

State of California  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
320 West 4th Street, Suite 200, Los Angeles

**FACT SHEET**

**WASTE DISCHARGE REQUIREMENTS  
FOR  
CITY OF OXNARD  
(Oxnard Wastewater Treatment Plant)**

NPDES No. CA0054097  
Public Notice No.: 02-023

**PLANT ADDRESS**

Oxnard Wastewater Treatment Plant  
6001 South Perkins Road  
Oxnard, CA 93033

Contact Person: Mark S. Norris  
Title: Wastewater Superintendent  
Phone No.: 805-488-3517

**MAILING ADDRESS**

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6001 South Perkins Road  
Oxnard, CA 93033

Contact Person: Mark S. Norris  
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Phone No.: 805-488-3517

**I. PUBLIC PARTICIPATION**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced plant. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

**A. Public Comment Period**

Interested persons are invited to submit written comments on the tentative WDRs for the City of Oxnard, Oxnard Wastewater Treatment Plant. Comments should be submitted either in person or by mail to:

EXECUTIVE OFFICER  
California Regional Water Quality Control Board, Los Angeles Region  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013  
ATTN: Don Tsai

To be fully responded to by staff and considered by the Regional Board, written comments should be received by 5:00 p.m. on May 10, 2002.

B. Public Hearing

The Regional Board will consider the tentative WDRs and NPDES permit during a public hearing on the following date, time and place:

Date: July 11, 2002  
Time: 9:00 a.m.  
Location: Council Chambers  
City of Simi Valley  
2929 Tapo Canyon Road  
Simi Valley, California

Interested parties and persons are invited to attend. At the public hearing, the Regional Board will hear testimony, if any, pertinent to the waste discharge that will be regulated and the proposed WDRs and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

C. Information and Copying

Copies of the tentative WDRs and NPDES permit, report of waste discharge, fact sheet, comments received, and other documents relative to this tentative WDRs and permit are available at the Regional Board office. Inspection and/or copying of these documents are by appointment scheduled between 8:00 a.m. and 4:50 p.m., Monday through Friday, excluding holidays. For appointment, please call the Los Angeles Regional Board at (213) 576-6600.

D. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this NPDES permit should contact the Regional Board, reference this facility, and provide a name, address, and phone number.

E. Waste Discharge Requirements Appeals

Pursuant to California Water Code section 13320, any aggrieved party may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the final waste discharge requirements. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812

**II. PURPOSE OF ORDER**

The City of Oxnard (City or Discharger) discharges secondary treated municipal wastewater from the Oxnard Wastewater Treatment Plant (Oxnard WTF) under waste discharge requirements contained in Order No. 94-045 adopted by this Regional Board on

June 13, 1994. This Order serves as the permit under the National Pollutant Discharge Elimination System program (NPDES No. CA0054097). The Discharger's permit was administratively extended beyond the June 13, 1999 expiration date. The City has timely filed a report of waste discharge and has applied for renewal of its WDRs and NPDES permit. The proposed WDRs and NPDES permit will expire on July 11, 2007.

### **III. DESCRIPTION OF FACILITY**

The City owns and operates the Oxnard WTP, a publicly owned treatment work (POTW). The Oxnard WTP is a secondary treatment facility located at 6001 South Perkins Road, Oxnard, California. The plant has a design capacity of 31.7 million gallons per day (mgd), but only discharges an average of 22 mgd (the Year 2001) of secondary treated municipal wastewater to the Pacific Ocean, at Ormond Beach, California. Figure 1 shows the vicinity map for the Oxnard WTP.

The Oxnard WTP serves a population of about 225,000 in the City of Oxnard, the City of Port Hueneme, and the US Naval Base, Ventura County. Flow to the plant consists of domestic, commercial and industrial wastewater. For Fiscal Year 1999, Industrial wastewater represented about 25% of the total flow to the plant.

The United States Environmental Protection Agency (USEPA) and the Regional Board have classified the Oxnard WTF as a major discharger. It has a Threat to Water Quality and Complexity rating of 1-A pursuant to CCR, Title 23, section 2200.

The Oxnard WTP developed and has been implementing an industrial wastewater pretreatment program, which has been approved by United States Environmental Protection Agency (USEPA) and the Regional Board.

The treatment system at the Oxnard WTP consists of bar screening, aerated grit removal, primary clarification, bio-filtration, activated sludge, secondary clarification, flow equalization, chlorine disinfection, and dechlorination. Grit removed from the wastewater is hauled to a landfill. Sludge is anaerobically digested, dewatered and disposed at the City-owned farmland just outside of Wasco in Kern County. Figure 2 is a schematic of the treatment system.

All of the storm water runoff traversing the treatment areas of the Oxnard WTP premises is captured and treated in the plant.

On September 21, 1993, the City approved a master plan for recycling of effluent from the Oxnard WTP. The plan involves addition of tertiary treatment and partial demineralization prior to injection to drinking water aquifers to prevent/minimize saltwater intrusion. However, to date the plan has not yet been implemented.

### **IV. DESCRIPTION QUALITY DESCRIPTION**

The effluent characteristics, shown in the following Table 1, are based on data listed in the Discharger's 2001 annual report submitted to the Regional Board.

Table 1 – Effluent Characteristics for Year 2001

<b>Constituent</b>	<b>Unit</b>	<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>
Flow	mgd	21.9	20.0	24.5
Acute Toxicity	TUc	0.80	0.41	1.10
pH	pH units	7.5	7.3	7.6
Temperature- winter (Nov. – April)	°C	21.5	20.1	23.6
summer(May – Oct.)	°C	25.0	23.6	25.7
BOD <sub>5@20°C</sub>	mg/L	12.8	10	18
Suspended solids	mg/L	7.0	5.5	8.8
Settleable solids	mL/L	<0.1	<0.1	<0.1
Turbidity (24-HR composite)	NTU	3.9	2.7	4.8
Oil and grease	mg/L	5	<5	6
Residual Chlorine (Dechlorinated)	mg/L	<0.001	<0.001	<0.001
Total Coliform	MPN/100mL	10,112	1,287	41,630
Fecal Coliform	MPN/100mL	11,672	74	64,034
Ammonia-N	mg/L	20	14	23
Organic-N	mg/L	3.33	2.15	5.70
Nitrate-N	mg/L	0.59	<0.01	2.35
Nitrite-N	mg/L	0.98	0.11	2.14
Arsenic	ug/L	1.2	<1.0	2.8
Cadmium	ug/L	<4.0	<4.0	4.1
Total Chromium	ug/L	12.8	<10.0	37.9
Copper	ug/L	<10.0	12.8	14.8
Lead	ug/L	<10.0	<10.0	24.5
Mercury	ug/L	<0.5	<0.5	<0.5
Nickel	ug/L	<10	<10	22.0
Silver	ug/L	<4.0	<4.0	5.5
Zinc	ug/L	26.3	10.7	63.8
Cyanide	ug/L	<5.0	<5.0	<5.0
Aldrin	ug/L	<0.001	<0.001	<0.001
HCHs	ug/L	0.01	<0.01	0.03
Chlordane	ug/L	<0.002	<0.001	<0.002
4,4-DDT & Derivatives	ug/L	<0.001	<0.001	<0.001
Dieldrin	ug/L	<0.001	<0.001	<0.001
Endosulfan & Derivatives	ug/L	<0.002	<0.002	<0.005
Endrin & Derivatives	ug/L	<0.002	<0.002	<0.005
Heptachlor & Derivatives	ug/L	<0.001	<0.002	<0.002
Chlorinated-Phenolic Compounds	ug/L	<10.0	<10.0	<10.0
Non-Chlorinated-Phenolic Compounds	ug/L	<2.0	<2.0	<2.0
Polychlorinated biphenyls (PCBs)	ug/L	<0.01	<0.01	<0.01
Toxaphene	ug/L	<0.01	<0.01	<0.01

**V. DISCHARGE OUTFALL AND RECEIVING WATER DESCRIPTION**

The treated wastewater is discharged through an ocean outfall off Ormond (see Figure 3). The description of the outfall (Table 2) is as follows:

Table 2 – The Description of the Outfall

Discharge Serial Number	001
Diameter of Pipe at Discharge Terminus (feet)	4
Outfall Distance Offshore (feet)	5,950 (including a 1,016-foot diffuser section)
Discharge Depth Below Surface Water (feet)	60
Latitude	34° 07' 34" North
Longitude	119° 11' 26" West

The receiving water (Pacific Ocean) off Ormond Beach for the Oxnard WTP discharge is part of the open coastline of the Regional Board-designated Ventura Coastal Watershed Management Area (WMA). In addition to the Oxnard WTP, there are two other major dischargers to the Ventura Coastal WMA – Ormond Beach and Mandalay Generating Stations, now owned by Reliant Energy, Inc. (formerly owned by Southern California Edison).

An area of the ocean located immediately off the coast of Ormond Beach was sampled as part of the 1994 Southern California Bight Pilot Project and the Bight 1998. The 1994 results are summarized in a series of reports published by the Southern California Coastal Water Research Project. In general, the water quality of ocean waters in this area is good. The 1998 results should be available at the end of the year 2002. The ocean water in this area is not listed as impaired under the 1998 Clean Water Act (CWA) Section 303(d) List.

**VI. APPLICABLE LAWS, PLANS, POLICIES, AND REGULATIONS**

- A. **Federal Clean Water Act** - Section 301(a) of the federal Clean Water Act (CWA) requires that point source discharges of pollutants to a water of the United States must be done in conformance with a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality. CWA section 402 authorizes the U. S. Environmental Protection Agency (USEPA) or States with an approved NPDES program to issue NPDES permits. The State of California has an approved NPDES program.
- B. **Basin Plan** - The Regional Board adopted a revised *Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) on June 13, 1994, and amended on January 27, 1997, by Regional Board Resolution No. 97-02. This updated and consolidated plan represents the Board's master quality control planning document and regulations. The State Water Resources Control Board (State Board) and the State of California Office of Administrative Law (OAL) approved the revised Basin Plan on November 17, 1994, and February 23, 1995, respectively. On May 26, 2000, the USEPA approved the

revised Basin Plan except for the implementation plan for potential municipal and domestic supply (MUN) designated water bodies.

The Basin Plan (i) designates beneficial uses for surface and groundwater, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated (existing and potential) beneficial uses and conform to the State's antidegradation policy, and (iii) includes implementation provisions, programs, and policies to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The 1994 Basin Plan was prepared to be consistent with all State and Regional Board plans and policies adopted in 1994 and earlier. This Order implements the plans, policies, and provisions of the Board's Basin Plan.

- C. **Ocean Plan** - On November 16, 2000, the State Water Resources Control Board (State Board) adopted a revised *Water Quality Control Plan for the Ocean Waters of California* (Ocean Plan). The revised plan was approved by the OAL on July 9, 2001 and approved by the USEPA on December 3, 2001. The revised plan contains water quality objectives for coastal waters of California. This Order includes effluent and receiving water limitations, prohibitions, and provisions that implement the objectives of the plan.
- D. **Beneficial Uses** - The beneficial uses of the receiving water nearshore zones (defined as the zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot contour, whichever is further from the shoreline) are:

Ormond Beach	Existing:	Industrial water supply, navigation, water contact and non contact recreation, commercial, marine habitat, wildlife habitat, threatened or endangered species, shellfish harvesting
	Potential:	Spawning, reproduction, and/or early development
Nearshore	Existing:	Industrial water supply, navigation, water contact and non contact recreation, commercial, marine habitat, wildlife habitat, threatened or endangered species, shellfish harvesting
	Potential:	Spawning, reproduction, and/or early development
Offshore	Existing:	navigation, water contact and non contact recreation, commercial, marine habitat, wildlife habitat, threatened or endangered species, shellfish harvesting, migration of aquatic organisms, Spawning, reproduction, and/or early development, shellfish harvesting
	Potential:	none

- E. **Antidegradation Policy** - On October 28, 1968, the State Board adopted Resolution No. 68-16, *Maintaining High Quality Water*, which established an antidegradation policy for State and Regional Boards. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR section 131.12) require that all permitting actions be consistent with the federal antidegradation policy. Together, the State and Federal

policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The provisions of this Order are consistent with the antidegradation policies.

- F. **Watershed Management** - This Regional Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles and Ventura Counties. The approach is in accordance with the USEPA guidance on *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995). The objective is to provide a comprehensive and integrated strategy resulting in water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. The Management Approach emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This Order and the accompanying *Monitoring and Reporting Program* fosters the implementation of this approach. The *Monitoring and Reporting Program* requires the Discharger to participate in regional water quality (Bight 2003 and Central Bight Cooperative Water Quality Program) and helps beds monitoring program for the Southern California Bight.

## VII. REGULATORY BASIS FOR EFFLUENT AND RECEIVING WATER LIMITS AND OTHER DISCHARGE REQUIREMENTS

- A. **Water Quality Objectives and Effluent Limits** - Water Quality Objectives (WQOs) and effluent limitations in this permit are based on:
1. The plans, policies and water quality standards (beneficial uses + objectives + antidegradation policy) contained in the 1994 *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, as amended;
  2. *Water Quality Control Plan, Ocean Waters of California, California Ocean Plan*, State Water Resources Control Board, 2001;
  3. *Guidance for Implementing Whole Effluent Toxicity Programs Final*, USEPA Regions 9 & 10, May 31, 1996;
  4. *Whole Effluent Toxicity (WET) Control Policy*, USEPA, July 1994;
  5. Applicable Federal Laws and Regulations
    - a. Federal Clean Water Act, and
    - b. 40 CFR Parts 122, 125, and 131, among others; and,
  6. Best professional judgment (pursuant to 40 CFR 122.44).
- B. U.S. EPA regulations, policy, and guidance documents upon which Best Professional

Judgment (BPJ) was developed include, in part:

1. *Technical Support Document for Water Quality Based Toxics Control*, March 1991 (EPA-505/ 2-90-001); and,
  2. *U.S. EPA NPDES Permit Writers' Manual*, December 1996 (EPA-833-B-96-003).
- C. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that water quality based effluent limits may be set based on USEPA criteria and supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.
- D. **Mass and Concentration Limits** - 40 CFR section 122.45(f)(1) requires that except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at its discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents, except during wet-weather, storm events that cause flows to the treatment plant to exceed the plant's design capacity.

- E. **Maximum Daily Effluent Limitations** - Pursuant to 40 CFR section 122.45(d)(2), for POTWs continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. It is impracticable to only include average weekly and average monthly effluent limitations in the permits, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of certain pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR section 122.45(d)(1), are included in the permit for certain constituents as discussed in the Fact Sheet accompanying this Order.
- F. **Pretreatment** - Pursuant to 40 CFR section 403, the City developed and has been implementing an approved industrial wastewater pretreatment program. This Order requires the City to continue the implementation of the approved pretreatment program and modifications thereof.

- G. **Sludge Disposal** - To implement CWA Section 405(d), on February 19, 1993, the USEPA promulgated 40 CFR Part 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the City to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program.
- H. **Stormwater Management** - CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR section 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*. This permit was amended in September 1992 and reissued on April 17, 1997 in State Board Order No. 97-03-DWQ.

Because storm water runoff is captured and treated, General NPDES permit No. CAS000001 is not applicable to storm water discharges from the Oxnard WTP's premises. Instead, the City is covered under the Ventura County Municipal Storm Water Program (Order No. 00-108) under which the City has been implementing the Storm Water Prevention Control Plan (SWPCP) model program.

- I. **Clean Water Act Effluent Limitations** - Numeric and narrative effluent limitations are established pursuant to Section 301 (Effluent Limitations), Section 302 (Water Quality-Related Effluent Limitations), Section 303 (Water Quality Standards and Implementation Plans), Section 304 (Information and Guidelines [Effluent]), Section 305 (Water Quality Inventory), Section 307 (Toxic and Pretreatment Effluent Standards), and Section 402 (NPDES) of the CWA. The CWA and amendments thereto are applicable to the discharges regulated by this Order.
- J. **Antibacksliding Policies** - Antibacksliding provisions are contained in Sections 303(d)(4) and 402(o) of the CWA and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions. Section 402(o)(2) outlines six exceptions where effluent limitations may be relaxed.

The relaxation of effluent limitations for certain discharges covered by this Order are excepted from antibacksliding pursuant to CWA sections 402(o)(2)(B)(i) and 303(d)(4) because information is available about the likelihood of constituents to be present in concentrations with a reasonable potential to cause or contribute to excursions above water quality standards, which would have justified the application of a less stringent effluent limitation at the time the NPDES permit was previously issued. Pursuant to the reasonable potential analysis (Attachment A), certain constituents that previously had effluent limitations have shown not to have reasonable potential. Consistent with antibacksliding statutes and regulations and antidegradation policies, the effluent limitations contained in this Order are at least as stringent as existing effluent limitation guidelines and are fully protective of existing,

intermittent, and potential designated uses.

**J.K. Types of Pollutants** - For CWA regulatory purposes, pollutants are grouped into three general categories under the NPDES program: conventional, toxic, and non-conventional. By definition, there are five conventional pollutants (listed in 40 CFR 401.16) - 5-day biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. Toxic or "priority" pollutants are those defined in Section 307(a)(1) of the CWA (and listed in 40 CFR 401.12 and 40 CFR 423, Appendix A) and include heavy metals and organic compounds. Non-conventional pollutants are those which do not fall under either of the two previously described categories and include such parameters as ammonia, phosphorous, chemical oxygen demand, whole effluent toxicity, etc.

**K.L. Technology-Based Limits for Municipal Facilities (POTWs)** - Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the discharger to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level--referred to as "secondary treatment"-- that all POTWs were required to meet by July 1, 1977. More specifically, Section 301(b)(1)(B) of the CWA required that USEPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of five-day biochemical oxygen demand, total suspended solids, and pH.

**L.M. Water Quality Based Effluent Limits (WQBELs)** - Water quality-based effluent limits are designed to protect the quality of the receiving water by ensuring that State water quality standards are met by discharges from an industrial/municipal point source. If, after technology-based effluent limits are applied, a point source discharge will cause, have the reasonable potential to cause, or contribute to an exceedance of an applicable water quality criterion, then 40 CFR 122.44(d)(1) requires that the permit contain a WQBEL. Although the CWA establishes explicit technology-based requirements for POTWs, Congress did not exempt POTWs from additional regulation to protect water quality standards. As a result, POTWs are also subject to WQBELs. Applicable water quality standards for ocean waters off the Ventura Coastline are contained in the Table B of the Ocean Plan. Any constituent for which a reasonable potential exists pursuant to 40 CFR 122.44(d)(1) to exceed the Ocean Plan Table B objectives has WQBEL.

**M.N. Ocean Plan Limits and Objectives** - Effluent limitations for conventional, nonconventional, and toxic pollutants were calculated based on effluent limitations in *Table A*, and water quality objectives in *Table B* of the Ocean Plan. The minimum dilution ratio used to calculate effluent limitations for nonconventional and toxic pollutants based on water quality objectives in *Table B* of the Ocean Plan is 98:1 (i.e., 98 parts seawater to one part effluent). This ratio was calculated by the State Board.

## VIII. REASONABLE POTENTIAL ANALYSIS

- A. 40 CFR Part 122.44(d)(1)(i and iii) provides that effluent limitations shall be prescribed in permits for all pollutants or pollutant parameters determined to (or may) be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard. 40 CFR Part 122.44(d)(1)(ii) provides the procedure and factors, including variability of the pollutants in the effluent, to be considered in determining reasonable potential. The procedure for statistical determination of the reasonable potential for a discharged pollutant to exceed an objective is outlined in the USEPA guidance, the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, March 1991). This statistical approach combines knowledge of effluent variability (in terms of the calculated coefficient of variation, CV) with uncertainty (that is a function of the number of effluent data) to estimate a maximum effluent value at a high level of confidence. The estimated maximum effluent value is calculated as the 99 percent confidence level of the 99th percentile based on a lognormal distribution of daily effluent values. The projected receiving water value (based on the estimated maximum effluent value and dilution ratio) is then compared to the appropriate objective to determine the potential for exceedance of that objective and the need for an effluent limitation.
- B. The procedures for conducting RPA are as follows:
- Step 1: A reported maximum effluent value was identified for each pollutant that has at least one detected sample. If the pollutant was not detected in any of the effluent samples, the reported maximum MDL (minimum detection limit) was selected as the reported maximum effluent value for that pollutant.
- Step 2: The effluent data were used to calculate the pollutant-specific coefficient of variation (CV) that was then used to generate pollutant-specific reasonable potential multiplier. When at least 80 percent of the data are reported as not detected, a default CV of 0.6 was used.
- Step 3: The estimated maximum effluent value was then determined by multiplying the reported maximum effluent value with its multiplier.
- Step 4: With the consideration of the dilution ratio (98 for Oxnard WTF), the projected receiving water concentrations for these pollutants were calculated based on the equation described in section IX. B.2.
- Step 5: Compare the projected receiving water concentrations to the Ocean Plan water quality objectives.
- C. Regional Board staff conducted RPAs for toxic pollutants listed in *Table B* of the Ocean Plan. Effluent data in the Discharger's monitoring reports for the period from January 1995 to June 2001 were used in the analysis. Regional Board staff compared the projected receiving water concentration with the appropriate objectives listed in the Ocean Plan, and determined that acrylonitrile, aldrin, benzidine, bis(2-chloroethyl) ether, chlordane, DDT, 3,3'-dichloro-benzidine, dieldrin, 1,2-

diphenylhydrazine, heptachlor, heptachlor epoxide, hexachlorobenzene, n-nitrosodi-n-propylamine, PAHs, PCBs, TCDD, and toxaphene showed the potential to exceed their respective objectives, and, therefore, require effluent limitations. Water quality-based effluent limitations for these pollutants were calculated using the procedure outlined in the Ocean Plan (shown in section IX. H). Attachment A shows the results of the RPAs.

- D. For constituents that have been determined to have no reasonable potential of causing or contributing to excursions of water quality objectives, no numerical limits are prescribed; instead a narrative limit to comply with all Ocean Plan objectives is provided and the discharger is required to monitor for these constituents to gather data for use in RPAs for future permit renewals and/or updates.
- E. The Order is consistent with State and Federal antidegradation policies in that it does not authorize a change in the quantity of wastewater discharged by the facility, nor does it authorize a change or relaxation in the manner of treatment. As a result, both the quantity and quality of the discharge are expected to remain the same or be improved, consistent with antidegradation policies. In conformance with reasonable potential analysis procedures identified in State Board and USEPA documents, effluent limitations for some toxic constituents are not carried forth in this Order because there is not presently a reasonable potential for the constituents to cause or contribute to an exceedance of water quality standards. Without reasonable potential, there is no longer a need to maintain prior WQBELs under WQBEL regulations, antibacksliding provisions, or antidegradation policies. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show a reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the permit will be reopened to incorporate appropriate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for potential and existing uses and conforms with antidegradation policies and antibacksliding provisions.

## **IX. PROPOSED EFFLUENT LIMITATIONS**

### **A. Major Wastewater Constituents**

Table A of the 2001 Ocean Plan lists the major wastewater constituents that are technology-based. Limits for these constituents are not dependent upon the dilution factor. The limits in the tentative permit are either based on secondary treatment standards or limits specified in Table A of the 2001 Ocean Plan, as shown in the following table.

Constituent	Units	Discharge Limitations			Basis
		Monthly Average	Weekly Average	Daily Maximum	
BOD <sub>5</sub> 20°C	mg/L	30	45		40 CFR 133.102
Suspended solids	mg/L	30	45		40 CFR 133.102
Oil and grease	mg/L	25	40	75	Ocean Plan
Settleable solids	mL/L	1.0	1.5	3.0	Ocean Plan
Turbidity	NTU	75	100	225	Ocean Plan

B. Toxic Effluent Limits

- Based on results of the reasonable potential analyses (Attachment A), effluent limits are prescribed in the tentative permit for pollutants that were determined to have reasonable potential to cause or contribute to cause exceedance of their respective water quality objective. In determining the toxic effluent limits, water quality objectives contained in the Basin Plan and the 2001 Ocean Plan and limits in the existing permit (Order No. 94-045) were considered. In general, the most stringent limit is prescribed for the pollutant unless otherwise indicated.
- The 2001 Ocean Plan provides the procedure (equation) in calculating the end-of-pipe toxic effluent limits as follows:

$$C_e = C_o + D_m (C_o - C_s)$$

where

C<sub>e</sub> = effluent concentration limit.

C<sub>o</sub> = the concentration (water quality objective) to be met at the completion of initial dilution.

C<sub>s</sub> = background seawater concentration. (As= 3 ug/L; Cu= 2 ug/L; Hg= 0.0005 ug/L; Ag= 0.16 ug/L; and Zn= 8 ug/L).

D<sub>m</sub> = minimum probable initial dilution expressed as parts seawater per part wastewater (98 for the Oxnard Discharge Outfall).

- In the existing permit (Order No. 94-045), the calculated effluent limit (C<sub>e</sub>) based on the 6-month median objective for aquatic life protection in the 1990 Ocean Plan were prescribed as monthly average limits. Applying the antibacksliding policy, the same approach is used in this Order, i.e., the C<sub>e</sub> based on the 6-month objective for a marine life toxicant (Table B) of the 2001 Ocean Plan are proposed to be as a monthly average limit.
- The Ocean Plan classifies the most stringent objectives for toxic pollutants into:
  - Marine Aquatic Life Toxicants;
  - Human Health Toxicants – Noncarcinogens; and,
  - Human Health Toxicants – Carcinogens.

a. Marine Life Toxicants

None of the individual pollutants under Marine Life Toxicants exhibited reasonable potential to cause exceedance of their respective objectives, hence, there are no limits for these pollutants.

Acute and Chronic Toxicity - In the previous versions of the Ocean Plan, acute toxicity was classified under Table A – Effluent Limitations, while chronic toxicity was under Table B – Water Quality Objectives. Constituents under Table A are mostly technology-based. In the 2001 Ocean Plan, acute toxicity is now classified under Table B, under which the effluent limit is dependent upon the dilution factor. Using the new objective of 0.3 TUa for the 30-day average (changed from 1.5), 10% of the dilution factor (as the acute toxicity mixing zone), and the discharger’s acute toxicity data, Regional Board staff conducted RPAs and determined that the effluent did not exhibit reasonable potential to exceed the objective. Similarly, there is also no reasonable potential for chronic toxicity.

Selection of chronic or acute toxicity test requirement – The 2001 Ocean Plan provides the criteria for requiring the discharger to test for either acute, chronic or both in the monitoring program. The criteria state that for dilution factors < 100, the discharger is required to test for chronic toxicity only, Interim results of chronic toxicity tests also provide information on acute toxicity. Therefore, in the *Monitoring and Reporting Program* for this Order, the discharger is required to monitor for chronic toxicity only using marine organisms.

G.b. Human Health Toxicants – Noncarcinogens

None of the individual pollutants under Human Health Toxicants – Noncarcinogens exhibited reasonable potential to cause exceedance of their respective objectives, hence, there are no limits for these pollutants.

H.c. Human Health Toxicants – Carcinogens

There are seventeen constituents that exhibited reasonable potential to cause exceedance of their respective objectives. The effluents were calculated using the equation in section B.2. using the dilution factor of 98. The resulting limits are 99 times the water quality objectives in the 2001 Ocean Plan because background concentrations for these pollutants are zero. These constituents and their calculated limits are given in the following table.

Constituent	Unit	Monthly Average Discharge Limitations	Rationale/Basis
Acrylonitrile	µg/L	9.9	Ocean Plan
Aldrin	ng/L	2.2	Ocean Plan
Benzidine	ng/L	6.8	Ocean Plan
Bis(2-chloroethyl)ether	µg/L	4.5	Ocean Plan
Chlordane	ng/L	2.3	Ocean Plan
DDT	ng/L	17	Ocean Plan
3,3 -Dichlorobenzidine	µg/L	0.80	Ocean Plan
Dieldrin	ng/L	4.0	Ocean Plan
1,2-Diphenylhydrazine	µg/L	16	Ocean Plan
Heptachlor	ng/L	5.0	Ocean Plan
Heptachlor epoxide	ng/L	2.0	Ocean Plan
Hexachlorobenzene	ng/L	21	Ocean Plan
n-nitrosodi-n-propylamine	µg/L	38	Ocean Plan
PAHs	µg/L	0.87	Ocean Plan
PCBs	ng/L	1.9	Ocean Plan
TCDD equivalents	pg/L	0.39	Ocean Plan
Toxaphene	ng/L	21	Ocean Plan

## X. PERFORMANCE GOALS

- A. Chapter III, section F.2 of the Ocean Plan allows the Regional Board to establish more restrictive water quality objectives and effluent limitations than those set forth in the Ocean Plan as necessary for the protection of the beneficial uses of ocean waters.

Pursuant to this provision and to implement the recommendation of the Water Quality Advisory Task Force (*Working Together for an Affordable Clean Water Environment, A final report presented to the California Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task force, September 30, 1993*) that was adopted by the Board on November 1, 1993, performance goals that are more stringent than those based on Ocean Plan objectives are prescribed in this Order. This approach is consistent with the antidegradation policy in that it requires the City to maintain its treatment level and effluent quality recognizing normal variations in treatment efficiency, and sampling and analytical techniques. However, this approach does not address substantial changes in plant operations that could significantly affect the quality of the treated effluent.

- B. While performance goals were present in many POTW permits in the region previously, they are not continued for discharges that are made to inland surface waters. For inland surface waters, the California Toxics Rule (40 CFR 131.38) has resulted in effluent limits as stringent as many performance goals. However, the Ocean Plan allows for significant dilution, and the continuing use of performance goals serves to maintain existing treatment levels and effluent quality and supports the State and Federal antidegradation policies.

- C. The performance goals are based upon the actual performance of the Oxnard WTF and are specified only as an indication of the treatment efficiency of the facility. Performance goals are intended to minimize pollutant loading (primarily toxics) and, at the same time, maintain the incentive for future voluntary improvement of water quality whenever feasible, without the imposition of more stringent limits based on improved performance. They are not considered as limitations or standards for the regulation of the discharge from the treatment facility. The Executive Officer may modify any of the performance goals if the City requests and has demonstrated that the change is warranted. The methodology for calculating the performance goals is documented in the Fact Sheet accompanying this Order.
- D. The performance goals were calculated as follows:
1. For constituents that have been routinely detected in the effluent, the performance goals were statistically set at the 95<sup>th</sup> percentile of the January 1995 through June 2001 performance data using the protocol described in Appendix E of the *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991. Effluent pollutant data with values above the detection limits are assumed lognormally distributed. For constituents with the number of detected samples is between one and three, and the percentage of nondetected sample is less than 95%, one half of the detection limits were assigned to each nondetected sample in order to perform a successful statistical analysis.
  2. For constituents for which monitoring data has consistently shown nondetectable levels, the performance goals were set at the five times (for carcinogens and marine aquatic life toxicants) or ten times (for noncarcinogens) of the minimum reported method detection limits. For constituents showing no reasonable potential to exceed respective effluent limits, if derived performance goals exceed the respective calculated effluent limits, the calculated effluent limits were selected as performance goals for those constituents.

## **XI. POLLUTANT MINIMIZATION PLAN**

The accompanying Order provides for the use of Pollutant Minimization Program, developed in conformance with Section III.C.8 of the Ocean Plan, when there is evidence that a pollutant is present in the Discharger's effluent above an effluent limitation. The goal of the pollutant minimization plan is to reduce all potential sources of a pollutant through pollution minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the WQBEL.

## **XII. PROPOSED MONITORING AND REPORTING PROGRAM**

*Monitoring and Reporting Program No. CI-2022*, Attachment T to the tentative Order, requires the Discharger to conduct monitoring of influent, effluent, and receiving waters at certain schedules to demonstrate compliance with the requirements. The program has

been designed in accordance with Southern California Coastal Water Research Project's Model Monitoring Program for POTWs discharging to the ocean.