: I would ask, if you're at the level on the same level playing field at the end of the pipe, where is the benefit? Your argument does not make sense to me.

MR. KELLY: Well, it may not make sense.

MR. LOVELAND: I understand. I'm asking you as the Staff, does it make sense to you?

MR. KELLY: Yes, it does. Because I've been in this business for a long time, and I know that there's a minimum level of treatment that can be achieved just without any water quality standards at all.

MR. LOVELAND: And what is your goal, Mr. Kelly?

MR. KELLY: To protect the beneficial uses and the water quality.

MR. LOVELAND: At the end of pipe, right? Or

the beneficial use in the pipe?

MR. KELLY: No. No. It's just the end.

MR. LOVELAND: So your concern is at the end of the pipe. So your argument does not make sense to me.

MR. KELLY: Well, it could be.

MR. LOVELAND: I guess, Mr. Chair, part of our responsibility, I think, is to highlight these issues that don't make sense and see if there's a better way. We're not just supposed to adhere to rules to make the permitee spend money.

Our goal is to protect the water quality. And if there are alternative ways to do that, we, at the very least, are not to be suggesting to our regulators that their rules don't make sense.

And we ought to be given some leeway just to blindly go on and say, do it because we've always done it because somebody in Timbuktu said we have to, and there's no benefit. Then why are we continuing to salute and do it without at least saying, hey, can't we do it a different way?

You know, we need future water supplies. We need cost effective ways of treating discharges. We need to work together. And to just meld rules so that the bottom line cost is greater because we're

too timid to say this doesn't make sense, I think, is a disservice to our constituents.

MR. DESTACHE: I'm going to kind of follow on to Mr. Loveland's question as to -- and Jeremy, if you can answer this question potentially -- or David. I'm sorry. David, potentially you can answer this question.

And the treatment of brine and its testing, once it comes out of the plant, if like Mr. Loveland said, if it at the end of the pipe has no effect, and it doesn't -- there's no effect on the environment between the plant and the pipe, then again, what is the cause and effect of the TBALS for that?

MR. DAVID: Let's see. If first of all, again, TBALS, under federal regulations, which NPDES permits, when they're issued by the Regional Board, they have to be issued in full conformance with the 4DCFR125.3 EPA, states that TBALS represent the minimum level of control that must be imposed in an NPDES permit.

And in the federal regulations, it stipulates further where the TBAL limits are applied and the regulations specify that they apply at the point of discharge from the facility that's discharging the

waste.

What we were attempting to do in this permit is adjust the TBALS so that they are in conformance with what the federal regulations require.

The other point about TBALS is NPDES permits have two kind of affluent level. One, it's referred to by the acronym TBAL, Technology Based Affluent Limits.

And then the second type of limit as water quality based limits. And the water quality based affluent limits, which are the State standards in the ocean plan, they can be met at the end of the ocean outfall pipe, and the discharger is free to use delusion techniques and whatever to meet those limits. And they've done that in the past, and they're continuing to do that in the proposed order.

The technology based limits however, are where the regulations require that they be designated at a point where the efficiency of the treatment process can be measured are imposed right at the point of the discharge. I don't know how to explain it.

The TBALS, they serve several functions. One is to check the efficiency of the treatment plant process itself. The other is to ensure that the

same types of waste have to meet the same type of discharge standards.

Like for instance in the San Diego region right now there are -- I think there are seven brine discharges in all. Six of those brine discharges have to meet the TBAL limits at the point of discharge. And usually those limits are based on table A of the ocean plan. This is the only one in the region that does not have to meet the affluent TBAL limit at the point of discharge.

MR. GIBSON: To make sure I understand correctly, I understand that there are several dischargers to this line in Genentech Fallbrook Utility. Do they all have TBALS in their permits, and are they complying with them? I haven't heard an answer yet. Answer for the record, please.

MR. KELLY: This is Brian Kelly. The answer to that is, yes. They are applied to each facility, and they are meeting the affluent limits in table A.

MR. DESTACHE: Okay. Mr. Green was waiting to ask a question. And we'll get back to you, my original question.

MS. GREEN: I'm not so sure it's a question. it's more of a comment. And it really goes back to the comment that I heard about the State Board

looking at some of these issues. And I think they're going to weigh in to some -- perhaps some earlier decisions that have been made. That was one concern I have.

The other things I think are notable is Californians are in need of water supplies and desalting as a method. And I think the water by Senator Waters, Mimi Waters, really kind of spells that out. So I'm really concerned about water supply in a situation and not diminishing those resources.

MR. STRAWN: It seems to me we have two separate arguments going on here.

In the first one, I didn't understand why there was a definite benefit to having sampling done at the outflow of each discharger. Even if the sampling at the end of the pipe is good, then there's no problem.

But if at sometime the outflow at the end of the pipe is bad and you have years worth of sampling data at each one of those sites, it can definitely help you go track the source and fix it. So the process of requiring each entity to do its own sampling, I don't have a problem with that. I understand it might be a bit of an expense. It

might be a change. But I can understand the need for that and, you know, but I can talk a number of specific examples of sampling and watersheds and the advantage of sampling each tributary so you know when there is a problem where the most likely source is and you go and fix it.

The other side of that argument is, unless I've missed something, the whole discussion here has to do with turbidity. And from what little I know of water sampling, turbidity as somebody said is, you know, on the back of an elephant. It's not something that we -- that I would support, you know, penalizing or slowing down a water treatment facility or desalinization plant or something, because of the turbidity itself.

But I think that just getting to the science, we do the sampling. We come in and say their samples have been great for five years except for turbidity, then we understand that's what's causing the turbidity. We defined that's a problem and we do our waiver or our adjustments at that level rather than at the macro level, which is saying we don't want to sample.

MR. DESTACHE: Question, David, for in regards to the State Board's action.

I have no knowledge of what's going on at the State Board. I'm wondering if you do on this particular item. And the fact that it may come into play even if we adopt this reissuance in the TSO, it may come into play during the TSO's life span so that that can be adjusted and the actual permit can be adjusted.

From what I'm hearing, the City of Oceanside is not saying we don't want you to reissue the permit, but we want you to reissue the permit with the TSO and the amendment to the TSO, so we can figure out what's going on the effluent that's coming out of it, the plant.

And I don't want to put words in your mouth, but am I characterizing that correct?

UNIDENTIFIED SPEAKER: That's true, yes.

MR. DESTACHE: The question, David, is does the action that the State Board is going to take fit within the TSO? And can we adjust the permit and the TSO as we go through this process?

MR. GIBSON: Most likely, yes. The State Board should be giving us some information on how they intend to address this petition for review in the next three months, but they may very well also extend it. In either case, though we expect we

would have some answer back from the State Board regarding this. And Catherine can clarify this for me.

If the State Board were to agree with SOCWA is the interpretation of how TBALS are applied, then, yes, we would bring back this order and the Time Schedule Order consistent with that decision from the State Board.

Did I miss anything, Ms. Hagan?

MS. HAGAN: Just the other possible outcome at the State Board is they decide not to issue an order and give an opinion and they dismiss the matter for failure to raise substantial issues which SOCWA could then file a petition to challenge the Regional Board's action in court and could be resolved in a year or two from that time. So it's not.

I think the Time Schedule Order as amended gives also 30 months before they will submit a plan, an alternative analysis, on the turbidity issue. And likely we would have some indication certainly by then.

MR. GIBSON: What's not clear to me, Mr. Chairman, and perhaps someone is -- how much money the City of Oceanside would be required to expend in

that interim -- three months, six months or a year and only to find out then that TBALS should not be applied at the location EPA and Staff? They should be applied. That's not clear to me. I hate to see money go down a rabbit hole for a pointless cause.

While I certainly understand Mr. Loveland's comments and your comments as well as Mr. Strawn's comments, EPA regulates from a national perspective. They may very well have a good basis for their decision in this regard or in other states would not necessarily apply here.

But there has to be a way to resolve that other than flying in the face of what seems to be a very clear direction from them. So I'm at a loss what to recommend on that subject other than we have the opportunity to have this question addressed by a State Board, who certainly works very closely with EPA. And certainly that decision needs to be made at that level.

But in the meantime, we're prepared to advise you as best we can on how to adopt this burden, the Time Schedule Order, should you choose to do so today.

MR. DESTACHE: And on that point, and the collaborative action, that probably is going to take

the work group that's been put together is going to work with either Staff to find out if there is an answer to the turbidity side of it.

MR. GIBSON: The work group that I understand that we're talking about is the interpretation of the Rec 1 beneficial use. And certainly, we are participating in that, and we'll continue to do so.

The Time Schedule Order does provide time with us to work with the City of Oceanside on the turbidity issues with respect to the application of TBALS in that permit.

MR. DESTACHE: From what I've seen in the TSO, the turbidity levels, the difference is relatively significant between what's in the TSO to start with and what the ultimate requirement is, where does the City of Oceanside sit right now with their testing? And do they meet the current compliance that's going to be required by the ultimate NPDES at the end of the TSO?

MR. HAMMOND: Sir, right now there's many questions to be answered about what's appropriate --

MR. GIBSON: If you could please go to speak into the microphone so we'll have a record of this statement.

MR. HAMMOND: Yes. This is Mark Hammond from

the City of Oceanside.

And to answer your question, there are still significant questions about what is appropriate monitoring and sampling techniques because this is not a discharge from the treatment plant. So it's a totally new type of waste treatment. And the typical methodology used at wastewater treatment plants, findings do not really apply to the brine discharge. Again, there's chemistry that happens if you make a deposit sample as required.

So right now, I cannot fully answer your question because there's a lot of questions that we need to answer and that's the request for an additional segment on the top of that TSO to answer these questions.

So we're just hoping to either possibly have consideration or best professional judgment discretion at this point.

MR. DESTACHE: Any other comments or questions?

MR. LOVELAND: I do.

MR. DESTACHE: Okay.

MR. LOVELAND: When you talk about the State Board picking this up, what are they taking up and what is their authority with regard to the TBALS or

anything?

MR. GIBSON: The Regional Board acted on SOCWA's permit last year, year before last, and they failed to act on their request by SOCWA to NPDES permit to change the application of TBALS. That inaction or failure to act was petitioned to the State Water Resources Control Board for review, and that's the review that's currently pending.

MR. LOVELAND: But if I hear Staff's explanation of what you think the constraints were operating under, they don't have any authority to change it.

MR. GIBSON: A state board might find differently, but the Staff's recommendation is that they don't believe they, themselves recommend to you that we comply with the director of EPA.

MR. LOVELAND: If we approve the permit as amended by this TSO request, Oceanside would not really incur a great deal of extra expense to modify their plan because they have a five-year window plan to figure out what to do, and they're going to research some information that may change the circumstances, the fact-based circumstances based on a different sampling.

So if we adopt this today, then probably no

real harm to them at the moment, if I'm reading this right.

UNIDENTIFIED SPEAKER: That was the reason for my question earlier. And I'm not clear from the record if the City of Oceanside would like to speak to that question. I would certainly like to know. I would think there are some costs associated with investigating the monitoring.

MR. LOVELAND: Yeah. To figure out what other alternative sampling techniques or whatever. But I would assume that that's not millions. Might be hundreds of thousands or tens of thousands.

MR. HAMMOND: Sir, this is Mark Hammond, again. And just to clarify that, whatever methodology we would choose to correct the turbidity issue, would have to be operational within the five-year window.

MR. LOVELAND: So you've got to do something in a year or two?

MR. HAMMOND: Right. The schedule sets forth -- yeah. We have to determine within a certain period of time, within 18 months, what we're going to do, basically.

MR. LOVELAND: That seems to be a reasonable thing.

Mr. Chair, I'd like to offer a motion -- two motions actually.

MR. DESTACHE: Of each one separately.

MR. LOVELAND: I will make a motion. I would move the Staff recommendation as amended and accepted by Staff in terms of the TSO that Oceanside is offered as an alternative. And that's the motion.

What I would like to do is follow that on with a motion directing Staff to bring back to us next month a proposed letter to the State Board and EPA asking for consideration of alternative ways to work with our Committees to assure water quality which is our ultimate goal, but which is not bound by rules which regulate the quality of water in the pipe before it gets to the receiving water.

MR. DESTACHE: Okay. So in trying to keep with the ability to move on both of these actions, we currently have a motion on 14B. And I would need a second on that. And then we'll have to go back to 14A and talk about that.

In lieu of that, it's hard to approve a time Schedule Order before you have a reissuance of the permit. So I would ask for a motion to 14A to reissue the permit. And are there an errata changes

associated with that?

MS. HAGAN: There are errata and supplemental errata.

MR. DESTACHE: Okay. So I would ask for a motion for the approval of 14A with errata and supplemental errata.

MR. LOVELAND: So moved.

MR. DESTACHE: I'll move second on that.

MR. STRAWN: Second that.

MR. DESTACHE: And all those in favor?

MR. STRAWN: Aye.

MR. ANDERSON: Aye.

MR. LOVELAND: Aye.

MS. GREEN: Aye.

MR. HIGGISON: Aye.

MR. DESTACHE: Then we'll go back to 14B's motion that Mr. Loveland made. And that would have -- is there an errata and supplemental errata there also?

MS. HAGAN: Yeah. The errata also changed the number of the order, so there's probably an errata and you can do collectively the errata and change the Time Schedule Order that was proposed by the City of Oceanside with the exception of the proposed new finding of facts.

MR. DESTACHE: With exception to that.

MS. HAGAN: Yes.

MR. DESTACHE: And so that's your motion?

MS. GREEN: Yes.

MR. DESTACHE: We have a second from Mr. Green. I'll call for a vote. All those in favor?

MR. STRAWN: Aye.

MR. ANDERSON: Aye.

MR. LOVELAND: Aye.

MS. GREEN: Aye.

MR. HIGGISON: Aye.

MR. DESTACHE: Opposed?

We have adopted 14A and 14B, the NPDES and the Time Schedule Order.

I wanted to thank everyone.

(Unreported discussion held)

(End of partial transcript)

REPORTER'S CERTIFICATE

I, HOPE GOLDSMITH, CSR NO. 12794, A CERTIFIED SHORTHAND REPORTER FOR THE STATE OF CALIFORNIA, DO HEREBY CERTIFY:

THAT THE FOREGOING TRANSCRIPT OF PROCEEDINGS WAS TAKEN BEFORE ME ON January 12, 2011 AT THE TIME AND PLACE THEREIN SET FORTH, WAS TAKEN DOWN BY ME IN SHORTHAND, AND THEREAFTER TRANSCRIBED INTO TYPEWRITING UNDER MY DIRECTION AND SUPERVISION;

AND I HEREBY CERTIFY THAT THE FOREGOING TRANSCRIPT OF PROCEEDINGS IS A FULL, TRUE AND CORRECT TRANSCRIPT OF MY SHORTHAND NOTES SO TAKEN.

I FURTHER CERTIFY THAT I AM NEITHER COUNSEL FOR NOR RELATED TO ANY PARTY TO SAID ACTION, NOR IN ANYWISE INTERESTED IN THE OUTCOME THEREOF.

IN WITNESS THEREOF, I HAVE HEREUNTO SUBSCRIBED MY NAME THIS 4th DAY OF February, 2011

Hope Goldsmith

HOPE GOLDSMITH, CSR NO. 12794
CERTIFIED SHORTHAND REPORTER
FOR THE STATE OF CALIFORNIA

EXHIBIT G

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

ORDER NO. R9-2005-0136
NPDES NO. CA0107433

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF OCEANSIDE SAN LUIS REY AND LA SALINA WASTEWATER TREATMENT PLANTS AND BRACKISH GROUNDWATER DESALINATION FACILITY DISCHARGE TO THE PACIFIC OCEAN VIA THE OCEANSIDE OCEAN OUTFALL

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

Table 1. Discharger Information

Discharger	City of Oceanside
Name of Facility	Oceanside Ocean Outfall
Facility Address	1330 South Tait Street Oceanside, CA 92054 San Diego County

The discharge by the City of Oceanside from the discharge point identified below is subject to waste discharge requirements as set forth in this Order.

Table 2. Outfall Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Outfall 001	POTW Effluent and waste brine	33° 09' 46" N	117° 23' 29" W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	August 10, 2005
This Order shall become effective on:	August 10, 2005
This Order shall expire on:	August 10, 2010
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a major discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that this Order supercedes Order No. 2000-011 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements herein.

I, John H. Robertus, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on August 10, 2005.

JOHN H. ROBERTUS
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 9, SAN DIEGO REGION

ORDER NO. R9-2005-0136
NPDES NO. CA0107433

WASTE DISCHARGE REQUIREMENTS
FOR THE CITY OF OCEANSIDE
SAN LUIS REY AND LA SALINA WASTEWATER TREATMENT PLANTS
AND BRACKISH GROUNDWATER DESALINATION FACILITY
DISCHARGE TO THE PACIFIC OCEAN VIA THE OCEANSIDE OCEAN OUTFALL

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	City of Oceanside
Name of Facility	Oceanside Ocean Outfall
Facility Address	1330 South Tait Street Oceanside, CA 92054 San Diego County
Facility Contact, Title, and Phone	Barry E. Martin, Water Utilities Director, (760) 966-4850
Mailing Address	300 North Coast Highway Oceanside, CA 92054 San Diego County
Type of Facility	Municipal POTW
Facility Design Flow	22.9 million gallons per day (MGD)

II. FINDINGS

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

A. **Background.** The City of Oceanside (hereinafter Discharger) is currently discharging pursuant to Order No. 2000-011 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0107433 which was adopted on February 9, 2000. The Discharger submitted a Report of Waste Discharge, dated August 10, 2004, with subsequent revisions and supplements, in application for a NPDES permit renewal to discharge up to 22.9 MGD of treated wastewater from the San Luis Rey and La Salina Wastewater Treatment Plants and waste brine from the Brackish Groundwater Desalination Facility, hereinafter Facilities. The application was deemed complete on February 14, 2005.

B. **Facility Description.** The Discharger owns and operates the San Luis Rey Wastewater Treatment Plant (SLRWTP), the La Salina Wastewater Treatment Plant (LSWTP), and the City of Oceanside sanitary collection system. The Discharger provides municipal wastewater treatment services to a population of approximately 173,000 within the boundaries of the City of Oceanside, treating primarily residential and commercial wastewater. Additionally, the SLRWTP serves a population of approximately 1,000 within the City of Vista and a population of approximately 10,000 within the Rainbow Municipal Water District on a contractual basis. There are ten significant industrial users within the City of Oceanside and none within the portions of the City of Vista and Rainbow Municipal Water District that are served by the Discharger. Wastewater treatment processes at the SLRWTP and LSWTP include screening and grit removal, primary sedimentation, activated sludge treatment followed by secondary clarification, and anaerobic digestion and dewatering of sludge. Screenings from the headworks and solids from grit removal are trucked to a local landfill or an Arizona landfill. Dewatered sludge is land applied off site. The SLRWTP produces up to 0.7 MGD of tertiary recycled water, the discharge of which is covered under separate waste discharge requirements. The Discharger also operates the Brackish Groundwater Desalination Facility (BGDF) which produces up to 6 MGD of final potable water and 2 MGD waste brine. Treated wastewater from SLRWTP and LSWTP and waste brine from BGDF, hereinafter collectively referred to as effluent, are discharged to the Discharger-owned Oceanside Ocean Outfall pipe where it commingles with discharges from the Fallbrook Public Utility District, US Marine Corps Base Camp Pendleton and Biogen IDEC Pharmaceuticals Corporation. The combined discharge enters the Pacific Ocean, a water of the United States, at Discharge Point 001 (see table on cover page). Attachment B provides a topographic map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implements regulations contained in the Code of Federal Regulations (CFR) adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from Facilities owned by the Discharger to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC.

D. **Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available environmental data. The Fact Sheet, Attachment F, which contains background information and rationale for Order requirements and other provisions, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

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

F. **Technology-Based Effluent Limitations.** 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR Part 133. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. **Water Quality-Based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality objective to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

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

Table 5. Basin Plan Beneficial Uses of the Pacific Ocean

Discharge Point	Receiving Water Name	Beneficial Use
Outfall 001	Pacific Ocean	Industrial Service Supply (IND); Navigation (NAV); Contact Water Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Preservation of Biological Habitats of Special Significance (BIOL); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Marine Habitat (MAR); Aquaculture (AQUA); Migration of Aquatic Organisms (MIRG); Spawning, Reproduction, and/or Early Development (SPWN); Shellfish Harvesting (SHELL)

The Basin Plan relies primarily on the requirements of the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) for protection of the beneficial uses of the State ocean waters. The Basin Plan, however, may contain additional water quality objectives applicable to the Discharger.

On November 16, 2000 the State Water Board adopted a revised Ocean Plan. The revised Ocean Plan became effective on December 3, 2001. The Ocean Plan contains water quality objectives and beneficial uses for the ocean waters of California. The beneficial uses of State ocean waters to be protected are summarized below:

Table 6. Ocean Plan Beneficial Uses of the Pacific Ocean.

Discharge Point	Receiving Water Name	Beneficial Use
Outfall 001	Pacific Ocean	Industrial Water Supply; Water Contact and Non-Contact Recreation, Including Aesthetic Enjoyment; Navigation; Commercial and Sport Fishing; Mariculture; Preservation and Enhancement of Designated Areas of Special Biological Significance (ASBS); Rare and Endangered Species; Marine Habitat; Fish Migration; Fish Spawning and Shellfish Harvesting

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

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended it on September 18, 1975. The Thermal plan contains temperature objectives for coastal waters.

The terms and conditions of the Ocean Plan, Thermal Plan, and any revisions thereto are incorporated into the Basin Plan by reference. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

I. **Antidegradation Policy.** 40 CFR 131.12 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 No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F), a discharge in compliance with this Order is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

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

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

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

M. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

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

III. DISCHARGE PROHIBITIONS

A. The discharge of waste from the SLRWTP and LSWTP not treated by a secondary treatment process and the discharge of waste from the Discharger's facilities not in compliance with the effluent limitations specified in Table 7 of Section IV.B of this Order, and/or to a location other than the Oceanside Ocean Outfall (Outfall 001), unless specifically regulated by this Order or separate waste discharge requirements, is prohibited.

B. The Discharger shall comply with the following waste discharge prohibitions of the Basin Plan:

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

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

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

4. The discharge of treated or untreated waste to lakes or reservoirs used for municipal water supply, or to inland surface water tributaries thereto, is prohibited.

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

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

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

8. Any discharge to a storm water conveyance system that is not composed entirely of "storm water" is prohibited unless authorized by this Regional Water Board. [Federal Regulations 40 CFR 122.26 (b) defines storm water as storm water runoff, snow melt runoff, and surface runoff and drainage.]

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

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

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

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

C. The discharge of waste shall not cause violation of water quality objectives for ocean waters established by Chapter II of the Ocean Plan.

D. The discharge of waste to Areas of Special Biological Significance, as designated by the State Water Board, is prohibited.

E. The discharge of sludge to the ocean is prohibited; 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.

F. The bypassing of untreated wastes containing concentrations of pollutants in excess of those in Tables A or B of the Ocean Plan is prohibited, except under upset conditions, as described in Attachment D of this Order, Standard Provision I. H.

G. Compliance with Discharge Prohibitions contained in Section III.H of the Ocean Plan is a requirement of this Order.

IV. DISCHARGE SPECIFICATIONS AND EFFLUENT LIMITATIONS

A. Discharge Specifications

The discharge of effluent from the Discharger's facilities through Outfall 001 shall comply with the following:

1. Waste management systems that discharge to the Pacific Ocean through Outfall 001 must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

2. Waste discharged to the Pacific Ocean through Outfall 001 must be essentially free of:

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

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

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

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

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

3. Waste effluents from the Discharger's Facilities shall be discharged through Outfall 001 in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in treatment.

4. The location of waste discharges from the Discharger's Facilities shall assure that:

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

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

   c. Maximum protection is provided to the marine environment.

5. Waste that contains pathogenic organisms or viruses shall be discharged from the Facility through Outfall 001 a sufficient distance from shellfishing and water contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard shall be used.

6. The calendar-monthly average of daily effluent discharge flow rates from the Discharger's Facilities through the Oceanside Ocean Outfall shall not exceed 22.9 million gallons per day (MGD).

B. Effluent Limitations and Performance Goals

The discharge of effluent to Outfall 001 shall be measured at Monitoring Location M-001, M-002 and M-003 as described in the Attachment E, Monitoring and Reporting Program, except as otherwise noted (Endnotes are located at the end of this Order starting on page 33). Scientific notation, with some exceptions, is used to express the effluent limitations and performance goals to prevent ambiguity. The effluent limitations and performance goals below are enforceable to the number of significant digits given in the effluent limitation or performance goal.

1. The discharge of effluent from SLRWTP and LSWTP to Outfall 001, as monitored at Monitoring Locations M-001 and M-002, respectively, shall maintain compliance with the following effluent limitations:

Table 7a. Effluent Limitations based on Secondary Treatment

Constituent	Units	Effluent Limitations					
		Max Daily	Average Monthly	Average Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
CBOD 5-day 20°C	mg/l		25	40			
	lbs/day		4.4 E+3	7.0 E+3			

Constituent	Units	Effluent Limitations					
		Max Daily	Average Monthly	Average Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
	%	The average monthly percent removal shall not be less than 85 percent.					
Total Suspended Solids	mg/l		30	45			
	lbs/day		5.2 E+3	7.8 E+3			
	%	The average monthly percent removal shall not be less than 85 percent.					
pH	Standard units				6.0	9.0	

2. The discharge of effluent from the Discharger's Facilities to Outfall 001, as monitored at Monitoring Location M-003, shall maintain compliance with the following effluent limitations:

Table 7b. Effluent Limitations based on California Ocean Plan 2001

Constituent	Units	Effluent Limitations					
		Max Daily	Average Monthly	Average Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
Oil and Grease	mg/l		25	40		75	
	lbs/day		4.4 E+3	7.0 E+3		1.4 E+4	
Settleable Solids	ml/l		1.0	1.5		3.0	
Turbidity	NTU		75	100		225	
Total Chlorine Residual [3]	ug/l	7.0 E+02				5.3 E+03	1.8 E+02
	lbs/day	1.3 E+02				1.0 E+03	3.4 E+01
Ammonia (expressed as nitrogen)	ug/l	2.1 E+05				5.3 E+05	5.3 E+04
	lbs/day	4.0 E+04				1.0 E+05	1.0 E+04
Chronic Toxicity [4]	TUc	8.8 E+01					
Phenolic Compounds (non-chlorinated)	ug/l	1.1 E+04				2.6 E+04	2.6 E+03
	lbs/day	2.0 E+03				5.0 E+03	5.0 E+02
Chlorinated Phenolics	ug/l	3.5 E+02				8.8 E+02	8.8 E+01
	lbs/day	6.7 E+01				1.7 E+02	1.7 E+01
Endosulfan	ug/l	1.6 E+00				2.4 E+00	7.9 E-01
	lbs/day	3.0 E-01				4.5 E-01	1.5 E-01
HCH [5]	ug/l	7.0 E-01				1.1 E+00	3.5 E-01
	lbs/day	1.3 E-01				2.0 E-01	6.7 E-02
Tributyltin	ug/l		1.2 E-01				
	lbs/day		2.4 E-02				

3. Constituents that do not have reasonable potential or had inconclusive reasonable potential analysis results are referred to as performance goal constituents and assigned the performance goals listed in the following table. Performance goal constituents shall also be

monitored at M-003, but the results will be used for informational purposes only, not compliance determination.

Table 8. Performance Goals based on California Ocean Plan 2001

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
Acute Toxicity	TUa	2.91E+00					
Arsenic	ug/l	2.6 E+03				6.8 E+03	4.4 E+02
	lbs/day	4.9 E+02				1.3 E+03	8.5 E+01
Cadmium	ug/l	3.5 E+02				8.8 E+02	8.8 E+01
	lbs/day	6.7 E+01				1.7 E+02	1.7 E+01
Chromium VI [1]	ug/l	7.0 E+02				1.8 E+03	1.8 E+02
	lbs/day	1.3 E+02				3.4 E+02	3.4 E+01
Copper	ug/l	8.8 E+02				2.5 E+03	9.0 E+01
	lbs/day	1.7 E+02				4.7 E+02	1.7 E+01
Lead	ug/l	7.0 E+02				1.8 E+03	1.8 E+02
	lbs/day	1.3 E+02				3.4 E+02	3.4 E+01
Mercury	ug/l	1.4 E+01				3.5 E+01	3.5 E+00
	lbs/day	2.7 E+00				6.7 E+00	6.6 E-01
Nickel	ug/l	1.8 E+03				4.4 E+03	4.4 E+02
	lbs/day	3.4 E+02				8.4 E+02	8.4 E+01
Selenium	ug/l	5.3 E+03				1.3 E+04	1.3 E+03
	lbs/day	1.0 E+03				2.5 E+03	2.5 E+02
Silver	ug/l	2.3 E+02				6.0 E+02	4.8 E+01
	lbs/day	4.4 E+01				1.1 E+02	9.1 E+00
Zinc	ug/l	6.3 E+03				1.7 E+04	1.1 E+03
	lbs/day	1.2 E+03				3.2 E+03	2.0 E+02
Cyanide [2]	ug/l	3.5 E+02				8.8 E+02	8.8 E+01
	lbs/day	6.7 E+01				1.7 E+02	1.7 E+01
Endrin	ug/l	3.5 E-01				5.3 E-01	1.8 E-01
	lbs/day	6.7 E-02				1.0 E-01	3.4 E-02
Radioactivity [6]	---	Not to exceed limits specified in Title 17 California Code of Regulations Section 30253, Standards for Protection Against Radiation					
Acrolein	ug/l		1.9 E+04				
	lbs/day		3.7 E+03				
Antimony	ug/l		1.1 E+05				
	lbs/day		2.0 E+04				
Bis(2-chloroethoxy) Methane	ug/l		3.9 E+02				
	lbs/day		7.4 E+01				
Bis(2-chloroisopropyl) ether	ug/l		1.1 E+05				
	lbs/day		2.0 E+04				
Chlorobenzene	ug/l		5.0 E+04				
	lbs/day		9.6 E+03				
Chromium (III)	ug/l		1.7 E+07				
	lbs/day		3.2 E+06				
Di-n-butyl Phthalate	ug/l		3.1 E+05				
	lbs/day		5.9 E+04				
Dichlorobenzenes [7]	ug/l		4.5 E+05				
	lbs/day		8.6 E+04				

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous		6 Month Median
					Min	Max	
Diethyl Phthalate	ug/l		2.9 E+06				
	lbs/day		5.5 E+05				
Dimethyl Phthalate	ug/l		7.2 E+07				
	lbs/day		1.4 E+07				
4,6-dinitro-2-methylphenol	ug/l		1.9 E+04				
	lbs/day		3.7 E+03				
2,4-dinitrophenol	ug/l		3.5 E+02				
	lbs/day		6.7 E+01				
Ethylbenzene	ug/l		3.6 E+05				
	lbs/day		6.9 E+04				
Hexachlorocyclo-pentadiene	ug/l		5.1 E+03				
	lbs/day		9.7 E+02				
Nitrobenzene	ug/l		4.3 E+02				
	lbs/day		8.2 E+01				
Thallium	ug/l		1.8 E+02				
	lbs/day		3.4 E+01				
Toluene	ug/l		7.5 E+06				
	lbs/day		1.4 E+06				
1,1,1-trichloroethane	ug/l		4.8 E+07				
	lbs/day		9.1 E+06				
Acrylonitrile	ug/l		8.8 E+00				
	lbs/day		1.7 E+00				
Aldrin	ug/l		1.9 E-03				
	lbs/day		3.7 E-04				
Benzene	ug/l		5.2 E+02				
	lbs/day		9.9 E+01				
Benzidine	ug/l		6.1 E-03				
	lbs/day		1.2 E-03				
Beryllium	ug/l		2.9 E+00				
	lbs/day		5.5 E-01				
Bis(2-chloroethyl) Ether	ug/l		4.0 E+00				
	lbs/day		7.6 E-01				
Bis(2-ethlyhexyl) Phthalate	ug/l		3.1 E+02				
	lbs/day		5.9 E+01				
Carbon Tetrachloride	ug/l		7.9 E+01				
	lbs/day		1.5 E+01				
Chlordane [8]	ug/l		2.0 E-03				
	lbs/day		3.9 E-04				
Chlorodibromomethane	ug/l		7.6 E+02				
	lbs/day		1.4 E+02				
Chloroform	ug/l		1.1 E+04				
	lbs/day		2.2 E+03				
DDT [9]	ug/l		1.5 E-02				
	lbs/day		2.9 E-03				
1,4-dichlorobenzene	ug/l		1.6 E+03				
	lbs/day		3.0 E+02				
3,3'-dichlorobenzidine	ug/l		7.1 E-01				
	lbs/day		1.4 E-01				
1,2-dichloroethane	ug/l		2.5 E+03				
	lbs/day		4.7 E+02				

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
1,1-dichloroethylene	ug/l		7.9 E+01				
	lbs/day		1.5 E+01				
Dichlorobromomethane	ug/l		5.5 E+02				
	lbs/day		1.0 E+02				
Dichloromethane	ug/l		4.0 E+04				
	lbs/day		7.6 E+03				
1,3-dichloropropene	ug/l		7.8 E+02				
	lbs/day		1.5 E+02				
Dieldrin	ug/l		3.5 E-03				
	lbs/day		6.7 E-04				
2,4-dinitrotoluene	ug/l		2.3 E+02				
	lbs/day		4.4 E+01				
1,2-diphenylhydrazine	ug/l		1.4 E+01				
	lbs/day		2.7 E+00				
Halomethanes [10]	ug/l		1.1 E+04				
	lbs/day		2.2 E+03				
Heptachlor	ug/l		4.4 E-03				
	lbs/day		8.4 E-04				
Heptachlor Epoxide	ug/l		1.8 E-03				
	lbs/day		3.4 E-04				
Hexachlorobenzene	ug/l		1.8 E-02				
	lbs/day		3.5 E-03				
Hexachlorobutadiene	ug/l		1.2 E+03				
	lbs/day		2.4 E+02				
Hexachloroethane	ug/l		2.2 E+02				
	lbs/day		4.2 E+01				
Isophorone	ug/l		6.4 E+04				
	lbs/day		1.2 E+04				
N-nitrosodimethylamine	ug/l		6.4 E+02				
	lbs/day		1.2 E+02				
N-nitrosodi-N-propylamine	ug/l		3.3 E+01				
	lbs/day		6.4 E+00				
N-nitrosodiphenylamine	ug/l		2.2 E+02				
	lbs/day		4.2 E+01				
PAHs [11]	ug/l		7.7 E-01				
	lbs/day		1.5 E-01				
PCBs [12]	ug/l		1.7 E-03				
	lbs/day		3.2 E-04				
TCDD equivalents [13]	ug/l		3.4 E-07				
	lbs/day		6.6 E-08				
1,1,2,2-tetrachloroethane	ug/l		2.0 E+02				
	lbs/day		3.9 E+01				
Tetrachloroethylene	ug/l		1.8 E+02				
	lbs/day		3.4 E+01				
Toxaphene	ug/l		1.8 E-02				
	lbs/day		3.5 E-03				
Trichloroethylene	ug/l		2.4 E+03				
	lbs/day		4.5 E+02				

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
1,1,2-trichloroethane	ug/l		8.3 E+02				
	lbs/day		1.6 E+02				
2,4,6-trichlorophenol	ug/l		2.6 E+01				
	lbs/day		4.9 E+00				
Vinyl Chloride	ug/l		3.2 E+03				
	lbs/day		6.1 E+02				

V. RECEIVING WATER LIMITATIONS

Unless specifically excepted by this Order, the discharge, by itself or jointly with any other discharge(s), shall not cause violation of the following water quality objectives. Compliance with these objectives shall be determined by samples collected at stations representative of the area within the waste field where initial dilution is completed.

A. Bacterial Characteristics

1. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Regional Water Board, but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column.

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

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

2. The Initial Dilution Zone for any wastewater outfall shall be excluded from designation as kelp beds for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards.

3. At all areas where shellfish may be harvested for human consumption, as determined by the Regional 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.

B. Physical Characteristics

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

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

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

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

C. Chemical Characteristics

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

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

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

4. The concentration of substances set forth in Chapter II, Table B of the Ocean Plan (2001), shall not be increased in marine sediments to levels that would degrade indigenous biota.

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

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

7. Numerical water quality objectives established in Chapter II, Table B of the California Ocean Plan (2001) shall not be exceeded outside of the zone of initial dilution as a result of discharges from the Facility.

D. Biological Characteristics

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

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

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

E. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

VI. PROVISIONS

A. Standard Provisions

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

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

   a. The Discharger shall comply with all requirements and conditions of this Order. Any permit non-compliance constitutes a violation of the CWA and/or the CWC and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of an application for permit renewal, modification, or reissuance.

   b. The Discharger shall comply with all applicable federal, state, and local laws and regulations that pertain to sewage sludge handling, treatment, use, and disposal, including CWA Section 405 and USEPA regulations at 40 CFR Part 257.

   c. The Discharger's wastewater treatment facilities shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23, Division 3, Chapter 26 of the California Code of Regulations.

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

      1) Identify the design capacity of the treatment facility, including the daily and 30-day design capacity,

      2) Certify the adequacy of each component of the treatment facility, and

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

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

1) The certification report is received by the Executive Officer,

2) The Executive Officer has received written notification of completion of construction (new treatment facilities and expansions only),

3) An inspection of the facility has been made by staff of the Regional Water Board (new treatment facilities and expansions only), and

4) The Executive Officer has provided the Discharger with written authorization to discharge at a daily flow rate in excess of its previously approved design capacity.

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

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

g. This Order expires on August 10, 2010, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR 122.6 and the State's regulations at CCR Title 23, Section 2235.4 regarding the continuation of expired permits and waste discharge requirements are met.

h. The Discharger's wastewater treatment facilities shall be operated and maintained in accordance with the operations and maintenance manual prepared by the Discharger pursuant to the Clean Water Grant Program.

i. A copy of this Order shall be posted at a prominent location at or near the treatment and disposal facilities and shall be available to operating personnel at all times.

j. The Discharger shall comply with any interim limitations established by addendum, enforcement action, or revised waste discharge requirements that have been or may be adopted by the Regional Water Board.

k. The Discharger shall comply with effluent standards and prohibitions for toxic pollutants established pursuant to Section 307 (a) of the CWA within the time frame set forth by the regulations that establish those standards and prohibitions, even if this Order has not been modified to incorporate the requirements. If an applicable effluent standard or prohibition, including any schedule of compliance, is promulgated pursuant to Section 307 (d) of the CWA for a toxic pollutant, and that standard or prohibition is more stringent than a limitation contained in this Order, the Executive Officer may institute proceedings to modify or revoke and reissue the Order to conform to the effluent standard or prohibition.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program (Attachment E) of this Order.

C. Special Provisions

1. Re-opener Provisions

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

1) Violation of any terms or conditions of this Order.

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

3) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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

b. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Regional Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

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

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

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

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

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

h. This Order may also be re-opened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order and permit, and endangerment to human health or the environment resulting from the permitted activity.

2. Special Studies, Technical Reports, and Additional Monitoring Requirements

a. Oceanside Ocean Outfall Capacity

No later than 180 days prior to the Order's expiration date, the Discharger shall submit a written report to the Executive Officer regarding capacity of the Oceanside Ocean Outfall (OOO) that satisfies the following:

1) The OOO capacity evaluation was conducted within four and a half years after the adoption date of this Order.
2) The report includes the Discharger's best estimate of when the average daily flow will equal or exceed the OOO capacity.
3) The report includes the Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the OOO and/or to control the flow rate before the flow rate is equal to the current outfall capacity.
4) The report includes an evaluation of the physical condition of the OOO conducted within four and a half years after the adoption date of this Order.
5) The report must be signed and agreed upon by each of the parties discharging through the OOO.

b. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer within 90 days after the monthly average influent flow rate equals or exceeds 75 percent of the design secondary treatment capacity of the wastewater treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter in accordance with Standard

Provision V.B.2.a (Attachment D) which transmits that report and certifies that the policy-making body is adequately informed of the influent flow rate relative to the Facility's design capacity. The report shall include the following:

1) Average influent daily flow for the calendar month; the date on which the maximum daily flow occurred; and the rate of that maximum flow.

2) The Discharger's best estimate of when the average daily influent flow for a calendar month will equal or exceed the design capacity of the facilities.

3) The Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the waste treatment and/or disposal facilities, and/or control the flow rate before the waste flow exceeds the capacity of present units.

c. Spill Reporting Requirements

For purposes of this section, a spill is a discharge of treated or untreated wastewater that occurs at or downstream of the SLRWTP or LSWTP headworks in violation of Discharge Prohibition A of this Order, or a discharge of other materials related to treatment and operations of the SLRWTP, LSWTP and BGDF that occurs anywhere throughout the collection and treatment system owned and/or operated by the Discharger. This section does not include sanitary sewer overflows reportable under separate waste discharge requirements. The Discharger shall report spills in accordance with the following procedures:

1) If a spill results in a discharge of treated or untreated wastewater that is greater than 1,000 gallons that reaches surface waters, the Discharger shall:

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

   b) Submit a written report, as well as any additional pertinent information, to the Regional Water Board no later than five days following the starting date of the spill event. The Discharger shall submit the written report using the Sanitary Sewer Overflow Report Form (June 13, 2001) provided under Regional Water Board Order No. 96-04.

2) If a spill results in a discharge of treated or untreated wastewater under 1,000 gallons and the discharge does not reach surface waters:

   a) The Discharger is not required to notify the Regional Water Board within 24 hours.

b) The Discharger shall submit a written report, as well as any additional pertinent information, in the monthly self-monitoring report for the month in which the spill occurred. The Discharger shall submit the written report using the Sanitary Sewer Overflow Report Form (June 13, 2001) provided under Regional Water Board Order No. 96-04.

3) For spills of material other than treated or untreated wastewater that cause, may cause, or are caused by significant operational failure, or endangers or may endanger human health or the environment, the Discharger shall notify the Regional Water Board by telephone, by voice mail, or by FAX within 24 hours from the time the Discharger becomes aware of the spill. The Discharger shall inform the Regional Water Board of the date of the spill, spill location and its final destination, time the spill began and ended, estimated total spill volume, and type of spill material.

4) For all spills, the Discharger shall submit an annual summary containing the following information for each spill: date of spill, location of spill and its final destination, time the spill began and ended, estimated total spill volume, and type of spill material.

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

d. Sanitary Sewer Systems and Sanitary Sewer Overflow Reporting Requirements

A sanitary sewer system is a wastewater collection system including sewers, pipes, pumps, or other conveyances which convey wastewater (e.g. domestic, commercial, and industrial wastewaters) to a wastewater treatment plant. A sanitary sewer system is part of the publicly owned treatment works, and all federal Standard Provisions of this Order apply to a sanitary sewer system. A sanitary sewer overflow is each instance of a discharge from a sanitary sewer system at any point upstream of the headworks of a wastewater treatment plant. Temporary storage and conveyance facilities (such as wet wells, impoundments, tanks, highlines, etc.) are part of the sanitary sewer system and are not sanitary sewer overflows provided that sewage from these facilities is not discharged to waters of the State.

The Discharger shall report sanitary sewer overflows from the sanitary sewer system owned and operated by the Discharger in accordance with Monitoring and Reporting Program No. 96-04, Sanitary Sewer Overflow Reporting Procedures for Sewage Collection Agencies, incorporated by reference into this Order.

e. Sludge Disposal Requirements

1) The handling, treatment, use, management, and disposal of sludge and solids derived from wastewater treatment must comply with applicable provisions of CWA section

405 and USEPA regulations at 40 CFR parts 257, 258, 501, and 503, including all monitoring, record keeping, and reporting requirements.

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

3) Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 25 pertaining to providing information to the public. In the annual self-monitoring report, the Discharger shall include the amount of sludge placed in the landfill as well as the landfill to which it was sent.

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

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

6) Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in ground water contamination.

7) The solids and sludge treatment and storage site shall have adequate facilities to divert surface water runoff from adjacent areas to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection, at the minimum, from a 100-year storm and protection from the highest possible tidal stage that may occur.

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

9) The Discharger shall submit an annual report to the USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements, as specified by 40 CFR 503. The Discharger shall also report the quantity of sludge removed from the Facility and the disposal method. This self-monitoring report shall be postmarked by February 19 of each year and report for the period of the previous calendar year.

f. Pretreatment Program

1) The Discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR Part 403, including any subsequent revisions to that part. Where 40 CFR Part 403 or subsequent revisions place mandatory actions upon the Discharger but do not specify a timetable for completion, the Discharger shall complete the mandatory actions within 6 months of the issuance date of this Order, or the effective date of the revisions to 40 CFR Part 403, whichever is later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies imposed by the USEPA and/or the Regional Water Board, as provided in the CWA and/or the California Water Code.

2) The Discharger shall implement and enforce its approved pretreatment program, and all subsequent revisions, which are hereby made enforceable conditions of this Order. The Discharger shall enforce the requirements promulgated pursuant to Sections 307 (b), 307 (c), 307 (d), and 402 (b) of the CWA with timely, appropriate, and effective enforcement actions. The Discharger shall cause industrial users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements, or in the case of a new industrial user, upon commencement of the discharge.

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

a) Implement the necessary legal authorities as required by 40 CFR 403.8 (f) (1)

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

c) Implement the programmatic functions as required by 40 CFR 403.8 (f) (2); and

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

4) By March 1 of each year, the Discharger shall submit an annual report to the Regional Water Board; USEPA Region 9; the State Water Board, Division of Water Quality, Regulations Unit; and the San Diego County Department of Health Services, Hazardous Materials Division, describing its pretreatment activities over the previous calendar year. In the event the Discharger is not in compliance with any condition or requirement of this Order, or any pretreatment compliance inspection/audit requirements, the Discharger shall include the reasons for noncompliance and state how and when it will comply with such conditions and requirements. The annual report shall contain, but not be limited to, the following information:

a) A summary of analytical results from representative flow-proportioned 24-hour composite sampling of the Discharger's influent and effluent for those pollutants known or suspected to be discharged by industrial users that the USEPA has

identified under Section 307 (d) of the CWA, which are known or suspected to be discharged by industrial users. This will consist of an annual full priority pollutant scan. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis required by the Monitoring and Reporting program of this Order (Attachment E). The Discharger shall also provide influent and effluent monitoring data for non-priority pollutants, which the Discharger believes may be causing or contributing to interference or pass through. The Discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed in MRP No. R9-2005-0136. Wastewater sampling and analysis shall be performed in accordance with 40 CFR Part 136.

b) A discussion of upset, interference, or pass through, if any, at the Facilities, which the Discharger knows or suspects were caused by industrial users. The discussion shall include the reasons why the incidents occurred, any corrective actions taken, and, if known, the name and address of the responsible industrial user(s). The discussion shall also include a review of the applicable local pollutant limitations to determine whether any additional limitations or changes to existing limitations, are necessary to prevent pass-through, interference, or non-compliance with sludge disposal requirements.

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

(1) Name of SIU and category, if subject to categorical standards;

(2) Type of wastewater treatment or control processes in place;

(3) Number of samples taken by SIU during the year;

(4) Number of samples and inspections by Discharger during the year;

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

(6) A list of pretreatment standards (categorical or local) violated during the year, or any other violations;

(7) Industries in significant non-compliance as defined at 40 CFR 403.12 (f) (2) (vii), at any time during the year;

(8) A summary of enforcement actions or any other actions taken against SIUs during the year. Describe the type of action, final compliance date, and the amount of fines and/or penalties collected, if any. Describe any proposed actions for bringing SIUs into compliance; and

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

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

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

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

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

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

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

5) The Discharger shall submit a semiannual SIU compliance status report to the Regional Water Board, the State Water Board, and the USEPA. The reports shall cover the periods of January 1 through June 30, and July 1 through December 31 and shall be submitted no later than September 1 and March 1, respectively. The report shall identify:

a) The names and addresses of all SIUs which violated any discharge or reporting requirements during the semi-annual reporting period;

b) A description of the violations, including whether the discharge violations were for categorical standards or local limits;

c) A description of the enforcement actions or other actions taken to remedy the non-compliance; and

d) The status of enforcement actions or other actions taken in response to SIU non-compliance identified in previous reports.

6) The Discharger shall continue with its implementation of a Non-Industrial Source Control Program, consisting of a public education program designed to minimize the entrance of non-industrial toxic pollutants and pesticides into the sanitary sewer system. The Program shall be reviewed periodically and addressed in the annual report.

3. Planned Bypasses at La Salina Wastewater Treatment Plant

A bypass of the south treatment train at the La Salina Wastewater Treatment Plant for planned repair, maintenance and upgrades is not prohibited provided that all of the following are satisfied:

a. At least three months prior to initiating a bypass, the discharger submits a technical report for the proposed bypass that includes the following:

(i) Start date and duration of the proposed bypass.
(ii) Scope of the proposed project.
(iii) Adequate information to demonstrate that the bypass is not a prohibited bypass because it meets the criteria given in Provision I.G.3 (a) and (b) of Attachment D Standard Provisions - Permit Compliance.
(iv) Adequate information to demonstrate that the discharger has minimized the anticipated duration and anticipated impact of the proposed bypass.

b. The Regional Board has provided the Discharger with written notification that the proposed bypass is not prohibited prior to initiating the bypass.

c. For the duration of the bypass, the combined effluent at Monitoring Point M-003 is monitored at the same frequency as Monitoring Points M-001 and M-002 for the constituents listed under Monitoring and Reporting Program Table 3a and the combined effluent complies with the technology-based effluent limitations contained in Table 7a of Section IV. Discharge Specifications and Effluent Limitations of the Order. Determination of percent removal for carbonaceous biochemical oxygen demand and total suspended solids shall be based on a system-wide basis in lieu of the formula provided under Section VII. Compliance Determination.

d. The discharger conducts additional effluent and receiving water monitoring relevant to the proposed bypass required by the Regional Board.

VII. COMPLIANCE DETERMINATION

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

A. Average Monthly Effluent Limitation (AMEL).
If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month.

For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Average Weekly Effluent Limitation (AWEL).

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

C. Maximum Daily Effluent Limitation (MDEL).

The MDEL shall apply to flow weighted 24-hour composite samples. If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

D. Instantaneous Minimum Effluent Limitation.

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

E. Instantaneous Maximum Effluent Limitation.

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

F. Six-month Median Effluent Limitation.

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the Discharger will be considered out of compliance for the 180-day period. For

any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

G. Mass and Concentration Limitations.

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be "ND" or "DNQ", the corresponding mass emission rate (MER) determined from that sample concentration shall also be reported as "ND" or "DNQ."

H. Percent Removal.

Compliance with the secondary treatment standard for monthly average percent removal of biochemical oxygen demand, carbonaceous biochemical oxygen demand, and total suspended solids pursuant to 40 CFR Part 133 shall be determined separately for each wastewater treatment facility discharging through an outfall. For each wastewater treatment facility, the monthly average percent removal is the average of the calculated daily discharge percent removals only for days on which the constituent concentration is monitored in both the influent and effluent of the wastewater treatment facility at locations specified in the Monitoring and Reporting Program (Attachment E) within a calendar month.

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

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

I. Ocean Plan Provisions for Table B Constituents.

1. Sampling Reporting Protocols

   a. Dischargers must report with each sample result the reported Minimum Level (ML) and the laboratory's current Method Detection Limit (MDL).

   b. Dischargers must also report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

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

      2) 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. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc.").

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

2. Compliance Determination

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

a. Compliance with Single-Constituent Effluent Limitations
The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the ML.

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

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

c. Multiple Sample Data Reduction

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

3. Pollutant Minimization Program

a. Pollutant Minimization Program Goal

The goal of the Pollutant Minimization Program is to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures, in order to maintain the effluent concentration at or below the effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The completion and implementation of a Pollution Prevention Plan, required in accordance with California Water Code Section 13263.3 (d) will fulfill the Pollution Minimization Program requirements in this section.

b. Determining the need for a Pollutant Minimization Program

1) The Discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true:

   a) The calculated effluent limitation is less than the reported ML.

   b) The concentration of the pollutant is reported as DNQ.

   c) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

2) Alternatively, the Discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true:

   a) The calculated effluent limitation is less than the Method Detection Limit.

   b) The concentration of the pollutant is reported as ND.

   c) There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

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

   1) Health advisories for fish consumption,

   2) Presence of whole effluent toxicity,

   3) Results of benthic or aquatic organism tissue sampling,

   4) Sample results from analytical methods more sensitive than methods included in the permit.

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

J. Receiving Water Sampling Protocol.

The instantaneous maximum and daily maximum receiving water limitations shall apply to grab sample determinations.

K. Acute Toxicity.

Compliance with the Acute Toxicity Performance Goals for Outfall 001 (Section IV.B.3 of this Order) shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTM), USEPA, American Public Health Association, or State Board. Acute Toxicity (TUa) shall be expressed in Toxic Units Acute (TUa), where:

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

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

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

$$TUa = \log (100-S) / 1.7$$

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

L. Chronic Toxicity.

Chronic toxicity is used to measure the acceptability of waters for supporting a healthy marine biota until approved methods are developed to evaluate biological response. Compliance with the Chronic Toxicity performance goal established in Section IV.B.2 of this Order for Outfall 001 shall be determined using critical life stage toxicity tests in accordance with procedures prescribed by the Ocean Plan (2001) and restated in MRP R9-2005-0136. Chronic Toxicity (TUc) shall be expressed as Toxic Units Chronic (TUc), where:

$$TUc = 100 / NOEL$$

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

If the toxicity testing result shows an exceedance of the chronic toxicity limitation identified in the performance goals for Outfall 001 (Section IV.B.2 of this Order), the Discharger shall:

1. Take all reasonable measures necessary to immediately minimize toxicity; and

2. Increase the frequency of the toxicity test(s) that showed a violation to at least two times per month until the results of at least two consecutive toxicity tests do not show violations.

If the Executive Order determines that toxicity testing shows consistent violation or exceedance of any acute or chronic toxicity limitation or performance goal identified in Section IV.B.2 of this Order, the Discharger shall conduct a Toxicity Reduction Evaluation (TRE) that includes all reasonable steps to identify the source of toxicity. Once the source of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the toxicity limitations identified in the final effluent limitations for Outfall 001 (Section IV.B.2 of this Order).

M. Toxicity Reduction Evaluation (TRE)

The Discharger shall develop a Toxicity Reduction Evaluation (TRE) workplan in accordance with the TRE procedures established by the USEPA in the following guidance manuals:

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

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

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

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

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

If a toxicity effluent limitation or performance goal identified in Section IV.B of this Order is exceeded, then within 15 days of the exceedance, the Discharger shall conduct chronic and acute toxicity tests monthly for a 6-month period and provide the results to the Regional Water Board. The additional monthly toxicity tests will be incorporated into the semiannual discharge monitoring reports submitted pursuant to Attachment E – Monitoring and Reporting Program.

If the additional monthly tests indicate that toxicity effluent limitations are being consistently violated (at least three exceedances out of the six tests), the Regional Water Board may recommend that the Discharger conduct a TRE and a Toxic Identification Evaluation (TIE), as identified in the approved TRE workplan.

Within 30 days of completion of the TRE/TIE, the Discharger shall submit the results of the TRE/TIE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitation of this Order and prevent recurrence of violations of those limitation, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer.

N. Mass Emission Rate.

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

$$\text{Mass Emission Rate (lb/Day)} = 8.34 \times Q \times C$$

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

O. Bacterial Standards and Analysis.

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

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

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

2. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN (most probable number). The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those listed in 40 CFR 136 or any improved method determined by the Regional Water Board (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure,* listed under 40 CFR 136, and any other method approved by the Regional Water Board.

P. Single Operational Upset.

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

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

2. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in Provision E.5.b(2) of Attachment D - Standard Provisions.

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

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

ENDNOTES

1. Dischargers may, at their option, meet this limitation (or apply this performance goal) as a total chromium limitation (or performance goal).

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

3. The water quality objectives for total chlorine residual applicable to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation: $\log y = -0.43 (\log x) + 1.8$, where y = the water quality objective (in ug/l) to apply when chlorine is being discharged; x = the duration of uninterrupted chlorine discharge in minutes. Actual effluent limitations for total chlorine, when discharging intermittently, shall then be determined according to *Implementation Procedures for Table B* from the Ocean Plan (2001), using a minimum probable initial dilution factor of 87 and a flow rate of 22.9 MGD.

4. Chronic toxicity expressed as Chronic Toxicity Units (TUc) = 100 / NOEL, where NOEL (No Observed Effect Level) is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of critical life stage toxicity tests identified in Section V of Monitoring and Reporting Program No. R9-2005-0101.

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

6. Not to exceed limits specified in Title 17 California Code of Regulations, Section 30253, Standards for Protection Against Radiation. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.

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

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

9. Shall mean the sum of 4,4'DDT; 2,4'DDT; 4,4'DDE; 2,4'DDE; 4,4'DDD; and 2,4'DDD.

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

11. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenapthalene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene,

benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorine, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

12. PCBs (polychlorinated biphenyls) shall mean he 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.

13. TCDD Equivalents shall mean the sum of 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 by 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 CDD	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 A – DEFINITIONS

Anti-Backsliding. Provisions in the Clean Water Act and USEPA regulations [CWA 303 (d) (4); CWA 402 (c); CFR 122.44 (l)] that require a reissued permit to be as stringent as the previous permit with some exceptions.

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

Applicable Standards and Limitations means all State, interstate, and federal standards and limitations to which a discharge, a sewage sludge use or disposal practice, or a related activity is subject under the CWA, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, pretreatment standards, and standards for sewage sludge use or disposal under sections 301, 302, 303, 304, 306, 307, 308, 403 and 405 of CWA.

Areas of Special Biological Significance (ASBS) are those areas designated by the State Water Board as requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable.

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.

Beneficial Uses of the waters of the State that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ). The method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data.

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

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

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

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

Bypass. The intentional diversion of wastestreams from any portion of a treatment (or pretreatment) facility.

Carbonaceous Biochemical Oxygen Demand (CBOD). The measurement of oxygen required for carbonaceous oxidation of a nonspecific mixture of organic compounds. Interference caused by nitrifying bacteria in the standard 5-day BOD test is eliminated by suppressing the nitrification reaction.

Certifying Official. All applications, including NOIs, must be signed as follows:

For a corporation: By a responsible corporate officer, which 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.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. 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.

Chemical Oxygen Demand (COD). A measure of the oxygen-consuming capacity of inorganic and organic matter present in wastewater. COD is expressed as the amount of oxygen consumed in mg/L. Results do not necessarily correlate to the biochemical oxygen demand (BOD) because the chemical oxidant may react with substances that bacteria do not stabilize.

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

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

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

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

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

Daily Maximum Limit. The maximum allowable daily discharge of pollutant. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the 24-hour period. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that 24-hour period.

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

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

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

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

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

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

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

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

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

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

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.

Method Detection Limit (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.

Minimum Level (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.

Sanitary Sewer. A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

Sanitary Sewer Overflows (SSO). Untreated or partially treated sewage overflows from a sanitary sewer collection system.

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

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

Surface Waters include navigable waters, rivers, streams (including ephemeral streams), lakes, playa lakes, natural ponds, bays, the Pacific Ocean, lagoons, estuaries, man-made canals, ditches, dry arroyos, mudflats, sandflats, wet meadows, wetlands, swamps, marshes, sloughs and water courses, and storm drains tributary to surface waters. Surface Waters include waters of the United States as used in the federal Clean Water Act (see 40 CFR 122.2).

Technology-Based Effluent Limit. A permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

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

Toxicity Reduction Evaluation (TRE). A site-specific study conducted in a stepwise process designed to identify the causative agent(s) of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

Upset is defined as (a) An unusual event that temporarily disrupts the usually satisfactory operation of a system. This definition constitutes the plain meaning or broad definition of the term "upset." (b) An event more narrowly defined at 40 CFR 122.41 (n)(1) and which belongs to a subset of events that fit the definition of the term "upset" provided in (a).

Water Quality Control Plan consists of a designation or establishment for the waters within a specified area of all of the following:

1. Beneficial uses to be protected.

2. Water quality objectives.

3. A program of implementation needed for achieving water quality objectives.

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

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

ATTACHMENT B – MAP

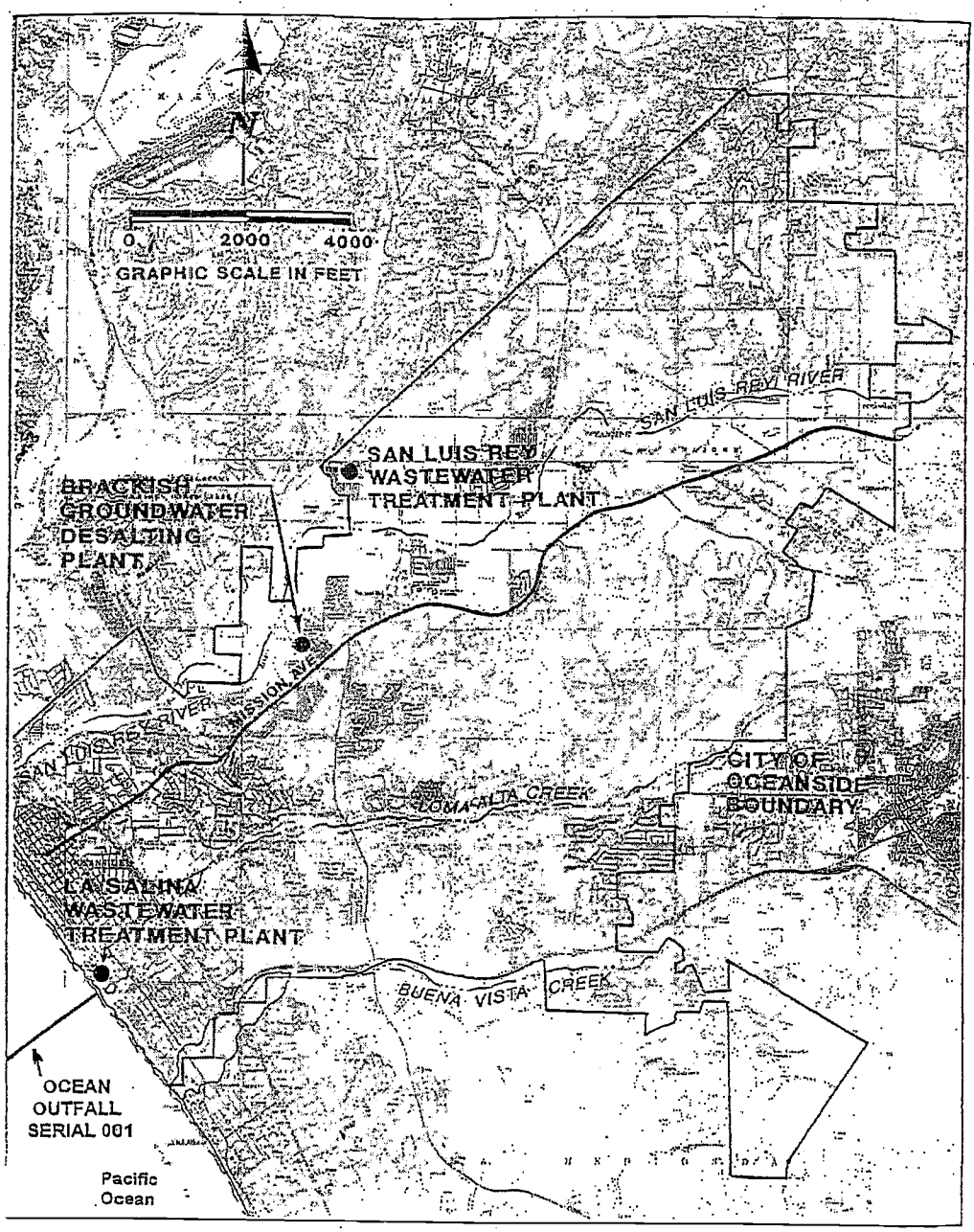
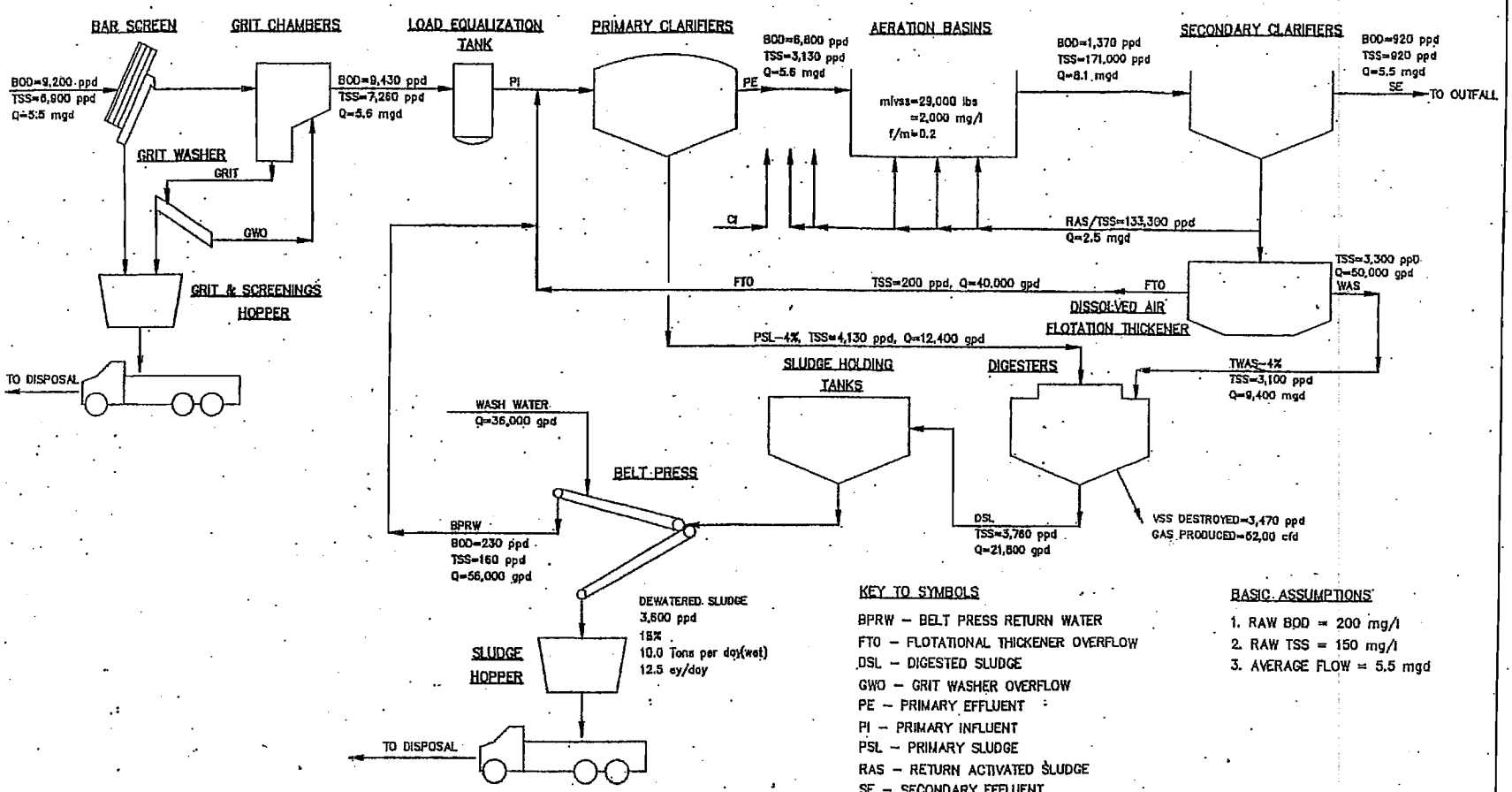


Figure 2

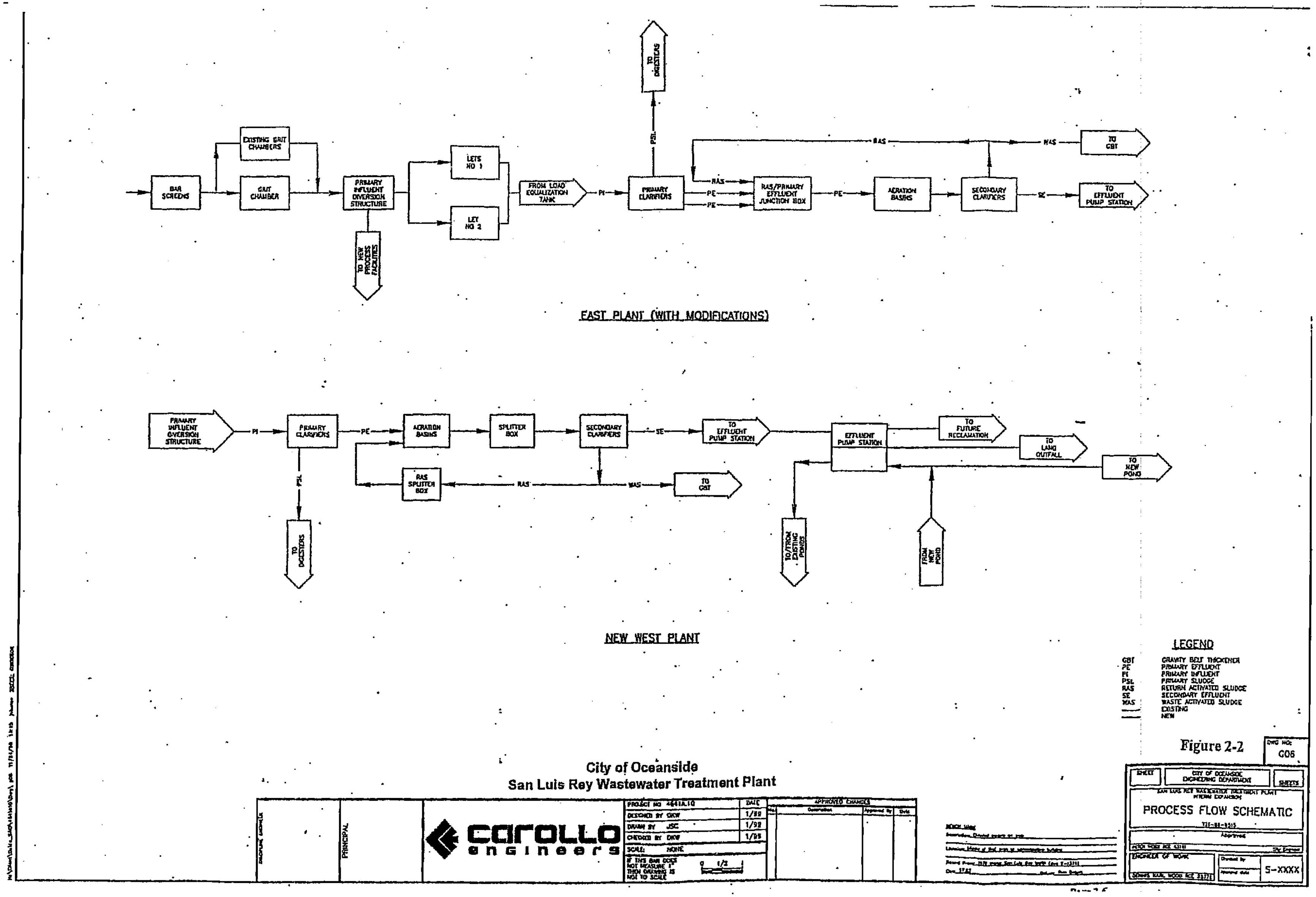
ATTACHMENT C – FLOW SCHEMATIC

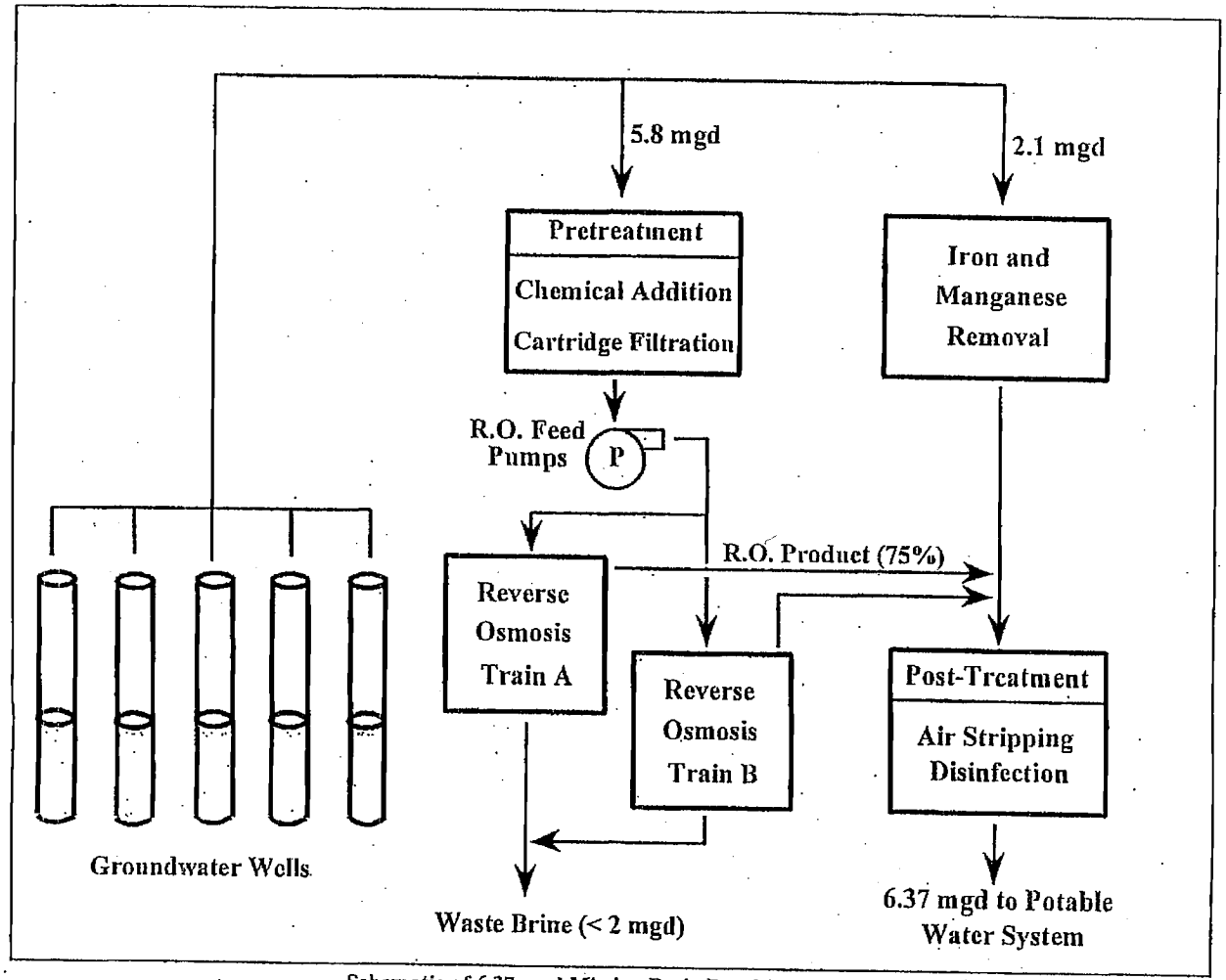
Flow schematics on the following pages for La Salina Wastewater Treatment Plant, San Luis Rey Wastewater Treatment Plant, and Brackish Groundwater Desalination Facility.



City of Oceanside
La Salina Wastewater Treatment Plant
PROCESS SCHEMATIC FLOW DIAGRAM

Figure 2-1


BAR SCREENS
EXISTING GRIT CHAMBERS
GRIT CHAMBER
PRIMARY INFLUENT DIVERSION STRUCTURE
TO NEW PROCESS FACILITIES
LETS NO 1
LET NO 2
FROM LOAD EQUALIZATION TANK
PI
PRIMARY CLARIFIERS
PSL
TO DIGESTERS
RAS
PE
RAS/PRIMARY EFFLUENT JUNCTION BOX
AERATION BASINS
SECONDARY CLARIFIERS
SE
TO GBT
TO EFFLUENT PUMP STATION
EAST PLANT (WITH MODIFICATIONS)
PRIMARY INFLUENT DIVERSION STRUCTURE
SPLITTER BOX
RAS SPLITTER BOX
WAS
EFFLUENT PUMP STATION
TO FUTURE RECLAMATION
TO LAND OUTFALL
TO NEW POND
TO/FROM EXISTING PONDS
FROM NEW POND
NEW WEST PLANT
LEGEND
GBT GRAVITY BELT THICKENER
PE PRIMARY EFFLUENT
PI PRIMARY INFLUENT
PSL PRIMARY SLUDGE
RAS RETURN ACTIVATED SLUDGE
SE SECONDARY EFFLUENT
WAS WASTE ACTIVATED SLUDGE
EXISTING
NEW
Figure 2-2
DWG NO. G06
City of Oceanside
San Luis Rey Wastewater Treatment Plant
carollo engineers
PRINCIPAL
DESIGNED BY DKW
DRAWN BY JSC
CHECKED BY DKW
SCALE NONE
DATE 1/98
APPROVED CHANGES
CITY OF OCEANSIDE ENGINEERING DEPARTMENT
PROCESS FLOW SCHEMATIC
ENGINEER OF WORK
S-XXXX



Schematic of 6.37 mgd Mission Basin Desalting Facility

ATTACHMENT D – FEDERAL 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 denial of a permit renewal application [*40 CFR §122.41(a)*].

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

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

2. Bypass not exceeding limitations – The 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 and I.G.5 below [*40 CFR §122.41(m)(2)*].

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

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

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

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

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

5. Notice

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

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

H. Upset

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

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the 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 Regional Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

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

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

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

3. All reports required by this Order and other information requested by the Regional Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this

provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

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

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

c. The written authorization is submitted to the Regional Water Board, SWRCB, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

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

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

C. Monitoring Reports

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

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

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal,

approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

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

F. Planned Changes

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

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

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

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

When the 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 Regional Water Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a

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

B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*40 CFR §122.41(a)(3)*].

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

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

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

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

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

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

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

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

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

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

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

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

B. Publicly-Owned Treatment Works (POTWs)

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

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and California regulations.

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 shall be taken at the monitoring points specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Regional Water Board. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirements of Order No. R9-2005-0136.

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

C. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, or unless other test procedures are specified in Order No. R9-2005-0136 and/or in this MRP and/or by the Regional Water Board.

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

E. Records of monitoring information shall include information required under Standard Provision IV.

F. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices.

G. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA or the

Regional Water Board, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger should have a success rate equal or greater than 80 percent.

H. Analysis for toxic pollutants, including acute and chronic toxicity, with effluent limitations based on water quality objectives of the California Ocean Plan (2001) shall be conducted in accordance with procedures described in the Ocean Plan (2001) and restated in this MRP.

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

II. MONITORING LOCATIONS

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

Table 1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	M-INF1	At a location where all influent flows to SLRWTP are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
	M-INF2	At a location where all influent flows to LSWTP are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
	M-001	Downstream of any in-plant return flows at SLRWTP where representative samples of effluent treated solely at SLRWTP can be collected.
	M-002	Downstream of any in-plant return flows where representative samples of effluent treated solely at LSWTP can be collected.
Outfall 001	M-003	At a location where representative samples of commingled effluent from SLRWTP, LSWTP, BGDF and Biogen IDEC Pharmaceuticals Corp. can be collected before combining with wastewaters from Fallbrook Public Utility District and US Marine Corp Base Camp Pendleton.
		- Receiving Water Monitoring Stations -
		- Surf Zone Monitoring Stations -
	S1	Surf Zone; 5,500 ft south of the outfall
	S2	Surf Zone; 2,500 ft south of the outfall
	S3	Surf Zone; at the outfall
	S4	Surf Zone; 2,000 ft north of the outfall
	S5	Surf Zone; 5,800 ft north of the outfall

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	S6	To be determined at a later date
	S7	To be determined at a later date
		- Near Shore Monitoring Stations -
	N1	Opposite S1; at the 30 foot depth contour, MLLW
	N2	Opposite S2; at the 30 foot depth contour, MLLW
	N3	Opposite S3; at the 30 foot depth contour, MLLW
	N4	Opposite S4; at the 30 foot depth contour, MLLW
	N5	Opposite S5; at the 30 foot depth contour, MLLW
	N6	To be determined at a later date
	N7	To be determined at a later date
		- Offshore Monitoring Stations -
	A1 – A4	At the corners of a 1,000 ft x 1,000 ft square having one side parallel to shore and the intersection of its diagonals at the seaward end of the outfall
	A5	At the seaward end of the outfall
	B1	One mile downcoast from the outfall, and over the same depth contour as Station A5
	B2	One mile upcoast from the outfall, and over the same depth contour as Station A5
		- Biological Transects -
	T0	At the 20, 40, 60, and 80 ft depth contours along the transect located 50 ft downcoast of and parallel to the outfall
	T1	At the 20, 40, 60, and 80 ft depth contours along the transect located 1 mile downcoast of and parallel to the outfall
	T2	At the 20, 40, 60, and 80 ft depth contours along the transect located 1.5 miles upcoast of and parallel to the outfall

CORE MONITORING

III. INFLUENT MONITORING REQUIREMENTS

Monitoring Location M-INF1 and M-INF2

The Discharger shall monitor influent at M-INF1 and M-INF2, respectively, as follows:

Table 2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	recorder / totalizer	continuous
$CBOD_5$ @ 20° C	mg/L	24 hr composite	weekly
TSS	mg/L	24 hr composite	weekly

IV. EFFLUENT MONITORING REQUIREMENTS

Sample Type and Frequency

The Discharger shall monitor secondary effluent at monitoring location M-001 and M-002 as follows (Endnotes are located at the end of the MRP starting on page 17):

Table 3a. Effluent Monitoring at M-001 and M-002

Parameter	Units	Sample Type [1]	Minimum Sampling Frequency
Flow [14]	MGD	recorder / totalizer	continuous
$CBOD_5$	mg/L	24 hr composite	daily [2]
BOD_5	mg/L	24 hr composite	monthly
TSS	mg/L	24 hr composite	daily [2]
pH	pH Units	grab	daily [2]

Table 3b. Effluent Monitoring M-003

Parameter	Units	Sample Type [1]	Minimum Sampling Frequency
Flow [14]	MGD	recorder / totalizer	continuous
Oil and Grease	mg/L	grab	monthly [3]
Settleable Solids	mL/L	grab	daily [2]
Turbidity	NTU	24 hr composite	weekly [3]
Dissolved Oxygen	mg/L	grab	weekly
Temperature	°F	grab	weekly
Total Residual Chlorine	µg/L	grab	daily [7]
arsenic	µg/L	24 hr composite	quarterly [3, 4]
cadmium	µg/L	24 hr composite	quarterly [3, 4]
chromium (VI)	µg/L	24 hr composite	quarterly [3, 4, 6]
copper	µg/L	24 hr composite	quarterly [3, 4]
lead	µg/L	24 hr composite	quarterly [3, 4]
mercury	µg/L	24 hr composite	quarterly [3, 4]
nickel	µg/L	24 hr composite	quarterly [3, 4]
selenium	µg/L	24 hr composite	quarterly [3, 4]
silver	µg/L	24 hr composite	quarterly [3, 4]
zinc	µg/L	24 hr composite	quarterly [3, 4]
cyanide	µg/L	24 hr composite	quarterly [3, 4]
ammonia	mg/L	24 hr composite	monthly [3]
non-chlorinated phenolic compounds	µg/L	24 hr composite	quarterly [3, 4]
chlorinated phenolics	µg/L	24 hr composite	quarterly [3, 4]
endosulfan	µg/L	24 hr composite	quarterly [3, 4]
endrin	µg/L	24 hr composite	quarterly [3, 4]
HCH	µg/L	24 hr composite	quarterly [3, 4]
radioactivity	pCi/L	grab	quarterly [3]

Parameter	Units	Sample Type [1]	Minimum Sampling Frequency
acrolein	µg/L	grab	semiannually [3]
antimony	µg/L	24 hr composite	semiannually [3]
bis (2-chloroethoxy) methane	µg/L	grab	semiannually [3]
bis (2-chloroisopropyl) ether	µg/L	grab	semiannually [3]
chlorobenzene	µg/L	grab	semiannually [3]
chromium (trivalent)	µg/L	24 hr composite	semiannually [3]
di-n-butyl phthalate	µg/L	grab	semiannually [3]
dichlorobenzenes	µg/L	grab	semiannually [3]
diethyl phthalate	µg/L	grab	semiannually [3]
dimethyl phthalate	µg/L	grab	semiannually [3]
4,6-dinitro-2-methylphenol	µg/L	grab	semiannually [3]
2,4-dinitrophenol	µg/L	grab	semiannually [3]
ethylbenzene	µg/L	grab	semiannually [3]
fluoranthene	µg/L	grab	semiannually [3]
hexachlorocyclopentadiene	µg/L	grab	semiannually [3]
nitrobenzene	µg/L	grab	semiannually [3]
thallium	µg/L	24 hr composite	semiannually [3]
toluene	µg/L	grab	semiannually [3]
1,1,1-trichloroethane	µg/L	grab	semiannually [3]
tributyltin	µg/L	24 hr composite	semiannually [3]
acrylonitrile	µg/L	grab	semiannually [3]
aldrin	µg/L	grab	semiannually [3]
benzene	µg/L	grab	semiannually [3]
benzidine	µg/L	grab	semiannually [3]
beryllium	µg/L	24 hr composite	semiannually [3]
bis (2-chloroethyl) ether	µg/L	grab	semiannually [3]
bis (2-ethylhexyl) phthalate	µg/L	grab	semiannually [3]
carbon tetrachloride	µg/L	grab	semiannually [3]
chlordane	µg/L	grab	semiannually [3]
chlorodibromomethane	µg/L	grab	semiannually [3]
chloroform	µg/L	grab	semiannually [3]
DDT	µg/L	grab	semiannually [3]
1,4-dichlorobenzene	µg/L	grab	semiannually [3]
3,3'-dichlorobenzidine	µg/L	grab	semiannually [3]
1,2-dichloroethane	µg/L	grab	semiannually [3]
1,1-dichloroethylene	µg/L	grab	semiannually [3]
dichlorobromomethane	µg/L	grab	semiannually [3]
dichloromethane	µg/L	grab	semiannually [3]
1,3-dichloropropene	µg/L	grab	semiannually [3]
dieldrin	µg/L	grab	semiannually [3]
2,4-dinitrotoluene	µg/L	grab	semiannually [3]
1,2-diphenylhydrazine	µg/L	grab	semiannually [3]
halomethanes	µg/L	grab	semiannually [3]

Parameter	Units	Sample Type [1]	Minimum Sampling Frequency
heptachlor	µg/L	grab	semiannually [3]
heptachlor epoxide	µg/L	grab	semiannually [3]
hexachlorobenzene	µg/L	grab	semiannually [3]
hexachlorobutadiene	µg/L	grab	semiannually [3]
hexachloroethane	µg/L	grab	semiannually [3]
isophorone	µg/L	grab	semiannually [3]
N-nitrosodimethylamine	µg/L	grab	semiannually [3]
N-nitrosodi-N-propylamine	µg/L	grab	semiannually [3]
N-nitrosodiphenylamine	µg/L	grab	semiannually [3]
PAHs	µg/L	grab	semiannually [3]
PCBs	µg/L	grab	semiannually [3]
TCDD equivalents	µg/L	grab	semiannually [3, 8]
1,1,2,2-tetrachloroethane	µg/L	grab	semiannually [3]
tetrachloroethylene	µg/L	grab	semiannually [3]
toxaphene	µg/L	grab	semiannually [3]
trichloroethylene	µg/L	grab	semiannually [3]
1,1,2-trichloroethane	µg/L	grab	semiannually [3]
2,4,6-trichlorophenol	µg/L	grab	semiannually [3]
vinyl chloride	µg/L	grab	semiannually [3]

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall conduct acute and chronic toxicity testing on effluent samples collected at Effluent Monitoring Station M-003 in accordance with the following schedule and requirements:

Table 4. Whole Effluent Toxicity Testing

Test	Unit	Sample	Minimum Test Frequency
Acute Toxicity	TUa	24-Hr. Composite	semiannually
Chronic Toxicity	TU_c	24-Hr. Composite	quarterly

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

Critical life stage toxicity tests shall be performed to measure chronic toxicity (TUc). 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* (Chapman, G.A., D.L. Denton, and J.M. Lazorchak, 1995) or *Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project* (SWRCB, 1996)

A screening period for chronic toxicity shall be conducted every other year for three months, using a minimum of three test species with approved test protocols, from the following list (from the Ocean Plan, 2001). Other tests may be used, if they have been approved for such testing by the State Water Board. The test species shall include a fish, an invertebrate, and an aquatic plant. After the screening period, the most sensitive test species shall be used for the monthly testing. Repeat screening periods may be terminated after the first month if the most sensitive species is the same as found previously to be most sensitive. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with test results.

Table 5. Approved Tests for Chronic Toxicity

Species	Test	Tier [1]	Reference [2]
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	a, c
red abalone, *Haliotis rufescens*	abnormal shell development	1	a, c
oyster, *Crassostrea gigas*; mussels, *Mytilus spp.*	abnormal shell development; percent survival	1	a, c
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	a, c
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	a, c
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. If first tier organisms are not available, the Discharger can use a second tier test method following approval by the Regional Water Board.

[2] Protocol References:

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

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

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

d. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler 9eds). 1998. Short-term Methods for Estimating the

Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

VI. RECEIVING WATER MONITORING REQUIREMENTS

The receiving water monitoring program required herein is also required by Regional Water Board Order No. R9-2005-0136, which establishes limitations and conditions for discharges from the City of Oceanside's Facilities. The Discharger may conduct the required receiving water monitoring together with the Fallbrook Public Utility Distric, US Marine Corps Base Camp Pendleton, and Biogen IDEC Pharmaceuticals Corporation, as these entities discharge through the Oceanside Ocean Outfall (OOO).

Receiving water and sediment monitoring in the vicinity of the OOO shall be conducted as specified below. Station location, sampling, sample preservation and analyses, when not specified, shall be by methods approved by the Executive Officer. The monitoring program may be modified by the Executive Officer at any time.

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

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

A. Surf Zone Water Quality Monitoring

All surf zone stations shall be monitored as follows:

1. Grab samples shall be collected and analyzed for total and fecal coliform and enteroccoccus bacteria at a minimum frequency of one time per week. [5]

2. Samples shall be collected in accordance with "Standard Operating Procedures for the Collection of Water Samples for Bacterial Analysis from Ocean and Bay Receiving Waters" developed by the County of San Diego Department of Environmental Health and incorporated herein by reference.

3. At the same time samples are collected from surf zone stations, the following information shall be recorded: observation of wind direction and speed; weather (cloudy, sunny, or rainy); current direction; tidal conditions; and observations of water color, discoloration, oil and grease; turbidity, odor, and materials of sewage origin in the water or on the beach; water temperature (° F); and status of the mouth of the Buena Vista Lagoon (open, closed, flow, etc.)

4. If a surf zone water quality monitoring station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 mL for a thirty day period or 12 organisms per 100 mL for a six month period, the Discharger shall conduct a survey to determine if discharges from the Discharger's Facilities are the source of the contamination. If the survey indicates that elevated coliform and/or enterococcus levels are attributable to discharges from the Discharger's Facilities, the Discharger shall take action to control the source.

B. Near Shore Water Quality Monitoring

1. Reduced Monitoring

If the Executive Officer determines that the effluent at all times complies with Section IV.B Effluent Limitations and Performance Goals of Order No. R9-2005-0136, only reduced near shore water quality monitoring specified below is required.

Table 6a. Near Shore Water Quality Reduced Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	-	-	monthly
Total and Fecal Coliform	number / 100 ml	grab [9]	monthly
Enteroccoccus [5]	number / 100 ml	grab [9]	monthly

2. Intensive Monitoring

The intensive near shore water quality monitoring specified below is required during the 12-month period beginning July 1, 2008 through June 30, 2009, and must be submitted by August 31, 2009. This monitoring data will assist Regional board staff in the evaluation of the Report of Waste Discharge. The intensive near shore water quality monitoring specified below is also required if the Executive Officer determines that the effluent does not at all times comply with Section IV.B Effluent Limitations and Performance Goals of Order No. R9-2005-0136.

Table 6b. Near Shore Water Quality Intensive Monitoring Requirements

Determination	**Units**	**Type of Sample**	**Minimum Frequency**
Visual Observations	-	-	monthly
Total and Fecal Coliform	number / 100 ml	grab [11]	monthly
Enteroccoccus [5]	number / 100 ml	grab [11]	monthly

C. Off Shore Water Quality Monitoring

1. Reduced Monitoring

If the Executive Officer determines that the effluent at all times complies with Section IV.B Effluent Limitations and Performance Goals of Order No. R9-2005-0136, only reduced off shore water quality monitoring specified below is required.

Table 7a. Off Shore Water Quality Reduced Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	-	-	monthly
Total and Fecal Coliform	number / 100 ml	grab 11	monthly
Enteroccoccus 5	number / 100 ml	grab 11	monthly

2. Intensive Monitoring

The intensive off shore water quality monitoring specified below is required during the 12-month period beginning July 1, 2008 through June 30, 2009, and must be submitted by August 31, 2009. This monitoring data will assist Regional board staff in the evaluation of the Report of Waste Discharge. The intensive off shore water quality monitoring specified below is also required if the Executive Officer determines that the effluent does not at all times comply with Section IV.B Effluent Limitations and Performance Goals of Order No. R9-2005-0136.

Table 7b. Off Shore Water Quality Intensive Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Visual Observations	-	-	monthly
Total and Fecal Coliform	number / 100 ml	grab [11]	monthly
Enteroccoccus [5]	number / 100 ml	grab [11]	monthly
Conductivity, Temperature and Depth (CTD)	Practical salinity units, ° C, feet	instrument (1- meter intervals, surface to bottom)	monthly
Dissolved Oxygen	mg/L	grab [12]	monthly
Light Transmittance	percent	instrument [12]	monthly
pH	pH units	grab [9]	monthly

D. Benthic Monitoring

The intensive monitoring specified below is required during the 12-month period beginning July 1, 2008 through June 30, 2009, and must be submitted by August 31, 2009. This monitoring data will assist Regional board staff in the evaluation of the Report of Waste Discharge. The sediment monitoring specified below is also required if the Executive Officer determines that the effluent does not at all times comply with Section IV.B Effluent Limitations and Performance

Goals of Order No. R9-2005-0136. Benthic monitoring shall be conducted at all off shore monitoring stations.

1. Sediment Characteristics. Analyses shall be performed on the upper two inches of core.

Table 8. Sediment Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Sulfides	mg/kg	core	Semiannually
Total Chlorinated Hydrocarbons	mg/kg	core	Semiannually
BOD_5	mg/kg	core	Semiannually
COD	mg/kg	core	Semiannually
Particle Size Distribution	mg/kg	core	Semiannually
Arsenic	mg/kg	core	Annually
Cadmium	mg/kg	core	Annually
Total Chromium	mg/kg	core	Annually
Copper	mg/kg	core	Annually
Lead	mg/kg	core	Annually
Mercury	mg/kg	core	Annually
Nickel	mg/kg	core	Annually
Silver	mg/kg	core	Annually
Zinc	mg/kg	core	Annually
Cyanide	mg/kg	core	Annually
Phenolic Compounds	mg/kg	core	Annually
Radioactivity	pCi/kg	core	Annually

2. Infauna. Samples shall be collected with a Paterson, Smith-McIntyre, or orange-peel type dredge, having an open sampling area of not less than 124 square inches and a sediment capacity of not less than 210 cubic inches. The sediment shall be sifted through a one-millimeter mesh screen and all organisms shall be identified to as low a taxon as possible.

Table 9. Infauna Monitoring Requirements

Determination	Units	Minimum Frequency
Benthic Biota	Identification and enumeration	3 grabs, semiannually

E. Additional Biological Monitoring

Demersal Fish and Macroinvertebrates

The monitoring specified below is required during the 12-month period beginning July 1, 2008 through June 30, 2009. The monitoring data will assist Regional Water Board staff in the

evaluation of the Report of Waste Discharge, which is required to be submitted by the Discharger within 180 days prior to the Order's expiration date of June 8, 2010.

Table 10. Demersal Fish and Macroinvertebrates Monitoring Requirements

Determination [13]	Units	Minimum Frequency
Biological Transects	Identification and enumeration	Year 4

In rocky or cobble areas, a 30-meter band transect, one meter wide, shall be established on the ocean bottom. Operations at each underwater station shall include: (1) recording of water temperature (may be measured from a boat) and estimated visibility and pelagic macrobiota at each 10-foot depth increment throughout the water column and at the bottom; (2) recording of general bottom description; (3) enumeration by estimate of the larger plants and animals in the band transect area; (4) development of a representative photographic record of the sample area; and (5) within each band, three one-quarter meter square areas shall be randomly selected, and all macroscopic plant and animal life shall be identified within each square to as low a taxon as possible, and measured.

For each epifauna and infauna, size frequency and distribution shall be shown for at least the three numerically largest populations identified to the lowest possible taxon and appropriate graphs showing the relationship between species frequency and population shall be plotted from each sample.

F. Solids Monitoring

The Discharger shall report, annually, the volume of screenings, sludges, grit, and other solids generated and/or removed during wastewater treatment and the locations where these waste materials are placed for disposal. Copies of all annual reports required by 40 CFR 503 shall be submitted to the Regional Water Board at the same time they are submitted to the USEPA.

REGIONAL MONITORING

G. Kelp Bed Monitoring

The Discharger shall participate with other ocean Dischargers in the San Diego Region in an annual regional kelp bed photographic survey. Kelp beds shall be monitored annually by means of vertical aerial infrared photography to determine the maximum aerial extent of the region's coastal kelp beds within the calendar year. Surveys shall be conducted as close as possible to the time when kelp bed canopies cover the greatest area. The entire San Diego Region coastline, from the international boundary to the San Diego Region / Santa Ana Region boundary, shall be photographed on the same day.

The images produced by the surveys shall be presented in the form of a 1:24,000 scale photo-mosaic of the entire San Diego Region coastline. Onshore reference points, locations of all

ocean outfalls and diffusers, and the 30-foot (MLLW) and 60 foot (MLLW) depth contours shall be shown

The areal extent of the various kelp beds photographed in each survey shall be compared to that noted in surveys of previous years. Any significant losses, which persist for more than one year, shall be investigated by divers to determine the probable reason for the loss.

H. Intensive Monitoring

The Discharger shall perform the intensive monitoring as described by this MRP for year 4 of the Order and participate in the Southern California Coastal Water Research Project (SCCWRP) Bight Study in year 5 of this Order.

The Discharger shall in year 5 of this Order participate and coordinate with state and local agencies and other Dischargers in the San Diego Region in development and implementation of a regional monitoring program (Bight Study) for the Pacific Ocean as directed by this Regional Water Board. The intent of the Bight Study is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the region.

VII. 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 arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.

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

4. The Discharger shall report all instances of noncompliance not reported under (Attachment D) D.III, D.V, and D.VI of Order No. R9-2005-0136 at the time monitoring reports are submitted.

5. Each year the Discharger shall submit an annual report to the Regional Water Board and USEPA Region 9 that contains tabular and graphical summaries of the monitoring data obtained during the previous year. The Discharger shall discuss the compliance record and corrective actions taken, or which may be taken, or which may be needed to bring the

discharge into full compliance with the requirements of Order No. R9-2005-0136 and this MRP.

6. Laboratory method detection limits (MDLs) and minimum Levels (MLs) shall be identified for each constituent in the matrix being analyzed with all reported analytical data. Acceptance of data shall be based on demonstrated laboratory performance.

7. The Discharger shall attach a cover letter to the Discharge Monitoring Report. The information contained in the cover letter shall clearly identify violations of the WDRs, discuss corrective actions taken or planned and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation.

B. Self Monitoring Reports (SMRs)

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

2. The Discharger shall submit monthly, quarterly, semiannual, and annual Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 1st day of the second month following the end of each calendar month; Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter; Semi-annual reports shall be due on August 1 and March 1 following each semi-annual period; Annual reports shall be due on March 1 following each calendar year.

3. Monitoring reports shall be submitted at intervals and in a manner specified in Order No. R9-2005-0136 and in this MRP. Unless otherwise specified, monitoring reports shall be submitted to the Regional Water Board and to the USEPA Region 9 according to the following schedule:

Table 11. Reporting Schedule

Monitoring Frequency	Reporting Period	Report Due
Continuous[14], Daily, Weekly, or Monthly	All	By the first day of the second month after the month of sampling
Quarterly	Jan – March April – June July – September Oct - Dec	May 1 August 1 Nov 1 February 1
Semiannually	Jan – June July - Dec	August 1 March 1
Annually	Jan – Dec	March 1

4. Minimum Levels

For each numeric effluent limitation identified in Table B of the California Ocean Plan (2001), the Discharger shall select one or more Minimum Levels (ML) and their associated analytical methods from Appendix II of the 2001 Ocean Plan. For constituents listed in Appendix II, the Discharger shall submit an appropriate ML (and its associated analytical method) for determining compliance with the effluent limitation for that constituent. All MLs must be approved by the Regional Water Board and/or the State Water Board. The "reported" ML is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from Appendix II. ML's chosen by the Discharger must be approved by the Executive Officer.

a. Selection of Minimum Levels from Appendix II

The Discharger must select from all MLs from Appendix II that are below the effluent limitation. If the effluent limitation is lower than all the MLs in Appendix II, then the Discharger must select the lowest ML.

b. Use of Minimum Levels

1) MLs, as defined in Appendix II of the Ocean Plan (2001), represent the lowest quantifiable concentration in a sample based on the proper application of method-specific analytical procedures and the absence of matrix interferences. MLs also represent the lowest standard concentration in the calibration curve for a specific analytical technique after the application of appropriate method-specific factors.

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

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

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

c. Reporting

For those constituents identified in Table B of the Ocean Plan (2001), the Discharger shall report with each sample result the applicable ML, the analytical method used, and the current Method Detection Limit (MDL). For reporting and compliance determinations for toxic pollutants (those identified in Table B of the Ocean Plan, 2001) the Discharger shall use analytical methods identified in Appendix II of the Ocean Plan or as approved by the Regional Water Board or the State Water Board.

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

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

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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

With a copy sent to:
Regional Administrator
U.S. Environmental Protection Agency
Region 9, Attn: 65/MR, W-3
75 Hawthorne Street
San Francisco, CA 94105

C. Discharge Monitoring Reports (DMRs)

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

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

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

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

ENDNOTES

1. For samples, which are to be physically composited prior to analyses, or for the results of analyses that are to be arithmetically composited, the basis for compositing shall be the rate of discharge to the ocean, not the rate of inflow to the plant.

2. Five days per week except seven days per week for at least one week during July or August of each year.

3. The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the effluent limit specified in this Order for this constituent. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all effluent limits specified in this Order for this constituent.

4. The minimum frequency of monitoring for this constituent is automatically reduced to annually if the results of twelve consecutive analyses, representing each month of the year, or the results of twenty four consecutive analyses, representing each quarter of the year, are below the Ocean Plan 6-month median water quality objective for this constituent, or below the Minimum Level for this constituent in the matrix being analyzed, whichever is higher.

5. As required by implementation procedures at section III. D of the Ocean Plan (2001), measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliform bacteria is required. When a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 mL for a 30-day period or 12 organisms per 100 mL for a 6-month period, the Regional Water Board must require that a survey be conducted to determine if the Discharger's Facilities are the source of the contamination. The Discharger shall conduct such a sanitary survey, if so directed by the Regional Water Board.

6. The discharger may, at its option, monitor for total chromium. If the measured total chromium concentration exceeds the hexavalent chromium limitation, it will be assumed that the hexavalent chromium limitation was exceeded unless the results of a hexavalent chromium analysis of a replicate sample indicate otherwise. When analyzing for hexavalent chromium, the appropriate sampling and analytical method must be used (i.e., 24-hour composite, cooled to 4° C and analyzed within 24 hours).

7. Monitoring of total chlorine residual is not required on days when none of the treatment units that are subject to Order No. R9-2005-0136 use chlorine for disinfection. If only one sample is collected for total chlorine residual analysis, on a particular day, that sample must be collected at the time when the concentration of total chlorine residual in the discharge would be expected to be greatest. The times of chlorine discharges on the days that samples are collected, and the time at which samples are collected, shall be reported.

8. USEPA method 8280 may be used to analyze for TCDD equivalents.

9. At the surface.

10. If the Discharger demonstrates to the satisfaction of the Executive Officer, by means of daily analyses, that the concentrations of total and fecal coliform bacteria in the effluent are consistently less than 1,000 per mL, enterococcus monitoring may be suspended. The Discharger shall conduct the monitoring as specified unless the Executive Officer provides written authorization to suspend it. If this monitoring is suspended, the Discharger shall resume it at the request of the Executive Officer.

11. At surface and mid-depth.

12. At surface, mid-depth, and bottom.

13. Sampling techniques will follow those employed by biologist divers of the California State Department of Fish and Game. In sandy areas, a 30-meter band transect, one meter wide, shall be established on the ocean bottom. Operations at each underwater station shall include: (1) recording of water temperature (may be measured from a boat), and estimated visibility and pelagic macrobiota at each 10-foot depth increment throughout the water column and at the bottom; (2) recording of general bottom description; (3) recording of height, period, and crest direction of ripple marks; (4) recording of amount, description, and location of detritus on bottom; (5) creation of a representative photographic record of the area sampled; and (6) within each band, three cores of at least 42.5 cm^2 in area shall be randomly taken to a depth of 15 cm where possible, (the three cores may be taken from a boat) and the material removed sifted through at least a 1 mm mesh screen, and all organisms identified to as low a taxon as possible, enumerated, measured, and reproductive conditions assessed where feasible.

14. Report the total daily effluent flow and the monthly average effluent flow.

Attachment F – Fact Sheet

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List of Tables

ATTACHMENT F – FACT SHEET

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table 1. Facility Information

WDID	**9 000000146**
Discharger	**City of Oceanside**
Name of Facility	**Oceanside Ocean Outfall**
Facility Address	**1330 South Tait Street Oceanside, CA 92054 San Diego County**
Facility Contact, Title and Phone	**Barry E. Martin, Water Utilities Director, (760) 966-4850**
Authorized Persons to Sign and Submit Reports	**Barry E. Martin, Water Utilities Director, (760) 966-4850 Guss Pennell, Environmental Compliance Officer, (760) 435-5804**
Mailing Address	**1330 South Tait Street Oceanside, CA 92054 San Diego County**
Billing Address	**1330 South Tait Street Oceanside, CA 92054 San Diego County**
Type of Facility	**Municipal POTW**
Major or Minor Facility	**Major**
Threat to Water Quality	**1**
Complexity	**A**
Pretreatment Program	**Yes**
Reclamation Requirements	**Producer and Distributor (regulated under separate WDRs)**
Facility Permitted Flow	**22.9 MGD**
Facility Design Flow	**22.9 MGD**
Watershed	**Pacific Ocean**
Receiving Water	**Pacific Ocean**
Receiving Water Type	**Ocean**

A. The City of Oceanside (hereinafter Discharger) is the owner and operator of the Oceanside Ocean Outfall (OOO), the San Luis Rey Wastewater Treatment Plant (SLRWTP), the La Salina Wastewater Treatment Plant (LSWTP), and the City of Oceanside sanitary sewer system; together these facilities comprise a municipal POTW. The Discharger also owns and operates

the Brackish Groundwater Desalination Facility (BGDF). Hereinafter, these facilities are collectively referred to as the Discharger's Facilities.

B. The Discharger discharges effluent consisting of treated wastewater from the SLRWTP and LSWTP and waste brine from the BGDF through the OOO to the Pacific Ocean, a water of the United States, and is currently regulated by Order No. 2000-011, which was adopted on February 10, 2000 and expired on February 10, 2005. The terms of the existing Order automatically continued in effect after the permit expiration date.

C. The Discharger filed a Report of Waste Discharge (RoWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on August 10, 2004. Supplemental Information was received on November 15, 2004. Comments on the application/RoWD were provided to the Discharger on December 16, 2004, and the Discharger submitted a revised complete application/RoWD on February 14, 2005.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The City of Oceanside owns and operates the Oceanside Ocean Outfall (OOO), the San Luis Rey Wastewater Treatment Plant (SLRWTP), the La Salina Wastewater Treatment Plant (LSWTP), and the City of Oceanside sanitary sewer system; together these facilities comprise a municipal POTW. The Discharger also owns and operates the Brackish Groundwater Desalination Facility (BGDF). These facilities are collectively referred to as the Discharger's Facilities in this Order. Order No. R9-2005-0136 establishes discharge prohibitions, limitations, and conditions to regulate discharges of effluent consisting of treated wastewater and waste brine from the Discharger's Facilities to the Pacific Ocean; these discharges were regulated by Order No. 2000-011 (NPDES Permit No. CA0107433) that expired on February 10, 2005 and administratively extended until the adoption of this Order.

The Discharger provides municipal wastewater treatment services to a population of approximately 173,000 within the boundaries of the City of Oceanside. Additionally, the SLRWTP serves a population of approximately 10,000 within the Rainbow Municipal Water District and a population of approximately 1,000 within the City of Vista. The Rainbow Municipal Water District owns 1 MGallons/Day of the City of Oceanside's treatment capacity, and is responsible for its sanitary sewer system up to the point where it connects with the Oceanside sanitary sewer system. To reduce pumping costs, the City of Oceanside has an agreement with the City of Vista for the exchange, treatment, and disposal of equal volumes of nonindustrial wastewater generated in the respective service areas. There are ten significant industrial users within the City of Oceanside and none within the portions of the City of Vista and Rainbow Municipal Water District that are served by the Discharger.

The La Salina Wastewater Treatment Plant (LSWTP) is located at 1330 South Tait Street in the City of Oceanside, adjacent to the mouth of Loma Alta Creek. Wastewater treatment unit

operations and processes at LSWTP consist of preliminary treatment by mechanical bar screening, flow equalization, aerated grit removal, primary sedimentation, and biological treatment using activated sludge followed by secondary clarification. Treated wastewater is discharged to the Pacific Ocean through the Oceanside Ocean Outfall (OOO). Sludge is thickened by dissolved air flotation, anaerobically digested, and mechanically dewatered via belt filter press. Secondary treatment design capacity at LSWTP is currently 5.5 MGD average daily flow which is interpreted by the Regional Water Board as a 30-day average daily flow. The annual average daily flow at LSWTP in 2003 was 3.4 MGD.

The San Luis Rey Wastewater Treatment Plant (SLRWTP) is located at 3950 North River Road in the City of Oceanside, north of the San Luis Rey River. The SLRWTP consists of an East Plant treatment train, with partial upgrades completed in March 2005, and a new West Plant treatment train, construction completed in 2005. The higher treatment capacity of SLRWTP resulting from the addition of the West Plant was approved by the Regional Water Board on June 21, 2005. Wastewater treatment unit operations and processes at SLRWTP consist of preliminary treatment by mechanical bar screening, aerated grit removal, flow equalization, primary sedimentation, and biological treatment using activated sludge followed by secondary clarification. Treated wastewater is discharged through the OOO via a 24-inch land outfall pipeline which connects the SLRWTP with the OOO. The SLRWTP also produces up to 0.7 MGD of disinfected tertiary effluent recycled water, the discharge of which is covered under separate waste discharge requirements, Order No. 93-07, Waste Discharge Requirements for the San Luis Rey Wastewater Treatment Plant, City of Oceanside, San Diego County. Sludge is thickened by gravity belt thickening, anaerobically digested, and dewatered via a centrifuge. Secondary treatment design capacity at SLRWTP is currently 15.4 MGD as a 30-day average daily flow. The annual average daily flow at SLRWTP in 2003 was 9.4 MGD. As part of the RoWD/application, the Discharger submitted a report certifying the capacities of the facilities.

At the time of adoption, screenings from the headworks and solids from grit removal at LSWTP and SLRWTP are collected on-site and trucked to landfills in San Diego County and Yuma County, Arizona. Dewatered treated sludge from LSWTP and SLRWTP is trucked to Yuma County, Arizona where it is land applied by Solid Solutions, Inc. (12340 Seal Beach Blvd., Suite #B-383, Seal Beach, CA 90740).

The Brackish Groundwater Desalinization Facility (BGDF), located northwest of the intersection of Fireside Street and Heritage Street in Oceanside, treats groundwater for municipal potable water supply. The facility extracts groundwater from the Mission Hydrologic Subarea (HSA) (3.11) and provides treatment consisting of pH adjustment, filtration, and demineralization by reverse osmosis. Waste brines generated at BGDF are conveyed via a 10" brine line which connects the BGDF to the OOO. The BGDF has a potable water production design capacity of 6.37 MGD which results in approximately 2 MGD of waste brine per day. The annual average daily flow of waste brine from BGDF in 2003 was 0.7 MGD.

Over the three-year period between 2001 and 2003 the combined flowrate of effluent discharged through the Oceanside Ocean Outfall from SLRWTP, LSWTP and BGDF were reported by the Discharger as follows:

Table 2. Historical Flows

City of Oceanside Discharge to the OOO	2001	2002	2003
Annual Average Daily Flow	12.9	13.3	13.6
Maximum Daily Flow	15.6	16.3	16.5

B. Discharge Points and Receiving Waters

The Discharger owns and operates the Oceanside Ocean Outfall (OOO) which begins at the LSWTP site just north of the mouth of Loma Alta Creek and extends southwesterly approximately 8,850 ft offshore to a depth of approximately 100 ft. The OOO is a 38-inch ID steel pipe with a 1-inch thick cement mortar interior lining and 2.75-inch thick cement mortar outer jacket; the OOO has a 36-inch internal diameter. The OOO terminates with a 230-ft diffuser collinear with the rest of the outfall and extends to a depth of approximately 108 ft. The diffuser has fourteen 5-inch diameter ports and ten 4-inch diameter ports. The terminus of the diffuser is located at Latitude 33° 09' 46" North, Longitude 117° 23' 29" West.

The design capacity of the OOO is 30 MGallons/Day (average daily flow), with a maximum rated peak-day capacity of 45 MGallons/Day. The Discharger is subject to a flow limitation of 22.9 MGD contained in this Order for the discharge of effluent from its Facilities through the OOO to the Pacific Ocean. The Discharger has a contract with the Fallbrook Public Utility District (FPUD) for the discharge of an average annual flowrate of 2.4 MGallons/Day of treated wastewater from the FPUD through the OOO, subject to waste discharge requirements contained in Order No. 2000-012 (NPDES No. CA0108031) which is scheduled for renewal as Order No. R9-2005-0137. The City of Oceanside has a contract with the US Marine Corp Base Camp Pendleton (USMCBCP) for the discharge of up to 3.6 MGD of undisinfected secondary effluent, treated at USMCBCP Wastewater Treatment Plant Nos. 1, 2, 3, and 13, to the Pacific Ocean through the OOO, subject to waste discharge requirements contained in Order No. R9-2003-0155 (NPDES Permit No. CA0109347) which was adopted by the Regional Board on August 13, 2003. The City of Oceanside has a contract with Biogen IDEC Pharmaceuticals Corporation (IDEC) for the discharge of up to 0.155 MGD of brine and other wastes associated with water softening and purification processes and other non-industrial maintenance-type activities to the Pacific Ocean through the OOO, subject to waste discharge requirements contained in Order No. R9-2003-0140 (NPDES Permit No. CA0109193) which was adopted by the Regional Board on August 13, 2003. The Discharger allows the discharge from IDEC to commingle with its discharge prior to Outfall 001 Monitoring Station M-003 which could influence the Discharger's ability to comply with effluent limitations. The combined permitted flowrate from all agencies discharging through the OOO is 29.055 MGD.

The Regional Water Board, with assistance from the State Water Board, determined the minimum initial dilution factor to be 87 for the discharge of up to 29.055 MGD of effluent through the OOO using the US EPA-approved computer modeling package Visual Plumes with the UM3 model. The computer modeling was performed based on characteristics of the OOO,

the effluent, and the receiving water, subject to the input limitations of Visual Plumes. The flowrate use in the computer modeling are summarized in Table # below. Initial dilution factors were determined for each month during the period July 2003 through June 2004 using receiving water characteristics for each month provided by the Discharger; the minimum initial dilution factor was determined using the May 2004 receiving water data. Section IV.C of this Fact Sheet includes additional discussion on initial dilution. Additional details of the initial dilution computer modeling performed are provided in Attachment G and in the Regional Water Board records.

Table No. 3 Discharges through the Oceanside Ocean Outfall

Discharger and Permit	Discharging Facility	Nature of Discharge	Flow (MGD)
City of Oceanside (Order No. 2005-0136)	La Salina WWTP	Secondary treated effluent	5.5
	San Luis Rey WWTP	Secondary treated effluent	15.4
	Brackish Groundwater Desalination Facility	Reverse Osmosis Brine	2.0
FPUD (Tentative Order No. 2005-0137)	FPUD Plant No. 1	Tertiary treated effluent	2.4
USMC Camp Pendleton (Order No. R9-2003-0155)	USMCB CP Plant Nos. 1, 2, 3, and 13	Secondary treated effluent	3.6
Biogen IDEC Pharmaceuticals Corp. (Order No. R9-2003-0140)	New IDEC Manufacturing Operations (NIMO)	Brine waste discharge from water purification and softening processes	0.155
TOTAL			**29.055**

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

Effluent limitations contained in Order No. 2000-011 for discharges from the Discharger's Facility and representative monitoring data obtained at Monitoring Locations M-001 and M-002 for years 1999 through 2003 are as follows:

Table 4. Historic Effluent Limitations and Monitoring Data

Parameter (units)		Effluent Limitation			Monitoring Data (From 1999 To 2003)	
		Monthly Average (30-day)	Weekly Average (7-day)	Maximum at any time	Mean Discharge	Maximum Discharge
$CBOD_5$	mg/L	25	40	45	3.5	23.2
	lbs/day	3400	5400	6100		
TSS	mg/L	30	45	50	6.3	146
	lbs/day	4100	6100	6800		

Parameter (units)		Effluent Limitation			Monitoring Data (From 1999 To 2003)	
		Monthly Average (30-day)	Weekly Average (7-day)	Maximum at any time	Mean Discharge	Maximum Discharge
O&G	mg/L	25	40	75	10	50
	lbs/day	3400	5400	10000		
Settleable Solids	mL/L	1.0	1.5	3.0	0.1	42
Turbidity	NTU	75	100	225	3.9	75
pH		6.0 to 9.0			7.4	8.1
Acute toxicity	TUa	1.5	2.0	2.5	1.1	3.0

Order No. 2000-011 also requires that the 30-day average removals of $CBOD_5$ and TSS through the Discharger's Facility be 85 percent or greater; and it establishes concentration and mass based effluent limitations for 77 toxic pollutants, based on water quality objectives presented in the Ocean Plan (1997).

The effluent exceeded technology-based acute toxicity effluent limits based on acute toxicity test results for samples taken on January 9, 2003 (1.56 TUa); March 21 and 28, 2003 (3.04 and 1.62 TUa); and April 8, 2003 (1.79 TUa). The Discharger submitted a report dated April 2003 for a Toxicity Identification Evaluation (TIE) that was conducted to determine the cause of toxicity observed in the Discharger's effluent. The TIE confirmed that ammonia in the San Luis Rey Wastewater Treatment Plant (SLRWTP) effluent was the primary cause of acute toxicity. The Discharger reported that it was working with an industrial discharger, identified as contributing significant amounts of ammonia to the SLRWTP's influent, to reduce the amount of ammonia in the Discharger's effluent. The Discharger also modified operations at the SLRWTP to lower ammonia concentrations at the outfall. Since April 2003, the effluent has not exceeded the acute toxicity limits of Order No. 2000-011.

Order No. 2000-011 established effluent limitations for toxic pollutants based on water quality objectives of the Ocean Plan (1997) and required monitoring at the following intervals:

Table 5. Toxic Pollutant Monitoring

Toxic Pollutant from Table B of the Ocean Plan (1997)	Monitoring Frequency
Ammonia	Monthly
Chlorine	Daily
Table B pollutants listed with Objectives for the Protection of Marine Aquatic Life from the Ocean Plan (1997) except ammonia, chlorine and chronic toxicity	Quarterly
All other Table B pollutants from the Ocean Plan (1997)	Semi-Annually

Monitoring of toxic pollutants for the period 2000 through 2004 showed the following results:

1. During this 5-year period, effluent limitations for toxic pollutants from Table B of the Ocean Plan were not exceeded with two exceptions. The effluent exceed the concentration and mass emission rate effluent limitations for tributyltin one time each in June 2003.

2. Analytical results reported by the Discharger indicate that the method detection limits used for analyses of several pollutants were, at times, greater than the corresponding effluent limitation and/or the Minimum Level established by the Ocean Plan (2001). Some of these pollutants include mercury, cyanide, endrin, total chromium, copper, lead, acrolein, bis (2-chloroethoxy) methane, chlorobenzene, toxaphene, and thallium.

D. Compliance Summary

As described above, the Discharger has complied with the effluent limitations of Order No. 2000-011 with some exceptions. Non-compliance resulting in monetary penalties are described as follows:

The Discharger was issued an Administrative Assessment of Civil Liability containing a $9,000 Mandatory Minimum Penalty on October 10, 2003 for three violations of Order No 2000-011: one violation of the 30-day oil and grease effluent limitation in August 2000, one violation of the tributyltin 30-day average concentration effluent limitation, and one violation of the tributyltin 30-day mass emission rate effluent limitation. The oil and grease violation was a chronic violation that required mandatory minimum penalty of $3,000 pursuant to Water Code Section 13385(i). The two tributyltin violations were serious violations that required mandatory minimum penalties of $3,000 each pursuant to Water Code Section 13385(h).

The Discharger was issued an Administrative Assessment of Civil Liability containing a $18,000 Mandatory Minimum Penalty on September 2, 2004 for 31 violations of the total suspended solids and settleable solids effluent limitations of Order No. 2000-011during the period October 29, 2003 through December 4, 2003. The Discharger demonstrated that the violations were the result of a single operation upset caused by two mechanical failures in the biological treatment process. California Water Code Section 13385(f)(2) allows the Regional Water Board to assess $3,000 total for all violations that occur within a 30-day period due to a single operational upset. Consequently, the Regional Water Board assessed $3,000 administrative civil liability for 26 violations that occurred within the first 30 days of the violation period and $3,000 each for five violations that occurred after the first 30 days.

E. Planned Changes

3. The Discharger reported that final design will be completed by early 2006 for a 36-inch pipeline that will run parallel to the existing 24-inch land outfall from SLRWTP to the OOO. The proposed pipeline will expand the capacity to discharge from the SLRWTP to the OOO. Completion of the proposed pipeline is expected during the next five years.

4. The Discharger reported in the RoWD that a comprehensive evaluation of the Discharger's wastewater facilities will be initiated as part of the City of Oceanside's Integrated Water Utilities Master Plan (IWUMP). The IWUMP will identify additional upgrades and

necessary changes. As of the adoption of Order No. R9-2005-0136, IWUMP has not been initiated.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from the Discharger's Facilities to the Pacific Ocean at Outfall 001. This Order also contains discharge prohibitions, effluent limitations, discharge specifications, provisions, and other requirements pursuant to the CWC.

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

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

Table 6. Basin Plan Beneficial Uses of the Pacific Ocean

Discharge Point	Receiving Water Name	Beneficial Use
Outfall 001	Pacific Ocean	Industrial Service Supply (IND); Navigation (NAV); Contact Water Recreation (REC-1); Non-Contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Preservation of Biological Habitats of Special Significance (BIOL); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Marine Habitat (MAR); Aquaculture (AQUA); Migration of Aquatic Organisms (MIRG); Spawning, Reproduction, and/or Early Development (SPWN); Shellfish Harvesting (SHELL)

The Basin Plan relies primarily on the requirements of the *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan) for protection of the beneficial uses of the State ocean waters. The Basin Plan, however, may contain additional water quality objectives applicable to the Discharger.

On November 16, 2000 the State Water Board adopted a revised Ocean Plan. The revised Ocean Plan became effective on December 3, 2001. The Ocean Plan contains water quality objectives and beneficial uses for the ocean waters of California. The beneficial uses of State ocean waters to be protected are summarized below:

Table 7. Ocean Plan Beneficial Uses of the Pacific Ocean.

Discharge Point	Receiving Water Name	Beneficial Use
Outfall 001	Pacific Ocean	Industrial Water Supply; Water Contact and Non-Contact Recreation, Including Aesthetic Enjoyment; Navigation; Commercial and Sport Fishing; Mariculture; Preservation and Enhancement of Designated Areas of Special Biological Significance (ASBS); Rare and Endangered Species; Marine Habitat; Fish Migration; Fish Spawning and Shellfish Harvesting

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

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. The Thermal plan contains temperature objectives for coastal waters.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

2. **Antidegradation Policy.** 40 CFR 131.12 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 No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution No. 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

3. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order or have been removed, consistent

with the anti-backsliding requirements of the CWA and federal regulations. Technology-based acute toxicity effluent limitations have been replaced with water quality-based acute toxicity effluent limitations consistent with Sections 402(o) and 303(d)(4) of the CWA and 40 CFR 122.44(l). Effluent limitations for silver have been relaxed based on the modification of water quality objectives for silver in the Ocean Plan and is consistent with Section 303(d)(4) of the CWA. Effluent limitations for several constituents listed under Table B of the Ocean Plan have been removed as a result of new information stemming from a reasonable potential analysis and is consistent with Section 402(o) of the CWA and 40 CFR 122.44(l). Mass emission rate effluent limitations have been increased as a result of greater flowrates stemming from material and substantial alterations or additions to the permitted facilities and is consistent with Section 402(o) of the CWA and 40 CFR 122.44(l).

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

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

6. **No More Stringent Than Federal Law.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal Clean Water Act. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), and hydrogen ion concentration (pH). Restrictions on CBOD5, TSS, and pH are specified in federal regulations as discussed in Finding F, and the Order's technology-based pollutant restrictions are no more stringent than required by the Clean Water Act. Water quality-based effluent limitations have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the Ocean Plan (2001), the Ocean Plan is the applicable standard pursuant to CWA Section 303(c)(1). The scientific procedures for calculating the individual water quality-based effluent limitations are based on the Program of Implementation contained in the California Ocean Plan, which was adopted by the State Water Resources Control Board on November 16, 2000 and approved by USEPA on December 3, 2001. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial

uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically temperature) were adopted in the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972 and amended on September 18, 1975 and are applicable water quality standards pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the Clean Water Act and the applicable water quality standards for purposes of the Clean Water Act.

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

On June 5 and July 25, 2003, the USEPA approved the list of impaired water bodies, prepared by the State Water Board pursuant to Section 303 (d) of the CWA, which are not expected to meet applicable water quality standards after implementation of technology-based effluent limitations for point sources. The 303 (d) list includes the following sections of Pacific Ocean shoreline within the proximity of the OOO as impaired for bacteria indicators:

1. 0.5 miles of Pacific Ocean shoreline at the mouth of the San Luis Rey River
2. 1.1 miles of Pacific Ocean shoreline at the mouth of Loma Alta Creek
3. 1.2 miles of Pacific Ocean shoreline at Buena Vista Creek

Impairment has been detected at the shorelines indicated above; however, the receiving waters in the immediate vicinity of the Facility's discharge point (Outfall 001) are not included on the current 303 (d) list.

E. Other Plans, Polices and Regulations

1. **Secondary Treatment Regulations.** 40 CFR 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by the USEPA, are incorporated into Order No. R9-2005-0136, except where more stringent limitations are required by other applicable plans, policies, or regulations.

2. **Storm Water.** Sewage treatment works with a design flow of 1.0 MGD or greater are required to comply with Water Quality Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activity, Excluding Construction Activities. The Discharger shall file a Notice of Intent within 60 days of adoption of this Order (unless already submitted under the previous Order) and comply with Order No. 97-03-DWQ or the Discharger shall provide certification to the Regional Water Board that all storm water is captured and treated on-site and no storm water is discharged or allowed to run off-site from the facility.
3. **Pretreatment.** Discharges of pollutants that may interfere with operations of a POTW are regulated by USEPA's pretreatment regulations at 40 CFR 403. These regulations require Dischargers to develop and implement pretreatment programs that impose limitations on industrial users of the POTW.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality objective to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, three options exist to protect water quality: 1) 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a); 2) proposed State criteria or a State policy interpreting narrative objective supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

A. Discharge Prohibitions

Prohibition A.1 of Order No. 2000-011 has been modified to clearly define what types of discharges are prohibited by this Order. The modified prohibition is contained in Section III.A of this Order.

B. Technology-Based Effluent Limitations

1. Scope and Authority

USEPA regulations at 40 CFR Part 122.44(a)(1) require permits to include technology-based effluent limitations and standards based on limitations and standards promulgated by the USEPA authorized under Section 301 of the CWA. USEPA promulgated technology-based effluent limitations and standards for POTWs as secondary treatment regulations at 40 CFR Part 133.

2. Applicable Technology-Based Effluent Limitations

Pursuant to Sections 301 (b) (1) (B) and 304 (d) (1) of the CWA, USEPA has established standards of performance for secondary treatment at 40 CFR Part 133. Secondary treatment is defined in terms of three parameters – 5-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH. The following table summarizes the technology-based requirements for secondary treatment, which are applicable to SLRWTP and LSWTP:

Table 8. Summary of Technology-Based Effluent Limitations for Secondary Treatment Facilities Established by USEPA at 40 CFR 133.102

Constituent	Monthly Avg	Weekly Avg	Percent Removal
BOD_5	30 mg/L	45 mg/L	85
$CBOD_5$	25 mg/L	40 mg/L	85

Constituent	Monthly Avg	Weekly Avg	Percent Removal
TSS	30 mg/L	45 mg/L	85
pH	6.0 to 9.0		

The parameters BOD_5, TSS, and pH must be included in NPDES permits for POTWs; however, the parameter $CBOD_5$ (5-day carbonaceous biochemical oxygen demand) may be substituted for BOD_5 at the option of the permitting authority. Following a request by the Discharger by letter dated June 4, 1993, limitations for $CBOD_5$ were incorporated into the Facility's discharge permit in lieu of BOD_5 limitations. Mass emission rate effluent limitations for $CBOD_5$ and TSS were calculated using a the combined design flowrate of 20.9 MGD for SLRWTP and LSWTP and exclusive of the flow contribution from the BGDF which is not a municipal wastewater treatment plant.

Table A of the Ocean Plan (2001) also establishes the following technology-based effluent limitations for publicly owned treatment works:

Table 9. Summary of Technology-Based Effluent Limitations for POTWs Established by the Ocean Plan (2001)

Constituent	Monthly Avg	Weekly Avg	Instantaneous Max	Percent Removal
O&G	25 mg/L	40 mg/L	75 mg/L	
TSS				75 *
Settleable Solids	1.0 mL/L	1.5 mL/L	3.0 mL/L	
Turbidity	75	100	225	
pH	6.0 to 9.0			

* Dischargers shall, as a monthly average, remove 75% of TSS from the influent stream before discharging to the ocean, except that the effluent limitation to be met shall not be lower than 60 mg/L

The TSS percent removal requirement and standards under 40 CFR 133 are more stringent than the Ocean Plan requirement; the more stringent TSS requirements are included in Order No. R9-2005-0136.

All technology-based effluent limitations from Order No. 2000-011 for $CBOD_5$, total suspended solids, settleable solids, oil and grease, turbidity, and pH are retained by Order No. R9-2005-0136 with four exceptions. Order No. R9-2005-0136 does not retain the maximum at anytime concentration and mass emission rate limitations for $CBOD_5$ and total suspended solids contained in Order No. 2000-011 and previous permits for the Discharger which were established using best professional judgment. Recent attempts to derive maximum at anytime limitations based on the secondary treatment standards at 40 CFR 133 using appropriate statistical approaches did not yield similar results as the previous maximum at anytime limitations; therefore, based on this new information, retaining the previous maximum at anytime limitations in Order No. R9-2005-0136 is not supported.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

USEPA regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels, which cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The establishment of WQBELs in this Order, based on water quality objectives contained in the Ocean Plan (2001), is in accordance with the USEPA regulations.

2. Applicable Beneficial Uses and Water Quality Objectives

a. Basin Plan

For all ocean waters of the State, the Basin Plan and its subsequent revisions establish the beneficial uses described previously in this Fact Sheet. The Basin Plan includes the following water quality objectives for dissolved oxygen and pH in ocean waters, which have been incorporated into Order R9-2005-0136:

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

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

b. Ocean Plan

Order No. R9-2005-0136 has been written using the guidance of the Ocean Plan, which was most recently updated in 2001, during the term of Order No. 2000-011.

For all ocean waters of the State, the Ocean Plan (2001) establishes the beneficial uses described previously in this Fact Sheet. The Ocean Plan also includes water quality objectives for the ocean receiving water for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. A water quality objective for acute toxicity was added to the Ocean Plan (2001) while the acute toxicity technology-based effluent limitation contained in the Ocean Plan (1997) was eliminated. Water quality objectives from the Ocean Plan (1997) were included as receiving water limitations in Order No. 2000-011 and water quality objectives from the Ocean Plan (2001) are similarly included as receiving water limitations in Order No. R9-2005-0136.

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

1) 6-month median, daily maximum, and instantaneous maximum objectives for 21 chemicals and chemical characteristics, including total residual chlorine and chronic toxicity, for the protection of marine aquatic life.

2) 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health.

3) 30-day average objectives for 42 carcinogenic chemicals for the protection of human health.

4) Daily maximum objectives for acute and chronic toxicity.

3. Determining the Need for WQBELs

Order No. 2000-011 contained effluent limitations for non-conventional and toxic pollutant parameters in Table B of the Ocean Plan. For Order No. R9-2005-0136, the need for effluent limitations based on water quality objectives in Table B of the Ocean plan was re-evaluated in accordance with 40 CFR 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed an objective, as outlined in the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, 1991) and the California Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited number of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probable initial dilution), can then be compared to the appropriate objective to determine the potential for an exceedance of that objective and the need for an effluent limitation. According to the Ocean Plan amendment, the reasonable potential analysis can yield three endpoints: 1) Endpoint 1, an effluent limitation is required and monitoring is required; 2) Endpoint 2, an effluent limitation is not required and the Regional Water Board may require monitoring; and 3) Endpoint 3, the RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause is included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion.

Using the RPcalc 2.0 software tool developed by the State Water Board for conducting reasonable potential analysis, Regional Water Board has determined that the constituents listed under Table 14, when discharged through Outfall 001, do not have reasonable potential to exceed Ocean Plan objectives (i.e., Endpoint 2), and, therefore, do not require effluent limitations. Since these constituents have been determined to have no reasonable potential to cause, or contribute to, or deviate from water quality objectives, numerical effluent limitations are not prescribed. Instead, a narrative limit statement to comply with all Ocean Plan objectives requirements is provided. This Order includes desirable maximum effluent concentrations for constituents that do not have reasonable potential which were derived

using the effluent limitation determination procedure described above and are referred to in this Order as "performance goals". The Discharger is required to monitor for these constituents as stated in the MRP (Attachment E) to gather data for use in reasonable potential analyses for future permit renewals and/or updates.

Conventional pollutants were not a part of the reasonable potential analysis and are included in this Order as described in Section B.2 above. Effluent limitations from Order No. 2000-011 are not retained for constituents for which RPA results indicated Endpoint 3; performance goals have instead also been assigned for these constituents. The MRP for this Order is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit renewals and/or updates.

Effluent data provided in the Discharger's monitoring reports from January 1999 to December 2003 or December 2004 were used in the analyses. A minimum probable initial dilution of 87:1 was considered in this evaluation.

4. WQBEL Calculations

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

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

The effluent limitation for acute toxicity is calculated according to the following equation:

$Ce = Co + (0.1) Dm (Co - Cs)$

where all variables are as indicated above. This equation applies only when $Dm > 24$.

The Dm is based on observed waste flow characteristics, receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure.

Prior to issuance of Order No. 2000-011, the State Water Board had determined the minimum initial dilution factor, Dm, for the OOO to be 82 to 1. This determination was based on 24 diffuser ports being open and a flowrate of 21.3 MGD although, at the time, the total permitted flowrate through the OOO was only 20.9 MGD, (i.e., 18.2 MGD from City of Oceanside Facilities prior to the expansion of the SLRWTP, and 2.7 from FPUD). When USMC Camp Pendleton and Biogen IDEC Pharmaceuticals Corporation applied for NPDES permits to discharge through the OOO in 2003, the dilution factor was recalculated by the State Water Board and was found not significantly different from the previous Dm. As

discussed elsewhere in this Fact Sheet, the initial dilution factor, Dm, was recalculated for this current permit renewal in order to account for the expansion of the City of Oceanside's SLRWTP and the addition of discharges from USMC Camp Pendleton and Biogen IDEC Pharmaceuticals Corporation which all discharge through the OOO. The new recalculated Dm was determined as 87 using the US-EPA approved computer modeling application Visual Plumes with the UM3 model.

Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally. As site-specific water quality data is not available, in accordance with Table B implementing procedures, Cs equals zero for all pollutants, except the following:

Table 10. Pollutants Having Background Concentrations

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

As examples, WQBELS for arsenic, cyanide, and zinc are determined as follows:

Water quality objectives from the Ocean Plan are:

Table 11. Copper, Chronic Toxicity, Chloroform, and Chlorine Ocean Plan Objectives

Pollutant	6-Month Median	Daily Maximum	Instantaneous Maximum	30 Day Avg
Copper	3 µg/L	12 µg/L	30 µg/L	-
Chronic Toxicity	-	1 TUc	-	-
Chloroform	-	-	-	130 µg/L
Total Chlorine Residual	2 µg/L	8 µg/L	60 µg/L	-

Using the equation, Ce = Co + Dm (Co – Cs), effluent limitations are calculated as follows before rounding to two significant digits.

Copper

Ce = 3 + 87 (3 – 2) = 90 µg/L (6-Month Median)
Ce = 12 + 87 (12 – 2) = 882 µg/L (Daily Maximum)
Ce = 30 + 87 (30 – 2) = 2,466 µg/L (Instantaneous Maximum)

Chronic Toxicity

Ce = 1 + 87 (1 - 0) = 88 TUc (Daily Maximum)

Chloroform

Ce = 130 + 87 (130 – 0) = 11,440 µg/L (30-Day Average)

Total Residual Chlorine

Ce = 2 + 87 (2 – 0) = 176 µg/L (6-Month Median)
Ce = 8 + 87 (8 – 0) = 704 µg/L (Daily Maximum)
Ce = 60 + 87 (60 – 0) = 5,280 µg/L (Instantaneous Maximum)

Based on the implementing procedures described above, effluent limitations have been calculated for all Table B pollutants from the Ocean Plan and incorporated into Order R9-2005-0136.

Because of the Reasonable Potential Analysis (RPA), many WQBELs established by Order No. 2000-011 are not retained in Order R9-2005-0136. The WQBELs that are retained have been changed to reflect the revised dilution factor. Differences between the WQBELs as they are required by the current Ocean Plan and how they are expressed in Order No. 2000-011 and/or Order No. R9-2005-0136 are described below:

a. The Ocean Plan (1997) did not include water quality objectives for four toxic pollutants, which are included in the Ocean Plan (2001) – chlorodibromomethane, dichlorobromomethane, N-nitrosodi-N-propylamine, and heptachlor epoxide; and therefore, effluent limitations for these pollutants were not established by Order No. 2000-011. Based on methods of the Ocean Plan (2001) and a design discharger flowrate of 22.9 MGD, the following performance goals are included in Order No. R9-2005-0136.

Table 12. New Toxic Pollutants and Corresponding Limitations

Pollutant	Units	Monthly Average
Chlorodibromomethane	µg/L	7.6 E+02
	lbs/day	1.4 E+02
Dichlorobromomethane	µg/L	5.5 E+02
	lbs/day	1.0 E+02
N-nitrosodi-N-propylamine	µg/L	3.3 E+02
	lbs/day	6.4 E+00
Heptachlor epoxide	µg/L	1.8 E-03
	lbs/day	3.4 E-04

b. For eight toxic pollutants, water quality objectives are more stringent in the Ocean Plan (2001) than in the Ocean Plan (1997). The following table contains effluent limitations for seven of these pollutants and performance goals for isophorone, which are based on

methods and water quality objectives of the Ocean Plan (2001) and a design discharge flowrate of 22.9 MGD. These effluent limitations and performance goals are included in Order No. R9-2005-0136.

Table 13. Toxic Pollutant Effluent Limitations or Performance Goals Based on the 2001 Ocean Plan

Pollutant	Units	Effluent Limitation Monthly Average	Performance Goal Monthly Average
1,1-dichloroethylene	µg/L	7.9 E+01	
	lbs/day	1.5 E+01	
Isophorone	µg/L		6.4 E+04
	lbs/day		1.2 E+04
Tetrachloroethylene	µg/L	1.8 E+02	
	lbs/day	3.4 E+01	
Thallium	µg/L	1.8 E+02	
	lbs/day	3.4 E+01	
1,1,2,2-tetrachloroethane	µg/L	2.0 E+02	
	lbs/day	3.9 E+01	
1,1,2-trichloroethane	µg/L	8.3 E+02	
	lbs/day	1.6 E+02	
1,2-dichloroethane	µg/L	2.5 E+03	
	lbs/day	4.7 E+02	
Heptachlor	µg/L	4.4 E-03	
	lbs/day	8.4 E-04	

5. Whole Effluent Toxicity (WET)

Implementing provisions at Section III. C of the Ocean Plan (2001) require chronic toxicity monitoring for ocean waste discharges with minimum initial dilution factors below 100. Based on methods of the Ocean Plan (2001), a maximum daily effluent limitation of 88 TUc for chronic toxicity is required.

There is no requirement to monitor for acute toxicity for discharges with minimum initial dilution factors below 100; however, a requirement to monitor for acute toxicity semiannually is included to ensure that recent actions taken by the Discharger to control acute toxicity remain effective and to provide appropriate data for future RPA. Based on a reasonable potential analysis result of Endpoint 2 using acute toxicity data from June 2003 through May 2005 and the Discharger's compliance history, a water quality-based acute toxicity limitation of 2.91 TUa is included in Order No. R9-2005-0136 which replaces the technology-based acute toxicity effluent limitation in Order No. 2000-011.

Toxicity Reduction Evaluation (TRE) is a site-specific study conducted in a stepwise process designed to identify the causative agent(s) of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

D. Final Effluent Limitations

The following tables lists the effluent limitations established by Order No. R9-2005-0136. Where Order No. R9-2005-0136 establishes mass emission limitations, these limitations have been derived based on a flow of 22.9 MGD with the exception of limitatios for $CBOD_5$ and TSS, which is the combined design capacity of the Discharger's Facilities, and a minimum probable initial dilution factor of 87:1.

Table 14a. Effluent Limitations based on Secondary Treatment

Constituent	Units	Effluent Limitations					
		Max Daily	Average Monthly	Average Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
CBOD 5-day 20°C	mg/l		25	40			
	lbs/day		4.4 E+3	7.0 E+3			
	%	The average monthly percent removal shall not be less than 85 percent.					
Total Suspended Solids	mg/l		30	45			
	lbs/day		5.2 E+3	7.8 E+3			
	%	The average monthly percent removal shall not be less than 85 percent.					
pH	Standard units				6.0	9.0	

Table 14b. Effluent Limitations based on California Ocean Plan 2001

Constituent	Units	Effluent Limitations					
		Max Daily	Average Monthly	Average Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
Oil and Grease	mg/l		25	40		75	
	lbs/day		4.4 E+3	7.0 E+3		1.4 E+4	
Settleable Solids	ml/l		1.0	1.5		3.0	
Turbidity	NTU		75	100		225	
Total Chlorine Residual [3]	ug/l	7.0 E+02				5.3 E+03	1.8 E+02
	lbs/day	1.3 E+02				1.0 E+03	3.4 E+01
Ammonia (expressed as nitrogen)	ug/l	2.1 E+05				5.3 E+05	5.3 E+04
	lbs/day	4.0 E+04				1.0 E+05	1.0 E+04
Chronic Toxicity [4]	TUc	8.8 E+01					
Phenolic Compounds (non-chlorinated)	ug/l	1.1 E+04				2.6 E+04	2.6 E+03
	lbs/day	2.0 E+03				5.0 E+03	5.0 E+02
Chlorinated Phenolics	ug/l	3.5 E+02				8.8 E+02	8.8 E+01
	lbs/day	6.7 E+01				1.7 E+02	1.7 E+01
Endosulfan	ug/l	1.6 E+00				2.4 E+00	7.9 E-01
	lbs/day	3.0 E-01				4.5 E-01	1.5 E-01
HCH [5]	ug/l	7.0 E-01				1.1 E+00	3.5 E-01
	lbs/day	1.3 E-01				2.0 E-01	6.7 E-02
Tributyltin	ug/l		1.2 E-01				
	lbs/day		2.4 E-02				

E. Performance Goals

Constituents that do not have reasonable potential are listed as performance goals in this Order. The following tables lists the performance goals established by Order No. R9-2005-0136. These constituents shall also be monitored at M-003, but the results will be used for informational purposes only, not compliance determination. Mass emissions have been derived based on a flow of 22.9 MGD, which is the combined design capacity of the Discharger's Facilities, and a minimum probable initial dilution factor of 87:1

Table 15. Performance Goals based on California Ocean Plan 2001

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
Acute Toxicity	TUa	2.91E+00					
Arsenic	ug/l	2.6 E+03				6.8 E+03	4.4 E+02
	lbs/day	4.9 E+02				1.3 E+03	8.5 E+01
Cadmium	ug/l	3.5 E+02				8.8 E+02	8.8 E+01
	lbs/day	6.7 E+01				1.7 E+02	1.7 E+01
Chromium VI [1]	ug/l	7.0 E+02				1.8 E+03	1.8 E+02
	lbs/day	1.3 E+02				3.4 E+02	3.4 E+01
Copper	ug/l	8.8 E+02				2.5 E+03	9.0 E+01
	lbs/day	1.7 E+02				4.7 E+02	1.7 E+01
Lead	ug/l	7.0 E+02				1.8 E+03	1.8 E+02
	lbs/day	1.3 E+02				3.4 E+02	3.4 E+01
Mercury	ug/l	1.4 E+01				3.5 E+01	3.5 E+00
	lbs/day	2.7 E+00				6.7 E+00	6.6 E-01
Nickel	ug/l	1.8 E+03				4.4 E+03	4.4 E+02
	lbs/day	3.4 E+02				8.4 E+02	8.4 E+01
Selenium	ug/l	5.3 E+03				1.3 E+04	1.3 E+03
	lbs/day	1.0 E+03				2.5 E+03	2.5 E+02
Silver	ug/l	2.3 E+02				6.0 E+02	4.8 E+01
	lbs/day	4.4 E+01				1.1 E+02	9.1 E+00
Zinc	ug/l	6.3 E+03				1.7 E+04	1.1 E+03
	lbs/day	1.2 E+03				3.2 E+03	2.0 E+02
Cyanide [2]	ug/l	3.5 E+02				8.8 E+02	8.8 E+01
	lbs/day	6.7 E+01				1.7 E+02	1.7 E+01
Endrin	ug/l	3.5 E-01				5.3 E-01	1.8 E-01
	lbs/day	6.7 E-02				1.0 E-01	3.4 E-02
Radioactivity [6]	---	Not to exceed limits specified in Title 17 California Code of Regulations Section 30253, Standards for Protection Against Radiation					
Acrolein	ug/l		1.9 E+04				
	lbs/day		3.7 E+03				
Antimony	ug/l		1.1 E+05				
	lbs/day		2.0 E+04				
Bis(2-chloroethoxy) Methane	ug/l		3.9 E+02				
	lbs/day		7.4 E+01				
Bis(2-chloroisopropyl) ether	ug/l		1.1 E+05				
	lbs/day		2.0 E+04				
Chlorobenzene	ug/l		5.0 E+04				
	lbs/day		9.6 E+03				

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
Chromium (III)	ug/l		1.7 E+07				
	lbs/day		3.2 E+06				
Di-n-butyl Phthalate	ug/l		3.1 E+05				
	lbs/day		5.9 E+04				
Dichlorobenzenes [7]	ug/l		4.5 E+05				
	lbs/day		8.6 E+04				
Diethyl Phthalate	ug/l		2.9 E+06				
	lbs/day		5.5 E+05				
Dimethyl Phthalate	ug/l		7.2 E+07				
	lbs/day		1.4 E+07				
4,6-dinitro-2-methylphenol	ug/l		1.9 E+04				
	lbs/day		3.7 E+03				
2,4-dinitrophenol	ug/l		3.5 E+02				
	lbs/day		6.7 E+01				
Ethylbenzene	ug/l		3.6 E+05				
	lbs/day		6.9 E+04				
Hexachlorocyclo-pentadiene	ug/l		5.1 E+03				
	lbs/day		9.7 E+02				
Nitrobenzene	ug/l		4.3 E+02				
	lbs/day		8.2 E+01				
Thallium	ug/l		1.8 E+02				
	lbs/day		3.4 E+01				
Toluene	ug/l		7.5 E+06				
	lbs/day		1.4 E+06				
1,1,1-trichloroethane	ug/l		4.8 E+07				
	lbs/day		9.1 E+06				
Acrylonitrile	ug/l		8.8 E+00				
	lbs/day		1.7 E+00				
Aldrin	ug/l		1.9 E-03				
	lbs/day		3.7 E-04				
Benzene	ug/l		5.2 E+02				
	lbs/day		9.9 E+01				
Benzidine	ug/l		6.1 E-03				
	lbs/day		1.2 E-03				
Beryllium	ug/l		2.9 E+00				
	lbs/day		5.5 E-01				
Bis(2-chloroethyl) Ether	ug/l		4.0 E+00				
	lbs/day		7.6 E-01				
Bis(2-ethlyhexyl) Phthalate	ug/l		3.1 E+02				
	lbs/day		5.9 E+01				
Carbon Tetrachloride	ug/l		7.9 E+01				
	lbs/day		1.5 E+01				
Chlordane [8]	ug/l		2.0 E-03				
	lbs/day		3.9 E-04				
Chlorodibromomethane	ug/l		7.6 E+02				
	lbs/day		1.4 E+02				
Chloroform	ug/l		1.1 E+04				
	lbs/day		2.2 E+03				
DDT [9]	ug/l		1.5 E-02				
	lbs/day		2.9 E-03				

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
1,4-dichlorobenzene	ug/l		1.6 E+03				
	lbs/day		3.0 E+02				
3,3'-dichlorobenzidine	ug/l		7.1 E-01				
	lbs/day		1.4 E-01				
1,2-dichloroethane	ug/l		2.5 E+03				
	lbs/day		4.7 E+02				
1,1-dichloroethylene	ug/l		7.9 E+01				
	lbs/day		1.5 E+01				
Dichlorobromomethane	ug/l		5.5 E+02				
	lbs/day		1.0 E+02				
Dichloromethane	ug/l		4.0 E+04				
	lbs/day		7.6 E+03				
1,3-dichloropropene	ug/l		7.8 E+02				
	lbs/day		1.5 E+02				
Dieldrin	ug/l		3.5 E-03				
	lbs/day		6.7 E-04				
2,4-dinitrotoluene	ug/l		2.3 E+02				
	lbs/day		4.4 E+01				
1,2-diphenylhydrazine	ug/l		1.4 E+01				
	lbs/day		2.7 E+00				
Halomethanes [10]	ug/l		1.1 E+04				
	lbs/day		2.2 E+03				
Heptachlor	ug/l		4.4 E-03				
	lbs/day		8.4 E-04				
Heptachlor Epoxide	ug/l		1.8 E-03				
	lbs/day		3.4 E-04				
Hexachlorobenzene	ug/l		1.8 E-02				
	lbs/day		3.5 E-03				
Hexachlorobutadiene	ug/l		1.2 E+03				
	lbs/day		2.4 E+02				
Hexachloroethane	ug/l		2.2 E+02				
	lbs/day		4.2 E+01				
Isophorone	ug/l		6.4 E+04				
	lbs/day		1.2 E+04				
N-nitrosodimethylamine	ug/l		6.4 E+02				
	lbs/day		1.2 E+02				
N-nitrosodi-N-propylamine	ug/l		3.3 E+01				
	lbs/day		6.4 E+00				
N-nitrosodiphenylamine	ug/l		2.2 E+02				
	lbs/day		4.2 E+01				
PAHs [11]	ug/l		7.7 E-01				
	lbs/day		1.5 E-01				
PCBs [12]	ug/l		1.7 E-03				
	lbs/day		3.2 E-04				
TCDD equivalents [13]	ug/l		3.4 E-07				
	lbs/day		6.6 E-08				
1,1,2,2-tetrachloroethane	ug/l		2.0 E+02				
	lbs/day		3.9 E+01				
Tetrachloroethylene	ug/l		1.8 E+02				

Constituent	Units	Performance Goals					
		Max Daily	Avg Monthly	Avg Weekly	Instantaneous Min	Instantaneous Max	6 Month Median
	lbs/day		3.4 E+01				
Toxaphene	ug/l		1.8 E-02				
	lbs/day		3.5 E-03				
Trichloroethylene	ug/l		2.4 E+03				
	lbs/day		4.5 E+02				
1,1,2-trichloroethane	ug/l		8.3 E+02				
	lbs/day		1.6 E+02				
2,4,6-trichlorophenol	ug/l		2.6 E+01				
	lbs/day		4.9 E+00				
Vinyl Chloride	ug/l		3.2 E+03				
	lbs/day		6.1 E+02				

Performance goals serve to maintain existing treatment levels and effluent quality and supports State and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected levels of pollutants in the discharge that should not be exceeded in order to maintain the water quality objectives established in the Ocean Plan. Performance goals are not limitations or standards for the regulation of the discharge. Effluent concentrations above the performance goals will not be considered as violations of the permit but serve as red flags that indicate water quality concerns. Repeated red flags may prompt the Regional Board to reopen and amend the permit to replace performance goals for constituents of concern with effluent limitations, or the Regional Board may coordinate such actions with the next permit renewal.

F. Antidegradation

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

1. Technology-based Effluent Limitations
   The technology-based standards for POTW performance are promulgated at 40 CRF 133 expressed as 30-day averages and 7-day averages for BOD, CBOD and TSS. In previous NPDES permits for the City of Oceanside, including Order No. 2000-011, these standards

were incorporated as "Monthly Average (30-day)" and "Weekly Average (7-day)" effluent limitations for CBOD and TSS which were enforced by the Regional Water Board as running averages. To comply with 40 CFR 122.45, which requires that effluent limitations be expressed as average weekly and average monthly limitations for POTWs, the CBOD and TSS standards have been revised in this current permit as Average Monthly Effluent Limitations (AMEL) and Average Weekly Effluent Limitations (AWEL) that are numerically equal to the previous effluent limitations. As explained in the Compliance Determination section of this Order, compliance with the AMEL and AWEL will be determined by considering the average of sampling results within a calendar month or calendar week, respectively, rather than as running averages. As also further explained in the Compliance Determination section of this Order, a violation of the AMEL or the AWEL would result in a violation for each day of the calendar month or calendar week, respectively. Consequently, the AMEL and AWEL are expected to provide a similar level of incentive for POTWs to operate treatment facilities to be in compliance at all times as the previous "Monthly Average (30-day)" and "Weekly Average (7-day)" running average effluent limitations. The conversion of the CBOD and TSS effluent limitations to AMEL and AWEL are not expected to cause a change in the physical nature of the effluent discharged and are not expected to impact beneficial uses nor cause a reduction of the water quality of the receiving water. For these reasons, the Regional Water Board has determined that an antidegradation analysis is not required to consider the possible impacts resulting from the CBOD and TSS AMELs and AWELs.

2. Water Quality-based Effluent Limitations

The water quality-based effluent limitations contained in this Order have been modified from previous NPDES permits for the City of Oceanside, including Order No. 2000-011, due to a recalculation of the ocean outfall initial dilution factor, an increase in permitted flow rates, and removal of effluent limitations after a reasonable potential analysis. In accordance with the State Water Board's Administrative Procedures Update, the Regional Board assessed the potential impact of the modified effluent limitations on existing water quality and the need for an antidegradation analysis as follows:

a. Recalculation of Ocean Outfall Initial Dilution Factor and Flowrate Increase

As discussed elsewhere in this Fact Sheet, the initial dilution factor, Dm, was recalculated for this current permit renewal to account for the expansion of the City of Oceanside's SLRWTP, and the addition of discharges from USMC Camp Pendleton and Biogen IDEC Pharmaceutical, Corp. which all discharge through the Oceanside Ocean Outfall (OOO). The new recalculated Dm of 87, which is based on an OOO total permitted flow rate of 29.055 MGD, is an increase over the previous permit's Dm of 82 which was based on the permitted total flowrate in 2000 through the OOO of 21.3 MGD. (The previous Dm was determined using 21.3 MGD although the total permitted flowrate was previously only 20.9 MGD, i.e., 18.2 MGD from City of Oceanside prior to expansion of the SLRWTP, and 2.7 from FPUD). The new Dm and greater total permitted flowrate results in a relaxation of effluent limitations in this Order compared to the those in Order No. 2000-011 and also reflects an expansion of the zone of initial dilution (ZID), both of which may indicate a lowering of water quality.

With the exception of effluent limitations for silver and acute toxicity, the concentration and mass emission rate (MER) water quality-based effluent limitations in this Order, recalculated using the new Dm and higher permitted flowrate for the Discharger's Facilities, have been relaxed and are approximately 6% and 47% higher, respectively, than the concentration and MER effluent limitations in the Order No. 2000-011. Because the total permitted flowrate through the OOO in 2000 was previously only 20.9 MGD, as provided in the previous NPDES permits for the City of Oceanside and FPUD, the relaxed effluent limitations in this permit combined with the new total permitted flowrate through the OOO of 29.055 MGD, as provided in the new NPDES permits for the City of Oceanside and FPUD and the existing NPDES permits for USMC Camp Pendleton and Biogen IDEC Pharmaceutical Corporation, results in a greater permitted mass emission rate (MER) for a given constituent. The greater MER for a given constituent, except for silver, is expected to result in a lowering of existing water quality for that constituent by an increment not greater than approximately 32% of the six-month median, daily maximum and instantaneous water quality objectives (WQO). See example calculations considering Arsenic below:

- Arsenic Daily Maximum WQO (Ocean Plan 2001, Table B) = 32 ug/L

- Previous mass emission rate (MER) =
  (previous effluent limitation) x (previous permitted total flow rate) =
  (2410 ug/L) x (20.9 MGD) x 0.00834 = 420 lbs/day

- Current MER =
  (current effluent limitation) x (current permitted total flow rate) =
  (2560 ug/L) x (29.055 MGD) x 0.00834 = 620 lbs/day

- MER difference =
  (Current MER) - (Previous MER) =
  620 lbs/day - 420 lbs/day = 200 lbs/day

- Increment Change in Arsenic water quality =
  (MER difference) / [(effluent flowrate) +(diluting ocean water "flowrate")] =
  (200 lbs/day) / [(29.055 MGD + 2,528 MGD)(0.00834)] = 9.4 ug/L

  where Ocean water "flowrate" =
  (Effluent flowrate) x (initial dilution factor) =
  29.055 MGD x 87 = 2,528 MGD

- Increment water quality change as a percentage of the water quality objective =
  9.4 ug/L / 32 ug/L x 100% = 29.4%

The example calculations illustrate that if the actual existing water quality for arsenic in the receiving water is better than the daily maximum WQO of 32 ug/L, then the water quality will be degraded by 9.4 ug/L for arsenic, or 29.4% of the WQO. This lowering of water quality is not expected to be significant and is not expected to cause adverse effects

to the overall receiving water. Furthermore, the example calculations assume that the effluent will contain arsenic at the concentration of the effluent limitation, whereas historical effluent data for the discharge through the OOO indicate that the concentration of constituents listed under Table B of the Ocean Plan in the effluent discharged are considerably lower. For these reasons, the Regional Board has determined that an antidegradation analysis is not required to consider the possible impacts resulting from the recalculation of initial dilution factor and consequent relaxation of effluent limitations.

The recalculation of Dm at the current permitted total flowrate of 29.055 MGD also indicated that the zone of initial dilution (ZID) expands to 78.5 feet from the outfall diffuser which is approximately 20 feet greater to compared to the ZID if the total flowrate was the previous total permitted flowrate of 20.9 MGD. The ZID is recognized as the mixing zone in the receiving water where water quality objectives may be exceeded however adverse effects to the overall receiving water body must be prevented. The computer model results indicate that lowering of water quality may occur in the area up to five feet from the outfall diffuser by an increment not greater than 200% of the WQO for a given constituent and by an increment not greater than 50 % of the WQO in the area five feet to 78.5 feet from the outfall diffuser. In addition to being spatially limited, the incremental lowering of water quality in the ZID is expected to be temporally limited because, as explained previously, the concentrations of a given constituent in the effluent discharged through the OOO have historically been considerably lower than the effluent limitations except for exceptional circumstances of short-term duration. For these reasons, the lowering of water quality within the ZID is not expected to be significant and is not expected to cause adverse effects to the overall receiving water; therefore, the Regional Board has determined that an antidegradation analysis is not required to consider the possible impacts resulting from the recalculation of the initial dilution factor, the increase in permitted flowrates, and the expansion of the ZID.

b. Removal of effluent limitations after a reasonable potential analysis

Effluent limitations were not included in this Order for constituents for which reasonable potential to exceed the water quality objective was not indicated following a reasonable potential analysis although the previous permit included effluent limitations for those constituents. The procedures for conducting the reasonable potential analysis are explained elsewhere in this Fact Sheet. For constituents for which effluent limitations were not included, non-regulatory performance goals were included which will indicate the level of discharge at which possible water quality impacts may be significant. The removal of effluent limitations by itself is not expected to cause a change in the physical nature of the effluent discharged and is not expected to impact beneficial uses nor cause a reduction of the water quality of the receiving water. Coupled with the inclusion of performance goals and retention of the monitoring program for constituents without effluent limitations, the existing water quality is expected to be maintained. For these reasons, the Regional Water Board has determined that an antidegradation analysis is not required to consider the possible impacts resulting from the removal of effluent limitations following a reasonable potential analysis.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations of Order No. R9-2005-0136 are derived from the water quality objectives for ocean waters established by the Basin Plan (1994) and the Ocean Plan (2001).

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this Facility.

A. Influent Monitoring

Influent monitoring in Order No. R9-2005-0136 is unchanged from Order No. 2000-011. These monitoring requirements are summarized in the following table.

Table 16. Influent Monitoring Requirements

Constituent	Units	Sample Type	Sampling Frequency
Flow	MGD	recorder / totalizer	continuous
$CBOD_5$ @ 20° C	mg/L	24 hr composite	weekly
TSS	mg/L	24 hr composite	weekly

Influent monitoring for $CBOD_5$ and TSS allows determination of removal efficiencies, which are limited by Order No. R9-2005-0136.

B. Effluent Monitoring

In an effort to standardize monitoring and reporting requirements and in order to support electronic data submittal of Discharger Self-Monitoring Reports, reporting units, definitions, and deadlines specified in the MRP for Order No. R9-2005-0136 have been written in accordance with the State Water Resource Control Board's Water Quality Permit Standards Team Final Report.

Effluent monitoring requirements of MRP No. R9-2005-0136 (Attachment E) should be consulted for greater detail regarding specific monitoring requirements.

Order No. R9-2005-0136 requires monitoring for acute toxicity and chronic toxicity to be monitored quarterly, otherwise all effluent monitoring requirements from Order No. 2000-011 are retained by MRP No. R9-2005-0136.

C. Whole Effluent Toxicity Testing Requirements

The Discharger shall conduct acute and chronic toxicity testing on 24-hour composite effluent samples collected at Effluent Monitoring Station M-003, as defined in Section II of the MRP (Attachment E). Acute and chronic toxicity are required to be monitored semiannually and quarterly, respectively.

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

Critical life stage toxicity tests shall be performed to measure chronic toxicity (TUc). 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* (Chapman, G.A., D.L. Denton, and J.M. Lazorchak, 1995) or *Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project* (SWRCB, 1996)

A screening period for chronic toxicity shall be conducted every other year for three months, using a minimum of three test species with approved test protocols, from the following list (from the Ocean Plan, 2001). Other tests may be used, if they have been approved for such testing by the State Water Board. The test species shall include a fish, an invertebrate, and an aquatic plant. After the screening period, the most sensitive test species shall be used for the monthly testing. Repeat screening periods may be terminated after the first month if the most sensitive species is the same as found previously to be most sensitive. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with test results.

D. Receiving Water Monitoring

1. Surf Zone Water Quality Monitoring

   To assess bacteriological conditions in areas used for body contact activities and to assess aesthetic conditions for general recreational uses, Monitoring and Reporting Program (MRP) No. R9-2005-0136 requires that total and fecal coliform and enterococcus bacteria be monitored at a minimum frequency of once per week on an annual basis at five surf zone locations. Recognizing that significant water-contact recreation, such as surfing and scuba diving, occurs year-round in ocean waters that may be impacted by the discharge from the OOO, the Regional Board adopted previously adopted Addendum No. 2 to Order No. 2000-011 which increased the surf zone monitoring frequency to weekly year-round from the previous minimum frequency of once per week from May 1 through October 31 and once every other week from November 1 through April 30 of each year.

   In correspondence dated October 6, 2003, County of San Diego Department of Environmental Health (DEH) recommends using its "Standard Operating Procedures (SOP)

for the Collection of Water Samples for Bacterial Analysis from Ocean and Bay Receiving Waters" as the sampling protocol at surf zone monitoring stations to reflect conditions during all critical environmental periods and be most protective of public health. The SOP specifies the time of day and depth for water sampling to reduce the effects of bacterial die-off in determining the actual bacterial densities that may be encountered by beach users. The SOP would also make sampling procedures consistent at sampling stations along the San Diego County coastline to facilitate data comparison.

For the period of July 2001 through August of 2004, samples collected at five surf zone stations have at times showed elevated bacterial levels that exceeded water quality objectives of the Ocean Plan for total and fecal coliform and exceeded recommended levels for enterococcus.

Order and MRP No. R9-2005-0136 retain the requirements of Order No. 2000-011 for surf zone water quality monitoring and requires a sampling procedure for surf zone stations in accordance with County of San Diego DEH Standard Operating Procedures.

2. Near Shore Water Quality Monitoring

To assess bacteriological conditions in areas used for body contact activities and where shellfish and/or kelp may be harvested, and to assess aesthetic conditions for general boating and recreational uses, MRP No. R9-2005-0136 establishes monitoring at five near shore locations for total and fecal coliform and enterococcus bacteria in surface samples on a year-round, monthly basis. These stations are located at the 30-foot depth contours opposite the surf zone stations. Enterococcus monitoring may be suspended in accordance with Endnote 11 of Appendix E - Monitoring and Reporting Program.

For the sample period of July 2001 through August of 2004, samples collected at near shore station N2 have at times exceeded the recommended 6-month geometric mean level for enterococcus but this may be due to the less sensitive analytical method used by the Discharger at times to measure enterococcus levels. Most other sample results were below the method detection limit for the period.

Order and MRP No. R9-2005-0136 retains the requirements of Order No. 2000-011 for near shore water quality monitoring.

3. Offshore Water Quality Monitoring

To determine compliance with water quality objectives of the Ocean Plan and to determine if discharges cause significant impacts to water quality within the zone of initial dilution, and beyond the zone of initial dilution, MRP No. R9-2005-0136 establishes a schedule of monitoring at seven off shore locations. On a routine basis, MRP No. R9-2005-0136 requires monitoring for total and fecal coliform and enterococcus bacteria in surface and mid-depth samples on a year-round, monthly basis.

For the sample period of July 2001 through August of 2004, no samples collected at any of the seven off shore water quality monitoring stations showed elevated bacteria levels exceeding water quality objective of the Ocean Plan. Most sample results were below the method detection limit for the period of review.

Order and MRP No. R9-2005-0136 retain the requirements of Order No. 2000-011 for offshore water quality monitoring.

E. Other Monitoring Requirements

1. Benthic Monitoring

To assess the status of the benthic community and to evaluate the physical and chemical quality of sediments in the receiving water, Order No. R9-2005-0136 requires the following monitoring during year 4 of the Order.

a. Sediment Characteristics. Analyses shall be performed on the upper two inches of sediment core samples in accordance with the following schedule:

Table 17. Sediment Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Sulfides	mg/kg	core	Year 4
Total Chlorinated Hydrocarbons	mg/kg	core	Year 4
BOD_5	mg/kg	core	Year 4
COD	mg/kg	core	Year 4
Particle Size Distribution	mg/kg	core	Year 4
Arsenic	mg/kg	core	Year 4
Cadmium	mg/kg	core	Year 4
Total Chromium	mg/kg	core	Year 4
Copper	mg/kg	core	Year 4
Lead	mg/kg	core	Year 4
Mercury	mg/kg	core	Year 4
Nickel	mg/kg	core	Year 4
Silver	mg/kg	core	Year 4
Zinc	mg/kg	core	Year 4
Cyanide	mg/kg	core	Year 4
Phenolic Compounds	mg/kg	core	Year 4
Radioactivity	pCi/kg	core	Year 4

a. Infauna. Samples shall be collected with a Paterson, Smith-McIntyre, or orange-peel type dredge, having an open sampling area of not less than 124 square inches and a sediment capacity of not less than 210 cubic inches. The sediment shall be sifted through a one-millimeter mesh screen and all organisms shall be identified to as low a taxon as

possible. Sampling shall consist of 3 grab samples per year taken during years 1 and 3 of the Order.

Table 18. Infauna Monitoring Requirements

Determination	Units	Minimum Frequency
Benthic Biota	Identification and enumeration	3 grabs, Year 4

If the Discharger does not comply with effluent limitations of the Order, the Regional Water Board may require the Discharger to perform the sediment monitoring, described above, on a year-round basis during the term of Order No. R9-2005-0136.

MRP No. R9-2005-0136 only alters the sampling frequency from Order No. 2000-011, otherwise, Order and MRP No. R9-2005-0136 retain the requirements of Order No. 2000-011 for benthic monitoring.

2. Demersal Fish and Macroinvertebrate Monitoring

Order No. R9-2005-0136 requires the Discharger to establish a 30-meter band transect on the ocean bottom, within the receiving waters. During 12-month period for the period July 2008 through June 2009 of Order No. R9-2005-0136, the Discharger must perform a survey of demersal fish and macroinvertebrates within the transect. If the Discharger does not comply with effluent limitations of the Order, the Regional Water Board may also require the Discharger to perform this monitoring, one time each year during the term of Order No. R9-2005-0136.

MRP No. R9-2005-0136 only alters the sampling frequency from Order No. 2000-011, otherwise, Order and MRP No. R9-2005-0136 retain the requirements of Order No. 2000-011 for demersal fish and macroinvertebrate monitoring.

3. Solids Monitoring

The Discharger shall report, annually, the volume of screenings, sludges, grit, and other solids generated and/or removed during wastewater treatment and the locations where these waste materials are placed for disposal.

4. Kelp Bed Monitoring

To assess the extent to which the discharge of wastes may affect the areal extent and health of coastal kelp beds, Order No. R9-2005-0136 requires the Discharger to participate with other ocean Dischargers in the San Diego Region in an annual regional kelp bed photographic survey.

Order and MRP No. R9-2005-0136 retain the requirements of Order No. 2000-011 for kelp bed monitoring.

5. Intensive Monitoring

The Discharger shall perform the intensive monitoring as described by MRP No. R9-2005-0136 for year 4 of the Order and participate in the Southern California Coastal Water Research Project (SCCWRP) Bight Study in year 5 of this Order.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which in accordance with 40 CFR 122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

B. Special Provisions

1. Re-opener Provisions

Order No. R9-2005-0136 may be re-opened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR Sections 122, 124, and 125.

2. Special Studies and Additional Monitoring Requirements

a. Oceanside Ocean Outfall Capacity

Order No. R9-2005-0136 retains the provision contained in Order No. 2000-011 with minor modifications.

b. Treatment Plant Capacity

The treatment plant capacity study required by Order No. R9-2005-0136 shall serve as an indicator for the Regional Water Board the Facility's increasing hydraulic capacity and growth in the service area.

c. Spill Prevention and Response Plans

Order No. R9-2005-0136 updates the Sewer Overflow Prevention Plan (SOPP) and the Sewer Overflow Response Plan (SORP) contained in Order No. 2000-011. Order No. R9-2005-0136 defines what types of spills are reportable to the Regional Water Board under this Order and what types (such as sanitary sewer overflows) are covered under other existing Orders. The SOPP and the SORP (now called SPP and SRP, respectively) established by Order No. 2000-011 are retained by this Order with minor modifications.

d. Solids Monitoring

Order No. R9-2005-0136 retains the requirements from Order No. 2000-011.

e. Pretreatment Program

Pretreatment requirements established in Order No. 2000-011 are retained by this Order.

f. Single Operational Upset

1) The term "upset" has broad and narrow definitions in *Attachment A – Definitions* because the term is used both to refer to an "upset" in the general sense as any malfunction or operational failure at a treatment facility and also in a more specific sense to refer to an "upset" as defined at 40 CFR 122.41 (n). The determination that the term "upset" has broad and narrow definitions is discussed further below.

2) Regulatory Upset Defense.
Provision 8 of *Attachment D – Standard Provisions* addresses the use of the regulatory upset defense to completely relieve dischargers of liability for violations under specific situations. According to the US EPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989), upset events that fit the definition of "upset" under 40 CFR 122.41 (n) "provide those who violate technology-based effluent limitations . . . with an affirmative defense to allegations of permit noncompliance, if the exceedance results from an exceptional, unintentional incident which is beyond the control of the party who discharges in violation of his permit. A party who successfully claims upset is not legally liable for the exceedances at issue, and has not violated the (Clean Water Act), his NPDES permit, or categorical pretreatment standards." 40 CFR 122.41 (n) states that the regulatory upset defense does not apply to those events caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operation. Provision 8 of Attachment D specifies the conditions that the Discharger must satisfy to claim the regulatory upset defense.

3) Single Operational Upset Defense.
Compliance Determination section VII.Q of Order No. R9-2005-0136 addresses how a Discharger may be able to limit his liability in the event of a single operational upset (SOU) resulting in multiple violations. The US EPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989) provides the necessary regulatory guidance in case of SOU except for purposes of California Water Code Section 13385 (h) and (i). The US EPA SOU guidance memo spells out that multiple violations due to an SOU are treated as one violation for each day only. For example, an SOU that results in multiple violations each day over a period of seven days will result in counting seven violations because the multiple violations on each of the seven days are treated as one violation for each day only. If the State or Regional Water Board is taking enforcement in accordance with CWC 13385 (h) and (i), commonly referred to as Mandatory Minimum Penalties, CWC Section 13385

(f)(2) expands a POTW discharger's ability to limit liability in the case of an SOU by allowing all violations that occur within a 30-day period, instead of each day, due to an SOU to be counted as one violation.

The regulatory upset defense completely relieves a discharger of all liability for violations of technology-based effluent limitations but not in cases where the violations are caused by operator error. In contrast, according to the US EPA SOU guidance memo, the SOU defense serves to only limit a discharger's liability for violations but applies to both technology-based and water quality-based effluent limitations even if caused by unknowing and unintentional operator error. For purposes of Mandatory Minimum Penalties in accordance with CWC Section 13385 (f)(2), the SOU defense does not apply when the upset was caused by operator error.

The effect of CWC Section 13385 (f)(2) on reducing a POTW discharger's liability is illustrated in the following example:

> A POTW discharged 20,000 gallons of treated effluent each day over two days, and the effluent quality exceeded the concentration effluent limitations and the mass emission rate limitations of the POTW's NPDES permit for iron and copper on both days. The POTW reported to the Regional Water Board that despite its best efforts, increased filamentous bacteria growth in the aeration tank due to a single operational upset resulted in a slight reduction in settling in the secondary clarifier which in turn resulted in the increased iron and copper content of the effluent. The Regional Water Board determined that four serious violations occurred on each day for a total of eight serious violations over the two days due to a single operational upset. Taking the SOU defense into account according to US EPA guidance, the Regional Water Board would determine that the four violations on each day collapse to one violation on each day and the POTW can be civilly liable for up to $10,000 per day of violation plus up to $10 per gallon discharged over 1,000 gallons [in accordance with CWC Section 13385 (c)] for a total possible maximum civil liability of $410,000 (i.e., $20,000 for two days of violations and $390,000 for the 39,000 gallons discharged over the initial 1,000 gallons). However, if the Regional Water Board determines mandatory minimum penalties in accordance with CWC Sections 13385 (h) and (i), the Regional Water Board must also consider the SOU defense in accordance with CWC Section 13385 (f)(2). In that case, the eight serious violations collapse to one violation with a Mandatory Minimum Penalty of $3,000.

4) Twenty-four Hour Reporting for Upsets.
Provision E.5(b)(2) of *Attachment D – Standard Provisions* requires that "any upset that exceeds any effluent limitation in this Order" must be reported within 24 hours from the time the discharger becomes aware of the circumstances. This standard provision is authorized at 40 CFR 122.41(l)(6)(ii)(B) and is interpreted to require reporting of any upset, in the broad sense, that results in an exceedance of any effluent limitation. The term "upset" in this provision cannot be limited to the meaning of the term "upset" within 40 CFR 122.41 (n), which only applies to

exceedances of technology-based effluent limitations, and must be interpreted broadly because an "upset", in the broad sense, can result in exceedance of water quality-based effluent limitations. Therefore, this provision also applies to the reporting of single operational upsets.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Diego Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the City of Oceanside. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through publication in the North County Times on July 6, 2005 and by letters mailed to interested parties on May 9, 2005 and June 13, 2005.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on July 27, 2005.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	August 10, 2005
Time:	9:00 am
Location:	Regional Water Quality Control Board, San Diego 9174 Sky Park Court Suite 100 San Diego, CA 92123

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is **http://www.waterboards.ca.gov/sandiego** where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 858-467-2952.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Victor Vasquez at (858) 636-3155.

ATTACHMENT G – DILUTION MODEL INFORMATION

The dilution model used to determine the dilution factor of the Oceanside Ocean Outfall (OOO) was USEPA-approved computer modeling application Visual Plumes (UM3 Model). The USEPA Visual Plumes website is located at <http://www.epa.gov/ceampubl/swater/vplume/index.htm>. The dilution model results are summarized in Table G.1 below.

Table 1: Summary of Visual Plumes dilution model results.

Ambient Profile	Effluent Temperature (°C)	Dilution Factor at last Trap level	Dilution Factor at Surface
Jan-04	16	No result	131.2
Feb-04	16	101.4	117.4
Mar-04	16	87.87	100.6
Apr-04	16	110.3	No result
May-04	21.1	86.89	No result
Jun-04	21.1	101.6	No result
Jul-03	21.1	89.75	103.3
Aug-03	21.1	98.36	113.7
Sep-03	21.1	104	115.4
Oct-03	21.1	87.41	99.58
Nov-03	16	81.52	99.67
Dec-03	16	No result	119.7

Information about the OOO and the outfall diffuser were obtained from the City of Oceanside Report of Waste Discharge Supplemental Information (February 2005). The following information and assumptions were used for the input into the model:

Port diameter – 4.6 inches - Average of 14 five-inch diameter ports and 10 four-inch diameter ports

Port elevation – 4 feet

Vertical angle - 0 degrees

Horizontal angle – 0 degrees – The City of Oceanside indicated that diffuser ports alternated facing 0 degrees and 180 degrees. This model does not have input abilities for a diffuser with ports facing various directions. A single direction for all ports was assigned. This will result in a conservative dilution factor.

Number of ports – 24 ports

Port spacing – 10 feet

Acute mix zone - Not relevant, value does not affect dilution factor as defined by the SWRCB.

Chronic mix zone - Not relevant, value does not affect dilution factor as defined by the SWRCB.

Port depth – 104 feet

Effluent flow – 29.055 mgd – The total of permitted discharge flows through the OOO from the City of Oceanside, Fallbrook Public Utility District, Biogen IDEC Pharmaceuticals Corporation, and US Marine Corps Base Camp Pendleton. The actual operating capacity of the outfall is 30 MGD.

Effluent salinity – 1.43 practical salinity unit (psu) – This value was calculated from total dissolve solids information for discharge from City of Oceanside, Fallbrook Public Utility District, Biogen IDEC Pharmaceuticals Corporation, and US Marine Corps Base Camp Pendleton.

Effluent temp – 21.1 °C average temperature assumed for May through October; 16 °C average temperature assumed for November through April.

Effluent concentration - Not relevant, input does not affect dilution factor.

Ambient data - Monthly ambient data for July 2003 through June 2004 obtained from 2003- 2004 Ocean Outfall Monitoring Program Report Addendum (March 2005) submitted by City of Oceanside. Salinity and temperature data taken at offshore monitoring stations A1-A5 were averaged at each depth and the average values were used in Visual Plumes. For each month and for each Visual Plumes run, initial dilution was interpreted to occur either when the plume first reaches the surface, or at the last trapping level when the plume does not surface. The minimum initial dilution was the lowest dilution factor attained using the May 2004 ambient profile.

Far-field diffusion coefficient - 0.0003 m0.67/s2 - recommended in the Visual Plumes manual as a conservative value.

Special Settings Tab, Farfield Diffusivity Option - 4/3 Power Diffusivity was chosen based on the fact that the discharge is occurring in open water.

Special Settings Tab, Diffuser Port Contraction Coefficient - 0.61 - based on the use of cylindrical ports in the diffuser.

Special Settings Tab, Standard Light Adsorption Coefficient - 0.16 - recommended in the manual as a conservative value.

EXHIBIT H

SOUTH COAST WATER DISTRICT

January 11, 2011

VIA EMAIL (dgibson@waterboards.ca.gov)

Mr. David Gibson
Executive Officer
Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4353

Re: Comments re: Tentative Order No. R9-2010-0120, NPDES CA0107433

Dear Mr. Gibson:

We appreciate the opportunity to comment on Tentative Order No. R9-2010-0120 (NPDES CA0107433) ("Tentative Order"). As a threshold matter, we support the comments provided by the City of Oceanside. As you know, South Coast Water District ("SCWD") is facing the same issues as Oceanside with respect to its groundwater recovery facility ("GRF"), and SCWD along with South Orange County Wastewater Authority ("SOCWA") have requested modification of their NPDES permit to restore the original terms of the permit which would allow the GRF to discharge its brine effluent to the San Juan Creek Ocean Outfall, which the San Diego Regional Water Quality Control Board (the "Regional Board") has denied. The matter is currently pending before the State Water Resources Control Board (the "State Board"). This Tentative Order is demonstrates that the issues raised by SCWD and SOCWA are not unique and they will continue to be raised by other entities as they strive to develop local sources of groundwater.

Like the 2006 NPDES permit issued to SOCWA governing the GRF, the Tentative Order requires Oceanside to comply with Ocean Plan Table A Effluent limitations at the Mission Basin Desalting Facility ("MBDF") without any justification. Oceanside's co-mingled MBDF and wastewater effluent discharge have been subject to the Table A standards since 1990. There have been no changes to the Ocean Plan or any other applicable rules or regulations which indicate that compliance should be determined differently from the past, nor has there been any evidence presented to suggest that the current approach of co-mingling brine effluent is not adequately protective of ocean water quality.

Mailing Address: P.O. Box 30205, Laguna Niguel, CA 92607-0205
Street Address: 31592 West Street, Laguna Beach, CA 92651
Fax: (949) 499-4256 Phone: (949) 499-4555

The Regional Board appears to apply the same rationale to the MBDF as it has to the GRF, i.e., because no effluent standards have been adopted, the default technology-based effluent limit ("TBEL") at the facility must be the Ocean Plan. While the Ocean Plan may be an appropriate default for traditional industrial dischargers that discharge processed wastewater into the ocean, we submit that it is not appropriate here, where the discharge is the separated brine effluent from brackish groundwater. The Regional Board can and should alternatively exercise its Best Professional Judgment to apply a more appropriate water quality standard for facilities like the MBDF and GRF.

Indeed, the Water Desalination Task Force of the Department of Water Resources (which included representatives from the Department of Water Resources, State Board Water Resources Control Board, California Coastal Commission, Department of Health Services, the Resources Agency, the California Environmental Protection Agency, environmental groups including Surfrider and Monterey Bay National Marine Sanctuary, and local and regional water agencies) has specifically recommended, "**[w]here feasible and appropriate, utilize wastewater outfalls for blending/discharging desalination brine/concentrate.**" *See* http://www.water.ca.gov/desalination/pud_pdf/Findings-Recommendations.pdf. We believe that it is both feasible and appropriate to utilize the outfall for the blending and discharging of desalination brine concentrate for the MBDF, as it has been doing for the last 20 years without impact to the outfall.

The Regional Board appears to rely on a letter written by EPA in 2004 which states:

> We understand that the discharger prefers the point of compliance be determined at the outfall, however we support the Regional Board's determination that compliance should be determined at the individual treatment plants. Secondary treatment is a technology-based standard and should be met after the treatment process. According to the Clean Water Act (CWA), all [POTWs] must meet effluent limitations for secondary treatment . . . .

Letter from Douglas E. Eberhardt to David Hanson dated December 8, 2004. EPA was clearly focused on POTWs, and ***not*** facilities like the GRF or MBDF. These facilities should not be treated as POTWs or even traditional industrial dischargers. They do not manufacture products, nor do they add or generate any waste; rather, they simply extract the brine from the groundwater and condition the water for potable use.

In effect, the Tentative Order would require Oceanside to send its brine discharge to a wastewater treatment plant. As SCWD has found, doing so will significantly increase the total dissolved solids ("TDS") concentrations in the recycled water produced at the wastewater plant and render the recycled water unacceptable for beneficial use. However, neither the City of Oceanside nor SCWD has been able to develop any other cost effective alternatives for brine effluent treatment. As such, the Tentative Order may result in a loss of critical groundwater supply for Oceanside. SCWD is certainly facing the same dilemma. If other local suppliers are also unable to dispose of their brine discharge, the collective impact will negatively affect regional water reliability.

We appreciate the opportunity to comment on this important matter. Should you have any questions, please feel free to contact us.

Sincerely,

South Coast Water District

Michael P. Dunbar

Michael P. Dunbar
General Manager

PJC

cc: Tom R. Rosales
Betty Burnett, Esq.
Patricia J. Chen, Esq.

EXHIBIT I

Suggestions to be considered by TRAC: "R List" (Unprioritized)

Suggestions on this list are categorized as making the Basin Plan more "Reasonable" (R). They will be prioritized by the Triennial Review Advisory Committee (TRAC).

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters
R-1	Chollas Creek BUs	Evaluate BUs in Chollas Creek; consider de-designation of WARM and WILD.	Much of the creek is channelized or underground; WARM and WILD do not appear to be supported.	S	Chollas Creek
R-2	Salt Creek BUs	Evaluate BUs in the Salt Creek area; consider de-designation of MUN and AGR from the site of the former Omar Class I hazardous waste storage facility.	TDS levels are high. An adjacent area was excepted from MUN in 1988.	G	Otay Valley (HU 910.20)
R-3	Shallow Urban Groundwater BUs	Evaluate BUs of shallow, brackish, "urban" groundwater; consider de-designation of BUs.	Such waterbodies do not meet the definition of an aquifer.	G	
R-4	San Luis Rey BUs	Evaluate BUs in the San Luis Rey watershed; add BU for ground water recharge (GWR).	There may be plans to enhance and develop groundwater resources for additional municipal supply.	S,G	San Luis Rey watershed
R-5	Tiered Aquatic Life BUs	Establish tiered aquatic life BUs that take into account the condition of a waterbody and specify the highest attainable water quality for the waterbody; develop corresponding WQOs to support the tiered BUs.	Some existing BU designations may no longer appropriate. Tiered BUs establish realistic water quality goals in urban streams.	S	
R-6	REC-1 in Ocean	Evaluate and clarify the area to which REC-1 applies in ocean waters. Limit applicability of REC-1 to waters within 1,000 feet of shore and the 30 foot depth contour, and waters within the La Jolla and Point Loma kelp beds.	It may not be appropriate to apply REC-1 bacterial objectives to all marine waters within three nautical miles and all depths and/or to require municipal dischargers of treated wastewater to meet the REC-1 bacterial objectives.	S	ocean, coastal
R-7	Restricted Access REC-1	Evaluate REC-1 in areas with engineered channels and other areas with restricted public access.	REC-1 should not be identified as a BU in these areas because conditions are unsafe and/or public access is restricted or not allowed.	S	some flood control areas; some drinking water supply reservoirs

Suggestions to be considered by TRAC: "R List"
(Unprioritized)

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters
R-8	Wildlife Impacted REC-1	Establish a sub-category of REC-1 for areas affected by wildlife wastes.	Wildlife wastes make it difficult or impossible for REC-1 fecal indicator bacteria objectives to be met in these areas	S	areas affected by wildlife wastes
R-9	Frequency of Use REC-1	Establish tiers of REC-1 based on defined frequency of use designations.	It may not be appropriate to apply the same bacterial objectives to both frequently- and infrequently-used waterbodies.	S	ocean and fresh waters
R-10	Turbidity WQO	Evaluate the WQO for turbidity, and modify to take into account natural processes and background conditions.	Existing objective often is not met, even in reference streams.	S,G	
R-11	Flouride WQO	Evaluate the flouride WQO, and modify to take into account fluoridation.	Existing objective is based on irrigation limits and is inconsistent with (more stringent than) the human health-based MCL. The addition of flouride to water will make it difficult for wastewater plants to meet the existing WQO.	S,G	drinking water, wastewater
R-12	Seasonal Variation WQOs	Establish WQOs that take into account seasonal flow conditions, setting different objectives for high and low flow conditions (i.e., wet weather and dry weather).	Some WQOs are not met under natural background conditions under some flow conditions (e.g., bacteria, phosphorus, TSS and turbidity).	S	seasonal flows
R-13	Dissolved Oxygen WQO for Enclosed Bays and Estuaries	Evaluate the WQO for dissolved oxygen as it applies to Enclosed Bays and Estuaries. Consider site-specific dissolved oxygen WQOs for various ecoregions (e.g., in San Diego Bay).	It may not be appropriate to apply the WQO for Inland Surface Waters to Enclosed Bays and Estuaries, or the same WQO for all areas of the bay.	S	Santa Margarita Estuary, San Diego Bay, other bays and estuaries
R-14	WQOs for Sweetwater and Loveland Reservoirs	Establish site-specific WQOs for aluminum, dissolved oxygen, and pH that take into account naturally occurring levels.	Existing objectives are too stringent and/or inappropriate.	S	Sweetwater and Loveland Reservoirs

Suggestions to be considered by TRAC: "R List"
(Unprioritized)

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters
R-15	Site Specific Objectives for Metals	Establish site-specific objectives for copper (and other metals such as nickel and zinc) for use instead of those in the California Toxics Rule (CTR).	Nationwide criteria in the California Toxics Rule (CTR) may be too stringent; Biotic Ligand Model (BLM) and Water Effects Ratio (WER) suggest less stringent WQOs are protective.	S	San Diego Bay, marine, fresh
R-16	Nutrient WQOs in Surface Water	Establish WQOs for nitrogen and phosphorus (biostimulatory substances) that take into account natural background levels, using the Numeric Nutrient Endpoint (NNE) framework to inform the process. [The NNE framework is based on the response of a waterbody to nutrient enrichment (e.g., algal blooms, low dissolved oxygen).]	Existing objectives are not realistic. Existing WQOs may not reflect a waterbody's response to nutrient input.	S	streams and lakes, estuaries, Santa Margarita watershed, other
R-17	Nutrient WQOs in Groundwater	Develop site-specific WQOs for nutrients in high-priority groundwater basins, using the Salt and Nutrient Management Plans currently under development by regional stakeholders pursuant to the State Board Recycled Water Policy to inform the process.	Existing objectives are not realistic.	G	groundwater basins that have been slated for development of future municipal water supply
R-18	TDS WQO	Evaluate the TDS WQOs for surface and groundwater, and modify to take into account the TDS levels in background conditions and imported water.	Existing objective is not realistic and not well aligned with background conditions. Imported water frequently exceeds the WQO for TDS prior to entry into reservoirs.	S,G	waters within County Water Authority distribution region

Suggestions to be considered by TRAC: "R List"
(Unprioritized)

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters
R-19	Regionwide TDS and Nutrient Management Plan	Develop a region-wide TDS and Nutrient Management Plan to address impacts from recycled and imported waters on both ground and surface waters. Revise the Basin Plan as necessary to implement the plan.	A comprehensive plan is needed to address both recycled and imported water, and both ground and surface water. Such a plan would go beyond the "Salt/Nutrient Management Plan" for each groundwater basin required by the State Board Recycled Water Policy, and would provide the most cost effective BU protection and attainment.	S,G	
R-20	TDS WQO in the Lower Ysidora HAS	Determine if the area in which the TDS WQO does not apply can be extended to further east of its current boundary at Interstate 5.	Applying the TDS objective to areas influenced by the Pacific Ocean but east of the current boundary prevents the use of reclaimed water.	G	Lower Ysidora HSA near the ocean (Santa Margarita HU)
R-21	Imported Water in Municipal Reservoirs	Establish an implementation provision or variance from certain WQOs for municipal reservoirs that takes into account the quality of imported water.	Imported water does not meet WQOs for several constituents prior to entry into local reservoirs.	S	municipal reservoirs
R-22	Indirect Potable Reuse and Municipal Reservoirs	Establish an implementation provision or variance from certain WQOs for municipal reservoirs to promote potable reuse.	Treated wastewater for indirect potable reuse does not meet WQOs for several constituents.	S	municipal reservoirs
R-23	Indirect Potable Reuse and Groundwater	Establish an implementation policy or variance from certain WQOs to facilitate storage of indirect potable reuse supplies in groundwater basins.	Treated wastewater for potable reuse does not meet WQOs for several constituents.	G	treated wastewater
R-24	Iron and Manganese WOQs in Groundwater	Evaluate WQOs for iron and manganese to determine if they can be modified or removed, and/or establish implementation provisions that promote the use of recycled water within the region (e.g., for irrigation).	Existing WQOs for iron and manganese are too stringent and do not accommodate the expanded use of recycled wastewater.	G	recycled water

Suggestions to be considered by TRAC: "R List"
(Unprioritized)

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters
R-25	All BUs and WQOs in Groundwater	Evaluate all BUs and WQOs for groundwater to determine if any can be modified or removed to facilitate the use of recycled water.	Existing standards do not facilitate the use of recycled water.	G	areas outside the alluvial basins
R-26	All BUs and WQOs	Evaluate all BUs and WQOs using factors in California Water Code section 13241. Update all based on current science and monitoring.	Some factors may not have been considered when establishing BUs and WQOs, especially with respect to regulation of nonpoint sources. BUs based on decades-old assumptions may be over-conservative. Protection of certain BUs under certain conditions (e.g., imported water) is unreasonable and a waste of resources.	S,G	
R-27	Potential BUs	Evaluate current 'Potential' BU designations to determine if they conform to 'Most Probable Future Use' BUs as defined in California Water Code section 13241.	BU designations may not be consistent with current legal standards.	S,G	
R-28	Translators for San Diego Bay	Develop site specific translators for San Diego Bay for copper, nickel and zinc. [Translators are not WQOs; they are used to convert receiving water numeric objectives (e.g., dissolved Cu form) to numeric effluent limits (total Cu form).]	Even when waters in San Diego Bay appear to meet the WQO, the standard nationwide translator provided in the California Toxics Rule (CTR) results in a low effluent limit that is difficult for dischargers to comply with.	S	San Diego Bay
R-29	Waiver for On-site Treatment Systems	Amend Conditional Waiver No.1 (Discharges from On-site Disposal Systems) to include criteria for advanced treatment systems for domestic wastewater.	Covering advanced treatment systems under the waiver allows deferral of regulation of such systems to the Counties and simplifies the application process for property owners proposing such systems.	G	
R-30	Septic Tank Nitrate Exemption	Establish an implementation provision that exempts septic tank owners from WQOs for nitrates in groundwater.	Standard septic tanks cannot meet the nitrate objectives and additional treatment to remove nitrate is costly.	G	
R-31	Prioritization Policy	Establish a policy for the prioritization of surface and groundwaters and water quality problems for planning purposes.	Prioritization will ensure that limited funding is directed to the most critical problems and threats.	S,G	

Suggestions to be considered by TRAC: "R List"
(Unprioritized)

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters
R-32	Constructed Wetlands Policy	Establish a policy for applicability of water quality standards to constructed wetlands.	There is need for clarification regarding the regulation of constructed wetlands.	S	constructed wetlands
R-33	Atmospheric Deposition Policy	Establish a policy that takes into consideration the levels of pollutants in surface waters due to atmospheric deposition, and includes a framework for coordination with agencies responsible for air quality.	There is need for guidance on atmospheric deposition, particularly in context of stormwater permit compliance and TMDLs.	S	

Suggestions to be considered by TRAC: "R List"
(Unprioritized)

#	Name	Suggested Action (factual)	Reason (may be opinion)	Surface / Ground	Specific Waters

Abbreviations

Beneficial Uses:

- MUN: municipal and domestic water supply
- REC1: water contact recreation
- REC2: non-contact water recreation, including aesthetic enjoyment
- COMM: commercial and recreational fishing / shellfishing
- WILD: terrestrial wildlife habitat
- RARE: habitat for rare, threatened & endangered species
- BIOL: Areas of special biological significance
- WARM: warm freshwater habitat
- COLD: cold freshwater habitat
- EST: estuarine habitat
- MAR: marine habitat
- SPWN: spawning habitat
- NAV: navigation
- GWR: ground water recharge

Other:

- BU - Beneficial Use
- WQO - Water Quality Objective
- TSS - Total Suspended Solids
- TDS - Total Dissolved Solids
- N - Nitrogen
- P - Phosphorus
- MCL - Maximum Contaminant Level
- HBCL - Health-Based Cleanup Levels
- CAO - Cleanup and Abatement Order
- ACL - Administrative Civil Liability