

**RP CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**MONITORING AND REPORTING PROGRAM NO. R5-2009-0806
ISSUED PURSUANT TO CALIFORNIA WATER CODE SECTION 13267**

**FOR
MR. MOHAMMAD SHAMSHAD AND MS. SAJDA PERVEEN
SUPER STAR PLUS FACILITY
6351 FRANKLIN BOULEVARD, SACRAMENTO
SACRAMENTO COUNTY**

Mr. Mohammad Shamshad (Discharger) has owned and operated three underground storage tanks at the Super Star Plus Facility (Site) located at 6351 Franklin Boulevard in Sacramento (the Site) as a market and gasoline station from 1997 to present. Ms. Sajda Perveen (Discharger) owned the property from March 1997 to May 2001. Mr. Shamshad and Ms. Sajda (collectively the Dischargers) are subject to this Order because they own or owned the property, and/or owned and operated the USTs and station at the time the UST system caused or permitted waste to be discharged to waters of the State where it has created a condition of pollution and nuisance.

BACKGROUND

A service station has operated on the property since the 1970's. In February 1999, the underground storage tank (UST) system was replaced during site renovation activities and to comply with state regulations. During UST system replacement, contamination was detected in soil samples, subsequent investigations confirmed groundwater has been impacted. The current UST system and station consists of three USTs (one 4,000-gallon gasoline, one 12,000-gallon gasoline, and one 8,000-gallon diesel), 9 dispensers, associated product piping, and convenience store.

Depth to groundwater is approximately 40 feet below ground surface (bgs). Groundwater samples have contained petroleum hydrocarbon constituents at maximum concentrations of: total petroleum hydrocarbons as gasoline (TPH-G) 210,000 micrograms per liter (ug/l), total petroleum hydrocarbons as diesel (TPH-D) 13,000, benzene 33,000 ug/l, toluene 45,000 ug/l, ethylbenzene 5,300 ug/l, xylenes 30,000 ug/l, methyl tert butyl ether (MTBE) 2,300 ug/l, tert amyl methyl ether (TAME) 2.1 ug/l, tert butyl alcohol (TBA) 310 ug/l, 1,2-dichloroethane (1,2-DCA) 1.8 ug/l, ethanol 5.3 ug/l, and methanol 180 ug/l. During the second quarter 2008 groundwater monitoring event, concentrations of petroleum constituents were detected at maximum concentrations of: TPH-G 38,000 ug/l, TPH-D 4,500 ug/l, benzene 3,300 ug/l, toluene 7,300 ug/l, ethylbenzene 1,100 ug/l, total xylenes 4,800 ug/l, MTBE 63 ug/l, lead 7.5 ug/l, and naphthalene 240 ug/l. This pollution has impaired the beneficial uses of the groundwater resource.

A soil vapor extraction (SVE) system has been operating since 1 July 2003 and has removed approximately 6,096 pounds (lbs) of TPH-G. A groundwater extraction (GWE) system has been operating at the site since 12 September 2005 and has extracted

approximately 5,887,892 gallons of groundwater and removed approximately 2,197 lbs of TPH-G, 133 lbs of benzene, and 24 lbs of MTBE.

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code (CWC) section 13267 and is necessary to delineate waste discharged from the Super Star Plus Facility (Site) former underground storage tanks (UST), characterize pollutant plumes, and evaluate whether remediation efforts are effective. Various chemicals, including total petroleum hydrocarbons as gasoline (TPH-G) and methyl tert butyl ether (MTBE, are present in soil and groundwater due to past operations at the Site. The Dischargers shall not implement any changes to this MRP unless and until a revised MRP is issued by the Executive Officer of this Regional Water Board.

GROUNDWATER MONITORING

- As shown on Figure 1, there are 25 groundwater monitoring wells, MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, EX-1, EX-2, and EX-3, associated with the Super Star Plus Facility. The groundwater monitoring program for the 25 monitoring wells and any wells installed subsequent to the issuance of this MRP, shall follow the schedule below.
- Monitoring wells with free phase petroleum product or visible sheen shall be monitored, at a minimum, for product thickness and depth to water. Sample collection and analysis shall follow standard Environmental Protection Agency (EPA) protocol. The volume of extracted groundwater also shall be provided in semi-annual monitoring reports.

		SAMPLING FREQUENCY ¹																									
		Semi-annually ²						Annually ³																			
Wells		MW-1	MW-3	MW-4	MW-6	MW-7	MW-9	MW-2	MW-5	MW-8	MW-10	MW-12	MW-13	MW-11	MW-14	MW-15	new wells	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	EX-1	EX-2	EX-3

1 All wells shall be monitored semi-annually for water levels and the presence and thickness of free product.

2 Wells shall be sampled semi-annually during the first and third quarters.

3 Wells shall be sampled annually during the third quarter.

Constituents	EPA Analytical Method	Maximum Practical Quantitation Limit (ug/l) ⁵	Analysis Frequency ⁶
Depth to Groundwater	---	0.01 feet	Semi-Annually
Total Petroleum Hydrocarbons as Gasoline	8015M	50	Semi-Annually
Total Extractable Petroleum Hydrocarbons as Diesel	8015M	50	Semi-Annually
Benzene	8020 or 8260B	0.5	Semi-Annually
Toluene	8020 or 8260B	0.5	Semi-Annually

Constituents	EPA Analytical Method	Maximum Practical Quantitation Limit (ug/l) ⁵	Analysis Frequency ⁶
Ethylbenzene	8020 or 8260B	0.5	Semi-Annually
Xylenes	8020 or 8260B	0.5	Semi-Annually
MTBE	8260B	0.5	Semi-Annually
TBA	8260B	5.0	Semi-Annually
TAME	8260B	0.5	Annually
DIPE	8260B	0.5	Annually
ETBE	8260B	0.5	Annually
Ethanol ⁶	8260B	50	Annually
Methanol ⁶	8260B	100	Annually
1,2-Dichloroethane	8260B	0.5	Annually
PAHs ⁶	8270	0.50	Semi-Annually
Total Lead ⁶	7421/6010B	10	Semi-Annually

5 All concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be reported as trace.

6 Analysis for ethanol, methanol, total lead, and PAHs may be discontinued after two consecutive monitoring events of non-detect results.

7 Report all peaks identified in the normal course of analysis for constituents of concern by EPA Method 8260B
 PAHs = polycyclic aromatic hydrocarbons

3. Prior to construction of any new groundwater monitoring or extraction wells, and prior to destruction of any groundwater monitoring or extraction wells, the Dischargers shall submit plans and specifications to the Regional Water Board for review and approval. Once installed, all new wells shall be added to the monitoring program and shall be sampled and analyzed according to the above schedule.

REPORTING

4. When reporting data, the Dischargers shall arrange the information in tabular form so that the sampling date, the analyzed constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with this Order.
5. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.
6. The Dischargers shall submit a paper copy of the semi-annual report to this Regional Water Board office and submit the semi-annual electronic data reports, which conform to the requirements of the California Code of Regulations, Title 23, Division 3, Chapter 30, electronically over the internet to the State Water Board's Geotracker database system. Both the paper copy and the electronic submittal are due by the 1st day of the second month following the end of the calendar quarter in which the samples were taken (**1 May, and 1 November**), until such time as the Executive Officer determines that the reports are no longer necessary. Each semi-annual report shall include the following minimum information:

- a. A description and discussion of the groundwater sampling event and results, including trends in the concentrations of pollutants and groundwater elevations in the wells, how and when samples were collected, and whether the pollutant plume(s) is delineated.
- b. Field logs that contain, at a minimum, water quality parameters measured before, during, and after purging, method of purging, depth of water, volume of water purged, etc.
- c. Groundwater contour maps for all groundwater zones, if applicable.
- d. Concentration contour maps for all groundwater zones for TPH-G, benzene, and MTBE.
- e. A table showing well construction details including at a minimum: well number, groundwater zone being monitored, ground surface elevation, screen interval, bentonite interval, filter pack interval, and total depth of the well.
- f. A table showing historical lateral and vertical (if applicable) down-gradient directions and gradients.
- g. Cumulative data tables containing the water quality analytical results and depth to groundwater for all analytes.
- h. A copy of the laboratory analytical data report.
- i. The status of any ongoing remediation, including:
 - i. Site maps indicating the capture zone and lateral and vertical extent of waste plumes.
 - ii. Average extraction rates of all treatment systems.
 - iii. Influent and effluent concentrations of TPH-G, BTEX, MTBE, di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), tert amyl methyl ether (TAME), and tert butyl alcohol (TBA), and disposal location.
 - iv. Mass of hydrocarbons treated during the reporting period and cumulative to date.
 - v. The effectiveness of the remediation system, including estimated mass of wastes remaining and predicted time frame for meeting cleanup objectives.
 - vi. System operating time, including running and down time for the remediation system(s).
 - vii. Any field notes pertaining to the operation and maintenance of the system, and a summary of consultant visits to the site.
 - viii. Evaluation of the overall remediation program and recommendations to correct deficiencies or increase efficiency.
- j. If applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.

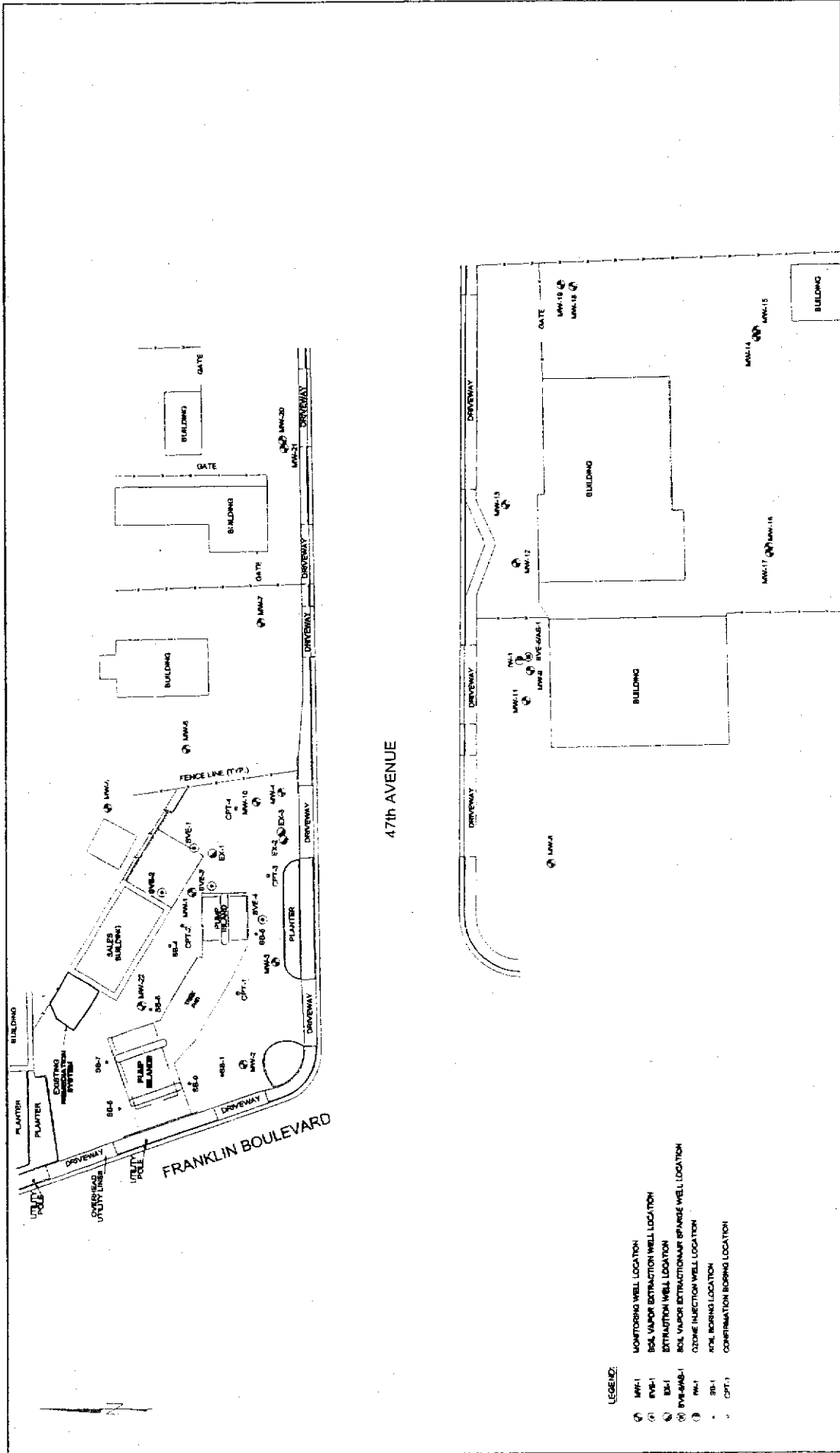
7. The Third Quarter Semi-Annual Groundwater Monitoring Report, due **1 November** of each year shall be an expanded report and will include the following additional information/items:
 - a. Tabular summaries of all data obtained during the year.
 - b. Graphical summaries of TPH-G and MTBE concentrations, groundwater elevation data, and remediation system operation, versus time for wells MW-1, MW-4, MW-12, MW-13, MW-14, and MW-15, and additional wells as request by Regional Water Board staff.
 - c. A rose diagram presenting groundwater flow direction and magnitude data.
 - d. Contaminant concentration contour maps for TPH-G, benzene, and MTBE, as applicable, for each quarter from the previous year, if applicable.
 - e. A discussion of the long-term trends in the concentrations of the pollutants in the groundwater monitoring wells.
 - f. An analysis of whether the pollutant plume is being captured by an extraction system or is continuing to spread.
 - g. A description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants, and plans to improve remediation system effectiveness.
 - h. An identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
 - i. If desired, a proposal and rationale for any revisions to the groundwater sampling plan frequency and/or list of analytes.
8. The results of any monitoring done more frequently than required at the locations specified in the MRP also shall be reported to the Regional Water Board.
9. The Discharge shall be responsible for submitting a separate remediation status report documenting remedial activities and remedial system operation for the second and fourth quarters. Both the paper copy and the electronic submittal are due by the 1st day of the second month following the end of the calendar quarter by **1 February, and 1 August**, until such time as the Executive Officer determines that the reports are no longer necessary. Each remediation status report shall include the following minimum information:
 - a. The status of any ongoing remediation, including:
 - i. Average extraction rates of all treatment systems.

- ii. Influent and effluent concentrations of TPH-G, BTEX, MTBE, di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), tert amyl methyl ether (TAME), and tert butyl alcohol (TBA), and disposal location.
 - iii. Mass of hydrocarbons treated during the reporting period and cumulative to date.
 - iv. The effectiveness of the remediation system, including estimated mass of wastes remaining and predicted time frame for meeting cleanup objectives.
 - v. System operating time, including running and down time for the remediation system(s).
 - vi. Any field notes pertaining to the operation and maintenance of the system, and a summary of consultant visits to the site.
 - vii. Evaluation of the overall remediation program and recommendations to correct deficiencies or increase efficiency.
 - b. If applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions.
10. The Discharger shall implement the above monitoring program as of the date of this Order.
11. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, section 2050. The petition must be received by the State Board, Office of Chief Counsel, P. O. Box 100 Sacramento, 95812 within 30 days of the date of this order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

Ordered by: _____

PAMELA C. CREEDON,
Executive Officer

January 26, 2009
(Date)



47th AVENUE

FRANKLIN BOULEVARD

SUPERSTAR PLUS CORPORATION
8351 FRANKLIN BOULEVARD
SACRAMENTO, CALIFORNIA
SITE PLAN

FIGURE 1
PROJECT NO. 2006-8351-01

SCALE
0 50 FT

STRATUS ENVIRONMENTAL, INC.

- LEGEND:**
- MW-1 MONITORING WELL LOCATION
 - EV-1 BGL VAPOR EXTRACTION WELL LOCATION
 - EV-2 EXTRACTION WELL LOCATION
 - EV-3 SOIL VAPOR EXTRACTION/SPARGE WELL LOCATION
 - EV-4 CODE INJECTION WELL LOCATION
 - EV-5 KOL BORING LOCATION
 - EV-6 CONFIRMATION BORING LOCATION