California Regional Water Quality Control Board
Central Coast Region

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Edmund G. Brown, Jr.
Governor

ORDER NO. R3-2011-0211
NPDES NO. CA CA0048127

WASTE DISCHARGE REQUIREMENTS
FOR THE CITY OF LOMPOC REGIONAL WASTEWATER RECLAMATION PLANT

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

Table 1. Discharger Information

Discharger	City of Lompoc
Indirect Dischargers	Vandenberg Air Force Base Vandenberg Village Community Services District
Name of Facility	City of Lompoc Regional Wastewater Reclamation Plant
Facility Address	1801 West Central Avenue
	Lompoc, CA 93436
	Santa Barbara County
The U.S. Environmental Protection Agency (USEPA) and the Central Coast Regional Water Quality Control Board (Central Coast Water Board) have classified this discharge as a major discharge.	

Discharges by the City of Lompoc Regional Wastewater Reclamation Plant from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Tertiary treated domestic wastewater	34º 39' 47" N	120º 28' 55" W	San Miguelito Creek

Table 3. Administrative Information

This Order was adopted by the Central Coast Water Board on:	**December 1, 2011**
This Order shall become effective on:	**January 13, 2012**
This Order shall expire on:	**January 13, 2017**
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

IT IS HEREBY ORDERED, that Order No. R3-2006-0037 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Roger Briggs 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, Central Coastal Region, on December 1, 2011.

Roger W. Briggs, 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 Lompoc
Indirect Dischargers	Vandenberg Air Force Base Vandenberg Village Community Services District
Name of Facility	City of Lompoc Regional Wastewater Reclamation Plant
Facility Address	1801 West Central Avenue
	Lompoc, CA 93436
	Santa Barbara County
Facility Contact, Title, and Phone	Tim Smith, Acting Wastewater Superintendent, (805) 875-8415
Mailing Address	100 Civic Center Plaza, P.O. Box 8001, Lompoc, CA 93438
Type of Facility	Publically Owned Treatment Works (POTW)
Facility Design Flow	**Design Flow:** 5.5 million gallons per day (MGD) (average dry weather flow) **Permitted Flow:** 5.0 MGD

II. FINDINGS

The Central Coast Regional Water Quality Control Board, Central Coast Region (hereinafter the Central Coast Water Board), finds:

A. Background. The City of Lompoc (hereinafter Discharger) is currently discharging pursuant to Order No. R3-2006-0037 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0048127. The Discharger submitted a Report of Waste Discharge (ROWD), dated January 6, 2011, and applied to renew it's NPDES permit to discharge up to 5.0 MGD of treated wastewater from the City of Lompoc Regional Wastewater Reclamation Plant (hereinafter Facility). The Central Coast Water Board deemed the application complete on January 24, 2011.

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

B. Facility Description. The Discharger owns and operates a municipal wastewater collection, treatment, and disposal system that discharges tertiary treated wastewater to San Miguelito Creek. The Facility currently serves approximately 53,050 municipal and industrial users and receives wastewater from the City of Lompoc, Vandenberg Air Force Base, and Vandenberg Village Community Services District (VVCSD). The Discharger completed major upgrades to the Facility in November 2009. The new wastewater handling and treatment system includes mechanical bar screens, an aerated grit tank, two parallel oxidation ditches, three secondary clarifiers, tertiary filters, and UV disinfection. Sludge handling includes two dissolved air floatation thickeners, aerobic sludge digesters, two sludge lagoons, drying beds, and offsite disposal. The Facility also maintains an emergency retention basin for use during events of disinfection maintenance, spills, and

other emergency situations. Treated wastewater is discharged from Discharge Point No. 001 to San Miguelito Creek, which is a tributary to the Santa Ynez River, waters of the United States within the Santa Ynez River Hydrologic Unit.

Attachment B provides a topographic map of the area around the Facility. Attachment C provides a flow diagram of the Facility.

For control of the storm water discharged from the site, the Discharger is covered under the State-wide General Permit for Storm Water, NPDES General Permit No. CAS000001.

C. Legal Authorities. This Order is issued pursuant to Clean Water Act (CWA) §402 and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (CWC), commencing with §13370. It shall serve as an 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 §13260.

D. Background and Rationale for Requirements. The Central Coast 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 are also incorporated into this Order.

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

F. Technology-Based Effluent Limitations. CWA §301(b) and USEPA's NPDES regulations at 40 CFR 122.44 require that permits include, at a minimum, conditions meeting applicable technology-based requirements 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 established at 40 CFR 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of development of technology-based effluent limitations is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. CWA Section 301 (b) and NPDES regulations at 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.

NPDES regulations at 40 CFR 122.44 (d) (1) (i) mandate 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 is 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 at 40 CFR 122.44 (d) (1) (vi).

H. Water Quality Control Plans. The Central Coast Water Board has adopted a *Water Quality Control Plan for the Central Coast Region* (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Facility discharges treated wastewater to San Miguelito Creek. During high flows, the Santa Ynez River periodically flows over its banks combining with San Miguelito Creek, resulting in a discharge to the Santa Ynez River. Therefore, beneficial uses established by the Basin Plan for the both San Miguelito Creek and Santa Ynez River are presented in Table 5, below.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Use(s)
001	San Miguelito Creek	• Municipal and domestic water supply (MUN) • Agricultural supply (AGR) • Groundwater recharge (GWR) • Water contact recreation (REC-1) • Non-contact water recreation (REC-2) • Wildlife habitat (WILD) • Cold fresh water habitat (COLD) • Warm fresh water habitat (WARM) • Spawning, reproduction, and/or early development (SPWN) • Commercial and sport fishing (COMM)

Discharge Point	Receiving Water	Beneficial Use(s)
From San Miguelito Creek	Santa Ynez River	• Municipal and domestic water supply (MUN) • Agricultural supply (AGR) • Industrial process supply (PRO) • Industrial service supply (IND) • Groundwater recharge (GWR) • Water contact recreation (REC-1) • Non-contact water recreation (REC-2) • Wildlife habitat (WILD) • Cold fresh water habitat (COLD) • Warm fresh water habitat (WARM) • Migration of aquatic organisms (MIGR) • Spawning, reproduction, and/or early development (SPWN) • Rare, threatened, or endangered species (RARE) • Freshwater replenishment (FRSH) • Commercial and sport fishing (COMM)

Groundwater throughout the Central Coast Region, except for that found in the Soda Lake Sub-Basin, is suitable for:

- Agricultural water supply,
- Municipal and domestic water supply, and
- Industrial supply

Requirements of this Order implement the Basin Plan.

I. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to discharges from the Facility.

J. State Implementation Policy. On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Central Coast Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and previsions for chronic toxicity control. Requirements of this Order implement the SIP.

K. Compliance Schedules and Interim Requirements. Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed five years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules or interim effluent limitations.

L. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000), codified at 40 CFR 131.21] 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.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water-quality based effluent limitations for individual pollutants. As discussed in section IV.B of the Fact Sheet, the Order establishes technology-based effluent limitations for 5-day biochemical oxygen demand (BOD), total suspended solids (TSS), settleable solids, oil and grease, and turbidity for Discharge Point No. 001. These technology-based limitations implement the minimum, applicable federal technology-based requirements. The Order also contains effluent limitations in addition to the minimum, federal technology-based requirements, necessary to meet applicable water quality standards. These limitations are not more stringent than required by the CWA.

Water quality effluent limitations have been scientifically derived to implement water quality objectives (WQOs) that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to NPDES regulations at 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR and the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs 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 NPDES regulations at 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.

N. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require 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 federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Coast Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in detail in section IV.D.2 of the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-backsliding Requirements. CWA §402 (o) (2) and CWA §303 (d) (4) and NPDES 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. As discussed in section IV.D.1 of the Fact Sheet, effluent limitations and other requirements established by this Order satisfy applicable anti-backsliding provisions of the CWA and NPDES regulations.

P. 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 U.S.C.A. §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 State and federal law regarding threatened and endangered species.

Q. Monitoring and Reporting. NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC §13267 and §13383 authorize the Central Coast Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with NPDES regulations at 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Central Coast 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.

S. Recycled Water Policy. A priority of the Strategic Plan Update 2008-2012 for the Regional Boards includes a priority to increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year, in excess of 2002 levels, by 2015, and ensure adequate water flows for fish and wildlife habitat. The State Water Board adopted the Recycled Water Policy via Resolution No. 2009-0011 on February 3, 2009[1]. The Recycled Water Policy is intended to support the Strategic Plan

[1] http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2009/rs2009_0011.pdf

priority to Promote Sustainable Local Water Supplies. Increasing the acceptance and promoting the use of recycled water is a means towards achieving sustainable local water supplies and can result in reduction in greenhouse gases, a significant driver of climate change. The Recycled Water Policy is also intended to encourage beneficial use of, rather than solely disposal of, recycled water.

The Recycled Water Policy calls for the development of regional groundwater basin/sub-basin salt/nutrient management plans. The State Water Board recognizes that, pursuant to the letter from statewide water and wastewater entities[2] dated December 19, 2008 and attached to Resolution No. 2009-0011 adopting the Policy, the local water and wastewater entities, together with local salt/nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/sub-basin in California, including compliance with CEQA and participation by Central Coast Water Board staff.

It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual projects. The Central Coast Water Board finds that a combination of regional management plans and individual or programmatic project requirements may be necessary to protect beneficial uses.

One of the primary components of the required regional salt/nutrient management plans is the development and implementation of groundwater basin/sub-basin monitoring programs. As specified in the Recycled Water Policy, salt/nutrient contributing stakeholders will be responsible for conducting, compiling, and reporting the monitoring data once the regional groundwater monitoring programs are developed.

A large number of technical reports and data contained within Central Coast Water Board files document widespread and increasing salt and nutrient impacts within the groundwater basins throughout the Central Coast Region, including the Lompoc Plain sub area of the Santa Ynez groundwater unit.

Assembly Bill No. 1366, approved on October 11, 2009, allows local agencies in California to “control salinity inputs from residential self-regenerating water softeners to protect the quality of the waters of the State, if the appropriate regional board makes a finding that the control of residential salinity input will contribute to the achievement of water quality objectives.” Actions to control salinity inputs authorized are included in the Assembly Bill No. 1366.

The City of Lompoc and VVCSD wastewater contributions to the Facility influent contain salts. The Discharger’s 2011 Salinity Management Study and Plan identifies self-

[2] http://www.waterboards.ca.gov/board_info/agendas/2009/feb/020309_7_%20rw_policy_funding_letter.pdf

regenerating water softeners as a source of high wastewater salinity. More specifically, the Salinity Management Study and Plan finds that residential water softeners contribute approximately 2 percent of the TDS loading, 5 percent of the chloride loading, and 7 percent of the sodium loading to Facility influent. Additionally, the Salinity Management Study and Plan estimates that the Facility influent would need a 15 percent reduction in TDS, 61 percent reduction in chloride, and a 54 percent reduction in sodium to meet applicable surface WQOs for salinity. Therefore, the Central Coast Water Board finds that control of residential self-regenerating water softeners will contribute to the achievement of WQOs.

T. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections V.B of this Order is 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.

U. Notification of Interested Parties. The Central Coast 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 accompanying this Order.

V. Consideration of Public Comment. The Central Coast 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 of this Order.

W. Privilege to Discharge. A permit and the privilege to discharge waste into waters of the State are conditional upon the discharge complying with provisions of division 7 of the CWC and of the CWA (as amended or as supplemented by implementing guidelines and regulations); and with any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisances.

III. DISCHARGE PROHIBITIONS

A. The discharge of any waste not specifically regulated by this Order, excluding storm water regulated by General Permit No. CAS000001 (Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities), is prohibited.

B. Discharge of treated wastewater at a location other than Discharge Point No. 001, as described by this Order, is prohibited, unless the discharge is regulated by General Permit No. CAS000001 or another discharge permit.

C. The overflow or bypass of wastewater from the Discharger's collection, treatment, or disposal facilities and the subsequent discharge of untreated wastewater, except as provided for in Attachment D, Standard Provision I.G (Bypass), is prohibited.

D. Creation of a condition of pollution, contamination, or nuisance, as defined by CWC §13050, is prohibited.

E. The discharge shall not cause or contribute to adverse impacts to beneficial uses of water or to threatened or endangered species and their habitat.

F. The discharge of radioactive substances is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program (MRP) (Attachment E)

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Biochemical Oxygen Demand (5-day @ 20°C) (BOD)[1]	mg/L	10	15	20
	lbs/day	420	630	830
Total Suspended Solids (TSS)[1]	mg/L	10	15	20
	lbs/day	420	630	830
Oil & Grease	mg/L	5.0	--	10
Settleable Solids	mL/L	0.1	--	0.3
Turbidity	NTU	10	--	20
pH	s.u.	6.5 – 8.3[2],[3]		
Un-ionized Ammonia	mg/L	--	0.025	--
Nitrate, Total (as N)	mg/L	--	--	10
Bis (2-ethylhexyl) Phthalate	µg/L	1.8	--	3.6
Aluminum	mg/L	1.0	--	--
Acute Toxicity	% survival	--	--	[4]
Chronic Toxicity	TUc	--	--	1.0

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

[2] Applied as an instantaneous effluent limitation.

[3] When the Discharger continuously monitors effluent pH, levels shall be maintained within specified ranges 99 percent of the time. To determine 99 percent compliance, the following conditions shall be met:

- The total time during which pH is outside the range of 6.5 – 8.3 shall not exceed 7 hours and 26 minutes in any calendar month;
- No single excursion from the range of 6.5 – 8.3 shall exceed 30 minutes;
- No single excursion shall fall outside the range of 6.0 – 9.0; and
- When continuous monitoring is not being performed, standard compliance guidelines shall be followed (i.e., between 6.5 – 8.3 at all times, measured daily).

[4] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared, using a t-test (or another test consistent with the procedures described by *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,* Fifth Edition, U.S. EPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition) to the survival of control organisms, as defined in section V of Attachment E to this Order.

2. Dry Weather Flow: Effluent average dry weather flow shall not exceed a monthly average of 5.0 MGD.

3. **Floating Material.** Discharge of treated wastewater through Discharge Point No. 001 shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

4. **Bacteria**

   a. Fecal Coliform

   i. Fecal coliform concentrations shall not exceed a log mean of 200 organisms/100 mL for any 30-day period (based on a minimum of 5 samples); and

   ii. Fecal coliform concentrations shall not exceed 400 organisms/100 mL for more than 10 percent of the samples in a 30-day period.

5. **Salinity.** The discharge of tertiary treated wastewater shall comply with the following effluent limitations:

Table 7. Salinity Effluent Limitations

Parameter	Units	Annual Mean[1]
Total Dissolved Solids (TDS)	mg/L	1,100
Sodium	mg/L	270
Chloride	mg/L	250

[1] Compliance with the effluent limitations are based on a 12-month running mean.

B. Land Discharge Effluent Limitations and Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. Receiving Water Limitations

A. Surface Water Limitations

Receiving water limitations are based on WQOs contained in the Basin Plan, are consistent with the SIP, and are a required part of this Order. The discharge shall not cause a violation of the following receiving water limitations in San Miguelito Creek, which is tributary to the Santa Ynez River. The Central Coast Water Board may require the Discharger to investigate the cause of exceedances in the receiving water before determining whether the Discharger caused any water condition that exceeds the following receiving water limitations.

1. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10 percent above natural background color, whichever is greater.

2. Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

3. Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

4. Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

5. Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.

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

7. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

8. The suspended sediment load and suspended sediment discharge rate to surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

9. Concentrations of toxic metals and inorganic chemicals in waters shall not be increased in such a manner that may adversely affect beneficial uses.

10. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increase in turbidity attributable to controllable water quality factors shall not exceed the following limits.

a. 5 NTU, where natural turbidity is less than 25 NTU.

b. 20 percent, where natural turbidity is between 25 and 50 NTU.

c. 10 NTU, where natural turbidity is between 50 and 100 NTU.

d. 10 percent, where natural turbidity is greater than 100 NTU.

11. The pH value shall not be depressed below 7.0 nor raised above 8.3. The change in normal ambient pH levels shall not exceed 0.5 units.

12. Dissolved oxygen concentrations in receiving waters shall not be reduced below 7.0 mg/L at any time.

13. Natural temperature of receiving waters shall not be altered unless it can be demonstrated to the satisfaction of the Central Coast Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or

place shall the temperature be increased by more than 5° F above natural receiving water temperature.

14. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge.

15. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/L (as N) in the receiving water.

16. No individual pesticide or combination of pesticides shall reach concentrations that adversely affect the beneficial uses of the receiving water. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life. For waters where existing concentrations are presently nondetectable or where beneficial uses would be impaired by concentrations in excess of nondetectable levels, total identifiable chlorinated hydrocarbon pesticides shall not be present at concentrations detectable within the accuracy of analytical methods as prescribed in Standard Methods for the Examination of Water and Wastewater, latest edition, or other equivalent methods approved by the Executive Officer.

17. Waters shall not contain organic substances in concentrations greater than the following:

Table 8. Organic Substances Water Quality Objectives

Parameter	Water Quality Objective
Methylene Blue Activated Substances	0.002 µg/L
PCBs[1]	0.3 µg/L
Phthalate Esters	0.002 µg/L
Phenol	1.0 µg/L

[1] PCBs refer to sum of PCB 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

18. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent, which presents a hazard to human, plant, animal, or aquatic life. In no circumstance shall receiving waters contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) for radioactivity presented in Table 4 of Title 22 California Code of Regulations (CCR), Division 4, Chapter 15, Article 5.

19. Receiving waters shall not contain concentrations of chemical constituents in excess of the primary MCLs specified for drinking water in Table 64431-A (Primary MCLs for Inorganic Chemicals) and Table 64444-A (Primary MCLs for Organic Chemicals) of Title 22 CCR, Division 4, Chapter 15.

20. Receiving waters shall not contain concentrations of chemical constituents in amounts that adversely affect the agricultural beneficial use. Interpretation of

adverse effect shall be derived from guidelines of the University of California Agricultural Extension Service guidelines presented in Section III, Table 3-3 of the Basin Plan.

21. Receiving waters shall not contain concentrations of chemical constituents in excess of those levels specified for irrigation and livestock watering in Section III, Table 3-4 of the Basin Plan. Salt concentrations for irrigation waters shall be controlled through implementation of the anti-degradation policy to the effect that mineral constituents of currently or potentially usable waters shall not be increased.

22. Receiving waters shall not contain concentrations of chemical constituents known to be deleterious to fish or wildlife in excess of the levels presented in Section III, Table 3-5 of the Basin Plan.

23. Cadmium shall not exceed 0.003 mg/L, when hardness in receiving waters is greater than 100 mg/L as $CaCO_3$, nor shall cadmium exceed 0.0004 mg/L when hardness in receiving waters is equal to or less than 100 mg/L as $CaCO_3$.

24. Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 organisms/100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 organisms/100 mL.

25. Discharges shall not cause receiving water to exceed the following water quality objectives specifically identified for the Santa Ynez Drainage (Lompoc Sub-Area) by Table 3-7 of the Basin Plan.

Table 9. Salinity Water Quality Objectives

Parameter	Units	Annual[1]
TDS	mg/L	1,000
Chloride	mg/L	100
Sulfate	mg/L	350
Boron	mg/L	0.4
Sodium	mg/L	100

[1] Objectives shown are annual mean values. Objectives based on preservation of existing quality or water quality enhancement believed attainable following control of point sources.

B. Groundwater Limitations

Activities at the Facility shall not cause exceedance/deviation from the following water quality objectives for groundwater established by the Basin Plan. The Central Coast Water Board may require the Discharger to investigate the cause of exceedances in the groundwater before determining whether the Discharger caused any water condition that exceeds the following groundwater limitations.

1. Groundwater shall not contain taste or odor-producing substances in concentrations that adversely affect beneficial uses.

2. The Discharger shall not cause a statistically significant increase of mineral constituent concentrations in underlying groundwater as determined by comparison of samples collected from wells located up-gradient and down-gradient of the waters affected by the discharge.

3. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. In no circumstances shall groundwater contain concentrations of radionuclides in excess of the MCLs for radioactivity presented in Table 4 of Title 22 California Code of Regulations, Division 4, Chapter 15, Article 5.

4. The median concentration of coliform organisms in groundwater, over any seven-day period, shall be less than 2.2 organisms/100 mL.

5. Groundwater shall not contain concentrations of chemical constituents in excess of the primary MCLs specified for drinking water in Table 64431-A (Primary MCLs for Inorganic Chemicals) and Table 64444-A (Primary MCLs for Organic Chemicals) of Title 22 California Code of Regulations, Division 4, Chapter 15.

6. Groundwater shall not contain concentrations of chemical constituents in amounts that adversely affect the agricultural supply beneficial use. Interpretation of adverse effects shall be as described in University of California Agricultural Extension Service guidelines provided in Table 3-3 of the Basin Plan.

7. Groundwater used for irrigation and livestock watering shall not exceed concentrations of chemical constituents in excess of those levels specified for irrigation and livestock watering in Section III, Table 3-4 of the Basin Plan.

8. Groundwater shall not contain constituents greater than the following concentrations established in Table 3-8 of the Basin Plan for groundwater within the Lompoc Plain sub area of the Santa Ynez groundwater unit.

Table 10. Groundwater Objectives

Parameter	Units	Annual Mean[1]
TDS	mg/L	1,250
Chloride	mg/L	250
Sulfate	mg/L	500
Boron	mg/L	0.5
Sodium	mg/L	250
Nitrogen	mg/L	2.0

[1] Objectives shown are median values based on data averages; objectives are based on preservation of existing water quality enhancement believed attainable following control of point sources.

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. **Central Coast Water Board Standard Provisions.** The Discharger shall comply with all Central Coast Water Board Standard Provisions included in Attachment D-1 of this Order.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order. All monitoring shall be conducted according to 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*.

C. Special Provisions

1. Reopener Provisions

This permit may be reopened and modified in accordance with NPDES regulations at 40 CFR 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any USEPA approved, new, State WQO.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

As indicated in section V.D of the MRP, when acute or chronic toxicity is detected in the effluent above the effluent limitations, if the discharge is continuing, the Discharger shall resample immediately, retest, and report the results to the Executive Officer, who will determine whether to initiate an enforcement action, require a Toxicity Reduction Evaluation (TRE) in accordance with the Discharger's TRE Workplan, or implement other measures.

A TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, 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. The TRE shall include all reasonable steps to identify the source of toxicity.

The Discharger shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

The Discharger shall maintain a TRE Workplan, which describes steps that the Discharger intends to follow in the event that a toxicity effluent limitation established by this Order is exceeded in the discharge. The workplan shall be prepared in accordance with current technical guidance and reference material, including EPA/600/2-88/062, and shall include, at a minimum:

i. Actions that will be taken to investigate/identify the causes/sources of toxicity;

ii. Actions that will be evaluated to mitigate the impact of the discharge, to correct the non-compliance, and/or to prevent the recurrence of acute or chronic toxicity (this list of action steps may be expanded, if a TRE is undertaken); and

iii. A schedule under which these actions will be implemented.

When monitoring measures toxicity in the effluent above a limitation established by this Order, if the discharge is continuing the Discharger shall resample immediately, and retest for acute or chronic toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Executive Officer as soon as possible following receipt of monitoring results. The Executive Officer will determine whether to initiate enforcement action, whether to require the Discharger to implement a TRE, or to implement other measures. When the Executive Officer requires the Discharger to conduct a TRE, the TRE shall be conducted giving due consideration to guidance provided by the USEPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (USEPA document Nos. EPA 600/R-91/003, 600/R-92/080, and 600/R-92/081, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

Table 11. Toxicity Reduction Evaluation—Schedule

Action Step	When Required
Take all reasonable measures necessary to immediately reduce toxicity, where the source is known.	Within 24 hours of identification of noncompliance.
Initiate the TRE in accordance to the Workplan.	Within 7 days of notification by the Executive Officer
Conduct the TRE following the procedures in the Workplan.	Within the period specified in the Workplan (not to exceed one year, without an approved Workplan)
Submit the results of the TRE, including summary of findings, required corrective action, and all results and data.	Within 60 days of completion of the TRE
Implement corrective actions to meet Permit limits and conditions.	To be determined by the Executive Officer

3. Best Management Practices and Pollution Prevention

a. Salt and Nutrient Management

i. The Discharger shall continue to update and implement an ongoing Salt Management Program, with the intent of reducing mass loading of salts in treated effluent and attainment of applicable WQOs for salts in the Lompoc Plain Sub-Basin of the Santa Ynez Drainage Basin. Additionally, the Discharger shall develop and implement a Nutrient Management Program, with the intent of reducing mass loading of nutrients in treated effluent and attainment of applicable WQOs for nutrients in the same basin.

ii. Salt reduction measures shall focus on all potential salt contributors to the collection system, including water supply, commercial, industrial, and residential dischargers.

iii. Nutrient reduction measures shall focus on optimizing wastewater treatment processes for nitrification and denitrification, or other means of nitrogen removal. Reduction measures may also include source control (non-human waste from commercial and industrial sources) as appropriate.

iv. As part of the Salt and Nutrient Management Program, the Discharger shall submit an annual report describing salt and nutrient reduction efforts as described in the section IX.C of the MRP (Attachment E).

v. As an alternative to the Salt and Nutrient Management Program requirements described above, upon Executive Officer approval, the Discharger may submit documentation and summary of participation in a regional salt/nutrient management plan implemented under the provisions of State Water Board Resolution No. 2009-0011 (Recycled Water Policy).

4. Construction, Operation and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management

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 the Central Coast 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 Central Coast 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 1 of each year and report for the period of the previous calendar year.

b. Pretreatment Requirements. The Discharger shall be responsible for the performance for all pretreatment requirements contained in 40 CFR 403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the USEPA, or other appropriate parties, as provided in the CWA, as amended (33 USC 1351 et seq.). The Discharger shall continue to implement and enforce its approved POTW Pretreatment Program. The Discharger's approved POTW Pretreatment Program is hereby made an enforceable condition of this permit. USEPA or the Central Coast Water Board may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the CWA.

The Discharger shall enforce the requirements promulgated under Sections 307 (b), 307 (c), 307 (d), and 402 (b) of the CWA. 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.

The Discharger shall perform the pretreatment functions as required in 40 CFR 403, including, but not limited to:

i. Implement the necessary authorities as provided in 40 CFR 403.8 (f) (1);

ii. Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

iii. Implement the programmatic functions as provided in 40 CFR 403.8 (f) (2); and

iv. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8 (f) (3).

6. Other Special Provisions

a. Discharges of Storm Water. For the control of storm water discharged from the site of the wastewater treatment and disposal facilities, if applicable, the Discharger shall seek authorization to discharge under and meet the requirements of the State Water Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS0000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*.

b. Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ). This General Permit, adopted on May 2, 2006, is applicable to all "federal and State agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publically owned treatment facility in the State of California." The purpose of the General Permit is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. If applicable, the Discharger shall seek coverage under the General Permit and comply with its requirements.

7. Compliance Schedules – Not Applicable

VII. Compliance Determination

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

A. General. Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Central Coast 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 Minimum Level (ML).

B. Multiple Sample Data. When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND), the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

Attachment A – Definitions

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water Concentrations, and n is the number of samples.

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

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

Bioaccumulative
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.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

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

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

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

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

Dilution Credit
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.

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

Enclosed Bays
Enclosed bays means 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, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed Bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries and Coastal Lagoons
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code Section 12220, Suisun Bay, Carquinez Strait downstream of Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

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

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

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

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

MDL (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, as defined in title 40 of the Code of Federal Regulations, PART 136, Attachment B.

Minimum Level (ML)
ML is the concentrations 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.

Mixing Zone
Mixing zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

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

Ocean Waters
The territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

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 a priority pollutant(s) 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 Central Coast 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 §13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into waters and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in CWC §13263.3). Pollution prevention does not include actions that merely shift a pollution in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board or Central Coast Water Board.

Reporting Level
Reporting Level is 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 Central Coast Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

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.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Central Coast Water Board's Basin Plan.

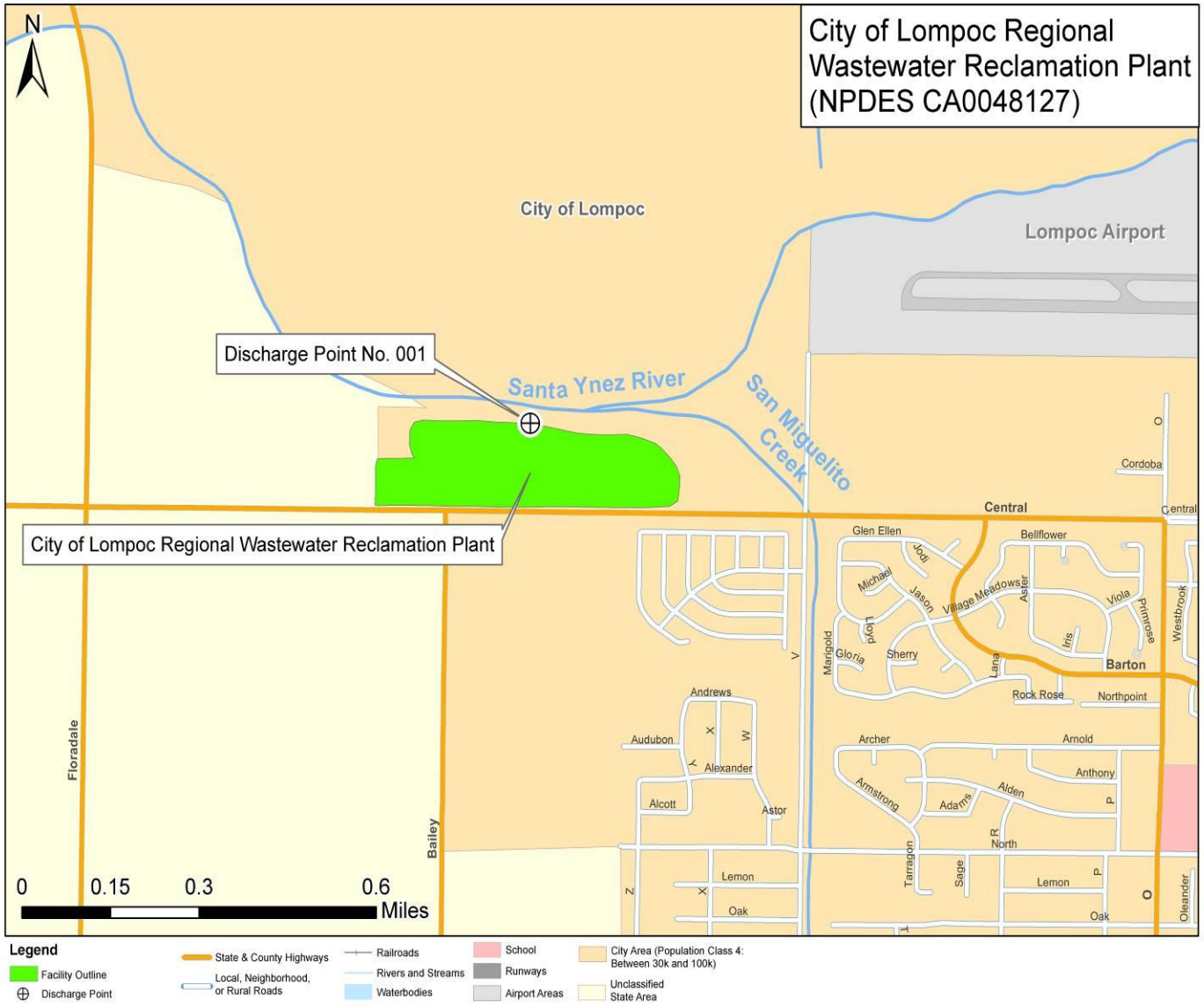
Standard Deviation
Standard Deviation is a measure of variability that is calculated as follows:

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

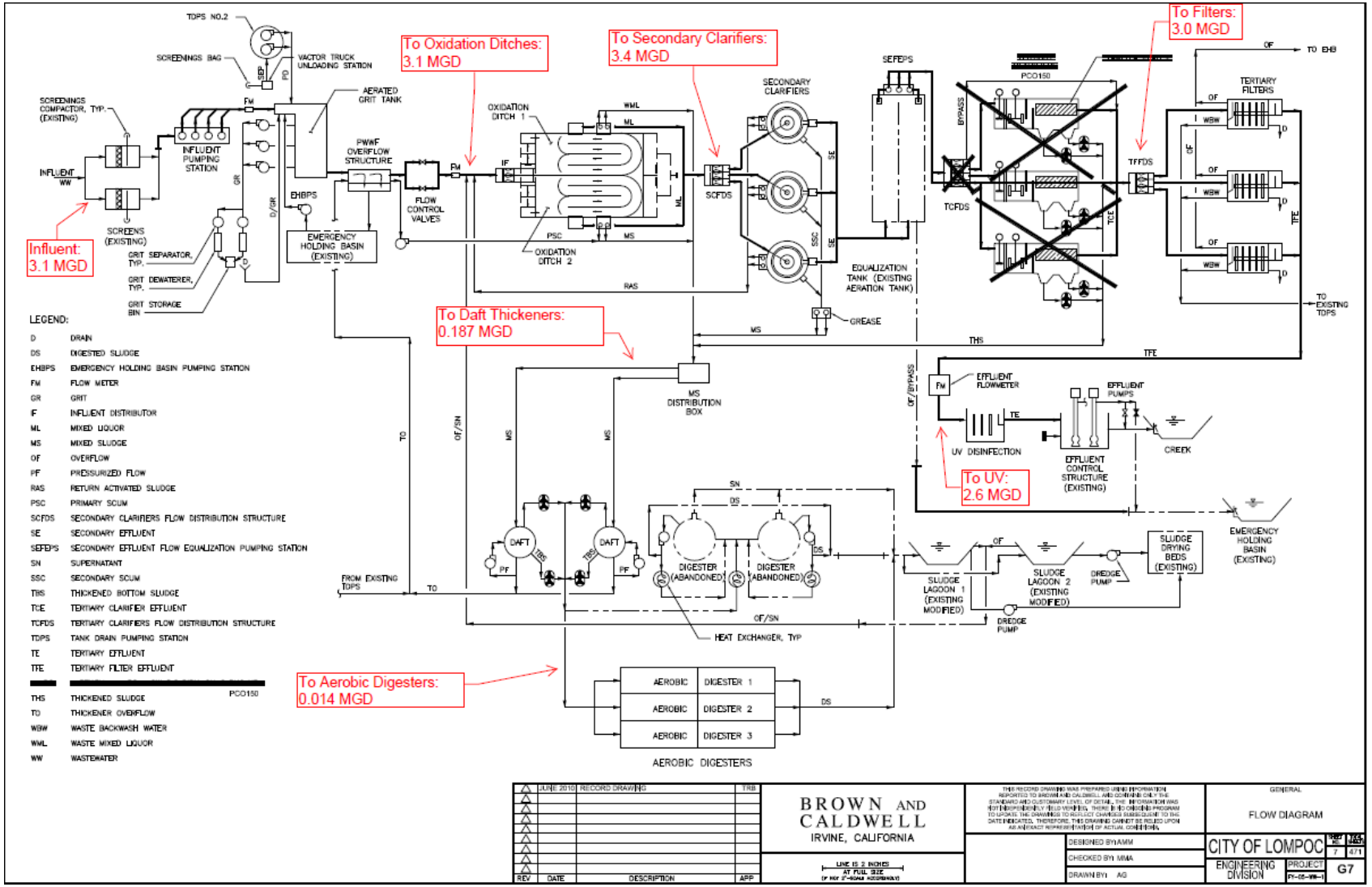
where :
x is the observed value;
μ is the arithmetic mean of the observed samples; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests).

Attachment B – MAP



Attachment C – Flow Schematic



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 §307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under §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 Central Coast Water Board, State Water Board, 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 Central Coast 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 Central Coast Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR §122.41(m)(4)(i)(C).)

4. The Central Coast Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Coast 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 Central Coast Water Board. The Central Coast 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 Part 136 unless otherwise specified in 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 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 Central Coast 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 Central Coast Water Board, State Water Board, or USEPA within a reasonable time, any information which the Central Coast 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 Central Coast 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 Central Coast 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., Central Coast Administrators of USEPA). (40 CFR § 22.22(a)(3).)

3. All reports required by this Order and other information requested by the Central Coast 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 § 22.22(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 Central Coast 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 Central Coast Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR §122.22(c).)

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

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

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coast 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 Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in 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 Central Coast 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 Central Coast 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 Central Coast 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 section 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 Central Coast 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 Central Coast 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 Central Coast Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, §13385, 1§3386, and §13387.

VII. Additional Provisions – Notification Levels

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Central Coast 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 D-1 - Central Coast Water Board Standard Provisions (January 1985)

I. Central Coast General Permit Conditions

A. Central Coast Standard Provisions – Prohibitions

1. Introduction of "incompatible wastes" to the treatment system is prohibited.

2. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.

3. Discharge of "toxic pollutants" in violation of effluent standards and prohibitions established under Clean Water Act (CWA) §307(a) is prohibited.

4. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainageways, surface waters, or the ocean is prohibited.

5. Introduction of pollutants into the collection, treatment, or disposal system by an "indirect discharger" that:

   a. Inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,

   b. Flow through the system to the receiving water untreated; and,

   c. Cause or "significantly contribute" to a violation of any requirement of this Order, is prohibited.

6. Introduction of "pollutant free" wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this order is prohibited.

B. Central Coast Standard Provisions – Provisions

1. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by California Water Code (CWC) §13050.

2. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.

3. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.

4. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the Executive Officer.

5. Publicly owned wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23 of the California Administrative Code (CAC).

6. After notice and opportunity for a hearing, this order may be terminated for cause, including, but not limited to:

    a. violation of any term or condition contained in this order;

    b. obtaining this order by misrepresentation, or by failure to disclose fully all relevant facts;

    c. a change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,

    d. a substantial change in character, location, or volume of the discharge.

7. Provisions of this permit are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.

8. After notice and opportunity for hearing, this order may be modified or revoked and reissued for cause, including:

    a. Promulgation of a new or revised effluent standard or limitation;

    b. A material change in character, location, or volume of the discharge;

    c. Access to new information that affects the terms of the permit, including applicable schedules;

    d. Correction of technical mistakes or mistaken interpretations of law; and,

    e. Other causes set forth under Sub-part D of 40 CFR Part 122.

9. Safeguards shall be provided to assure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operating procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the effect of accidental discharges shall:

    a. identify possible situations that could cause "upset", "overflow" or "bypass", or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.)

    b. evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.

10. Physical Facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this order when properly operated and maintained. Proper operation and maintenance shall be

described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.

11. Production and use of reclaimed water is subject to the approval of the Central Coast Water Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in CAC, Chapter 3, Title 22 and CWC, Chapter 7, Division 7. An engineering report pursuant to CAC §60323, Title 22 is required and a waiver or water reclamation requirements from the Central Coast Water Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by this Board.

C. Central Coast Standard Provisions – General Monitoring Requirements

1. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed.

   For example, if copper is monitored annually and results exceed the six-month median numerical effluent limitation in the permit, monitoring of copper must be increased to a frequency of at least once every two months (Central Coast Standard Provisions – Definitions I.G.13.). If suspended solids are monitored weekly and results exceed the weekly average numerical limit in the permit, monitoring of suspended solids must be increased to at least four (4) samples every week (Central Coast Standard Provisions – Definitions I.G.14.).

2. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the State Department of Health Services for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accord with guidelines approved by the State Water Board and the State Department of Fish and Game. If the laboratory used or proposed for use by the discharger is not certified by the California Department of Health Services or, where appropriate, the Department of Fish and Game due to restrictions in the State's laboratory certification program, the discharger shall be considered in compliance with this provision provided:

   a. Data results remain consistent with results of samples analyzed by the Central Coast Water Board;

   b. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program that is available for inspections by the staff of the Central Coast Water Board; and,

   c. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.

4. 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.

D. Central Coast Standard Provisions – General Pretreatment Provisions

1. Discharge of pollutants by "indirect dischargers" in specific industrial sub-categories (appendix C, 40 CFR Part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 CFR Chapter 1, Subchapter N), shall comply with the appropriate pretreatment standards:

   a. By the date specified therein;

   b. Within three (3) years of the effective date specified therein, but in no case later than July 1, 1984; or,

   c. If a new indirect discharger, upon commencement of discharge.

E. Central Coast Standard Provisions – General Reporting Requirements

1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the Monitoring and Reporting Program shall include at least 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, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).

   c. A description of the sampling procedures and preservation sequence used in the survey.

   d. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to Central Coast Standard Provisions – C.1 above, and Federal Standard Provision – Monitoring III.B. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.

e. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.

2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.

3. The "Discharger" shall file a report of waste discharge or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.

4. Within 120 days after the discharger discovers, or is notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the discharger shall file a written report with the Central Coast Water Board. The report shall include:

   a. the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,

   b. a schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

   In addition to complying with Federal Standard Provision – Reporting V.B., the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

5. The Discharger shall submit Self-Monitoring Reports (SMRs) electronically using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. If electronic submittal is not available and hard copy SMRs must be submitted, SMRs must be submitted to the Central Coast Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

   Central Coast Water Board
   895 Aerovista Place, Suite 101
   San Luis Obispo, CA 93401-7906

In addition, "Dischargers" with designated major discharges shall submit a copy of each document to:

Regional Administrator
US Environmental Protection Agency, Region 9
Attention: CWA Standards and Permits Office (WTR-5)
75 Hawthorne Street
San Francisco, California 94105

6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing "Discharger" and proposed "Discharger" containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board's receipt of a complete permit application. Please also see Federal Standard Provision – Permit Action II.C.

7. Except for data determined to be confidential under CWA §308 (excludes effluent data and permit applications), all reports prepared in accordance with this permit shall be available for public inspection at the office of the Central Coast Water Board or Regional Administrator of USEPA. Please also see Federal Standard Provision – Records IV.C.

8. By January 30th of each year, the discharger shall submit an annual report to the Central Coast Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharge into full compliance. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall inform the Board of the date of the Facility's Operation and Maintenance Manual (including contingency plans as described Central Coast Standard Provision – Provision B.9., above), of the date the manual was last reviewed, and whether the manual is complete and valid for the current facility. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with effluent limits and provide a summary of performance relative to Section C above, General Monitoring Requirements.

   If the facility treats industrial or domestic wastewater and there is no provision for periodic sludge monitoring in the Monitoring and Reporting Program, the report shall include a summary of sludge quantities, analyses of its chemical and moisture content, and its ultimate destination.

   If applicable, the report shall also evaluate the effectiveness of the local source control or pretreatment program using the State Water Board's "Guidelines for Determining the Effectiveness of Local Pretreatment Programs."

F. Central Coast Standard Provisions – Enforcement

1. Any person failing to file a report of waste discharge or other report as required by this permit shall be subject to a civil penalty not to exceed $5,000 per day.

2. Upon reduction, loss, or failure of the treatment facility, the "Discharger" shall, to the extent necessary to maintain compliance with this permit, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

G. Central Coast Standard Provisions – Definitions

(Not otherwise included in Attachment A to this Order)

1. A “composite sample" is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the Monitoring and Reporting Program ordered by the Executive Officer.

2. “Daily Maximum” limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on "composite samples” except for ammonia, total chlorine, phenolic compounds, and toxicity concentration. For all exceptions, comparisons will be made with results from a “grab sample”.

3. “Discharger", as used herein, means, as appropriate: (1) the Discharger, (2) the local sewering entity (when the collection system is not owned and operated by the Discharger), or (3) "indirect discharger" (where "Discharger" appears in the same paragraph as "indirect discharger”, it refers to the discharger.)

4. “Duly Authorized Representative" is one where:

   a. the authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision V.B.;

   b. the authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,

   c. the written authorization was submitted to the Central Coast Water Board.

5. A "grab sample" is defined as any individual sample collected in less than 15 minutes. "Grab samples” shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the daily maximum limits identified in Central Coast Water Board’s Standard Provision – Provision G.2. and instantaneous maximum limits.

6. "Hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to CWA §311.

7. "Incompatible wastes" are:

   a. Wastes which create a fire or explosion hazard in the treatment works;

   b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;

   c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;

   d. Any waste, including oxygen demanding pollutants (BOD, etc.), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,

   e. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40°C (104°F) unless the treatment works is designed to accommodate such heat.

8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.

9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:

   Log Mean = (C1 x C2 x...x Cn)1/n,

   in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria (MPN/100 ml) found on each day of sampling. "n" should be five or more.

10. "Mass emission rate" is a daily rate defined by the following equations:

mass emission rate (lbs/day) = 8.34 x Q x C; and,

mass emission rate (kg/day) = 3.79 x Q x C,

   where "C" (in mg/l) is the measured daily constituent concentration or the average of measured daily constituent concentrations and "Q" (in MGD) is the measured daily flow rate or the average of measured daily flow rates over the period of interest.

11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six-month period, is a daily rate determined with the formulas in paragraph G.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.

12. “Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate determined with the formulas in Central Coast Standard Provision – Provision G.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.

13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of two middle values.

14. "Monthly Average" (or "Weekly Average”, as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period.

    $Average = (X1 + X2 + ... + Xn) / n$

    in which “n" is the number of days samples were analyzed during the period and “X" is either the constituent concentration (mg/l) or mass emission rate (kg/day or lbs/day) for each sampled day. “n" should be four or greater.

15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial waste, or other waste.

16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.

17. "Pollutant-free wastewater" means inflow and infiltration, storm waters, and cooling waters and condensates which are essentially free of pollutants.

18. "Primary Industry Category" means any industry category listed in 40 CFR Part 122, Appendix A.

19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using “Monthly averages" of pollutant concentrations (C, in mg/l) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

    $C_{Effluent}$ *Removal Efficiency (%)* $= 100 \times (1 - C_{effluent} / C_{influent})$

20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in the absence of a "bypass”. It does not mean economic loss caused by delays in production.

21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.

22. To "significantly contribute" to a permit violation means an "indirect discharger" must:

a. Discharge a daily pollutant loading in excess of that allowed by contract with the "Discharger" or by Federal, State, or Local law;

b. Discharge wastewater which substantially differs in nature or constituents from its average discharge;

c. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or

d. Discharge pollutants, either alone or in conjunction with pollutants from other sources that increase the magnitude or duration of permit violations.

23. "Toxic Pollutant" means any pollutant listed as toxic under Section 307 (a) (1) of the Clean Water Act or under 40 CFR Part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions V.E.).

24. “Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Board.

Attachment E – Monitoring and Reporting Program

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List of Tables

Attachment E – Monitoring and Reporting Program (MRP)

The Code of Federal Regulations §122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) §13267 and §13383 also authorize the Central Coast Regional Water Quality Control Board (Central Coast Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. General Monitoring Provisions

A. Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health (DPH), in accordance with CWC §13176, and must include quality assurance/quality control data with their reports.

B. 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 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 approval of the Central Coast Water Board.

C. 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 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 ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.

1. *A Guide to Methods and Standards for the Measurement of Water Flow*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

2. *Water Measurement Manual*, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

3. *Flow Measurement in Open Channels and Closed Conduits*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

4. *NPDES Compliance Sampling Manual*, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

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

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.

F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule (CTR) shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005) (SIP).

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 (previously M-INF)	Influent wastewater prior to treatment and following all significant inputs to the collection system of untreated wastewater and inflow and infiltration, where representative samples of wastewater influent can be obtained.
001	EFF-001 (previously M-001)	At a point where representative samples of tertiary treated wastewater effluent can be collected after all treatment and prior to contact with the receiving water.
--	RSW-001 (previously R-001)	A location upstream from Discharge Point No. 001 at V Street and Central Avenue
--	RSW-002 (previously R-002)	A location downstream approximately 20 yards from Discharge Point No. 001
--	GW-001	At the groundwater well located at the center of the southern perimeter of the Facility property line
--	GW-002	At the groundwater well located at the western perimeter of the Facility property line
--	GW-003	At the groundwater well located at 1641 West Central Avenue

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	BIO-001	Biosolids at the last point in the biosolids handling process where representative samples of residual solids from the treatment process can be obtained.

III. Influent Monitoring Requirements

A. Monitoring Location INF-001

The Discharger shall monitor influent to the Facility at Monitoring Location INF-001 as follows

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Continuous	1/Day
Biochemical Oxygen Demand (5-day @ 20°C) (BOD)	mg/L	24-hr composite	1/Month[1]
Total Suspended Solids (TSS)	mg/L	24-hr composite	1/Month

[1] BOD shall be monitored in the influent at the same time as it is monitored in the effluent.

IV. Effluent Monitoring Requirements

A. Monitoring Location EFF-001

1. The Discharger shall monitor effluent discharged at Discharge Point No. 001 at Monitoring Location EFF-001 as follows.

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Metered	1/Day
Instantaneous Maximum Flow	MGD	Metered	1/Day
Maximum Daily Flow	MGD	Metered	1/Day
Mean Daily Flow	MGD	Metered	1/Day
pH[1]	s.u.	Metered	Continuous
BOD	mg/L	24-Hour composite	1/Week
	lbs/day		
TSS	mg/L	24-Hour composite	1/Week
	lbs/day		
Settleable Solids	ml/L	Grab	5/Week
Dissolved Oxygen	mg/L	Grab	1/Week
Temperature[1]	°C	Grab	5/Week
Fecal Coliform Bacteria	MPN/100 mL	Grab	5/Week
Total Dissolved Solids (TDS)[2]	mg/L	24-Hour composite	1/Quarter

Parameter	Units	Sample Type	Minimum Sampling Frequency
Sodium[2]	mg/L	24-Hour composite	1/Quarter
Chloride[2]	mg/L	24-Hour composite	1/Quarter
Sulfate[2]	mg/L	24-Hour composite	1/Quarter
Boron[2]	mg/L	24-Hour composite	1/Quarter
Nitrate, Total (as N)	mg/L	24-Hour composite	1/Month
Nitrite, Total (as N)	mg/L	24-Hour composite	1/Quarter
Organic Nitrogen (as N)	mg/L	24-Hour composite	1/Quarter
Ammonia, Total (as N)[1]	mg/L	Grab	1/Week
Un-ionized Ammonia (as N)[1]	mg/L	Calculated	1/Week
Turbidity	NTU	24-Hour composite	1/Month
Hardness (as $CaCO_3$)	mg/L	24-Hour composite	1/Quarter
Oil and Grease	mg/L	Grab	1/Quarter[3]
Color	color units	24-Hour composite	1/Quarter
Total Phosphorus	mg/L	24-Hour composite	1/Quarter
Chronic Toxicity[4]	TUc	Grab	1/Quarter
Acute Toxicity[4]	% survival	Grab	1/Month
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	1/Quarter[5]
Aluminum	mg/L	Grab	1/Year
CTR Pollutants[6],[7]	µg/L	Grab	1/Year
Title 22 Pollutants[8],[9]	µg/L	Grab	1/Year

[1] Temperature and pH shall be measured simultaneously with the sample taken for measurement of total ammonia. Results shall be used to calculate un-ionized ammonia concentration.

[2] Compliance is based on 12-month running mean.

[3] Sampling frequency will increase to monthly if oil and grease effluent limitations are exceeded.

[4] Whole effluent acute and chronic toxicity monitoring shall be conducted according to the requirements established in sections V.A and V.B, respectfully, of this Monitoring and Reporting Program.

[5] Quarterly monitoring is required for the first year of this Order. If no violations of the effluent limitation for bis (2-ethylhexyl) phthalate are observed over that period, quarterly monitoring for the constituent may be suspended and the Discharger shall begin annual monitoring of bis (2-ethylhexyl) phthalate with other priority pollutant monitoring. If a violation of the effluent limitation is observed during the first year of monitoring, then semi-annual (2/Year) monitoring shall continue for the remainder of the term of this Order.

[6] The CTR priority pollutants are those listed by the California Toxics Rule at 40 CFR 131.38 (b) (1). These pollutants shall be monitored one time per year. Analyses, compliance determination, and reporting for these pollutants shall adhere to applicable provisions of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP). The Discharger shall instruct its analytical laboratory to establish calibration standards so that the Minimum Levels (MLs) presented in Appendix 4 of the SIP are the lowest calibrated standards. The Discharger and its analytical laboratory shall select MLs, which are below applicable water quality criteria of the CTR; and when applicable water quality criteria are below all MLs, the Discharger and its analytical laboratory shall select the lowest ML.

[7] Monitoring for the CTR pollutants in the effluent shall occur simultaneously with monitoring required for the CTR pollutants in the receiving water.

[8] The Title 22 pollutants are those for which primary Maximum Contaminant Levels (MCLs) have been established by the Department of Health Services and which are listed in Tables 64431-A and 64444-A of the California Code of Regulations, Title 22, Division 4, Chapter 15. Where these pollutants are included in other groups of pollutants (CTR Priority Pollutants), monitoring does not need to be duplicated. Analytical methods shall adhere to the Detection Limits for Purposes of Reporting (DLRs) established by Title 22 of the California Code of Regulations, Division 4, Chapter 15, section 64432 and 64445.1.

[9] Monitoring for Title 22 pollutants in the effluent shall occur simultaneously with monitoring required for the Title 22 pollutants in the receiving water.

V. Whole Effluent Toxicity Monitoring Requirements

A. Whole Effluent Acute Toxicity

1. Acute Toxicity Monitoring Requirements – Discharge Point No. 001

a. Bioassays shall be performed to evaluate the toxicity of the discharge in accordance with the following procedures unless otherwise specified by the Central Coast Water Board's Executive Officer or designee.

b. The test species given below shall be used to measure acute toxicity:

Table E-4. Approved Tests – Acute Toxicity

Species	Effect	Test Duration (days)	Reference
Fathead Minnow *(Pimephales promelas)*	Larval Survival and Growth	7	EPA/821-R-02-012 (Acute)

c. The presence of effluent acute toxicity is represented by the statistically significant mortality of the test organism in the wastewater sample compared with their mortality in the control sample using the t-test and 95 percent confidence. Monthly test results meeting these criteria will be given a “Pass” (P) rating, and those not, will be given a “Fail” (F) rating

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements – Discharge Point No. 001

a. Sampling. The Discharger shall collect grab samples of the effluent at Discharge Point No. 001 for critical life stage toxicity testing as indicated below.

b. Test Species. The test species shall include a vertebrate, an invertebrate, and an aquatic plant. After a three month screening period, monitoring may be reduced to the most sensitive species. Screening phase chronic toxicity monitoring shall be conducted with the following three species with approved test protocols.

Table E-5. Short-Term Methods for Estimating Chronic Toxicity – Fresh Water

Species	Scientific Name	Effect	Test Duration (days)
Fathead Minnow	*Pimephales promelas*	Larval Survival and Growth	7
Water Flea	*Ceriodaphnia dubia*	Survival; number of young	6 to 8 days
Alga	*Selenastrum capricornutum*	Growth Rate	4 days

The Executive Officer may change to another test species if data suggest that another test species is more sensitive or more suitable to the discharge.

c. Methodology. Sample collection, handling and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, currently Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

d. Dilution Series. Authorized dischargers shall conduct chronic toxicity tests using effluent dilutions of 100 percent, 85 percent, 70 percent, 50 percent, and 25 percent. Dilution and control waters shall be obtained from an area of the receiving waters, typically upstream, which is unaffected by the discharge. Standard dilution water can be used, if the receiving water itself exhibits toxicity or if approved by the Central Coast Water Board. If the dilution water used in testing is different from the water in which the test organisms were cultured, a second control sample using culture water shall be tested.

e. The sensitivity of test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

2. Chronic Toxicity Reporting Requirements

a. Routine Reporting. Toxicity test results for the current reporting period shall include, at a minimum, for each test:

i. Sample date(s)

ii. Test initiation date

iii. Test species

iv. End point values for each dilution (e.g., number of young, growth rate, percent survival)

v. NOEC value(s) in percent effluent

vi. IC15, IC25, IC40, and IC50 values (or EC15, EC25…etc.) as percent effluent

vii. TUc values (100/NOEC, 100/IC25, or 100/EC25)

viii. Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)

ix. NOEC and LOEC values for reference toxicant test(s)

x. IC50 or EC50 value(s) for reference toxicant test(s)

xi. Available water quality measurements for each test (pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

b. Compliance Summary. The results of the chronic toxicity testing shall be provided in the self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items listed above under section V.B.2.a, specifically item numbers i, iii, v, vi (IC25 or EC25), vii, and viii.

C. Quality Assurance

1. For the acute toxicity testing using a t-test, two dilutions shall be used, i.e., 100 percent effluent and a control (when a t-test is used instead of an LC50).

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

3. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the toxicity test references, then the permittee must resample and retest within 15 working days or as soon as possible. The retesting period begins when the Discharger collects the first sample required to complete the retest.

4. The reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method in the respective methods manuals.

D. Accelerated Monitoring Requirements

1. When acute toxicity is detected in the effluent above the effluent limitation established by this Order or when the chronic toxicity effluent limitation of 1 TUc is exceeded during regular toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring to confirm the effluent toxicity.

2. The Discharger shall implement an accelerated monitoring frequency consisting of performing three toxicity tests in a six-week period following the first failed test results.

3. If implementation of the generic Toxicity Reduction Evaluation (TRE) work plan indicates the source of the exceedance of the toxicity trigger (for instance, a temporary plant upset), then only one additional test is necessary. If exceedance of the toxicity trigger is detected in this test, the Discharger will continue with accelerated monitoring requirements or implement the Toxicity Identification and Toxicity Reduction Evaluations.

4. If none of the three tests indicated exceedance of the toxicity trigger, then the Discharger may return to the normal bioassay testing frequency.

E. Conducting Toxicity Identification Evaluations and Toxicity Reduction Evaluations

1. A Toxicity Identification Evaluation (TIE) shall be triggered if testing from the accelerated monitoring frequency indicates any of the following:

a. Two of the three accelerated toxicity tests are reported as failed tests meeting any of the conditions specified in Attachment E, section V.C.

b. The TIE shall be initiated within 15 days following failure of the second accelerated monitoring test.

c. If a TIE is triggered prior to the completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.

2. The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the USEPA which include the following:

a. Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, (USEPA, 1992a);

b. Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition (USEPA, 1991a);

c. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Sampling Exhibiting Acute and Chronic Toxicity (USEPA, 1993a); and

d. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (USEPA, 1993b).

3. As part of the TIE investigation, the Discharger shall be required to implement its TRE work plan. The Discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified. A failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of numerical effluent limitations for chronic toxicity in a permit or appropriate enforcement action. Recommended guidance in conducting a TRE include the following:

a. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999, EPA/833B-99/002; and

b. Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program dated March 27, 2001, USEPA Office of Wastewater Management, Office of Regulatory Enforcement.

VI. Land Discharge Monitoring Requirements – Not Applicable

VII. Reclamation Monitoring Requirements – Not Applicable

VIII. Receiving Water Monitoring Requirements

A. Receiving Water Monitoring – RSW-001 and RSW-002

The Discharger shall monitor the receiving water at Monitoring Stations RSW-001 RSW-002 as follows:

Table E-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]
Flow	MGD	Estimated	1/Quarter
pH	s.u.	Grab	1/Quarter
Temperature	°C	Grab	1/Quarter
Turbidity	NTU	Grab	1/Quarter
Color	color units	Grab	1/Quarter
Dissolved Oxygen	mg/L	Grab	1/Quarter
TDS	mg/L	Grab	1/Quarter
Chloride	mg/L	Grab	1/Quarter
Sulfate	mg/L	Grab	1/Quarter
Sodium	mg/L	Grab	1/Quarter
Boron	mg/L	Grab	1/Quarter
Fecal Coliform[2]	MPN/100 mL	Grab	1/Quarter
Nitrate, Total (as N)	mg/L	Grab	1/Quarter
Methylene Blue Activated Substances	mg/L	Grab	1/Year[3]
Ammonia, Total (as N)	mg/L	Grab	1/Quarter
Un-ionized Ammonia (as N)	mg/L	Calculated	1/Quarter
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Quarter
Acute Toxicity	Pass/Fail	Grab	1/Quarter[4]
CTR Pollutants[5],[6]	µg/L	Grab	1/Year
Title 22 Pollutants[7],[8]	µg/L	Grab	1/Year

[1] Monitoring of RSW-001 is only necessary when there are observable flows upstream. During quarters where there is no upstream flow, the Discharger shall state so in the monitoring report.
[2] Based on a minimum of 5 samples for any 30-day period.
[3] Monitoring frequency shall be decreased to twice during the permit cycle if initial sample results do not exceed Basin Plan Objectives set forth in Chapter 3, Section II.A.2.a.
[4] Acute toxicity testing in receiving water shall be conducted concurrently with acute toxicity testing in effluent.
[5] The CTR priority pollutants are those listed by the California Toxics Rule at 40 CFR 131.38 (b) (1). These pollutants shall be monitored one time per year. Analyses, compliance determination, and reporting for these pollutants shall adhere to applicable provisions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).
[6] Monitoring of receiving water for the CTR pollutants shall occur simultaneously with effluent monitoring for the CTR pollutants.
[7] The Title 22 pollutants are those for which primary MCLs have been established by the Department

Parameter	Units	Sample Type	Minimum Sampling Frequency[1]

of Health Services and which are listed in sections 64431-A and 64444-A of the California Code of Regulations, Title 22, Division 4, Chapter 15. Where these pollutants are also identified as CTR Priority Pollutants, monitoring does not need to be duplicated.

[8] Monitoring of receiving water for the Title 22 Pollutants shall occur simultaneously with effluent monitoring for Title 22 pollutants.

B. Groundwater Monitoring – GW-001, GW-002, and GW-003

The Discharger shall monitor groundwater at GW-001, GW-002, and GW-003 as follows. After depth to groundwater has been measured, wells shall be purged before samples are collected for analysis.

Table E-7. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	Feet	Measured	2/Year[1]
Nitrate, Total (as N)	mg/L	Grab	2/Year[1]
TDS	mg/L	Grab	2/Year[1]
Sodium	mg/L	Grab	2/Year[1]
Chloride	mg/L	Grab	2/Year[1]
Sulfate	mg/L	Grab	2/Year[1]
Boron	mg/L	Grab	2/Year[1]
pH	s.u.	Grab	2/Year[1]
Title 22 Pollutants[2]	µg/L	Grab	2/Year[1]

[1] Pollutants shall be monitored once in April and once in October.

IX. Other Monitoring Requirements

A. Biosolids Monitoring, Reporting, and Notification – BIO-001

The Discharger shall collect a representative sample of residual solids (biosolids) from the last point in the handling process and perform the following analyses:

Table E-8. Biosolids Monitoring Requirements

Constituent	Units	Type of Sample	Sample/Analysis Frequency
Quantity Removed	tons or yds^3	Measured	1/Year
Location of Reuse/Disposal	General Public or Specific Site	--	1/Year
Moisture Content	Percent	Grab	1/Year
Total Kjedldahl Nitrogen	mg/kg[1]	Grab	1/Year
Ammonia, Total (as N)	mg/kg[1]	Grab	1/Year
Nitrate, Total (as N)	mg/kg[1]	Grab	1/Year
Total Phosphorus	mg/kg[1]	Grab	1/Year
pH	s.u.	Grab	1/Year

Constituent	Units	Type of Sample	Sample/Analysis Frequency
Oil and Grease	mg/kg[1]	Grab	1/Year
Arsenic, Total Recoverable	mg/kg[1]	Grab	1/Year
Cadmium, Total Recoverable	mg/kg[1]	Grab	1/Year
Chromium, Total	mg/kg[1]	Grab	1/Year
Copper, Total Recoverable	mg/kg[1]	Grab	1/Year
Lead, Total Recoverable	mg/kg[1]	Grab	1/Year
Mercury, Total Recoverable	mg/kg[1]	Grab	1/Year
Molybdenum, Total Recoverable	mg/kg[1]	Grab	1/Year
Nickel, Total Recoverable	mg/kg[1]	Grab	1/Year
Selenium, Total Recoverable	mg/kg[1]	Grab	1/Year
Zinc, Total Recoverable	mg/kg[1]	Grab	1/Year

[1] Results shall be reported on a dry weight basis.

The following information shall be submitted with the Annual Report required by the Central Coast Water Board. Adequate detail shall be included to characterize biosolids in accordance with 40 CFR 503.

1. Annual biosolids production in dry tons.

2. Percent solids content of biosolids which leave the site.

3. A schematic drawing showing handling facilities, including temporary and final storage areas. Include a narrative description of solids treatment and performance.

4. A description of disposal methods, including the following information as applicable related to the disposal methods used at the Facility.

a. For landfill disposal include: tons placed in the landfill; the Central Coast Water Board Waste Discharge Requirements (WDR) numbers that regulate the landfills used; the present classification of the landfill; and the names and locations of the landfills which receive biosolids.

b. For land application include: tons applied to the land; the location of the land applications sites; the Central Coast Water Board's WDR numbers that regulate the land application sites; the application rates in lbs/acre/year (specify the weight basis, e.g., dry weight or percent solids); and the subsequent uses of the land.

B. Pretreatment Monitoring

By February 1 of each year, the Discharger shall submit an Annual Report to the State Water Board, Central Coast Water Board, and USEPA describing the Discharger's pretreatment activities over the previous 12 months. In the event that the Discharger is not in compliance with any condition or requirement of this Order and permit pertaining to pretreatment, including any noncompliance with pretreatment audit or compliance

inspection requirements, then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger will comply with such conditions and requirements. This report shall contain, but not be limited to, the following information:

1. A summary of analytical results from representative, flow-proportioned, 24-hour composite sampling of the plant's effluent and sludge as provided in the relevant sections of this Monitoring and Reporting Program. The Discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which the Discharger believes may be causing or contributing to interference, pass-through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto.

2. A discussion of upset, interference, or pass-through incidents, if any, at the POTW, which the Discharger knows or suspects, were caused by industrial users of the POTW system. The discussion shall include the reasons why incidents occurred, corrective actions taken and, if known, name and address of the industrial user(s), responsible. Discussions shall also include a review of applicable pollutant limitations to determine whether any additional limitations or changes to existing requirements may be necessary to prevent pass-through, interference, or noncompliance with sludge disposal requirements.

3. The cumulative number of industrial users that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.

4. An updated list of the Discharger's industrial users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to Federal Categorical Standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the Federal Categorical Standards. The Discharger shall also list the non-categorical industrial users that are subject only to local discharge limitations. The Discharger shall characterize the compliance status of each industrial user by employing the following descriptions.

a. In compliance with Baseline Monitoring Report requirements (where applicable);

b. Consistently achieving compliance;

c. Inconsistently achieving compliance;

d. Significantly violated applicable pretreatment requirements defined by 40 CFR 403.8 (f)(2)(vii);

e. On a schedule to achieve compliance (include the date final compliance is required);

f. Not achieving compliance and not on a compliance schedule; or,

g. The Discharger does not know the industrial user's compliance status.

A report describing the compliance status of any industrial user characterized by descriptions in Items iv. 4(c) through (g), above, shall be submitted quarterly from the annual report date to the State Water Board, Central Coast Water Board, and USEPA. The report shall identify the specific compliance status of each such industrial user. This quarterly reporting requirement shall commence upon issuance of this Order. Quarterly reports shall be submitted May 1, August 1, and November 1. The fourth quarter report shall be incorporated in the Annual Report (February 1). Quarterly reports shall briefly describe POTW compliance with audit/pretreatment compliance inspection requirements. If none of the aforementioned conditions exist, at a minimum, a letter indicating that all industries are in compliance and no violations or changes to the pretreatment program have occurred during the quarter must be submitted.

h. A summary of inspection and sampling activities conducted by the Discharger during the past year to gather information and data regarding industrial users. The summary shall include:

i. Names and addresses of the industrial users subject to surveillance by the Discharger and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and

ii. Conclusions or results from the inspection or sampling of each industrial user.

i. A summary of compliance and enforcement activities during the past year. The summary shall include names and addresses of the industrial users affected by the following actions.

i. Warning letters or notices of violation regarding the industrial users' apparent noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the Federal Categorical Standards or local discharge limitations;

ii. Administrative Orders regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;

iii. Civil actions regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned the Federal Categorical Standards or local discharge limitations;

iv. Criminal actions regarding the industrial users' noncompliance with Federal Categorical Standards or local discharge limitations. For each industrial user, identify whether the violation concerned Federal Categorical Standards or local discharge limitations;

v. Assessment of monetary penalties. For each industrial user, identify the amount of the penalties;

vi. Restriction of flow to the POTW; or

vii. Disconnection from discharge to the POTW.

j. Description of any significant changes in operating the pretreatment program, which differ from the information in the Discharger's approved POTW Pretreatment Program including, but not limited to, changes concerning:

i. The program's administrative structure;

ii. Local industrial discharge limitations;

iii. Monitoring program and monitoring frequencies;

iv. Legal authority or enforcement policy;

v. Finding mechanisms;

vi. Resource requirements; or

vii. Staffing levels.

k. A summary of the annual pretreatment budget, including costs of pretreatment program functions and equipment purchases.

l. A summary of public participation activities to involve and inform the public.

m. A description of any changes in sludge disposal methods and a discussion of any concerns not described elsewhere in the report.

Reports shall be signed by a principal Executive Officer, ranking elected official, or other duly authorized employee if such employee is responsible for overall operation of the POTW. Signed copies of these reports shall be submitted to the Regional Administrator and the State at the following addresses:

Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

State Water Board
Division of Water Quality, Pretreatment Unit
1001 I Street
Sacramento, CA 95812

Pretreatment and Compliance Section
USEPA Region 9
Attn: W-5-2
75 Hawthorne Street
San Francisco, CA 94105

C. Salt and Nutrient Management Plan Reporting

By February 1 of each year, the Discharger shall submit an Annual Report describing salt and nutrient reduction efforts. The report shall include, at a minimum:

1. Salt Component

a. Calculations of annual salt mass discharged to (influent) and from (effluent) the wastewater treatment or recycling facility with a description of contributing sources;

b. Analysis of wastewater evaporation/salt concentration effects;

c. Analysis of groundwater monitoring results for salts constituents and associated trends;

d. Analysis of potential impacts of salt loading on the groundwater basin (focusing on the relationship between salt concentration in the discharge and the Basin Plan water quality objectives);

e. A summary of existing salt reduction measures; and,

f. Recommendations and time schedules for implementation of any additional salt reduction measures.

2. Nutrient Component

a. Calculations of annual nitrogen mass (for all identified species) discharged to (influent) and from (effluent) the wastewater treatment or recycling facility with a description of contributing sources;

b. Analysis of wastewater treatment facility ability to facilitate nitrification and denitrification, or other means of nitrogen removal;

c. Analysis of groundwater monitoring results for nitrogen constituents and trends;

d. Analysis of potential impacts of nitrogen loading on the groundwater basin (focusing on the relationship between salt concentration in the discharge and the Basin Plan water quality objectives);

e. A summary of existing nitrogen loading reduction measures; and,

f. Recommendations and time schedules for implementation of any additional nitrogen loading reduction measures.

X. 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.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall submit Self-Monitoring Reports (SMRs) electronically using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). 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 and annual 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. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On …	Monitoring Period	SMR Due Date
Continuous	December 10, 2011	All	First day of the second calendar month following month of sampling.
1/Day	December 10, 2011	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	
1/Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	
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	1st day of calendar month through last day of calendar month	

Sampling Frequency	Monitoring Period Begins On …	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	January 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
1/Year Pretreatment Program Biosolids Report Salt/Nutrient Management Study	January 1 following (or on) permit effective date	January 1 through December 31	February 1
1X/Permit Term	Between 180 and 365 days prior to Order expiration date	Permit term	The earliest of May 1, Aug 1, Nov 1, or Feb 1 following the monitoring event

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 Part 136.

   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 reported 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 priority 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 Central Coast and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

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

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 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.

c. In the event that electronic submittal via CIWQS is not available, SMRs must be submitted to the Central Coast Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401

C. Discharge Monitoring Reports (DMRs)

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

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

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

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

D. Other Reports

1. The Discharger shall report the results of any special monitoring, TREs, or other data or information that results from the Special Provisions, section VI.C, of the Order. The Discharger shall submit such reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date..

ATTACHMENT F – FACT SHEET

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List of Tables

Attachment F – Fact Sheet

As described in section II of the 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	3 420105001
Discharger	City of Lompoc
Indirect Dischargers	Vandenberg Air Force Base Vandenberg Village Community Services District
Name of Facility	City of Lompoc Regional Wastewater Reclamation Plant
Facility Address	1801 West Central Avenue
	Lompoc, CA 93436
	Santa Barbara County
Facility Contact, Title and Phone	Tim Smith, Acting Wastewater Superintendent, (805) 875-8415
Authorized Person to Sign and Submit Reports	Tim Smith, Acting Wastewater Superintendent, (805) 875-8415
Mailing Address	100 Civic Center Plaza, P.O. Box 8001, Lompoc, CA 93438
Billing Address	100 Civic Center Plaza, P.O. Box 8001, Lompoc, CA 93438
Type of Facility	Publically Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	Yes
Reclamation Requirements	No
Facility Permitted Flow	5.0 million gallons per day (MGD) (average dry weather flow)
Facility Design Flow	5.5 MGD (average dry weather flow)
Watershed	Santa Ynez River
Receiving Waters	San Miguelito Creek
Receiving Water Type	Inland, fresh water

A. The City of Lompoc (hereinafter Discharger) is the owner and operator of the City of Lompoc Regional Wastewater Reclamation Plant (hereinafter Facility), a wastewater collection, treatment, and disposal system which provides sewerage service for the City of Lompoc, Vandenberg Air Force Base, and the Vandenberg Village Community Services District (VVCSD) in Santa Barbara County.

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 tertiary treated wastewater to San Miguelito Creek which is tributary to the Santa Ynez River, a water of the United States, and is currently regulated by Order R3-2006-0037, which was adopted on July 7, 2006, and expired on July 7, 2011. The terms and conditions of the current Order will be automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its WDRs and NPDES permit on January 6, 2011. Additional information was requested and received on January 20, 2011.

II. Facility Description

A. Description of Wastewater and Biosolids Treatment and Controls

The City of Lompoc Regional Wastewater Reclamation Plant is a municipal wastewater collection, treatment, and disposal facility that discharges tertiary treated wastewater to San Miguelito Creek. Located at the northwest corner of the City of Lompoc adjacent to San Miguelito Creek, the Facility provides sewerage service to approximately 53,050 municipal and industrial users from the City of Lompoc, Vandenberg Air Force Base, and Vandenberg Village Community Services District (VVCSD). The wastewater generated from the service area is approximately 90 percent domestic and 10 percent from commercial, light industrial and military sources. The permitted dry weather flow capacity of the Facility is 5.0 MGD, and during the last five years the Facility treated an average of 2.9 MGD before major facility upgrades were completed in November 2009 and 3.5 MGD after upgrades were completed.

The Discharger currently operates and retains responsibility for the wastewater collection system within the City of Lompoc, which includes two lift stations. Vandenberg Air Force Base and Vandenberg Village Community Services District retain ownership and direct responsibility for wastewater collection and transport up to the point of discharge to the Facility.

In September 2004, the Discharger began work to upgrade the Facility to discharge tertiary treated wastewater. Upgrades were completed in November 2009. In the upgraded facility, raw influent entering the Facility is pumped into the headworks where solids are separated out through screens. The screened influent is then pumped to the aerated grit tank where heavy materials are settled out for removal. The water then enters the two parallel oxidation ditches for biological nitrification and denitrification. The water then enters the secondary clarifiers and then the tertiary filters. The filtered effluent then enters the UV disinfection chambers before being discharged into San Miguelito Creek at Discharge Point No. 001. The Facility also maintains an emergency retention basin for use during events of disinfection maintenance, spills, and other emergency situations.

Biosolids from the Facility are thickened in two dissolved air floatation thickeners before being fed to aerobic digesters. The digested material is transferred to a facultative lagoon before being dried in sludge drying beds. The dried sludge is then shipped offsite for composting.

B. Discharge Points and Receiving Waters

Tertiary treated wastewater is discharged from Discharge Point No. 001 to San Miguelito Creek, approximately 400 yards upstream of its confluence with the Santa Ynez River. During dry months, the combined flow of San Miguelito Creek and effluent from the Facility is the only flow in the Santa Ynez River downstream of the Facility. During high flows, the Santa Ynez River periodically flows over its banks combining with the San Miguelito Creek so that discharge from the Facility is directly to the Santa Ynez River. Discharge Point No. 001 to the San Miguelito Creek is located at 34° 39' 47" N Latitude; 120° 28' 55" W Longitude. No dilution has been granted for this discharge.

C. Summary of Existing Requirements and Effluent Characterization

Effluent limitations contained in the existing Order for discharges from Discharge Point No. 001 and representative monitoring data for Monitoring Location EFF-001, for the term of the previous Order, are presented in the following tables.

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (September 2006 through July 2010)[1]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	5.0[2]	--	--	3.75	--	--
Biochemical Oxygen Demand (5-day @ 20°C) (BOD)	mg/L	30	45	90	20	24	24
	lbs/day	1,250	1,880	3,750	NA	NA	NA
Total Suspended Solids (TSS)	mg/L	30	45	90	21	26	26
	lbs/day	1,250	1,880	3,750	NA	NA	NA
Settleable Solids	mL/L	0.1	--	0.3	0.15	--	0.4
Turbidity	NTU	10	--	20	14	--	14
Oil and Grease	mg/L	5.0	--	10	7		12
Un-ionized Ammonia (as N)	mg/L	--	0.025	--	--	0.059	--
pH	s.u.	6.5 - 8.3[3]			6.6 – 7.9		
Total Dissolved Solids (TDS)	mg/L	1,100[4]	--	--	1,183[5]	--	--
Chloride	mg/L	250[4]	--	--	217[5]	--	--
Sodium	mg/L	270[4]	--	--	269[5]	--	--
Nitrate (as N)	mg/L	--	--	36[6]	--	--	29
Nitrate (as N)	mg/L	--	--	10[7]	--	--	[8]
Chlorine, Total Residual	mg/L	--	--	[9]	--	--	2.3[10]
Acute Toxicity	% Survival	--	--	[11]	--	--	[12]
Chronic Toxicity	TUc	--	--	1.0	--	--	4.0
Copper	µg/L	18	--	37	13	--	13
Mercury	µg/L	0.05	--	0.10	0.04	--	0.04

Parameter	Units	Effluent Limitation			Monitoring Data (September 2006 through July 2010)[1]		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Molybdenum	µg/L	10	--	20	17	--	17
Chlorodibromomethane	µg/L	0.4	--	0.8	2.1	--	2.1
Dichlorobromomethane	µg/L	0.6	--	1.1	6.5	--	6.5

NA = Not Available

[1] Data collected before and after the upgrades to facility processes. A majority of the effluent limitation exceedances occurred in November 2009, prior to facility upgrades.

[2] Average dry weather flow.

[3] When the Discharger continuously monitors effluent pH, levels shall be maintained within specified ranges 99 percent of the time. To determine compliance 99 percent compliance, the following conditions shall be met.

- The total time during which pH is outside the range of 6.5 – 8.3 shall not exceed 7 hours and 26 minutes in any calendar month;
- No single excursion from the range of 6.5 – 8.3 shall exceed 30 minutes;
- No single excursion shall fall outside the range of 6.0 – 9.0; and
- When continuous monitoring is not being performed, standard compliance guidelines shall be followed (i.e., between 6.5 and 8.3 at all times, measured daily).

[4] Compliance is based on a 12-month running mean.

[5] 12-month running mean.

[6] Interim effluent limitation established in a time schedule order (TSO), Order No. R3-2006-0090. Interim effluent limitation effective until July 7, 2011.

[7] Final effluent limitation, effective after July 7, 2011.

[8] No data available after July 7, 2011.

[9] Compliance determination for total chlorine residual shall be based on 99 percent compliance. To determine 99 percent compliance with effluent limitations for total chlorine residual, the following conditions shall be satisfied:

- The total time during which the total chlorine residual values are above 0.02 mg/L (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month;
- No individual excursion from 0.02 mg/L shall exceed 30 minutes;
- No individual excursion shall exceed 0.1 mg/L; and,
- When continuous monitoring is not being used, standard compliance guidelines shall be followed (i.e. below 0.02 mg/L at all times, measure once a day according to standard provisions).

If grab sampling is used instead of continuous analysis:

- The total number of excursion above 0.02 mg/L shall be no more than one individual excursion in any calendar month;
- No individual excursion from 0.1 mg/L shall exceed 30 minutes, and must include results of no more than 2 grab samples; and
- No individual excursion shall exceed 2.0 mg/L.

[10] The Central Coast Water Board amended Order No. R3-2006-0037 to eliminate chlorine monitoring requirements on February 4, 2010 because the Facility no longer uses chlorine for disinfection. All chlorine exceedances occurred before February 2010.

[11] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared, using a t-test (or another test constituent with the procedures described by *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organism*, Fifth Edition, USEPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition), to the survival of control organisms.

[12] Minimum percent survival reported during the term of the previous Order for the Fathead Minnow was 80 percent.

D. Compliance Summary

1. The following effluent limitation violations were observed for the Discharger from September 2006 to July 2011:

Table F-3. Summary of Compliance History

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
9/8/2006	3rd Quarter 2006	Maximum Daily	Total Residual Chlorine	2.3	0.1	mg/L
9/22/2006	3rd Quarter 2006	Maximum Daily	Settleable Solids	0.4	0.3	mg/L
9/30/2006	3rd Quarter 2006	Average Monthly	Settleable Solids	0.15	0.1	mg/L
10/11/2006	4th Quarter 2006	Maximum Daily	Total Chlorine Residual	1.1	0.1	mg/L
10/26/2006	4th Quarter 2006	Maximum Daily	Chronic Toxicity	2	1	TUc
12/14/2006	4th Quarter 2006	Average Monthly	Turbidity	14	10	NTU
1/11/2007	1st Quarter 2007	Maximum Daily	Chronic Toxicity	2	1.0	TUc
1/24/2007	1st Quarter 2007	Maximum Daily	Chronic Toxicity	2	1.0	TUc
6/9/2007	2nd Quarter 2007	Maximum Daily	Chronic Toxicity	>4.0	1.0	TUc
6/25/2007	2nd Quarter 2007	Maximum Daily	Chronic Toxicity	>4.0	1.0	TUc
7/11/2007	3rd Quarter 2007	Maximum Daily	Chronic Toxicity	>4.0	1.0	TUc
7/20/2007	3rd Quarter 2007	Maximum Daily	Total Chlorine Residual	0.8	0.1	mg/L
8/13/2007	3rd Quarter 2007	Maximum Daily	Total Chlorine Residual	1.1	0.1	mg/L
8/15/2007	3rd Quarter 2007	Maximum Daily	Chronic Toxicity	4	1.0	TUc
9/10/2007	3rd Quarter 2007	Maximum Daily	Total Chlorine Residual	1.35	0.1	mg/L
9/17/2007	3rd Quarter 2007	Maximum Daily	Total Chlorine Residual	1.97	0.1	mg/L
10/3/2007	4th Quarter 2007	Maximum Daily	Chronic Toxicity	4	1.0	TUc
10/9/2007	4th Quarter 2007	12-month Running Mean	TDS	1,119	1,100	mg/L
11/15/2007	4th Quarter 2007	Maximum Daily	Acute Toxicity	Fail	[2]	--
11/29/2007	4th Quarter 2007	Maximum Daily	Total Chlorine Residual	0.2	0.1	mg/L
12/9/2007	4th Quarter 2007	Maximum Daily	Total Chlorine Residual	1.45	0.1	mg/L
1/11/2008	1st Quarter 2008	12-month Running Mean	TDS	1,126	1,100	mg/L
1/16/2008	1st Quarter 2008	Maximum Daily	Chronic Toxicity	4.0	1.0	TUc
2/13/2008	1st Quarter 2008	Maximum Daily	Chronic Toxicity	2.0	1.0	TUc
4/2/2008	2nd Quarter 2008	12-month Running Mean	TDS	1,147	1,100	mg/L
4/16/2008	2nd Quarter 2008	Maximum	Chronic Toxicity	4.0	1.0	TUc

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
		Daily				
4/30/2008	2nd Quarter 2008	Maximum Daily	Chronic Toxicity	>4.0	1.0	TUc
7/8/2008	3rd Quarter 2008	12-month Running Mean	TDS	1,181	1,100	mg/L
7/15/2008	3rd Quarter 2008	Average Monthly	Dichlorobromomethane	1.3	0.6	µg/L
7/16/2008	3rd Quarter 2008	Maximum Daily	Chronic Toxicity	4.0	1.0	TUc
8/6/2008	3rd Quarter 2008	Maximum Daily	Chronic Toxicity	1.18	1.0	TUc
9/11/2008	3rd Quarter 2008	Maximum Daily	Total Chlorine Residual	0.45	0.1	mg/L
10/9/2008	4th Quarter 2008	12-month Running Mean	TDS	1,169	1,100	mg/L
10/14/2008	4th Quarter 2008	Monthly Average	Oil and Grease	6.0	5.0	mg/L
10/5/2008	4th Quarter 2008	12-month Running Mean	TDS	1,179	1,100	mg/L
11/12/2008	4th Quarter 2008	Maximum Daily	Chronic Toxicity	2.0	1.0	TUc
1/15/2009	1st Quarter 2009	Maximum Daily	Chronic Toxicity	4.0	1.0	TUc
2/22/2009	1st Quarter 2009	Maximum Daily	Total Chlorine Residual	0.96	0.1	mg/L
4/2/2009	2nd Quarter 2009	12-month Running Mean	TDS	1,171	1,100	mg/L
4/8/2009	2nd Quarter 2009	Maximum Daily	Chronic Toxicity	2.0[3]	1.0	TUc
4/21/2009	2nd Quarter 2009	Maximum Daily	Oil and Grease	12	10	mg/L
4/21/2009	2nd Quarter 2009	Average Monthly	Oil and Grease	7.0	5..0	mg/L
5/25/2009	2nd Quarter 2009	Average Weekly	Un-ionized Ammonia	0.059	0.025	mg/L
6/16/2009	2nd Quarter 2009	Average Weekly	Un-ionized Ammonia	0.046	0.025	mg/L
7/15/2009	3rd Quarter 2009	12-month Running Mean	TDS	1,134	1,100	mg/L
7/21/2009	3rd Quarter 2009	Average Monthly	Chlorodibromomethane	2.1	0.4	µg/L
7/21/2009	3rd Quarter 2009	Maximum Daily	Chlorodibromomethane	2.1	0.6	µg/L
7/21/2009	3rd Quarter 2009	Average Monthly	Dichlorobromomethane	6.5	0.6	µg/L
7/21/2009	3rd Quarter 2009	Maximum Daily	Dichlorobromomethane	6.5	1.1	µg/L
7/22/2009	3rd Quarter 2009	Maximum Daily	Chronic Toxicity	1.18	1.0	TUc
7/31/2009	3rd Quarter 2009	Monthly	Oil and Grease	6.0	5.0	mg/L

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
		Average				
10/9/2009	4th Quarter 2009	12-month Running Mean	TDS	1,127	1,100	mg/L
10/28/2009	4th Quarter 2009	Maximum Daily	Chronic Toxicity	1.18	1.0	TUc
12/7/2009	4th Quarter 2009	Daily Minimum	pH	6.3	6.5	s.u.
12/8/2009	4th Quarter 2009	Daily Minimum	pH	6.3	6.5	s.u.
12/9/2009	4th Quarter 2009	Daily Minimum	pH	6.3	6.5	s.u.
12/10/2009	4th Quarter 2009	Daily Minimum	pH	6.4	6.5	s.u.
12/31/2009	4th Quarter 2009	Daily Minimum	pH	6.3	6.5	s.u.
4/7/2010	2nd Quarter 2010	Maximum Daily	Chronic Toxicity	4.0[4]	1.0	TUc
7/14/2010	3rd Quarter 2010	Maximum Daily	Chronic Toxicity	2.0[5]	1.0	TUc
10/13/2010	4th Quarter 2010	Maximum Daily	Chronic Toxicity	1.43	1.0	TUc

[1] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared, using a t-test, to the survival of control organisms.
[2] Resampled on 4/22/2009, with a result of 4 TUc.
[3] Re-sampled on 4/14/2010, with a result of 4 TUc.
[4] Re-sampled on 7/28/2010, with a result of 4 TUc.

E. Planned Changes

In June 2009, it was observed that the dissolved oxygen concentration in the oxidation ditches was falling well below the design criteria and total nitrogen removal was less than expected due to undersized blowers. To correct this issue, the undersized blowers were replaced with higher volumetric blowers. However, the new blowers were oversized, resulting in elevated dissolved oxygen concentrations above design values in the oxidation ditches. Currently, design engineers are in the process of redesigning new blowers for improved performance and plan to have them online by mid-2011.

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 federal Clean Water Act (CWA) §402 and implementing regulations adopted by the United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with §13370). It shall serve as an 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 Water Code (commencing with §13260).

B. California Environmental Quality Act (CEQA)

Pursuant to Water Code §13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code §21100 - through §21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) has adopted a Water Quality Control Plan (Basin Plan) for the Central Coast Region that designates beneficial uses, establishes water quality objectives (WQOs), and contains implementation programs and policies to achieve those objectives for receiving waters addressed through the Plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses established by the Basin Plan for San Miguelito Creek and the Santa Ynez River are presented below.

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Use(s)
001	San Miguelito Creek	• Municipal and domestic water supply (MUN) • Agricultural supply (AGR) • Groundwater recharge (GWR) • Water contact recreation (REC-1) • Non-contact water recreation (REC-2) • Wildlife habitat (WILD) • Cold fresh water habitat (COLD) • Warm fresh water habitat (WARM) • Spawning, reproduction, and/or early development (SPWN) • Commercial and sport fishing (COMM)

Discharge Point	Receiving Water	Beneficial Use(s)
From San Miguelito Creek	Santa Ynez River	• Municipal and domestic water supply (MUN) • Agricultural supply (AGR) • Industrial process supply (PRO) • Industrial service supply (IND) • Groundwater recharge (GWR) • Water contact recreation (REC-1) • Non-contact water recreation (REC-2) • Wildlife habitat (WILD) • Cold fresh water habitat (COLD) • Warm fresh water habitat (WARM) • Migration of aquatic organisms (MIGR) • Spawning, reproduction, and/or early development (SPWN) • Rare, threatened, or endangered species (RARE) • Freshwater replenishment (FRSH) • Commercial and sport fishing (COMM)

Groundwater throughout the Central Coast Region, except for that found in the Soda Lake Sub-Basin, is suitable for:

- Agricultural water supply;
- Municipal and domestic water supply; and
- Industrial supply

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control 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. This plan contains temperature objectives for inland surface waters.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. T hese rules contain water quality criteria for priority pollutants that are applicable to the receiving water for discharges from the Facility.

4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters,*

Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Central Coast Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control that are applicable to discharges to the San Miguelito Creek and Santa Ynez River.

Requirements of this Order implement the SIP.

5. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000), codified at 40 CFR 131.21] 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.

6. **Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require 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 federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Coast Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

7. **Anti-backsliding Requirements.** CWA §402(o)(2) and §303(d)(4) and NPDES 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. As discussed in section IV.D.1 of this Fact Sheet, effluent limitations and other requirements established by this Order satisfy applicable anti-backsliding provisions of the CWA and NPDES regulations.

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

CWA §303(d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all §303(d) listed water bodies and pollutants, the Central Coast Water Board must develop and implement Total Maximum Daily Loads (TMDLs)

that will specify Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for non-point sources.

The USEPA approved the State's 2010 §303(d) list of impaired water bodies on November 12, 2010. The 2010 303(d) list identifies San Miguelito Creek as being impaired for chloride, sodium, temperature, and pH. Additionally, the 2010 §303(d) list identifies the Santa Ynez River below the City of Lompoc as being impaired for chloride, E. coli, fecal coliform, low dissolved oxygen, nitrate, sedimentation/siltation, sodium, temperature, and total dissolved solids.

TMDLs establish WLAs for point source and LAs for non-point sources and are intended to achieve the water quality standards for the impaired waterbodies. Currently, there are no TMDLs applicable to the Facility. According to the 2010 §303(d) list, these TMDLs are scheduled for completion by January 1, 2021.

E. Other Plans, Polices and Regulations

1. **Storm Water Management.** For the control of storm water discharged from the site of the wastewater treatment facilities, the Order requires the Discharger to seek authorization to discharge under and meet the requirements of the State Water Resource Control Board's Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*, if applicable.

2. **Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ).** The General Permit, adopted on May 2, 2006, is applicable to all "federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California". The purpose of the General Permit is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. If applicable, the Discharger must seek coverage under the General Permit and comply with its requirements.

3. **Recycled Water Policy.** A priority of the Strategic Plan Update 2008-2012 for the Water Boards includes a priority to increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year, in excess of 2002 levels, by 2015, and ensure adequate water flows for fish and wildlife habitat. The State Water Board adopted the Recycled Water Policy via Resolution No. 2009-0011 on February 3, 2009[1]. The Recycled Water Policy is intended to support the Strategic Plan priority to Promote Sustainable Local Water Supplies. Increasing the acceptance and promoting the use of recycled water is a means towards achieving sustainable local water supplies and can result in

[1] http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2009/rs2009_0011.pdf

reduction in greenhouse gases, a significant driver of climate change. The Recycled Water Policy is also intended to encourage beneficial use of, rather than solely disposal of, recycled water.

The Recycled Water Policy calls for the development of regional groundwater basin/sub-basin salt/nutrient management plans. The State Water Board recognizes that, pursuant to the letter from statewide water and wastewater entities[2] dated December 19, 2008 and attached to Resolution No. 2009-0011 adopting the Policy, the local water and wastewater entities, together with local salt/nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/sub-basin in California, including compliance with CEQA and participation by Central Coast Water Board staff.

It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual projects. The Central Coast Water Board finds that a combination of regional management plans and individual or programmatic project requirements may be necessary to protect beneficial uses.

One of the primary components of the required regional salt/nutrient management plans is the development and implementation of groundwater basin/sub-basin monitoring programs. As specified in the Recycled Water Policy, salt/nutrient contributing stakeholders will be responsible for conducting, compiling, and reporting the monitoring data once the regional groundwater monitoring programs are developed.

A large number of technical reports and data contained within Central Coast Water Board files document widespread and increasing salt and nutrient impacts within the groundwater basins throughout the Central Coast Region, including the Lompoc Plain sub area of the Santa Ynez groundwater unit.

Assembly Bill No. 1366, approved on October 11, 2009, allows local agencies in California, to "control salinity inputs from residential self-regenerating water softeners to protect the quality of the waters of the State, if the appropriate regional board makes a finding that the control of residential salinity input will contribute to the achievement of water quality objectives". Actions to control salinity inputs authorized are included in the Assembly Bill No. 1366.

The City of Lompoc and VVCSD wastewater contributions to the Facility influent contain salts. The Discharger's 2011 Salinity Management Study and Plan identifies self-regenerating water softeners as a source of high wastewater salinity. More

[2] http://www.waterboards.ca.gov/board_info/agendas/2009/feb/020309_7_%20rw_policy_funding_letter.pdf

specifically, the Salinity Management Study and Plan finds that residential water softeners contribute approximately 2 percent of the TDS loading, 5 percent of the chloride loading, and 7 percent of the sodium loading to Facility influent. Additionally, the Salinity Management Study and Plan estimates that the Facility influent would need a 15 percent reduction in TDS, 61 percent reduction in chloride, and a 54 percent reduction in sodium to meet applicable surface WQOs for salinity. Therefore, the Central Coast Water Board finds that control of residential self-regenerating water softeners will contribute to the achievement of WQOs.

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. NPDES regulations establish two principal bases for effluent limitations. At 40 CFR 122.44 (a) permits are required to include applicable technology-based limitations and standards; and at 40 CFR 122.44 (d) permits are required to 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. When numeric water quality objectives have not been established, but a discharge has the reasonable potential to cause or contribute to an excursion above a narrative criterion, WQBELs may be established using one or more of three methods described at 40 CFR 122.44 (d) - 1) WQBELs may be established using a calculated water quality criterion derived from a proposed State criterion or an explicit State policy or regulation interpreting its narrative criterion; 2) WQBELs may be established on a case-by-case basis using USEPA criteria guidance published under CWA §304 (a); or 3) WQBELs may be established using an indicator parameter for the pollutant of concern.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A** (The discharge of any waste not specifically regulated by this Order is prohibited). Because limitations and conditions of the Order have been prepared based on specific information provided by the Discharger and specific wastes described by the Discharger, the limitations and conditions of the Order do not adequately address waste streams not contemplated during drafting of the Order. To prevent the discharge of such waste streams that may be inadequately regulated, the Order prohibits the discharge of any waste that was not described by to the Central Coast Water Board during the process of permit reissuance. This prohibition has been retained from the previous Order.

2. **Discharge Prohibition III.B** (No discharge at a location or in a manner except as described by the Order). The Order authorizes a single, specific point of discharge to surface waters, and the limitations and conditions established by the Order are based on specific information provided by the Discharger and gained by the Central Coast Water Board through site visits, monitoring reports, and other information. Discharges to surface waters at locations not contemplated by this Order or discharges of a character not contemplated by this Order are therefore viewed as inconsistent with CWA §402's prohibition against discharges of pollutants except in

compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition has been retained from the previous Order.

3. **Discharge Prohibition III.C** (The overflow or bypass of wastewater from the Discharger's collection, treatment, or disposal facilities and the subsequent discharge of untreated or partially treated wastewater, except as provided for in Attachment D, Standard Provision I.G (Bypass), is prohibited). The discharge of untreated or partially treated wastewater from the Discharger's collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 CFR 122.41 (m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore, is explicitly prohibited by the Order. This prohibition has been retained from the previous Order.

4. **Discharge Prohibition III.D** (Creation of pollution, contamination, or nuisance, as defined by CWC §13050, is prohibited). This prohibition has been retained from the previous Order.

5. **Discharge Prohibition III.E** (The discharge shall not cause or contribute to adverse impacts to beneficial uses of water or to threatened or endangered species and their habitat). This prohibition has been retained from the previous Order.

6. **Discharge Prohibition III.F** (The discharge of radioactive substances is prohibited). This prohibition has been retained from the previous Order.

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. Where the USEPA has not yet developed technology based standards for a particular industry or a particular pollutant, CWA §402(a)(1) and USEPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

At 40 CFR 133, in the Secondary Treatment Regulations, USEPA has established the following minimum required level of effluent quality attainable by secondary treatment.

Table F-5. Secondary Treatment Requirements

Parameter	Units	30-day Average	7-day Average
BOD[1]	mg/L	30	45
TSS[1]	mg/L	30	45
pH	s.u.	6.0 – 9.0	

[1] The 30-day average percent removal for BOD and TSS shall not be less than 85 percent.

2. Applicable Technology-Based Effluent Limitations

Title 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 and mass limitations are not necessary to protect the beneficial uses of the receiving water.

a. BOD and TSS. Federal Regulations, 40 CFR 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream and the final effluent limitations for BOD and TSS are based on the technical capability of the tertiary processes. BOD is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary and tertiary treatment standards for BOD and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR 133 for weekly and monthly average BOD and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower levels for BOD and TSS than the secondary standards currently prescribed; the 30-day average BOD and TSS limitations are 10 mg/L, which are technically based on the capability of a tertiary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD and TSS is included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. Final technology-based effluent limitations required by this Order are presented in Table F-6. These effluent limitations for BOD and TSS have been adopted for similar facilities in the Central Coast Region that have effluent limitations for this level of treatment. Data collected from the Facility after it upgraded to tertiary treatment in November 2009 indicate that the Facility has consistently achieved this level of performance and will be able to comply with the effluent limitations.

Additionally, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (i.e., treatment beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD and TSS over each calendar month.

b. pH. Federal Regulations, 40 CFR 133, establishes technology-based effluent limitations for pH. The secondary treatment standards require the pH of the effluent to be no lower than 6.0 and no greater than 9.0 standard units. This technology-based effluent limitation is not as stringent as the WQBELs for pH as

discussed in section IV.C of this Fact sheet; therefore, this Order establishes the more stringent WQBELs for pH.

c. Flow. Although the Facility has increased its design capacity to 5.5 MGD, the previous Order contained an average dry weather flow of 5.0 MGD and historically the Facility average flow has been well below 5.0 MGD. The Discharger has not requested an increase in permitted flow and has not submitted an antidegradation analysis supporting an increase in permitted flow. Therefore, the average dry weather flow effluent limitation of 5.0 MGD is retained in this Order.

d. Settleable Solids. The previous Order contained an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) of 0.1 ml/L and 0.3 ml/L, respectively. These effluent limitations are typical of similar facilities that discharge tertiary treated wastewater. Therefore, this Order retains the effluent limitations for settleable solids from the previous Order.

e. Oil and Grease. The previous Order contained an AMEL and MDEL of 5.0 mg/L and 10 mg/L, respectively. These effluent limitations are typical of similar facilities that discharge tertiary treated wastewater. This Order retains the effluent limitations from the previous Order.

f. Turbidity. The previous Order contained an AMEL and MDEL of 10 NTU and 20 NTU, respectively. These effluent limitations are typical of similar facilities that discharge tertiary treated wastewater. This Order retains the effluent limitations from the previous Order.

The following table summarizes technology-based effluent limitations established by the Order.

Table F-6. Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Flow	MGD	5.0	--	--
BOD[1]	mg/L	10	15	20
	lbs/day[2]	420	630	830
TSS[1]	mg/L	10	15	20
	lbs/day[2]	420	630	830
Oil & Grease	mg/L	5.0	--	10
Settleable Solids	mL/L	0.1	--	0.3
Turbidity	NTU	10	--	20

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

[2] Mass-based effluent limitations were calculated using the following formula:
lbs/day = pollution concentration (mg/L) * Design flow (5.0 MGD) * conversion factor (8.34)

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 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, including numeric and narrative objectives within a standard.

The process for determining "reasonable potential" and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters as specified in the Basin Plan and achieve applicable WQOs and criteria that are contained in the Basin Plan and in other applicable State and federal rules, plans, and policies, including applicable water quality criteria from the CTR and NTR.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established in accordance with the requirements of 40 CFR 122.44 (d)(1)(vi), using (1) USEPA criteria guidance under CWA §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.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses described by the Basin Plan for San Miguelito Creek and the Santa Ynez River are presented in section II.H of the Order. Water quality criteria applicable to this receiving water are established by the CTR, the NTR, and by the Basin Plan. Reasonable potential for pollutants with applicable water quality criteria was evaluated for Discharge Point No. 001.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44 (d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.

The SIP, statewide policy that became effective on May 22, 2000, establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above State water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants which show reasonable potential.

The SIP Section 1.3 requires the Central Coast Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information

to conduct a reasonable potential analysis. Here, the Discharger has collected and analyzed samples for the CTR pollutants and the toxic pollutants with WQOs established in the Basin Plan from November 2009 until July 2010.

Some freshwater water quality criteria for metals are hardness dependent; i.e., as hardness decreases, the toxicity of certain metals increases and the applicable water quality criteria become correspondingly more stringent. Since San Miguelito Creek varies greatly in flow depending on the season and is often effluent dominated during dry season, the Central Coast Water Board considered both upstream and downstream receiving water hardness data when conducting the RPA. Using the most conservative approach, Central Coast Board staff used the most stringent hardness of 293 mg/L (as $CaCO_3$), which occurred downstream of Discharge Point No. 001.

To conduct the reasonable potential analysis, the Central Coast Water Board identified the maximum observed effluent (MEC) and background (B) concentrations for each priority, toxic pollutant from receiving water and effluent data provided by the Discharger and compared this data to the most stringent applicable water quality criterion (C) for each pollutant from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

- Trigger 1 – If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

- Trigger 2 – If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required.

- Trigger 3 – After reviewing other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA §303(d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

The following table summarizes the RPA for each priority, toxic pollutant or Title 22 pollutant that was measured in effluent during monitoring events from November 2009 until July 2010, after the Facility was upgraded to include tertiary treatment.

Table F-7. RPA Results

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
Priority Pollutants					
Antimony	µg/L	6.0 (Basin Plan [Title 22] human health)	<0.095	1.0	No
Arsenic, Total Recoverable	µg/L	10 (Basin Plan [Title 22] human health)	1.02	4.0	No
Beryllium	µg/L	4.0 (Basin Plan [Title 22] human health)	<0.072	<0.2	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
Cadmium, Total Recoverable	µg/L	5.0 (Basin Plan [Title 22] human health)	<0.022	0.40	No
Chromium (III), Total Recoverable	µg/L	50[6] (Basin Plan [Title 22] human health)	<0.23	5.0	No
Chromium (VI), Total Recoverable	µg/L	11.43 (CTR freshwater chronic aquatic life)	<0.97	0.30	No
Copper, Total Recoverable	µg/L	23.38 (CTR freshwater chronic aquatic life)	5.0	9.0	No
Lead, Total Recoverable	µg/L	12.5 (CTR freshwater chronic aquatic life)	0.383	2.6	No
Mercury, Total Recoverable	µg/L	0.050 (CTR human health)	<0.001	<0.02	No
Nickel, Total Recoverable	µg/L	100 (Basin Plan [Title 22] human health)	<0.1	20	No
Selenium, Total Recoverable	µg/L	10 (Basin Plan Table 3-2 human health)	1.3	2.0	No
Silver, Total Recoverable	µg/L	25.79 (CTR freshwater acute aquatic life)	<0.052	<1.0	No
Thallium, Total Recoverable	µg/L	1.70 (CTR human health)	<0.11	<0.20	No
Zinc, Total Recoverable	µg/L	200 (Basin Plan Table 3-5 chronic aquatic life)	61.1	60	No
Cyanide, Total (as CN)	µg/L	5.20 (CTR freshwater chronic aquatic life)	<1.0	<4.0	No
Asbestos	Fibers/L	No Criteria	<0.2	Not Available	No
2,3,7,8-TCDD (Dioxin)	µg/L	1.3E-08 (CTR human health)	<1.8E-06	2.8E-06	No
Acrolein	µg/L	320 (CTR human health)	<1.9	<5.0	No
Acrylonitrile	µg/L	0.059 (CTR human health)	<0.5	<2.0	No
Benzene	µg/L	1.0 (Basin Plan Table 3-1 human health)	<0.058	<0.50	No
Bromoform	µg/L	4.3 (CTR human health)	<0.069	<0.50	No
Carbon Tetrachloride	µg/L	0.25 (CTR human health)	<0.055	<0.50	No
Chlorobenzene	µg/L	70 (Basin Plan Table 3-1 human health)	<0.039	<0.50	No
Chlorodibromomethane	µg/L	0.40 (CTR human health)	<0.057	<0.50	No
Chloroethane	µg/L	No Criteria	<0.2	<0.50	No
2-Chloroethylvinyl Ether	µg/L	No Criteria	<3.9	10	No
Chloroform	µg/L	No Criteria	0.228	<0.50	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
Dichlorobromomethane	µg/L	0.56 (CTR human health)	<0.057	<0.50	No
1,1-Dichloroethane	µg/L	5.0 (Basin Plan Table 3-1 human health)	<0.084	<0.50	No
1,2-Dichloroethane	µg/L	0.38 (CTR human health)	<0.12	<0.50	No
1,1-Dichloroethylene	µg/L	0.057 (CTR human health)	<0.079	<0.50	No
1,2-Dichloropropane	µg/L	0.52 (CTR human health)	<0.079	<0.50	No
1,3-Dichloropropylene	µg/L	0.50 (Basin Plan Table 3-1 human health)	<0.12	<0.50	No
Ethylbenzene	µg/L	300 (Basin Plan [Title 22] human health)	<0.038	<0.50	No
Methyl Bromide	µg/L	48 (CTR human health)	<0.18	<0.50	No
Methyl Chloride	µg/L	No Criteria	0.228	<0.50	No
Methylene Chloride	µg/L	4.7 (CTR human health)	<0.11	<0.50	No
1,1,2,2-Tetrachloroethane	µg/L	0.17 (CTR human health)	<0.19	<0.50	No
Tetrachloroethylene	µg/L	0.80 (CTR human health)	<0.097	<0.50	No
Toluene	µg/L	150 (Basin Plan [Title 22] human health)	<0.046	<0.50	No
1,2-Trans-Dichloroethylene	µg/L	10 (Basin Plan Table 3-1 human health)	<0.099	<0.50	No
1,1,1-Trichloroethane	µg/L	200 (Basin Plan Table 3-1 human health)	<0.067	<0.50	No
1,1,2-Trichloroethane	µg/L	0.60 (CTR human health)	<0.11	<0.50	No
Trichloroethylene	µg/L	2.7 (CTR human health)	<0.097	<0.50	No
Vinyl Chloride	µg/L	0.50 (Basin Plan Table 3-1 human health)	<0.077	<0.50	No
Chlorophenol	µg/L	120 (CTR human health)	<1.0	<2.0	No
2,4-Dichlorophenol	µg/L	93 (CTR human health)	<0.75	<2.0	No
2,4-Dimethylphenol	µg/L	540 (CTR human health)	<1.1	<2.0	No
2-Methyl-4,6-Dinitrophenol	µg/L	13.4 (CTR human health)	<0.46	<1.0	No
2,4-Dinitrophenol	µg/L	70 (CTR human health)	<2.3	<5.0	No
2-Nitrophenol	µg/L	No Criteria	<0.7	<2.0	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
4-Nitrophenol	µg/L	No Criteria	<0.67	<2.0	No
3-Methyl-4-Chlorophenol	µg/L	No Criteria	<1.2	<2.0	No
Pentachlorophenol	µg/L	0.28 (CTR human health)	<0.54	<2.0	No
Phenol	µg/L	21,000 (CTR human health)	<0.88	<1.0	No
2,4,6-Trichlorophenol	µg/L	2.1 (CTR human health)	<0.47	<1.0	No
Acenaphthene	µg/L	1,200 (CTR human health)	<0.47	<1.0	No
Acenephthylene	µg/L	No Criteria	<0.53	<1.0	No
Anthracene	µg/L	9,600 (CTR human health)	<0.48	<1.0	No
Benzidine	µg/L	0.00012 (CTR human health)	<1.8	<10	No
Benzo(a)Anthracene	µg/L	0.0044 (CTR human health)	<0.34	<1.0	No
Benzo(a)Pyrene	µg/L	0.0044 (CTR human health)	<0.085	<0.1	No
Benzo(b)Fluoranthene	µg/L	0.0044 (CTR human health)	<0.43	<1.0	No
Benzo(ghi)Perylene	µg/L	No Criteria	<0.23	<1.0	No
Benzo(k)Fluoranthene	µg/L	0.0044 (CTR human health)	<0.17	<1.0	No
Bis(2-Chloroethoxy)Methane	µg/L	No Criteria	<0.54	<1.0	No
Bis(2-Chloroethyl)Ether	µg/L	0.031 (CTR human health)	<0.51	<1.0	No
Bis(2-Chloroisopropyl)Ether	µg/L	1,400 (CTR human health)	<0.41	<1.0	No
Bis(2-Ethylhexyl)Phthalate	µg/L	1.80 (CTR human health)	2.56	3.0	Yes
4-Bromophenyl Phenyl Ether	µg/L	No Criteria	<0.22	<1.0	No
Butylbenzyl Phthalate	µg/L	3,000 (CTR human health)	<0.66	<2.0	No
2-Chloronaphthalene	µg/L	1,700 (CTR human health)	<0.48	<1.0	No
4-Chlorophenyl Phenyl Ether	µg/L	No Criteria	<0.48	<1.0	No
Chrysene	µg/L	0.0044 (CTR human health)	<0.074	<1.0	No
Dibenzo(a,h)Anthracene	µg/L	0.0044 (CTR human health)	<0.19	<1.0	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
1,2-Dichlorobenzene	µg/L	600 (Basin Plan [Title 22] human health)	<0.055	<0.5	No
1,3-Dichlorobenzene	µg/L	400 (CTR human health)	<0.07	<0.5	No
1,4-Dichlorobenzene	µg/L	5.0 (Basin Plan Table 3-1 human health)	<0.061	<0.5	No
3,3'-Dichlorobenzidine	µg/L	0.04 (CTR human health)	<0.69	<2.0	No
Diethyl Phthalate	µg/L	23,000 (CTR human health)	<0.53	<1.0	No
Dimethyl Phthalate	µg/L	313,000 (CTR human health)	<0.43	<1.0	No
Di-n-Butyl Phthalate	µg/L	2,700 (CTR human health)	<0.66	<2.0	No
2,4-Dinitrotoluene	µg/L	0.11 (CTR human health)	<0.56	<1.0	No
2,6-Dinitrotoluene	µg/L	No Criteria	<0.55	<1.0	No
Di-n-Octyl Phthalate	µg/L	No Criteria	<0.51	<1.0	No
1,2-Diphenylhydrazine	µg/L	0.04 (CTR human health)	<0.52	<1.0	No
Fluoranthene	µg/L	300 (CTR human health)	<0.53	<1.0	No
Fluorene	µg/L	1,300 (CTR human health)	<0.51	<1.0	No
Hexachlorobenzene	µg/L	0.00075 (CTR human health)	<0.39	<0.01	No
Hexachlorobutadiene	µg/L	0.44 (CTR human health)	<0.37	<0.50	No
Hexachlorocyclopentadiene	µg/L	50 (Basin Plan [Title 22] human health)	<0.49	<0.1	No
Hexachloroethane	µg/L	1.9 (CTR human health)	<0.38	<1.0	No
Indeno(1,2,3-cd) Pyrene	µg/L	0.0044 (CTR human health)	<0.39	<1.0	No
Isophorone	µg/L	8.4 (CTR human health)	<0.53	<1.0	No
Naphthalene	µg/L	No Criteria	<0.44	<0.50	No
Nitrobenzene	µg/L	17 (CTR human health)	<0.65	<1.0	No
N-Nitrosodimethylamine	µg/L	0.00069 (CTR human health)	<0.60	<2.0	No
N-Nitrosodi-n-Propylamine	µg/L	0.005 (CTR human health)	<0.54	<1.0	No
N-Nitrosodiphenylamine	µg/L	5.0 (CTR human health)	<0.50	<1.0	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
Phenanthrene	µg/L	No Criteria	<0.45	<1.0	No
Pyrene	µg/L	960 (CTR human health)	<0.53	<1.0	No
1,2,4-Trichlorobenzene	µg/L	5.0 (Basin Plan [Title 22] human health)	<0.073	<0.5	No
Aldrin	µg/L	0.00013 (CTR human health)	<0.00103	<0.00102	No
alpha-BHC	µg/L	0.0039 (CTR human health)	<0.00103	<0.00102	No
beta-BHC	µg/L	0.014 (CTR human health)	<0.00103	<0.00102	No
gamma-BHC	µg/L	0.019 (CTR human health)	<0.00103	<0.00102	No
delta-BHC	µg/L	No Criteria	<0.00103	<0.00102	No
Chlordane	µg/L	0.00057 (CTR human health)	<0.011	<0.10	No
4,4-DDT	µg/L	0.00059 (CTR human health)	<0.00103	<0.00102	No
4,4-DDE	µg/L	0.00059 (CTR human health)	<0.00103	0.0448	No
4,4-DDD	µg/L	0.00083 (CTR human health)	<0.00103	<0.00102	No
Dieldrin	µg/L	0.00014 (CTR human health)	<0.00103	<0.00102	No
alpha-Endosulfan	µg/L	0.056 (CTR freshwater chronic aquatic life)	<0.00103	<0.00102	No
beta-Endosulfan	µg/L	0.056 (CTR freshwater chronic aquatic life)	<0.00103	<0.00102	No
Endosulfan Sulfate	µg/L	110 (CTR human health)	<0.00103	<0.00102	No
Endrin	µg/L	0.036 (CTR freshwater chronic aquatic life)	<0.00103	<0.00102	No
Endrin Aldehyde	µg/L	0.76 (CTR human health)	<0.00103	<0.00102	No
Heptachlor	µg/L	0.00021 (CTR human health)	<0.00103	<0.00102	No
Heptachlor Epoxide	µg/L	0.0001 (CTR human health)	<0.00103	<0.00102	No
PCBs sum[7]	µg/L	0.00017 (CTR human health)	<0.018	<0.50	No
Toxaphene	µg/L	0.00020 (CTR freshwater chronic aquatic life)	<0.0103	<0.0102	No
Non-Priority Pollutants					
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	1,200 (Basin Plan Table 3-1 human health)	<0.24	<0.50	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
2,4-D	µg/L	70 (Basin Plan [Title 22] human health)	<0.48	<2.0	No
2,4,5-TP (Silvex)	µg/L	10 (Basin Plan Table 3-1 human health)	<0.20	<1.0	No
Aluminum	µg/L	1,000 (Basin Plan [Title 22] human health)	36.3	1,440	Yes
Alachlor	µg/L	2.0 (Basin Plan [Title 22] human health)	<0.027	<0.20	No
Atrazine	µg/L	1.0 (Basin Plan [Title 22] human health)	<0.11	<0.50	No
Barium	µg/L	1,000 (Basin Plan [Title 22] human health)	10.7	100	No
Bentazon	µg/L	18 (Basin Plan Table 3-1 human health)	<0.35	<2.0	No
Carbofuran	µg/L	18 (Basin Plan Table 3-1 human health)	<0.50	<5.0	No
cis-1,2-Dichloroethylene	µg/L	6.0 (Basin Plan Table 3-1 human health)	<0.085	<0.50	No
Cobalt	µg/L	50 (Basin Plan Table 3-4 for agriculture)	Not Available	Not Available	No
Dalapon	µg/L	200 (Basin Plan [Title 22] human health)	<1.4	<10	No
Dibromochloropropane	µg/L	0.20 (Basin Plan Table 3-1 human health)	<0.0056	<0.01	No
Di(2-ethylhexyl)adipate	µg/L	400 (Basin Plan [Title 22] human health)	<0.062	<1.0	No
Dinoseb	µg/L	0.007 (Basin Plan [Title 22] human health)	<0.92	<1.0	No
Diquat	µg/L	20 (Basin Plan [Title 22] human health)	<0.29	<2.0	No
Endothall	µg/L	100 (Basin Plan [Title 22] human health)	<11	<40	No
Ethylene Dibromide	µg/L	0.02 (Basin Plan Table 3-1 human health)	<0.0045	Not Available	No
Glyphosate	µg/L	700 (Basin Plan Table 3-1 human health)	<2.4	<20	No
Iron	µg/L	5,000 (Basin Plan Table 3-4 for agriculture)	Not Available	Not Available	No
Lithium	µg/L	2,500 (Basin Plan Table 3-4 for agriculture)	21	Not Available	No
Manganese	µg/L	200 (Basin Plan Table 3-4 for agriculture)	Not Available	Not Available	No
Methoxychlor	µg/L	30 (Basin Plan [Title 22] human health)	<0.00103	<0.00102	No
Methyl-tert-butyl ether	µg/L	13 (Basin Plan [Title 22] human health)	<0.025	<1.0	No
Molinate	µg/L	20 (Basin Plan Table 3-1 human health)	<0.18	<2.0	No

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]
Molybdenum	µg/L	10 (Basin Plan Table 3-4 for agriculture)	<0.076	Not Available	No
Oxamyl	µg/L	50 (Basin Plan [Title 22] human health)	<0.61	<5.0	No
Picloram	µg/L	500 (Basin Plan [Title 22] human health)	<0.44	<1.0	No
Simazine	µg/L	4.0 (Basin Plan [Title 22] human health)	<0.12	<1.0	No
Styrene	µg/L	100 (Basin Plan [Title 22] human health)	<0.042	<0.5	No
Thiobencarb	µg/L	70 (Basin Plan Table 3-1 human health)	<0.074	<1.0	No
Trichlorofluoromethane	µg/L	150 (Basin Plan Table 3-1 human health)	<0.17	<0.5	No
Vanadium	µg/L	100 (Basin Plan Table 3-4 for agriculture)	Not Available	Not Available	No
Xylenes	µg/L	1,750 (Basin Plan Table 3-1 human health)	<0.072	<0.5	No
Un-ionized Ammonia as N	mg/L	0.025 (Basin Plan Chapter 3, Section II.A.2)	0.019	0.042	Yes
Boron	mg/L	0.4 (Basin Plan Table 3-7[8])	0.58	4.21	Yes
Chloride	mg/L	100 (Basin Plan Table 3-7[8])	207	733	Yes
Fluoride	mg/L	1,000 (Basin Plan Table 3-4 for agriculture)	0.249	0.2	No
Nitrate, Total (as N)	mg/L	10 (45 mg/L as NO_3) (Basin Plan [Title 22] human health)	17	16.4	Yes
Nitrate Plus Nitrite (as N)	mg/L	10 (Basin Plan [Title 22] human health)	17.8	Not Available	Yes
Nitrite, Total (as N)	mg/L	1.0 (Basin Plan [Title 22] human health)	0.98	Not Available	No
Sodium	mg/L	100 (Basin Plan Table 3-7[8])	277	2,972	Yes
Sulfate	mg/L	350 (Basin Plan Table 3-7[8])	374	911	Yes
TDS	mg/L	1,000 (Basin Plan Table 3-7[8])	1,068	2,986	Yes

Pollutant	Units	C (Basis)[1]	MEC (µg/L)[2],[3]	B (µg/L)[4]	RPA Result[5]

[1] The most stringent water quality objective/criteria has been summarized in this Table.

[2] The highest, undiluted reported effluent concentration is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table. All reasonable potential analyses were conducted with no dilution and a minimum downstream receiving water hardness of 293 mg/L as $CaCO_3$.

[3] Effluent data used for this RPA were collected from November 2009 to July 2010.

[4] Receiving water data was collected and analyzed both upstream and downstream of Discharge Point No. 001. Because of the high flow variability of San Miguelito Creek, the most conservative approach of using the maximum concentration between the upstream and downstream data was used to conduct the RPA.

[5] RPA Results:
= Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
= No, if MEC and B are < WQO/WQC or all effluent data are undetected;
= Undetermined, if no criteria have been promulgated (Uc), or for lack of data (Ud).

[6] Title 22 primary MCL is for total chromium.

[7] PCBs refer to sum of PCB 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

[8] Values listed in Table 3-7 of the Basin Plan are annual mean values. The values listed for MEC and B for these pollutants are the maximum 12-month running mean values for each pollutant.

As detailed in Table F-7, reasonable potential has been determined for bis (2-ethylhexyl) phthalate, aluminum, boron, chloride, nitrate + nitrite, nitrate, sodium, sulfate, TDS, and un-ionized ammonia.

4. WQBEL Calculations

a. If reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in Section 1.4 of the SIP. These procedures include:

i. If applicable and available, use of the wasteload allocation (WLA) established as part of a TMDL.

ii. Use of a steady-state model to derive MDELs and AMELs.

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Central Coast Water Board.

b. Water quality based effluent limitations for bis (2-ethylhexyl) phthalate are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this tentative Order, no dilution credit is being allowed.

d. Water quality based effluent limitations Calculation Example

The following demonstrates how WQBELs were established for this Order for bis (2-ethylhexyl) phthalate.

Concentration-Based Effluent Limitations

Two sets of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limitation, identify the applicable water quality criteria or objective. For each criteria determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C > B$, and
$ECA = C$ when $C \leq B$,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators.
D = The dilution credit, and
B = The ambient background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$ECA = C$

For bis (2-ethylhexyl) phthalate, there are no aquatic life criteria, so the applicable water quality criteria is:

$ECA_{human\ health} = 1.8\ \mu g/L$

Since there are no aquatic life criteria for bis (2-ethylhexyl) phthalate and no other pollutants for the Facility require WQBELs using the steady state model, steps 2-4 are only included in this Order for completeness.

Step 2: For each ECA based on aquatic life criterion/objective determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute\ 99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic\ 99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples . Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$

AMEL multipliers are based on a 95^{th} percentile occurrence probability, and the MDEL multipliers are based on the 99^{th} percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

Calculation of human health AMEL and MDEL:

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

For bis (2-ethylhexyl) phthalate:

$AMEL_{human\ health} = 1.8\ \mu g/L$

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the $Multiplier_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL} / Multiplier_{AMEL})$

For bis (2-ethylhexyl) phthalate, the following data were used to develop the $MDEL_{human\ health}$:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	1.55	3.11	2.01

$MDEL_{human\ health}$ = 1.8 µg/L x 2.01 = 3.6 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

For bis (2-ethylhexyl) phthalate, no aquatic life criteria exists, thus the human health criteria-based effluent limitations of 1.8 µg/L (AMEL) and 3.6 µg/L (MDEL) are established in this Order.

5. Whole Effluent Toxicity (WET)

WET limitations protect receiving water quality from the aggregated toxic effect of a mixture of pollutants in effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests - acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan requires that all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Survival of aquatic organisms in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or for another control water. Section 4.0 of the Basin Plan also requires a chronic toxicity limitation for all discharges that will cause, have reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The previous Order included effluent limitations for chronic and acute toxicity. Monitoring results during the term of the previous Order show that acute and chronic toxicity exceed effluent limitations on several occasions. As such, reasonable potential to exceed water quality exists; therefore the acute and chronic toxicity effluent limitations have been retained from the previous Order.

The Discharger is also required to maintain a Toxicity Reduction Evaluation (TRE) workplan, as described in section VI.C.2.a of the Order, which describes the steps that the Discharger intends to follow in the event that the acute and/or chronic toxicity limitations are exceeded. When monitoring measures WET in the effluent above the limitations established by the Order, the Discharger must resample, if the

discharge is continuing, and retest. The Central Coast Water Board Executive Officer will then determine whether to initiate enforcement action, whether to require the Discharger to implement a TRE, or to implement other measures.

6. Basin Plan

a. Aluminum. For the protection of receiving waters with designated beneficial uses of municipal and domestic supply, the Basin Plan establishes water quality objectives for chemical constituents based on the limitations specified in California Code of Regulations (CCR), Title 22, Article 4, Chapter 15, Tables 64431-A and 64444-A. As detailed in Table F-7 of this Fact Sheet, the Discharger was determined to have reasonable potential to contribute to the exceedance of a WQO for aluminum because the receiving water had a concentration of 1,440 µg/L and the pollutant was detected in the effluent. The WQO for aluminum established in Table 64444-A of CCR, Title 22, Article 4,Chapter 15 is 1.0 mg/L. Thus, a monthly effluent limitation of 1.0 mg/L has been established for aluminum. Because the maximum effluent concentration reported by the Discharger for aluminum is 0.036 mg/L, the Discharger is expected to be able to comply with the effluent limitation for aluminum immediately upon the effective date of this Order.

b. Ammonia. Section II.A.2 in Chapter 3 of the Basin Plan establishes a water quality criteria for un-ionized ammonia (NH_3) of 0.025 mg/L. Because the receiving water had a concentration of 0.042 mg/L and un-ionized ammonia was detected in the effluent, the discharge from the Facility was found to have reasonable potential to cause or contribute to the exceedance of the WQO for un-ionized ammonia. Therefore, effluent limitations for un-ionized ammonia (NH_3) at Discharge Point No. 001 are retained from the previous Order.

c. Bacteria

i. Fecal Coliform. The Basin Plan establishes WQOs for the protection of surface wasters with the designated beneficial use of Water Contact Recreation (REC-1) of a log-mean for any 30-day period, based on a minimum of not less than five samples, of 200 MPN/100 mL, and that no more than 10 percent of total samples during any 30-day period exceed 400 MPN/100 mL. Because the receiving water has a REC-1 beneficial use and fecal coliform is a pollutant of concern for treated municipal wastewater, these WQOs are implemented as effluent limitations in this Order.

d. Nitrate and Nitrate+Nitrite. The Basin Plan establishes a narrative water quality objective for biostimulatory substances, which states,

> "Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses."

Nitrogen may exist in a number of oxidation states within municipal wastewater, including nitrate. Nitrate is a common pollutant in effluent from wastewater

treatment facilities, that when not properly controlled may lead to excessive biostimulatory growth, negatively impacting the receiving water. As such, the Central Coast Water Board staff established the Title 22 primary MCL as a numeric effluent limitation of 10 mg/L for nitrate in the previous Order. Because nitrite will readily oxidize to nitrate during wastewater treatment steps, the previous Order established an effluent limitation for nitrate but did not establish an effluent limitation for the sum total of nitrite plus nitrate nitrogen (nitrite + nitrate). Before Facility upgrades, the Facility was not able to comply with effluent limitations for nitrate using the old treatment processes. In order to be in compliance with effluent limitations until upgrades were complete, on October 25, 2006 the Central Coast Water Board adopted Order No. R3-2006-0090, which established an interim maximum daily effluent limitation of 36 mg/L until July 7, 2011. Since the upgrade was completed in November 2009, the Facility was out of compliance with the final effluent limitation of 10 mg/L four out of nine samples, all of which occurred in early 2010.

Additionally, because these pollutants showed reasonable potential, this Order requires the Discharger to implement a Nutrient Management Program as described in section VII.B.3.a of this Fact Sheet, with the ultimate goal of controlling levels of nutrients discharged from the Facility.

e. pH. The Basin Plan establishes a WQO for pH of between 6.5 to 8.3 standard units for the protection of receiving waters with the beneficial use of Municipal and Domestic Supply (MUN), and a pH of between 7.0 to 8.5 standard units for the beneficial use of Cold Freshwater Habitat (COLD). This Order retains an effluent limitation of 6.5 to 8.3 established by the previous Order.

f. Floating Material. Discharge of treated wastewater through Discharge Point No. 001 shall not contain floating material, including solids, liquids, foams, and scum in concentrations that cause nuisance or adversely affect beneficial uses. This effluent limitation is consistent with the Basin Plan and retained from the previous Order.

g. TDS, Sulfate, Chloride, Boron, and Sodium. The previous Order established effluent limitations for TDS, chloride, and sodium as summarized below:

Table F-8. Effluent Limitations for Salinity

Parameter	Units	Annual Mean[1]
TDS	mg/L	1,100
Chloride	mg/L	250
Sodium	mg/L	270

[1] Compliance with the effluent limitations are based on a 12-month running mean.

This Order establishes the effluent limitations in Table F-8 for TDS, chloride, and sodium. As described in the following discussion, the current discharge is not causing San Miguelito Creek to exceed WQOs since background concentrations of the pollutants naturally exceed WQOs in Basin Plan Table 3-7. Implementation of the effluent limitations in Table F-8 will prevent further

degradation and protect beneficial uses of San Miguelito Creek and Santa Ynez River.

Basin Plan Water Quality Objectives

The Basin Plan contains specific numeric surface WQOs within Table 3-7, presented as median values for the Lompoc Sub-Area of the Santa Ynez Sub-Basin. According to the Basin Plan, "these objectives are intended to serve as a water quality baseline for evaluating water quality management in the basin." Chapter 3, Section II.A.3 of the Basin Plan also says:

> "It must be recognized that the median values indicated in Table 3-7 are values representing gross areas of a water body. Specific water quality objectives for a particular area may not be directly related to the objectives indicated. Therefore, application of these objectives must be based upon consideration of the surface and groundwater quality naturally present…"

The language preceding Table 3-7 also indicates, "the issuance of requirements must be tempered by consideration of beneficial uses within the immediate influence of the discharge."

Site Specific Water Quality

The Discharger monitors both upstream and downstream of the discharge point to San Miguelito Creek at RSW-001 and RSW-002, respectively. Based on available data for TDS, sodium, and chloride, upstream receiving water data exceeds the surface WQOs, indicating background levels for salts are elevated prior to contributions from Facility effluent. Additionally, groundwater recharge is a specified beneficial use for the receiving water; thus surface water discharge may impact groundwater quality. Since upgrades to the Facility in 2009, approximate RSW-001 and RSW-002 12-month running mean concentrations for TDS, chloride, and sodium are shown in Table F-9.

Table F-9. Receiving Water Data

Site	TDS (mg/L)[1]	Chloride (mg/L)[1]	Sodium (mg/L)[1]
RSW-001	2,900	730	3,000
RSW-002	1,000	190	200
Basin Plan Table 3-7 WQO	1,000	100	100

[1] 12-month running mean.

The data in Table F-9 clearly shows that the background TDS, chloride, and sodium concentrations exceed WQOs listed in Table 3-7 of the Basin Plan. Further evaluation of these data show TDS, chloride, and sodium concentrations upstream of the discharge point are greater than concentrations downstream of the discharge point, indicating that water quality improves downstream of the discharge point. In effect, the data indicates the discharge is not causing or contributing to increases in salinity parameters or excursions of the Basin Plan Table 3-7 WQOs in downstream portions of San Miguelito Creek and Santa Ynez River.

Sources and Control of Salt Loading

Salts originate from both natural and unnatural sources. In 2011, the Discharger conducted a Salinity Management Study and Plan (Study). The Study examined the relative contributions of several primary sources of Facility influent salt loadings, which included analyzing data from municipal supply water sites as seen in Table F-10.

Table F-10. Municipal Supply Water Sites

Site	Site Description
VVCSD Well	VVCSD source water obtained from 3 groundwater wells; samples are taken directly from wells, prior to water treatment processes.
VAFB State Water	VAFB source water consists of a combination of State Water Project water and groundwater. State water makes up approximately 75 percent of water supply.
VAFB Well	Groundwater makes up 25 percent of VAFB's water supply.
City of Lompoc Water Treatment Plant Effluent	Effluent from the Water Treatment Plant; water supply is obtained from groundwater wells.

Analyzing the water supply data from the facilities listed in Table F-10 showed that water supply was a major contributor of TDS, sodium, and chloride loadings in Facility influent, as seen in Table F-11.

Table F-11. Municipal Supply Water Loadings

Site	TDS (% of Facility Influent)	Chloride (% of Facility Influent)	Sodium (% of Facility Influent)
Supply Water from VVCSD Well	13	16	11
Supply water from VAFB Well	3	3	2
Supply water from VAFB State Water	4	7	5
City of Lompoc Residential Water Treatment Plant Effluent	68	43	57
Total Loadings from Municipal Water Supply	**88**	**69**	**75**

Additionally, self-regenerating water softeners are said to make up 2 percent TDS loading, 5 percent chloride loading, and 7 percent sodium loading in Facility influent from VVCSD residential water softeners and City of Lompoc residential water softeners.

The Discharger has limited control over the sources of salt loading to its treatment plant. Historically, since plant upgrades in 2009, the Facility has been able to meet effluent limitations for chloride and sodium. However, in order to meet existing effluent limitations for TDS, the Discharger needs an estimated 7 percent reduction of TDS in Facility effluent. In order to meet existing surface WQOs in the Basin Plan, the Discharger would need a 15 percent reduction in TDS, 61 percent reduction in chloride, and 54 percent reduction in sodium. To address the salt loading issue, the Discharger evaluated several options to reduce water source salt loadings in Facility influent. Some of the options

included were water treatment plant modifications, source water alternatives, microfiltration/reverse osmosis wastewater treatment, groundwater discharge, and ocean outfall discharge. These options mostly proved to have major economic impacts and/or be difficult to implement. However, the Discharger did find that reducing water softener usage will help to decrease the salt loading and is economically feasible. The Facility will continue its public education and outreach initiative to promote awareness regarding the water quality impacts of salinity and promote voluntary removal of water softeners.

Proposed Salt Limits

Typically, waste discharge requirements incorporate the Basin Plan's specific, numeric WQOs as effluent limitations. Although convention generally sets effluent limitations at the Basin Plan's WQOs, the previous Order does not use Table 3-7 Basin Plan numeric WQOs for the Lompoc Sub-Area of the Santa Ynez Sub-Basin as effluent limitations. Instead, the existing and proposed effluent limitations are greater than WQOs in Basin Plan Table 3-7 to account for high background salt concentrations and uncontrollable salt loading from the water supply in Facility influent. Consistent with the previous Order, this Order shall establish limitations that are characteristic of the natural receiving water. Effluent limitations for the Facility should be related to water quality naturally present in the vicinity of the discharge while also protecting beneficial uses within the immediate influence of the discharge. Effluent limitations for TDS, chloride, and sodium from the previous Order were more closely related to the background water quality and were protective of beneficial uses.

Conclusion:

Consistent with the Basin Plan, the proposed effluent limitations for salinity are based on a regional assessment of water quality conditions, are within reasonable control of the Discharger to meet, and are protective of downstream beneficial uses.

Because of elevated levels of salinity in the source water and naturally present in the receiving water, this Order requires the Discharger to continue to implement and update the Salt Management Study and Plan as described in section VII.B.3.a of this Fact Sheet. This Special Provision is retained from the previous Order.

D. Final Effluent Limitations

Final, technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

1. Satisfaction of Anti-Backsliding Requirements

The Order retains effluent limitations equal to, or more stringent than those established by the previous Order for BOD, TSS, pH, oil and grease, settleable solids, nitrate, acute toxicity, chronic toxicity, total dissolved solids, sodium, chloride, turbidity, and un-ionized ammonia. Further, additional effluent limitations for

aluminum, bis (2-ethylhexyl) phthalate, and fecal coliform have been established in this Order as described in section IV.C of this Fact Sheet.

Effluent limitations for copper, mercury, molybdenum, chlorodibromomethane, and dichlorobromomethane have not been retained from the previous Order. The elimination of these WQBELs is consistent with the exception to the CWA's anti-backsliding requirements expressed at §402 (0)(2)(B)(i) of the Act, which allows a reissued permit to include less stringent limitations when information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods), and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. In these circumstances, less stringent limitations (here, the removal of limitations) are based on new data, which was generated during the term of previous Order and which demonstrates no reasonable potential for discharges from the Facility to cause or contribute to exceedances of applicable WQOs for these pollutants. Therefore, effluent limitations for these pollutants from the previous Order are not retained in this Order. Additionally, the Facility completed major upgrades in 2009, which included discontinuing use of chlorine disinfection and introducing UV disinfection. Therefore, the effluent limitations for total residual chlorine in the previous Order have not been retained in this Order.

The effluent limitation for total coliform has also not been retained from the previous Order. Removal of the total coliform effluent limitation will not result in impacts on water quality since the permit now includes a fecal coliform limit that replaces the total coliform limit. Fecal coliform is a better indicator of potential human pathogens than total coliform and is therefore a more appropriate parameter to measure. Additionally, the Central Coast Basin Plan REC-1 and REC-2 beneficial uses has a water quality objective for fecal coliform but not for total coliform; therefore, including an effluent limitation for total coliform is not justified or applicable. This change in effluent limitations is based on new information and is in compliance with anti-backsliding exceptions requirements of CFR 122.44(l)(i)(A), Sections 402(o)(2) and 303(d)(4) of the CWA. The Central Coast Water Board finds that removing the effluent limitation for total coliform is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Any impact on existing water quality will be insignificant.

2. Satisfaction of Antidegradation Policy

Provisions of the Order are consistent with applicable anti-degradation policy expressed by NPDES regulations at 40 CFR 131.12 and by State Water Board Resolution No. 68-16. This Order does not authorize increases in discharge rates or pollutant loadings, and its limitations and conditions otherwise assure maintenance of the existing quality of receiving waters.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on flow, BOD, TSS, oil and grease, settleable solids, and turbidity.

Restrictions on these pollutants are discussed in section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

4. Summary of Final Effluent Limitations – Discharge Point No. 001

a. The following effluent limitations are applicable to the discharge of tertiary treated wastewater from the Facility at Discharge Point No. 001.

Table F-12. Final Effluent Limitations

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
BOD[1]	mg/L	10	15	20
	lbs/day	420	630	830
TSS[1]	mg/L	10	15	20
	lbs/day	420	630	830
Oil & Grease	mg/L	5.0	--	10
Settleable Solids	mL/L	0.1	--	0.3
Turbidity	NTU	10	--	20
pH	s.u.	6.5 – 8.3[2],[3]		
Un-ionized Ammonia	mg/L	--	0.025	--
Nitrate (as N)	mg/L	--	--	10
Bis (2-ethylhexyl) Phthalate	µg/L	1.8	--	3.6
Aluminum	mg/L	1.0	--	--
Acute Toxicity	% survival	--	--	[4]
Chronic Toxicity	TUc	--	--	1.0

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

[2] Applied as an instantaneous effluent limitation.

[3] When the Discharger continuously monitors effluent pH, levels shall be maintained within specified ranges 99 percent of the time. To determine 99 percent compliance, the following conditions shall be met:

- The total time during which pH is outside the range of 6.5 – 8.3 shall not exceed 7 hours and 26 minutes in any calendar month;
- No single excursion from the range of 6.5 – 8.3 shall exceed 30 minutes;
- No single excursion shall fall outside the range of 6.0 – 9.0; and
- When continuous monitoring is not being performed, standard compliance guidelines shall be followed (i.e., between 6.5 – 8.3 at all times, measured daily).

[4] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared, using a t-test (or another test consistent with the procedures described by *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,* Fifth Edition, U.S. EPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition) to the survival of control organisms, as defined in section V of Attachment E to this Order.

b. Dry Weather Flow. Effluent average dry weather flow shall not exceed a monthly average of 5.0 MGD.

c. Floating Material. Discharge of treated wastewater through Discharge Point No. 001 shall not contain floating material, including solids, liquids, foams, and scum. In concentrations that cause nuisance or adversely affect beneficial uses.

d. Bacteria.

i. Fecal Coliform

(a) Fecal coliform concentrations shall not exceed a log mean of 200 organisms/100 mL for any 30-day period (based on a minimum of 5 samples); and

(b) Fecal coliform concentrations shall not exceed 400 organisms/100 mL for more than 10 percent of the samples in a 30-day period.

e. Salinity. The discharge of tertiary treated wastewater shall comply with the following effluent limitations:

Table F-13. Salinity Effluent Limitations

Parameter	Units	Annual Mean[1]
TDS	mg/L	1,100
Chloride	mg/L	270
Sodium	mg/L	250

[1] Compliance with the effluent limitations are based on a 12-month running mean.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Effluent Limitations and Specifications – Not Applicable

G. Reclamation Specifications

The Discharger intermittently reclaims treated wastewater for on-site dust control and landscape irrigation. The volume of wastewater applied to the 10-acre wastewater treatment plant site is not quantified and is dependent on irrigation needs. In accordance with Title 22, Division 4, Chapter 3, Article 3, the application of reclaimed wastewater on site at a wastewater treatment plant is exempt from Title 22 requirements, so long as access by the public to the area of wastewater reclamation is restricted. Access by the public to the area of wastewater reclamation is restricted at the Facility; therefore, the Facility is exempt from reclamation specifications in Title 22, Division 4, Chapter 3, Article 3.

V. Rationale for Receiving Water Limitations

A. Surface Water

Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving water. Specific WQOs established by the Basin Plan to meet this goal for all inland surface waters are included as Receiving Water Limitations

in section V.A of the Order. All receiving water limitations are retained from the previous Order.

B. Groundwater

Groundwater limitations included in section V.B of the Order include general objectives as established in Chapter 3, Section II.A.4 of the Basin Plan and specific numeric WQOs for groundwater within the Lompoc Plain sub area of the Santa Ynez groundwater unit as established in Table 3-8 of the Basin Plan. All groundwater limitations in this Order are retained from the previous Order.

VI. Rationale for Monitoring and Reporting Requirements

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC §13267 and §13383 also authorize the Central Coast Water Board to require technical and monitoring reports. Rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program (MRP), which is presented as Attachment E of this Order, is presented below.

A. Influent Monitoring

In addition to influent flow monitoring, monitoring for BOD and TSS is required to determine compliance with the Order's 85 percent removal requirement for those pollutants. Influent monitoring requirements have been retained from the previous Order.

B. Effluent Monitoring

Effluent monitoring requirements from the previous Order for Discharge Point No. 001 are retained in this Order with the following exceptions:

1. Effluent monitoring for fecal coliform has been established to determine compliance with the newly established effluent limitations for fecal coliform.

2. Quarterly effluent monitoring for bis(2-ethylhexyl) phthalate has been established for the first year of monitoring to determine if the exceedance of water quality criteria was due to sample contamination. If the parameter is not detected during the first year of sampling, it is assumed that the exceedance of water quality criteria was due to sample contamination and future sampling is not necessary to ensure compliance with the effluent limitation and shall be conducted annually to be consistent with other priority pollutant monitoring. However, if sampling does indicate the presence of the pollutant, monitoring shall continue at a reduced frequency to determine compliance with the newly established effluent limitations.

3. Annual effluent monitoring for aluminum has been established to determine compliance with the newly established effluent limitation.

4. Effluent monitoring requirements for copper, mercury, chlorodibromomethane, dichlorobromomethane, and molybdenum have not been retained from the previous Order because these pollutants no longer demonstrate reasonable potential and,

therefore, effluent limitations for these pollutants have been removed. Monitoring for copper, mercury, chlorodibromomethane, dichlorobromomethane, and molybdenum will now be required as part of the CTR pollutant and Title 22 pollutant monitoring.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer period of time and may measure mortality, reproduction, and or growth. This Order retains limitations for acute and chronic toxicity and monitoring requirements for acute and chronic toxicity for Discharge Point No. 001 from the previous permit.

D. Receiving Water Monitoring

1. Surface Water

Surface water receiving water monitoring requirements are retained from the previous Order as necessary to determine compliance with surface water limitations and for the protection of public health.

2. Groundwater

Groundwater monitoring requirements are retained from the previous Order as necessary to determine compliance with groundwater limitations.

E. Other Monitoring Requirements

1. Biosolids/Sludge Monitoring

Biosolids monitoring shall be reported in the annual report in accordance with 40 CFR 503. Biosolids monitoring requirements have been retained from the previous Order.

2. Pretreatment Monitoring

Pretreatment monitoring shall be reported in the annual report in accordance with requirements in 40 CFR 403.8. Pretreatment monitoring requirements have been retained from the previous Order.

3. Salt and Nutrient Management Plan Reporting

Salt and Nutrient Management Plan reporting requirements have been added to this Order to help identify and reduce salt and nutrient loading in effluent. This salt/nutrient management report shall be included as part of the annual report.

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.

NPDES regulations at 40 CFR 122.41 (a) (1) and (b - 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 CFR123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41 (j) (5) and (k) (2), because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference CWC §13387 (e).

B. Special Provisions

1. Reopener Provisions

The Order may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any, new State water quality objectives that are approved by the USEPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

2. Special Studies and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

The order retains the requirement to perform a TRE, if the acute toxicity limitation is exceeded or if chronic toxicity is detected in the effluent above 1 TUc. When toxicity monitoring measures acute or chronic toxicity in the effluent above the limitations established by the Order, the Discharger is required to resample and retest. When all monitoring results are available, the Executive Officer can determine whether to initiate enforcement action, whether to require the Discharger to implement TRE requirements, or whether other measures are warranted.

3. Best Management Practices and Pollution Prevention

a. Salt and Nutrient Management Program

Section VI.C.6 of the previous Order required the Discharger to conduct a Salt Management Study to control levels of TDS, chloride, sodium, sulfate, and boron (collectively referred to as salts) in discharges from the Facility and attain

applicable WQOs for salts in the Lompoc Plain Sub-Basin of the Santa Ynez Drainage Basin.

The Discharger conducted a Salt Management Study and Plan (Study) in January 2011. The purpose of the Study was to summarize effluent and receiving water data, characterize source water supply and wastewater quality, and evaluate and identify feasible source control strategies. The Study indicated that receiving water quality upstream and downstream of the Facility discharge point exceeds surface WQOs, indicating the background levels for salts are elevated prior to contributions from the Facility effluent. Secondly, the Study examined the relative contributions of three primary sources to Facility influent: water supply, collection systems, and significant industrial users. The Study indicated that 70 percent of the loading for all salts except boron can be attributed to uncontrollable sources (i.e., water supply), while boron loading can be attributed to water supply (25 percent) and other commercial and residential activities (45 percent), defined as activities that contribute salt levels to the Facility influent beyond water supply and water softener discharges. Finally, an analysis was conducted to evaluate the potential for source control to address necessary reductions and the main sources of salt loadings. The Discharger identified several source control options and the feasibility of each.

Data from the term of the previous Order indicated the Facility has reasonable potential to cause or contribute to downstream impairment for salts loading. Therefore, in addition to effluent limitations for TDS, sodium, and chloride, this Order requires the Discharger to continue to update and implement the Salt Management Program. Additionally, the Discharger shall develop and implement a Nutrient Management Program as part of the Salt and Nutrient Management Program, as discussed in section VI.C.3 of this Order, based on the Recycled Water Policy discussed in section III.E.3 of this Fact Sheet.

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Municipal Facilities (POTWs Only)

a. Biosolids Management

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 503. The Discharger is required to comply with the standards and time schedules contained in 40 CFR 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. These requirements have been retained from the previous Order.

b. Pretreatment Requirements

Pretreatment requirements for POTWs are contained within 40 CFR 403. Per 40 CFR 403.8, any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5.0 MGD and receiving from industrial users pollutants which pass through or interfere with the operation of the POTW, or are otherwise subject to pretreatment standards, will be required to establish a POTW pretreatment program unless the State exercises its option to assume local responsibilities as provided for in 40 CFR 403.10 (e). The Executive Officer may require that a POTW with a design flow of 5.0 MGD or less develop a POTW pretreatment program if he or she finds that the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent interference with the POTW or pass through as defined in 40 CFR 403.3.

Although the Facility flow is not greater than 5.0 MGD, there have been numerous violations of effluent limitations over the term of the previous Order. Therefore, the Central Coast Water Board has determined that pretreatment requirements are necessary and applicable to the Facility. Thus, this Order retains the pretreatment requirements from the previous Order.

6. Other Special Provisions

a. Discharges of Storm Water. Discharges of storm water from POTWs with a design capacity greater than 1.0 MGD are eligible for coverage under General State Water Board Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Dischargers of Storm Water Associated with Industrial Activities Excluding Construction Activities. The design capacity of the Facility is greater than 1.0 MGD. Therefore, the Discharger shall seek coverage under General Permit No. CAS000001 for all storm water discharges. This is retained from the previous Order.

b. Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ). The Order requires coverage by and compliance with applicable provisions of General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ). This General Permit, adopted on May 2, 2006, is applicable to all "federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California." The purpose of the General Permit is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. This provision is retained from the previous Order.

7. Compliance Schedules – Not Applicable

VIII. Public Participation

The Central Coast Regional Water Quality Control 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 Lompoc Regional Wastewater Reclamation Facility. As a step in the WDR adoption process, the Central Coast Water Board staff has developed draft WDRs. The Central Coast Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Coast Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided them with an opportunity to submit their written comments and recommendations. Notification was provided through publication in the Lompoc Record on July 26, 2011, and posting on the City's website, at City Hall, and at the Lompoc Public Library.

B. Written Comments

Staff received written comments solely from the City of Lompoc, via electronic correspondence on August 26, 2011. Those comments are summarized, along with staff's response to the comments, as follows:

1. Due to difficulties in meeting the current limit during times of low rainfall, the City requests that the TDS effluent limitation be changed from 1,100 mg/L to 1,200 mg/L along with a time schedule order (TSO) to implement the existing limit.

Staff Response: According to the water code, the Central Coast Water Board can issue a TSO to a discharger when a more stringent effluent limit is included in reissued permit. The purpose of the TSO is to give the discharger time to upgrade its facility to meet the new effluent limit and to shields the discharger from accruing mandatory penalties while the upgrade is in progress. In this situation, Central Coast Water Board staff cannot change the limit for TDS from 1,100 mg/L to 1,200 mg/L, as this would be considered backsliding. Therefore, the TDS limit in the draft permit is the same as in the City's current permit and a TSO is not appropriate. Central Coast Water Board staff appreciates that the City will be implementing its proposed Salt Management Plan and expects that implementing the plan will help the City comply with the TDS limit. Therefore, Central Coast Water Board staff does not propose to change the TDS effluent limit in the permit or issue a TSO.

2. The City requests that *Selenastrum capricornutum* is not a suitable indicator species for the chronic toxicity tests and requests a six-month screening period to allow the City to conduct a comprehensive evaluation of the test species.

Staff Response: The standard TRE/TIE language in the permit does not preclude the City from taking a six-month screening period to evaluate the appropriate test species. Additionally, water quality is protected since the permit includes effluent limits for toxic

constituents. Therefore, Central Coast Water Board staff did not change the test species in the permit. The permit does allow the Executive Officer to make this change later, if appropriate.

3. The City requests that the permit not include an effluent limitation for aluminum because of lack of flow in the upstream monitoring station on San Miguelito Creek.

Staff Response: The City has no difficulty meeting the aluminum limitation currently and additional data collection for the RPA during the next permit term may allow the limitation to be removed at that time. Central Coast Water Board staff has retained the aluminum effluent limitation in the permit. In addition, the permit does not impose a specific month for annual sampling. Staff concurs with the City that sampling in the spring when the river has higher flows is appropriate.

4. The City requests that with the addition of the fecal coliform limit that either the fecal coliform or total coliform effluent limitations be removed from the permit as including both effluent limitations is unnecessary and duplicative.

Staff Response: Staff agrees with the City's comments that including both fecal and total coliform effluent limitations is duplicative and not necessary. Removal of the total coliform effluent limitation will not result in impacts on water quality since the permit now includes a fecal coliform limit that replaces the total coliform limit. Fecal coliform is a better indicator of potential human pathogens than total coliform and is therefore a more appropriate parameter to measure. Additionally, the Central Coast Basin Plan REC-1 and REC-2 beneficial uses have water quality objectives for fecal coliform but not for total coliform; therefore, including an effluent limitation for total coliform is not justified or applicable. This change in effluent limitations is based on new information and is in compliance with anti-backsliding exceptions requirements of CFR 122.44(l)(i)(A), Sections 402(o)(2) and 303(d)(4) of the CWA. The Central Coast Water Board finds that removing the effluent limitation for total coliform is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Any impact on existing water quality will be insignificant.

5. The City noted that the draft permit modifies the allowable pH range of its discharge from 6.5 to 8.3 to 7.0 to 8.3. The City believes this change in unnecessary, as the current permit's pH is supportive of all identified beneficial uses.

Staff Response: Central Coast Water Board staff concurs with the City's comment and has made the editorial correction of language in the Fact Sheet regarding pH.

C. Public Hearing

The Central Coast Water Board will hold a public hearing on the draft WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **December 1, 2011**
Time: **8:30 a.m.**
Location: **Central Coast Water Board Offices**
895 Aerovista Place – Suite 101, San Luis Obispo, CA 93401

Interested persons are invited to attend. At the public hearing, the Central Coast 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/centralcoast/ 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 Central Coast Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Central Coast 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 (ROWD), 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 Central Coast Water Board by calling (805) 549-3147.

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 Central Coast 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 Peter von Langen at (805) 549-3688 or pvonlangen@waterboards.ca.gov.