

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. 92-010
NPDES NO. CAG917001

GENERAL WASTE DISCHARGE REQUIREMENTS
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FOR
DISCHARGES OF EXTRACTED AND TREATED GROUND WATER
RESULTING FROM THE CLEANUP OF GROUND WATER
POLLUTED BY FUEL AND OTHER RELATED WASTE LEAKS
IN FUEL STORAGE AND DISPENSING FACILITIES

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Board) finds that:

1. On September 22, 1989, the U.S. Environmental Protection Agency (EPA), Region IX, granted authorization for the State to issue general NPDES permits in accordance with 40 CFR 122.28, 123.62 and 403.10. Title 40 CFR 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same types of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit rather than individual permits.
2. A general permit for existing and proposed discharges of extracted and treated petroleum hydrocarbon polluted ground water to surface waters of the Colorado River Basin Region (CRBR) would meet the requirements of 40 CFR 122.28. To qualify for this general permit, the discharges and proposed discharges must:
 - a. Result from similar operations, i.e. all involve extraction, treatment, and discharge of ground water;
 - b. Be the same types of waste, i.e. petroleum hydrocarbon polluted ground water;
 - c. Require similar effluent limitations for the protection of the beneficial uses of surface waters in the CRBR;
 - d. Require similar monitoring; and
 - e. Be more appropriately regulated under a general permit rather than individual permits.

Therefore, this Order establishes a general permit regulating disposal of extracted and treated ground water resulting from the cleanup of ground water polluted by fuel leaks and other related wastes from fuel storage and dispensing facilities, discharged to municipal drinking water sources and tributaries thereto, but does not include constructed drains that are not tributary to municipal drinking water sources.

*Replaced by
98-400*

3. Entities subject to this Board Order (parties deemed responsible by the Regional Board for remediation of ground water polluted by fuel leaks and other related wastes from fuel storage and dispensing facilities) are hereinafter referred to as the discharger(s).
4. There are currently about 230 cases of soil and/or ground water pollution in the Region resulting from leaks at fuel storage and dispensing facilities, and more are expected. Remedial activities at many of these sites are expected to necessitate discharge of treated ground water to surface waters within the Region. It is anticipated that their number will far exceed the capacity of available staff to develop and bring individual tentative waste discharge requirements to the Regional Board for adoption. The adoption of a general NPDES permit and/or general waste discharge requirements will significantly alleviate this problem, and enable the Regional Board to better utilize limited staff resources.
5. The Regional Water Quality Control Plan (Basin Plan) for the Colorado River Basin Region (CRBR) was adopted by the Board on May 15, 1991. The Basin Plan contains water quality objectives for surface waters and ground waters within the CRBR. The existing and potential beneficial uses of these waters are shown in the following attachments:
 - Attachment 1: Table 3-1 ("Definitions of Beneficial Uses of Water"),
 - Attachment 2: Table 3-2 (Beneficial Uses of Surface Waters in the East Colorado River Basin")
 - Attachment 3: Table 3-3 ("Beneficial Uses of Surface Waters in the West Colorado River Basin"),
 - Attachment 4: Table 3-5 ("Beneficial Uses of Ground Waters in the Colorado River Basin")
6. The Basin Plan supports optimizing the use of potentially reclaimable water. If ground water reclamation is technically and economically feasible and if beneficial uses of the receiving water are not adversely affected, it is the intent of the Regional Board to authorize the discharge of treated extracted ground water in accordance with the requirements of this Order.
7. The Federal Water Quality Act of 1987 added Section 304(1) to the Clean Water Act. This section requires States to adopt lists of impaired water bodies, including a list of surface waters which do not meet applicable water quality standards due entirely or substantially to point-source discharges of toxic substances.
8. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (collectively antidegradation policy), the Regional Board will ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions will be consistent with the following:

- a. Existing in-stream water uses and the level of water quality necessary to protect existing beneficial uses will be maintained and protected;
 - b. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality will be maintained and protected unless the State Water Resources Control Board (State Board) finds, after full satisfaction of inter-governmental coordination and public participation provisions of the State Board's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located; and,
 - c. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method will be consistent with Section 316 of the Clean Water Act.
9. The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal antidegradation policies and has determined that:
- a. The discharge conditions and effluent limitations established in this Order for discharges of treated ground water to surface waters in this Region ensure that the existing beneficial uses and quality of surface waters in the Region will be maintained and protected;
 - b. Discharges regulated by this Order should not lower water quality if the terms and conditions of this Order are met; and
 - c. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.
10. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
11. Effluent and receiving water limitations in this Order are based on the Basin Plan, Inland Surface Waters Plan, State Board's plans and policies, U.S. EPA guidance, best professional judgement, and best available technology economically achievable.
12. In accordance with Section 13389, Chapter 5.5, Division 7 of the California Water Code, and Section 15263, Chapter 3, Title 14 of the California Code of Regulations, the issuance of these waste discharge requirements is exempt from the California Environmental Quality Act requirement to prepare an Environmental Impact Report or Negative Declaration (Public Resources Code, Section 21100 et. seq.).
13. The Regional Board has notified the dischargers, and all known interested agencies of its intent to prescribe waste discharge requirements for said discharge and has provided them with an opportunity for a public meeting and opportunity to submit comments.

14. The Regional Board, in a public meeting, heard and considered all comments pertaining to said discharges.

IT IS HEREBY ORDERED that dischargers discharging treated ground water polluted by fuel and other related wastes from fuel dispensing and storage facilities, their agents, successors, and assignees, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated polluted ground water to waters of the State either at the treatment system or from any of the collection transport systems pump stations tributary to the treatment system is prohibited.
2. Neither the treatment nor the discharge of wastewater shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
3. The discharge of oil, trash, industrial waste sludge, or other solids directly to the surface waters in this Region or in any manner which permit it to be washed into the surface waters in this Region is prohibited.
4. The discharge of extracted and treated ground water from a specific site in excess of the flow rate specified in each discharger's authorization letter from the Executive Officer is prohibited.
5. The discharge of extracted and treated ground water polluted by fuel leaks and other related wastes at fuel storage and dispensing facilities to surface waters in this Region is prohibited unless an application for proposed discharge and the certification report required by Provision D.2 for the discharge have been submitted to, and reviewed by, the Regional Board's Executive Officer; and the Regional Board's Executive Officer has provided the discharger with written authorization to initiate the discharge; or an individual NPDES permit has been adopted for the discharge.

B. Effluent Limitations

1. The discharge shall be limited to extracted and treated ground water and added treatment chemicals approved by the Regional Board's Executive Officer which do not adversely affect the environment and comply with the requirements of this Order.
2. The effluent (at a point after full treatment but before it joins or is diluted by any other waste stream, body of water, or substance) shall not exceed the constituent limits as set forth in the Inland Surface Waters Plan (ISWP; Chapter 2, Tables 1 and 2 (column 1)), and the following instantaneous maximum limits:

<u>Constituents</u>	<u>Instantaneous Maximum Limits (µg/L)</u>
Purgeable Aromatics (EPA Method 602)	
Benzene	1.0
Toluene	100.0
Ethylbenzene	680.0
Total Xylenes	1750.0
Lead	50.0
Other Volatile Organic Compounds (per constituent, as identified by EPA methods 601 and 602)	5.0
 Total Petroleum Hydrocarbons (TPH) (as identified by modified EPA Method 8015)	 50.0

3. Monitoring for specific pollutants, including pesticides, radionuclides, solvents and metals may be required by the Regional Board in areas where their presence is suspected or has been confirmed by previous data. The guidelines for those constituents are:

<u>Constituents</u>	<u>Instantaneous Maximum Limits (µg/L)</u>
Purgeable Halocarbons (EPA Method 601)	
Carbon Tetrachloride	0.5
1,2-Dichloroethane	0.5
Vinyl Chloride	0.5
1,1-Dichloroethane	5.0
1,1-Dichloroethylene	6.0
(cis + trans)-1,2-Dichloroethylene	5.0
Methylene Chloride	5.0
Tetrachloroethylene	5.0
Trichloroethylene	5.0
1,1,1-Trichloroethane	5.0
1,1,2-Trichloroethane	5.0
Trichlorotrifluoroethane	5.0
Chloroform	5.0

4. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
5. There shall be no acute toxicity in the treated effluent being discharged to any surface water. Acute toxicity is defined as less than ninety percent survival, fifty percent of the time, and less than seventy percent survival, ten percent of the time, of standard test organisms in undiluted effluent in a 96-hour static or continuous-flow test.

C. Receiving Water Limitations

1. The discharge shall not cause the following conditions to exist in waters of the State:

- a. An increase in turbidity, unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in turbidity does not adversely affect beneficial uses.
 - b. An increase in the total dissolved solids (TDS) content, unless it can be demonstrated to the satisfaction of the Regional Board's Executive Officer that such an increase does not adversely affect beneficial uses.
 - c. An increase in aquatic growth to the extent that such growths cause a nuisance or adversely affect beneficial uses.
 - d. Floating debris, scum, grease, oil, wax, or other unsightly matter; and
 - e. Objectionable color, odor and/or taste.
2. The dissolved oxygen concentration shall not be reduced by the discharge to below the following minimum levels:

Waters designated

WARM	5.0 mg/l
COLD	8.0 mg/l
WARM and COLD 8.0 mg/l	

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Board as required by the Federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Board will revise and modify this Board Order in accordance with said more stringent standards.

D. Provisions

1. Each 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 dischargers to achieve compliance with the conditions of this Board Order and in the authorization letters from the Executive Officer. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Board Order and authorization letters from the Regional Board's Executive Officer. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Regional Board. All of the above procedures shall be described in an Operation and Maintenance (O&M) Manual. The O&M Manuals shall also contain a description of the safeguards to assure that, should there be reduction, loss, or failure of electric power, the dischargers will be able to comply with the terms and conditions of this Order and the authorization letters from the Regional Board's Executive Officer. The O&M Manuals shall describe preventive (fail-safe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect

of such events. These plans shall identify the possible sources of accidental loss, untreated or partially treated waste bypass, and polluted drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes shall be considered.

2. Wastewater discharged to any surface water shall be monitored for toxicity using bioassays as specified in "Monitoring and Reporting Program No. 92-010"(attached).
3. If the discharge consistently exceeds the applicable chronic toxicity limitation, a toxicity reduction evaluation (TRE) is required. The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of toxicity is identified, the discharger shall take all reasonable steps necessary to reduce toxicity to the required level.
4. Each discharger shall submit to the Regional Board's Executive Officer, as part of the application for proposed discharge, a report certifying the adequacy of each component of the proposed treatment facilities along with the associated O&M Manual. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process and physical design of the treatment facilities will ensure compliance with this Order. Each report shall also certify that (a) all treatment facility start-up and operation instruction manuals are adequate and available to operating personnel, (b) adequate treatment facility maintenance and testing schedules are included in the treatment facility O&M Manual, and (c) influent and effluent sampling locations or ports are located in areas where samples representative of the waste stream to be monitored can be obtained. The design engineer shall affix his/her signature and engineering license number to this certification report.
5. The application for proposed discharge shall contain the following information:
 - a. A letter from the local Publicly Owned Treatment Works (POTW), if any, stating that the plant cannot accept the discharge must accompany the application, along with a brief discussion of why other disposal methods were not viable;
 - b. Completed EPA Application Forms 1 (General Information) and 2D (New Sources and New Dischargers);
 - c. Chemical analysis of the untreated ground water;
 - d. A discussion of the proposed cleanup project in general terms including a review of the extraction system design and the status of delineation of the extent of both free product, and dissolved petroleum hydrocarbons in ground water;
 - e. The certification report and associated O&M Manual as described in Provisions D.1. and D.2.;
 - f. A map showing the path from the point of initial discharge to the ultimate location of discharge;

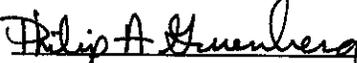
- g. The estimated average and maximum daily flow rates;
 - h. A list of known or suspected leaking underground tanks and other facilities or operations which have, or may have, impacted the quality of the underlying ground waters;
 - i. A discussion of the quality of the proposed receiving waters;
 - j. A discussion of plans for the prevention of run-on, interception and diversion of run-off, and prevention of infiltrations and runoff from contaminated soils stored on-site, if the discharge is associated with a ground water remediation project and soils containing petroleum products or other pollutants will be maintained on-site;
 - k. A discussion of why the proposed discharge is consistent with the type of discharge covered by this general permit (Board Order No.92-010); and
 - l. Any other information deemed necessary by the Executive Officer.
6. Upon receipt of a complete application for proposed discharge, the Regional Board's Executive Officer will review the application to determine whether the proposed discharge has shown compliance with the following criteria and is eligible to discharge waste under this general permit: (a) the proposed discharge results from the cleanup of ground water polluted by fuel leaks and other related wastes at fuel storage and dispensing facilities; (b) the proposed discharge is to surface waters in this region; and (c) the proposed treatment system and associated operation, maintenance, and monitoring plans are believed to be reasonably capable of meeting the provisions, prohibitions, effluent limitations, and receiving water limitations of this Board Order.
7. If the Regional Board's Executive Officer determines that the proposed discharger is eligible to discharge waste under this general permit, the Regional Board's Executive Officer may (a) authorize the proposed discharge or (b) require the discharge proponent to obtain an individual NPDES permit prior to any discharge to inland surface waters in this Region. If the Regional Board's Executive Officer authorizes the discharge, a "discharge authorization letter" will be transmitted to the discharge proponent (now an "authorized discharger") authorizing the initiation of the discharge subject to the conditions of this Order and any other conditions necessary to protect the beneficial uses of the receiving waters. The discharge authorization letter will specify the maximum allowed discharge flow rate (which also limits the mass loading rate for each pollutant listed in Effluent Limitation B.1 of this Order) and the Self-Monitoring Program for this Order. The discharge authorization letter may be terminated or revised by the Regional Board's Executive Officer at any time.
8. Dischargers shall comply with the attached "Monitoring and Reporting Program No. 92-010" as adopted by the Regional Board and as amended by the Regional Board's Executive Officer. The sampling and analysis schedule in the attached Monitoring and Reporting Program is the program expected to be followed for six months. After six months, the results will be reviewed, if requested by the dischargers, and the Regional Board's Executive Officer may modify the Monitoring and Reporting Program to cover only constituents of concern (TPH and BTEX must continue to be monitored in all cases). If

- the ground water extraction and/or treatment system(s) described in the application for proposed discharge and certification report is modified, the schedule of monitoring specified in Part B, Table 1, of the Monitoring and Reporting Program will be reviewed for possible modification.
9. This Board Order may be modified by the Regional Board prior to the expiration date to include effluent or receiving water limitations for toxic constituents determined to be present in significant amounts in discharges regulated by this general permit (through the comprehensive monitoring program included as part of this Order).
 10. Dischargers shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated October 1990 which are part of this Order, except Items A.10, B.2, B.3, C.8 and C.11. Item C.10(b)(c) shall be modified by substituting instantaneous maximum for maximum daily.
 11. Upon receipt of the Regional Board's Executive Officer's discharge authorization letter, the discharger(s) shall comply with all conditions and limitations of this Order and the discharge authorization letter. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit or authorization letter termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.
 12. The EPA Administrator may request the Regional Board's Executive Officer to require any discharger authorized to discharge waste by the general permit to subsequently apply for and obtain an individual NPDES permit. The Regional Board's Executive Officer may require any discharger, authorized to discharge waste by a general permit to subsequently apply for and obtain an individual NPDES permit. An interested person may petition the Regional Board's Executive Officer or the Regional Administrator to take action under this provision. Cases where an individual NPDES permit may be required include the following:
 - a. The discharger is not in compliance with the conditions of this Order or the discharge authorization letter from the Executive Officer;
 - b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
 - c. Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;
 - d. A water quality control plan containing requirements applicable to such point sources is approved; or
 - e. The requirements of 40 CFR 122.28(a) are not met.
 13. Unless otherwise revoked this Board Order expires five years from the date of adoption. It will be administratively updated at that time barring unforeseen complications. Dischargers must file an application for proposed discharge and a certification report as described in Provision

D.2. not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

14. This Board Order shall serve as a general National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act and amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Philip A. Gruenberg, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 13, 1992.



Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. 92-010

FOR DISCHARGES OF EXTRACTED AND TREATED GROUND WATER
RESULTING FROM THE CLEANUP OF GROUND WATER
POLLUTED BY FUEL LEAKS AND OTHER RELATED WASTES
FROM FUEL STORAGE AND DISPENSING FACILITIES

I. DESCRIPTION OF SAMPLING STATIONS

<u>Station</u>	<u>Description</u>
A. INFLUENT	
I-1	At a point after ground water extraction and immediately prior to treatment.
B. EFFLUENT	
E-1	At a point after full treatment but before it joins or is diluted by any other waste stream, substance or body of water.
C. RECEIVING WATERS	
R-1	At a point approximately 50 feet downstream from the point of discharge into the receiving water.
R-2	At a point approximately 50 feet upstream from the point of discharge into the receiving water.

II. START-UP PHASE AND REPORTING

- A. The discharger shall inform the Regional Board in writing concerning the location of all sampling stations for the above monitoring as well as the date of start-up at least one week before start-up begins.
- B. During the original start-up for the treatment system, sampling of the effluent must be performed on the first and fifth day. On the first day of the original start-up, the system shall be allowed to run until at least three well volumes are removed and until three consecutive readings for pH, conductivity and temperature are within five percent of each other. Then the influent and effluent shall be sampled and submitted for analyses. All of this initially discharged effluent shall be discharged into a holding tank or sanitary sewer (not to the receiving water) until the results of the analyses (including the toxicity test) show the discharge to be within the effluent limits established in this Board Order and/or in the authorization letter.

If the first day's sampling shows compliance, the treatment system shall be operated for a total of five days with the discharge to the

storm sewer or other conveyance system leading to the receiving water, and be sampled again. While the fifth day's samples are being analyzed, the effluent may be discharged to the receiving water as long as the analyses are received within 48 hours of sampling, and then, continue to be discharged to the receiving water if the analyses show compliance. If the treatment system is shut down more than 48 hours during the original start-up (awaiting results of the analyses, etc.), the original start-up procedures and sampling must be repeated.

A report on the start-up phase shall be submitted to the Regional Board that presents the results of the laboratory analysis, flow rates, chain of custody forms, and describes any changes or modifications to the treatment system. This report shall be submitted to the Regional Board no more than fifteen days after the end of the start-up phase.

III. ADDITIONAL REPORTING REQUIREMENTS

- A. Dischargers shall notify the Regional Board within one day if the self-monitoring program results exceed effluent limitations, or if any activity has occurred or will occur that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order. If a violation of instantaneous maximum limits should occur (and be confirmed), the discharge shall be directed to a holding tank and contained, or the extraction and treatment system shall be shut down. The content of the holding tank shall be re-treated until the re-treated effluent is in compliance, or be disposed in accordance with the provisions of Chapter 15, Title 23, California Code of Regulations.

If the treatment system is shut down for more than 120 consecutive hours after the start-up period (maintenance, repair, violations, etc.) the reason(s) for shut-down, proposed corrective action(s), and estimated start-up date shall be orally reported to the Regional Board within five days of shut-down and a written submission shall also be provided within 15 days of shut-down.

If feasible, the corrective action(s) taken and the proposed start-up procedures shall be reported to the Regional Board at least 15 days before start-up.

- B. A report describing the need, method of chemical application and disposal shall be submitted to the Regional Board at least 30 days before the use of any chemicals in the treatment, or operation and maintenance of the treatment units, is to begin. This report shall include toxicity data. The Regional Board's Executive Officer must approve the use of any chemicals prior to the usage of any chemicals in the treatment, operation, and/or maintenance of the treatment units.
- C. Dischargers shall submit quarterly reports summarizing work accomplished toward ground water pollution clean-up. The Regional Board's Executive Officer may waive this requirement if adequate reporting to the local agency(ies) or the Regional Board is already being required. The quarterly reports shall include the following information:

1. The results of all investigations completed to date to determine the extent of soil and/or ground water and/or surface water pollution due to the release(s) of hazardous substance(s);
 2. The method of clean-up implemented to date and an assessment as to whether remedial action taken to date has been adequate and its degree of effectiveness;
 3. Ground water levels and chemical analyses results presented in tabular form for all on-site and off-site monitoring wells;
 4. Updated potentiometric surface maps for all effected water bearing zones, and updated maps and cross-sections depicting isoconcentration and isothickness contours;
 5. Description and schedule of any additional site work an/or modifications anticipated for the coming quarter; and
 6. The method and location of disposal of the released hazardous substance(s) and any polluted soils and/or ground water and/or surface water (indicate whether a hazardous waste manifest(s) is utilized).
- D. Dischargers shall report the total amount of separate phase fuel (free product) removed by the treatment system each month in gallons and the cumulative total amount of separate phase fuel removed to date.
- E. The daily status (e.g., personnel on site, in operation/on stand-by, shut down, standard observation results, etc.) of any treatment systems used to achieve compliance with this Order or associated discharge authorization letter from the Executive Officer shall be included in the Self-Monitoring Report submittal. The reason(s) for the treatment system being shut down shall also be included in this submittal.

IV. SCHEDULE OF SAMPLING AND ANALYSIS

See Table 1 (attached).

V. BIOASSAY REQUIREMENT

- A. The fish species to be used for compliance in the chronic toxicity test is the (Pimephales promelas) fathead minnow.

B. The discharger shall conduct chronic toxicity testing on the treated effluent as follows:

<u>Test</u>	<u>Units</u>	<u>Type of Samples</u>	<u>Minimum Frequency Test</u>
Chronic Toxicity	tu _c	8-Hr. Composite	Quarterly

The test given below shall be used to measure chronic toxicity:

Critical Life Stage Toxicity Test:

<u>Species</u>	<u>Effect</u>	<u>Test Duration (Days)</u>	<u>Reference</u>
fathead minnow (<u>Pimephales promelas</u>)	larval survival and growth rate	7	Horning & Weber, 1989

Toxicity Test Reference: Horning W.B. and C.I. Weber (eds). 1989 Short term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organism. Second edition. U.S. EPA Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. Epa/600/4-89/001.

Dilution and control waters should be obtained from an unaffected area of the receiving waters. Standard dilution water should be used if the above source exhibit toxicity greater than 1.0 tu_c. The sensitivity of the test organism to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

Chronic toxicity shall be expressed and reported as toxic units (tu_c) where:

$$tu_c = 100/NOEL$$

and the No Observed Effect Level (NOEL) is expressed as the maximum percent effluent or test water that causes no observed effect on a test organism, as determined in a critical life stage toxicity test (indicated above).

Table 1

EFFLUENT MONITORING

Treated ground water shall be monitored for the following constituents. All samples shall be taken between 6 a.m. and 6 p.m.

<u>Constituent</u>	<u>Type of Unit</u>	<u>Sampling Sample</u>	<u>Frequency</u>
Flow rate	gallons/day	continuous	continuous
pH	pH Units	grab	D for 5 days; M thereafter
Temperature	°C	grab	D for 5 days; M thereafter
Conductivity	μ mhos/cm @25°C	grab	D for 5 days; M thereafter
Total Dissolved Solids	mg/L	grab	D for 5 days; M thereafter
Dissolved Oxygen	mg/L	grab	D for 5 days; M thereafter
Toxicity	---	bioassay	quarterly for 1 yr; annually thereafter
EPA 601 and 602	μ g/L	grab	1st and 5th day; M for 1st quarter; Q for 1st year; A thereafter
Lead	μ g/L	grab	1st and 5th day; M for 1st quarter; Q for 1st year; A thereafter
Modified EPA 8015	μ g/L	grab	1st and 5th day; M for 1st quarter; Q for 1st year; A thereafter

Abbreviations:

D=daily
M=monthly
Q=quarterly
BA=biannually
A=annually

INFLUENT MONITORING

Extracted ground water shall be monitored for the following constituents immediately prior to treatment. All samples shall be taken between 6 a.m. and 6 p.m.

<u>Constituent</u>	<u>Type of Unit</u>	<u>Sampling Sample</u>	<u>Frequency</u>
Purgeable Halocarbons (EPA 601)	μ g/L	grab	once on first day; BA there- after
Purgeable Aromatics (EPA 602) for: Benzene Toluene Xylene(s)-total Ethylbenzene	μ g/L	grab	D for 5 days; M thereafter

RECEIVING WATER MONITORING

The receiving water (drain, river, etc.) shall be monitored for the following constituents. All samples shall be taken between 6 a.m. and 6 p.m. If, due to flow conditions, the samples can not be taken 50' upstream and 50' downstream from the point of discharge into the receiving waters, the exact location of the sample shall be noted.

<u>Constituent</u>	<u>Type of Unit</u>	<u>Sampling Sample</u>	<u>Frequency</u>
pH (field)	pH Units	grab	D for 5 days; M thereafter
Temperature (field)	°C	grab	D for 5 days; M thereafter
Total Dissolved Solids (lab)	μ mhos/cm	grab @25°C	D for 5 days; M thereafter

REPORTING

Quarterly, monthly, bi-weekly, weekly and daily monitoring reports shall be submitted to the Regional Board on a quarterly basis by January 15, April 15, July 15, and October 15 of each year. Biannual monitoring shall be submitted to the Regional Board on January 15, and July 15 of each year. Annual reports shall be submitted by January 15 of the following year.

Submit monitoring reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

ORDERED BY:

Philip A. Guenberg
Executive Officer

May 13, 1992

Date