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Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Service Station No. 9-0917
5280 Hopyard Road
Pleasanton, CA

I have reviewed the attached work plandated October 19, 2009.

This information in this work plan is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This work plan was prepared by Conestoga Rovers Associates, upon who assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Aaron Costa
Project Manager

Attachment: Work Plan

CONESTOGA-ROVERS
& ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
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October 19, 2009 Reference No. 060057

Mr. Jerry Wickham
Alameda County Environmental Health Services (ACEH)
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Work Plan for Well Destructions
Chevron Service Station 9-0917
5280 Hopyard Road
Pleasanton, California
Fuel Leak Case RO0000439

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) is submitting this *Work Plan for Well Destructions* on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. Chevron Global Marketing is planning an expansion of the current station building and one extraction well and one vapor well are within the proposed building footprint. CRA requests approval to destroy the wells. Presented below are a summary of the site background and the proposed scope of work.

SITE BACKGROUND

The site is an active Chevron station located at the southern corner of the intersection of Hopyard Road and Owens Drive in Pleasanton, California (Figure 1). Site facilities include a station building, car wash, four underground storage tanks (USTs) and three dispenser islands under a common canopy (Figure 2). A Shell-branded service station is located across Hopyard Road to the east of the site and has an open case with ACEH. Land use surrounding the site is primarily commercial.

A total of 5 soil borings, 9 groundwater monitoring wells, 1 extraction well and 4 soil vapor wells have been installed at the site. A summary of environmental investigations conducted to date at the site is included as Attachment A.

SITE GEOLOGY AND HYDROGEOLOGY

The site is located in the Dublin Sub-Basin (DSB) of the Livermore Valley Groundwater Basin. Soils in this sub-basin consist mainly of Holocene age valley-fill deposits with a surficial clay layer cap up to 40 feet thick. Alluvial fan and stream deposits consisting of unconsolidated sand, gravel, silt and clay have been encountered below the clay cap in this sub-basin.

The upper, unconfined groundwater in the DSB generally flows southward. Aquifers in the DSB are generally flat lying, but there is a drop in groundwater elevation of approximately 50 feet across the Parks Fault (Evaluation of Groundwater Resources: Livermore and Sunol Valleys, Department of the Water Resources Bulletin Number 118-2, June 1974). The Park Fault trends east-northeast approximately 1 mile south of the site (Pacific Environmental Group, Inc., *Soil and Groundwater Investigation*, dated August 11, 1997).

Based on historic and recent boring logs, sediments observed immediately beneath the site consist of interbedded clay, silty clay, clayey silt, sandy silt and silt to the maximum explored depth of 60 feet below grade (fbg). Groundwater depth ranges between approximately 5 and 10 fbg and flows generally southward at a gradient of 0.004 to 0.009.

PROPOSED SCOPE OF WORK

CRA proposes to destroy extraction well IW-1 and vapor well VP1 to accommodate the expansion of the station building. To accomplish the scope of work, CRA proposes to conduct the following:

Health and Safety Plan: CRA will prepare a health and safety plan to protect site workers. The plan will be reviewed and signed by all site workers and visitors. The plan will remain onsite during all field activities.

Permits: CRA will obtain the necessary permits from Zone 7 Water Agency prior to beginning field operations.

***Underground Utility Location*:** CRA will contact Underground Services Alert (USA) and use a private utility locator to confirm that no utilities are present at or near the well locations.

Well Destructions: Once well IW-1 is cleared of underground utilities, CRA will drill out to total depth using 10-inch hollow-stem augers. After each well is drilled out, the boring will be

tremie grouted with Portland Type I/II neat cement. Once the well is grouted, the well vault will be removed and the area resurfaced or backfilled as required to match the existing grade. CRA's standard operating procedures for monitoring well destruction are included as Attachment B. Vapor probe VP1 will be removed by hand augering to the total depth and removing the probe and all associated tubing. The vapor well will be grouted with Portland Type I/II neat cement. Once the well is grouted, the well vault will be removed and the area resurfaced or backfilled as required to match the existing grade.

Waste Disposal: All waste generated will be placed in drums and labeled appropriately. These wastes will be transported to the appropriate Chevron-approved disposal facility following receipt of analytical profile results.

Reporting: A report documenting the well destructions will be submitted to ACEH approximately 6 weeks following completion of work.

CLOSING

Presently, there is an ongoing soil vapor investigation at the site due to elevated soil gas concentrations in the subsurface primarily in the vicinity of vapor well VP1. Since the source of these soil gas concentrations has yet to be determined, CRA, at the request of Chevron has planned an additional soil gas investigation. Based on the investigation results CRA will determine if vapor well VP1 will need to be replaced.

Historically, extraction well IW-1 was solely used for batch groundwater extraction and it was determined that little hydrocarbon mass could be removed through groundwater extraction. Based on these results, there is no need to replace the well as it is not providing any valuable groundwater data. Additional information related to well IW-1 is available in Cambria Environmental Technology's March 12, 2007 *Groundwater Batch Extraction Results.*

CONESTOGA-ROVERS
& ASSOCIATES

October 19, 2009 Reference No. 060057

Due to the construction schedule of the project, CRA is requesting expedited review and approval of this work plan. If you have any questions or comments, please contact Ms. Charlotte Evans at (510) 420-3351 or Mr. Aaron Costa at (925) 543-2961.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Charlotte Evans Brandon S. Wilken, P.G. # 7564

CE/doh/7

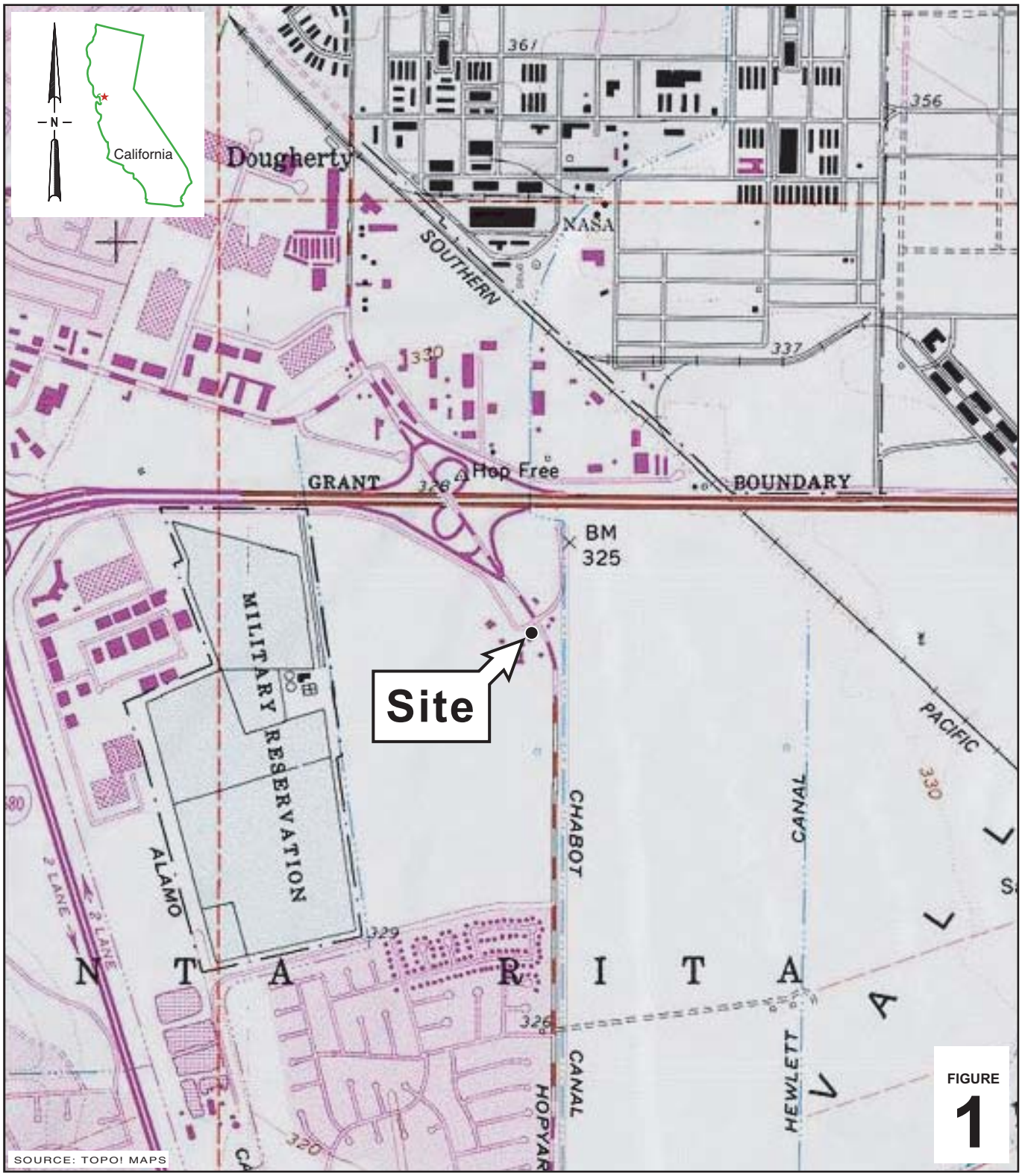
Enc.

Figure 1	Site Vicinity Map
Figure 2	Site Plan
Attachment A	Summary of Previous Environmental Work
Attachment B	Standard Field Procedures for Well Destruction

cc: Mr. Aaron Costa, Chevron Environmental Management Company
Lamorinda Development and Investment
C&H Development Company

FIGURES

10/23/08



I:\Chevron\0600-\060057 9-0917 Pleasanton\060057-FIGURES\060057 VICINITY-MAP.AI

FIGURE
1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Chevron Service Station 9-0917
5280 Hopyard Road
Pleasanton, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

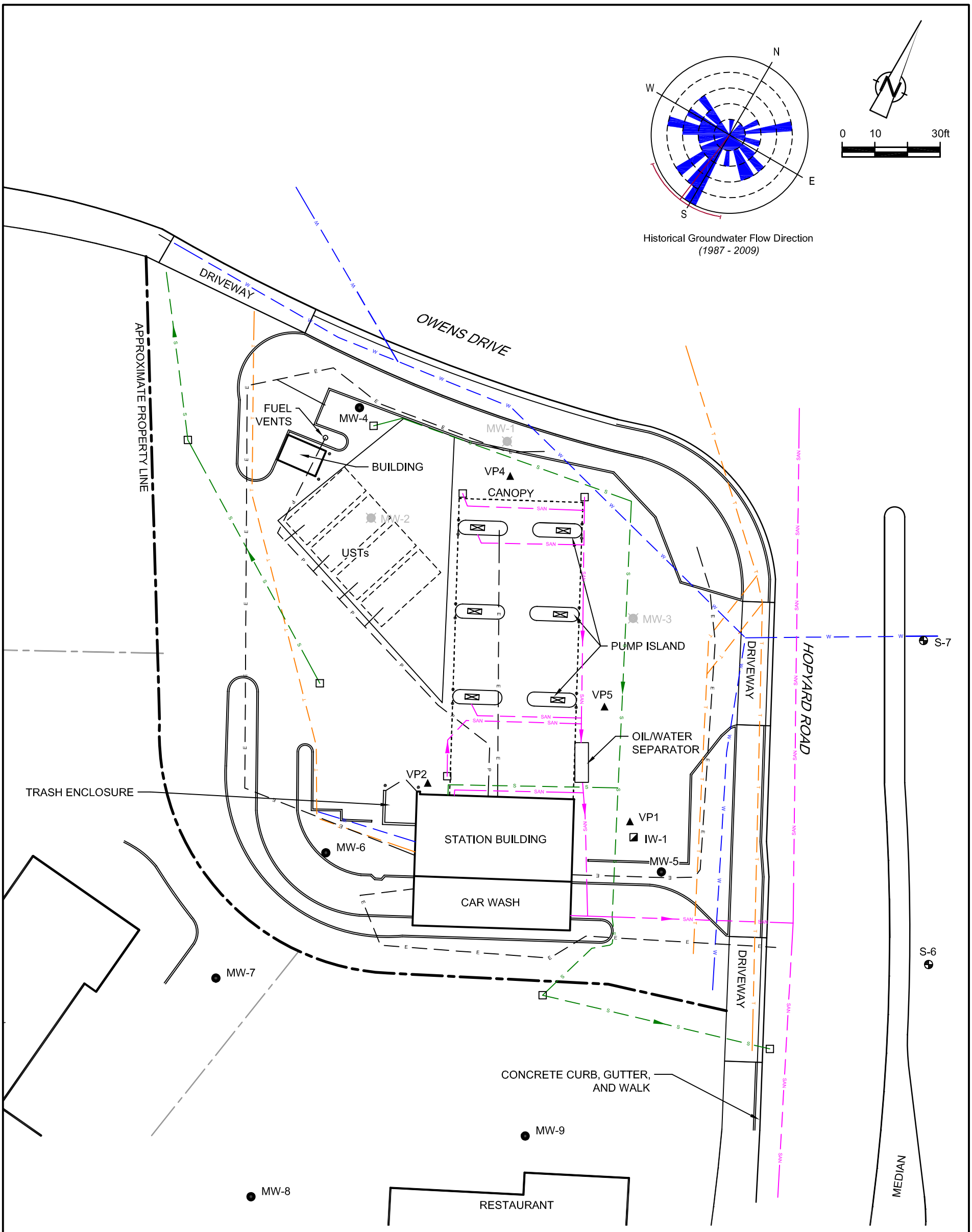


Figure 2

SITE PLAN WITH UTILITIES
CHEVRON STATION 9-0917
5280 HOPYARD ROAD
Pleasanton, California

60057-2009(PRES003)GN-WA001 OCT 13/2009

ATTACHMENT A

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

1989 Monitoring Well Installation: In August 1989, Groundwater Technology, Inc. (GTI) installed onsite groundwater monitoring wells MW-1 through MW-3. No total petroleum hydrocarbons as gasoline (TPHg) or benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in soil. Only 6 micrograms per liter (µg/L) ethylbenzene was detected in groundwater, no other fuel hydrocarbons were detected. Additional information available in GTI's August, 1989 *Site Assessment Report.*

1991 Monitoring Well Destruction and Well Installation: In July 1991, GTI destroyed wells MW-1 through MW-3 and installed groundwater monitoring wells MW-4 through MW-6. TPHg was detected at up to 3 milligrams per kilogram (mg/kg) in well MW-5, but the chromatogram was not consistent with a gasoline standard pattern. In particular, a set of peaks are present both before and after the gasoline hydrocarbon range, indicating a suite of hydrocarbons both lighter and heavier than normal gasoline-range hydrocarbons. No benzene, ethylbenzene or xylenes were detected; toluene was detected at a maximum concentration of 0.022 mg/kg. Groundwater was encountered in the well borings at a depth of approximately 13 fbg. Maximum TPHg and benzene concentrations were detected in groundwater in well MW-5 at 12,000 micrograms per liter (µg/L) and 4,000 µg/L, respectively. Additional information is available in GTI's November 14, 1991 *Well Installation Report.*

1991 UST Replacement and Soil Excavation: In June 1991, Blaine Tech Services, Inc. observed the underground storage tank (UST) system removal and soil excavation, and collected soil and groundwater samples for chemical analyses. Five fiberglass USTs consisting of three 10,000-gallon gasoline, one 10,000-gallon diesel, and one 500-gallon used-oil UST were removed and replaced with four 12,000-gallon double-walled fiberglass gasoline USTs. TPHg and benzene were detected in soil samples collected from the bottom of the UST excavation at maximum concentrations of 70 mg/kg and 0.64 mg/kg, respectively, at depths of 9.5 fbg to 10 fbg. TPHg and benzene were detected in over-excavation soil samples collected from beneath the fuel product piping at concentrations of 440 mg/kg and 1.1 mg/kg, respectively, at 7 fbg. Total petroleum hydrocarbons as diesel (TPHd) was detected at a maximum concentration of 8.0 mg/kg from 10 fbg in the product piping area. Over-excavation of UST and product piping areas extended to maximum depths of approximately 10 fbg. Concentrations of 24,000 µg/L TPHg and 1,000 µg/L benzene were detected in a groundwater sample collected from the UST excavation. Depth to water in the excavation was measured at approximately 10 fbg. Approximately 90 cubic yards of soil, not including pea gravel, were removed during UST removal and over-excavation, and approximately 70 cubic yards of soil were removed during product line removal and over-excavation. The probable hydrocarbon source area, based on reported soil and grab-groundwater samples, is the former dispenser

island and associated northeastern product lines. Additional information can be found in Gettler-Ryan's (G-R) *Site Conceptual Model and Closure Request*, dated January 25, 2002.

1997 Monitoring Well Installation: On May 5, 1997, Pacific Environmental Group, Inc. (PEG) installed offsite groundwater monitoring wells MW-7 through MW-9 to define the extent of petroleum hydrocarbons and methyl tertiary-butyl ether (MTBE) in groundwater south of the source area. No TPHg, BTEX or MTBE was detected in any soil samples. Selected soil samples were sent to Cooper Testing Facilities for physical analysis for moisture, density, porosity, specific gravity, and organic content. Details of this investigation can be found in PEG's *Soil and Groundwater Investigation*, dated August 11, 1997.

March 1999 Enhanced Bioremediation: On March 26, 1999, G-R installed oxygen releasing compound (ORC) socks in wells MW-5 and MW-6 to increase the dissolved oxygen concentrations in groundwater to enhance biodegradation of the hydrocarbon plume. ORC in this application had an estimated time release of approximately six months. A significant decrease in dissolved hydrocarbon concentrations was observed in wells MW-5 and MW-6 after installation of the ORC. A significant decrease in dissolved oxygen (DO) concentrations in wells MW-5 and MW-6 was reported from samples collected from June 19, 2000 to September 18, 2000, suggesting that the ORC socks were spent. During the next five quarters DO concentrations stabilized around 3.6 milligrams per liter (mg/L) and 4.3 mg/L in wells MW-5 and MW-6, respectively. A second significant decrease in DO was reported in samples collected from September 7, 2001 to December 5, 2001. Per the request of ACEHS, G-R removed the ORC socks in wells MW-5 and MW-6 during the monitoring and sampling event on September 7, 2001.

2006 Subsurface Investigation: In February 2006, Cambria Environmental Technology, Inc. (Cambria) advanced five soil borings. Two of the borings were advanced to deeper groundwater bearing zones using a Cone Penetration Technology (CPT) direct push drill rig. TPHg was only detected in soil samples from boring GP-1, at concentrations ranging from 7.9 mg/kg at 7 fbg to 110 mg/kg at 5 fbg. Benzene was detected only in soil boring GP-1 at concentrations ranging from 0.003 mg/kg at 7 fbg to 0.09 mg/kg at 10 fbg. MTBE was detected only in soil boring GP-2 at 10 fbg at a concentration of 0.006 mg/kg. The highest TPHg concentrations detected in grab-groundwater samples were 2,400 µg/L at 8 fbg from GP-1 and 110 µg/L at 28 fbg in GP-2. Benzene was only detected in samples from GP-1 at concentrations of 2 µg/L (8 fbg) and 0.7 µg/L (36 fbg), respectively. MTBE detections were 19 µg/L in GP-1 at 36 fbg and 22 µg/L in GP-2 at 28 fbg. No TPHg, benzene or MTBE were detected in grab-groundwater samples from borings GP-3 through GP-5, with the exception of 1 µg/L MTBE in GP-5. Additional information is available in Cambria's March 29, 2006 *Subsurface Investigation Report*.

2006 Well Installation: In August 2006, Cambria installed remediation well IW-1. TPHg and benzene were detected at maximum concentrations of 880 mg/kg at 15.5 fbg and 0.35 mg/kg at 20 fbg, respectively. No MTBE was detected in soil. Details of this investigation can be found in Cambria's *Subsurface Investigation Report*, dated September 26, 2006.

2007 Groundwater Batch Extraction: Cambria performed batch groundwater extraction from well IW-1. The calculated TPHg mass removed was 0.0051 pounds. Review of the boring log and physical soil data indicate the majority of soil encountered beneath the site has high clay content and low permeability, therefore it yielded little hydrocarbon mass through groundwater extraction. Additional information is available in Cambria's March 12, 2007 *Groundwater Batch Extraction Results.*

2009 Soil Vapor Probe Installations: Conestoga-Rovers & Associates (CRA) installed four soil vapor probes onsite to evaluate the potential for a vapor intrusion pathway onsite from soil gas to indoor air. TPHg in soil was only detected in VP1 at 100 mg/kg. Benzene was detected in all four soil samples, ranging in concentration from 0.0007 mg/kg in VP2 and VP4 to 1.2 mg/kg in VP1. No toluene, ethylbenzene, xylenes or MTBE were detected above environmental screening levels (ESLs)[1] in any soil sample. Probe VP1 had hydrocarbon concentrations above ESLs[2] with maximum concentrations of 200,000,000 micrograms per meter cubed ($\mu g/m^3$) TPHg, 960,000 $\mu g/m^3$ benzene, and 87,000 $\mu g/m^3$ xylenes. No toluene, ethylbenzene, or MTBE was detected above shallow soil vapor ESLs. Elevated methane concentrations were detected in samples from VP1 and VP5, with a maximum concentration of 57 percent. Both VP1 and VP5 are adjacent to sewer lines that exit the station building. Details of this investigation can be found in CRA's *Soil Vapor Probe Installation and Sampling Report*, dated April 19, 2009.

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1 Environmental Screening Levels (ESLs) for shallow soils (≤3m) where groundwater is current or potential source of drinking water for commercial/industrial land use from the 2007 *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* by the California Regional Water Quality Control Board, San Francisco Bay Region Interim Final November 2007, revised May 2008, Table A.

2 Environmental Screening Levels (ESLs) soil gas (Vapor Intrusion concerns) for commercial/industrial land use from the 2007 *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* by the California Regional Water Quality Control Board, San Francisco Bay Region Interim Final November 2007, revised May 2008, Table E

ATTACHMENT B

STANDARD FIELD PROCEDURES FOR WELL DESTRUCTION

Conestoga-Rovers & Associates

STANDARD FIELD PROCEDURES FOR ABANDONING MONITORING WELLS

This document presents standard field methods for abandoning ground water monitoring wells. The objective of well abandonment is to destroy wells in a manner that is protective of potential water resources. The two procedures most commonly used are pressure grouting and drilling out the well. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Pressure Grouting

Pressure grouting consists of injecting neat Portland cement through a tremie pipe under pressure to the bottom of the well. The cement is composed of about five gallons of water to a 94 lb. sack of Portland I/II Cement. Once the well casing is full of grout, it remains pressurized by applying pressure with a grout pump. The well casing can also be pressurized by extending the well casing to the appropriate height and filling it with grout. In either case, the additional pressure allows the grout to be forced into the sand pack. After grouting the sand pack and casing, the well vault is removed and the area resurfaced or backfilled as required.

Well Drill Out

When well drill out is required, a hollow-stem auger drilling rig is used to drill out the well casing and pack materials. First, drill rods are dropped down the well and used to guide the augers as they drill out the well. Once the well is drilled out, the boring is filled with Portland cement injected through the augers or a tremie pipe under pressure to the bottom of the boring. The well vault is removed and the area resurfaced or backfilled as required.