California Regional Water Quality Control Board

Central Valley Region

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Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

ORDER NO. R5-2006-0080
NPDES NO. CA0083429

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Chevron Environmental Management Company, ChevronTexaco, Incorporated; and SECOR International Incorporated
Name of Facility	Purity Oil Sales Superfund Site
Facility Address	3281 South Maple Avenue
	Malaga, CA 93725
	Fresno County

The Discharger is authorized to discharge from the following discharge points as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Groundwater	36 º, 41', 13" N	119 º, 44', 49" W	Fresno Irrigation District North Central Canal
002	Treated Groundwater	36 º, 41', 06" N	119 º, 44', 39" W	Fresno Irrigation District Central Canal

This Order was adopted by the Regional Water Board on:	**3 August 2006**
This Order shall become effective on:	**3 August 2006**
This Order shall expire on:	**3 August 2011**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 5-00-008 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Pamela C. Creedon, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 3 August 2006.

PAMELA C. CREEDON, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 5, CENTRAL VALLEY REGION

TABLE OF CONTENTS

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

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Name of Facility	Purity Oil Sales Superfund Site
Facility Address	3281 South Maple Avenue
	Malaga, CA 93725
	Fresno County
Facility Contact, Title, and Phone	Frank Gegunde, Project Geologist, (559) 271-2650
Mailing Address	SAME
Type of Facility	Groundwater Cleanup Project
Facility Design Flow	0.542 million gallons per day (mgd)

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. **Background.** Chevron Environmental Management Company, ChevronTexaco, Incorporated; and SECOR International Incorporated (hereinafter Discharger) are currently discharging under Waste Discharge Requirements (WDRs) Order No. 5-00-008 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0083429. The Discharger submitted a Report of Waste Discharge, dated January 17, 2005 and applied for a NPDES permit renewal to discharge up to 0.542 mgd of treated groundwater from the Purity Oil Sales Superfund Site, hereinafter Facility. The application was complete on 17 February 2005.

B. **Facility Description.** The Discharger operates a groundwater cleanup project. The groundwater treatment system (GWTS) consists of groundwater extraction wells, a groundwater feed tank, a potassium permanganate chemical feed system, greensand catalytic oxidizer/filters, and an air stripper column. Wastewater is discharged from Discharge Points 001 and 002 (see table on cover page) to the Fresno Irrigation District (FID) North Central Canal and FID Central Canal (canals), respectively, waters of the United States within the South Valley Floor Hydrologic Unit, Fresno Hydrologic Area (No. 551.30). The canals discharge to Fresno Slough and during periods of heavy rain Fresno Slough drains to the San Joaquin River, both of which are waters of the United States. Attachment B provides a topographic map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

D. **Background and Rationale for Requirements**. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A through G, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

E. **California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.) in accordance with Section 13389 of the CWC.

F. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. **Water Quality-based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

H. **Water Quality Control Plans.** The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereinafter Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply (MUN) use to water bodies that do not have beneficial uses listed in the Basin Plan, therefore, this designation applies to the FID canals. As described above, the FID canals discharge to Fresno Slough, a Valley Floor Water. The Basin Plan designates the beneficial uses of Valley Floor Waters as: agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (including spawning) (WARM); wildlife habitat (WILD); support of rare, threatened, or endangered species (RARE); and groundwater recharge (GWR). Discharges from the groundwater cleanup system to the FID canals must be protective of the beneficial uses of Fresno Slough. Therefore, for purposes of this Order the beneficial uses of Fresno Slough are considered applicable to the FID canals; along with the MUN designation in accordance with State Water Board Resolution No. 88-63. Beneficial uses applicable to the FID canals are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	FID North Central Canal	MUN, AGR, IND, PRO, REC-1, REC-2, WARM, WILD, RARE, and GWR.
002	FID Central Canal	MUN, AGR, IND, PRO, REC-1, REC-2, WARM, WILD, RARE, and GWR.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual

discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP was amended by the State Water Board on February 24, 2005. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under Section 5.3 of the SIP, a compliance schedule may not exceed 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 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) is included in the Fact Sheet (Attachment F).

L. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16.

M. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

N. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

O. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order

special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

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

Q. **Consideration of Public Comment.** In a public meeting, all comments pertaining to the discharge were heard and considered. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

R. **Applicable Plans, Policies, and Regulations.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under USEPA's new regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

S. **Finding for No More Stringent than Federal Law**. This Order contains restrictions on individual pollutants that are no more stringent than required by the federal Clean Water Act. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The permit's technology-based pollutant restrictions are no more stringent than required by the Clean Water Act. Water quality-based effluent limitations 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 toxic pollutant water quality-based effluent limitations were derived from the California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 2001. Beneficial uses and water quality objectives contained in the Basin Plan which were used in the development of water quality-based effluent limitations were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the Clean Water Act and the applicable water quality standards for purposes of the Clean Water Act.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.

B. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except as allowed in Standard Provision I.G of Attachment D, Federal Standard Provisions.

C. The discharge or treatment that creates a nuisance as defined in Section 13050 of the CWC is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 001 and 002

1. Final Effluent Limitations – Discharge Points 001 and 002

a. The discharge of treated groundwater shall maintain compliance with the following effluent limitations at Discharge Points 001 and 002 with compliance measured at Monitoring Locations M-001 or M-002 as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	0.432	0.542	--	--
pH	standard units	--	--	6.5	8.3
Arsenic (total recoverable)	µg/L	--	10	--	--
	lbs/day	--	0.05	--	--
Copper (total recoverable)	µg/L	0.8	1.6	--	--
	lbs/day	3.6×10^{-3}	7.2×10^{-3}	--	--
Lead (total recoverable)	µg/L	0.11	0.3	--	--
	lbs/day	4.8×10^{-4}	1.4×10^{-3}	--	--
Nickel (total recoverable)	µg/L	4	11	--	--
	lbs/day	0.02	0.05	--	--
Boron (total recoverable)	mg/L	--	1.0	--	--
	lbs/day	--	4.5	--	--
Chloride	mg/L	--	175	--	--
	lbs/day	--	790	--	--
EC at 25° C	µmhos/cm	--	1000	--	--
Iron (total recoverable)	µg/L	--	300	--	--
	lbs/day	--	1.4	--	--
Manganese (total recoverable)	µg/L	--	50	--	--
	lbs/day	--	0.23	--	--
Dichloromethane	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
1,4-Dichlorobenzene	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
TCE	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
1,1-DCA	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
1,2-DCA	µg/L	0.38	<0.5	--	--
	lbs/day	$1.7x10^{-3}$	--	--	--
1,1-DCE	µg/L	0.057	0.11	--	--
	lbs/day	$2.6x10^{-4}$	$5.2x10^{-4}$	--	--
cis-1,2-DCE	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
trans-1,2-DCE	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
Benzene	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
Chlorobenzene	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
Vinyl chloride	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
MEK	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
4-Methyl-2-pentanone	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
Total Xylene Isomers	µg/L	--	<0.5	--	--
	lbs/day	--	--	--	--
Other VOCs	µg/L	--	Nondetectable[a]	--	--
	lbs/day	--	--	--	--

a. Based on minimum levels in Appendix 4 of the SIP and detection limits for purposes of reporting in Title 22, section 64445.1 of the California Code of Regulations.

b. Survival of aquatic organisms in 96-hour bioassays of undiluted waste at Monitoring Location M-001 or M-002 shall be no less than:

Minimum for any one bioassay -70%
Median for any three or more consecutive bioassays - - - - - 90%

2. Interim Effluent Limitations

a. During the period beginning **3 August 2006** and ending on **18 May 2010**, the discharge of treated domestic wastewater shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached Monitoring and Reporting Program (Attachment E). These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Parameter	Units	Interim Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min	Instantaneous Max
Copper (total recoverable)	µg/L	--	--	50	--	--
	lbs/day	--	--	0.2	--	--
Lead (total recoverable)	µg/L	--	--	7	--	--
	lbs/day	--	--	0.03	--	--
Nickel (total recoverable)	µg/L	--	--	70	--	--
	lbs/day	--	--	0.3	--	--

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

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 shall not cause the following in the FID canals:

1. Un-ionized ammonia to be present in amounts that adversely affect beneficial uses or that exceed 0.025 mg/L (as N).

2. Biostimulatory substances to be present in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. Bacteria: The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.

4. Dissolved Oxygen: Concentrations of dissolved oxygen to fall below 5.0 mg/L. The monthly median dissolved oxygen concentrations in the main water mass (at centroid of flow) of streams to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration.

5. Oil and Grease: Oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the water surface or on objects in the water, or otherwise adversely affect beneficial uses.

6. Color: Discoloration that causes nuisance or adversely affects beneficial uses.

7. pH: The pH of water to fall below 6.5, exceed 8.3, or changed at any time more than 0.3 units from normal ambient pH.

8. Temperature: The natural receiving water temperature to increase more than 5°F.

9. Settleable Material: Substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

10. Radioactivity: Radionuclides to be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life. Concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

11. Toxicity: Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

12. Floating Material: Floating material in amounts that cause nuisance or adversely affect beneficial uses.

13. Sediment: Suspended sediment load and suspended sediment discharge rate altered in such a manner to cause nuisance or adversely affect beneficial uses.

14. Suspended Material: Suspended material concentrations that cause nuisance or adversely affect beneficial uses.

15. Taste and Odor: Taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.

16. Chemical constituents: Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.

17. Turbidity: Changes in turbidity that cause nuisance or adversely affect beneficial uses. Turbidity attributable to controllable water quality factors to exceed the following:

    a. More than 1 Nephelometric Turbidity Units (NTUs) where natural turbidity is between 0 and 5 NTUs.

    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

    c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.

    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

18. Pesticides:

    a. Pesticides in individual or combined concentrations that adversely affect beneficial uses.

    b. Pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.

    c. Concentrations exceeding the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

19. Violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board pursuant to the Clean Water Act and regulations adopted thereunder.

B. Groundwater Limitations

Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the Facility and discharge area(s) to contain waste constituents in concentrations in excess of natural background quality.

VI. PROVISIONS

A. Standard Provisions

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

   The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.

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

   a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by the California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 14.

   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

      i. violation of any term or condition contained in this Order;

      ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

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

      iv. a material change in the character, location, or volume of discharge.

      The causes for modification include:

      i. New regulations. New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

ii. Land application plans. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

iii. Change in sludge use or disposal practice. Under 40 Code of Federal Regulations (CFR) 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 04(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

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

h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

i. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.

j. Safeguard to electric power failure:

   i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, failure of electric power, the discharge shall comply with the terms and conditions of this Order.

   ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

   iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

k. The Discharger, upon written request of the Regional Water Board, shall file with the Regional Water Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

   The technical report shall:

   i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

   ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions, which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

l. The Discharger shall file with the Regional Board a Report of Waste Discharge at least 180 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:

i. Adding a major industrial waste discharge to a discharge of essentially domestic sewage, or adding a new process or product by an industrial facility resulting in a change in the character of the waste.

ii. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.

iii. Significantly changing the method of treatment.

iv. Increasing the discharge flow beyond that specified in the Order.

m. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by **January 31.** A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.

n. The Discharger shall submit technical reports as directed by the Executive Officer.

o. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional

Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

i. Unless otherwise specified, all metals shall be reported as Total Metals.

ii. Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

iii. Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).

p. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.

q. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

r. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

s. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.

t. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.

u. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

v. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report to the Regional Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

w. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or

disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

x. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or be imprisoned for not more than two years per violation, or by both.

B. Monitoring and Reporting Program Requirements

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

C. Special Provisions

1. Reopener Provisions

a. Upon adoption of any applicable water quality standard for receiving waters by the Regional Water Board or the State Water Board pursuant to the CWA and regulations adopted thereunder, this permit may be reopened and receiving water limitations added.

b. If chronic toxicity testing specified in Section VI.C.2.a indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, this Order shall be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.

c. If after review of effluent monitoring results or the study results specified in Sections VI.C.2.a and VI.C.2.b, it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective, this Order will be reopened and effluent limitations added for the subject constituents.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. The Discharger shall conduct the chronic toxicity testing specified in the Monitoring and Reporting Program. If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, the Discharger shall initiate a Toxicity Identification Evaluation (TIE) to identify the causes of toxicity. Upon completion of the TIE, the Discharger shall submit a workplan to conduct a Toxicity Reduction Evaluation (TRE) and, after Regional Water Board evaluation, conduct the TRE.

b. In a February 27, 2001 letter from the Regional Water Board, the Discharger was directed under section 13267 of the CWC to conduct a receiving water and effluent priority pollutant monitoring study in accordance with the requirements of section 1.2 of the SIP. The letter required the Discharger to analyze the discharge and receiving water upstream of the discharge twice for priority pollutants. The Discharger sampled the effluent twice, but has sampled the upstream receiving water only once for priority pollutants. The Discharger shall comply with the following time schedule in conducting a study of these constituents potential effect in surface waters:

Task	Description	Due Date
i.	Submit Workplan and Time Schedule to sample the upstream receiving water once for priority pollutants.	**3 November 2006**
ii.	Begin Sampling	**2 February 2007**
iii.	Complete Sampling	**3 August 2007**
iv.	Submit Study Report	**3 October 2007**

The Discharger shall submit to the Regional Water Board on or before each due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Compliance Schedules

Section IV.C.3 of the attached Fact Sheet (Attachment F) indicates that copper, lead, and nickel concentrations in the discharge have a reasonable potential to cause or contribute to an in stream excursion above water quality criteria. The Discharger shall comply with the following:

Task	Description	Due Date
a.	Submit a technical report containing a compliance schedule justification sufficient to satisfy SIP Section 2.1, paragraph 3. The report shall include: (1) documentation that diligent efforts have been made to quantify pollutant (copper, lead, and nickel) levels in the discharge and the sources of the pollutant in the waste stream; (2) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; (3) a proposal, including an implementation schedule, for additional or future source control measures, pollutant minimization	**18 September 2006**.

Task	Description	Due Date
	actions, or waste treatment (i.e. GWTS upgrades or operational modifications); and (4) a demonstration that the proposed schedule is short as possible.	
b.	If approved, begin implementation of the items identified in Task a, above. If rejected, comply immediately with Final Effluent Limitations IV.A.1.a.	Within 30 days of approval or rejection of the technical report by the Executive Officer.
c.	Submit Quarterly Progress Reports	1st day of the second month following the close of each calendar quarter.
d.	Comply fully with Final Effluent Limitations IV.A.1.a.	By the deadline approved by the Executive Officer but no later than **18 May 2010.**

5. Construction, Operation and Maintenance Specifications

Each greensands filter shall be cleaned by backflushing with approximately 5,070 gallons of uncontaminated water after treating approximately 35,000 gallons of groundwater.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

a. Any proposed change in greensands filter backwash water disposal practice from that described in section II.A of Attachment F shall be reported to the Regional Water Board Executive Officer at least 90 days in advance of the change.

b. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Board (Division of Water Rights).

c. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Regional Water Board Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision V.B, Attachment D, and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Regional Water Board Executive Officer.

d. All technical reports required herein that involve planning, investigation, evaluation, design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional(s) responsible for the work.

VII. COMPLIANCE DETERMINATION

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

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

B. Maximum Daily Effluent Limitation (MDEL).
If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

C. Instantaneous Minimum Effluent Limitation.
If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

D. Instantaneous Maximum Effluent Limitation.
If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

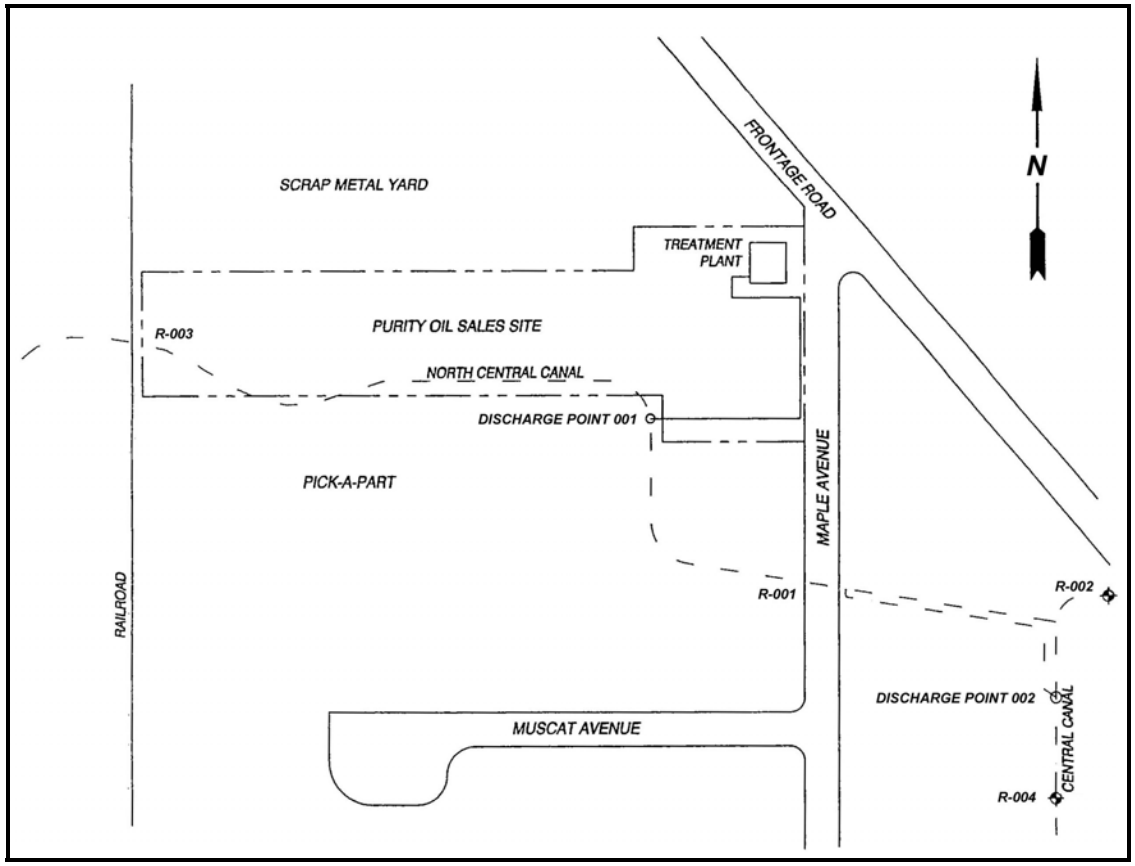
Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

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

Method Detection Limit (MDL): is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B.

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.

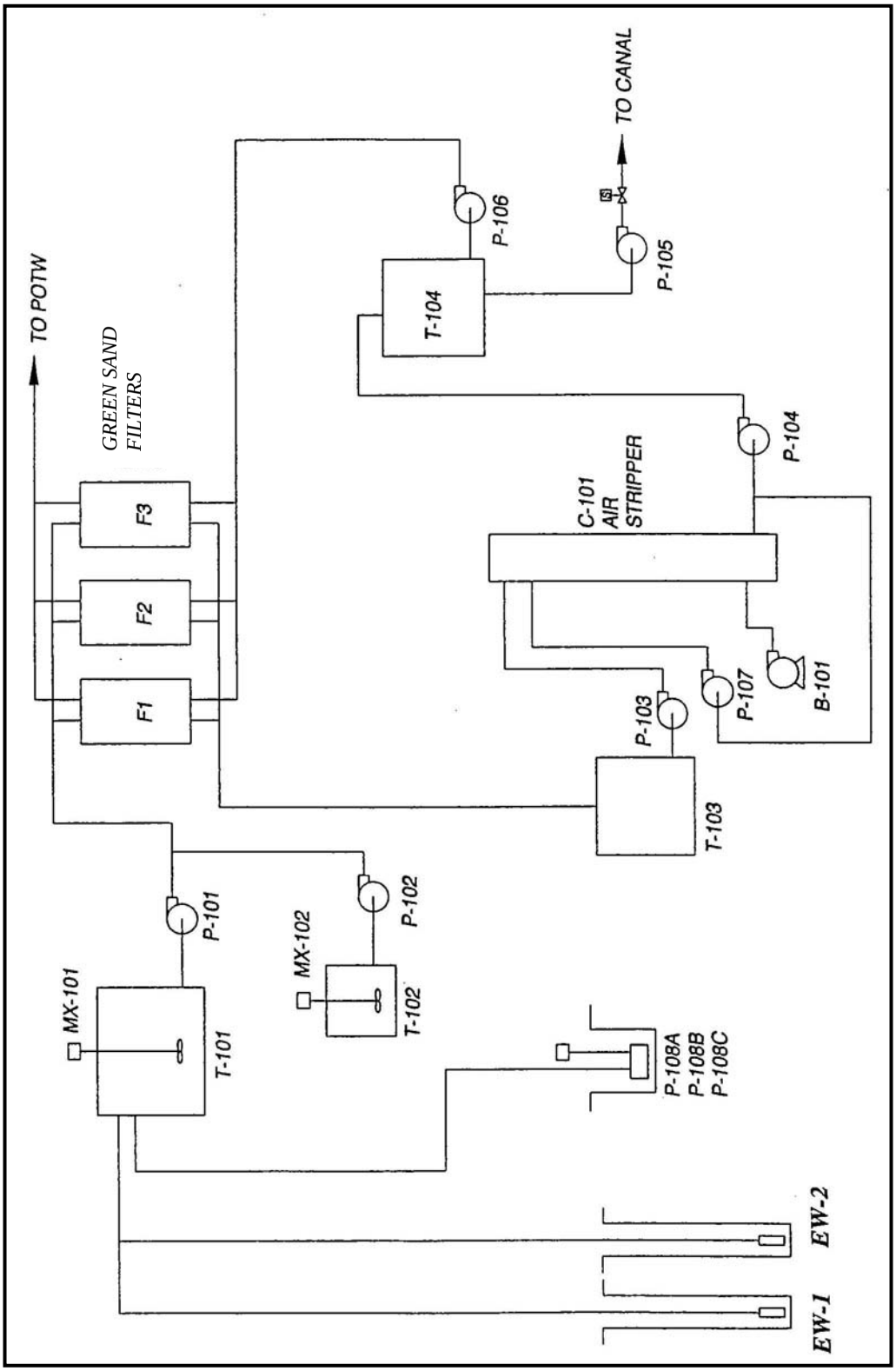
ATTACHMENT B –MAP



SITE MAP

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
CHEVRONTEXACO, INCORPORATED
SECOR INTERNATIONAL INCORPORATED
PURITY OIL SALES SUPERFUND SITE
Malaga – Fresno County
Facility Location - Latitude 36º 41’ 16” N, Longitude 119º 44’ 46” W
Section 25, T14S, R20E, MDB&M

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR 122.41(a)*].

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR 122.41(i)*] [*CWC 13383(c)*]:

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

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

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

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

G. Bypass

1. Definitions

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

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

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

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

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

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

    c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR 122.41(m)(4)(C)*].

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

5. Notice

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

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

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR 122.41(n)(2)*].

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in

40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR 122.41(j)(4)*] [*40 CFR 122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR 122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR 122.22(a)(1)*];

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR 122.22(a)(2)*]; or

   c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [*40 CFR 122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR 122.22(b)(1)*];

   b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental

matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [*40 CFR 122.22(b)(2)*]; and

c. The written authorization is submitted to the Regional Water Board, SWRCB, or USEPA [*40 CFR 122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR 122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

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

C. Monitoring Reports

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

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR 122.41(l)(6)(i)*].

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

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

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

    c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR 122.41(l)(6)(ii)(C)*].

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR 122.41(l)(1)(ii)*].

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR 122.41(l)(7)*].

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT – NOT APPLICABLE

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*40 CFR 122.42(a)*]:

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

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

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

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

d. The level established by the Regional Water Board in accordance with 40 CFR 122.44(f) [*40 CFR 122.42(a)(1)(iv)*].

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

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

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

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

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

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*40 CFR 122.42(b)*]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [*40 CFR 122.42(b)(1)*]; and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*40 CFR 122.42(b)(2)*].

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

Attachment E – Monitoring and Reporting Program – Table of Contents

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) 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 State regulations.

I. GENERAL MONITORING PROVISIONS

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

B. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

1. "A Guide to Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
2. "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)
3. "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
4. "NPDES Compliance Sampling Manual," U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services.

D. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their

continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

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

F. If a discharge is intermittent rather than continuous, the Discharger shall monitor and record data for all of the constituents listed below on the first day of each intermittent discharge and thereafter the frequencies in the schedules shall apply. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedules.

G. If results of the monitoring a pollutant appear to violate effluent limitations, but the monitoring frequency is not sufficient to validate the violation, the frequency of sampling shall be increased immediately to confirm the magnitude and duration of the violation.

H. If a monitoring result appears to violate an effluent limitation for VOCs, as indicated by the results from a single sample, the Discharger shall immediately collect at least two grab samples and analyze both for the constituent(s) showing noncompliance. If one or both of the re-sampling results indicate continued noncompliance, the Discharger must cease the discharge immediately after receiving the results confirming non-compliance, and submit a work plan and schedule within 30 days thereafter to achieve compliance. The work plan must be prepared by a California registered professional engineer experienced in the design of wastewater treatment facilities. Discharge from the groundwater treatment system may resume only after the work plan is implemented, and only after at least one additional monitoring result demonstrates that the VOC violation problem has been corrected.

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:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	M-001	Representative sample of total effluent wastewater flow after all treatment operations, at the last connection prior to discharge from Discharge Point 001.
002	M-002	Representative sample of total effluent wastewater flow after all treatment operations, at the last connection prior to discharge from Discharge Point 002.
--	R-001	600 feet upstream from Discharge Point 001 in Fresno Irrigation District (FID) North Central Canal.
--	R-002	300 feet upstream from Discharge Point 002 in FID Central Canal.
--	R-003	1050 feet downstream from Discharge Point 001 in FID North Central Canal.
--	R-004	300 feet downstream from Discharge Point 002 in FID Central Canal.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001 or M-002

1. The Discharger shall monitor treated groundwater at M-001 or M-002 (depending on where the effluent is discharged) as follows:

Parameter	Units	Sample Type	Minimum Sampling[1] Frequency	Required Analytical Test Method
Flow	mgd	Metered	1 / month	--
pH	s.u.	Grab	1 / month	[2]
Copper (total recoverable)	µg/L	Grab	1 / month	[2]
Lead (total recoverable)	µg/L	Grab	1 / month	[2]
Nickel (total recoverable)	µg/L	Grab	1 / month	[2]
Boron (total recoverable)	mg/L	Grab	1 / month	[2]
Chloride	mg/L	Grab	1 / month	[2]
EC at 25ºC	µmhos/cm	Grab	1 / month	[2]
Iron (total recoverable)	µg/L	Grab	1 / month	[2]
Manganese (total recoverable)	µg/L	Grab	1 / month	[2]
Dichloromethane	µg/L	Grab	1 / month	[2]
1,2-Dichlorobenzene	µg/L	Grab	1 / month	[2]
1,4-Dichlorobenzene	µg/L	Grab	1 / month	[2]
TCE	µg/L	Grab	1 / month	[2]
1,1-DCA	µg/L	Grab	1 / month	[2]
1,2-DCA	µg/L	Grab	1 / month	[2]
1,1-DCE	µg/L	Grab	1 / month	[2]
cis-1,2-DCE	µg/L	Grab	1 / month	[2]
trans-1,2-DCE	µg/L	Grab	1 / month	[2]
Benzene	µg/L	Grab	1 / month	[2]

Parameter	Units	Sample Type	Minimum Sampling[1] Frequency	Required Analytical Test Method
Chlorobenzene	µg/L	Grab	1 / month	[2]
Vinyl chloride	µg/L	Grab	1 / month	[2]
MEK	µg/L	Grab	1 / month	[2]
4-Methyl-2-pentanone	µg/L	Grab	1 / month	[2]
Total Xylene Isomers	µg/L	Grab	1 / month	[2]
Other VOCs	µg/L	Grab	1 / quarter	[2]
Arsenic (Total Recoverable	µg/L	Grab	1 / month	[2]
Acute Toxicity[3]	% survival	Grab	1 / year	[2]

[1] If any monthly sample contains detectable concentrations of volatile organic compounds the Discharger shall immediately resample and reanalyze the effluent for the detected constituent(s) and shall continue sampling the effluent on a daily basis until the constituent(s) concentrations are ND for two consecutive monitoring events.

[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP. For other pollutants the methods must meet the lowest detection limits for reporting (DLRs) in California Code of Regulations, Title 22, section 64445.1, and where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

[3] All acute toxicity bioassays shall be performed according to EPA-821-R-02-012 Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October 2002 (or latest edition) using *Pimephales promelas* with no pH adjustment, with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP). Temperature and pH shall be recorded at the time of bioassay sample collection.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. The testing shall be conducted as specified in EPA-821-R-02-013, *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002. Twenty-four hour composite samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Control waters shall be provided by the laboratory or collected from the potable water supply at the Facility. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Both the reference toxicant and effluent test must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days.

Species: *Pimephales promelas, Ceriodaphnia dubia and Selenastrum capriconicutum*

Frequency: One time no more than 365 days and no less than 180 days prior to expiration of this Order

Dilution Series:

	Dilutions (%)					Controls	
	100	**50**	**25**	**12.5**	**6.25**	**Irrigation Canal Water**	**Lab Water**
% Effluent	100	50	25	12.5	6.25	0	0
% Dilution Water[1]	0	50	75	87.5	93.75	100	0
% Lab Water[2]	0	0	0	0	0	0	100

[1] Dilution water may be uncontaminated receiving water, a standard synthetic (reconstituted) water, or another acceptable dilution water as defined in Section 7 of EPA/821/R-02/013. The dilution series may be altered upon approval of Regional Water Board staff.

[2] Lab water shall meet USEPA protocol requirements

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations R-001 and R-003 or R-002 and R-004

1. Samples shall be obtained from Monitoring Locations R-001 and R-003 when effluent is discharged to the FID North Central Canal and from R-002 and R-004 when effluent is discharged to the FID Central Canal. If discharge does not occur during the monitoring period, samples are not required to be collected. The Discharger shall monitor FID North Central Canal and FID Central Canal at R-001 and R-003 or at R-002 and R-004 respectively as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Metered	1 / month	[1]
EC at 25ºC	µmhos/cm	Grab	1 / month	[1]
Turbidity	NTU	Grab	1 / month	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

2. In conducting the receiving water sampling, a log shall be kept of the upstream and downstream receiving water conditions. Attention shall be given to the presence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring reports.

IX. OTHER MONITORING REQUIREMENTS

A. Priority Pollutants

The State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Water Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Water Board is requiring, as part of this Monitoring and Reporting Program, that the Discharger conduct effluent and receiving water monitoring for priority pollutants one time no more than **365 days and no less than 180 days prior to expiration of this Order**. Priority pollutants are defined as USEPA Priority Pollutants and consist of the constituents listed in the most recent National Toxics Rule and California Toxics Rule. The Discharger must analyze effluent and receiving water pH and hardness at the same time as priority pollutants.

All analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the USEPA MDL determined by the procedure found in 40 CFR Part 136. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols required in Section 2.4.4 of the SIP:

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

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

3. 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.

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

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs. Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described below.

2. The Discharger shall submit monthly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 1st day of the second month following the end of each calendar month. Annual reports shall be due on February 1 following each calendar year.

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

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1 / month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1 / quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1 / year	January 1 following (or on) permit effective date	January 1 through December 31	February 1

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

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or

planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

Submit monitoring reports to:
Central Valley Regional Water Quality Control Board Fresno Branch Office 1685 "E" Street Fresno, CA 93706

C. Discharge Monitoring Reports (DMRs)

1. When requested by USEPA, the Discharger shall complete and submit DMRs. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger SMRs.

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

Submit DMRs to:
State Water Resources Control Board Discharge Monitoring Report Processing Center Post Office Box 671 Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. Annual Report (1/Year):

   By **February 1 of each year**, the Discharger shall submit a written report to the Executive Officer containing the following:

   a. The names and general responsibilities of all persons employed at the groundwater treatment system who have responsibility for the subject discharges.

   b. The names and telephone numbers of persons to contact regarding the groundwater treatment system for emergency and routine situations.

c. A statement certifying when monitoring instruments and devices for purposes of assuring compliance with this Order were last calibrated including identification of who performed the calibration.

2. Upon notice, the Discharger may also be requested to submit an annual report (1/Year) to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

Attachment F – Fact Sheet – Table of Contents

ATTACHMENT F – FACT SHEET

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

Scope of Permit. This renewed Order regulates the discharge of up to 0.542 million gallons per day (mgd) of groundwater treatment system effluent from the Purity Oil Sales Superfund Site groundwater cleanup project. This Order includes effluent and surface water limitations, monitoring and reporting requirements, additional study requirements, and reopener provisions for effluent constituents.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

WDID	5D102120001
Discharger	Chevron Environmental Management Company, ChevronTexaco, Incorporated; and SECOR International Incorporated
Name of Facility	Purity Oil Sales Superfund Site
Facility Address	3281 South Maple Avenue
	Malaga, CA 93725
	Fresno County
Facility Contact, Title and Phone	Frank Gegunde, Project Geologist, (559) 271-2650
Authorized Person to Sign and Submit Reports	Robert D. Mihalovich, Senior Superfund Specialist, (925) 842-1341
Mailing Address	6001 Bollinger Canyon Road, San Ramon, CA 94583
Billing Address	c/o SECOR International Inc., 3475 West Shaw Avenue, Suite #104, Fresno, CA 93711
Type of Facility	Groundwater Cleanup Project
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	0.542 million gallons per day (mgd)
Facility Design Flow	0.542 mgd
Watershed	South Valley Floor Hydrologic Unit (551.00)
Receiving Waters	Fresno Irrigation District North Central Canal, Fresno Irrigation District Central Canal
Receiving Water Type	Irrigation Canal

A. Chevron Environmental Management Company and ChevronTexaco, Incorporated; are the owner and operator of Purity Oil Sales Superfund Site (hereinafter Facility) a groundwater cleanup project. SECOR International Incorporated (SECOR) is responsible for the operation of

the Facility's groundwater treatment system. Together Chevron Environmental Management Company, ChevronTexaco, Incorporated; and SECOR are hereinafter referred to as Discharger.

B. The Facility discharges wastewater to the Fresno Irrigation District (FID) North Central Canal and FID Central Canal (canals), which discharge to Fresno Slough and during periods of heavy rainfall, Fresno Slough drains to the San Joaquin River; all are waters of the United States. The discharge is currently regulated by Waste Discharge Requirements (WDRs) Order 5-00-008 which was adopted on January 28, 2000 and was to expire on January 28, 2005. The terms of the existing Order automatically continued in effect after the permit expiration date.

C. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and National Pollutant Discharge Elimination System (NPDES) permit on January 17, 2005. A site visit was conducted on November 16, 2004 to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Discharger owns and operates the Facility and provides groundwater cleanup under the U.S. Environmental Protection Agency (USEPA) Superfund Program. The groundwater cleanup involves extracting groundwater, removing contaminants, and discharging the treated groundwater to the FID North Central Canal or the FID Central Canal. The Discharger has operated the project's groundwater extraction and treatment system under the limitations of a NPDES permit since 1994.

The 6.86-acre "Site" where the Facility is located is in Section 25, T14S, R20E, MDB&M as shown on Attachment B. The State of California acquired the Facility property (Assessor's Parcel No. 330-060-04) for non-payment of property taxes and owned it between 1973 and 1978. The State sold the Facility property in 1978, but it is currently in tax status default and the owner is unknown.

On March 25, 1994, the Regional Water Board adopted WDRs Order No. 94-066 (NPDES Permit No. CA0083429) for the Purity Oil Sales Site Steering Committee, an unincorporated California association and its members (comprised of the potentially responsible parties named in the USEPA Unilateral Administrative Order), for the discharge of treated groundwater into the Central Canal and/or North Central Canal. The Discharger assumed control of the groundwater extraction and treatment system following a legal settlement.

Site History

The Site was occupied between 1934 and 1975 by an oil recycling facility, where crankcase drainage and other waste oils were stored, processed and recycled. During this period, oily acidic liquids and sludges were spilled and disposed of on the Site. In February 1974, a Regional Water Board staff inspection of the Site disclosed the discharges of wastes to unlined sumps. On January 7, 1975 the Regional Water Board issued a Cleanup and Abatement Order to the Facility. The Facility owner filed for bankruptcy and shut down its operations in 1975.

Site investigations conducted by USEPA, the California Department of Health Services (DHS), and the Regional Water Board during 1980, 1981, and 1982 revealed high to extremely high surface soil

concentrations of oil and grease, lead, zinc, copper, soluble sulfur, volatile organic compounds (VOCs), and polychlorinated biphenyls. Soil samples indicated that, in addition to waste oil, chlorinated solvents and other materials not directly associated with the waste oil reprocessing operation were handled at the Site. Additional investigation revealed that groundwater at the Site was contaminated with VOCs, iron, and manganese. Groundwater samples also contained nickel at concentrations of up to 90 parts per billion. Various site-specific USEPA documents note that iron, manganese, and nickel are naturally occurring.

The waste areas identified at the Site include three ponds, one pit, and eight sumps, all of which were unlined. In addition, seven above-ground steel tanks, several of which evidenced seepage of contaminants, were removed from the Site in 1991. The western three quarters of the Site is mounded 8 to 10 feet above natural grade because a former large pond area, which had contained a tar-like material, was filled with construction debris in 1974.

USEPA placed the Site on the National Priority List in December 1982 and became the lead agency for the site in 1986. On September 26, 1989, USEPA signed a Record of Decision (ROD) selecting extraction wells, air stripping technology, and the greensand process for the removal of contaminants from groundwater. The ROD establishes cleanup goals, which in this case, are equal to the State Maximum Contaminant Levels (MCLs) for some VOCs, iron, and manganese.

Site Conditions

Site soils are comprised of sand and silty sands, interspersed with layers of lower-permeability silt. Groundwater is generally encountered at depths of 50 feet below ground surface (bgs). Groundwater flow is to the northwest with a gradient of about 0.002 foot-per-foot.

Annual precipitation in the area is about 10.5 inches and the average evaporation is about 66 inches.

A. Description of Treatment or Controls

1. Groundwater is pumped from two onsite extraction wells (EW-1 and EW-2) and fed to the groundwater treatment system (GWTS) at an average influent flow rate of less than 2 gallons per minute (gpm). The GWTS removes volatile organic compounds (VOCs), iron, and manganese to below State MCLs. The GWTS consists of groundwater extraction wells, groundwater feed tank, potassium permanganate chemical feed system, three greensand catalytic oxidizer/filters connected in parallel (iron and manganese removal), and an air stripper column (VOCs removal). The treatment capacity of the GWTS is 542,000 gallons per day (gpd).

2. Treated groundwater is used for system reconditioning and greensand filter backwash. In accordance with an agreement between former Purity Oil Sales Site Steering Committee and the Malaga County Water District (MCWD), the filter backwash water containing precipitated iron, manganese, and suspended solids is discharged to the MCWD sewer system.

B. Discharge Points and Receiving Waters

1. The Discharger discharges to the FID North Central Canal (Discharge Point 001) under normal operations. When the FID North Central Canal is unavailable, due to maintenance or repair activities, the discharge is to the FID Central Canal (Discharge Point 002). The canals are owned and operated by the FID. The former Purity Oil Sales Site Steering Committee and the FID have entered into a formal agreement for the discharge. Discharge Points 001 and 002 are in Section 25, T14S, R20E, MDB&M.

2. The North Central and Central canals bifurcate approximately 1,800 feet to the southeast of the Facility and flow in a westerly direction, recombining approximately five miles to the west. From there, FID directs the combined canal to either: (a) a 240-acre infiltration parcel approximately eight miles southwest of the Site, or (b) Fresno Slough approximately 16 miles southwest of the property. During years of heavy rainfall, water drains from the Fresno Slough to Mendota Pool along the San Joaquin River.

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

1. Effluent limitations contained in the existing Order for discharges from Discharge Points 001 and 002 (Monitoring Locations M-001 and M-002 respectively) and representative effluent monitoring data from the term of the previous Order are as follows:

Parameter (units)	Effluent Limitation		Effluent Monitoring Data (January 2000 – September 2004)	
	30-Day Median	Maximum Daily	Highest 30-Day Median Discharge	Highest Daily Discharge
Flow (gpd)	432,000[a]	542,000	6,820[b]	37,940
Iron (µg/L)	--	300	--	1500
Manganese (µg/L)	--	50	--	220
Trichloroethene (µg/L)	<0.5	5	ND	ND
1,1-Dichloroethane (µg/L)	<0.5	5	ND	ND
1,2- Dichloroethane (µg/L)	<0.5	5	ND	ND
1,1-Dichloroethene (µg/L)	<0.5	5	ND	ND
cis-1,2-Dichloroethene (µg/L)	<0.5	5	ND	ND
trans-1,2-Dichloroethene (µg/L)	<0.5	5	ND	ND
Benzene (µg/L)	<0.5	5	ND	ND

Parameter (units)	Effluent Limitation		Effluent Monitoring Data (January 2000 – September 2004)	
	30-Day Median	Maximum Daily	Highest 30-Day Median Discharge	Highest Daily Discharge
Chlorobenzene (µg/L)	<0.5	5	0.59	0.59
1,2-Dichlorobenzene (µg/L)	<0.5	5	ND	ND
Vinyl chloride (µg/L)	<0.5	1	ND	ND
Other volatile organic compounds (µg/L)	--	Nondetectable	--	--
Dichloromethane (µg/L)	--	Nondetectable	4.4	4.4
4-Methyl-2-pentanone (µg/L)	--	Nondetectable	5.2	5.2
Methyl Tert Butyl Ether (µg/L)	--	Nondetectable	0.47 DNQ	0.47 DNQ
pH (standard unit)	--	6.0 – 9.0[c]	--	7.1 – 8.4[c]

[a] Average monthly effluent limitation

[b] Highest average monthly discharge

[c] Instantaneous minimum-maximum range

2. Representative GWTS influent monitoring data from the period of January 2000 – September 2004 are as follows (table summarizes detected influent data):

Parameter	Units	Maximum	Long-term Average[a]
Iron	mg/L	14	1.8
Manganese	mg/L	0.8	0.4
1,1-Dichloroethane	µg/L	1.1	0.65
1,2-Dichlorobenzene	µg/L	2.4	1.2
1,2-Dichloroethane	µg/L	2.1	0.82
1,4-Dichlorobenzene	µg/L	0.51	0.51
Benzene	µg/L	0.64	0.64
Chlorobenzene	µg/L	3.1	1.1
cis-1,2-Dichloroethene	µg/L	34	10
Total Xylene Isomers	µg/L	1.4	1.0
Trichloroethene	µg/L	0.32	0.32
Vinyl chloride	µg/L	0.31	0.31
Methyl Ethyl Ketone	µg/L	17	17
4-Methyl-2-pentanone	µg/L	1.1	1.1

[a] Averages based on detected values only.

D. Compliance Summary

1. During the monitoring period of January 2000 – September 2004 the Discharger violated the following effluent limitations established by Order No. 5-00-008:

Parameter (units)	Effluent Limitations		Number of Exceedances	
	30-Day Median	Maximum Daily	30-Day Median	Maximum Daily
Iron (µg/L)	--	300	--	1
Manganese (µg/L)	--	50	--	1
Chlorobenzene (µg /L)	<0.5	5	1	--
Dichloromethane (µg/L)	--	Nondetectable	--	2
4-Methyl-2-pentanone (µg/L)	--	Nondetectable	--	1
"The sum of the concentrations of the VOC constituents …in the discharge shall not exceed 5 µg/l …"			3	

E. Planned Changes – Not Applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.) in accordance with Section 13389 of the CWC.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereinafter 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, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply (MUN) use to water bodies that do not have beneficial uses listed in the Basin Plan, therefore this designation applies to the FID canals. As described above, the FID canals discharge to Fresno Slough, a Valley Floor Water. The Basin Plan designates the beneficial uses of Valley Floor Waters as: agricultural supply (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (including spawning) (WARM); wildlife habitat (WILD); support of rare, threatened, or endangered species (RARE); and groundwater recharge (GWR). Discharges from the groundwater cleanup system to the FID canals must be protective of the beneficial uses of Fresno Slough. Therefore, for purposes of this Order the beneficial uses of Fresno Slough are considered applicable to the FID canals; along with the MUN designation in accordance with State Water Board Resolution No. 88-63. Beneficial uses applicable to the FID canals are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	FID North Central Canal	Existing: MUN, AGR, IND, PRO, REC-1, REC-2, WARM, WILD, RARE, and GWR.
002	FID Central Canal	Existing: MUN, AGR, IND, PRO, REC-1, REC-2, WARM, WILD, RARE, and GWR.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

3. **State Implementation Policy.** On March 2, 2000, 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 Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP was amended by the State Water Board on February 24, 2005. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires dischargers to submit data sufficient to do so.

4. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which is consistent with the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 68-16.

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

6. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

7. **Storm Water Requirements.** USEPA promulgated Federal Regulations for storm water on November 16, 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program does not regulate storm water discharges from groundwater cleanup facilities.

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

The FID North Central and Central Canals are not listed as impaired water bodies.

E. Other Plans, Polices and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto that are applicable to the discharge are contained herein.

The federal Clean Water Act (CWA) mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law. (33 U.S.C., section 1311(b)(1)(C); 40 CFR 122.44(d)(1)). NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants

that "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality." 40 CFR 122.44(d)(1)(vi), further provides that "[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

The Basin Plan, at page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Water Board "will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives." This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including USEPA's published water quality criteria, a proposed state criterion (i.e., water quality objective), or an explicit state policy interpreting its narrative water quality criteria (i.e., the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)). The Basin Plan contains a narrative objective requiring that: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life". The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as MUN, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCLs) of California Code of Regulations (CCR) Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs. When a reasonable potential exists for exceeding a narrative objective, federal regulations mandate numerical effluent limitations and the Basin Plan narrative criteria clearly establish a procedure for translating the narrative objectives into numerical effluent limitations.

Chapter 4 of the Basin Plan contains a policy for application of water quality objectives that specifies a method for evaluating the cumulative cancer risk from multiple chemicals found together in water. As of July 9, 2004, the following constituents detected in the Facility's discharge are considered to be carcinogens as defined by The Safe Drinking Water & Toxic Enforcement Act of 1986:

Arsenic	1,1-DCA	Benzene
Chromium VI	1,2-DCA	1,4-Dichlorobenzene
Lead	TCE	Dichloromethane
Nickel	Vinyl chloride	

According to the Basin Plan, for carcinogenic constituents, the additive toxicity of the sum of the constituents is determined by dividing the concentration of each carcinogen in the discharge by its

toxicological limit. The Basin Plan assumes an additive toxicity problem does not exist if the summation of the ratios is less than 1.0. If the summation of the ratios is equal to or greater than 1.0, the combination of constituents is assumed to present an unacceptable level of toxicologic risk.

The Basin Plan describes additive toxicity by the following formula:

$$\sum_{i=1}^{n} \frac{[\text{Concentration of Toxic Substance}]i}{[\text{Toxicological Limit for Substance in Water}]i} < 1.0$$

The GWTS was designed to provide groundwater cleanup for up to its design flow of 0.542 mgd. This Order establishes a daily maximum effluent flow limitation of 0.542 mgd, based on the design flow. Order No. 5-00-008 included a 30-day average effluent flow limit of 0.432 mgd. This Order continues the 30-day average effluent flow limit as a monthly average effluent flow limitation of 0.432 mgd.

Mass-based effluent limitations were calculated by multiplying the concentration limitation by the design flow (0.542 mgd) and the appropriate unit conversion factors.

A. Discharge Prohibitions

1. As stated in Section I.G of Attachment D, Federal Standard Provisions, this Order prohibits bypass from any portion of the treatment facility.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

a. The SIP defines Minimum Level (ML) as the concentration at which the entire analytical system must give recognizable signal and 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 method specified sample weights, volumes, and processing steps have been followed.

b. The SIP defines Method Detection Limit (MDL) as the 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 40 CFR 136, Appendix B, revised as of 14 May 1999.

c. The SIP requires the Discharger to report with each sample result the corresponding applicable ML and the laboratory's current MDL.

d. CWA section 301(b)(1) requires NPDES permits to include effluent limitations that achieve technology-based standards and any more stringent limitations necessary to meet water quality standards. Water quality standards include the Basin Plan's beneficial uses and narrative and numeric water quality objectives, State Water Board adopted standards and federal standards including NTR and CTR. These standards include the Basin Plan's toxicity objective and Resolution 68-16. Under the Clean Water Act, the applicable

technology-based standard is "best available technology economically achievable/best conventional pollutant control technology" or BAT/BCT. Because there are no promulgated effluent limitations for VOCs in groundwater extracted for cleanup, technology-based effluent limitations are established based upon consideration of the Regional Water Board staff's best professional judgment (BPJ). This Regional Water Board has a long history of regulating cleanup of VOCs in groundwater and has consistently imposed effluent limits at less than minimum levels (MLs) for VOCs in groundwater (see Attachment A for a definition of MLs). With respect to the specific discharges permitted herein, and particularly the air stripper, the following have been considered; as required by 40 CFR 125 for establishing BAT based upon BPJ:

- **Appropriate technology for category or class of discharges** – Air Stripping treatment systems are commonly used to remove VOCs from extracted groundwater at cleanup sites. Systems are designed to remove VOCs to nondetectable concentrations. Properly operated and maintained systems perform reliably and ensure essentially complete removal of VOCs. The Discharger employs an air stripper system.

- **Unique factors relating to the applicant –** The Discharger has not identified any unique factors that would justify discharges equaling or exceeding quantifiable concentrations of VOCs.

- **Age of equipment –** The GWTS was constructed in 1994. The first water was extracted, treated, and discharged in December 1994. There have been no significant upgrades to any of the system components since 1994.

- **Non-water quality environmental impacts, including energy requirements and cost of achieving proposed effluent reduction** – The system currently in place reliably removes VOCs to nondetectable concentrations of less than 0.5 µg/L, therefore, implementation of the proposed limits would not create additional non-water quality impacts, or financial costs for the Discharger.

- **Influent and effluent data** – The monitoring data provided by the Discharger indicates that most of the time its air stripper effluent VOC concentrations are below detection limits of 0.5 µg/L. Out of the seven hundred eight effluent samples tested, consisting of seventeen different VOCs, only three samples exceeded the 0.5 µg/L detection limit while most were not detected. Therefore, the Facility is capable of meeting the proposed effluent limits.

Air stripping systems are appropriate technologies for complete VOC removal from extracted groundwater. The above supports a conclusion that the limits of less than 0.5 µg/L as a daily maximum reflects best practicable treatment control technology (BPTC)/BAT. Additionally, the Discharger must properly operate and maintain its treatment systems. As the Discharger is already meeting the effluent limitations, continued proper operation and maintenance will achieve these effluent limits and not impose additional costs on the Discharger.

e. CWA Section 301 requires implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state law. Applicable state water quality standards include Resolution 68-16.

f. Resolution No. 68-16 requires implementation of BPTC to ensure that the highest water quality is maintained consistent with the maximum benefit to the people of the State. BPTC for groundwater cleanup of VOCs provides that the pollutants should be discharged at concentrations no higher than quantifiable levels for each pollutant. BPTC is equivalent to BAT and for VOCs subject to this Order requires meeting effluent limits set at less than MLs. Several dischargers in the Central Valley Region have implemented BPTC groundwater treatment systems and have been able to consistently treat VOCs in the wastewater to concentrations below the MLs. The MLs for VOC constituents of concern are listed below:

Parameter	Units	ML
Trichloroethene (TCE)	µg/L	0.5[1]
1,1-Dichloroethane (1,1-DCA)	µg/L	0.5[1]
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5[1]
1,1-Dichloroethene (1,1-DCE)	µg/L	0.5[1]
cis-1,2-Dichloroethene (cis-1,2-DCE)	µg/L	0.5[2]
trans-1,2-Dichloroethene (trans-1,2-DCE)	µg/L	0.5[1]
Benzene	µg/L	0.5[1]
Chlorobenzene	µg/L	0.5[1]
1,2-Dichlorobenzene (o-Dichlorobenzene)	µg/L	0.5[1]
Vinyl chloride	µg/L	0.5[1]
Dichloromethane	µg/L	0.5[1]
1,4-Dichlorobenzene	µg/L	0.5[1]
Methyl tert butyl ether (MTBE)	µg/L	3[2]
Methyl ethyl ketone (MEK)	µg/L	0.5[2]
4-methyl-2-pentanone	µg/L	0.5[2]
Total Xylene Isomers	µg/L	0.5[2]

[1] Based on MLs listed in Appendix 4 of the SIP.

[2] The SIP does not include MLs for these constituents; these values are based on California Department of Health Services Detection Limits for purposes of Reporting (DLRs) codified in Title 22, CCR, section 64445.1.

2. Applicable Technology-Based Effluent Limitations

a. Order No. 5-00-008 established effluent limitations for iron and manganese, which are technology-based effluent limitations (TBELs) for the iron and manganese precipitation and greensands filtration portion of the GWTS. The iron and manganese limitations were developed using best professional judgment. The existing TBELs are protective of Basin Plan beneficial uses. To ensure continued attainment of beneficial uses, this Order carries over the TBELs for iron and manganese established by the Order No. 5-00-008 with

additional mass-based effluent limitations. Order No. 5-00-008 did not establish mass-based effluent limitations for iron or manganese.

b. Volatile Organic Compounds

i. According to the SIP, if no ML value is below the effluent limitation, the applicable ML value shall be the lowest ML value listed in Appendix 4 of the SIP. VOC concentrations below the MLs are generally considered unquantifiable. Therefore, application of TBELs for VOCs at ground water cleanup sites requires effluent to be below MLs.

ii. Order No. 5-00-008 established 30-day median effluent imitations of less than current MLs (<0.5 µg/L) and daily maximum effluent limitations of 5 µg/L for TCE, 1,1-DCA, 1,2-DCA, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, benzene, chlorobenzene, 1,2-dichlorobenzene, and vinyl chloride, which are TBELs based on BPJ. In accordance with federal Antibacksliding provisions, this Order assigns maximum daily TBELs for these VOCs, except water quality based effluent limitations (WQBELs) are being established for 1,1-DCE. WQBELs are more stringent than applicable TBELs for 1,1-DCE; see section IV.C of this Fact Sheet for further discussion. The maximum daily TBELs established by this Order are less than current MLs, consistent with BPJ based BAT limitations for VOCs removal using air strippers.

iii. Order No. 5-00-008 established a daily maximum effluent limitation of "nondetectable" for other VOCs. This Order continues the "nondetectable" limitation for other VOCs.

iv. Order No. 5-00-008 includes the following effluent limitation: "For any sample event, the sum of the concentrations of the VOC constituents…in the discharge shall not exceed 5 µg/L (nondetectables shall be considered equal to zero)." Order No. 5-00-008's summation of VOCs limitation described above would allow the discharge of VOCs in detectable amounts up to a total of 5 µg/L. Discharge of VOCs in detectable amounts does not comply with BPTC requirements for removal of VOCs established by this Order. Therefore, this Order does not continue the previous Order's summation of VOCs limitation.

v. Analysis of Discharger Self Monitoring Reports for the period of January 2000 – September 2004 and CTR priority pollutant scans (see section II.C and Table F-2 of this Fact Sheet) indicate that the following VOCs, in addition to those already assigned TBELs (see paragraph ii.) have been detected in influent and/or treatment system effluent at levels greater than the effluent limitations contained in Order No. 5-00-008: dichloromethane, 1,4-dichlorobenzene, MEK, 4-methyl-2-pentanone, and total xylene isomers. Because these VOCs have been detected in influent and/or treatment system effluent at concentrations exceeding the limitations in Order No. 5-00-008, TBELs consistent with BPJ based BAT limitations for VOCs removal using air strippers have been included in this permit.

Dichloromethane and 1,4-dichlorobenzene are priority pollutants with MLs listed in Appendix 4 of the SIP. Concentrations of these VOCs less than the corresponding MLs (0.5 µg/L) are considered unquantifiable; therefore TBELs for dichloromethane and 1,4-dichlorobenzene are set at <0.5 µg/L.

MEK, 4-methyl-2-pentanone, and total xylene isomers are not priority pollutants. California Department of Health Services lists DLRs for numerous organic chemicals. The DLRs are codified in Title 22, CCR, section 64445.1. The DLRs for MEK, 4-methyl-2-pentanone, and total xylene isomers are summarized below:

Parameter	DLR (µg/L)
MEK	0.5
4-methyl-2-pentanone	0.5
total xylene isomers	0.5

Concentrations below Title 22 DLRs are considered unquantifiable. BPTC is capable of removing MEK, 4-methyl-2-pentanone, and total xylene isomers to concentrations below the DLRs. Therefore, this Order assigns TBELs equivalent to less than the above DLRs for MEK, 4-methyl-2-pentanone, and total xylene isomers. These limitations are consistent with BPJ based BAT limitations for VOCs removal using air strippers.

3. Final Technology-Based Effluent Limitations

Table F-1 summarizes the final technology-based effluent limitations established in this Order.

Table F-1
Summary of Technology-based Effluent Limitations
Discharge Points 001 and 002

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	0.432	0.542	--	--
Iron (total recoverable)	µg/L	--	300	--	--
	lbs/day	--	1.4	--	--
Manganese (total recoverable)	µg/L	--	50	--	--
	lbs/day	--	0.23	--	--
Dichloromethane	µg/L	--	<0.5	--	--
1,2-Dichlorobenzene	µg/L	--	<0.5	--	--
1,4-Dichlorobenzene	µg/L	--	<0.5	--	--
TCE	µg/L	--	<0.5	--	--
1,1-DCA	µg/L	--	<0.5	--	--
1,2-DCA	µg/L	--	<0.5	--	--
cis-1,2- DCE	µg/L	--	<0.5	--	--
trans-1,2- DCE	µg/L	--	<0.5	--	--
Benzene	µg/L	--	<0.5	--	--
Chlorobenzene	µg/L	--	<0.5	--	--
Vinyl Chloride	µg/L	--	<0.5	--	--
MEK	µg/L	--	<0.5	--	--
4-Methyl-2-pentanone	µg/L	--	<0.5	--	--
Total Xylene Isomers	µg/L	--	<0.5	--	--
Other VOCs	µg/L	--	Nondetectable[a]	--	--

a. Based on minimum levels in Appendix 4 of the SIP and detection limits for purposes of reporting in Title 22, section 64445.1 of the California Code of Regulations.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. There may be assimilative capacity within the receiving waters (FID canals) for the Facility's discharge, however, section 1.4.2.2 of the SIP requires that the Discharger's permit application include the information needed by the Regional Water Board to make a determination on allowing a mixing zone, including the calculations for deriving the appropriate receiving water and effluent flows, and/or the results of a mixing zone study. Without the mixing zone study and flow information, it is impossible for the Regional Water Board to assess the assimilative capacity of the receiving waters. Therefore, the Regional Water Board has evaluated the need for WQBELs for pollutants without benefit of dilution in this Order. These water quality-based effluent limitations are based on the application of water quality criteria or objectives at the point of discharge to the FID canals (Discharge Points 001 and 002).

b. The minimum receiving water hardness was used to develop hardness dependent WQBELs. The worst-case or minimum observed value has been chosen to protect the beneficial uses of the receiving water and is shown below:

Parameter	Units	Minimum Receiving Water Concentration
Hardness	mg/L	10

3. Determining the Need for WQBELs

a. Reasonable potential (RP) was determined by calculating the projected MEC (maximum effluent concentration) for each constituent and comparing it to applicable water quality criteria; if a criterion was exceeded, the discharge was determined to have reasonable potential to exceed a water quality objective for that constituent. The projected MEC is determined by multiplying the observed MEC by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample

results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean. For all constituents for which the source of the applicable water quality standard is the CTR or NTR, the multiplying factor is 1. Reasonable potential evaluation was based on the methods used in the SIP and the USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001] (TSD).

b. According to Section 1.2 of the SIP, the Discharger must report data for all the priority pollutants listed in the CTR. The data are used to determine the reasonable potential for these constituents to cause or contribute to an exceedance of applicable water quality criteria and to calculate effluent limitations. The Discharger was issued a 13267 Order directing it to conduct a receiving water and effluent monitoring study in accordance with the SIP. The Discharger has not submitted all of the required monitoring data for the receiving water. This Order contains provisions that:

   i. Require the Discharger to conduct a study to provide information as to whether the levels of NTR and CTR constituents, USEPA priority pollutants, in the discharge have the reasonable potential to cause or contribute to an in-stream excursion above a water quality standard, including Basin Plan numeric and narrative objectives and water quality standards, objectives, and criteria;

   ii. If the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard, require the Discharger to submit sufficient information to calculate effluent limitations for those constituents; and

   iii. Allow the Regional Water Board to reopen this Order and include effluent limitations for those constituents.

c. Section 1.2 of the SIP requires the Regional Water Board to use all available, valid, relevant, representative data and information to implement the requirements of the SIP. In addition to effluent and receiving water quality data, analysis of groundwater quality data is a valid and relevant means of determining the requirements of this Order.

d. Although the Discharger's GWTS has performed reliably, similar systems have experienced failures or operational errors that have resulted in pass through of untreated or partially treated effluent resulting in exceedances of permit limits. A failure of the GWTS or operational errors could result in a similar discharge of partially treated or untreated effluent exceeding applicable water quality criteria. Therefore groundwater quality data or influent data and effluent data were used to determine the need for additional effluent limitations in this Order.

e. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs the Regional Water Board finds that the

discharge does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for arsenic, copper, lead, nickel, iron, manganese, conductivity at 25 ºC, 1,2-DCA, and cis-1,2-DCE. Effluent limitations for these constituents are included in this Order.

f. The SIP, at Section 1.4 states, in part, "…calculated water quality based effluent limitations shall be compared to the technology-based effluent limitations for the pollutant, and the most protective of the two types of limitations shall be included in the permit." 40 CFR 122.44 requires the same comparison and the application of the more stringent limitations.

g. The reasonable potential analysis for detected constituents is summarized below in Table F-2. Background data for the receiving water have not been summarized because no data are available.

Table F-2
Reasonable Potential Analysis Summary for Detected Constituents
Discharge Points 001 and 002

Parameter	Units	n[1]	CV[2]	Multiplier	MEC[3]	MIC[4]	99th MEC[3]	WQO / WQC[5]	Sources	RP[6]
Antimony (total recoverable)	µg/L	2	0.6	7.4	0.3	NA	2.22	6	California Primary MCL	N
Arsenic (total recoverable)	µg/L	2	0.6	7.4	4	NA	29.6	10	USEPA Primary MCL	Y[7]
Chromium (III)	µg/L	2	0.6	1	3.4	NA	3.4	31 / 260	National Toxic Rule	N
Chromium (VI)	µg/L	2	0.6	1	1.1	NA	1.1	11 / 16	California Toxics Rule	N
Copper (total recoverable)	µg/L	2	0.6	1	6.4	NA	6.4	1.3 / 1.6	California Toxics Rule	Y
Lead (total recoverable)	µg/L	3	0.6	1	1.3	NA	1.3	0.17 / 4	California Toxics Rule	Y
Mercury	µg/L	2	0.6	1	0.0012	NA	0.0012	0.05	California Toxics Rule	N
Nickel (total recoverable)	µg/L	2	0.6	1	9.3	NA	9.3	7 / 70	California Toxics Rule	Y
Selenium	µg/L	2	0.6	1	1	NA	1	5 / 20	National Toxics Rule	N
Thallium (total recoverable)	µg/L	2	0.6	1	0.09	NA	0.09	1.7	National Toxics Rule	N
Zinc (total recoverable)	µg/L	2	0.6	1	3	NA	3	17 / 17	California Toxics Rule	N
Chlorobenzene	µg/L	47	0.6	1.75	0.59	3.1	1.0325	20	USEPA Ambient WQ Criteria	N
Dichloromethane	µg/L	46	0.6	1	4.4	ND	4.4	4.7	California Toxics Rule	N
Iron (total recoverable)	µg/L	34	0.6	1.93	1500	14000	2895	300	California Secondary MCL	Y
Manganese (total recoverable)	µg/L	32	0.6	1.97	220	800	433.4	50	California Secondary MCL	Y
Electrical Conductivity at 25° C (EC)	µmhos/cm	2	0.6	7.4	850	NA	6290	1000	Basin Plan	Y
4-Methyl-2-pentanone	µg/L	6	0.6	3.8	5.2	1.1	19.76	120	California DHS Action Level	N

Parameter	Units	n[1]	CV[2]	Multiplier	MEC[3]	MIC[4]	99th MEC[3]	WQO / WQC[5]	Sources	RP[6]
MTBE	µg/L	45	0.6	1.77	0.47	ND	0.8319	5	California Secondary MCL	N
Benzene	µg/L	29	0.6	--	ND	0.64	--	1	California Primary MCL	N
1,1-DCA	µg/L	29	0.6	--	ND	1.1	--	5	California Primary MCL	N
1,2-DCA	µg/L	29	1.1	--	ND	2.1	--	0.38	National Toxics Rule	Y[8]
TCE	µg/L	29	0.6	--	ND	0.32	--	2.7	California Toxics Rule	N
Vinyl Chloride	µg/L	29	0.6	--	ND	0.31	--	0.5	California Primary MCL	N
1,2-Dichlorobenzene	µg/L	29	0.3	--	ND	2.4	--	24	Odor Threshold	N
1,4-Dichlorobenzene	µg/L	29	0.6	--	ND	0.51	--	5	California Primary MCL	N
cis-1,2-DCE	µg/L	29	0.6	--	ND	34	--	6	California Primary MCL	Y[8]
Xylene(s)	µg/L	29	0.6	--	ND	1.4	--	17	Taste & Odor Threshold	N
MEK	µg/L	2	0.6	--	ND	17	--	4,200	USEPA IRIS Reference Dose	N

1 n: number of parameter samples.
2 CV: coefficient of variation.
3 MEC: maximum effluent concentration. 99th MEC: maximum predicted effluent concentration using 99th percentile multiplier. Note that multiplier is equal to "1" when applying CTR criteria. NA: Not Available. ND: Not Detectable.
4 MIC: maximum influent concentration. Note that 99th percentile multipliers were not used to determine a projected maximum influent concentration. The TSD RPA procedures for the determination of projected maximum effluent concentrations may be applicable for the determination of projected maximum influent concentrations; however, the TSD approach indicates that facility effluent concentrations should be used with the multipliers when determining the need for WQBELs.
5 WQO: water quality objective. WQC: water quality criteria.
6 Reasonable potential.
7 RP based on groundwater monitoring and extraction well data. Not enough data to base reasonable potential on effluent concentrations.
8 RP based on influent concentration.

h. **Arsenic.** CTR freshwater aquatic life criteria for arsenic are 150 µg/L (as a four-day average) and 340 µg/L (as a one-hour average). For waters with the designated beneficial use of MUN, the Basin Plan prohibits discharges that contain chemicals in concentrations that exceed California drinking water MCLs. The California DHS Primary MCL for arsenic is 50 µg/L. On 31 October 2001, USEPA adopted a new federal Primary MCL for arsenic of 10 µg/L. The Safe Drinking Water Act requires California DHS to adopt a Primary MCL at least as low as the USEPA Primary MCL. To protect potential MUN, it is reasonable to require compliance with the USEPA Primary MCL for arsenic. The drinking water standards for arsenic are lower than the aquatic life CTR criteria.

There are only two effluent results for arsenic (3.6 µg/L on 8 February 2005 and 4 µg/L on 5 May 2005). Regional Water Board staff do not believe the limited data is sufficient to determine whether the discharge has reasonable potential to cause or contribute to an in-stream excursion above applicable water quality objectives for arsenic. However, review of groundwater monitoring data and extraction well data indicate that the influent to the GWTS could exceed the USEPA Primary MCL of 10 µg/L. Analytical results for two groundwater monitoring wells less than 200 feet from extraction well EW-1 show dissolved arsenic concentrations to be 9.9 µg/L or greater since May 2005 and as high as 22.9 µg/L. Extraction well EW-1 supplies the largest fraction of the influent to the GWTS. Dissolved arsenic concentrations in EW-1 have been reported as high as 15.1 µg/L (18 March 2005). When combined with the flow from extraction well EW-2 (dissolved concentrations from 1.4 µg/L to 9.3 µg/L), it is reasonable to conclude that, at times, the influent to the GWTS can exceed the USEPA Primary MCL of 10 µg/L. Given that the GWTS's arsenic removal efficiency is undetermined at this time and GWTS sometimes fail, there is a reasonable potential that the effluent arsenic concentrations could exceed the USEPA Primary MCL of 10 µg/L during periods of no receiving water dilution. Therefore, to protect potential MUN, this Order includes a maximum daily effluent limitation of 10 µg/L for arsenic based on the Basin Plan chemical constituent objective.

i. **Copper**. The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. WARM is a beneficial use of the receiving water. The criteria for copper are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for copper in freshwater are 0.960 for both the acute and the chronic criteria. Using the worst-case (lowest receiving water) measured hardness of 10 mg/L, the corresponding criteria are 1.6 µg/L and 1.3 µg/L for the acute and chronic criteria, respectively. The maximum observed effluent copper concentration was 6.4 µg/L. The maximum observed upstream receiving water copper concentration was 2.5 µg/L. Both the effluent and receiving water concentrations have exceeded the chronic criterion; therefore, effluent limitations for copper are included in this Order. The effluent limitations for copper are presented in total recoverable concentrations, and are based on CTR criteria for the protection of freshwater aquatic life. A review of effluent monitoring data indicates that the Discharger will not be able

to immediately comply with these new effluent limitations for copper. This Order includes interim limitations and a compliance schedule for copper.

j. **Lead.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for lead. WARM is a beneficial use of the receiving water. The standards for lead are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for lead in freshwater are 1.13 for both the acute and the chronic criteria. Using the worst-case (lowest receiving water) measured hardness of 10 mg/L, the corresponding criteria are 4 µg/L and 0.17 µg/L for the acute and chronic criteria, respectively. The maximum observed effluent lead concentration was 1.3 µg/L. The maximum observed upstream receiving water lead concentration was 1.5 µg/L. Both the effluent and receiving water concentrations have exceeded the chronic criterion; therefore, effluent limitations for lead are included in this Order. The effluent limitations for lead are presented in total recoverable concentrations, and are based on the CTR standards for the protection of freshwater aquatic life. A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for lead. This Order includes interim limitations and a compliance schedule for lead.

k. **Nickel.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for nickel. WARM is a beneficial use of the receiving water. The standards for metals are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total recoverable concentrations. The conversion factors for nickel in freshwater are 0.998 and 0.997 for acute and the chronic criteria, respectively. Using the worst-case (lowest receiving water) measured hardness of 10 mg/L, the corresponding criteria are 70 µg/L and 7 µg/L for the acute and chronic criteria, respectively. The maximum observed effluent nickel concentration was 9.3 µg/L. The maximum observed upstream receiving water nickel concentration was 3.4 µg/L. The effluent water concentration has exceeded the chronic criterion; therefore, the effluent limitations for nickel are included in this Order. The effluent limitations for nickel are presented in total recoverable concentrations, and are based on the CTR standards for the protection of freshwater aquatic life. A review of effluent monitoring data indicates that the Discharger will not be able to immediately comply with these new effluent limitations for nickel. This Order includes interim limitations and a compliance schedule for nickel.

l. **Conductivity at 25° C (EC), Boron, and Chloride.** Page IV-9, Discharges to Navigable Waters of the Basin Plan, requires at a minimum, dischargers to surface waters to comply with the following effluent limits:

- Maximum EC not to exceed the quality of the source water plus 500 µmhos/cm or 1,000 µmhos/cm, whichever is more stringent, and
- Discharges shall not exceed a chloride content of 175 mg/l or a boron content of 1.0 mg/l.

To comply with Basin Plan requirements, this Order includes EC, boron, and chloride limitations as maximum daily effluent limitations. The GWTS does not add EC, chloride, or boron. Therefore the effluent EC, chloride, and boron concentrations should be the same as the influent concentrations. This Order assigns EC, chloride, and boron limitations and monitoring to gather information, and may be reopened to reconsider EC, chloride, and boron limitations should future monitoring indicate the need.

m. **pH.** The Basin Plan includes numeric water quality objectives that the pH "…not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH." Because there is no available assimilative capacity, this Order requires that effluent pH be within the limits of 6.5 to 8.3 units.

n. As shown in Table F-2, WQBELs are necessary for arsenic, copper, lead, nickel, iron, manganese, 1,2-DCA, and cis-1,2-DCE, however, the SIP and 40 CFR 122.33 require NPDES permits to consider both TBELs and WQBELs, and that the more stringent of the two must be implemented to protect water quality. The following table summarizes applicable TBELs, WQBELs, and the final effluent limitations for constituents of concern (i.e. constituents with TBELs shown in Table F-1 and constituents requiring WQBELs-as shown in Table F-2):

Constituent	Units	WQBEL			TBEL	More Stringent WQBEL / TBEL	Final Effluent Limits	
		AMEL	MDEL	Source	MDEL		AMEL	MDEL
Arsenic (total recoverable)	µg/L	--	10	USEPA Primary MCL	--	WQBEL	--	10
Copper (total recoverable)	µg/L	0.8	1.6	CTR Aquatic Life	--	WQBEL	0.8	1.6
Lead (total recoverable)	µg/L	0.11	0.3	CTR Aquatic Life	--	WQBEL	0.11	0.3
Nickel (total recoverable)	µg/L	4	11	CTR Aquatic Life	--	WQBEL	4	11
Iron (total recoverable)	µg/L	300	--	California Secondary MCL	300	TBEL	--	300
Manganese (total recoverable)	µg/L	50	--	California Secondary MCL	50	TBEL	--	50
Dichloromethane	µg/L	4.7	9.5	CTR HH	<0.5	TBEL	--	<0.5
1,2-Dichlorobenzene	µg/L	24	--	Odor Threshold	<0.5	TBEL	--	<0.5
1,4-Dichlorobenzene	µg/L	5	--	California Primary MCL	<0.5	TBEL	--	<0.5
TCE	µg/L	2.7	5.4	CTR HH	<0.5	TBEL	--	<0.5
1,1-DCA	µg/L	5	--	California Primary MCL	<0.5	TBEL	--	<0.5
1,2-DCA	µg/L	0.38	1.0	NTR HH	<0.5	WQBEL / TBEL	0.38	<0.5
1,1-DCE	µg/L	0.057	0.11	NTR HH	<0.5	WQBEL	0.057	0.11
cis-1,2-DCE	µg/L	6	--	California Primary MCL	<0.5	TBEL	--	<0.5
trans-1,2-DCE	µg/L	10	--	California Primary MCL	<0.5	TBEL	--	<0.5
Benzene	µg/L	1	--	California Primary MCL	<0.5	TBEL	--	<0.5
Chlorobenzene	µg/L	70	--	California Primary MCL	<0.5	TBEL	--	<0.5
Vinyl Chloride	µg/L	0.5	--	California Primary MCL	<0.5	TBEL	--	<0.5
MEK	µg/L	4200	--	USEPA IRIS	<0.5	TBEL	--	<0.5
4-Methyl-2-pentanone	µg/L	120	--	DHS Action Level	<0.5	TBEL	--	<0.5
Total Xylene Isomers	µg/L	17	--	Taste and Odor	<0.5	TBEL	--	<0.5

4. WQBEL Calculations

a. The Discharger conducted monitoring for priority and non-priority pollutants. The analytical results of two comprehensive sampling events were submitted to the Regional Water Board. The results of these sampling events, along with effluent and receiving water monitoring conducted during the term of Order No. 5-00-008 were used in developing the requirements of this Order. Effluent limitations are included in the Order to protect the beneficial uses of the receiving water and to ensure that the discharge complies with the Basin Plan objective that toxic substances not be discharged in toxic amounts.

b. Effluent Limitations for WQBELs were calculated in accordance with Section 1.4 of the SIP and the TSD. The following paragraphs describe the general methodology used for calculating effluent limitations.

c. **WQBELs Calculation Example.** Using copper as an example, the following demonstrates how WQBELs were established for this Order. The process for developing these limits is in accordance with Section 1.4 of the SIP. Attachment G summarizes the development and calculation of all WQBELs for this Order using the process described below.

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

ECA = C + D (C-B) when C > B, and
ECA = C when C <= B,

Where: C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 10 mg/L (as $CaCO_3$) was used for development of hardness-dependant criteria.
D = The dilution credit, and
B = The ambient background concentration

As discussed in Section IV.C.2.a of this Fact Sheet, dilution credits have not been considered in this Order; therefore:

ECA = C

For copper, the applicable water quality criteria are:

ECA_{acute} = 1.6 µg/L
$ECA_{chronic}$ = 1.3 µg/L
$ECA_{human\ health}$ = 1000 µg/L

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

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

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

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

For copper, the following data were used to develop the acute and chronic LTA using Table 1 of the SIP:

No. of Samples	CV	$Multiplier_{acute}$	$Multiplier_{chronic}$
2	0.6	0.32	0.53

$LTA_{acute} = 1.6\ \mu g/L \times 0.32 = 0.51\ \mu g/L$

$LTA_{chronic} = 1.3\ \mu g/L \times 0.53 = 0.69\ \mu g/L$

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

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

For copper, the most limiting LTA was the LTA_{acute}

$LTA = 0.51\ \mu g/L$

Step 4: Calculate the water quality based effluent limits by multiplying the LTA by a factor (multiplier). Water quality-based effluent limits are expressed as Average Monthly Effluent Limitations (AMELs) and Maximum Daily Effluent Limitations (MDELs). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations

to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

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

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

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

For copper, the following data were used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

No. of Samples	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$
2	0.6	3.11	1.55

$AMEL_{aquatic\ life} = 0.51 \times 1.55 = 0.80\ \mu g/L$

$MDEL_{aquatic\ life} = 0.51 \times 3.11 = 1.60\ \mu g/L$

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

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

For copper:

$AMEL_{human\ health} = 1000\ \mu g/L$

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

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

For copper, the following data were used to develop the $MDEL_{human\ health}$:

No. of Samples	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$	Ratio
2	0.6	3.11	1.55	2.01

$MDEL_{human\ health} = 1000\ \mu g/L \times 2.01 = 2010\ \mu g/L$

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

For copper:

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
0.80 µg/L	1.60 µg/L	1000 µg/L	2010 µg/L

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. These limits will be protective of aquatic life.

Mass-based Limitations. Mass-based effluent limitations, or mass emission rates (MERs), for WQBELs applicable to Discharge Point 001 are calculated as follows:

MER = 8.34 (lb-L/mg-Mgal) x (AMEL or MDEL) x 0.542 mgd

d. **Final WQBELs.** Table F-3 summarizes the final WQBELs contained in this Order

Table F-3
Summary of Water Quality-based Effluent Limitations
Discharge Points 001 and 002

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard unit	--	--	6.5	8.3
Arsenic (total recoverable)	µg/L	--	10	--	--
	lbs/day	--	0.05	--	--
Copper (total recoverable)	µg/L	0.8	1.6	--	--
	lbs/day	3.6×10^{-3}	7.2×10^{-3}	--	--
Lead (total recoverable)	µg/L	0.11	0.3	--	--
	lbs/day	4.8×10^{-4}	1.4×10^{-3}	--	--
Nickel (total recoverable)	µg/L	3.56	11.4	--	--
	lbs/day	0.02	0.05	--	--
Boron (total recoverable)	mg/L	--	1.0	--	--
	lbs/day	--	4.5	--	--
Chloride	mg/L	--	175	--	--
	lbs/day	--	790	--	--
EC at 25° C	µmhos/cm	--	1000	--	--
1,2-DCA	µg/L	0.38	--	--	--
	lbs/day	1.7×10^{-3}	--	--	--
1,1-DCE	µg/L	0.057	0.11	--	--
	lbs/day	2.6×10^{-4}	5.2×10^{-4}	--	--

5. Whole Effluent Toxicity (WET)

a. **Acute Toxicity.** In order to comply with Basin Plan narrative toxicity requirements, this Order includes the following acute toxicity limitation: the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival.

b. **Chronic Toxicity.** The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

D. Final Effluent Limitations

1. 40 CFR 122.45 states that:

> "…All pollutants limited in permits shall have limitations…expressed in terms of mass except…[f]or pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass…Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations."

2. Over the past several years, the air-stripper has consistently removed the pollutants to the proposed effluent limits. The proposed effluent limitations consider the BPJ factors in section IV B.1, above, historical performance of the on-site BAT/BPTC systems, receiving water conditions, USEPA method detection limits, and are less than or equal to California Primary Maximum Contaminant Levels, California Toxics Rule and National Toxics Rule criteria, and limits which implement applicable water quality objectives.

3. Application of BAT/BCT to achieve the effluent limits will also result in compliance with WQBELs, consistent with the requirement of Resolution 68-16 that discharges meet BPTC. Possible exceptions are the WQBELs for 1,2-DCA and 1,1-DCE. However, given that the limitations for these constituents are below the applicable MLs, it is appropriate to assume that the results of <0.5 µg/L also represent compliance with the WQBEL and BPTC. The permitted discharge is consistent with the anti-degradation provisions of 40 CFR 131.12 and Resolution No. 68-16. BPTC for cleanup of groundwater polluted by volatile organic constituents is removal of VOCs to a level at or below corresponding analytical quantitation limits. Some resulting degradation of the receiving water could occur if VOCs were present at concentrations below the quantitation limit, but such degradation would not be quantifiable. The Discharger has not submitted an analysis to the Regional Water Board demonstrating that degradation resulting from discharges of VOCs at concentrations in excess of quantifiable levels would be consistent with the maximum benefit of the people of the state and Resolution No. 68-18. The continued remediation of polluted groundwater

and the discharge of the treated groundwater to the FID canals benefit the people of the state.

4. Table F-4 summarizes the final technology-based and water quality-based effluent limits established in this Order.

Table F-4
Summary of Final Effluent Limitations
Discharge Points 001 and 002

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	mgd	0.432	0.542	--	--	Previous Order No. 5-00-008, Antibacksliding
pH	standard units	--	--	6.5	8.3	Basin Plan
Arsenic (total recoverable)	µg/L	--	10	--	--	Basin Plan
	lbs/day	--	0.05	--	--	
Copper (total recoverable)	µg/L	0.8	1.6	--	--	CTR
	lbs/day	3.6×10^{-3}	7.2×10^{-3}	--	--	
Lead (total recoverable)	µg/L	0.11	0.3	--	--	CTR
	lbs/day	4.8×10^{-4}	1.4×10^{-3}	--	--	
Nickel (total recoverable)	µg/L	3.56	11.4	--	--	CTR
	lbs/day	0.02	0.05			
Boron (total recoverable)	mg/L	--	1.0	--	--	Basin Plan
	lbs/day	--	4.5	--	--	
Chloride	mg/L	--	175	--	--	Basin Plan
	lbs/day	--	790	--	--	
EC at 25° C	µmhos/cm	--	1000	--	--	Basin Plan
Iron (total recoverable)	µg/L	--	300	--	--	Previous Order No. 5-00-008, Antibacksliding
	lbs/day	--	1.4	--	--	
Manganese (total recoverable)	µg/L	--	50	--	--	Previous Order No. 5-00-008, Antibacksliding
	lbs/day	--	0.23	--	--	
Dichloromethane	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
1,2-Dichlorobenzene	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
1,4-Dichlorobenzene	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
TCE	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
1,1-DCA	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
1,2-DCA	µg/L	0.38	<0.5	--	--	NTR, BPJ
	lbs/day	$1.7x10^{-3}$	--	--	--	
1,1-DCE	µg/L	0.057	0.11	--	--	NTR
	lbs/day	$2.6x10^{-4}$	$5.2x10^{-4}$	--	--	
cis-1,2-DCE	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
trans-1,2-DCE	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
Benzene	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
Chlorobenzene	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
Vinyl chloride	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
MEK	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
4-Methyl-2-pentanone	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
Total Xylene Isomers	µg/L	--	<0.5	--	--	BPJ
	lbs/day	--	--	--	--	
Other VOCs	µg/L	--	Nondetectable[a]	--	--	BPJ
	lbs/day	--	--	--	--	

a. Based on minimum levels in Appendix 4 of the SIP and detection limits for purposes of reporting in Title 22, section 64445.1 of the California Code of Regulations.

E. Interim Effluent Limitations

1. As stated in Finding II.I of this Order, the USEPA adopted the NTR and the CTR, which contain promulgated water quality criteria applicable to this discharge and the State Water Resources Control Board adopted the SIP, which contains guidance on implementation of the NTR and CTR. CTR and NTR criteria along with beneficial use designations contained the Basin Plan and antidegradation policies constitute water quality standards pursuant to the Clean Water Act. The SIP, Section 2.2.1, requires that if a compliance schedule is granted for a CTR or NTR constituent, the Regional Water Board shall establish interim requirements and dates for their achievement in the NPDES permit. The interim limitations must: be based on current GWTS performance or existing permit limitations, whichever is more stringent; include interim compliance dates separated by no more than one year, and; be included in the Provisions. The interim limitations in this Order are based on current GWTS performance. In developing the interim limitations, where there are ten or more sampling data points available, sampling and laboratory variability are accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists*, Kennedy and Neville). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data. Where actual sampling shows an exceedance of the proposed 3.3 standard deviations interim limit, the maximum detected concentration has been established as the interim limitation. When there are less than ten sampling data points available, the *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001) (TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. Therefore, when there are less than ten sampling results for a constituent, the interim limitation is based on the corresponding multiplier from Table 3.1 of the TSD multiplied by the maximum observed sampling point. Interim limitations are established when compliance with NTR and CTR-based effluent limitations cannot be achieved by the existing discharge. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitations can be achieved.

2. The following interim limitations establish an enforceable maximum effluent concentration until compliance with the final effluent limitations can be achieved:

Parameter	Units	Interim Effluent Limitations
		Maximum Daily
Copper (total recoverable)	µg/L	50
	lbs/day	0.2
Lead (total recoverable)	µg/L	7
	lbs/day	0.03
Nickel (total recoverable)	µg/L	70
	lbs/day	0.3

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. The Clean Water Act, Section 303(a-c), required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Water Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control (40 CFR 131.20). State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that; "The numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses." This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for Biostimulatory Substances, Chemical Constituents, Color, Dissolved Oxygen, Floating Material, Oil and Grease, pH, Pesticides, Radioactivity, Salinity, Sediment, Settleable Material, Suspended Material, Tastes and Odors, Temperature, Toxicity and Turbidity.

2. **Fecal Coliform.** The receiving waters have been designated as having the beneficial use of contact recreation (REC-1). For water bodies designated as having REC-1 as a beneficial use, the Basin Plan includes a water quality objective limiting the "…fecal coliform concentration based on a minimum of not less than five samples for any 30-day period…" to a maximum geometric mean of 200 MPN/100 ml. The objective also states that "…[no] more than ten percent of the total number of samples taken during any 30-day period [shall] exceed 400/100 ml." This objective is included in the Order as a receiving water limitation.

3. **Dissolved Oxygen.** The receiving waters have been designated as having the beneficial use of warm freshwater aquatic habitat (WARM). For water bodies designated as having WARM as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 5.0 mg/L of dissolved oxygen. Since the beneficial use of

WARM does apply to the FID canals, a receiving water limitation of 5.0 mg/L for dissolved oxygen was included in the Order.

The Basin Plan also includes the water quality objective that "Waste discharges shall not cause the monthly median dissolved oxygen concentrations (DO) in the main water mass (at centroid of flow) of streams and above the thermocline in lakes to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration." This objective was included as a receiving water limitation in the Order.

4. **pH.** For all surface water bodies in the Tulare Lake Basin, the Basin Plan includes water quality objectives stating that "The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH." The Order includes receiving water limitations for both pH range and pH change.

5. **Temperature.** The receiving waters have the beneficial use of WARM. The Basin Plan includes the objective that "Elevated temperature wastes shall not cause the temperature of waters designated COLD or WARM to increase by more than 5°F above natural receiving water temperature." This Order includes a receiving water limitation based on this objective.

6. **Turbidity.** The Basin Plan includes the following objective: "Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits:

   a. Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.

   b. Where natural turbidity is between 5 and 10 NTUs, increases shall not exceed 20 percent.

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

   d. Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent."

B. Groundwater

1. The Basin Plan designates the beneficial uses of groundwater in the discharge area as MUN, AGR, industrial service supply (IND), industrial process supply (PRO), REC-1, and REC-2.

2. The following Groundwater Limitation in this Order is based on the State Antidegradation Policy, State Water Board Resolution 68-16: Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not, in combination with other sources of the waste constituents, cause groundwater within

influence of the Facility and discharge area(s) to contain waste constituents in concentrations in excess of natural background quality. The GWTS is a closed system and there is no reason for a release of waste that would affect groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

A. Influent Monitoring – Not Applicable

B. Effluent Monitoring

Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Table F-5 summarizes the monitoring required and the rationale for assigning the monitoring.

Table F-5
Summary of Effluent Monitoring
Discharge Points 001 and 002

Parameter(s)	Monitoring Frequency	Rationale
Flow	1/month	Determine compliance daily maximum and monthly average flow limitation.
Copper, Lead, Nickel	1/month	Determine compliance with effluent limitations.
Iron, Manganese	1/month	Determine compliance with effluent limitations.
TCE; 1,1-DCA; 1,2-DCA; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; Benzene; Chlorobenzene; Dichloromethane; 1,2-Dichlorobenzene; 1,4-Dichlorobenzene; Vinyl chloride; MEK; 4-Methyl-2-pentanone; Total Xylene Isomers	1/month	Determine compliance with effluent limitations.
Other VOCs	1/quarter	Determine compliance with effluent limitations.
pH	1/month	Determine compliance with instantaneous minimum/maximum effluent limitations.
Boron, Chloride, EC at 25° C	1/month	Determine compliance with effluent limitations.
Arsenic	1/month	Determine compliance with effluent limitations.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Chapter III of the Basin Plan establishes narrative toxicity water quality objectives and requires that at a minimum compliance with this objective shall be evaluated with a 96-hour bioassay. This Order requires annual acute toxicity testing that implements the requirements of the Basin Plan.

2. **Chronic Toxicity.** Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Therefore, in accordance with the SIP, the Discharger will be required to conduct chronic toxicity testing in order to determine reasonable potential and establish WQBELs as necessary.

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is included to determine the impacts of the discharge on the receiving water, and also to determine compliance with receiving water limitations. Table F-6 summarizes the receiving water monitoring required by this Order.

Table F-6
Summary of Receiving Water Monitoring
Monitoring Locations R-001 and R-003 or R-002 and R-004

Parameter	Frequency	Rationale
pH, EC at 25° C, Turbidity	1/month	Monitoring assigned to determine whether the discharge is causing an in-stream exceedance of applicable water quality objectives.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

Section 1.3 of the SIP requires the Regional Water Board to require periodic monitoring for pollutants, at least once prior to the reissuance of a permit, for which criteria or objectives apply and for which no effluent limitations have been established. To comply with the SIP, this Order requires the Discharger to sample effluent and upstream receiving water for priority pollutants at least once during this permit term and the samples shall be collected no more than 365 days and no less than 180 days prior to expiration of this Order.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Federal Standard Provisions

Standard Provisions, which in accordance with 40 CFR Sections 122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

40 CFR Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR Section 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with Section 123.35, this Order omits federal conditions that address enforcement authority specified in 40CFR Sections 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Provision VI.C.1.a, Reopener Provision.** This provision allows the Regional Water Board to re-open this Order to include any newly adopted receiving water standards.

b. **Provision VI.C.1.b, Chronic Toxicity Reopener Provision.** If the chronic toxicity testing specified in Section VI.C.2 indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, this Order shall be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened and a limitation based on that objective included.

c. **Provision VI.C.1.c, Studies/Monitoring Reopener Provision.** This provision allows the Regional Water Board to reopen this Order if review of the study results specified in Section VI.C.2 of this Order or any effluent monitoring show that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective.

2. Special Studies and Additional Monitoring Requirements

a. **Provision VI.C.2.a, Toxicity Studies.** This provision is based on Section 4 of the SIP. It requires the discharger to conduct additional studies to evaluate toxicity in the

discharge and eventually reduce that toxicity (Toxicity Identification Evaluation (TIE) and Toxicity Reduction Evaluation (TRE)) if chronic toxicity monitoring indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity.

b. **Provision VI.C.2.b, Priority Pollutant Monitoring.** According to Section 1.2 of the SIP, the Discharger must report data for all the priority pollutants listed in the CTR. The data are used to determine reasonable potential for these constituents to cause or contribute to an exceedance of applicable water quality criteria and to calculate effluent limitations. The Discharger was directed under Section 13267 of the California Water Code to conduct a receiving water and effluent monitoring study in accordance with the SIP. The Discharger has not submitted all of the required monitoring data. This provision requires the Discharger to sample the upstream receiving water for priority pollutants and submit the results to the Regional Water Board.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Compliance Schedules

Provision VI.C.4, Compliance Schedule and Infeasibility Study. The SIP, Section 2.1, provides that: "Based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with a CTR criterion, or with an effluent limitation based on a CTR criterion, the Regional Water Board may establish a compliance schedule in an NPDES permit." Section 2.1 further states that compliance schedules may be included in NPDES permits provided that the following justification has been submitted:…"(a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control and/or pollution minimization efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., GWTS upgrades); and (d) a demonstration that the proposed schedule is as short as practicable." This Order requires the Discharger to provide this information. The new water quality-based effluent limitations for copper, lead, and nickel become effective on **18 September 2006** if a compliance schedule justification is not completed and submitted by the Discharger to the Regional Water Board. Otherwise, final water quality-based effluent limitations for copper, lead, and nickel become effective May 18, 2010.

5. Construction, Operation, and Maintenance Specifications

Order No. 5-00-008 established the following backflushing requirement: "Each greensand filter shall be cleaned by backflushing with approximately 5070 gallons of uncontaminated water after treating approximately 35,000 gallons of groundwater." This Order continues the backflushing requirement established in the previous Order.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

Order No. 5-00-008 established the following requirement for the disposal of greensands filter backflush water: "Any proposed change in [greensands filter backwash water] disposal practice from that described in [section II.A of Attachment F] shall be reported to the Executive Officer at least 90 days in advance of the change." This Order continues the above backflush water disposal requirement.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Purity Oil Sales Superfund Site. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through mail service and posting at the site and other public locations.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on **21 June 2006.**

C. Public Hearing

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

Date: 3 August 2006
Time: 8:30 A.M.
Location: Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

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

Please be aware that dates and venues may change. Our web address is http://www.waterboards.ca.gov/centralvalley/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the Regional Water Board's Fresno Office at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. The address of the Fresno Office is on the cover of this Order. Copying of documents may be arranged through the Regional Water Board by calling (559) 445-5116.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Matt Scroggins at (559) 445-6042.

Attachment G – WQBEL Calculations

The water quality-based effluent limits developed for this Order are summarized below and were calculated as described in the methodology summarized in Attachment F, Fact Sheet Section IV.C.4 of this Order.

	Human Health Calculations			**Aquatic Life Calculations**											**Selected Limits**	
	Human Health			Freshwater												
Pollutant	AMEL = ECA = C hh	MDEL/AMEL multiplier	MDEL hh	ECA acute = C acute	ECA acute multiplier	LTA acute	ECA chronic = C chronic	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aquatic life	MDEL multiplier 99	MDEL aquatic life	AMEL	MDEL
	ug/L		ug/L	ug/L		ug/L	ug/L		ug/L	ug/L					ug/L	ug/L
Copper	1000	2.01	2006	1.6	0.32	0.51	1.3	0.53	0.69	0.51	1.55	0.8	3.11	1.60	0.80	1.6
Lead	15	2.93	44	4	0.14	0.55	0.17	0.25	0.04	0.04	2.48	0.11	7.29	0.31	0.11	0.3
Nickel	100	3.20	320	70	0.10	6.98	7	0.16	1.14	1.14	3.13	3.56	10.02	11.38	3.56	11.4
1,2-DCA	0.38	2.62	1.0	--	--	--	--	--	--	--	--	--	--	--	0.38	1.0
1,1-DCE	0.057	2.01	0.11	--	--	--	--	--	--	--	--	--	--	--	0.057	0.11

Notes:

C = Water Quality Criteria
hh = human health
AMEL = Average monthly effluent limitation
MDEL = Maximum daily effluent limitation
ECA = Effluent concentration allowance
LTA = Long-term average concentration