

## Los Angeles Regional Water Quality Control Board

February 6, 2015

Mr. Stuart Strum, Environmental Protection Specialist  
Defense Logistics Agency –Energy  
3171 N. Gaffey Street  
San Pedro, CA 90731

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR ONSITE TREATMENT OF CONTAMINATED SOIL – DEFENSE FUEL SUPPORT POINT NORWALK, 15306 NORWALK BOULEVARD, NORWALK, CALIFORNIA (FILE NO. 90-60-145, ORDER NO. 90-148, CI-10118, GEOTRACKER GLOBAL ID. SLT43185183)**

Dear Mr. Strum:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is in receipt of the following documents:

1. *Submission of Application to Conduct Land Treatment of Soils, Defense Fuel Support Point Norwalk*, transmitting an Application/Report of Waste Discharge (Form 200), dated October 2, 2014;
2. *Soil Management Plan: Treatment Cell Operation and Site Excavation, Defense Fuel Support Point*, dated November 5, 2014;
3. *Addendum to Soil Remediation Action Plan, Defense Fuel Support Point Norwalk*, dated December 10, 2014; and
4. *Request for Confirmation Sample Frequency Modification for Treated Soil at the Defense Fuel Support Point Norwalk*, date January 16, 2015.

These documents are collectively referred to as a Report of Waste Discharge (ROWD), which has been prepared by the Source Group, Inc. (SGI) and submitted on behalf of Defense Logistics Agency – Energy (Discharger) to apply for waste discharge requirements (WDRs) for the bio-remediation and onsite reuse of petroleum hydrocarbons contaminated soils at the Defense Fuel Support Point (DFSP) Norwalk (Site) at 15306 Norwalk Boulevard, Norwalk, California.

The Site is owned by the US Air Force and controlled through the office of March Air Reserve Base and was historically used to receive, store, and distribute military grade jet fuel. Active operations at the site ceased in the 1990s and tanks and other infrastructure were removed in 2012. As a result of past fuel handling operations, soil and groundwater at the Site have been contaminated with petroleum hydrocarbons. Remediation activities at the Site are currently overseen by the Regional Board Site Cleanup Program (SCP). Remediation of soil and groundwater, including removal of light non-aqueous phase liquid (LNAPL), has been on-going at the Site since 1994 and has resulted in the removal of the majority of LNAPL from the

shallow aquifer and the removal and destruction of thousands of pounds of hydrocarbons present in the soil and groundwater. However, a significant mass of hydrocarbons remains in shallow and deep soil at the Site. To further cleanup the contamination and ready the Site for redevelopment, the Discharger proposes to excavate the contaminated soil for on-site bioremediation.

The proposed bioremediation will be carried out in treatment cells constructed in historical tank basins at the Site that are completely contained by berms that were originally constructed for secondary containment for tanks. Each treatment cell will include up to six stockpile rows that are approximately 215 feet long, 20 feet wide, and 8 feet high (approximately 750 cubic yards). The rows will be underlined with 30-mil high density polyethylene (HDPE) liners and covered with 10- to 20-mil heavy duty plastic sheets that are secured with sand bags. Before being placed in a treatment stockpile, contaminated soil will be processed at an Earth Cleaning Machine (ECM) by adding Bio-Reclaim™, an US EPA approved bioremediation agent provided by F4 Remediation, Inc., that contains a proprietary blend of non-pathogenic microbes and a safe surfactant to degrade petroleum hydrocarbons and other organic compounds into carbon dioxide and water. A vapor extraction system consists of PVC pipelines and motor blowers will be installed to induce fresh, oxygen rich air into the treatment rows and to mitigate the emission of volatile organic compounds (VOCs). Soaker hose will be placed on the rows to maintain the moisture content between 40 to 85 percent of field capacity. The stockpile rows will be maintained and monitored until all chemicals of concern are reduced to site cleanup goals. The treatment time is expected to be from 60 to 90 days. Treated soil that meets site cleanup goals will be used onsite for excavation backfill.

Regional Board staff has completed review of the ROWD and determined that the proposed bioremediation project is appropriate to be regulated under Regional Board Order No. 90-148, *General Waste Discharge Requirements for Land Treatment of Petroleum Hydrocarbon Contaminated Soil in Los Angeles and Santa Clara River Basins*. The cleanup goals for contaminated soil at the Site are included in a letter dated July 12, 2012, from SCP staff of the Regional Board (copy attached). Treated soils that will be reused onsite must meet these cleanup goals. Monitoring and reporting requirements for the bioremediation project are included in the attached Monitoring and Reporting Program (MRP CI-10118). The cleanup goals and sampling frequencies may be modified if the Regional Board Executive Officer determines that such modifications are warranted. Enclosed is the WDRs package, including:

1. General Waste Discharge Requirements (Order No. 90-148)
2. Monitoring and Reporting Program (CI-10118)
3. Regional Board letter date July 12, 2012 (cleanup goals)

Please note that Coverage of the General WDRs is applicable only to the proposed bioremediation operations. The excavation, relocation and storage of contaminated soil, as well as the reuse treated soil, are still regulated under SCP.

Please further note that the General WDRs only allow the land treatment of a maximum of 100,000 cubic yards of petroleum hydrocarbons contaminated soil and that the permitted treatment operations must be completed within 365 days from the date of this letter. A separate

Mr. Stuart Strum  
Defense Fuel Support Point Norwalk

- 3 -

February 6, 2015

ROWD must be filed and approved in advance by the Regional Board Executive Officer if either the volume of contaminated soil being treated exceeds 100,000 cubic yards or the treatment period exceeds 365 days.

If you have any questions regarding the General WDRs, please contact Dr. Wen Yang, Chief of Land Disposal Unit at the Regional Board, at (213) 620-2253 or [wen.yang@waterboards.ca.gov](mailto:wen.yang@waterboards.ca.gov). Questions related to the remediation of the Site in general should be directed to Mr. Paul Cho, Case Manager from SCP, at (213)-576-6721 or [paul.cho@waterboards.ca.gov](mailto:paul.cho@waterboards.ca.gov).

Sincerely,



Samuel Unger, P.E.  
Executive Officer

Enclosures

CC: See Mailing List

### **Mailing List**

Leslie Graves, SWRCB (Leslie.Graves@waterboards.ca.gov)  
Gerardo Villalobos, Los Angeles County DPH (gvillalobos@ph.lacounty.gov)  
Angelina Mancillas, Office of Linda T. Sanchez (angelina.mancillas@mail.house.gov)  
Evelyn Herrera, Office of Grace F. Napolitano (evelyn.herrera@mail.house.gov)  
Luis Gonzalez, Office of State Senator Ron Calderon (luis.gonzalez@sen.ca.gov)  
Mike Egan, City of Norwalk (megan@ci.norwalk.ca.us)  
Adriana Figueroa, City of Norwalk (afigueroa@ci.norwalk.ca.us)  
Norman Dupont, Richards Watson Gershon (ndupont@rwglaw.com)  
Steve Harari, Department of Toxic Substances Control (shariri@dtsc.ca.gov)  
Mary McIntosh, Norwalk Restoration Advisory Board (maryjanemc13@aol.com)  
Everett Bole, Defense Logistics Agency Energy (everett.bole@dla.mil)  
Stuart Strum, Defense Logistics Agency Energy (stuart.strum@dla.mil)  
Lt. Col. Tam Gaffney, Defense Logistics Agency (tam.gaffney@dla.mil)  
Walter Scherer, March Air Force Base (walter.scherer@march.af.mil)  
Phuong Ly, Water Replenishment District of Southern California (ply@ wrd.org)  
Los Angeles County Department of Public Health (waterquality@ph.lacounty.gov)  
Everett Ferguson, Water Replenishment District of Southern California (eferguson@ wrd.org)  
Steve Defibaugh, Kinder Morgan Energy Partners (Steve\_Defibaugh@kindermorgan.com)  
Neil Irish, The Source Group (nirish@thesourcegroup.net)  
Daniel Jablonski, CH2MHILL (daniel.jablonski@ch2m.com)  
Mark Wuttig, CH2MHILL (mark.wuttig@ch2m.com)  
Charles Emig, City of Cerritos (Charles\_emig@ci.cerritos.ca.us)  
Tracy Winkler (tracywink@aol.com)  
Jim Dystra (jdykstra@edingtonpeel.com)  
Eugene Garcia, 15608 Claretta Avenue, Norwalk, CA 90650  
Minxia Dong, Norwalk Regional Library, 12350 E. Imperial Hwy., Norwalk, CA 90651  
Bert MacNeil, Dolland Elementary School, 15021 S. Bloomfield Ave., Norwalk, CA 90650  
Ken Wall, The Source Group, Inc. (kwall@thesourcegroup.net)

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION  
MONITORING AND REPORTING PROGRAM NO. CI-10118  
FOR  
LAND TREATMENT OF PETROLEUM HYDROCARBON CONTAMINATED SOIL  
DEFENSE FUEL SUPPORT POINT NORWALK  
15306 NORWALK BOULEVARD, NORWALK, CALIFORNIA  
(FILE NO. 90-60-145)**

Defense Logistics Agency – Energy (Discharger) shall implement this Monitoring and Reporting Program (MRP), No. CI-10118, at the Defense Fuel Support Point Norwalk (Site) pursuant to Order No. 90-148 (Order) adopted by the Regional Water Quality Control Board, Los Angeles Region (Regional Board), on October 22, 1990.

**I. REPORTING REQUIREMENTS**

- A. The Discharger shall submit monitoring reports to the Regional Board in a quarterly basis. The first monitoring report under this MRP is due on April 15, 2015. Thereafter, monitoring reports shall be submitted by the date in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
January - March	April 15
April - June	July 15
July - September	October 15
October - December	January 15

- B. Within 30 days of completing all post treatment sampling, a "Final Project Completion Report" shall be submitted to the Regional Board verifying that all bioremediation operations at the Site are complete. The report shall include all data collected to date, the quantity and the final disposition of all treated soil, and verify that all cleanup goals have been met. A statement shall be included stating that the land treatment was completed in accordance with the Order. All other signed statements required by under the Order shall also be included.

**II. GROUNDWATER MONITORING**

The Discharger is currently implementing a Remediation Action Plan (RAP) at the Site that includes soil vapor extraction, groundwater extraction, biosparging, LNAPL removal, and groundwater monitoring under the Regional Board Site Cleanup Program (SCP). Since the proposed bioremediation cells will be lined with high density polyethylene (HDPE) liners and covered with heavy duty plastic sheets, they are not expected to release additional pollutants to groundwater. As such, groundwater monitoring dedicated to the bioremediation cells is not required. Nevertheless, the Discharger may be required to conduct additional groundwater monitoring for the bioremediation project if the Regional Board Executive Officer (Executive Officer) determines that such requirements are warranted.

*February 6, 2015*

**III. LAND TREATMENT MONITORING**

- A. Progress monitoring – Progress samples shall be collected at least monthly following the initiation of bioremediation operations to evaluate the effectiveness of soil treatment. Soil samples shall be collected at a rate of at least one sample per 500 cubic yards (CY) of soil being treated. Sampling locations shall be determined by subdividing each batch into approximately equal grad cells. One sample shall be collected at a randomly selected location from each grid cell during each successive sampling event. Progress monitoring samples shall be analyzed for the following constituents:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Bacteria Plate Count	Colonies/gm	Monthly
Soil Moisture Content	%	Monthly
Total Petroleum Hydrocarbons (TPH) (EPA Method 8015)	mg/kg	Monthly

- B. Acceptance sampling – At the end of each treatment cycle, prior to removal from the treatment stockpile, acceptance samples shall be taken at a rate of 35 samples per each treatment stockpile of approximately 750 CY, or at an alternative rate determined under SCP. Sampling locations shall be evenly distributed along the length, width, and depth of each treatment stock pile. All acceptance samples shall be analyzed for the following constituents:

<u>Parameter</u>	<u>Units</u>
Total Petroleum Hydrocarbons (EPA Method 8015)	mg/kg
Volatile Organic Compounds (VOCs, EPA Method 8260B)	µg/kg

The Discharger shall verify that concentrations of all contaminants are below their respective cleanup goals prior removal and reuse treated soil. Treated soil that exceeds cleanup goals shall either be retreated until the cleanup goals are achieved or be properly disposed of offsite. No treated soil shall be reused or backfilled unless all cleanup goals are met.

- C. Post treatment sampling – Following the completion of bioremediation operations, the Discharger shall inspect all liners for any damages that may have resulted in the release of pollutants from the treatment rows to the underline soil. A minimum of three surface samples shall be taken at each treatment row and analyzed for TPH (EPA Method 8015) and VOCs (EPA Method 8260B). Any soil that exceeds cleanup goals shall be excavated and properly disposed of offsite or treated onsite if a treatment cell is still active.
- D. Inspections - Throughout the duration of bioremediation operations, the Discharger shall conduct visual inspections at least weekly at the treatment cells to ensure that all liners, covers, and vapor and moisture control systems are properly maintained. Any damages shall be repaired immediately. Records of such inspections shall be included in the quarterly reports submitted to the Regional Board.

**IV. GENERAL PROVISIONS FOR SAMPLING AND ANALYSIS**

- A. All sampling, sample preservation, and analysis, shall be performed in accordance with the latest editions of "Guidelines Establishing Test Procedure for Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (U.S. EPA) and U.S. EPA SW-846 Methods (dated December 1996).
- B. All chemical, bacteriological, and bioassay analyses, shall be conducted at a laboratory certified for such analyses by the California Department of Health Services, or approved by the Executive Officer. No changes shall be made in sampling points without prior approval of the Executive Officer.
- C. Written and verbal notice must be made to the Regional Board a minimum of seven days in advance of the sampling event so that staff may participate, if they choose.
- D. The Discharger shall maintain all sampling and analytical results, including strip charts, date, exact location, and time of sampling, date analysis were performed, name of analyst, analytical techniques used, and results of all analysis. Such results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board.

**V. GENERAL PROVISIONS FOR REPORTING**

- A. When applicable, all reports shall contain the following minimum information:
  - 1. Quantity of waste material treated during the reporting period;
  - 2. Analytical results from all soil sampling and any groundwater monitoring, if required;
  - 3. Quantity of water and nutrients added to the land treatment units during the report period;
  - 4. Records of bioremediation operations and facility inspections conducted during the report period;
  - 4. A statement certifying that storm water runoff was prevented from entering the land treatment area, other than rainfall directly on the land treatment units, and that no waste material was carried away from the land treatment area by stormwater runoff; and
  - 5. Color photographs of the bioremediation operations shall be taken at least monthly and be included in the quarterly and final reports.
- B. All technical reports prepared for submittal to the Regional Board shall be signed by a California registered Professional Engineer or Professional Geologist.
- C. For every item where requirements in the Order are not met, the Discharger shall submit a statement of the actions undertaken or proposed, together with a timetable, to bring the Discharger back into full compliance with the requirements at the earliest time.

**MONITORING AND REPORTING PROGRAM**  
**Defense Fuel Support Point Norwalk**

**CI-10118**

- D. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the data, the constituents, and the concentrations, are readily discernible. The data shall be summarized to determine compliance with waste discharge requirements, and where applicable, shall include receiving groundwater analytical data.
- E. Reports submitted to the Regional Board shall be signed by:
1. In the case of a corporation, the principal executive officer of at least the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;
  2. In the case of a partnership, a general partner;
  3. In the case of a sole proprietorship, the proprietor;
  4. In the case of a municipal, state or public facility, either a principal executive officer, ranking elected officer, or other duly authorized employee.
- F. Each report shall contain the following completed declaration:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
- G. Unless it is otherwise required by the Executive Officer, all reports required under this MRP shall be submitted to the State Water Resources Control Board (State Board) Geotracker database system, under Global ID **SLT43185183**, in the form of searchable Portable Document Format (PDF) files. In addition, any groundwater monitoring data shall also be submitted to Geotracker in Electronic Deliverable Format (EDF). A hard copy of the report, including all original laboratory reports and field records that are used in preparation of the reports, shall be retained by the Discharger and be available for review by Regional Board staff.
- H. These records and reports are public documents and shall be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by: Samuel Unger  
Samuel Unger, P.E.  
Executive Officer

Date: February 6, 2015



Los Angeles Regional Water Quality Control Board

July 12, 2012

Mr. Matthew Young  
Defense Logistics Agency Energy  
8725 John J. Klingman Road, Suite 2941  
Fort Belvoir, VA 22060-6222

**SUBJECT: REVIEW OF PROPOSED SOIL CLEANUP GOALS**

**SITE: DEFENSE FUEL SUPPORT POINT NORWALK, 15306 NORWALK BOULEVARD, NORWALK, CALIFORNIA (SCP NO. 0286A, SITE ID NO. 16638)**

Dear Mr. Young:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) has received and reviewed your March 14, 2012, *Justification for Calculations of the Proposed Soil Cleanup Goals and Revised Tables*, prepared by Parsons on your behalf for the above referenced site (site).

Proposed soil cleanup goals for chemicals of concern (COCs) were calculated using the procedures prescribed in the Regional Board's May 1996, *Interim Site Assessment & Cleanup Guidebook* (Guidebook). Petroleum fuel hydrocarbons and BTEX (benzene, toluene, ethylbenzene and xylenes) compounds were calculated in compliance with Table 4-1 of the Guidebook. The following table lists the proposed soil cleanup goals for COCs:

Proposed Soil Cleanup Goals

Depth Below Ground Surface	(feet below ground surface)					
	0.5	5	10	15	20	25
Depth to Groundwater	25.5	21	16	11	6	1
Constituent	Proposed Soil Cleanup Goal (mg/kg)					
TPH as Gasoline (C4-C12)	500	500	100	100	100	100
TPH as JP-5 (C8-C17)	500	500	100	100	100	100
TPH as Diesel (C5-C25)	1,000	1,000	100	100	100	100
Benzene	0.015	0.013	0.012	0.013	0.011	0.012
Toluene	0.614	0.440	0.391	0.423	0.356	0.367
Ethylbenzene	2.07	1.44	1.19	1.33	1.07	1.10
Xylenes	5.55	3.77	3.09	3.47	2.76	2.84
1,1,2,2-Tetrachloroethane	0.0023	0.0020	0.0015	0.0012	0.0006	0.0002
1,1,2-Trichloroethane	0.0032	0.0029	0.0023	0.0020	0.0012	0.0008
1,2,3-Trichlorobenzene	0.0740	0.0634	0.0467	0.0356	0.0162	0.0034

MARIA MEHRANIAN, CHAIR | SAMUEL UNGER, EXECUTIVE OFFICER

320 West 4th St., Suite 200, Los Angeles, CA 90013 | [www.waterboards.ca.gov/losangeles](http://www.waterboards.ca.gov/losangeles)

Depth Below Ground Surface	(feet below ground surface)					
	0.5	5	10	15	20	25
Depth to Groundwater	25.5	21	16	11	6	1
Constituent	Proposed Soil Cleanup Goal (mg/kg)					
1,2,3-Trichloropropane	8.74E-07	7.66E-07	5.87E-07	4.79E-07	2.56E-07	1.23E-07
1,2,4-Trimethylbenzene	2.10	1.80	1.34	1.03	0.478	0.120
1,2-Dibromo-3-chloropropane	2.50E-04	2.19E-04	1.68E-04	1.37E-04	7.31E-05	3.52E-05
1,2-Dibromoethane	3.05E-06	2.78E-06	2.27E-06	2.04E-06	1.30E-06	9.60E-07
1,2-Dichloroethane	1.06E-04	1.04E-04	9.37E-05	9.60E-05	7.29E-05	6.92E-05
1,3,5-Trimethylbenzene	2.06	1.77	1.31	1.01	0.470	0.118
2-Butanone	0.557	0.607	0.617	0.713	0.612	0.661
2-Chlorotoluene	0.558	0.481	0.358	0.278	0.132	0.039
2-Hexanone	0.0073	0.0072	0.0065	0.0066	0.0050	0.0047
4-Chlorotoluene	0.547	0.472	0.351	0.273	0.130	0.038
Acetone	0.994	1.17	1.28	1.57	1.42	1.60
Bromomethane	0.0015	0.0014	0.0013	0.0013	0.0010	0.0010
Carbon disulfide	0.049	0.046	0.039	0.038	0.026	0.023
Chlorobenzene	0.119	0.104	0.079	0.063	0.032	0.013
Chloroethane (Ethyl Chloride)	2.23	2.47	2.55	2.98	2.59	2.83
Chloroform	7.38E-05	6.82E-05	5.67E-05	5.25E-05	3.48E-05	2.75E-05
Dichlorodifluoromethane	0.984	0.868	0.672	0.559	0.309	0.167
Diisopropyl Ether (DIPE)	0.449	0.424	0.364	0.350	0.246	0.212
Isopropylbenzene	5.56	4.78	3.53	2.71	1.26	0.303
Methylene Chloride	7.78E-04	7.99E-04	7.61E-04	8.27E-04	6.69E-04	6.82E-04
Methyl-t-Butyl Ether (MTBE)	9.07E-04	9.10E-04	8.43E-04	8.89E-04	6.97E-04	6.86E-04
Naphthalene	0.270	0.231	0.170	0.130	0.059	0.012
n-Butylbenzene	3.97	3.40	2.50	1.91	0.867	0.179
n-Propylbenzene	2.18	1.87	1.39	1.06	0.489	0.114
p-Isopropyltoluene	2.82	2.42	1.79	1.37	0.636	0.154
sec-Butylbenzene	2.59	2.22	1.64	1.26	0.576	0.129
Styrene	0.463	0.399	0.296	0.229	0.108	0.030
Tert-Butyl Alcohol (TBA)	0.0010	0.0012	0.0013	0.0016	0.0014	0.0016
tert-Butylbenzene	2.07	1.78	1.32	1.01	0.465	0.110
Trichloroethene	0.0070	0.0061	0.0047	0.0038	0.0020	0.0009

mg/kg = milligram per kilogram

The Guidebook specifies that the soil cleanup goals are calculated by the same general formula as the US EPA Soil Screening Levels, which is as follows:

$$\text{soil cleanup goal} = \text{total attenuation factor} \times \text{water quality standards}$$

The proposed water quality standards used to calculate the soil cleanup goals were most conservative of sources from 1) California drinking water Maximum Contaminant Levels, 2) California drinking water

Notification Levels, and 3) US EPA Tapwater Regional Screening Levels. Site-specific soil parameters including thickness of the clay, sand, and silt layers were used to calculate for specific depth.

We have reviewed the proposed soil cleanup goals and concur with the goals for COCs at the site, based on information provided in your March 14, 2012 report.

If you have any questions, please contact Mr. Paul Cho at (213) 576-6721 (pcho@waterboards.ca.gov).

Sincerely,



Paul Cho, P.G.  
Engineering Geologist  
Site Cleanup Unit III

cc: Congresswoman Grace Napolitano, 1609 Longworth Building, Washington, D.C. 20515  
Mr. Benjamin Cardenas (benjamin.cardenas@mail.house.gov)  
Ms. Evelyn Herrera (evelyn.herrera@mail.house.gov)  
Mr. Mike Egan, City of Norwalk (megan@ci.norwalk.ca.us)  
Mr. Thomas Lynch, City of Norwalk (tlynch@ci.norwalk.ca.us)  
Ms. Adriana Figueroa, City of Norwalk (afigueroa@ci.norwalk.ca.us)  
Mr. Steve Harari, Department of Toxic Substances Control (shariri@dtsc.ca.gov)  
Mr. Redwan Hassan, Parsons (Redwan.hassan@parsons.com)  
Ms. Mary Lucas, Parsons (mary.lucas@parsons.com)  
Ms. Mary McIntosh, Norwalk Restoration Advisory Board (Maryjanemc13@aol.com)  
Mr. Steve Defibaugh, Kinder Morgan Energy Partners (Steve\_Defibaugh@kindermorgan.com)  
Mr. Daniel Jablonski, CH2MHILL (Daniel.Jablonski@CH2M.com)  
Mr. Norman Dupont, Richards Watson Gershon (ndupont@rwglaw.com)

State of California  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER NO. 90-148

GENERAL WASTE DISCHARGE REQUIREMENTS  
FOR  
LAND TREATMENT OF PETROLEUM HYDROCARBON CONTAMINATED SOIL  
IN LOS ANGELES AND SANTA CLARA RIVER BASINS  
(FILE NO. 90-60)

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. Soils contaminated with high concentrations of petroleum hydrocarbon, where identified and left unmitigated, are considered to be a discharge of waste that could affect the quality of the waters of the State, as defined in Section 13260 of the California Water Code.
2. Land treatment of these soils is proving to be an efficient and economical means of mitigating the effects of such hydrocarbon contamination. The threat to waters of the State is thereby eliminated or reduced to non-significant levels of contamination and the soil rendered suitable for reclamation and reuse. Such land treatment operations involve the discharge to land of petroleum hydrocarbon contaminated soil.
3. Section 2532(b)(5) of Chapter 15, Division 3, Title 23 of the California Code of Regulations, requires that Regional Boards shall specify in Waste Discharge Requirements, the elements of land treatment programs by dischargers who treat or dispose of wastes in land treatment waste management units.
4. Each month this Board receives a large number of Reports of Waste Discharge for the land treatment of hydrocarbon contaminated soils. Such requests far exceed the capacity of staff to review and bring to the Board for adoption, individual waste discharge requirements. These circumstances create the need for an expedited system for processing the numerous requests.

Revised October 22, 1990

General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

5. The adoption of general waste discharge requirements would 1) simplify the application process for dischargers, 2) free up staff for higher priority work, and 3) reduce Board time involved by enabling the Executive Officer to notify the discharger, in appropriate cases, of the applicability of the general requirements adopted by the Regional Board. The vast majority of these discharges is characterized by low volume, short term discharges to land primarily for the purpose of allowing reuse of the soil during site cleanup and development.
6. These general waste discharge requirements for land treatment of up to 100,000 cubic yards of petroleum hydrocarbon contaminated soil for durations not exceeding 365 days under the direction of the Executive Officer, would benefit the public, staff and the Board through a streamlined process without loss of significant regulatory oversight.
7. The Board adopted revised Water Quality Control Plans for Santa Clara River Basin and Los Angeles River Basin on April 27, 1978 and November 27, 1978, respectively. These Water Quality Control Plans contain water quality objectives for ground water for all Hydrologic Subareas within the Region. The requirements contained in this Order, as they are met, will be in conformance with the goals of these Water Quality Control Plans.
8. All ground waters in both the Los Angeles and Santa Clara River Basins have beneficial uses which include municipal and domestic supply, agricultural supply, industrial process supply, and groundwater recharge.
9. The waste discharge requirements contained in this order would regulate such land treatment programs in accordance with Title 23, Division 3, Chapter 15, of the California Code of Regulations.
10. The issuance of Waste Discharge Requirements for the discharges subject to these general requirements is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code pursuant to one or more of the following provisions:  
(1) The lead agency has prepared a negative declaration

General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

2  
based on findings pursuant to California Code of Regulations, Title 14, Chapter 3, Section 15070 which show that there will be no significant impact on water quality; or (3) The project would effect a minor alteration to the condition of land, and is exempt in accordance with Title 14, Chapter 3, Section 15304 of the California Code of Regulation.

11. This land treatment operation is a one time, short term process, and is not anticipated to require in excess of 365 days to complete at which time these requirements will expire.
12. These general waste discharge requirements are not intended to alter any existing working arrangements relating to cleanup cases with local governmental agencies.

The Board has notified the interested agencies and persons of its intent to adopt general waste discharge requirements for land treatment projects and has provided them with an opportunity to submit their written views and recommendations.

The Board in a public meeting heard and considered all comments pertaining to the tentative requirements.

IT IS HEREBY ORDERED THAT:

- A. This Order shall serve as General Waste Discharge Requirements for the temporary discharge of petroleum hydrocarbon contaminated soil to an on-site land treatment facility for land treatment processing of the soil. Upon receipt of a Report of Waste Discharge describing such a discharge, the Executive Officer shall determine if such discharge 1) involves 100,000 cubic yards or less of contaminated soil to be land treated, 2) involves a process that will bioremediate the contaminated soil to acceptable levels as determined by the Executive Officer, but not exceeding 1000 ppm, 3) will be completed within 365 days, and 4) is covered by adequate site assessment which characterizes the nature and extent of the soil contamination including sufficient water quality data, collected under the direction of an appropriate regulatory

General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

agency, to determine the impact on ground water resulting from such soil contamination. In the event the Executive Officer so finds, he shall notify the applicant (hereinafter called the Discharger) in writing that the proposed land treatment operation is subject to this Order.

Notwithstanding the provisions of the above paragraph, appropriate cases may be brought to the Board for adoption of individual requirements when the Executive Officer deems it desirable or necessary to do so.

- B. The operation of any temporary land treatment facility shall be in conformance with Title 23, Division 3, Chapter 15, of the California Code of Regulations, "Discharge of Waste To Land", including but not limited to Sections 2510; 2532(b-5); 2549; 2550; 2580; 2584; 2590 and the following special provisions:
1. Wastes discharged on-site for biodegradation by a land treatment process shall be limited to hydrocarbon contaminated soil found on site. No other waste material shall be imported for land treatment on-site. The land treatment process, which includes water, nutrients and bacterial addition to soil along with soil aeration in the treatment zone, shall be conducted in such a way that no contaminants are added to surface water or ground waters.
  2. For any proposed development on-site during the land treatment, closure and post-closure period, as defined in Title 23, Division 3, Chapter 15 of the California Code of Regulations, the discharger shall submit to this Board, written notification of such development.
  3. During the land treatment operations, surface runoff from the drainage area tributary to this site shall be prevented from passing over or percolating through the treatment zone. Adequate facilities shall be provided to divert all surface runoff from storms away from the treatment area.
  4. The treatment zone shall be bermed in such a way that storm water falling directly on the treatment zone will be contained. Standing water within the contained treatment zone shall be pumped down immediately and

General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

removed to treatment facilities on site or disposed of at a legal disposal site. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been established by a California Regional Water Quality Control Board, and which is in full compliance therewith.

5. No condition of pollution or nuisance shall be caused by the handling, treatment or reuse of the wastes or from any excavation operation conducted in association with this land treatment operation.
6. Odors from the handling, treatment or reuse of these wastes shall not be perceivable beyond the limits of the property owned or controlled by the discharger. The discharger shall demonstrate, to the satisfaction of the Executive Officer, a positive method for odor control, prior to beginning a full-scale land treatment operation.
7. All required state and local health department permits and/or variances and air quality permits and/or variances shall be obtained by the discharger prior to commencing the land treatment operation.
8. During full-scale operation of the land treatment operation, a sampling and analysis program shall be implemented, in accordance with a Monitoring and Reporting program prescribed by the Executive Officer, to verify that complete degradation and transformation of the petroleum hydrocarbon is occurring to levels approved by the Executive Officer. Reporting of this data shall comply with the Monitoring and Reporting Section of this Order.
9. Maximum land treatment zone thickness shall not exceed 18 inches or the maximum depth of penetration of the aeration equipment, whichever is less, except with prior written approval of the Executive Officer.

C. The following General Provisions Shall Apply:

1. A copy of these requirements shall be maintained at the discharge facility and be available at all times to operating personnel.



General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

2. In the event of any change in name, ownership, or control of these land treatment facilities, the discharger shall notify this Board in writing and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Board.
3. In the event the discharger is unable to comply with any of the conditions of this Order due to:
  - (a) Breakdown of waste treatment equipment,
  - (b) Accidents caused by human error or negligence,
  - (c) Other causes such as acts of nature,
  - (d) Facility operations,

The discharger must notify this Board by telephone within 24 hours of the incident and confirm it in writing within one week of the telephone notification.

4. In accordance with Section 13260 of the California Water Code, the discharger shall file a report with this Regional Board of any material change or proposed change in the character, location or volume of the discharge.
5. In accordance with Section 13267 of the California Water Code, the discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted.
6. Wastes discharged or reclaimed for reuse as soil backfill shall not contain any substance in concentrations toxic to human, animal, plant, or aquatic life.
7. Any off-site disposal of wastes shall be to a legal point of disposal and in accordance with the provisions of Division 7.5 of the Water Code. A legal point of disposal is defined in item A4 above.

General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

8. The Regional Board and other authorized representative shall be allowed:
  - (a) Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
  - (b) Access to copy any records that are kept under the conditions of this Order;
  - (c) To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
  - (d) To photograph, sample, and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the California Water Code.
  
9. Following completion of the land treatment program on site, the discharger shall, implement a land treatment facility closure plan, which complies with the requirements of Article 8, Chapter 15, Division 3, Title 23, of the California Code of Regulations. As a minimum the plan shall include but not be limited to the following:
  - (a) continue all operations necessary to maximize degradation of waste constituents within the treatment zone,
  - (b) continue all ground water and unsaturated zone monitoring,
  - (c) continue all operations in the treatment zone to prevent runoff from the site containing waste constituents, and
  - (d) maintain the precipitation and drainage control systems.

General Waste Discharge Requirements  
For Land Treatment of Petroleum Hydrocarbon  
Contaminated Soil  
Order No. 90-148

File No. 90-60

10. In accordance with Section 13263 of the Water Code, these waste discharge requirements are subject to periodic review and revision by this Regional Board.
  11. These requirements do not exempt the discharger from compliance with any other laws, regulations, or ordinances which may be applicable, they do not legalize these land treatment and disposal facilities and they leave unaffected any further restraints on those facilities which may be contained in other statutes or required by other regulatory agencies.
  12. An appropriate Health and Safety Plan for all assessment and mitigation activities at the site shall be filed with this Board prior to commencing any land treatment activities.
- E. The attached Monitoring and Reporting Program is made a requirement of the order.
- F. The Waste Discharge Requirements regulating a specific short term land treatment expire 365 days after the Executive Officer has determined the applicability of this Order to the specific project.

I, Robert P. Ghirelli, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on October 22, 1990.

  
ROBERT P. GHIRELLI, D.Env.  
Executive Officer