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Arnold Schwarzenegger
Governor

ORDER NO. R3-2008-0004
NPDES NO. CA0050628

WASTE DISCHARGE REQUIREMENTS FOR PLAINS EXPLORATION AND PRODUCTION ARROYO GRANDE PRODUCED WATER RECLAMATION FACILITY

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

Table 1. Discharger Information

Discharger	Plains Exploration and Production
Name of Facility	Arroyo Grande Produced Water Reclamation Facility
Facility Address	1821 Price Canyon Road
	San Luis Obispo, CA 93401
	San Luis Obispo County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the Plains Exploration and Production (PXP) Arroyo Grande Produced Water Reclamation Facility from the discharge point identified below is subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Produced Water	35 °, 11', 10.8" N	120 °, 37', 3.7" W	Pismo Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**May 9, 2008**
This Order shall become effective on:	**May 10, 2008**
This Order shall expire on:	**May 9, 2013**
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 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 (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Roger W. 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 Coast Region, on **May 9, 2008**.

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	Plains Exploration and Production
Name of Facility	Arroyo Grande Produced Water Reclamation Facility
Facility Address	1821 Price Canyon Road
	San Luis Obispo, CA 93401
	San Luis Obispo County
Facility Contact, Title, and Phone	Candice Salway, Manager of Environmental, Health and Safety (323-298-2266)
Mailing Address	SAME
Type of Facility	Treatment of Produced Water Derived from Crude Oil Extraction
Facility Design Flow	0.84 million gallons per day (MGD)

II. FINDINGS

The California Water Resources Control Board, Central Coast Region (hereinafter the Central Coast Water Board), finds:

A. **Background.** PXP (Discharger) submitted a Report of Waste Discharge, dated September 15, 2006, (with supplemental information submitted March 19, May 17, August 6 and August 8, 2007) and applied for a National Pollutant Discharge Elimination System (NPDES) permit authorizing the discharge of up to 0.84 MGD of treated wastewater from the Arroyo Grande Produced Water Reclamation Facility.

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

B. **Facility Description.** The Discharger owns and operates oil recovery facilities within the Arroyo Grande Oil Field in San Luis Obispo County. The oil recovery process generates produced water, which is presently re-injected into the oil producing reservoir. The Discharger is proposing to construct a wastewater treatment facility for treatment of the produced water. The collection system consists of gathering lines, which transport the commingled oil, water, and gas to the surface facilities, where each phase is separated. The oil is sold, the gas is utilized onsite, and the produced water would be transported via a pipeline to the proposed wastewater treatment plant. The proposed treatment plant includes warm-lime softening, deep bed filtration, strong-acid cation exchange softening, and cooling. This preliminary treatment is followed by two–pass reverse osmosis (RO) and air stripping. The wastewater treatment plant would be located approximately 1700 feet from the proposed discharge location. Treated produced water would be discharged from Discharge Point 001 to Pismo Creek, waters of the United States, at a point approximately 3.5 miles northeast of the Pacific Ocean, within the Estero Bay hydrologic unit or beneficially reused for irrigation purposes. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 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 section 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 Water Code section 13389, this action to adopt an NPDES permit for the PXP Arroyo Grande Produced Water Reclamation Facility (a "new source" as defined by the Clean Water Act) must comply with the provisions of CEQA, Public Resources Code sections 21100-21177. Compliance with CEQA requirements was met on May 8, 2008, and is discussed in greater detail in the Fact Sheet (Attachment F). A Subsequent Environmental Impact Report (SEIR) for the project was adopted by San Luis Obispo County (lead agency) on May 8, 2008, which identifies potentially significant impacts to water quality and proposes mitigation measures for each potential impact. Potential water quality impacts identified in the SEIR are mitigated through implementation of the requirements specified in this permit.

F. **Technology-Based Effluent Limitations.** CWA Section 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 Effluent Limitations Guidelines and Standards for the Oil and Gas Extraction Point Source Category in Part 435 and/or 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 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* (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all 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.

In accordance with Chapter 2 of the Basin Plan, present and potential beneficial uses applicable to Pismo Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	**Pismo Creek**	• Municipal and domestic supply (MUN) • Agricultural supply (AGR) • Industrial service supply (IND) • Ground water 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) • Preservation of biological habitats of special significance (BIOL) • Rare, threatened, or endangered species (RARE) • Freshwater replenishment (FRSH) • Commercial and sport fishing (COMM)

Requirements of this Order implement the Basin Plan.

I. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the applicable provisions of the Thermal Plan.

J. **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 forty 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 PXP Produced Water Reclamation Facility.

K. **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. Requirements of this Order implement the SIP.

L. **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 5 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 is a new discharge and this Order does not include compliance schedules or interim effluent limitations.

M. **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.

N. **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 for oil and grease and are discussed in section IV.C. of the Fact Sheet. This Order's technology-based limitations implement the minimum, applicable federal technology-based requirements.

Water quality based effluent limitations (WQBELs) have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the

applicable federal water quality standards. To the extent that 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 water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to NPDES regulations at 40 CFR 131.21 (c) (1). This Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

O. **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 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 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. Although the discharge will be a new discharge to Pismo Creek, the Central Coast Water Board has determined that, due to the benefit to be provided to agricultural or wildlife beneficial uses and due to the high level of wastewater treatment proposed by the Discharger, authorization of the discharge by this Order is consistent with applicable State and federal antidegradation policy.

P. **Anti-Backsliding Requirements.** CWA sections 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. The PXP reclamation facility is a new facility (not previously subject to an NPDES permit), and therefore, backsliding considerations are not raised with the issuance of this Order.

Q. **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. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable state and federal statutes regarding threatened and endangered species.

R. **Monitoring and Reporting.** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Central Coast Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), provided as Attachment E to the Order, establishes monitoring and reporting requirements to implement federal and State requirements.

S. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable pursuant to 40 CFR 122.42. 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.

T. **Provisions and Requirements Implementing State Law.** The provisions and requirements in subsections IV.B, IV.C, and V.B of this Order are included to implement State law only. These provisions and requirements are not required or authorized under the federal CWA; consequently, violations of these provisions and requirements are not subject to the enforcement remedies that are available for NPDES violations. In accordance with Section 13241 of the CWC, the Central Coast Water Board has established water quality objectives for groundwater in the Basin Plan. The groundwater limitations listed in Section V.B. of this Order are consistent with the Basin Plan and are for the protection of present and potential groundwater beneficial uses. In establishing these limitations, the Central Coast Water Board has considered the factors listed in Section 13241 of the CWC. The Discharger and other interested parties have not submitted any information regarding economic considerations or the other factors se forth in Section 13241. The groundwater limitations in the permit are consistent with other similar permits throughout the Central Coast region. Other dischargers have successfully implemented similar requirements. Beneficial uses and environmental characteristics of the area are discussed in Attachment F. The requirements are reasonably necessary to protect beneficial uses identified in the Basin Plan, and there is no economic information related to costs of compliance sufficient, in the Board's determination, to justify failing to protect beneficial uses. Coordinated control of water quality throughout the region will not eliminate the need for this Discharger to prevent adverse water quality impacts from its discharge.

U. **Notification of Interested Parties.** The Central Coast Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of 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.

III. DISCHARGE PROHIBITIONS

A. Discharge of treated wastewater at a location or in a manner, other than as described by this Order, is prohibited.

B. Discharge of wastewaters not described by Section II.B. of this Order is prohibited. Prohibited wastewaters include, but are not limited to, demineralizer regenerant waste streams, membrane cleaning solutions, reverse osmosis reject/concentrate streams, lime sludges, and domestic wastes.

C. The overflow or bypass of wastewater from the Discharger's reclamation facility and the subsequent discharge of untreated or partially treated wastewater is prohibited.

D. Effluent flow shall not exceed the design flow capacity of the treatment facility (0.84 MGD).

IV. EFFLUENT LIMITATIONS and DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. **Final Effluent Limitations – Discharge Point 001.** The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations		
		Instantaneous Maximum	Average Monthly	Maximum Daily
TDS	mg/L	---	---	450
	lbs/day [1]	---	---	3.1×10^3
pH	pH units	7.0 – 8.3 at all times		
Acute Toxicity	TUa	---	---	1.0
Oil and Grease	mg/L	---	---	35
Benzene	µg/L	---	1.0	2.0
Phenol	µg/L	---	1.0	2.0

[1] Based on a flow rate of 0.84 MGD

2. **Interim Effluent Limitations.** Not applicable to this permit.

B. Land Discharge Specifications.

Not applicable to this permit.

C. Reclamation Specifications.

Reclaimed water used for landscape irrigation shall at all times be treated as described in Section II.B. of this Order, meet the Reclaimed Water Limitations specified below, and shall not exceed water quality objectives for agricultural water use specified in Basin Plan Table 3-4. Reclaimed water shall not be allowed to run off to Pismo Creek or tributary streams.

Table 7. Reclaimed Water Limitations

Parameter	Units	Effluent Limitations		
		Instantaneous Maximum	Average Monthly	Maximum Daily
TDS	mg/L	---	---	450
pH	pH units	6.5 – 8.4 at all times		
Oil and Grease	mg/L	---	---	35
Benzene	µg/L	---	1.0	2.0
Phenol	µg/L	---	1.0	2.0

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations. Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge from the reclamation facility shall not cause the following conditions in receiving waters.

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 causes nuisance or adversely affects 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. This may require effluent oil and grease to be less than 35 mg/L.

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. 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. Where natural turbidity is less than 25 NTU, increases shall not be more than 5 NTU above natural turbidity.

   b. Where natural turbidity is between 25 and 50 NTU, increases shall not exceed 20% above natural turbidity.

c. Where natural turbidity is between 50 and 100 NTU, increases shall not exceed 10 NTU above natural turbidity.

d. Where natural turbidity is greater than 100 NTU, increases shall not exceed 10% above natural turbidity.

10. The pH value shall not be depressed below 7.0 nor raised above 8.3.

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

12. At no time or place shall the temperature be increased more than 5° F above natural receiving water temperature.

13. 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.

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

15. 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.

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

Methylene Blue Activated Substances	0.2 mg/L
PCBs	0.3 µg/L
Phenols	1.0 µg/L
Phthalate Esters	0.002 µg/L

17. 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. Receiving waters shall not contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) for radioactivity presented in Table 64442 of Title 22 California Code of Regulations, Division 4, Chapter 15, Article 5.

18. Receiving waters shall not contain concentrations of chemical constituents in excess of the primary maximum contaminant levels (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.

19. 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 the University of California Agricultural Extension Service guidelines presented in Table 3-3 of the Basin Plan. In addition, waters used for irrigation and livestock watering shall not exceed concentrations of chemicals listed in Table 3-4 of the Basin Plan. Salt concentrations 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. No controllable water quality factor shall degrade the quality of any ground water resource or adversely affect long term soil productivity.

20. 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 per 100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 per 100 mL.

21. Waters shall not contain concentrations of chemical constituents known to be deleterious to fish or wildlife in excess of the limits listed in Table 3-5 of the Basin Plan.

22. For protection of fish spawning activity, cadmium shall not exceed .003 mg/L in hard water or .0004 mg/L in soft water at any time. (Hard water is defined as water exceeding 100 mg/L $CaCO_3$.)

B. Groundwater Limitations. Activities at the treatment facility shall not cause exceedance/deviation from the following water quality objectives for groundwater established by the Basin Plan.

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

2. 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 that presents a hazard to human, plant, animal, or aquatic life, or that exceed the limits specified in the California Code of Regulations, Title 22, Chapter 15, Article 5, Section 64443, Table 4.

3. The median concentration of coliform organisms in groundwater, over any seven-day period, shall be less than 2.2 organisms per 100 milliliters.

4. Groundwater shall not contain concentrations of chemical constituents in excess of the primary maximum contaminant levels (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.

5. Groundwaters shall not contain concentration of chemical constituents that adversely affect an agricultural beneficial use, as described by Table 3-3 of the Basin Plan. Water used for irrigation or livestock watering shall not exceed the concentrations for those chemicals listed in Table 3-4 of the Basin Plan.

VI. PROVISIONS

A. Standard Provisions. The Discharger shall comply with all Standard Provisions included in Attachment D 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 Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants* or other equivalent methods approved by the Executive Officer.

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 water quality objective. The Order may be reopened once additional effluent data has been collected, to implement new limits or to increase the frequency of monitoring, if the information should indicate this is necessary.

2. **Special Studies, Technical Reports and Additional Monitoring.** Requirements described in Section V.D. of Attachment E of this Order (Monitoring and Reporting Program), accelerated monitoring for whole effluent acute and chronic toxicity is required when routine monitoring shows exceedances of applicable effluent limitations or triggers.

3. **Best Management Practices and Pollution Prevention**

   a. **Best Management Practices.** The Discharger shall develop and implement a Best Management Practices (BMP) plan to ensure that no contaminated storm water leaves the treatment and disposal facilities and flows to surface waters. A BMP plan is designed to prevent, or minimize the potential for release of toxic substances from ancillary activities to the waters of the State through plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMP plans may either be source controls, which prevent a discharge, or treatment controls, which remove pollutants from a discharge before reaching surface or ground waters. Best management practices should be certified by the California State Board to be considered "best." Further information regarding BMP plans is found in Chapter 4 of the Basin Plan, and the appropriate Best Management Practices Handbook.

If a Storm Water Pollution Prevention Plan (SWPPP) is developed for compliance with the General Permit No. CAS000001, pursuant to Provision VI.C.6., below, the SWPPP will satisfy this BMP plan requirement.

b. Pollutant Minimization Program. Not applicable to this permit.

4. **Construction, Operation and Maintenance Specifications.** Not applicable.

5. **Special Provisions for Municipal Facilities (POTWs Only).** Not applicable.

6. **Storm Water Provisions.** 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 Resources Control Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.*

7. **Compliance Schedules.** Not applicable to this permit.

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 priority 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 priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

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

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

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

Coefficient of Variation (*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 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) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

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

Enclosed Bays 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 the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are 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 is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

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 to the 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 are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

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

Method Detection Limit (MDL) 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, revised as of July 3, 1999.

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

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) are those sample results less than the laboratory's MDL.

Ocean Waters are 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 are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (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 Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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 water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant 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 or Regional Water Board.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a

sample result that are selected by the Regional 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 RL.

Satellite Collection System is 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 is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

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

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

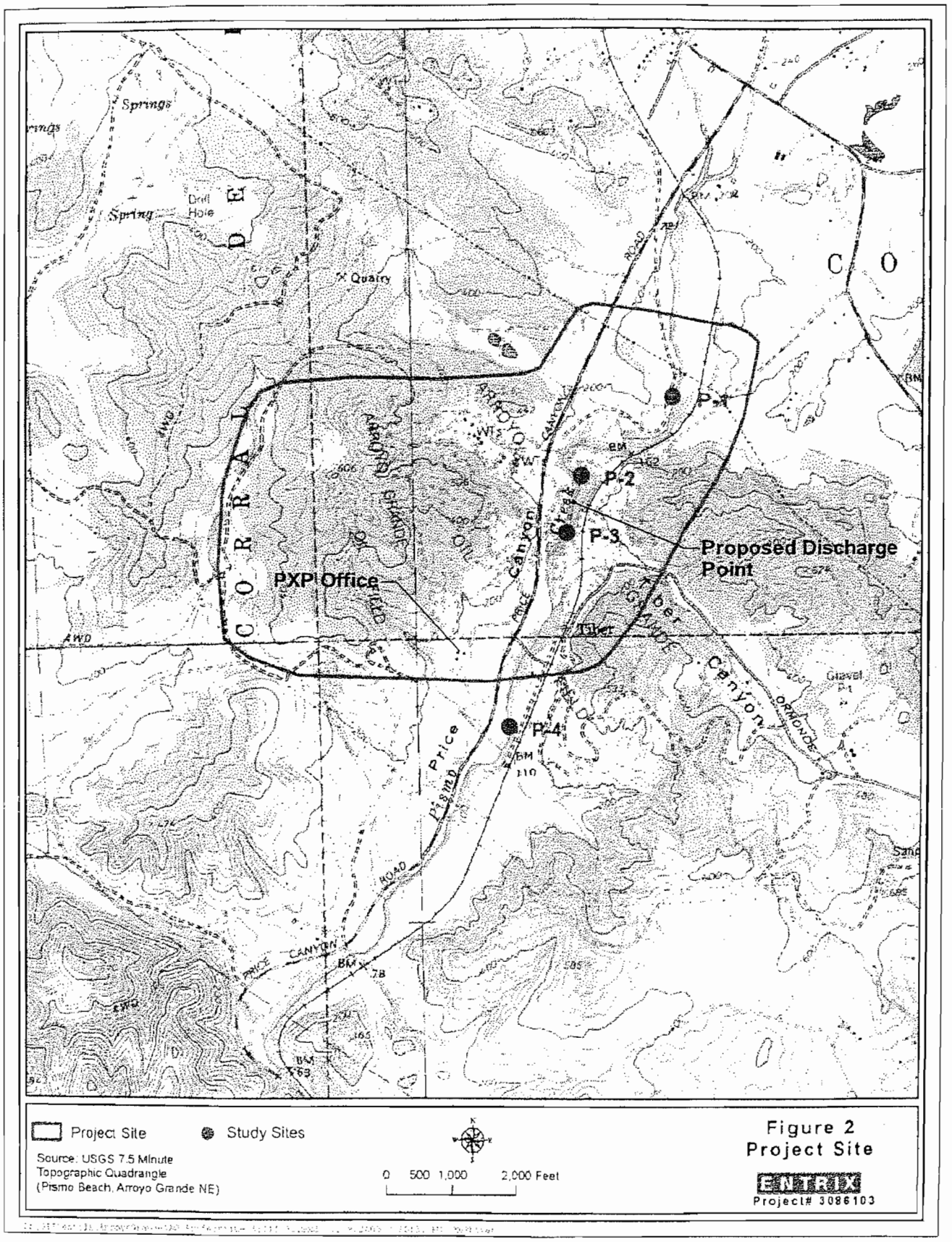
x is the observed value;

μ is the arithmetic mean of the observed values; and

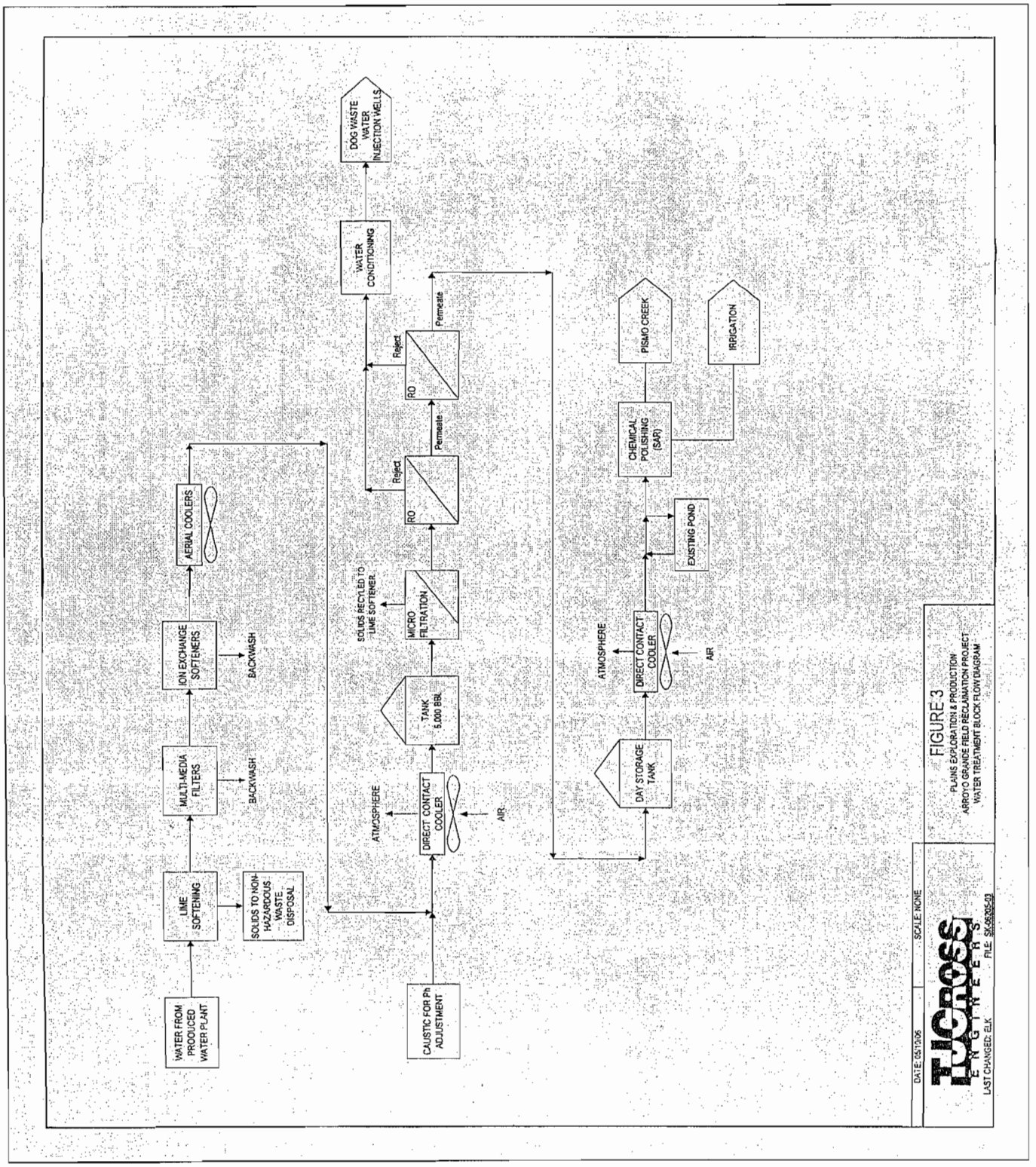
n is the number of samples.

Toxicity Reduction Evaluation (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 and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 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 C.F.R. § 122.5(c).)

F. Inspection and Entry. The Discharger shall allow the Central Coast Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their

representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Water Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(i)(3)); and

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

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

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

b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 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 C.F.R. § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 Water Code. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Records Retention. 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 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b))

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 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 C.F.R. § 122.41(h); Water Code, § 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 C.F.R. § 122.41(k).)

2. All permit applications shall be signed by a responsible corporate officer. For purposes of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vise-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the

regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 C.F.R. § 122.22(a)(1)).

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 C.F.R. § 122.22(b)(1));

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

   c. The written authorization is submitted to the Central Coast Water Board and State Water Board. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coastl Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(l)(6)(i).)

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

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

   b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions – Notification Levels VII.A.1) (40 C.F.R. § 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 C.F.R.§ 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 Order requirements. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. **Non-Municipal Facilities.** Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Coast Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a))

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

   a. 100 micrograms per liter (µg/L) (40 C.F.R. §b122.42 (a)(1)(i);

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

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. §122.42(a)(1)(iv).)

   d. The level established by the Central Coast Water Coast Board in accordance with section 122.44(f). (40 §C.F.R. 122.42(a)(1)(iv).)

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

   a. 500 micrograms per liter (µg/L) (40 C.F.R. §122.42(a)(2)(i);

   b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. §122.42(a)(2)(ii);

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. §122.42(a)(2)(iii);

   d. The level established by the Central Coast Water Board in accordance with section 122.44(f). (40 C.F.R. §122.42(a)(2)(iv).)

VIII. CENTRAL COAST REGION'S STANDARD PROVISIONS (January 1985)

A. General Permit Conditions

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 Section 307(a) of the Clean Water Act 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.

Provisions

7. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by Section 13050 of the California Water Code.

8. 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.

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

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

11. 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.

12. 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.

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

14. 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.

15. 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 affect 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.

16. 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.

17. Production and use of recycled water is subject to the approval of the Board. Production and use of recycled water shall be in conformance with water recycling criteria established in Chapter 3, Title 22, of the California Administrative Code and Chapter 7, Division 7, of the California Water Code. An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water recycling requirements from the Board is required before recycled 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.

B. 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 (ref. paragraph F.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 (ref. paragraph F.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 Resources Control 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.

C. 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 paragraph B.1 above, and Attachment D, Federal Standard Provision 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 Attachment D, Federal Standard Provision 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. All "Dischargers" shall submit reports to the:

   California Regional Water Quality Control Board
   Central Coast Region
   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 Attachment D, Federal Standard Provision II.C.

7. Except for data determined to be confidential under Section 308 of the Clean Water Act (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 EPA. Please also see Attachment D, Federal Standard Provision IV.C.

8. By February 1st 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 in Provision A.15.), 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 B 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 Resources Control Board's "Guidelines for Determining the Effectiveness of Local Pretreatment Programs."

D. 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. 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.

F. 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: (I) 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 Attachment D, 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 paragraph F.2 and instantaneous maximum limits.

6. "Hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

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 = $(C_1 \times C_2 \times ... \times C_n)^{1/n}$

   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 F.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 paragraph F.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 = $(X_1 + X_2 + ... + X_n) / n$

    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):

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

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 (Attachment D, Federal Standard Provision 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 Resources Control Board.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional 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 Department of Health Services, in accordance with Water Code section 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. 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.

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

E. 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 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).

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
001	EFF-001	Effluent samples shall be collected at a location representative of the discharge following full treatment and before contact with the receiving water or other waste streams not covered by this Order.
Upstream Receiving Water	RW-001	Pismo Creek immediately upstream of Discharge Point 001, where representative samples of background conditions in the receiving water, not influenced by this discharge, can be collected.
Downstream Receiving Water	RW-002	Pismo Creek immediately downstream of Discharge Point 001, where representative samples of downstream conditions in the commingled stream can be collected.

III. INFLUENT MONITORING REQUIREMENTS

The MRP does not establish influent monitoring requirements.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor effluent at Monitoring Location EFF – 001 in accordance with the following schedule.

Table E-2. Effluent Monitoring at EFF - 001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Total Flow	MGD	Metered	Daily
Mean Daily Flow	MGD	---	Monthly
Maximum Daily Flow	MGD	---	Monthly
pH	pH units	Grab	Daily
Ammonia (ionized and unionized)	mg/L	Grab	Quarterly
Nitrate (as N)	mg/L N	Grab	Quarterly
Phosphorus	mg/L	Grab	Quarterly
Biochemical Oxygen Demand (BOD_5)	mg/L	24-hr composite	Monthly
Total Dissolved Solids (TDS)	mg/L	24-hr composite	Weekly
Total Suspended Solids (TSS)	mg/L	24-hr composite	Monthly
Temperature	°F	Meter	Monthly
Benzene	µg/L	Grab	Monthly
Phenol	µg/L	Grab	Monthly
Oil and Grease	mg/L	Grab	Monthly
Acute Toxicity [1]	TUa	24-hr composite	2X/Year
Chronic Toxicity[1]	TUc	24-hr composite	2X/Year
Radium-226 and 228, Combined[2]	pCi/L	Grab	Quarterly
Hardness	mg/L $CaCO_3$	Grab	Quarterly
Metals [2],[3]	µg/L	24-hr composite	Quarterly
CTR Pollutants 13-126 [4]	µg/L	24-hr composite	1X/Year
Title 22 Pollutants[5]	µg/L	24-hr composite	1X/Year

[1] Whole effluent acute and chronic toxicity monitoring shall be conducted according to the requirements established in section V of this Monitoring and Reporting Plan. Acute and chronic testing will alternate each quarter, such that each are tested twice per year.

[2] Monitoring shall continue on a quarterly basis for eight consecutive monitoring events (2 years), at which time monitoring frequency may be reduced to one time per year following written approval by the Central Coast Water Board Executive Officer.

[3] Metals include the CTR metals identified as pollutant numbers 1-13 at 40 CFR 131.38(b), the Title 22 metals for which maximum contaminant levels are established by Table 64431-A, in Title 22 of the California Code of Regulations, Section 64431; and those metals with applicable water quality objectives established in Tables 3-4 and 3-5 of the Basin Plan for the protection of agriculture and aquatic life beneficial uses - aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (+3 and +6), cobalt, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc.

[4] Those pollutants identified in the CTR at 40 CFR 131.38.

[5] The pollutants for which primary MCLs have been established by the Department of Health Services in Title 22 of the California Code of Regulations, Division 4, Chapter 15, Table 64431-A (MCLs for Inorganic Chemicals) and Table 64444-A (MCLs for Organic Chemicals).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Whole Effluent Acute Toxicity Monitoring. Bioassays shall be performed to evaluate the acute toxicity of the discharge in accordance with the following procedures, unless otherwise specified by the Central Coast Water Board's Executive Officer or designee.

1. Bioassays shall be conducted on a sensitive fish species and an invertebrate species as approved by the Central Coast Water Board's Executive Officer. *Pimephales promelas* (fathead minnow) and *Ceriodaphnia dubia* (water flea) are suggested test species that may be utilized. The bioassays shall be conducted in accordance with the protocol given in EPA/821-R-02-012 – Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, 5th Edition, or subsequent editions.

2. Both test species given below shall be used to measure acute toxicity.

Table E-3. Approved Test for Acute Toxicity

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

3. Toxicity Test References for Conducting Toxicity Tests: Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA/821-R-02-012, October 2002, or subsequent editions.

B. Whole Effluent Chronic Toxicity Monitoring

1. *Sampling.* The Discharger shall collect 24-hour composite samples of the effluent at the compliance point station specified in a table above, for critical life stage toxicity

testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

2. *Test Species. Pimephales promelas.* The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.

3. *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. These are "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," currently third edition (EPA-821-R-02-014), and "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," currently fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

4. *Dilution Series.* The Discharger shall conduct tests at 100%, 75%, 50%, 25%, and 12.5%. The "%" represents percent effluent as discharged.

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

   (a) Sample date(s)

   (b) Test initiation date

   (c) Test species

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

   (e) NOEC value(s) in percent effluent

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

   (g) TUc values (100/NOEC, 100/IC25, or 100/EC25)

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

   (i) NOEC and LOEC values for reference toxicant test(s)

   (j) IC50 or EC50 value(s) for reference toxicant test(s)

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

6. *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 2.a, specifically item numbers 1, 3, 5, 6(IC25 or EC25), 7, and 8.

C. Quality Assurance

1. If applicable, a series of at least five dilutions and a control shall be tested for chronic toxicity testing and may be used for acute toxicity testing. The series shall include the following concentrations: 12.5, 25, 50, 75, and 100 percent effluent.

2. 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).

3. 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.).

4. 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 re-sample 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.

6. 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. When the numeric acute toxicity limit, or a chronic toxicity trigger 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.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. 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. 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 acute toxicity tests are reported as failed tests meeting any of the conditions specified in Attachment E, Section V.D.

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 United States Environmental Protection Agency (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 to this permit.

VII. RECLAMATION MONITORING REQUIREMENTS

Each monitoring report shall include a summary of reclaimed water use, including: date and location of use; land owner; estimated quantity of reclaimed water used for irrigation; and a summary of compliance with requirements specified in Section IV.C of this Order.

VIII. RECEIVING WATER MONITORING REQUIREMENTS - SURFACE WATERS

A. Monitoring Location RW-001

1. The Discharger shall monitor receiving water in Pismo Creek at Monitoring Stations RW-001 and RW-002 in accordance with the following schedule.

Table E-4. Receiving Water Monitoring

Constituent	Units	Sample Type	Minimum Sampling Frequency
Hardness	mg/L $CaCO_3$	Grab	Every other year [1]
TDS	mg/L	Grab	Every other year [1]
Temperature	°F	Grab	Every other year [1]
Oil & Grease	mg/L	Grab	Every other year [1]
CTR Pollutants [2]	µg/L	Grab	Every other year [1]
Title 22 Pollutants[3]	µg/L	Grab	Every other year [1]
Basin Plan Table 3-3 Pollutants[4]	vary	Grab	Every other year [1]
Basin Plan Table 3-4 Pollutants[5]	mg/L	Grab	Every other year [1]

[1] Monitoring shall include sampling in a dry season and in a wet season during the expected five-year permit term that begins at the time of permit adoption.

[2] Those pollutants identified in the CTR at 40 CFR 131.38. 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)*.

[3] Those pollutants with primary MCLs established at Tables 64431-A and 64444-A of the California Code of Regulations, Title 22, Division 4, Chapter 15.

[4] Those pollutants with water quality standards established by the Basin Plan at Table 3-3, Guidelines for Interpretation of Quality of Water for Irrigation.

[5] Those pollutants with water quality standards established in the Basin Plan at Table 3-4, Water Quality Objectives for Agricultural Water Use.

IX. OTHER MONITORING REQUIREMENTS

Not applicable to this permit.

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.

2. The Discharger shall report the results of acute toxicity testing, TRE and TIE as required in the previous Section entitled, "Effluent Toxicity Testing".

3. The results of any analysis taken, more frequently than required using analytical methods, monitoring procedures and performed at the locations specified in this Monitoring and Reporting Program shall be reported to the Central Coast Water Board.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Central Coast Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. 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, quarterly, 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-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	May 10, 2008	All	First day of second calendar month following the month of sampling
1x/day	May 10, 2008	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following the month of sampling
1x/week	May 11, 2008	Sunday through Saturday	First day of second calendar month following the month of sampling
1x/month	June 1, 2008	1st day of calendar month through last day of calendar month	First day of second calendar month following the month of sampling
1x/quarter	July 1, 2008	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1st August 1st November 1st February 1st

1x/semiannual period	July 1, 2008	January 1 through June 30 July 1 through December 31	August 1st February 1st
1x/year	January 1, 2009	January 1 through December 31	February 1st
Every other year	January 1, 2009	January 1 through December 31	February 1st
1x/permit term	As specified in permit	Permit term	The earliest of May 1st, Aug 1st, Nov 1st, or Feb 1st following the monitoring event

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) 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 RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, 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. 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. SMRs must be submitted to the Central Coast Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the following address.

California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

d. An Annual Self Monitoring Report shall be due on February 1 following each calendar year and shall include all information described in Standard Provision VIII.C.8.:

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or 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 Discharge shall submit the original DMR and one copy of the DMR to one of the addresses 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 or modified cannot be accepted.

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 this 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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ATTACHMENT F – FACT SHEET

As described in Section II (Findings) 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	(to be established after adoption)
Discharger	Plains Exploration and Production
Name of Facility	Arroyo Grande Produced Water Reclamation Facility
Facility Address	1821 Price Canyon Road San Luis Obispo, CA 93401 San Luis Obispo County
Facility Contact, Title and Phone	Candice Salway, Manager EHS, 323-298-2266
Authorized Person to Sign and Submit Reports	Candice Salway, Manager EHS, 323-298-2266
Mailing Address	5640 S. Fairfax Ave. Los Angeles CA 90056
Billing Address	Same as Mailing Address
Type of Facility	Wastewater Treatment Facility
Major or Minor Facility	Major
Threat to Water Quality	2
Complexity	A
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	0.84 million gallons per day
Facility Design Flow	0.84 million gallons per day
Watershed	Pismo Creek
Receiving Water	Pismo Creek (below the Hyla Crossing)
Receiving Water Type	Inland Fresh Surface Water

A. Plains Exploration and Production (Discharger) is the owner and operator of the proposed Arroyo Grande Produced Water Reclamation Facility, which is the subject of this Order. 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 produced water reclamation facility is a new facility, and will discharge treated wastewater to Pismo Creek, waters of the United States.

C. The Discharger filed a Report of Waste Discharge and submitted an application for Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit on September 15, 2006. Additional information was submitted March 19, May 17, August 6, and August 8, 2007, to complete the application.

II. FACILITY DESCRIPTION

A. Description of Wastewater Treatment or Controls. The Discharger owns and operates crude oil recovery facilities within the Arroyo Grande Oil Field, and is proposing to construct a wastewater reclamation facility for treatment of the produced water generated by the oil extraction process. Produced water is all water associated with oil and gas producing formations, when the reservoir is produced and brought to the surface. The water may include flow from above or below the hydrocarbon zone, or flow from an injection recovery activity. The produced water will be piped to the wastewater reclamation facility. The treatment plant will be composed of two phases. The first phase will consist of warm-lime softening, deep-bed filtration to remove particulates, strong-acid cation softening, and cooling of the produced water as a pretreatment before the second phase. The second series of treatments will include a two pass reverse osmosis (RO) system, and air stripping to remove contaminants. RO concentrate will be re-injected into the formation, or recycled within the treatment facility. The produced water reclamation facility will be located approximately 1700 feet from Pismo Creek.

B. Discharge Points and Receiving Waters. Treated wastewater will be discharged from Discharge Point 001 to Pismo Creek, a water of the United States, at a point approximately 3.5 miles from the Pacific Ocean within the Estero Bay hydrologic unit. The discharge point location is at 35° 10' 51" north latitude, and 120° 37' 5.6" west longitude. The Discharger submitted a July 11, 2006, Revised Hydrologic, Water Quality, and Biological Characterization of Pismo Creek Report, in which Pismo Creek was described as having measured base flow conditions ranging from 0.9 to 1.76 cubic feet per second (cfs). The anticipated volume of discharge of treated wastewater to the creek is approximately 1.3 cfs, or 75–145 percent of the current base flow in the creek.

Based upon information provided by the Discharger and documented in the 2002 Department of Water Resources report, *Water Resources of the Arroyo Grande - Nipomo Mesa*, groundwater is recharged by stream infiltration from Pismo Creek and agricultural wells are located immediately downstream from the discharge location. Based upon this information, Water Board staff concurs with the Discharger's assessment that the proposed discharge will contribute to recharging groundwater used for agricultural purposes downstream of the discharge point. Direct reuse for irrigation is also proposed.

The 2002 Department of Water Resources report does not clearly indicate seawater intrusion (identified in an earlier report) is currently occurring in the Pismo Creek basin. However, the report does warn of potential intrusion into the groundwater basin if groundwater extraction exceeds the rate of recharge. Water Board staff concurs with the Discharger's assessment that the proposed discharge will contribute to recharging groundwater in a manner preventing and/or reducing potential seawater intrusion.

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

Not applicable to this permit as it is a new facility.

D. Compliance Summary. Not applicable to this permit as it is a new facility.

E. Planned Changes. No significant changes to the components or operation of the collection, treatment, and disposal systems are planned for the term of the Order.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 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 section 13260).

B. California Environmental Quality Act (CEQA). Pursuant to Water Code section 13389, this action to adopt an NPDES permit must comply with the provisions of CEQA, Public Resources Code sections 21100 through 21177. CEQA require State and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The State Office of Planning and Research has established guidelines for public agencies to implement CEQA, and these regulations are codified at Title 14 of the California Code of Regulations, Division 6, Chapter 3 (§§ 15000- 15387). CEQA is intended to be used in conjunction with discretionary powers granted to public agencies by other laws; and as such, state and local agencies have integrated the requirements of CEQA with planning and environmental review procedures otherwise required by law or by local practice, so that all of those procedures, to the maximum extent feasible, run concurrently, rather than consecutively.

For the PXP produced water reclamation project, the lead agency for CEQA purposes is San Luis Obispo (SLO) County. A Land Use Permit application was submitted to the SLO County Department of Planning and Building on June 20, 2006, and accepted for processing October 11, 2006.

As the lead agency, the County must consider the environmental effects, both individual and collective, of all activities involved in a project and must determine whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required. The County can require changes in any or all activities involved in a project in order to substantially lessen or avoid significant effects on the environment. A Subsequent Environmental Impact Report, which supplements an earlier 2005 EIR, was developed as part of the land use approval process to satisfy the requirements of CEQA. A Subsequent Environmental Impact Report (SEIR) for the project was adopted by San Luis Obispo County (the CEQA lead agency) on May 8, 2008, which identifies potentially significant

impacts to water quality and proposes mitigation measures for each potential impact. Potential water quality impacts identified in the SEIR are mitigated through implementation of the requirements specified in this permit.

C. State and Federal Regulations, Policies, and Plans

1. **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 all waters addressed through the Plan. In addition, the Basin Plan implements 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 applicable to Pismo Creek are as follows:

Table F-2. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pismo Creek	• Municipal and domestic supply (MUN) • Agricultural supply (AGR) • Industrial service supply (IND) • Ground water 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) • Preservation of biological habitats of special significance (BIOL) • Rare, threatened, or endangered species (RARE) • Freshwater replenishment (FRSH) • Commercial and sport fishing (COMM)

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan in September 18, 1975. The Thermal Plan is not applicable to this discharger, as the receiving water is not within the category of coastal, interstate, enclosed bay, or estuarine waters that are addressed by the plan.

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 forty 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 to Pismo Creek.

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 Pismo Creek. 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 C.F.R. 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, and states:

   Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with the maximum benefit to the people of the State, will not reasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies; and

   Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) pollution or nuisance will not occur and (b) the highest water

quality consistent with the maximum benefit to the people of the State will be maintained.

Effluent limitation guidelines at 40 CFR 435 for the Oil and Gas Extraction Point Source Category prohibit discharges from such facilities. PXP has met an exception, however, to this prohibition described in 40 CFR 435 Subpart E for discharges of produced water for use in agricultural and or wildlife propagation, and provides effluent limits for those onshore facilities that qualify for this discharge exception. Such an exception may be granted only for circumstances where discharges will provide substantial benefit for downstream agricultural uses and/or wildlife propagation while assuring protection of all other beneficial uses of the receiving water. PXP will be employing a very high level of wastewater treatment to assure a high quality effluent that will not result in water quality diminished from that quality required by applicable laws, guidance, and policy, including policy established in the Basin Plan. Although the discharge will be a new discharge to Pismo Creek, the Central Coast Water Board has determined that, due to the benefit to be provided to agricultural or wildlife beneficial uses and due to the high level of wastewater treatment proposed by the Discharger, authorization of the discharge by this Order is consistent with applicable State and federal anti-degradation policy.

7. **Anti-Backsliding Requirements.** CWA Sections 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. Anti-backsliding provisions of the CWA and NPDES regulations are not applicable for this Order, as it is not a reissued permit.

D. **Impaired Water Bodies on CWA 303(d) List .** Pismo Creek is not identified as impaired pursuant to CWA section 303 (d), which requires states to identify receiving waters which are not meeting applicable water quality standards after imposition of technology-based requirements on point source discharges, as required by CWA sections 301 (b) (1) (A and B).

E. **Other Plans, Polices and Regulations**

1. **Discharges of Storm Water**. If applicable, the Discharger is required by this Order to apply for the General Permit for Discharges of Storm Water Associated with Industrial Activities, Excluding Construction Activities (Permit Number CAS000001).

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)(vi) : 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 U.S. EPA criteria guidance published under CWA Section 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 (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 Pismo Creek; and this prohibition reflects CWA section 402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions.

2. **Discharge Prohibition III. B (Discharge of wastes not described by Section II.B. is prohibited).** Prohibited discharges include but are not limited to regenerant waste streams, membrane cleaning solutions, lime sludges, and domestic wastes. The Effluent Limitations Guidelines for the Oil and Gas Extraction Point Source Category Subpart E (Agricultural and Wildlife Water Use Subcategory) prohibit all discharges, except produced water, from sources associated with the production, field exploration, drilling, well completion or well treatment within the oil and gas extraction industry.

3. **Discharge Prohibition III. C (Overflows and bypasses are prohibited).** The discharge of untreated or partially treated produced water from the Discharger's reclamation facility 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.

4. **Discharge Prohibition III. D (Discharge flow shall not exceed 0.84 MGD).** The purpose of the prohibition is to assure that influent flows do not exceed the treatment plant's design capacity, and thereby, assure efficient treatment of produced water.

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, at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Oil and Gas Extraction Point Source Category in 40 CFR 435 and/or Best Professional Judgment (BPJ) in accordance with 40 CFR 125. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

2. **Applicable Technology-Based Effluent Limitations.** Being "engaged in the production, field exploration, drilling, well completion and well treatment in the oil and gas extraction industry," the Discharger's Arroyo Grande Produced Water Reclamation Facility is subject to the technology-based effluent limitations established by USEPA at 40 CFR 435, Effluent Guidelines and Standards for the Oil and Gas Extraction Point Source Category, Subpart C (Onshore Subcategory). Although the Effluent Guidelines and Standards simply prohibit discharges from such facilities, certain exceptions to the discharge prohibition are allowed.

   The Discharger has submitted documentation to the Central Coast Water Board justifying the exception to the discharge prohibition established at 40 CFR 435 Subpart E for the Agricultural and Wildlife Water Use Subcategory. This exception permits discharges of produced water when it has a use in agriculture or wildlife propagation. The term "use in agricultural or wildlife propagation" means that the produced water is of good enough quality to be used for wildlife or livestock watering or other agricultural uses and that the produced water is actually put to such use during periods of discharge." [40 CFR 435.51 (c)] EPA established this exception because, in arid portions of the western United States, low salinity produced waters are often the only source of water, or at least a significant source, used for agricultural and wildlife propagation purposes. [44 Fed. Reg. 22069, 22072 (April 13, 1979)] "In order to qualify for the beneficial use subcategory, it will be necessary that the discharge is in fact needed for cattle watering, irrigation, etc." [41 Fed. Reg. 44942, 4948 (October 13, 1976)]

   As described above (Fact Sheet section II.B.), the Discharger submitted information documenting that the discharge will contribute to recharging groundwater used for downstream agricultural purposes. The Discharger has also submitted information documenting that the discharge will contribute to recharging groundwater in a manner preventing and/or reducing potential seawater intrusion. Discharge water quality (as required by this permit) will be adequate to support wildlife in and around Pismo Creek. Based upon these findings, the proposed discharge meets applicable criteria to qualify for exception to the federal prohibition of discharge, based upon its use in agricultural and wildlife propagation.

   Applicable Effluent Guidelines and Standards for the Agricultural and Wildlife Water Use Subcategory require (1) that there be no discharge of pollutants from any source (other than produced water) associated with production, field exploration, drilling, well completion, or well treatment (i.e., drilling muds, drill cuttings, and produced sands) and (2) oil and grease in discharges of produced water shall not exceed 35 milligrams per liter (mg/L). These requirements are incorporated into the proposed permit.

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 water quality objectives 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 the 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 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.

2. **Applicable Beneficial Uses and Water Quality Criteria and Objectives.** Beneficial uses for Pismo Creek are established by the Basin Plan and are described by Section II.H (Findings) of the Order. Water quality criteria and objectives applicable to this receiving water are established by the California Toxics Rule (CTR), established by the USEPA at 40 CFR 131.38; the National Toxics Rule (NTR), established by the USEPA at 40 CFR 131.36; and Chapter 3, Section II.A.2 of the Basin Plan, including Tables 3-3 (Guidelines for Interpretation of Quality of Water for Irrigation), 3-4 (Water Quality Objectives for Agricultural Use), and 3-5 (Toxic Metal Concentrations not to be Exceeded in Aquatic Life Habitats). The Basin Plan water quality objectives for chemical constituents are stated as not to exceed the limits set forth in the California Code of Regulations, Title 22, Article 4, Chapter 15, Section 64435, Tables 64431-A and 64444-A. Some pollutants have WQC/WQOs established by more than one of these sources.

3. **Determining the Need for WQBELs.** NPDES regulations at 40 CFR 122.44(d)(1)(i) require permits to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard". The State Implementation Plan became effective on May 22, 2000, and establishes procedures to implement water quality criteria from the NTR, CTR, and priority toxic pollutant objectives established in the Basin Plan. The implementation procedures if 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 Regional Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis (RPA). In three monitoring events in January 2007, the Discharger characterized untreated produced water from the Arroyo Grande oil field. Data from these monitoring events was used as "effluent" data to conduct the RPA. It should be noted that the produced water had not received the proposed treatment and therefore represents the worst-case scenario of effluent quality if all

treatment malfunctioned. The Pismo Creek water quality characterization was submitted by the Discharger on July 11, 2006, in a report titled, Revised Hydrologic, Water Quality, and Biological Characterization of Pismo Creek.

Some freshwater water quality criteria are hardness dependent. For the RPA, a receiving water hardness of 270 mg/L was used, representing the minimum hardness detected in Pismo Creek. To conduct the RPA, Central Coast Water Board staff identified the maximum observed effluent (MEC) and background (B) concentrations for each priority, toxic pollutant from "effluent" and receiving water data provided by the Discharger, and compared this to the most stringent applicable water quality criterion (C) for each pollutant from the NTR, CTR, and the Basin Plan. Section 1.3 establishes three triggers for finding reasonable potential.

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

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

Trigger 3. After a review of 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 analysis, lack of dilution, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, and the presence of endangered or threatened species or their critical habitat.

The MECs, most stringent WQO/WQCs, and background concentrations used in the RPA are presented in the following table, along with the RPA results (yes or no) for each toxic pollutant analyzed. Only pollutants that were detected in the "effluent" are listed. Reasonable potential could not be determined for all CTR pollutants, as there are not applicable water quality criteria and/or available monitoring data for all pollutants. The RPA determined that benzene and phenol show reasonable potential, by Trigger 1 (MEC was greater than C).

Table F-3. Summary of RPA Results

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L) (MEC)	Governing WQO/ WQC (µg/L) (C)	Maximum Background or Minimum DL [a][b] (µg/L) (B)	RPA Results[c]
5b	Chromium (VI)	5.5	11.4 (CTR freshwater chronic for aquatic life criterion)	1.7	No
19	Benzene	23	1 (Title 22 MCL, human health criterion)	<0.5	Yes
33	Ethylbenzene	28	300 (Title 22 MCL, human health criterion)	---	No
39	Toluene	10	150 (Title 22 MCL, human health	0.027	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L) (MEC)	Governing WQO/ WQC (µg/L) (C)	Maximum Background or Minimum DL [a][b] (µg/L) (B)	RPA Results[c]
			criterion)		
47	2,4-Dimethylphenol	42	**540** (CTR, human health criterion)	---	No
54	Phenol	100	**1** (Basin Plan, human health criterion)	---	Yes
94	Naphthalene	16	No Criteria	---	Ud

[a]The Maximum Effluent Concentration (MEC) or maximum background concentration is the actual detected concentration, unless it is preceded by "<", in which case the value shown is the minimum detection level.

[b]The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

[c]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 (Ud), if no criteria have been promulgated;
Cannot determine, if there are insufficient data.

4. **WQBEL Calculations.** Final WQBELs for benzene and phenol have been determined using the methods described in Section 1.4 of the SIP.

Step 1: To calculate the effluent limits, an effluent concentration allowance (ECA) is calculated for each pollutant found to have reasonable potential using the following equation, which takes into account dilution and background concentrations:

ECA = C + D (C – B), where

C = the applicable water quality criterion (adjusted for receiving water hardness and expressed as the total recoverable metal, if necessary)

D = dilution credit (here D= 0, as the discharge to Pismo Creek does not qualify for a dilution credit)

B = background concentration

Step 2: For each ECA based on an aquatic life criterion/objective, the long term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends 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 values of the CV. When the data set contains less than 10 sample results (as for the PXP reclamation facility), or when 80 percent or more of the data set is reported as non-detect (ND), the CV is set equal to 0.6. Derivation of the multipliers is presented in Section 1.4 of the SIP.

Step 3: WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here the CV is set equal to 0.6, and the sampling

frequency is set equal to 4 (n=4). The 99th percentile occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. From Table 2 of the SIP, the MDEL multiplier is 3.11 and the AMEL multiplier is 1.55.

Step 4: When the most stringent water quality criterion/objective is a human health criterion/objective, (as for benzene and phenol), the ECA is set as the AMEL. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier (3.11 / 1.55 = 2.01).

Table F-4. WQBELs for the Protection of Human Health

Pollutant	ECA	MDEL/AMEL Mulitplier	MDEL (µg/L)	AMEL (µg/L)
Benzene	1.0	2.01	2.0	1.0
Phenol	1.0	2.01	2.0	1.0

5. **pH.** Due to pH adjustment steps in the proposed reclamation facility, and the effluent dominated conditions that will be present in Pismo Creek, the Central Coast Water Board has determined that discharges from the wastewater treatment facility have reasonable potential (Trigger 3) to cause or contribute to pH excursions in the receiving water from applicable water quality objectives. The applicable water quality objectives for pH (7.0 – 8.3) are therefore being established as end-of-pipe effluent limitations.

6. **Total Dissolved Solids (TDS).** Produced waters generated during production of crude petroleum and natural gas will contain a variety of dissolved salts with concentrations varying from one geographical area to another. A USEPA study in 1976 showed TDS levels in produced waters from onshore facilities in California ranging from 580 mg/L to 27,300 mg/L [USEPA, Developmental Document for Interim Final Effluent Limitations Guidelines and Proposed New Source Performance Standards for the Oil and Gas Extraction Point Source Category, EPA 440/l-76/055-a (1976)]. Because of the potential for elevated levels of TDS in produced waters, and because discharges from the wastewater treatment facility will be used for agricultural purposes, the Central Coast Water Board is establishing a water quality based effluent limitation for TDS of 450 mg/L reflecting a recommended standard for waters used in agriculture. [Regional Water Quality Control Board, Central Valley Region, *A Compilation of Water Quality Goals* (August 2000)].

7. **Whole Effluent Toxicity (WET).** Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the 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 specifies a narrative objective for (acute) toxicity, requiring that all waters be maintained free of toxic substances in concentrations that 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 control water. Because of the reasonable potential for discharges from the wastewater treatment facility to influence toxicity within the receiving stream, the Central Coast Water Board is establishing a water quality based effluent limitation for acute toxicity of 1.0 acute toxicity units (TUa). This Order also establishes monitoring requirements for chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V).

The Discharger must also maintain a Toxicity Reduction Evaluation (TRE) Workplan, which describes steps that the Discharger intends to follow in the event the acute toxicity limitation or chronic toxicity trigger of 1.0 TUc 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 Executive Officer will then determine whether to initiate enforcement action, whether to require the Discharger to implement a Toxicity Reduction Evaluation, or to implement other measures.

8. **Final WQBELs.** Final WQBELs established by the Order are summarized below.

Table F-5. Final WQBELs

Parameter	Units	Effluent Limitations		
		Instantaneous Maximum	Average Monthly	Maximum Daily
TDS	mg/L	---	---	450
	lbs/day [1]	---	---	3.1×10^3
pH	pH units	7.0 – 8.3 at all times		
Acute Toxicity	TUa	---	---	1.0
Benzene	µg/L	---	1.0	2.0
Phenol	µg/L	---	1.0	2.0

[1] Based on a flow rate of 0.84 MGD

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.** Limitations for discharges to the Pismo Creek are established for the first time in the Order for this Discharger, and therefore anti-backsliding requirements are not relevant to these circumstances.

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. Limitations and conditions of the Order 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 oil and grease. 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.

   Final, technology and water quality based effluent limitations are summarized in sections IV. B and C of this Fact Sheet.

E. **Interim Effluent Limitations.** Not applicable to this permit.

F. **Land Discharge Specifications.** Not applicable to this permit.

G. **Reclamation Specifications.** The permit includes reclamation specifications reflecting Basin Plan water quality objectives for agricultural supply water. The reclamation limitations are consistent with effluent limitations described above, except that a broader range of pH (6.5 – 8.4) is allowed due to the less pH sensitive use and consistent with Basin Plan criteria. Also, toxicity limits applicable to the stream discharge (for protection of aquatic life) are not applicable to irrigation uses and do not appear in the reclamation limitations.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. **Surface Water.** CWA section 303 (a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers those factors and is designed to minimize the influence of the discharge on the receiving water.

B. **Groundwater.** Groundwater limitations established by the Order include general objectives for ground water established by the Basin Plan for the Central Coast Region, and objectives for municipal and domestic supply, and agricultural beneficial uses.

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. Water Code sections 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.** Not applicable to this discharger.

B. **Effluent Monitoring.** Effluent monitoring requirements are established in Section III of the Monitoring and Reporting Program in Attachment E of this Order. Effluent

monitoring is required to determine compliance with effluent limitations for TDS, pH, benzene, phenol, and whole effluent acute toxicity. Additional monitoring is required to provide further characterization of the discharge, as described below.

1. *Ammonia, nitrate, and phosphorus.* These nutrients are pollutants which have toxic and/or biostimulatory effects when discharged into freshwaters. Monitoring is required to determine whether nutrients are present in detrimental concentrations.

2. *BOD_5.* Produced waters can be characterized by a high organic content; and therefore monitoring for BOD is required to characterize the organic content of the discharge.

3. *Temperature.* The Basin Plan contains water quality objectives for the receiving water to protect Warm Freshwater Habitat prohibiting an increase in temperature of more than 5°F from the natural receiving water temperature. The description of the produced water treatment scheme includes a cooling of the produced water to a temperature of 80° to 90° F. The discharge of waters with elevated temperatures may adversely impact the beneficial uses of Pismo Creek, so monitoring of the effluent temperature is required by this Order.

4. *Hardness.* A number of the applicable water quality objectives for metals are hardness dependant; i.e., toxicity of the metal increases with decreasing hardness. Hardness monitoring is necessary for determining metals criteria which provide adequate protection of aquatic life.

5. *Metals.* Water quality criteria for metals originate in the CTR and the Basin Plan. The frequency of monitoring is quarterly for two years and then the frequency can be reduced to one time per year upon evidence that water quality objectives for metals are not being exceeded.

6. *CTR Pollutants.* The Regional Board is required by Section 1.3 of the SIP to conduct periodic monitoring of the priority pollutants in order to evaluate the discharge and its potential to cause or contribute to exceedances of applicable water quality criteria. The CTR pollutants are to be monitored one time per year.

7. *Title 22 Pollutants.* The municipal or domestic supply (MUN) beneficial use has been assigned to Pismo Creek. The Title 22 MCLs are applicable as water quality objectives to this water. Therefore, monitoring of the Title 22 pollutants is required by this Order to assess the potential for the discharge to cause or contribute to exceedances of applicable water quality criteria.

8. *Total Suspended Solids (TSS).* Total suspended solids are a common constituent of waste water. Monitoring of TSS is necessary to characterize the discharge.

9. *Radium- 226 and Radium-228, Combined.* Literature sources indicate that naturally occurring radioactive material (NORM) can contaminate produced water, with radium-226 and radium-228 being the most abundant NORM compounds in produced water. The frequency of monitoring is quarterly for two years, when the

frequency may be reduced if the data indicate the isotopes are not present in the discharge above applicable water quality criteria.

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 contains monitoring requirements for acute and chronic toxicity for Discharge Point 001, as described in Section V of Attachment E.

1. **Acute Toxicity.** 96-hour bioassay testing is required twice per year to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** Chronic whole effluent toxicity testing is required twice per year in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

Toxicity testing will occur quarterly, alternating between acute and chronic testing.

D. **Receiving Water Monitoring**

1. **Surface Water.** The Order requires background receiving water monitoring of Pismo Creek for toxic pollutants with applicable water quality criteria established by the CTR, the NTR, and the Basin Plan. Monitoring for these pollutants (which include the CTR pollutants, the Title 22 pollutants, and the pollutants listed in Tables 3-3 and 3-4 of the Basin Plan) will provide characterization of receiving water and is required by the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* to determine if discharges from the treatment facility have a reasonable potential to contribute to excursions from applicable water quality objectives in receiving waters. Because applicable water quality objectives for some metals are hardness dependent (i.e., toxicity of metals increases with decreasing hardness, and therefore, applicable water quality objectives are lower in softer waters), the Discharger must determine background hardness levels in Pismo Creek every other year during the permit term.

2. **Groundwater.** Not applicable to this Order.

E. **Other Monitoring Requirements.** Not applicable to this Order.

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 Water Code section 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 U.S. EPA. 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. The permit may also be reopened to increase the frequency of monitoring.

2. **Special Studies and Additional Monitoring Requirements.** Additional accelerated monitoring for acute and chronic toxicity are required by this Order when the numerical limit for acute or a chronic toxicity trigger is exceeded. Accelerated monitoring allows for a confirmation of effluent toxicity. If the TRE trigger is exceeded, the Central Coast Water Board Executive Officer may require the Discharger to conduct a TRE to identify sources of toxicity and take all reasonable steps to reduce toxicity once the source of toxicity is identified.

3. **Best Management Practices and Pollution Prevention.** As the Plains Exploration and Production produced water reclamation facility is a new facility, it is important to establish best management practices. The Discharger is required to develop a Best Management Practices (BMP) plan which prevents, or minimizes the potential for, release of toxic substances from ancillary activities to the waters of the United States through plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. Best Management Practices include "methods, measures, or practices, selected by an agency to meet its nonpoint source control needs." BMP plans may include structural and nonstructural controls and operation and maintenance procedures. This Order requires the Discharger to implement and update the BMP plan on an ongoing basis to ensure that no contaminated storm water leaves the facility's property and enters surrounding surface waters.

4. **Construction, Operation, and Maintenance Specifications.** Not applicable.

5. **Special Provisions for Municipal Facilities (POTWs Only).** Not applicable.

6. **Storm Water Provisions.** 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 Resources Control Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.*

7. **Compliance Schedules.** The Order does not establish interim effluent limitations and schedules for compliance with final effluent limitations.

VIII. PUBLIC PARTICIPATION

The Central Coast Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Plains Exploration and Production produced water reclamation facility. As a step in the WDR adoption process, the Central Coast Water Board staff has developed tentative WDRs. The Central Coast Water Board encourages public participation in the WDR adoption process.

A. **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. Notification was provided through publication in the San Luis Obispo County Tribune on December 5, 2007.

B. **Written Comments.** Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Officer at the Central Coast Water Board at the address above on the cover page of this Order. The following comments were received on the draft Order.

PXP (Discharger) – On January 4, 2008, the Discharger submitted a brief letter reiterating its plans to utilize the reclaimed water for landscape irrigation and requesting incorporation of provisions for such uses in the proposed Order. Staff Response: This option was proposed in the application and will reduce the volume discharged to Pismo Creek. Provisions allowing for such use were inadvertently omitted from the draft permit circulated for public comment and have been added to this proposed Order.

Dr. Jean-Pierre Wolff, Wolff Vineyards – Dr. Wolff recommended further study of beneficial reuse options. Beneficial reuse of the discharge for vineyard irrigation is limited to certain times of the year and vineyards are typically not irrigated during the rainy season. However, discharge to Pismo Creek during the rainy season is not likely to provide environmental benefit and may in fact be damaging. Therefore, Dr. Wolff suggests storage of excess (wet-weather) flows in a subsurface reservoir to be extracted for irrigation purposes during the dry season. Staff Response: Dr. Wolff's comments make clear the dilemma associated with balancing beneficial use and discharge issues associated with the proposed project. The NPDES program seeks to eliminate discharges of waste to surface waters. Accordingly, reuse for irrigation supply is supported as a means of minimizing the discharge and maximizing beneficial use of water resources. However, as described in the Fact Sheet and associated staff report, the proposed discharge may be authorized only if it meets the criteria for exception to the federal discharge prohibition. This exception is based upon the discharge supporting downstream agriculture and wildlife propagation. The dilemma is that demand for irrigation reuse occurs during the dry season, at the same time that discharge supporting agriculture and wildlife would be most beneficial. Staff concludes that the most beneficial balance of these issues includes providing reclaimed water storage capacity to facilitate reuse, maximizing irrigation reuse locations, and minimizing wet-weather discharges. The proposed project includes 840,000 gallons of reclaimed water storage capacity. The discharger plans to utilize the reclaimed water

for landscape irrigation within its own property and is working with nearby land owners to facilitate additional irrigation uses.

No comments were received from San Luis Obispo County Planning, Environmental Health, or Air Pollution Control District; City of Pismo Beach; Central Coast Salmon Enhancement; State Water Board; California Department of Fish & Game; U. S. Fish & Wildlife Service, or the U. S. Environmental Protection Agency.

C. **Public Hearing.** The Central Coast Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **May 9, 2008** Time: **8:30 am**
Location: **Water Board Conference Room**
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Interested persons were invited to attend. The Central Coast Water Board adopted the WDRs at the meeting described above.

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 (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the 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 Ms. Sorrel Marks by telephone at (805) 549-3695 or by e-mail at smarks@waterboards.ca.gov.

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