



California Regional Water Quality Control Board

Los Angeles Region



Matthew Rodriguez
Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

November 15, 2011

Mr. Jeff Appel
Sanesco Oil Company
17311 South Main Street
Gardena, CA 90248

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT
PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR
HEXAVALENT CHROMIUM IMPACTED SITES (ORDER NO. R4-2007-0019) (CI-9754,
SERIES NO. 171)
SANESCO #5 (B-2 PRIORITY SITE)
3631 SANTA FE AVENUE, LONG BEACH (CASE # 908100161)**

Dear Mr. Appel:

We have completed our review of your application for coverage under the General Waste Discharge Requirements (WDR) to inject ozone into groundwater to supplement active remediation of the groundwater contamination plume beneath the subject site (Site). The Site is currently an active gasoline station within an area of mixed residential and commercial properties.

The Site is located within the Los Angeles Coastal Groundwater Basin. According to boring logs, the subsurface lithology of the Site consists of fine grain sand with variable amounts of silty sand with occasional coarse grained sand from ground surface to a depth of approximately 40 feet below ground surface (bgs).

Currently, the site has ten onsite and eleven offsite groundwater monitoring wells (MW-1 through MW-21). Quarterly groundwater monitoring has been conducted since March 1998. Historically, total petroleum hydrocarbons as gasoline (TPHg) up to 2,100,000 microgram per liter ($\mu\text{g/L}$), and methyl tertiary butyl ether (MTBE) up to 730,000 $\mu\text{g/L}$ were detected in the groundwater. In November 2010, groundwater samples detected TPHg of up to 4,000 $\mu\text{g/L}$, benzene of 96 $\mu\text{g/L}$, tertiary butyl alcohol (TBA) of 61,000 $\mu\text{g/L}$ and MTBE of 8,600 $\mu\text{g/L}$. Depth to groundwater was at 25 feet bgs and groundwater flow direction was toward the east.

A soil vapor extraction (SVE) system was implemented at the site from October 2002 till March 2003. The SVE system had removed approximately 976 pounds of vapor phase petroleum hydrocarbons from the site.

On January 23, 2004, a high vacuum dual-phase vapor extraction (HVDPE) system pilot test was performed for 96-hour and approximately 1,403 pounds of vapor phase petroleum hydrocarbons were removed. Between April 10, 2008 and December 30, 2008, the dual system (SVE/HVDPE)

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operated at this site and approximately 210,135 gallons of groundwater and 1,188 pounds of vapor phase petroleum hydrocarbons were removed from the site.

In a technical report titled "Addendum to Corrective Action Plan" dated December 7, 2010, your consultant, FREY Environmental Inc., proposed to install a total of 25 ozone sparging wells at the site, ten wells (OS1 through OS10) onsite and 15 wells (OS11 through OS-25) offsite. Ozone will be injected into these ozone sparging wells via an automated system to clean up the groundwater contamination plume beneath the Site and possible offsite areas. The ozone injection automated system is equipped with programmable controller, a manifold assembly, compressor and ozone detector designed to automatically shutdown if ozone is detected in unsafe concentrations within the system. On September 21, 2011, Regional Board staff approved the "Addendum to Corrective Action Plan."

Based on our review, Regional Board staff has determined that the proposed discharge meets the conditions specified in Order No. R4-2007-0019, "Revised General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites" adopted by the Regional Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019, Monitoring and Reporting Program No. CI-9754, and Standard Provisions.

The WDRs issued shall not be terminated until Regional Board staff determines the WDRs are no-longer needed for the site cleanup.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019. When submitting monitoring or technical reports to the Regional Board, please reference Compliance File No. CI-9754 to assure that the reports are directed to the appropriate staff. Do not combine other reports with your monitoring reports complying with Order No. R4-2007-0019. Submit each type of report as a separate document.

In accordance with regulations adopted by the State Board in September 2004 regarding electronic submittal of information (ESI), the Discharger has been electronically submitting monitoring reports to the State Board GeoTracker system under UST Global ID T0603701910. To comply with the Monitoring and Reporting Program (MRP) under this WDR, the Discharger shall upload the WDR monitoring reports to GeoTracker under the two Global IDs: Global ID T0603701910 (continuing) and Global ID WDR100001794 (new). For more information regarding the new Global ID under WDR, please see the ESI training video available at: <https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=44145287&rKey=7dad4352c990334b>.

We are sending a copy of Order No. R4-2007-0019 only to the applicant. A copy of the Order will be furnished to anyone who requests it. A copy of the Order can also be found online at: [http://www.waterboards.ca.gov/losangeles/board decisions/adopted orders/general orders/r4-2007-0019/r4-2007-0019.pdf](http://www.waterboards.ca.gov/losangeles/board%20decisions/adopted%20orders/general%20orders/r4-2007-0019/r4-2007-0019.pdf).

Mr. Jeff Appel
Sanesco Oil Company

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November 15, 2011

To avoid paying future annual fees, please submit written request for termination of your enrollment under the general permit in a separate letter, when your project has been completed and the permit is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

If you have any questions on Order No. R4-2007-0019, please contact Dr. Ann Chang at (213) 620-6122 (achang@waterboards.ca.gov). Questions regarding the underground storage tank issues should be forwarded to Mr. Magdy Baiady at (213) 576-6699 (mbaiady@waterboards.ca.gov).

Sincerely,



Samuel Unger, P.E.
Executive Officer

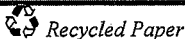
Enclosures:

1. Board Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9754
3. Standard Provisions

cc: Underground Storage Tank Cleanup Fund, State Water Resources Control Board
Tim Smith, Los Angeles County Department of Public Works
Richard Lavin, County of Los Angeles, Department of Public Health Drinking Water Program
Joe Frey, FREY Environmental Inc.

3631 Santa Fe WDR cover ltr (9-27-11)

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STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
MONITORING AND REPORTING PROGRAM NO. CI-9754
FOR
SANESCO OIL COMPANY
SERVICE STATION NO.5

ENROLLMENT UNDER REGIONAL BOARD

ORDER NO. R4-2007-0019
SERIES NO. 171

I. REPORTING REQUIREMENTS

- A. Sanesco Oil Company Service Station (Sanesco) (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019.

Monitoring reports shall be received by the due dates in the following schedule:

<u>Reporting Period</u>	<u>Sampling Period</u>	<u>Report Due Date</u>
January – June	April - June	July 15 th
July – December	October - December	January 15 th

The first monitoring report under this monitoring program is due by January 15, 2012.

- B. If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.
- C. By March 1 of each year, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall explain the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements (WDR).
- D. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be provided each time a new and/or renewal certification is obtained from ELAP.

- E. The method limits (MLs) employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable and obtains approval for a higher ML from the Regional Board Executive Officer (Executive Officer). The Discharger shall submit a list of the analytical methods employed for each test and the associated laboratory quality assurance/quality control (QA/QC) procedures upon request by the Regional Board.
- F. Groundwater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All QA/QC samples must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff.
- G. Each monitoring report must affirm in writing that "All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health, and in accordance with current United States Environmental Protection Agency (USEPA) guideline procedures or as specified in this Monitoring Program." Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report.
- H. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with the WDR. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements.
- I. The Discharger shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records 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.
- J. If the Discharger performs analyses on any groundwater samples more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the report.
- K. 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 to demonstrate compliance with the requirements and, where applicable, shall include results of receiving water observations.
- L. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.
- M. In addition to the aforementioned requirements, the Discharger shall comply with requirements contained in Section G of Order No. R4-2007-0019 "*Monitoring and Reporting Requirements*".

II. DISCHARGE MONITORING REQUIREMENTS

The semi-annual reports shall contain the following information regarding the injection activities. If there is no injection during any reporting period, the report shall so state.

1. Location map showing injection points.
2. Written summary defining:
 - Depth of injection points;
 - Quantity of ozone injected at each injection point;
 - Days on which the injection system was in operation; and
 - Total amount of ozone injected at the site.
3. Semi-annual visual inspection at each injection well shall be conducted to evaluate the well casing integrity for a period of three months after each injection. The semi-annual report shall include a summary of the visual inspection.
4. To avoid groundwater monitoring network reduction, data bias, and well screen clogging or alteration, no groundwater monitoring wells shall be used as injection points during the proposed ozone injection. Separate injection points/wells must be installed at the Site for the proposed ozone injection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. The monitoring well network must include MW-14, MW-16, MW-19 and MW-20 as a background wells; MW-2, MW-4, MW-17 and MW-18 as source wells; and MW-10, MW-11 and MW-21 as downgradient wells. These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Regional Board Executive Officer (Executive Officer) prior to their use.

The Discharger shall conduct baseline sampling all wells identified two weeks prior to the proposed ozone injection and regular sampling with the required frequencies from all the monitoring wells in the monitoring network for the following constituents:

<u>CONSTITUENT</u>	<u>UNITS</u>	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
pH	PH units	Grab	Semi-annual ¹
Temperature	°F	grab	Semi-annual ¹
Oxidation-reduction potential	Milivolts	grab	Semi-annual ¹

Specific conductivity	µmhos/cm	grab	Semi-annual ¹
Dissolved Ferrous iron	µg/L	grab	Semi-annual ¹
Dissolved Oxygen	µg/L	grab	Semi-annual ¹
MTBE, Tert-Butyl Alcohol (TBA), Di-isopropyl Ether (DIPE), Ethyl-t-Butyl Ether (ETBE), Tert-Amyl-Methyl Ether (TAME)	µg/L	grab	Semi-annual ¹
Ethanol Formaldehyde Acetone	µg/L	grab	Semi-annual ¹
Total Petroleum Hydrocarbons as gasoline (TPHg)	µg/L	grab	Semi-annual ¹
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	grab	Semi-annual ¹
Total organic carbon	µg/L	grab	Semi-annual ¹
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	grab	Semi-annual ¹
Total Chromium and Chromium six ²	Mg/L	grab	Semi-annual ¹

¹ One week before injection and semi-annual thereafter.

² The Discharger is required to monitor for total chromium and chromium six in the baseline, semi-annually. If detected at any of these sampling events, the total chromium and chromium six must be monitored semiannually thereafter.

All groundwater monitoring reports must include, at a minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

IV. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

V. ELECTRONIC SUBMITTAL OF INFORMATION

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100001794.

VI. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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 a fine and imprisonment.

Executed on the ____ day of ____ at _____.

_____(Signature)

_____(Title)"

VII. PUBLIC DOCUMENTS

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, upon request by interested parties.

Ordered by:

Samuel Unger
Samuel Unger
Executive Officer

Date: November 15, 2011