Chevron Environmental Management Company
6001 Bollinger Canyon Rd, K2236
P.O. Box 6012
San Ramon, CA 94583-2324
Tel 925-842-9559
Fax 925-842-8370

Dana Thurman
Project Manager

ChevronTexaco

August 31, 2006
(date)

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

Re: Chevron Service Station # 9-2029

Address: 890 W. MacArthur Boulevard, Oakland, California

I have reviewed the attached report titled *Well Destruction and Installation Workplan* and dated August 31, 2006.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Cambria Environmental Technology, Inc., upon whose 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.

Sincerely,

Dana Thurman
Project Manager

Enclosure: Report

CAMBRIA

August 31, 2006

Mr. Barney Chan
Alameda County Health Care Services (ACHCS)
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: **Well Destruction and Installation Workplan**
Former Chevron Service Station 9-2029
890 W. MacArthur Blvd.
Oakland, California

Dear Mr. Chan:

Cambria Environmental Technology, Inc. (Cambria) is submitting this *Well Destruction and Installation Workplan* on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. Cambria proposes to properly destroy all on-site monitoring wells to accommodate impending site development and install wells off-site for continued hydrocarbon plume monitoring. The site background and details of the proposed work are presented below.

SITE BACKGROUND

The site is located at the northeast corner of the intersection of West MacArthur Boulevard and Market Street in Oakland, California (Figure 1). Surrounding land use is mixed commercial and residential. Chevron began site operation under a ground lease agreement in 1956 and operated a service station continuously at the site until June 2004. According to Chevron's records, facilities were constructed prior to 1956, indicating station operations prior to Chevron's site involvement. Two of the three parcels were subsequently purchased by Chevron in 1957, followed by a third parcel in 1984.

In 1984, the site was reconstructed into its most recent configuration. Product dispenser replacement and UST upgrades were conducted in 1997. The former site facilities consisted of a kiosk and five dispenser islands under a common canopy. The previous generation of USTs, in a common pit, was located directly east of the kiosk. All previous generation USTs were located in the same area. A former used-oil UST was located northeast of the kiosk and adjacent to the northeast dispenser island. A former station building, housing hydraulic lifts, was located immediately north of the kiosk. The site is currently a vacant lot.

Cambria Environmental Technology, Inc.

2000 Opportunity Drive
Suite 110
Roseville, CA 95678
Tel (916) 677-3407
Fax (916) 677-3687

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SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

April 1981 Tank Test and Subsurface Investigation: In April 1981, Smith and Denison conducted a tank integrity test and advanced two soil borings. The test indicated the tanks were corroded, but had no holes. Total petroleum hydrocarbons as gasoline (TPHg) were reported in three of the four soil samples collected.

March 1991 Air Monitoring: In March 1991, Environmental Health Consultants conducted ambient air monitoring and sampling when a strong hydrocarbon odor was noted in the service station building. The results indicated hydrocarbons were present in air entering the station building from the crawl space beneath the building.

February 1997 Subsurface Investigation: In February, 1997 Gettler-Ryan Inc. (G-R) conducted a soil investigation during the product dispenser replacement and UST upgrade. The existing dispensers were removed and the soil in the immediate vicinity of each dispenser island was excavated. Soil samples were collected at the base of the each excavation at approximately three feet below grade (fbg) which reported TPHg, methyl tertiary butyl ether (MTBE) and benzene were detected in soil underneath the dispenser islands. Investigation results are presented in G-R's *Soil Sampling During Product Dispenser Investigation Report, dated October 31, 2000*

October 2001 Subsurface Investigation: In October 2001, G-R advanced ten soil borings, B-1 through B-10, to depths between 16.5 and 19 fbg. Based on analytic results, hydrocarbon impact appeared to be limited to the central and southern portion of the site. Initial groundwater samples collected from the borings indicated maximum TPHg, benzene, and MTBE concentrations were 33,000 µg/L (B3), 1,200 µg/L (B3) and 820 µg/L (B1), respectively.

March 2002 Monitoring Well Installation: In March 2002, Delta Environmental Consultant Inc. (Delta) installed monitoring wells MW-1 through MW-4. No hydrocarbons were reported in soil from MW-1 and MW-2. MW-3, located in the southern portion of the site, reported the highest hydrocarbon concentrations down-gradient of the source area.

April 2005 Station Removal: In April 2005, Chevron contracted Musco Excavators Inc. to remove all station facilities, USTs, dispenser islands and associated piping. Cambria collected compliance samples in the UST cavity, and beneath the disperser islands and associated product piping. Approximately 54 tons of soil was excavated during facility removal and approximately 16,400 gallons of groundwater was pumped out of the tank cavity. Approximately 5,080 tons of additional soil was excavated across the entire site to a depth of approximately 12 fbg. Due to

depth of groundwater approximately 25,486 gallons of groundwater were pumped from the excavated areas. Details of this investigation can be found in Cambria's *June 17, 2005, Underground Storage Tank/Product Piping Removal and Compliance Sampling Report.*

March 2006 Subsurface Investigation: In March 2006, Cambria advanced soil borings SB-1 through SB-9. Two groundwater grab samples were collected in all soil borings, except SB-4 and SB-7, at first encountered water and approximately 10 to 15 feet below initial groundwater depth. TPHg, benzene and MTBE were reported at maximum concentrations of 2,700 µg/L (20 fbg, SB-2), 34 µg/L (20 fbg, SB-2), and 210 µg/L (23 fbg, SB-9), respectively. No reported concentration of benzene or MTBE exceeds the applicable San Francisco Bay Regional Water Quality Control Board (SF Bay-RWQCB) environmental screening limits (ESL)[1] of 46 µg/L and 1,800 µg/L, respectively. TPHg only exceeds the ESL of 500 µg/L in soil boring SB-2. Soil boring SB-6, located down-gradient of boring SB-2, reported no TPHg, benzene or MTBE above laboratory detection limits.

PROPOSED SCOPE OF WORK

In order to accommodate impending site redevelopment, Cambria proposes properly destroying on-site monitoring wells MW-1 through MW-4. Four new wells for continued hydrocarbon plume monitoring will be installed along West MacArthur Boulevard and Market Street (Figure 2). Standard Operating Procedures for Monitoring well Installations and Destructions are presented in Attachment A. Details of the proposed work are discussed below.

Permits: Cambria will obtain well installation permits from Alameda County Public Works Agency (ACPWA) and encroachment permits from the City of Oakland prior to the beginning of any field operations. Cambria will notify ACPWA at least 48 hours prior to the start of work.

Site Health and Safety Plan: Cambria will prepare a site safety plan to protect on-site workers. The plan will be kept onsite at all times and signed by all site workers and visitors each day.

Underground Utility Location: Cambria will notify Underground Service Alert prior to drilling to clear monitoring well locations with utility companies. Additionally, Cambria will contract a

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[1] ESL from Table D: Deep Soils (>3m)-Water is NOT a current potential source of drinking water in Chapter 4 of *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* prepared by the California Regional Water Quality Control Board San Francisco Bay Region, interim final dated February 2005

private utility line locator to ensure no utilities are in conflict with the proposed boring locations. All boring locations will be cleared to 8 fbg using an airknife vacuum truck or hand auger prior to drilling.

Soil Borings: After clearing to 8 fbg, Cambria proposes advancing three soil borings using an 8-inch hollow-stem auger to approximately 25 fbg and completing the borings as 2-inch groundwater monitoring wells. Actual well locations may be adjusted based upon underground utility locations. Cambria's standard operating procedures for soil boring monitoring well installation is presented in Attachment A.

Well Installation: The wells will be screened from approximately 15 to 25 fbg. Actual screen intervals may be modified based on the depth at which water bearing units are encountered. The wells will be constructed using 2-inch diameter, 0.010 slotted screen, schedule 40 PVC casing with #2/16 Monterey Sand filter pack.

Chemical Analyses: Selected soil samples will be analyzed at a standard turn around time for:

- TPHg by EPA method 8015B and
- Benzene, toluene, ethylbenzene, xylene (BTEX), fuel MTBE, tert-butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), 1,2 dichloroethane (1,2 DCA) by EPA Method 8260B.

Well Destruction: Monitoring wells MW-1 thorough MW-4 will be properly destroyed by drilling out the total depth of the well and backfilling with Portland I/II cement. Cambria's *Standard Operating Procedures for Well Destruction* is presented as Attachment A.

Well Development and Sampling: The wells will be developed using agitation and evacuation after the well has been installed. Gettler-Ryan Inc. of Dublin, California will develop and sample the wells no sooner than 72 hours after installation.

Well Elevation Survey: The well locations and top of casing will be surveyed to mean sea level by a California Licensed Land Surveyor.

Soil and Water Disposal/Recycling: Soil and water produced during field activities will be temporarily stored on-site. Soil cuttings will either be stockpiled on plastic and covered with plastic or placed in 55-gallon drums and stored on-site. Rinseate and development water will be stored in drums. Following review of laboratory analytical results, the soil and water will be transported to a Chevron approved facility for disposal/recycling.

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Geotracker Upload: Once all of the necessary data is received, the data will be uploaded to the State Water Resources Control Board Geotracker databases as required in sections 2729 and 2729.1 of the California Code of Regulations for USTs.

Reporting: After all analytical results are received; Cambria will prepare a subsurface investigation report that, at a minimum, will contain:

- A summary of the site background and history,
- Descriptions of the monitoring well installation, destruction and soil sampling methods,
- Boring logs,
- DWR well completion reports,
- Tabulated soil analytical results,
- A figure illustrating well locations,
- Analytical reports and chain-of-custody forms,
- Soil and groundwater disposal methods,
- A discussion of the hydrocarbons in soil, and
- Cambria's conclusions and recommendations.

LIMITATIONS

Cambria Environmental Technology, Inc. (Cambria) prepared this document for use by our client and appropriate regulatory agencies. It is based partially on information available to Cambria from outside sources and/or in the public domain, and partially on information supplied by Cambria and its subcontractors. Cambria makes no warranty or guarantee, expressed or implied, included or intended in this document, with respect to the accuracy of information obtained from these outside sources or the public domain, or any conclusions or recommendations based on information that was not independently verified by Cambria. This document represents the best professional judgment of Cambria. None of the work performed hereunder constitutes or shall be represented as a legal opinion of any kind or nature.

SCHEDULE

Cambria will perform this well destruction after receiving written approval of this workplan and permits from the ACHCS. Well destructions and installations are tentatively scheduled to begin on September 27, 2006. Cambria will submit a report approximately six weeks after receipt of analytical data.

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CLOSING

Please call Christene Sunding at (916) 677-3407 (ext. 109) if you have any questions or comments regarding this investigation.

Sincerely,
Cambria Environmental Technology, Inc.

Christene M. Sunding
Senior Staff Geologist

David W. Herzog P.G. #7211
Senior Project Geologist

Figures: 1 – Vicinity Map
2 – Site Plan

Attachments: A – Standard Operating Procedures

cc: Mr. Dana Thurman, Chevron Environmental Management Company, P.O. Box 6012, K2236, San Ramon, CA 94583
Cambria File Copy

06/10/05

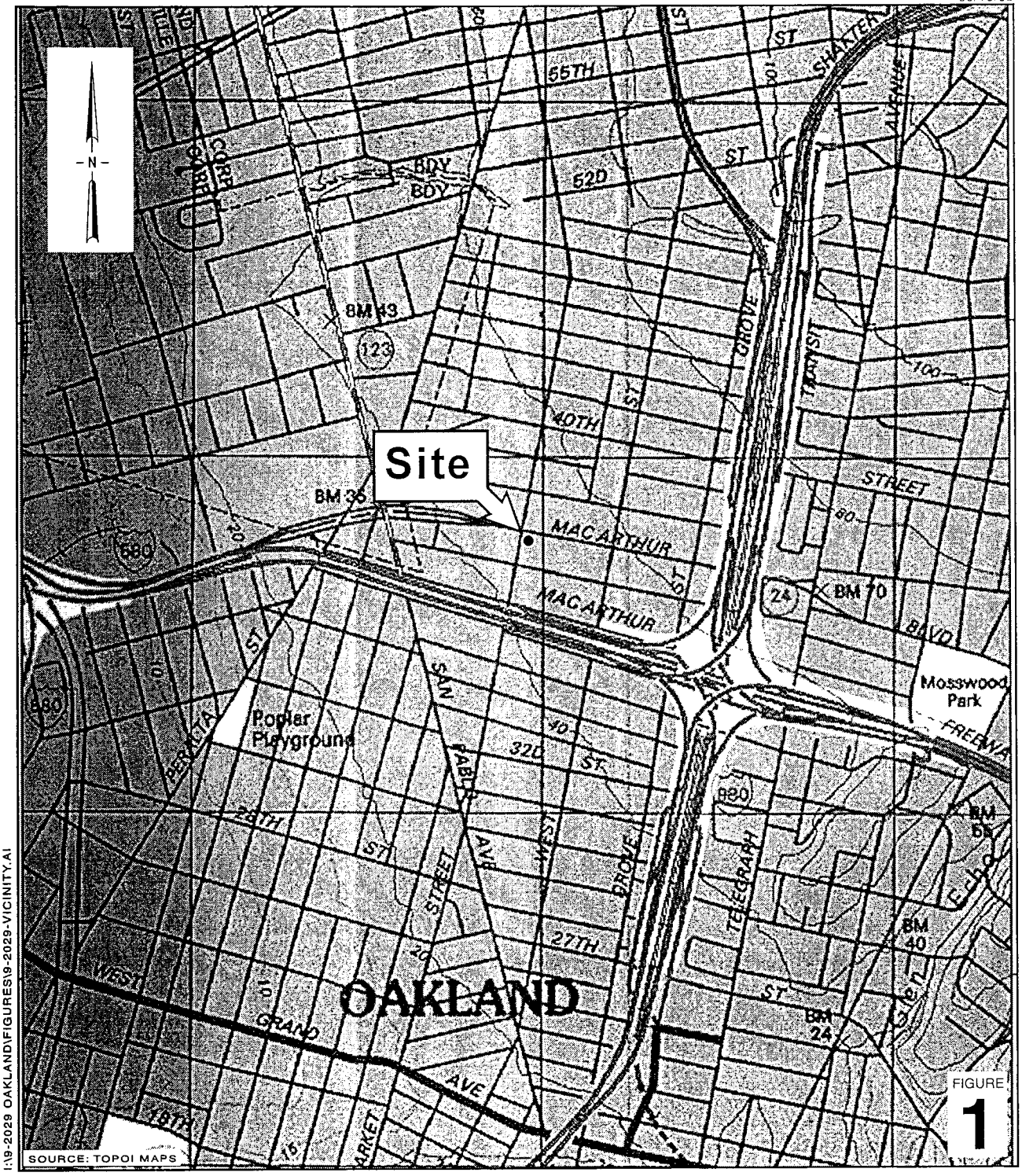

FIGURE 1

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0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Chevron Service Station 9-2029

890 West MacArthur Boulevard

Oakland, California

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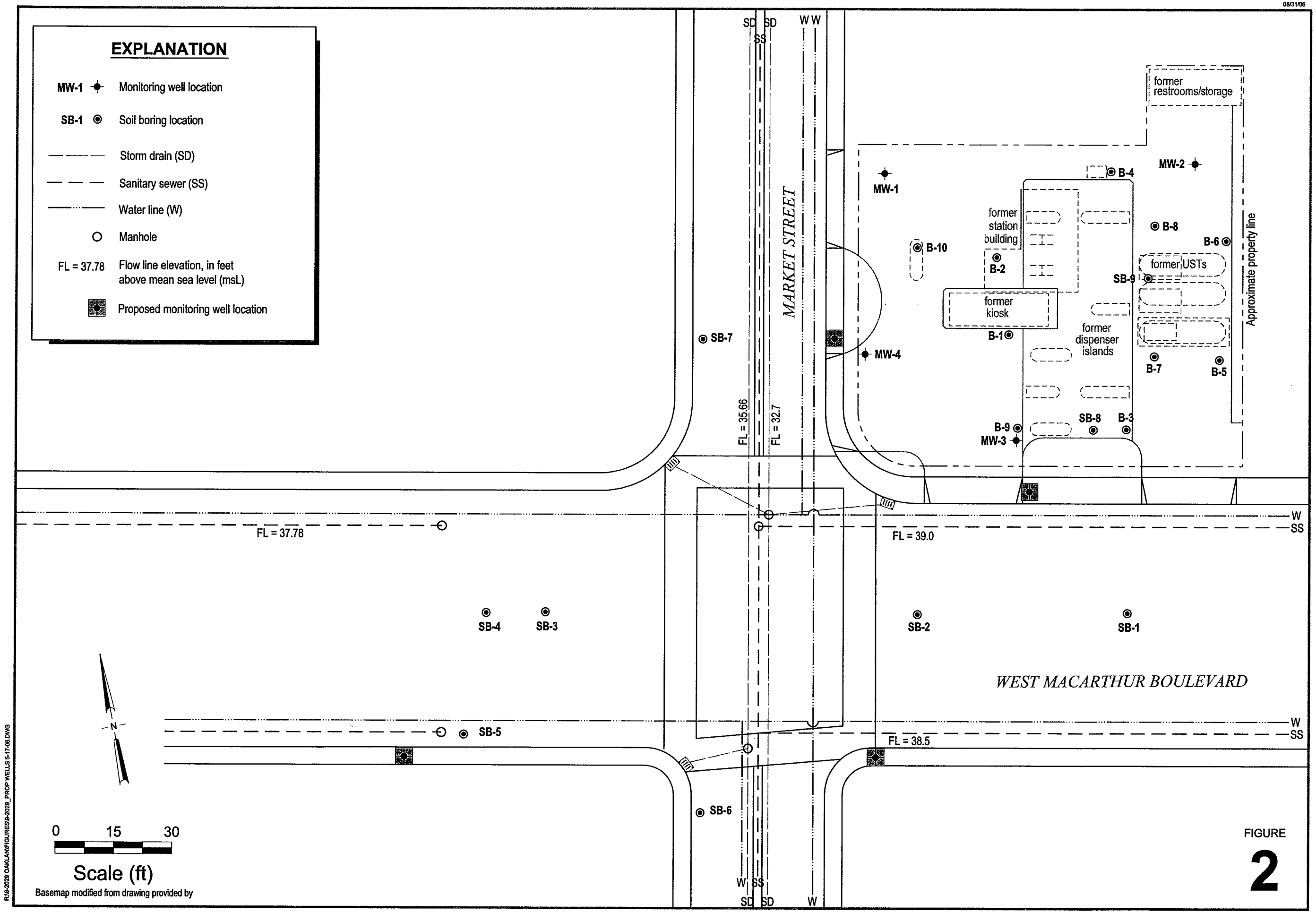
Vicinity Map

08/31/06

EXPLANATION

- MW-1 — Monitoring well location
- SB-1 — Soil boring location
- Storm drain (SD)
- Sanitary sewer (SS)
- Water line (W)
- Manhole
- FL = 37.78 — Flow line elevation, in feet above mean sea level (msL)
- Proposed monitoring well location



Basemap modified from drawing provided by

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FIGURE **2**

Site Plan

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Former Chevron Station 9-2029
890 W. MacArthur Boulevard
Oakland, California

ATTACHMENT A
Standard Operating Procedures

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

DRILLING AND SAMPLING

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Prior to drilling, the first 8 ft of the boring are cleared using an air or water knife and vacuum extraction. This minimizes the potential for impacting utilities.

Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. Equipment blanks may be analyzed if non-dedicated sampling equipment is used.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. Rinsed and graded sand corresponding to the slot size occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

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STANDARD FIELD PROCEDURES FOR MONITORING WELL DESTRUCTION

This document presents standard field methods for destroying groundwater monitoring wells. The objective of well destruction 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 for five minutes by applying a pressure of 25 pounds per square inch (psi) 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, the well location is cleared for subsurface utilities and a hollow-stem auger drilling rig is used to drill out the well casing and filter pack materials. First, drill rods are placed down the well and used to guide the augers as they drill out the well. A guide auger is used in place of the drill rods if feasible. 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.