

C A M B R I A

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July 27, 2004

Ms. Donna Drogos
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Alameda County
JUL 30 2004
ELECTRONIC MAIL

Re: **Request for Concurrence - Feasibility Study/Correction Action Plan Preparation**
Connell Automotive Dealership
3093 Broadway
Oakland, California
StID #469



Dear Ms. Drogos:

On behalf of Messrs. George Hill and Gordon Linden, Cambria Environmental Technology, Inc. (Cambria) prepared this letter requesting regulatory concurrence that the site conditions merit preparation of a feasibility study/corrective action plan for the site referenced above. To facilitate your consideration of our request during your July 29, 2004 meeting with Don Hwang, Cambria prepared this letter describing the current site conditions as well as the corrective action and regulatory background on this project. While your agency has requested and approved corrective action plans for this site, the information below indicates why additional regulatory concurrence and clarification is merited.

CURRENT SITE CONDITIONS

Despite prior soil vapor extraction and ongoing interim remediation, free product and elevated constituent concentrations persist at both the upper and lower portions of the site. The site is located on the hillside of "Pill Hill." The upper portion of the site is near the former USTs (and presumed source area), while the lower portion of the site is near the bottom of the hill. The subsurface materials consist of permeable soil interbedded with lower permeability materials, apparently sloping down the hillside.

It is likely that free product from the former UST area (near MW-1) migrated down the hillside and collected near MW-6. Investigation and remediation data indicate that free product may be accessible for vapor extraction near MW-1, is less accessible near wells MW-14 and MW-15, and is primarily submerged and trapped under a clay unit near downgradient well MW-6. The site hydrogeology and extent of free product and elevated constituents is illustrated on figures in Attachment A.

At the upper portion of the site, free product is present in wells MW-1, MW-14, and MW-15. Prior to the detection of free product in the wells MW-1, MW-14, and MW-15, the benzene concentrations were 39,000 micrograms per liter (ug/l), 12,000, and 9,900 ug/l, respectively.

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At the lower portion of the site, the elevated impact area is characterized by wells MW-4, MW-6, MW-9 and MW-10. Free product is still present in well MW-6 despite approximately 18 months of vapor extraction from that well between October 1996 and March 1998. In well MW-4, located approximately 100 feet away from MW-6, free product was observed in 1993 and 1995. Since 1995 benzene concentrations in well MW-4 have ranged from 12,000 to 24,000 ug/l. Benzene concentrations in well MW-10 ranged from 28,000 to 140,000 ug/l before monitoring discontinued in 1998 due to its proximity to well MW-4. At the upgradient most edge of the lower portion of the site, well MW-9 has had benzene concentrations ranging from 730 to 2,600 ug/l since 2000.

CORRECTIVE ACTION BACKGROUND

The presence of free product and the elevated constituent concentrations significantly exceed the water quality objectives and the environmental screening levels (ESL) established by the Regional Water Quality Control Board – San Francisco Bay Region (RWQCB-SFBR). In light of these site conditions, the Alameda County Health Care Services Agency (ACHCSA) has required remediation of the site.

Over the course of regulatory oversight, the ACHCSA has changed regulatory case management personnel. Ms. Susan Hugo provided oversight from at least 1995 to approximately July 2001, followed by Mr. Scott Seery from approximately September 2001 to March 2003, and Mr. Don Hwang from approximately April 2003 to present. The corrective action history and the ACHCSA oversight of the site are summarized below.

1989 Tank Removal

In December 1989, three underground storage tanks (USTs) were removed from the site. The USTs had previously contained gasoline, diesel, and waste oil.

1990 & 1991 Initial Investigation and Interim Remediation (Product Bailing)

Soil and groundwater investigation has been ongoing since 1990. Manual removal of hydrocarbons from site monitoring wells has been ongoing since 1991.

1995 Corrective Action Plan (CAP) Submittal

In November 1995, Subsurface Consultants Incorporated (SCI) of Oakland, California submitted a corrective action plan (CAP) for the installation and operation of a vapor extraction system (VES). The ACHCSA approved the CAP.

October 1996 Vapor Extraction Commences

In October 1996 SCI commenced operation of a vapor extraction remediation system (VES).

Dec 1997 Workplan for Additional VES & Assessment, Pilot Testing, and FS/CAP Preparation

On December 27, 1997, SCI prepared a Workplan that outlined the following tasks for implementation in 1998:

- Additional investigation,
- Continued interim free product removal using VES,
- Vapor extraction pilot testing,
- Biotreatability evaluation,
- Tier I risk-based corrective action analysis, and
- FS/CAP preparation.

The workplan also included groundwater monitoring and project management. The ACHCSA approved the workplan on January 26, 1998.

March 1998 Vapor Extraction Ceased

The hydrocarbon removal rates by the VES had decreased significantly during the rainy season. Following meetings and discussions with the ACHCSA and the California UST Cleanup Fund (Fund), VES operation was ceased in March 1998. The VES system had removed approximately 1,421 lbs of hydrocarbons. SCI conducted additional investigation in May 1998 and further evaluated site data. SCI concluded that the fluctuating water table and subsurface conditions did not lend themselves to VES alone, as they originally believed. SCI stopped the planned vapor extraction and groundwater pumping tests and FS/CAP preparation, and initiated discussion with the regulatory agencies.

May 1999 Approval of Risk-Based Corrective Action Approach ('Expanded CAP')

Between July and October 1998 several agency meetings were held with the ACHCSA, RWQCB-SFBR, City of Oakland, and representatives of the site owners. The culmination of the meetings resulted in regulatory conditional approval of a risk-based approach for site management and closure, according to SCI's *Workplan for Expanded CAP Preparation* dated April 15, 1999. The site was to be a 'pilot site' for City of Oakland's Urban Land Redevelopment (ULR) Program. The revised workplan tasks to be completed now included:

- Free Product Removal via Passive Skimmers and Absorbent 'Socks',
- Additional Assessment to Categorize Soil for the ULR Program,
- Research of Potential Subsurface Pathways and a Sensitive Receptor Survey,
- Human Health Risk Evaluation,

- Risk Management Plan, and
- Expanded CAP.

Note that the scope no longer included feasibility testing, feasibility testing, or active site remediation. The 'Expanded CAP' scope focused on risk-based corrective action, limited free product removal, and natural attenuation as the selected corrective action for the site.



Dec 1999 Cambria Selected to Implement RBCA Approach ('Expanded CAP')

In December 1999 Cambria was selected by representatives of the site owners to implement approved RBCA approach. Cambria completed the *Potential Receptor and Preferential Pathway Survey Report* dated March 30, 2000. Cambria continued groundwater monitoring and free product removal.

May 2000 Workplan Addendum for Feasibility Testing, RBCA Approach Clarification, and Modified Groundwater Monitoring Program

On April 3, 2000, Cambria met with the ACHCSA and site representatives. At the meeting, the following revisions to SCI's April 15, 1999 workplan were determined necessary or warranted:

- Implementing a modified monitoring program;
- Basing human health risk calculations on measured soil vapor concentrations;
- Submitting the Risk Management Plan (RMP) at a later, unspecified date; and
- Performing feasibility testing of technologies for active removal of separate phase hydrocarbons (SPH) from the site subsurface, and evaluating the testing results in the expanded CAP.

Cambria submitted the *Workplan Addendum* on May 8, 2000, which the ACHCSA approved on July 14, 2000. Note that the scope of the Expanded CAP had been increased to incorporate results of feasibility testing.

August 2000 Disapproval of Risk-Based Corrective Action Approach

On August 10, 2000 the Fund issued a letter of cost pre-approval. The letter referenced discussions with Susan Hugo of the ACHCSA, and did not provide cost pre-approval for the risk evaluation elements of the RBCA approach previously approved by the ACHCSA after months of correspondence and conditional agreements. The Expanded CAP scope and budget were no longer appropriate at that time.

March 2001 Feasibility Test Report

Consistent with the May 8, 2000 Workplan Addendum, Cambria conducted feasibility testing from select site wells during September 2003. The testing evaluated methods for removing free product. In October 2003 Cambria verbally proposed additional feasibility testing to better evaluate potential technologies, and to provide additional source removal. In October 2003 the ACHCSA requested a workplan for additional testing. To avoid further project delay, the additional feasibility testing was not performed and Cambria prepared its *Feasibility Test Report* March 16, 2001.

Cambria's report concluded that in situ remedial techniques could target residual free product at the site. In situ techniques would work best near the former UST area (near MW-1), with additional effort required near well MW-6 (the lower part of the hillside site where VES alone had limited effectiveness based on SCT's evaluation). The report included a brief discussion soil vapor extraction (SVE), dual-phase vapor extraction (DVE), and air sparging (AS).

Most importantly, Cambria's feasibility test report requested an agency meeting to discuss required elements of the CAP to move the site toward closure.

June 28, 2001 Sample Regulatory Concurrence Letter for FS/CAP

To help expedite regulatory concurrence, Cambria prepared a sample concurrence letter for Ms. Hugo dated June 28, 2001. During subsequent quarterly monitoring reports and correspondence with the ACHCSA, Cambria continued to request a meeting with the ACHCSA and regulatory concurrence for FS/CAP preparation.

September 2002 ACHCSA Requests Interim Remediation Work Plan (IRAP)


In 2001 Ms. Susan Hugo transferred the case management to Mr. Scott Seery. After repeated requests for a meeting, Mr. Seery stated that he had insufficient time to adequately review the file and issued a request for an Interim Remediation Work Plan (IRAP).

Early 2003 Case Management Transferred to Mr. Don Hwang of the ACHCSA

In early 2003 the case management was transferred from Mr. Seery to Mr. Don Hwang. Cambria continued to request an agency meeting or concurrence that preparation of an FS/CAP is merited for this site. Cambria cites recent increasing thickness of free product in site wells, the limited effectiveness of current interim free product removal efforts, and the lack of significant biodegradation of elevated dissolved concentrations. Given the complex subsurface conditions and the attempted interim removal methods, a comprehensive FS/CAP is merited rather than an IRAP.

CONCLUSION

Based on the information presented above, Cambria concludes that preparation of a FS/CAP is merited for the site. The presence of free product and the elevated constituent concentrations significantly exceed the water quality objectives and the environmental screening levels (ESLs) established by the Regional Water Quality Control Board – San Francisco Bay Region (RWQCB-SFBR).



Based on our recent conversations with Mr. Hwang, the ACHCSA is interested in active remediation of the residual free product and dissolved-phase hydrocarbons at the site. The Expanded CAP/RBCA approach, which was approved by your agency in May 1999 and effectively retracted in August 2000, is no longer appropriate. The scope and budget of an IRAP, requested by your agency in September 2002, is also inappropriate to respond to the site-specific conditions. Interim remedial efforts conducted to date at the site have been ineffective.

In conclusion, Cambria again respectfully requests a regulatory concurrence letter requesting preparation of a FS/CAP. The FS/CAP shall incorporate results of prior feasibility testing, and evaluate several remedial techniques potentially applicable for the site. The FS/CAP shall present a plan for remediation of free product and dissolved petroleum hydrocarbons across the site.

Mr. Hwang indicated that you would prefer to conduct a telephone conference rather than schedule a meeting at your office. If the ACHCSA issues a letter incorporating the above conclusions then a meeting may not be necessary. Otherwise, Cambria and the site representatives will again request a meeting with your agency and the RWQCB-SFBR. As you understand, our clients seek clear regulatory directive to pursue case closure and to help facilitate reimbursement from the Fund.

We appreciate your assistance with this project. If you have any questions or comments, please contact me at (510) 420-3303.

Sincerely,
Cambria Environmental Technology, Inc.



Bob Clark-Riddell, P.E.
Principal Engineer

C A M B R I A

Request for Concurrence for FS/CAP Preparation
3093 Broadway
Oakland, California
July 27, 2004

Attachment A -- Site Hydrogeology and Extent of Free Product and Elevated Constituents

cc: Don Hwang, ACHCSA, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577
George Hill, 305 Sheridan Ave., Piedmont, CA 94611
Gordon Linden, 150 La Salle Avenue, Piedmont, California 94611
Paul Kibel, Fitzgerald, Abbott & Beardsley, LLP, 1221 Broadway, 21st Floor, Oakland, CA 94612
Leroy Griffin, Hazardous Materials Manager, Fire Department - OES, 1605 MLK Jr. Way, Oakland, CA 94612



Attachment A

Site Hydrogeology and Extent of Free Product and Elevated Constituents

EXPLANATION

MW-1 + Monitoring Well Location

Basemap from Subsurface Consultants, Inc.

HAWTHORNE STREET

WEBSTER STREET

SIDEWALK

SIDEWALK

MW-11 +

MW-1 +
(SPH)

MW-14 +
(SPH)

MW-15 +
(SPH)

MW-9 +
1,500

MW-10 +

MW-4 +
130,000

MW-7 +
150

MW-5 +

MW-3 +

MW-8 +
50

3083 BROADWAY

BROADWAY

SIDEWALK



Scale (ft)

150
MW-13 +

BROOK STREET

SIDEWALK



FIGURE

1

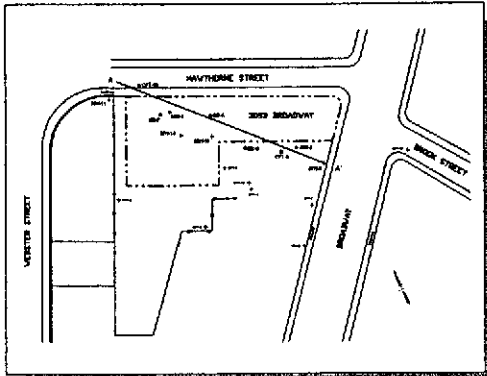
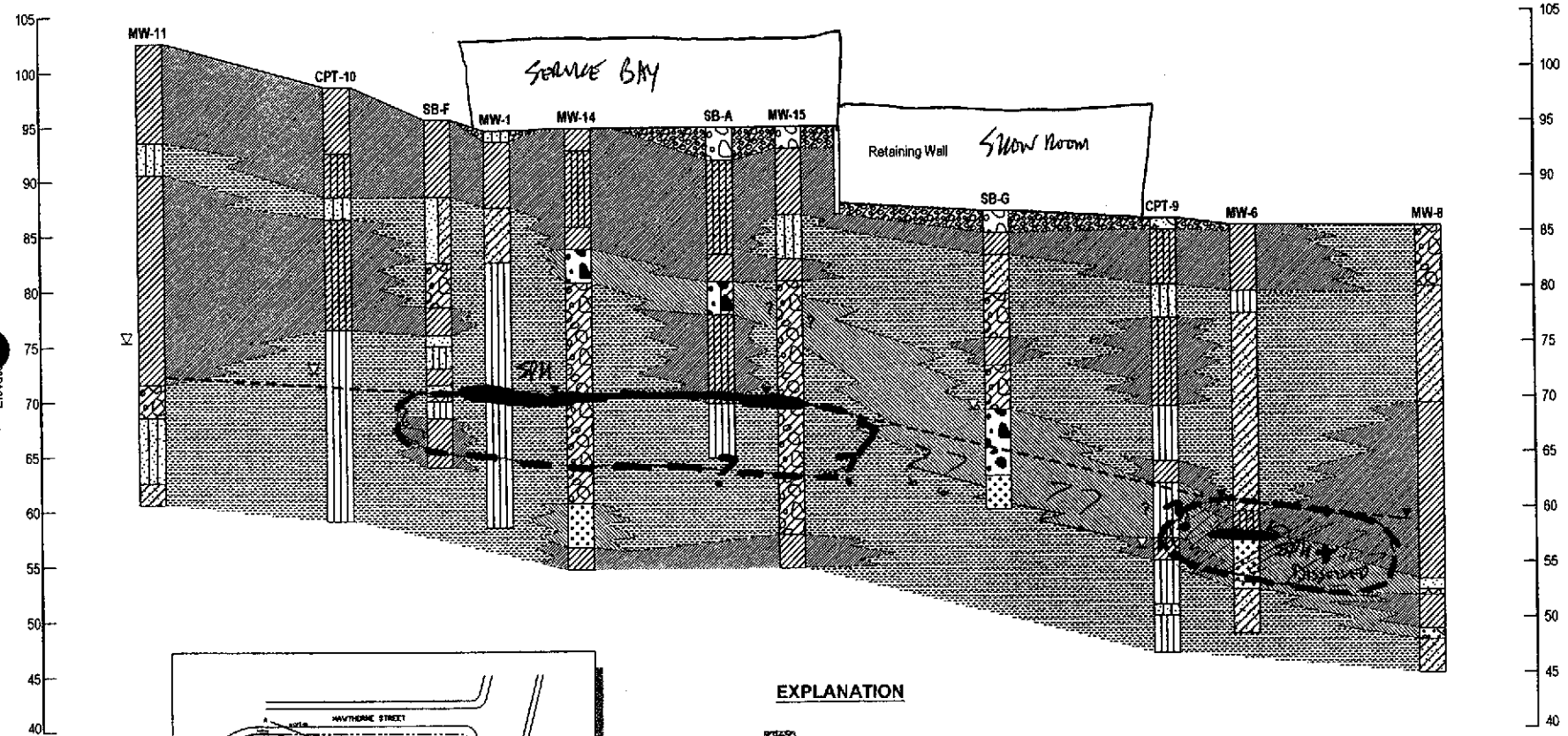
Site Plan
Dissolved TPHg
Concentration (ug)
Nov. 10, 2003



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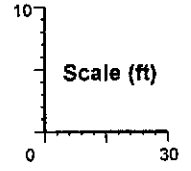
Connell Oldsmobile
3083 Broadway
Oakland, California

A Northwest A' Southeast



EXPLANATION

- Baserock / Fill
- Moderate to High Permeability Soil
- Low to Moderate Permeability Soil
- Very Low to Low Permeability Soil
- Depth of Groundwater
- Initial Groundwater level
- Groundwater Table



FIGURE

3

Geologic Cross-Section



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