## RECEIVED

By lopprojectop at 1:02 pm, Jun 12, 2006

June 12, 2006

Mr. Barney Chan Alameda County Environmental Health Services (ACEHS) 1131 Harbor Bay Parkway Alameda, CA 94502

Re: Well Destruction Workplan

Former Chevron Service Station #9-1026 3701 Broadway Oakland, California Cambria Project No. 31J-1959



Dear Mr. Chan:

On behalf of Chevron Environmental Management Company (Chevron), Cambria Environmental Technology, Inc. (Cambria) is submitting this workplan to destroy six groundwater monitor wells at the site referenced above. The wells, designated A, B and B-1 through B-4, are being destroyed in conjunction with planned site redevelopment. A site plan illustrating well locations is included as Figure 2.

#### PROPOSED SCOPE OF WORK

*Underground Utility Location:* Cambria will notify Underground Service Alert of our drilling activities to identify utilities in the drilling area. Before the advancement of mechanical devices, a series of four borings will be cleared around each well to a depth of eight feet below grade (fbg) using either a vacuum assisted air knife or by hand auger.

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

**Permits**: Cambria will obtain the appropriate permits from Alameda County Department of Public Works.

Monitoring Well Destruction: Once borehole clearance is completed, each of the six wells, with the exception of monitor well B, will be drilled out to their total depths by hollow-stem auger to remove the well casing and other well materials. After the wells are drilled out each boring will be filled with Portland cement injected through a tremmie pipe from the bottom of the boring up to approximately one foot below the surface. A concrete cap will be placed to match the existing ground surface. Standard field procedures for monitor well destruction activities are presented as Attachment A.

Cambria Environmental Technology, Inc.

5900 Hollis Street Suite A Emeryville, CA 94608 Tel (510) 420-0700 Fax (510) 420-9170

Monitor well B was constructed of 12-inch corrugated steel to 20 fbg in 1982 and reconstructed in 1988 by drilling to 35 fbg through the original corrugated steel casing and re-completing the well with 4-inch diameter PVC piping to the new total depth. Monitor well B will be destroyed by using 8-inch augers to drill out the 4-inch PVC pipe to its total depth of 35 fbg. After the well has been drilled out it will be filled with Portland cement injected through a tremmie pipe from the bottom of the boring up to approximately one foot below the surface. The 20-foot corrugated steel pipe from the original well completion will be removed during subsequent site excavation. This excavation is currently proposed to begin during the 3<sup>rd</sup> Quarter of 2006.



Soil and Water Disposal: Well materials and water generated during well destruction activities will be stockpiled onsite and off-hauled along with material generated during the excavation. Any water generated during the well destruction activities will be profiled and disposed of at a Chevron-approved location.

**Reporting:** After the wells have been properly abandoned, a report will be prepared that will summarize well destruction activities undertaken at the site.

#### **SCHEDULE**

Cambria anticipates beginning well destruction activities on June 26, 2006. When the work has been completed, a report will be prepared that will contain a summary of the wells destruction activities.

If you have any questions, please do not hesitate to contact Laura Genin at (510) 420-3367.

Sincerely,

Cambria Environmental Technology, Inc.

Laura Genin Project Geologist

Robert Foss, P.G. #7445

Associate Geologist



Figures:

1 – Vicinity Map

2 – Site Map

Attachments:

A – Standard Field Procedures for Monitoring Well Destruction

cc:

J. Mark Inglis, Chevron, 6001 Bollinger Canyon Road, Room K2256, San

Ramon, CA 94583

Satya Sinha Chevron, 6001 Bollinger Canyon Road, Room K2256, San

Ramon, CA 94583

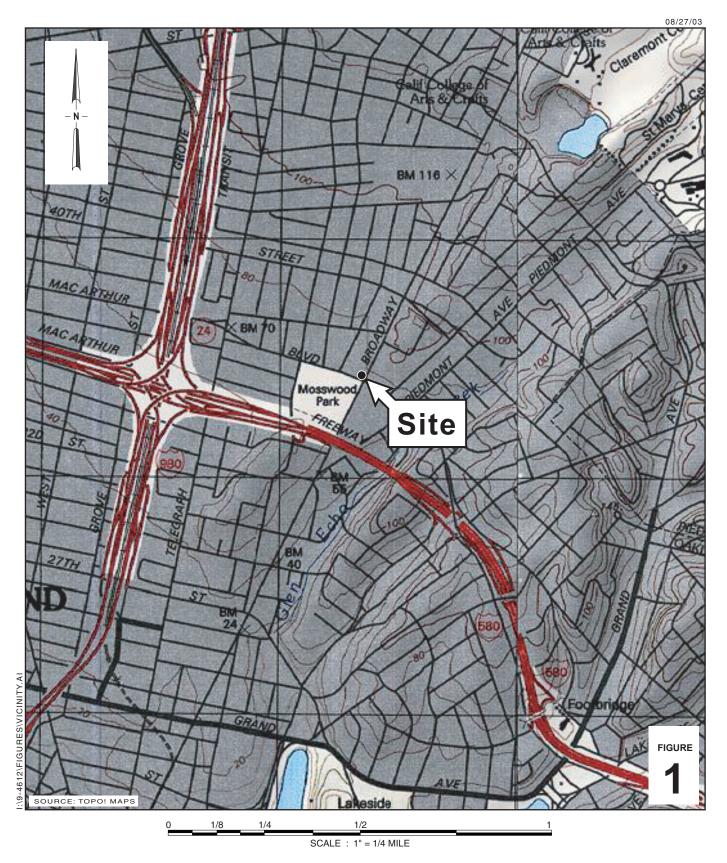
Gary Bankhead, Kaiser Permanente, 1100 San Leandro Boulevard, Suite

200, San Leandro, CA 94577



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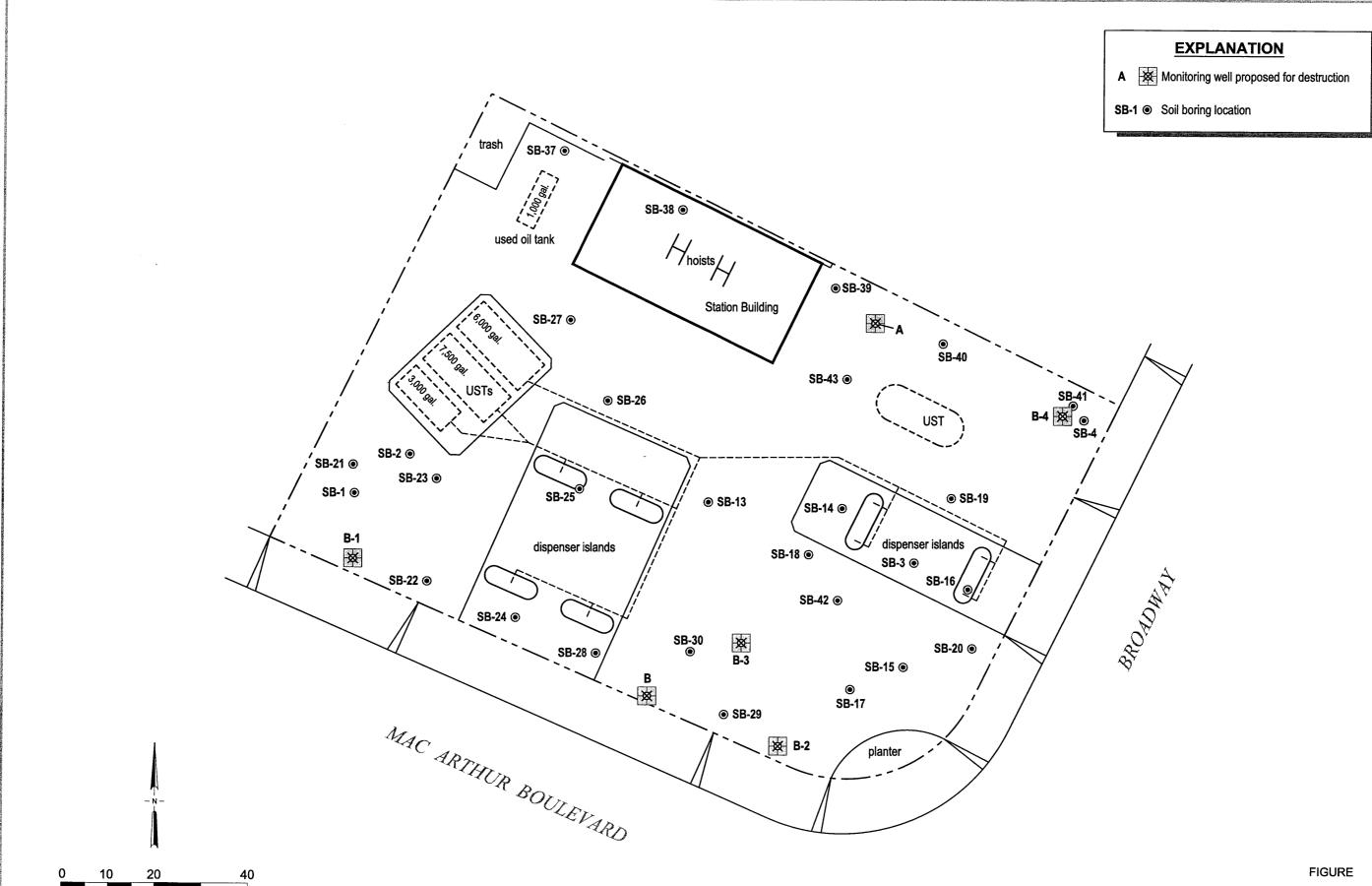


## Former Chevron Station 9-1026

3701 Broadway Oakland, California



**Vicinity Map** 



Scale (ft) Basemap modified from 1957 Stardard Oil drawing

# ATACHMENT A STANDARD OPERATING PROCEDURES FOR WELL DESTRUCTION

## 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 hollowstem 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.

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