CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6T-2004-0015
WDID NO. 6A099311007

WASTE DISCHARGE REQUIREMENTS
FOR

LAND DISPOSAL OF TREATED GROUND WATER

_____ Lahontan Region _____

The California Regional Water Quality Control Board, Lahontan Region (Board) finds:

1. Justification for the General Order

   Numerous unauthorized releases of petroleum product and chlorinated hydrocarbon pollutants have impacted ground waters of the Lahontan Region. Releases occur from leaking underground and aboveground fuel tanks and other unauthorized discharges.

   Several treatment technologies currently employed for remediation include the extraction and aboveground treatment of ground water. Where other means of disposal are not available or practical, treated water may be proposed for discharge to land. Since treated water discharges from cleanup sites are often similar in nature, it is appropriate to regulate these dischargers with general Waste Discharge Requirements (WDRs). This general WDR expedites the process for discharges resulting from site cleanups.

   The discharge of water from a ground water treatment unit to land is a discharge of waste that could affect the quality of the ground waters. This Order covers the discharge of treated ground water to land.

2. Permit History

   Waste Discharge Requirements (WDRs) Board Order No. 6-93-106 were adopted on November 19, 1993. The Permit was amended September 9, 1999 to reflect changes in groundwater detection limits and effluent/discharge limitations for total petroleum hydrocarbons, methyl tertiary-butyl ether (MTBE), and tertiary butyl alcohol (TBA).

3. Reason for Action

   Board Order No. 6-93-106 is being updated at this time to reflect changes in groundwater detection limits and effluent/discharge limitations for a number of constituents. Additionally, the monitoring and reporting program is being updated and streamlined.

4. California Environmental Quality Act Compliance

   This update results in minor changes to detection limits and discharge limitations based on current technology and drinking water standards. Regional Board staff has determined that this action is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, California Code of Regulations, Chapter 3, Section 15308 (actions by regulatory agencies for protection of the environment). This change will not result in any adverse impacts to ground waters of the State. For the adoption of the Waste Discharge Requirements, Board Order No. 6-93-106, the Regional Board certified a negative declaration on November 19, 1993.

5. Issuance of the General Order

The responsible party(ies) and property owner, or solely the property owner, are considered to be the "Discharger" for the purposes of this Order. A complete Attachment A, Notice of Intent (NOI) must be filed by the Discharger for each proposed discharge to be covered by this Order. The NOI must include the appropriate filing fee. Information necessary to support the application is listed in Attachment B, "Information to Support Discharge of Treated Ground Water to Land." This Order shall only apply to Dischargers to whom a Notice of Applicability (NOA) has been issued by the Executive Officer. A NOA must be issued for each proposed discharge.

6. Wastewater Description

The primary pollutants covered by this Order are petroleum product and chlorinated hydrocarbon constituents. Petroleum product constituents include total petroleum hydrocarbons (measured as gasoline, diesel, kerosene, aviation fuel, fuel oil and heavier ranges of fuels and oils); benzene; toluene; xylene; ethylbenzene; tetraethyl lead, and gasoline oxygenates such as MTBE or ethanol. Other additives may also be present. Chlorinated hydrocarbons include trichloroethene, tetrachloroethene and their secondary degradation products. A complete list of constituents covered by this Order are included in the Discharge Specifications section of this Order.

7. Method of Discharge

Treated wastewater may either be disposed of by subsurface infiltration, surface infiltration trenches or basins, evaporation and/or percolation ponds, land spreading, spray disposal, or through irrigation of landscaping. This Order does not cover injection of treated wastewater directly to the ground water aquifer or discharge to surface waters or municipal wastewater collection systems.

8. Water Quality Control Plan

The Regional Board adopted Water Quality Control Plan for the Lahontan Region (Basin Plan), on March 31, 1995. This Permit implements this Plan, as amended.

9. Beneficial Uses

The beneficial uses of ground waters within the Lahontan Region as designated in the Basin Plan are:

a. municipal and domestic supply
b. industrial service supply
c. agricultural supply
d. freshwater replenishment

These beneficial uses apply to all ground waters of the Region except where lesser beneficial uses are designated in the Basin Plan.

10. Established Water Quality Standards

SWRCB Resolution No. 68-16

SWRCB Resolution No. 68-16 is a part of the Basin Plan for the Lahontan Region and describes a nondegradation policy for the waters of the State. Man-made fuel and solvent constituents are not naturally occurring, and thus pre-existing background concentrations of these constituents are considered nondetectable (below current analytical laboratory detection limits) in waters of the Region.

Existing Best Practicable Treatment (BPT) for the treatment of organic constituents in polluted water is capable of reliably removing most man-made constituents to nondetectable levels. The commonly achieved detection limits for these constituents in treated water are as follows:

Constituent	**Detection Level**	**Units**	**Analytical Methods***
Total Petroleum Hydrocarbons ($C_2 – C_{15}$)	50	µg/l	EPA 8015
Total Petroleum Hydrocarbons (C_{16} - C_{46})	100	µg/l	EPA 8015
Benzene	0.1	µg/l	EPA 8260
Ethylbenzyne	0.5	µg/l	EPA 8260
Toluene	0.5	µg/l	EPA 8260
Xylene	0.5	µg/l	EPA 8260
Methyl tertiary-butyl ether (MTBE)	0.5	µg/l	EPA 8260
Tertiary butyl alcohol (TBA)	5.0	µg/l	EPA 8260
TAME	0.5	µg/l	EPA 8260
DIPE	0.5	µg/l	EPA 8260
ETBE	0.5	µg/l	EPA 8260
Naphthalene	0.5	µg/l	EPA 8271
Methanol	5.0	µg/l	EPA 8260A
Ethanol	5.0	µg/l	EPA 8260A
Total Lead	1.0	µg/	EPA 7000
Ethylene Dichloride (EDB)	0.02	µg/l	EPA 8011
1,2 Dichloroethane (1,2 DCA)	0.5	µg/l	EPA 8021
Trichloroethane (1,1,1 TCA)	0.5	µg/l	EPA 8021
Tetrachloroethene(PCE)	0.5	µg/l	EPA 8021
Trichloroethene (TCE)	0.5	µg/l	EPA 8021
Trans-1,2 Dichloroethene (Trans-1,2 DCE)	0.5	µg/l	EPA 8021
Cis-1,2 Dichloroethene (Cis-1,2 DCE)	0.5	µg/l	EPA 8021
1,1 Dichloroethene (1,1 DCE)	0.5	µg/l	EPA 8021
1,1 Dichloroethane (1,1 DCA)	0.5	µg/l	EPA 8021
1,1,2 Trichloroethane (1,1,2 TCA)	0.5	µg/l	EPA 8021
Vinyl Chloride	0.5	µg/l	EPA 8021

Alternative analytical methods that provide equivalent detection limits may be proposed in the Permit application or site specific Sampling and Analysis Plan.

Primary Drinking Water Standards

The State of California and/or the USEPA have set primary drinking water standards for the following hydrocarbon constituents as follows:

Constituent	Level	Units	Consideration
EDB	0.02	µg/l	Primary State of CA MCL
1,2 DCA	0.50	µg/l	Primary State of CA MCL
Benzene	1.0	µg/l	Primary State of CA MCL
Toluene	150	µg/l	Primary State of CA MCL
Xylenes	1750	µg/l	Primary State of CA MCL
Ethylbenzene	300	µg/l	Primary State of CA MCL
MTBE	13	µg/l	Primary State of CA MCL
TBA	12	µg/l	Primary State of CA MCL
Napthalene	170	µg/l	Primary State of CA MCL
Total Lead	15	µg/l	Primary State of CA MCL
PCE	5	µg/l	Primary State of CA MCL
TCE	5	µg/l	Primary State of CA MCL
1,1,1 TCA	200	µg/l	Primary State of CA MCL
trans-1,2 DCE	10	µg/l	Primary State of CA MCL
cis-1,2 DCE	6	µg/l	Primary State of CA MCL
1,1 DCE	6	µg/l	Primary State of CA MCL
1,1 DCA	5	µg/l	Primary State of CA MCL
1,1,2 TCA	32	µg/l	Primary State of CA MCL
Vinyl Chloride	0.5	ug/l	Primary State of CA MCL

Secondary Drinking Water Standards

The State of California has set secondary drinking water standards for taste and odor of all constituents at a maximum contaminant level of three threshold odor units (TOU), Section 64473, Title 22, of the California Code of Regulations. The Federal EPA has proposed secondary drinking water standards for a select group of constituents based on a three TOU concentration (Federal Register, Vol. 54, No. 97, pp. 22138, 22139). The following proposed secondary standards are lower than or equal to the primary drinking water standards set for these constituents by the State of California.

Constituent	Level	Units	Consideration
Total Petroleum Hydrocarbons (C_2-C_{15})	50	µg/l	Taste and Odor
Total Petroleum Hydrocarbons (C_{16}-C_{46})	100	µg/l	Taste and Odor
Toluene	42	µg/l	Taste and Odor
Ethylbenzene	29	µg/l	Taste and Odor
Total Xylenes	17	µg/l	Taste and Odor
MTBE	5	ug/l	Taste and Odor
Napthalene	21	ug/l	Taste and Odor
Methanol	740,000	ug/l	Taste and Odor
Ethanol	760,000	ug/l	Taste and Odor

EPA Health Advisory Levels

The USEPA has established Health Advisory levels for selected petroleum product constituents in ground water as follows:

Constituent	Level	Units	Consideration
Naphthalene	20	µg/l	Health Advisory
MTBE	35	µg/l	Health Advisory

11. Antidegradation Policy

The Regional Board has considered antidegradation pursuant to 40 CFR 131.12 and SWRCB Resolution No. 68-16 and finds that the subject discharges are consistent with the provisions of these policies. An antidegradation analysis is not necessary for this Permit. Discharges not consistent with the provisions of these policies and regulations are not covered by this general Permit.

12. Notification of Interested Parties

The Regional Board has notified the interested agencies and persons of its intent to prescribe WDRs in this general Order and has provided them with an opportunity for a public hearing and an opportunity to submit their written comments.

13. Consideration of Public Comments

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger shall comply with the following:

I. DISCHARGE SPECIFICATIONS

A. Effluent/Discharge Limitations

Numerical effluent limitations listed below include 30-day median and daily maximum values. Thirty-day median concentration limits listed below are based on what is achievable by Best Practicable Treatment (BPT). BPT for petroleum and chlorinated hydrocarbon constituents is capable of reliably treating to below laboratory detection limits. Daily maximum values are based on established water quality standards that are protective of beneficial uses of ground and surface waters of the Lahontan Region. Thirty-day median values are to be calculated based on the analytical results of samples obtained over 30 successive days ("running 30-day median"). A sufficient number of samples must be collected and analyzed to demonstrate compliance with the effluent limitations.

Discharge Specifications of this Permit list the 30-day median effluent limitations of specific constituents to be monitored are listed in the NOA issued to the Discharger. If the analytical results of effluent sampling indicate a detectable concentration of a constituent that is listed in the NOA, then sufficient samples must be collected and analyzed during the ensuing 30 days to demonstrate compliance with the 30-day median effluent limitations. The running 30-day median time frame shall begin the day the sample containing a detectable concentration was collected. Any detected concentration above a daily maximum value listed in this Permit is a violation of the Permit.

1. The discharge of an effluent in excess of the following limits is prohibited. All samples of effluent are to be single grab samples.

Constituents	Units	30-day Daily Median	Maximum
Total Petroleum Hydrocarbons (C_2-C_{46})	µg/l	<50	100
Benzene	µg/l	<0.50	1.0
Toluene	µg/l	<0.50	42.0
Ethylbenzene	µg/l	<0.50	29.0
Total Xylenes	µg/l	<0.50	17.0
Total Lead	µg/l	<1.0*	15.0
Naphthalene	µg/l	<0.5	20
MTBE	µg/l	<0.5	5
TBA	µg/l	<5.0	12
EDB	µg/l	<0.02	0.02
1,2 DCA	µg/l	<0.50	0.50
1,1,1 TCA	µg/l	<0.50	200
PCE	µg/l	<0.50	5.0
TCE	µg/l	<0.50	5.0
Trans-1,2 DCE	µg/l	<0.50	10
Cis-1,2 DCE	µg/l	<0.50	6
1,1 DCE	µg/l	<0.50	6
1,1 DCA	µg/l	<0.50	5
1,1,2 TCA	µg/l	<0.50	32
vinyl chloride	ug/l	<0.50	0.50

* This 30-day median limit could be set above 1.0 µg/l if the Discharger can demonstrate in the Permit Application that background Total Lead concentrations in the receiving water are greater than 1.0 µg/l. Any 30-day median limit allowed above 1.0 µg/l will be listed in the NOA. All samples for total lead are to be filtered samples.

2. The discharge shall not have a pH of less than 6.5 nor greater than 8.5.

B. Reclamation Requirements

All effluent made available for reclamation shall comply with standard Department of Health Services Reclamation Requirements as specified in Chapter 3, Division 4, Title 22 of the California Code of Regulations.

C. General Requirements and Discharge Prohibitions

1. All discharges covered by this Permit shall be limited to treated water from the investigation and remediation of identified or potential ground water pollution. This Permit shall apply only to discharges that meet the following conditions.

   a. The identified pollutants have effluent limitations prescribed in this general Permit;

   b. The treatment system is capable of reliably meeting all prescribed effluent limitations in this general Permit; and

   c. The general water quality of the discharge is of equal to or better water quality than that of the receiving water. General water quality is to be determined as part of the Permit application process.

2. There shall be no discharge, bypass, or diversion of polluted or partially treated water, sludge, grease, oils, purge water, development water, or pump test water from the collection, transport, or disposal facilities to adjacent land areas or surface waters.

3. The discharge shall not cause pollution as defined in Section 13050 of the California Water Code, or a threatened pollution.

4. Neither the treatment nor the discharge shall cause a nuisance as defined in Section 13050 of the California Water Code.

5. The discharge of treated wastewater except to the disposal point(s) authorized in the NOA is prohibited.

6. The discharge shall not cause erosion of sediments.

II. PROVISIONS

A. Discharge Prohibitions

Discharges regulated by this Order are hereby exempt from the Discharge Prohibitions described in the Basin Plan where the Basin Plan provides for such exemptions.

B. Standard Provisions

The Discharger shall comply with the "Standard Provisions for NPDES Permits," in Attachment "C," which is made part of this Permit.

C. Monitoring and Reporting

1. Pursuant to the California Water Code Section 13267(b), the Discharger shall comply with the Monitoring and Reporting Program No. 2004-0015 as specified by the Executive Officer.

2. The Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of the Monitoring and Reporting Program.

D. Applicability

1. Wastewater remediated by the treatment unit may typically be generated from the following sources during the investigation and/or remediation of ground water pollution:

   a. Ground water extracted from the underlying aquifer as part of the ground water remediation process.

   b. Potentially polluted ground water generated during aquifer pump tests.

   c. Potentially polluted well development water or purge water generated during ground water monitoring.

   d. Other waste water generated during site investigations or cleanups.

2. This Permit does not pre-empt or supersede the authority of other agencies to prohibit, restrict, or control the discharge of treated ground water.

3. When individual Waste Discharge Requirements are issued to a Discharger otherwise subject to this Permit, the applicability of this Permit to the Discharger is automatically terminated on the effective date of the individual Permit.

E. Definitions

"Waste" as used in this Order includes, but is not limited to, any waste or waste constituent as defined in Section 13050 of the California Water Code, or Section 2601, Article 10, Chapter 15, Title 23, of the California Code of Regulations.

F. Operation and Maintenance

The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Permit. Pollutant-free wastewater may include rainfall, ground water, surface water, cooling waters, and condensates.

G. Notifications and Modifications

1. The Discharger shall identify all active water supply wells within a ¼ mile radius of the proposed discharge site and notify well owners at least 30 days prior to the discharge. Prior to discharge, the Discharger shall submit a list to the Regional Board of all well owners notified.

2. At least 180 days prior to making any change in the method of treatment or other factors which may affect the quality of the discharge, discharge point (Outfall), place of use, purpose of use of the wastewater, the Discharger shall file a new RWD. Any change in the character of the influent shall be reported to the Regional Board within 48 hours.

3. 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 Permit by letter. A copy of this letter should be immediately forwarded to this office.

4. The Discharger shall notify the Regional Board within 30 days when the clean-up activities are complete or the discharge will no longer occur. At that time the Executive Officer will consider withdrawal of the NOA. Once the NOA is withdrawn, the discharge will no longer be covered by this Permit and no discharge may occur prior to compliance with provisions of the California Water Code.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an NPDES Permit adopted by the California Regional Water Quality Control Board, Lahontan Region, on May 12, 2004.

_____
HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: A. Notice of Intent (NOI)
B. Information to Support Discharge of Treated Ground Water to Land
C. Standard Provisions for Waste Discharge Requirements

BTW/cgT: WDR.GP.GW.update.proposed

ATTACHMENT "A"

LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF GENERAL ORDER NO. R6T-2004-0015
FOR
UPDATED WASTE DISCHARGE REQUIREMENTS FOR
LAND DISPOSAL OF TREATED GROUND WATER

This Notice of Intent, together with the site Workplan, is equivalent to a Report of Waste Discharge. The site Workplan is to include all the requirements of "Information to Support Discharge of Treated Groundwater to Land," Attachment B," at a minimum.

I. CONSULTANT/OPERATOR

–If additional owners/operators are involved, provide the information in a supplementary letter.

Name:			
Mailing Address:			
City:	State:	Zip:	Phone:
Contact Person:	Consultant_____ Operator_____ Consultant/Operator_____		
UST No. _____.	WDID No. _____		

II. PROPERTY OWNER

–If additional owners/operators are involved, provide the information in a supplementary letter.

Name:			
Mailing Address:			
City:	State:	Zip:	Phone:
Contact Person:			

III. BILLING ADDRESS:

Name:			
Mailing Address:			
City:	State:	Zip:	Phone:
Contact Person:			

IV. DISCHARGE LOCATION

–If more than one discharge is proposed, provide the information in a supplementary letter.

Street (including address, if any) _____

City/County _____

Nearest Cross Street(s) _____

Township/Range/Section T_____, R_____, Section_____, MDB&M

Attach a map of at least 1:2400 (1" = 2000') showing the discharge site. (eg. USGS 7.5' topographical map.)

A map shall also be provided that shows the treatment system, discharge point and surface waters. Wells and residences within 1,500 feet of the discharge site shall also be identified.

V. DISCHARGE INFORMATION

Please Identify type of discharge:

_____ Treated groundwater _____ Other (specify)

Start Date_____Stop Date_____(estimate) Discharge Rate_____MGD.

Is the discharge short term, intermittent, or seasonal? _____

Please provide a time schedule below.

_____

_____

_____

_____

VI. TREATMENT SYSTEM

Please Identify:

_____ Granular activated carbon _____ Air stripping

_____ Vapor extraction _____ Air sparging

_____ Chemical oxidation (describe) _____ _____ Bioreactor

_____ None (describe why a treatment system is not necessary)

_____ Other (please describe)_____

Provide a schematic drawing of the proposed treatment system and process, and describe pollutant removal mechanisms, and estimated effluent concentrations. Provide a residual waste disposal plan if residuals will occur.

VII. LAND DISPOSAL/RECLAMATION ANALYSIS

Regional Board policies prefer that wastewater discharges be disposed to land or beneficially re-used if practical. You must evaluate and fully consider at least 2 land disposal alternatives.

Describe land discharge options considered. Attach additional sheets if needed. Please list below any constraints that limit your ability to discharge to land. If land discharge is infeasible, state the basis for your determination.

Land Discharge Option	Environmental Constraints	Financial Constraints	Area or Access Constraints
Percolation trenches or basins			
Irrigation of landscaping			
Spray disposal			
Evaporation trenches or basins			
Subsurface infiltration			
Other similar disposal methods considered Describe below:			

Is land reclamation feasible? Yes _____ No _____

If no, explain below. If yes, you should contact the Regional Board.

_____

_____

_____

IX. PRIMARY POLLUTANTS/PARAMETERS LIKELY TO BE IN THE DISCHARGE

Please identify constituents of concern:

_____ Benzene	_____ TBA
_____ Toluene	_____ PCE/TCE/DCE/Vinyl Chloride
_____ Ethylbenzene	_____ Naphtalene
_____ Xylenes	_____ TPH gasoline
_____ MTBE	_____ TPH diesel
_____ TAME	_____ Other (please describe)

Have samples been collected? _____ Yes (attach results) _____ No

Are additives in the discharge? _____ Yes (describe and quantify) _____ No

If yes, please specify the additive and/or sample results

X. RECEIVING GROUNDWATER INFORMATION

Quality of receiving groundwater (attach recent data (sample and analyze or provide existing data within one year of permit application) for all priority pollutant/parameter constituents identified in Section IX above):

XI. PROFESSIONAL ENGINEER OR REGISTERED GEOLOGIST

If a Professional Engineer or Registered Geologist has helped you evaluate the proposed discharge for compliance with this General Order, please identify

Name:			
Mailing Address:			
City:	State:	Zip:	Phone:
Signature	Certificate No.		Date:

XII. SITE WORKPLAN

Is the Site Workplan attached? ☐ Yes ☐ No

XIII. FEES

A check payable to the State Water Resources Control Board in the amount of $4,251 ($3,900 for category 2C discharge plus a 9% ambient water monitoring surcharge or appropriate current fee) must be submitted to the Regional Board.

XVII. CERTIFICATION

I hereby certify under penalty of perjury that the information provided in this application and in any attachments is true and accurate to the best of my knowledge. By signing this NOI, I agree to comply with the monitoring and reporting program and stop the discharge if there is any violation, or threatened violation, of the General Permit.

Signature of Contractor/Operator:		Signature of Property Owner:	
Print or Type Name:		Print or Type Name:	
Title:	Date:	Title:	Date:

BTW/cgT: WDR.GP.TreatedGW.NOI.Attachment A

ATTACHMENT "B"

INFORMATION TO SUPPORT DISCHARGE OF TREATED GROUNDWATER TO LAND

This guidance document outlines the minimum information required by the California Regional Water Quality Control Board, Lahontan Region, prior to considering issuance of a Notice of Applicability for general waste discharge requirements for the discharge of treated ground water to land. In addition to the information outlined in this document, a completed Notice of Intent (Attachment A) and filing fee must also be submitted.

Discharges to land regulated by the general Order include the following:

1. percolation trenches or basins
2. irrigation of landscaping
3. spray disposal
4. evaporation trenches or basins
5. subsurface infiltration
6. other similar discharges

A. Background Information

A basic description of the proposed discharge must be provided to allow staff to determine if a general permit is applicable to the proposed discharge. This information generally includes:

1. Identification of the source of pollutants (source areas), the potential seasonal variations in the concentrations of pollutants and flow rates, and a general description of the proposed treatment and disposal systems.

2. Locations of all recharge areas (e.g. ephemeral stream channels, percolation ponds, subsurface sewage disposal systems, irrigated agriculture, etc.) within one mile of the facility.

3. Identification of all piezometers and all wells, including monitoring, extraction, injections and supply wells, onsite and offsite within one mile of the site or within an area that may potentially be influenced by the discharge.

4. Property boundaries.

5. Buildings, dwellings, and other significant structures.

6. Map(s) of the site which depicts the locations of all surface features identified above, including the process and source areas, the points of discharge and the extraction, treatment and disposal facilities.

7. Documentation of compliance with all necessary local and state permits.

B. Chemical and Physical Wastewater Characteristics

A chemical and physical evaluation of the wastewater is needed to allow staff to assess the need for discharge standards and monitoring, and to evaluate the potential for impacts on

water quality. The specifics of the characterization varies with the type of wastes being discharged. The following are minimum requirements for ground water cleanup discharges:

1. A minimum of one of each of the following analyses of the wastewater:

    a. Chlorinated volatile hydrocarbons (EPA Method 8021 or equivalent).

    b. Aromatic volatile hydrocarbons (EPA Method 8260 or equivalent).

    c. Total petroleum hydrocarbons (TPH) in the gasoline and diesel ranges (EPA Method 8015 or equivalent). Additional or alternative TPH analyses may be required if the suspected pollutants contain hydrocarbon fractions outside the range of these tests.

    d. General or standard minerals analyses, including but not limited to, total dissolved solid (TDS), chloride, sulfate, nitrate, electrical conductivity (EC), pH and temperature.

    e. Other analyses associated with specific types of waste streams.

C. Wastewater Treatment System and Characteristics

A description of the treatment facility is needed to assure that all waste streams are accounted for, and to aid in design of the monitoring program.

1. A detailed narrative description and schematic presentation of the proposed treatment system, including all processes.

2. Descriptions of the nature and concentration of any chemical additive used for treatment must be included. If the proposed treatment system uses activated carbon, submit an estimate of the breakthrough time for each carbon treatment unit. If the operations and maintenance included backflushing, or other required treatment for maintenance, then a full description of any discharges associated with these procedures must be included.

3. An estimate of the average, maximum and any variation in flows, as well as the design flows (hydraulic and treatment) for the treatment system. All necessary sizing calculations to accommodate the treatment volume must be included.

4. An operation plan describing general operations, maintenance procedures and process controls. Information on the provisions for stand-by power must be provided.

5. A description of the proposed performance-monitoring system utilized to determine that the treatment and disposal system is in compliance with Waste Discharge Requirements.

6. A spill plan including the preventive and contingency measures for controlling accidental discharges and for minimizing the effect of such an event.

7. Information required to assess protection of the facility from floods and frost.

8. A narrative and schematic description of the proposed extraction system. A discussion of the number, location and pumping rates of the extraction wells.

D. Disposal Analysis

The disposal analysis usually contains the following:

1. An evaluation of land disposal options for the purpose of screening feasible disposal alternatives. Land disposal alternatives to be evaluated include those listed on page 1 of this document. An evaluation of the environmental and financial constraints for each alternative must be provided. The proposed disposal system may consist of two or more disposal alternatives.

2. A narrative and schematic description of each of the proposed alternatives in the disposal system. Identification of whether disposal occurs on a seasonal basis. Information on the type and size of the disposal alternative(s). Provide design details, including flows, for each disposal alternative.

3. A water mass balance for each land disposal alternative must be provided to assure that sufficient disposal capacity is available at all times under all weather and operational conditions.

4. A discussion on the potential hydraulic and other impacts of the selected wastewater disposal alternative(s) on the migration and capture of the plume.

5. If treated water is to be used for irrigation, property owner, type and permeability of the soils, estimated quantities based on consumptive use, method of application, surface runoff controls and irrigation season must be identified. Institutional arrangements for control of land must also be identified.

6. If ponds are used for the disposal of the treated wastewater, information on the freeboard and structural integrity and estimates of infiltration and evaporation must be provided.

E. Site Hydrogeology and Characterization of Pollution

1. Depth to ground water, including seasonal variations.

2. Direction and gradient of ground water flow.

3. Locations of any known geologic features (e.g. aquitards, subterranean channels, faults, etc.) which could affect pollution migration.

4. Information on the locations, construction, design and analytical results from monitoring wells used to define the lateral and vertical extent of the plume and wells used to monitor the effectiveness of the cleanup.

5. Aquifer characteristics (e.g. hydraulic conductivity, porosity, etc.) determined from a sufficient number of locations by aquifer tests, soil borings, geophysics, etc.

6. Ground water modeling results including calculations and results for extraction system spacing, pumping/collection rates, injection system spacings and injection/infiltrations rates.

7. Location, construction and design details of extraction and injection systems (drilling methods, well designs, trench designs, etc.)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING PROGRAM NO. R6T-2004-0015

GENERAL ORDER FOR LAND DISPOSAL OF TREATED GROUND WATER, LAHONTAN REGION

I. MONITORING

The Information to Support Discharge of Treated Ground Water to Land requires the submittal of laboratory analytical data from ground water samples collected from ground water monitoring wells within the ground water pollution plume. Based on these analysis, the complete Report of Waste Discharge (RWD) shall indicate all constituents of concern (COCs) that will be treated by the ground water treatment system.

The following Influent, Effluent, and Receiving Water Monitoring schedules detail sampling frequency. Constituents to be analyzed will be listed in the Notice Of Applicability (NOA). The frequency of sampling or number of parameters analyzed may be reduced if the Discharger provides justification to the Executive Officer that such a reduction is warranted. Under certain adverse conditions, more frequent sampling is required if it is appropriate. An adverse condition is defined as any problem which does or could affect treatment facility efficiency. If at any time the system is shut down for a continuous time period greater than 60 days, the following influent and effluent monitoring programs must be reinitiated unless otherwise specifically approved by the Executive Officer.

A. Treatment Facility Startup Monitoring

Prior to disposal of any treatment plant effluent, the Discharger shall conduct startup monitoring to confirm that the plant will produce effluent that complies with standards prescribed in the Waste Discharge Requirements (WDRs). During startup monitoring, the Discharger shall direct the effluent to a temporary, impervious storage container. Startup monitoring shall be conducted until two consistent, consecutive sample results indicate system stability and compliance with the Order. Samples shall be taken a minimum of twelve hours apart and a maximum of 72 hours apart. Only treatment plant effluent is required to be analyzed during startup monitoring. Effluent that does not meet the Discharge Specifications for effluent shall not be discharged to land.

B. Treatment Facility Flow Monitoring

The following information shall be recorded in a permanent log book:

1. The total volume, in gallons, of wastewater flow to the treatment facility for each day.

2. The total volume, in gallons, of wastewater flow to the treatment facility for each month.

3. The average flow rate, in gallons per day, of wastewater to the treatment facility calculated for each month.

4. The total volume, in gallons, of wastewater flow to the disposal facility(ies) for each month.

5. If applicable, the freeboard (distance from the top of the lowest part of the dike to the wastewater surface in the pond) shall be measured each month in each pond. If a pond does not contain wastewater, indicate that it is empty.

6. The treatment system non-operation time in hours of each non-operation period and in total hours of non-operation during the reporting period.

II. TREATMENT FACILITY INFLUENT MONITORING

The purpose of the influent monitoring is to verify the efficiency of the treatment system. Influent samples shall be collected after the last connection before the waste enters the treatment process. Influent samples should be representative of the volume and nature of the influent. Time of collection of a grab sample shall be recorded. Specific constituents to be monitored shall be named in the NOA.

The minimum frequency of sampling shall be as follows:

A. During the first two months of treatment operation, samples shall be collected on the 1st, 4th, 14th, 28th, and 56th days of operation.

B. During the third to sixth month, the sampling shall be every 30 days.

C. Thereafter, the sampling frequency shall be every 90 days.

III. TREATMENT FACILITY EFFLUENT MONITORING

Effluent samples shall be collected after the last connection through which wastes can be admitted into the discharge. Effluent samples should be representative of the volume and nature of the discharge. Time of collection of a grab sample shall be recorded. The sampling parameters and frequency shall be the same as described in Item II, above.

IV. RECEIVING WATER MONITORING

The complete RWD shall demonstrate the existing ground water quality in the area of the proposed wastewater disposal location(s), and shall include a list of proposed ground water monitoring wells to be sampled during the project.

These wells shall be located so as to monitor both the hydrologic and ground water quality impacts of the Discharge. An approved list of monitoring wells will be listed in the NOA. Constituents and parameters to be analyzed in ground water samples will be listed in the NOA. Sampling frequency shall be outlined in the NOA.

V. REPORTING

A. General Provisions

The Discharger shall comply with the "General Provisions for Monitoring and Reporting", dated September 1, 1994, which is made part of this Monitoring and Reporting Program (Attachment 1).

B. Submittal Periods

Quarterly monitoring reports shall be submitted to the Regional Board by the fifteenth (15th) day of January, April, July and October of each year. These reports shall contain the following information in addition to what is required in the General Provisions for Monitoring and Reporting.

a. All water quality monitoring data from the previous three month period.

b. A map or aerial photograph showing the locations of monitoring wells in the receiving water monitoring program.

c. Ground water elevations for all wells utilized in the receiving water monitoring program.

C. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly the compliance with WDRs. The Discharger shall report all periods of non-operation.

D. The Discharger shall submit a report to the Regional Board by the thirtieth (30) of January of each year. The report shall contain both tabular and graphical

summaries of the monitoring data obtained during the previous year. In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the WDRs. This report may be combined with the fourth quarterly report or submitted under separate cover.

E. The Discharger shall implement the above monitoring program immediately upon the commencement of the initial discharge covered by the general Order. This Monitoring and Reporting Program may be modified by the Executive Officer for individual discharges.

Ordered by:_____ Dated: _____

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments: 1. General Provisions for Monitoring and Reporting

BTW/cgT: GenPermit.MRP.Treated Groundwater.update.2004