

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

**MONITORING AND REPORTING PROGRAM NO. R5-2009-0802
CALIFORNIA WATER CODE SECTION 13267**

FOR

**SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY
FORMER LAWSON MECHANICAL
58 ARDEN WAY, SACRAMENTO
SACRAMENTO COUNTY**

The Former Lawson Mechanical (Site) at 58 Arden Way Street in Sacramento, Sacramento County, is situated on the southeast corner of Arden Way and Barstow Street (Figure 1). The Site is currently a vacant lot and surrounding land use is predominantly industrial and commercial, with residential property located to the northeast. A petroleum discharge from a former underground storage tank has resulted in soil and groundwater pollution. The property is currently owned by the Sacramento Housing and Redevelopment Agency (Discharger).

In 1990, impacted soil was excavated to a depth of approximately 30 feet, aerated on-site and then used to backfill the excavation. Groundwater is first encountered at approximately 36 feet below ground surface (bgs). Groundwater samples have contained petroleum and chlorinated hydrocarbon constituents at maximum concentrations of: total petroleum hydrocarbons (TPH-G) 36,000 micrograms per liter (ug/l), benzene 3,190 ug/l, toluene 207ug/l, ethylbenzene 329 ug/l, xylenes 1,100 ug/l, 1,2-dichloroethane (1,2-DCA) 130 ug/l, tetrachloroethylene (PCE) 146 ug/l, and trichloroethylene (TCE) 11,300 ug/l. During the first quarter 2008 groundwater monitoring event, concentrations of chemical constituents were detected at maximum concentrations of: TPH-G 5,800 ug/l, benzene 5.7 ug/l, 1,2-DCA 28 ug/l, PCE 110 ug/l, and TCE 11,000 ug/l. This pollution has impaired the beneficial uses of the underlying water resource. Industrial activities conducted at the Micheletti Property (2147 Barstow Street, Sacramento), a nearby property, has contributed to the local groundwater pollution.

This Monitoring and Reporting Program (MRP) is issued pursuant to Section 13267 of the California Water Code and is necessary to delineate waste discharged from the Former Lawson Mechanical, characterize groundwater pollutant plumes and determine whether remediation efforts are effective. Existing data and information about the Site show the presence of various chemicals, including TPH-G; benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tert butyl ether (MTBE); and 1,2-DCA, emanating from the property resulting from past operations at the Site. Regional coordination of groundwater monitoring is needed to better understand contribution from adjacent sites to the groundwater pollution plume, and to evaluate and select remedial technologies for restoration of the beneficial uses of this water resource.

Prior to construction of any new groundwater monitoring or extraction wells, and prior to destruction of any groundwater monitoring or extraction wells, the Discharger 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 schedule below. The Discharger 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

1. As shown on Figure 1, there are five groundwater monitoring wells, MW-1, MW-2, MW-3, MW-4, and MW-5, associated with the Former Lawson Mechanical. The groundwater monitoring program for the five monitoring wells and any wells installed subsequent to the issuance of this MRP, shall follow the schedule below.
2. Monitoring wells with free phase petroleum product or visible sheen shall be monitored, at a minimum, for product thickness and depth to water.
3. Sample collection and analysis shall follow standard Environmental Protection Agency (EPA) protocols. All wells shall be monitored quarterly for water levels and the presence and thickness of free product. The volume of extracted groundwater also shall be provided in quarterly monitoring reports.

SAMPLING FREQUENCY						
Quarterly						
Wells	MW-1	MW-2	MW-3	MW-4	MW-5	New Wells

Constituents ¹	EPA Analytical Method	Maximum Practical Quantitation Limit (ug/l) ²	Analysis Frequency
Depth to Groundwater	---	---	Quarterly
TPH-G	8015M or 8260B	50	Quarterly
Benzene	8020 or 8260B	0.5	Quarterly
Toluene	8020 or 8260B	0.5	Quarterly
Ethylbenzene	8020 or 8260B	0.5	Quarterly
Xylenes	8020 or 8260B	0.5	Quarterly
Naphthalene	8260B	0.5	Quarterly
1,2-Dichloroethane	8260B	0.5	Quarterly

1 Report all discrete peaks identified during the normal course of analysis.

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

REPORTING

4. When reporting the data, the Discharger shall arrange the information in tabular form so that the date, the 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. Groundwater monitoring shall be coordinated between the Former Lawson Mechanical Facility (58 Arden Way, Sacramento), and the Micheletti Property (2147 Barstow Street,

Sacramento). Data generated from each Site is to be shared between Responsible Parties. The monitoring report should include a regional evaluation of the groundwater pollution. All well surveys must be tied to a common datum. Site Maps must show all data from both Sites.

6. 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.
7. The Discharger shall submit a paper copy of the quarterly report to this Regional Water Board office and submit the quarterly 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 Boards 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 by **1 February, 1 May, 1 August, and 1 November**, until such time as the Executive Officer determines that the reports are no longer necessary. Each quarterly 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, and volume of water purged.
 - (c) Groundwater contour maps for all groundwater zones.
 - (d) Concentration contour maps for all groundwater zones for TPH-G, benzene, and 1,2-DCA.
 - (e) A table showing well construction details such as 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 describing 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.
 - (h) A copy of the laboratory analytical data report.
 - (i) If applicable, the status of any ongoing remediation, including cumulative information on the mass of pollutant removed from the subsurface, system operating time, the effectiveness of the remediation system, and any field notes pertaining to the operation and maintenance of the system.

- (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.
8. The Fourth Quarter Monitoring Report, due **1 February** 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, benzene, and 1,2-DCA concentrations, and groundwater elevation data versus time for Site wells.
 - (c) A rose diagram presenting groundwater flow direction and magnitude data.
 - (d) Contaminant concentration contour maps for TPH-G, benzene, and 1,2-DCA for each quarter from the previous year.
 - (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.
9. The results of any monitoring done more frequently than required in the MRP also shall be reported to the Regional Water Board.

The Discharger shall implement the above monitoring program as of the date of the Order.

Ordered by: _____
PAMELA C. CREEDON,
Executive Officer

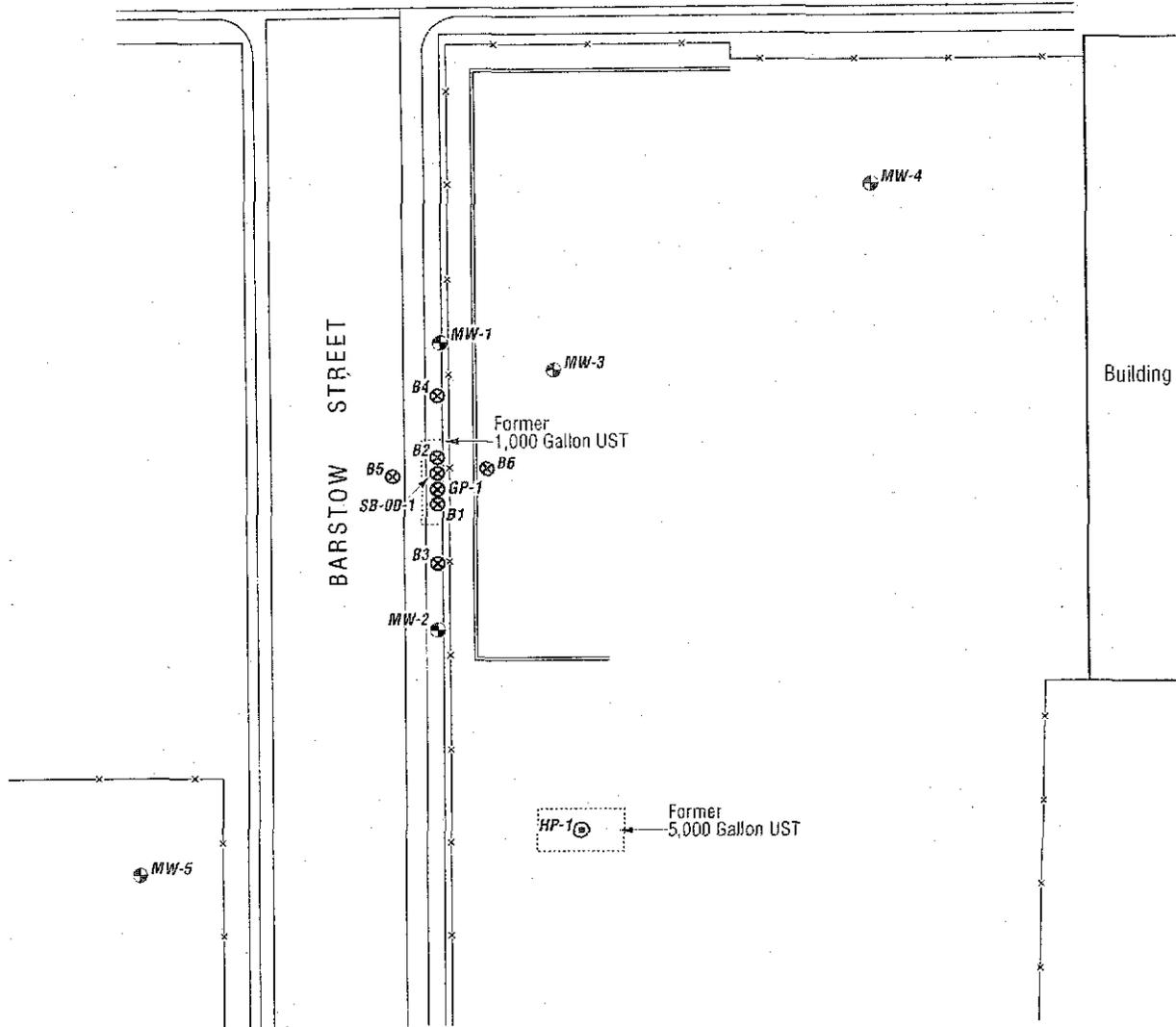
1-12-2009
(Date)



ARDEN WAY

BARSTOW STREET

Building



0 40
Scale in Feet

Ref: Anderson Consulting Group, Sept. 2000

LEGEND:

- MW-5 Approximate Monitoring Well Location
- B5 Approximate Boring Location
- HP-1 Approximate Hydropunch Location
- UST Underground Storage Tank

GEOCON

CONSULTANTS, INC.

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Former Lawson Mechanical

58 Arden Way
Sacramento, California

SITE PLAN

S9299-06-01

April 2008

Figure 1