

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2003-0044

GENERAL ORDER FOR LAND DISPOSAL
OF GROUNDWATER OR SURFACE WATER FROM CLEANUP
OF
PETROLEUM POLLUTION

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

1. California Water Code Section 13263(i) authorizes the Regional Board to prescribe general waste discharge requirements for a category of discharges if all the following criteria apply to the discharges in the category:
 - a. The discharges are produced by the same or similar operations.
 - b. The discharges involve the same or similar types of waste.
 - c. The discharges require the same or similar treatment standards.
 - d. The discharges are more appropriately regulated under general discharge requirements than individual discharge requirements.
2. It is appropriate to prescribe general waste discharge requirements for the discharge to land for disposal of groundwater or surface water produced during investigation and cleanup of waters polluted with petroleum constituents.
3. This Order serves as general Waste Discharge Requirements for the discharge to land for disposal of groundwater or surface water produced during the investigation and cleanup of waters polluted with petroleum constituents. As of the date of this Order, known primary constituents in petroleum products include, but are not limited to, Total Petroleum Hydrocarbons found in gasoline, diesel, light and heavy heating oils, and motor oil; benzene; toluene; ethylbenzene; xylene; naphthalene; polynuclear aromatic hydrocarbons (PAHs); ethylene dichloride; ethylene dibromide; fuel oxygenates that include methyl tertiary-butyl ether (MtBE), tertiary-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), ethanol and methanol; and organic lead.
4. In time, other oxygenate compounds, other additives, or problematic components of fuels may become evident in groundwater or surface water. Effluent limitations have not yet been developed for all of these constituents. In the event that such limitations are developed, this Order may be reopened and the effluent limitations included in this Order for those compounds. If this Order is reopened and new and/or more stringent effluent limits are imposed, a phase-in period may be allowed for existing dischargers to adjust their treatment processes.

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5. Petroleum constituents discharged into groundwater at various sites throughout the Region adversely impact beneficial uses or pose a threat to existing and potential beneficial uses of groundwater. The constituents are undergoing remediation with oversight from this Regional Board. Remediation of the impacted groundwater includes groundwater extraction with treatment and subsequent discharge of the treated groundwater to land. Occasionally groundwater with petroleum fuel pollution enters a surface watercourse or surface drainage. Cleanup of such a discharge to surface waters may require the discharge of treated water to land.
6. Refined Stoddard Solvent (non-halogenated) is a petroleum distillate that, because of its chemical properties, may be covered by this Order.
7. Discharge of ground or surface water that contained pesticides (including herbicides and insecticides), halogenated solvents and petroleum constituents commingled with pesticides (except as noted in Part C) are not covered by this Order. If the ground or surface water contains constituents not addressed in this Order, the discharger must submit a report of waste discharge for an individual waste discharge requirement.
8. The information in the attached Information Sheet was considered in developing the Findings of this Order and is a part of this Order by reference.
9. On 22 November 1991, the Regional Board adopted General Order No. 91-25000 establishing waste discharge requirements for discharge to land of treated groundwater from cleanup of petroleum fuel. Order No. 91-25000 is not current with all types of fuel compounds and cleanup technologies and must be updated.
10. Wastewater generated from investigation and cleanup of groundwater with fuel pollution includes, but is not limited to, the following:
 - a. groundwater that has been polluted by petroleum constituents,
 - b. unpolluted groundwater pumped from beneath a layer of free product in order to establish a cone of depression to aid in the containment and extraction of the free product,
 - c. groundwater extracted during short- and long-term pump tests,
 - d. well development water,
 - e. purge water extracted prior to well sampling, and
 - f. groundwater released due to failure of treatment system.

These wastewaters may be produced, stored, and treated on a continuous or batch basis.

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11. Treated wastewater may either be disposed of by subsurface injection, subsurface infiltration, surface infiltration, evaporation, land spreading, spray disposal, reclaimed through irrigation of landscape or selected crops, or industrial processes.
12. The discharge of wastewater from a treatment system, other than to a community sanitary waste collection system, is a discharge of waste that could affect the quality of the waters of the State. Requirements must be prescribed for any discharge of waste that may affect the quality of the waters of the State, in accordance with California Water Code Section 13263.
13. A separate Notice of Intent must be filed for each discharge intended for coverage under this Order. The Notice of Intent shall consist of the Report of Waste Discharge, filing fee and, at a minimum, the contents detailed in **Attachment A**, entitled "Application Requirements".
14. The combined category of discharges covered by this Order have a Threat to Water Quality (TTWQ) and Complexity (CPLX) of 3B as defined in Title 23 California Code of Regulations (CCR) Division 3, Chapter 9, Section 2200 (CCR). Discharges with a category TTWQ of "3" are those discharges of waste that could degrade water quality without violating water quality objectives, or cause a minor impairment of designated beneficial uses. Discharges that use physical, chemical, or biological treatment systems have a CPLX category of "B".
15. Authorization to discharge will only be extended to persons who have filed the requisite Notice of Intent and have in their possession a "Notification of Applicability" from the Executive Officer. For purposes of this Order, those persons are "Dischargers" as used herein.
16. Best Practicable Treatment and Control technology includes, but is not limited to, air stripping and/or activated carbon and other processes capable of dependably removing petroleum fuel constituents to concentrations that are non-detectable by current analytical technology. Biotreatment, UV/Ozone, ion exchange resins, and other treatment technologies may be proposed, but if utilized must achieve the same treatment standard.
17. The current acceptable analytical methods are as follows:

Constituent	Units	Analytical ** Method
Total Petroleum Hydrocarbons Gasoline, Diesel, and Fuel Oil	µg/l	EPA Method 8015B/5030 & 8015B/3510 & 8260B
Benzene	µg/l	EPA Method 8021B/8260B

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Constituent	Units	Analytical ** Method
Toluene	µg/l	EPA Method 8021B/8260B
Ethylbenzene	µg/l	EPA Method 8021B/8260B
Xylene, Total	µg/l	EPA Method 8021B/8260B
MtBE (Methyl tert-Butyl Ether)	µg/l	EPA Method 8021B/8260B
Organic lead (as total lead)	µg/l	EPA Method 1639/200.9
Methanol	µg/l	EPA Method 8260B
Ethanol	µg/l	EPA Method 8260B
Tertiary Butyl Alcohol (TBA)	µg/l	EPA Method 8260B
Di-isopropyl Ether (DIPE)	µg/l	EPA Method 8260B
Ethyl Tertiary Butyl Ether (ETBE)	µg/l	EPA Method 8260B
Tertiary Amyl Methyl Ether (TAME)	µg/l	EPA Method 8260B
1,2,-Dichloroethane (1,2-DCA)	µg/l	EPA Method 8260B
1,2 Dibromoethane (EDB)	µg/l	EPA Method 8260B
Polynuclear Aromatics (PNAs)	µg/l	EPA Method 8310

** Non-proprietary, performance based analytical methods may be used with approval of Regional Board staff.

18. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* and a *Water Quality Control Plan, Second Edition, for the Tulare Lake Basin* (hereafter Basin Plans). The Basin Plans designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve water quality objectives for all waters of the Basins. These requirements implement the Basin Plans.

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19. Designated beneficial uses of groundwater within the Central Valley Region are municipal, industrial, and agricultural supply, with other beneficial uses for specific groundwater basins specifically designated in the Basin Plans.
20. The Basin Plans contain water quality objectives established for the reasonable protection of designated beneficial uses or the prevention of nuisance.
21. The permitted discharge is consistent with State Water Resources Control Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California") that requires that the quality of the waters of the state be maintained unless: (a) some change in water quality is consistent with the maximum benefit to the people of the state, b) the discharge will not unreasonably affect beneficial uses or result in a violation of any applicable water quality objective, and c) the discharge will be required to meet waste discharge requirements that will result in the implementation of the best practicable treatment or control. This Order establishes requirements for the discharge of waste from the cleanup of petroleum fuel pollution in waters of the state that require treatment to non-detectable levels using specified detection limits. This Order requires application of best practicable treatment or control for the kinds of constituents addressed in this Order. Therefore, any change in water quality will be insignificant and non-detectable. In addition, this Order applies to cleanup of polluted water and such cleanups are consistent with the maximum benefit to the people of the state even if some degradation to the receiving water may occur. If the water to be treated cannot meet the requirements of this Order, the discharger must cease the discharge, implement other measures, change the method of disposal, or take other action. The discharger may be required to obtain individual waste discharge requirements.
22. In 1991, the Regional Board adopted General Order No. 91-25000 and a mitigated Negative Declaration in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.) and the State CEQA Guidelines.
23. The Regional Board's action to adopt this Order, which is a revised version of Order No. 91-25000, is categorically exempt from CEQA based on Title 14 CCR Section 15308, which exempts actions by regulatory agencies for the restoration and protection of the environment where the regulatory process involves procedures for protection of the environment. The Regional Board's action to regulate the clean up petroleum fuel pollution in surface waters or groundwaters, is a regulatory action that restores and protects the environment. The action involves procedures for the protection of the environment, such as discharge requirements that establish effluent limitations and monitoring. Application of this exemption is limited by the factors described in Title 14 CCR Section 15300.2, subsections (b), (c), (d), (e), and (f). Additional compliance with CEQA may be required for individual projects.
24. The Regional Board's action to adopt this order also is categorically exempt from CEQA based on Title 14 CCR Section 15330, which exempts minor hazardous waste or hazardous

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substances clean up actions. This exemption applies to minor clean up actions where treated groundwater and surface water will be disposed of to land. Application of this exemption is further limited by the factors described in Title 14 CCR Section 15300.2, subsections (b), (c), (d), (e), and (f). Additional compliance with CEQA may be required for individual projects.

25. The Regional Board has notified the interested agencies and persons of its intent to adopt general waste discharge requirements for the discharge of groundwater from the investigation and cleanup of petroleum fuel pollution and has provided them with an opportunity to submit their written comments and recommendations.
26. The Regional Board, in a public meeting, heard and considered all comments pertaining to this permit.

IT IS HEREBY ORDERED, General Order No. 91-25000 is rescinded and that Dischargers, in order to meet the provisions contained in Division 7 of the California Water Code, and regulations and guidelines adopted thereunder, shall comply with the following:

A. APPLICABILITY

1. The source of all discharges covered by this Order shall be limited to groundwater or surface water from the investigation and cleanup of petroleum (Findings No. 1 – 6 above).
2. Dischargers seeking coverage under this Order shall submit a complete Notice of Intent, including a Report of Waste Discharge (as detailed in Attachment A) along with an appropriate filing fee.
3. If the Executive Officer finds that the proposed discharge qualifies for coverage under this Order, the Discharger shall be issued a Notification of Applicability. If a proposed discharge does not qualify for this Order, or if significant public comments are received on the application, the proposed discharge may be considered for individual waste discharge requirements or for coverage under this Order at a meeting of the Regional Board.

B. DISCHARGE PROHIBITIONS

1. Discharge of material other than surface water or groundwater from the investigation and cleanup of petroleum fuel pollution, or discharge from the investigation of petroleum fuel pollution where the surface or ground water contains waste constituents not addressed by this Order, is prohibited.
2. The discharge of wastes, wastewater, or treated wastewater into any surface water or surface water drainage course is prohibited.

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3. Bypass or overflow of untreated or partially treated waste is prohibited.
4. The discharge shall not cause the degradation of any individual or municipal water supply.
5. The surfacing of treated/untreated wastewater resulting from subsurface disposal/treatment of petroleum polluted ground or surface water is prohibited.
6. Ponding/ponding of treated/untreated effluent on the ground surface in any location other than that approved by Regional Board staff is prohibited.
7. Runoff of water from the permitted discharge area is prohibited.
8. Creation of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code, is prohibited.
9. The export or discharge of wastes or wastewater into a separate groundwater area is prohibited.
10. The discharge of treated groundwater that has the potential to degrade the receiving groundwater quality, is prohibited.

C. EFFLUENT LIMITATIONS

1. The discharge of an effluent to land for disposal of ground and/or surface water from the cleanup of petroleum pollution must comply with the following limitations:

<u>Constituents</u>	<u>Daily Units</u>	<u>30-Day Median</u>	<u>Daily Maximum</u>
Total Petroleum Hydrocarbons (diesel, motor oil)	µg/l	<50	100
Total Petroleum Hydrocarbons (gasoline)	µg/l	<50	50
Benzene	µg/l	<0.5	0.5
Toluene	µg/l	<0.5	5.0
Ethylbenzene	µg/l	<0.5	5.0
Xylenes (total)	µg/l	<0.5	5.0

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<u>Constituents</u>	<u>Daily Units</u>	<u>30-Day Median</u>	<u>Daily Maximum</u>
Naphthalene	µg/l	<5.0	21
Carcinogenic PAHs*	µg/l	<0.5	<0.5
MtBE plus other ether oxygenates**	µg/l	<0.5	5
Tertiary Butyl Alcohol	µg/l	<5.0***	12***
Methanol	µg/l	<50	***
Ethanol	µg/l	<5.0	***
1,2-Dichloroethane (1,2-DCA)	µg/l	<0.5	<0.5
1,2-Dibromoethane (EDB)	µg/l	<0.5	<0.5
Lead	µg/l	2	2

* Polynuclear Aromatic Hydrocarbons; the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-c,d]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrochrysene, 2-nitrofluorene and chrysene.

** The limit applies to each individual oxygenate compound.

*** Due to current technological and economic dynamics for these constituents, site specific approval will be issued for these constituents. Limitations to be determined by Regional Board staff upon review of each submitted Report of Waste Discharge. Appropriate limitations will be set in the Executive Officer's "Notice of Applicability" letter.

Note: 1) Constituent quantitation (or reporting) limits are to be sufficient to identify a violation to the above listed effluent limits and/or those specified in the applicable "Notice of Applicability" issued by the Executive Officer.

2) All detection and quantitation limits must be reported with the analytical results.

3) Published literature for Total Petroleum Hydrocarbons as gasoline provides a taste and odor threshold of 5 µg/l which is applied to the narrative Taste and Odor objective of the Basin Plan, but detection is 50 µg/l and is controlling.

2. The discharge of lead must comply with the above listed limitation unless the Discharger can demonstrate that higher concentrations are a result of naturally occurring background concentrations contained in the source water being treated. Background concentrations may be defined by using the methodology described in Title 27 CCR Section 20415.
3. The discharge shall not have a pH of less than 6.5 nor greater than 8.5.
4. The discharge shall remain within the designated disposal area at all times.

D. SOLIDS DISPOSAL

Collected screenings, sludges, and other solids removed from the treated groundwater, or generated as the result of groundwater treatment, shall be disposed of in a manner that is

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consistent with Title 22 CCR Division 2, Subdivision 1 and Division 4.5 and approved by the Executive Officer.

E. PROVISIONS

1. Dischargers currently covered by Order 91-25000 are automatically covered under this Order. Coverage under Order No. R5-2003-0044 may be terminated after 180 days from the date of adoption of said Order, unless a new Notice of Applicability (NOA) has been approved by the Executive Officer.
2. The Discharger shall comply with the Monitoring and Reporting Program No. R5-2003-0044, in which is a part of this Order.
3. The Discharger shall comply with all applicable "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (Waste Discharge to Land from Cleanup of Petroleum Pollution)" included as an attachment of this Order.
4. The Discharger may be required to submit technical reports pursuant to California Water Code Section 13267 as directed by the Executive Officer. The technical reports required by this order and the attached "Monitoring and Reporting Program No. R5-2003-0044" are necessary to assure compliance with these waste discharge requirements. These monitoring reports are necessary because existing data and information about the site indicate that waste, petroleum fuel and/or fuel additives such as, but not limited to, benzene, toluene, ethylbenzene, xylene, and MtBE, have been discharged or are being discharged at the property, which is/was owned and/or the UST system operated, formerly owned and/or operated, or leased and/or operated by the Discharger(s) named.
5. 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 the Regional Board.
6. This Order does not pre-empt or supersede the authority of local agencies to prohibit, restrict, or control the discharge of groundwater or surface water cleanup wastewater subject to their control.
7. When individual waste discharge requirements are issued to a Discharger otherwise subject to this Order, the applicability of this Order to the Discharger is automatically terminated on the effective date of the individual Order.

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8. Title 23 CCR Sections 2729 and 2729.1 specify that underground tank owners and/or operators (individually or collectively the Responsible Party) or their agent submit analytical data electronically via the internet to the regulating agencies, using electronically deliverable formats (EDF) designated by the State Water Resources Control Board that are both non-proprietary and available as public domain. All EDF data must be submitted over the internet to the State Water Resources Control Board Geographic Environmental Information Management System database (Geotracker).
9. The Discharger shall notify the Regional Board when the cleanup activities covered by these requirements are complete, so that the Notice of Applicability may be withdrawn and the Discharger will no longer be covered by this Order or be responsible for payment of annual fees.

I, THOMAS R. PINKOS, 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, Central Valley Region, on 14 March 2003.

THOMAS R. PINKOS, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM
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The Discharger shall maintain water quality monitoring systems that are appropriate for detection and corrective action monitoring. Failure to comply with this Program constitutes non-compliance with the Waste Discharge Requirements and with the California Water Code, which can result in the imposition of civil monetary liability. Detection level requirements are noted in Ordered C.1 and acceptable analysis methods are described in Finding 17 of the Waste Discharge Requirements. Influent and effluent samples shall be taken concurrently to demonstrate the effectiveness of the treatment system.

The Discharger shall comply with the electronic data submittals required by Provisions E.8 of this Order for influent, effluent, routine and special monitoring, and grab sample analyses. The electronic data submittal is to occur within three working days of the hard copy document submittal.

INFLUENT MONITORING

Influent samples shall be collected after the last connection before the wastes enter 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. The following shall constitute the influent monitoring program:

<u>Constituents</u>	<u>Units</u>	<u>Sample</u>	<u>Frequency</u>
Total Petroleum Hydrocarbons (Gasoline, diesel, motor oil, etc., as applicable)	µg/l	Grab	Monthly
Benzene	µg/l	Grab	Monthly
Toluene	µg/l	Grab	Monthly
Ethylbenzene	µg/l	Grab	Monthly
Xylenes (total)	µg/l	Grab	Monthly
Methyl tertiary-Butyl Ether (MtBE)	µg/l	Grab	Monthly**
Lead (total)*	µg/l	Grab	Monthly
Lead (organic)	µg/l	Grab	Monthly
Methanol	µg/l	Grab	Monthly**
Ethanol	µg/l	Grab	Monthly**
Tertiary Butyl Alcohol (TBA)	µg/l	Grab	Monthly**
Di-isopropyl Ether (DIPE)	µg/l	Grab	Monthly**
Ethyl Tertiary Butyl Ether (ETBE)	µg/l	Grab	Monthly**
Tertiary Amyl Methyl Ether (TAME)	µg/l	Grab	Monthly**

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<u>Constituents</u>	<u>Units</u>	<u>Sample</u>	<u>Frequency</u>
1,2-Dichloroethane (1,2-DCA)	µg/l	Grab	Monthly**
1,2-Dibromoethane (EDB)	µg/l	Grab	Monthly**
Naphthalene	µg/l	Grab	Monthly**
Polynuclear Aromatic Hydrocarbons***	µg/l	Grab	Monthly**

* If lead is not detected in the first 2 sampling events, then testing may be discontinued thereafter, upon approval by Regional Board staff.

** Influent samples shall be taken in conjunction with effluent samples. If three consecutive monthly sampling events result in a constituent having a non-detectable concentration, at appropriate detection limits, and the constituent is not present in the groundwater, or surface water being treated, then the sampling frequency shall be reduced to annually for that constituent. Required detection limits are described in Ordered C.1 of this Order.

*** Polynuclear Aromatic Hydrocarbons; the sum of benzo[a]pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, dibenz[a,j]acridine, dibenz[a,h]acridine, 7H-dibenzo[c,g]carbazole, dibenzo[a,e]pyrene, dibenzo[a,h]pyrene, dibenzo[a,i]pyrene, dibenzo[a,l]pyrene, indeno[1,2,3-c,d]pyrene, 5-methylchrysene, 1-nitropyrene, 4-nitropyrene, 1,6-dinitropyrene, 1,8-dinitropyrene, 6-nitrocrysene, 2-nitrofluorene and chrysene.

EFFLUENT MONITORING

Effluent samples shall be collected downstream from 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 following shall constitute the effluent monitoring program:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
Flow	mgd	continuous	Monthly
Specific Conductivity	µmhos/cm	Grab	Monthly
pH	pH units	Grab	Monthly
Total Dissolved Solids	mg/l	Grab	Monthly
Total Petroleum Hydrocarbons (Gasoline, diesel, motor oil)	µg/l	Grab	Monthly**
Benzene	µg/l	Grab	Monthly**
Toluene	µg/l	Grab	Monthly**
Ethylbenzene	µg/l	Grab	Monthly**
Xylenes (total)	µg/l	Grab	Monthly**

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<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Frequency</u>
MtBE	µg/l	Grab	Monthly**
Lead (total)*	µg/l	Grab	Monthly**
Lead (organic)	µg/l	Grab	Monthly**
Methanol	µg/l	Grab	Monthly**
Ethanol	µg/l	Grab	Monthly**
Tertiary Butyl Alcohol (TBA)	µg/l	Grab	Monthly**
Di-isopropyl Ether (DIPE)	µg/l	Grab	Monthly**
Ethyl Tertiary Butyl Ether (ETBE)	µg/l	Grab	Monthly**
Tertiary Amyl Methyl Ether (TAME)	µg/l	Grab	Monthly**
1,2-Dichloroethane (1,2-DCA)	µg/l	Grab	Monthly**
1,2-Dibromoethane (EDB)	µg/l	Grab	Monthly**
Naphthalene	µg/l	Grab	Monthly**
Polynuclear Aromatic Hydrocarbons	µg/l	Grab	Monthly**

* If lead is not detected in the first 2 sampling events, then testing may be discontinued thereafter, upon approval by Regional Board staff.

** 1) Analyses shall be conducted weekly for four consecutive weeks following initial discharge from the treatment system. 2) If any sample shows detectable TPH, benzene, toluene, ethylbenzene, xylenes, Naphthalene, 1,2-Dichloroethane, 1,2-Dibromoethane, Polynuclear Aromatic Hydrocarbons, MtBE or other oxygenates, the Discharger shall immediately evaluate the treatment system, resample within three days of laboratory notification and reanalyze the effluent for the detected constituent(s), and shall continue sampling the effluent on a weekly basis until the constituent(s) concentrations are below permitted levels. Once four consecutive weeks are below permitted levels, monthly sampling may be initiated. 3) If a detectable concentration is determined to be present in wastewater, the frequency will revert back to weekly. 4) If a constituent is not present in the influent sample, then the testing for that constituent may be discontinued, upon approval by Regional Board staff, until detected in the influent. Appropriate quantitation (or reporting) limits are described in Part C.1 of this Order.

GROUNDWATER MONITORING

The groundwater monitoring program submitted with the Report of Waste Discharge and approved by the Executive Officer, shall constitute the groundwater monitoring program.

Prior to construction, plans and specifications for groundwater monitoring wells and/or extraction wells shall be submitted to the Regional Board staff for review and approval.

Quarterly reports are required in Section 2652(d) of the Underground Tank Regulation, Chapter 16, Division 3, Title 23, of the California Code of Regulations. Recommended reporting formats are included in the Tri-Regional Recommendations and Appendix A. Groundwater monitoring results,

volumes of extracted groundwater and product, gradient maps, remediation system operational information, and recommendations/conclusions must be included. All monthly information obtained during the calendar quarter is to be included in the respective quarterly report.

REPORTING

Annually, by **30 January**, the Discharger shall submit to the Regional Board a report evaluating the effectiveness and progress of the groundwater cleanup, including at a minimum: both tabular and graphical summaries of the monitoring data obtained during the previous year; trends in the concentrations of the pollutants in groundwater monitoring wells; whether the contaminant plume is being captured by the extraction system or is continuing to spread; plans for improvements to the groundwater monitoring, extraction or treatment system; status of any other cleanup activities such as soil excavation or soil venting systems; and the anticipated date for completion of cleanup activities. The annual report shall also include the reasons for and durations of all interruptions in the operation of the treatment systems.

Quarterly monitoring reports shall be submitted to the Regional Board by the 30th day of the month following the end of the calendar quarter.

In reporting the monitoring data, the Discharger shall arrange the data in tabular format 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 Waste Discharge Requirements. Monitoring Reports will also include an evaluation of the ground water cleanup progress, trends, monitoring well analyses and plume containment. If this evaluation is already submitted to the Regional Board in a separate groundwater monitoring report, then the Discharger may reference the date and title of the most recent report in lieu of including it with the monitoring report required under this Order. 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 Waste Discharge Requirements.

The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported to the Regional Board.

The results of all monitoring done shall report:

1. a concentration, if the result is above the analytical quantitation limit,
2. "trace", if the result is below the analytical quantitation limit but above the detection limit,
3. "ND", if the result is below the detection limit, and
4. a discussion regarding all peaks displayed, whether a fuel petroleum fuel component or not.

(Note: The detection limit is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the true value is greater than zero. The quantitation limit is the lowest level that can be reliably achieved within the specific limits of precision and accuracy during routine laboratory operating conditions.)

The Discharger shall implement the above monitoring program immediately upon the

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GENERAL ORDER FOR LAND DISPOSAL
OF GROUNDWATER OR SURFACE WATER
FROM CLEANUP OF PETROLEUM FUEL POLLUTION

commencement of the initial discharge covered by this Order.

This Monitoring and Reporting Program may be modified by the Executive Officer for individual discharges.

Ordered by:

THOMAS R. PINKOS, Executive Officer

(Date)