RO 2467

11-18-03

Alameda County
NOV 20 2003
Environmental Health

D & B
BELLEVUE
LLC

Mr. Don Hwang
Hazardous Materials Specialist
Alamaeda County Health Care Services
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Gulf Service Station #0006 460 Grand Avenue, Oakland, California

Dear Mr. Hwang:

I currently have the above referenced property in escrow for purchase. We are conducting our due diligience on the property and have until December 9th to remove contingencies with respect to the soil conditions of the property.

I have a copy of a report from Geomatrix Consultants, Inc. (of Oakland, California). Inclusive in this report are the following documents:

- "Case Closure Summary" dated November 19th, 1996
- "Well Abandonment Report" dated November 17th, 1996
- "Remedial Action Completion Certificate" dated December 3, 1998
- "Geomatrix Consultants, Inc. Report" dated July 19, 2001
- "Geomatrix Consultants, Inc., Letter " dated September 24, 2001
- "ACDHS letter" dated October 11, 2001 (***Confirms No Restrictions***)
- "Chevron Products Company letter" dated December 13, 1998

The two letter/reports by Geomatrix were written to you summarizing their findings and requesting unrestricted use due to their findings . On October 11, 2001, you responded to Mr. John Gibson, Attorney for the owners, that you concurred that ***"it is now appropriate to allow unrestricted land use".***

Do to the nature of our current position in the property, i.e. that we are currently under contract and are activly engaged in "due diligence", I am requesting a letter from you, addressed to me, ***James R. Burns II. Member of D & B Bellevue LLC***, reiterating your concerence of the October 11th, 2001 letter.

Our release of contingencies due to the soil condition history of this project hinges on our confidence that the Alamaeda County Health Care Services is satisfied that the property, in it's current condition, has unrestricted use with respect to the soil contamination issues.

As per our telephone conversation this morning, your prompt attention to this request would be very much appreciated.

Sincerely,

D & B Bellevue LLC

James R. Burns II

ENCLOSURE: GEOMATRIX REPORT LISTED ABOVE

HISTORIC LICK BATHS BUILDING 165 10TH STREET, SAN FRANCISCO, CA 94103
Business: (415) 397-5455 Fax: (415) 397-5653

RO 2467

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

February 28, 2002
Project 7315.000 C

Alameda County
NOV 20 2003
Environmental Health

Falaschi Brothers
c/o John C. Gibson, Receiver
Gibson & MacPhee
1534 Fifth Avenue, Suite 4
San Rafael, California 94901

Subject: 460 Grand Avenue
Oakland, California

Gentlemen:

On behalf of the Falaschi Brothers, Geomatrix Consultants, Inc. (Geomatrix) has prepared this letter report to summarize the readily available information regarding environmental conditions at 460 Grand Avenue (the Site), Oakland, California. This summary is based upon site visits, the results of a soil investigation performed in June 2001, and the review of various available documents. A list of references is included as Attachment 1, and pertinent excerpts (including site maps and data tables) are also included as attachments.

As described in the following sections, five underground storage tanks (USTs) were removed from the Site in 1990 and 1994. Contaminated soil was removed to the extent required by the regulatory agency, and groundwater conditions were monitored by four groundwater wells. A Case Closure Summary (Attachment 2) was issued by the Alameda County Department of Health Services (ACDHS) on November 19, 1996 and approved by the Regional Water Quality Control Board (RWQCB) on April 21, 1997. Following a Risk Evaluation, the wells were closed in place in November 1998 (Attachment 3). According to the Remedial Action Completion Certificate issued by the ACDHS on December 3, 1998 (Attachment 4), no further action related to the underground tank release was required at the Site. However, the Case Closure Summary included a property use restriction, as follows:

> Residential site development would be acceptable, provided that either 1) the development should include a 15' setback distance from Grand Ave., or 2) soil will be excavated within the 15' setback zone, soil samples collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and another revised Risk Evaluation).

Additional soil data was collected in June 2001 to evaluate current conditions within the 15-foot setback area (Geomatrix, 2001a; Attachment 5). Based on that data and additional information and clarification provided by Geomatrix (Geomatrix, 2001b; Attachment 6), the RWQCB concluded that the 1996 setback requirement "*no longer appears warranted and that it is now appropriate to allow unrestricted land use*" (ACDHS, 2001; Attachment 7).

SITE USE HISTORY

The Site had been operated as a service station from the late 1940s until it was closed by Gulf Oil prior to the sale to the Falaschi Brothers in August 1978. At the time of purchase by the Falaschi Brothers, the fuel dispensers were removed and the USTs were received empty from the previous owner, Gulf Oil, later acquired by Chevron Products Company. The Site is currently a fenced vacant lot.

SITE INVESTIGATION AND REMEDIATION HISTORY

Three 10,000-gallon gasoline USTs and two 250-gallon waste oil USTs were removed and subsequent soil remediation was performed at the Site between November 1990 and January 1994. Table 1 presents a summary of the UST and soil removal activities, including groundwater monitoring well installations performed in December 1992 and May 1995, monitoring well abandonment conducted November 1998, and a limited soil investigation performed in June 2001. The approximate excavation dimensions and disposition of excavated soil are included in Table 1.

In November and December 1990, the three gasoline USTs and one waste oil UST were removed, and soil was stockpiled on-site (Figure 1). The chemical analytical results for soil and groundwater samples collected during the UST removals indicated elevated concentrations of hydrocarbons in soil near the former product line and former waste oil tank. Volatile organic compounds (VOCs) were detected in a soil sample near the former waste oil tank. Elevated concentrations of hydrocarbons were also detected in a water sample near the former fuel tanks. Historical chemical analytical data are summarized in the ACDHS *Case Closure Summary* dated November 19, 1996 (Attachment 2).

In December 1992, samples were collected from the soil stockpiles (resulting from the UST removal activities) and water in the then-open excavation pits[1]. Elevated concentrations of hydrocarbon compounds were detected in the soil sample and water sample collected from the waste oil UST stockpile. Lead was also detected in that same soil sample.

[1] Touchstone Developments, 1993, letter report on field sampling activities, January 12.

Also in December 1992, three groundwater monitoring wells (C-1, C-2, C-3) were installed at the Site to monitor groundwater conditions[2]. A figure showing the well locations is included in Attachment 3. Additional soil samples were collected during well installation and from a shallow soil boring near the former fuel dispenser islands. The chemical analytical data indicated hydrocarbon contamination in the vicinity of the former fuel dispenser islands. The groundwater data indicated that groundwater flow direction was southerly (towards Lake Merritt) and hydrocarbon compounds and a VOC (1,2-dichloroethane, a gasoline additive) were detected in one monitoring well (C-2) located near the former pump island.

Chevron Products Company letters to the ACDHS indicate that (1) the stockpiled soil from the gasoline UST excavation was used on-site as backfill material and the stockpiled soil from the waste oil UST excavation was disposed offsite (December 16, 1992), and (2) additional fill was brought in to completely fill the two excavation pits (January 15, 1993). Reportedly the on-site soil and the imported fill were not compacted due to wet weather conditions.

In March 1993, additional soil removal was conducted at the former waste oil UST excavation, sidewall samples were collected, and the excavation was temporarily backfilled with crushed rock[3] (Figure 4 in Attachment 2).

During the period of December 1993 through January 1994, the service station building was demolished and the pump islands, the second waste oil UST, and an oil/water separator were also removed (Figure 5 in Attachment 2). Additional soil excavation and sampling was performed to remediate contaminated soil to the extent possible. The northern extent of the excavation in the area of the first former waste oil UST was limited by the retaining wall that is still present on the Site. Confirmation soil samples indicated that low levels of Total Petroleum Hydrocarbons as gasoline (TPHg at 30 milligrams per kilogram [mg/kg]) and TPH as diesel (TPHd at 24 to 1,300 mg/kg) were present at the northern excavation boundary when the soil removal work was finished in January 1994[4]. Residual benzene concentrations for soil left in place at the perimeter of the entire excavation ranged from 0.005 to 13 mg/kg. The approximate outlines of the excavations are shown on Figure 2. The pits were backfilled with imported fill reportedly compacted to at least 90 percent[5]. However, based on field observations by Treadwell & Rollo, Inc., the resulting compacted fill "*was not very firm*".

In May 1995, a fourth groundwater monitoring well (C-4) was installed downgradient of the Site within Grand Avenue (Figure 1 in Attachment 4).

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[2] Pacific Environmental Group, Inc., 1993, Recent Soil and Groundwater Investigation Report, January 15.
[3] Chevron U.S.A. Products Company, 1993, letter transmitting soil sampling data from additional excavation at the former waste oil UST, May 5.
[4] Touchstone Developments, 1994, *Soil Excavation and Remediation Report*, March 11.
[5] Construction Materials Testing, Inc., 1994, Results of Soil Compaction Testing, February 16.

Groundwater was sampled and monitored between December 1992 and December 1995, and the data indicated low to non-detect concentrations of hydrocarbon compounds (Attachment 2). The measured depth to groundwater ranged from 2.3 to 7.3 feet below ground surface.

The four groundwater monitoring wells were abandoned in place in November 1998 (Gettler-Ryan, Inc., 1998, Attachment 3).

In June 2001, five soil borings were advanced near the former Well C-2 to evaluate current conditions at the location with a previously reported elevated concentration of benzene (13 mg/kg, 5 feet below ground surface [bgs], Figure 2 in Attachment 5). Benzene was not detected in any of the soil samples.

SITE CLOSURE

Based on the soil and groundwater data, a human health risk evaluation was prepared by Chevron Research and Technology in 1996 and later revised in 1997 (on behalf of Chevron Products Company, responsible party for the Site). The risk assessment was considered acceptable by the regulatory agency for a commercial or industrial use scenario. Residential use was also acceptable by the regulatory agency provided that certain site management requirements were met (ACDHS, 1996; Attachment 2).

Following the in-place closure of the four groundwater monitoring wells, a Remedial Action Completion Certificate was issued by the ACDHS on December 3, 1998 indicating that no further action related to the underground tank release was required at the Site (Attachment 4).

The objective of the June 2001 soil sampling described above was to provide current data to re-evaluate the need for the 15-foot setback for future residential land use. The chemical analytical data for the soil samples indicated that benzene was not detected in vadose-zone soil above the laboratory reporting limit (Geomatrix, 2001a; Attachment 5). (In addition, benzene was not detected in groundwater at Well C-2 during three of the last four quarters of groundwater monitoring at Well C-2, and was detected at 0.93 ug/L [below the Maximum Contaminant Level of 1.0 ug/L] in the final quarter of sampling[6].) Comparison with the initial soil data suggests that benzene in soil has biodegraded over time at that location. If benzene remains in soil in the area along Grand Avenue (Figure 2 in Attachment 5), it is very limited in extent as defined by the boundaries of the excavation and the additional samples. Upon review of the data and additional information and clarification provided by Geomatrix (Geomatrix, 2001b; Attachment 6), the RWQCB concurred with this conclusion and recommended unrestricted land use (ACDHS, 2001; Attachment 7).

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[6] Gettler-Ryan, Inc., 1996, Quarterly Groundwater Sampling Report, January 26.

SITE MANAGEMENT ISSUES

The Site data indicate that residual concentrations of benzene have degraded over time, but may be present at low concentrations in soil and groundwater at the Site (primarily within the southwestern half of the property near Grand Avenue). In addition, low levels of residual fuel-related compounds may be present at the northern portion of the Site because the soil removal was limited by the existing retaining wall. However, based on the 1997 risk evaluation and the results of the June 2001 soil sampling, there are no site use restrictions for future commercial, industrial or residential development related to the known environmental conditions discussed in this letter report. The 1996 ACDHS *Case Closure Summary* (Attachment 2) was amended by the ACDHS and RWQCB to allow "*unrestricted land use*" (ACDHS, 2001; Attachment 7).

According to a December 1998 Chevron Product Company letter (Chevron, 1998; Attachment 8), Chevron retains responsibility to "address any petroleum hydrocarbons, that resulted from our past operations, and which are detected at the site in the course of any future construction activities." Chevron has requested notification four to six weeks prior to proposed construction activities. Chevron's contact is:

Philip R. Briggs
Site Assessment and Remediation Project Manager
Chevron Products Company
6001 Bollinger Canyon Road, Building L, Room 1110
P.O. Box 6004
San Ramon, CA 94583-0904
Voice: (925) 842-9136
842-1000

I hope that this report provides the information that you need. Please call if you have any questions.

Sincerely,
GEOMATRIX CONSULTANTS, INC.

Margaret K. (Peggy) Peischl, P.E.
Senior Engineer

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The following complete this letter report:

Table 1	Summary of Site Activities
Figure 1	1992 UST Excavation Location
Figure 2	1994 Excavation Location
Attachment 1	List of References
Attachment 2	Case Closure Summary, November 19, 1996
Attachment 3	Well abandonment report dated November 17, 1998
Attachment 4	Remedial Action Completion Certifiçate, December 3, 1998
Attachment 5	Geomatrix Consultants, Inc., report dated July 19, 2001 ——— DOC. R
Attachment 6	Geomatrix Consultants, Inc., letter dated September 24, 2001
Attachment 7	ACDHS letter dated October 11, 2001 —— CONFIRMS NO RESTRICTIONS —
Attachment 8	Chevron Products Company letter dated December 13, 1998

Tables

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TABLE 1

SUMMARY OF SITE ACTIVITIES

460 Grand Avenue
Oakland, California

Date of Activity	Description of Activity	Approximate Volumes Removed
11/27 – 12/4/1990	Remove 3 gasoline USTs and 1 waste oil UST (excavations were not backfilled). Gasoline UST excavation size was approximately 30 feet wide, 30 long, 13 feet deep. Waste oil UST excavation was approximately 12 feet long, 5 feet side, 6 feet deep (later overexcavated in 1993 and 1994).	250-300 cy from gasoline USTs; 15 cy from waste oil UST.[1]
12/4/1992	Soil stockpiles sampled.[2]	Volume from gasoline USTs estimated at 200 cy, 20 cy for waste oil UST.
12/14 – 15/1992	3 monitoring wells installed (C1, C2, C3).[3]	
1/15/1993	Chevron letter stating that the soil excavated from the gasoline UST pit will be re-used as backfill material but it will not be compacted due to weather conditions.	
3/19/1993	Additional excavation at the waste oil UST excavation, including wall samples[4]. Excavation "temporarily filled with crushed rock".	No volumes noted.
12/28/1993	Service station building demolished.	
1/3/1994	Second waste oil UST discovered under the former service station building; oil/water separator area excavated.	
1/5/1994	Pump islands excavated; second waste oil UST removed.	
1/20 – 21/1994	Additional excavation near pump islands and second waste oil UST. Final approximate excavation sizes: Former waste oil tanks area: 51 feet long, 32 feet at its widest, 8 feet deep. Oil/water separator area: 14 feet long, 5-9 feet wide, 7 feet deep. Pump island area: 37 feet long, 30 feet wide, 8-12 feet deep.	350 cy from first waste oil UST excavation disposed at Forward Landfill; 450 cy from pump island excavation disposed at Redwood Landfill[5]. Reportedly the bill of laden for disposal indicated 666 cy.[6] Soil from pump island excavation also estimated to be 425-500 cy.[7]
1/4 and 1/26/1994	First former waste oil UST excavation backfilled on 1/4/1994, and excavation near pump islands and second waste oil UST backfilled on 1/26/1994.[8] Clean imported material used as backfill.[7]	
1/28/1994	Soil compaction of the excavation near the pump islands observed by P. Tringale. Compaction may have been performed by tracking a backhoe over the fill—"compaction was not very firm".[9]	
5/4/1995	Fourth monitoring well installed (C4).	
11/6/1998	4 monitoring wells abandoned in place.	
6/29/2001	5 soil borings advanced near former groundwater well C-2 to evaluate current conditions in the 15-foot setback.[10]	

GEOMATRIX

References:

1 Treadwell & Associates, 1991, *Removal of Inactive Underground Storage Tanks*, January 29.

2 Touchstone Developments, 1993, letter report on field sampling activities, January 12.

3 Pacific Environmental Group, Inc., 1993, Recent Soil and Groundwater Investigation Report, January 15.

4 Chevron U.S.A. Products Company, 1993, letter transmitting soil sampling data from additional excavation at the former waste oil UST, May 5.

5 Alameda County Department of Health Services, 1996, *Case Closure Summary*, November 19.

6 Touchstone Developments, 1994, letter transmitting tables of final excavation confirmation samples, June 14.

7 Touchstone Developments, 1994, *Soil Excavation and Remediation Report*, March 11.

8 Construction Materials Testing, Inc., 1994, Results of Soil Compaction Testing, February 16.

9 Treadwell & Rollo, Inc., 1994, Field Investigation Daily Report, January 28.

10 Geomatrix Consultants, Inc., 2001, letter report with results of soil sampling, July 19.

GEOMATRIX

Figures

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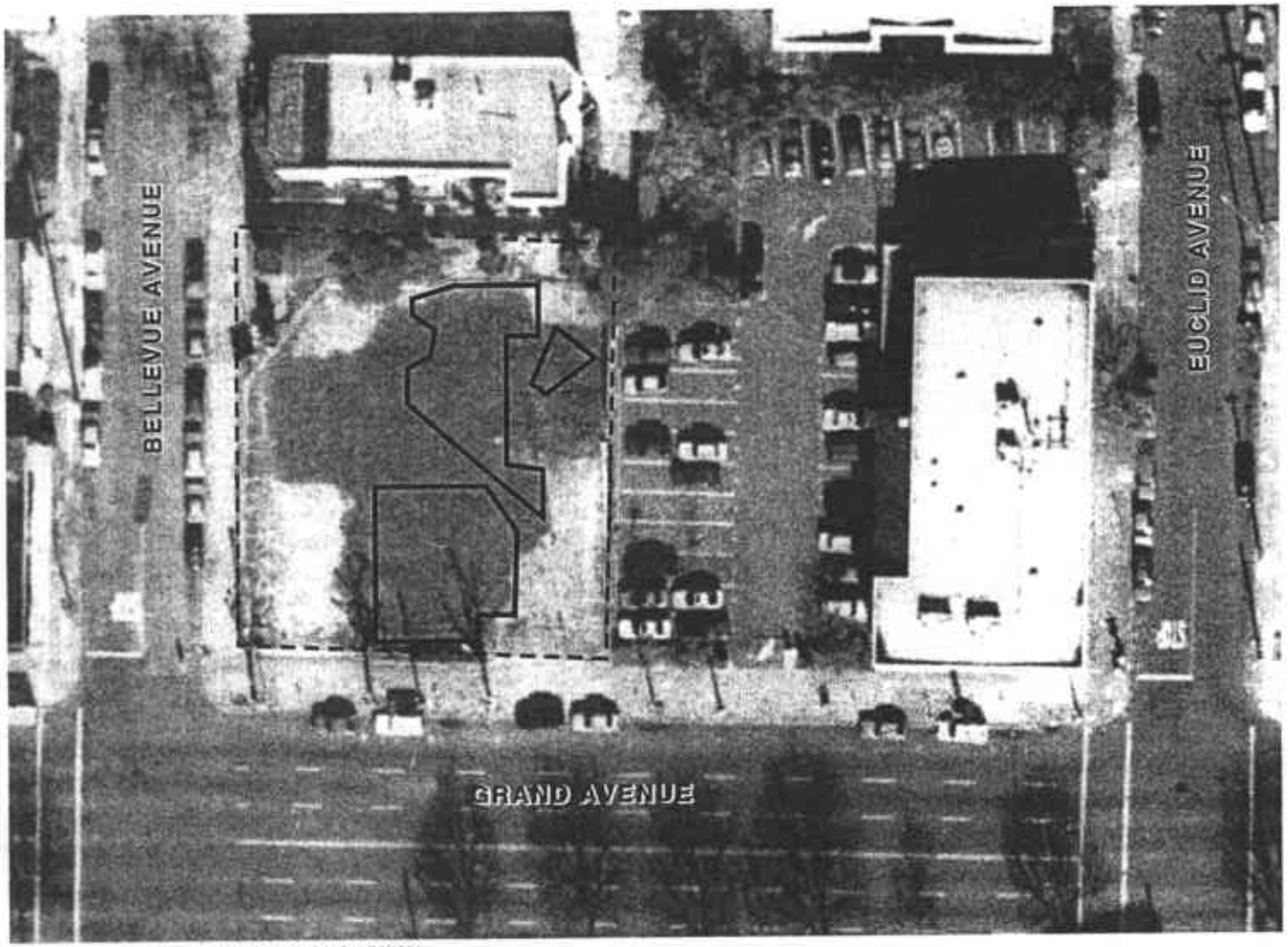

EXPLANATION

Property boundary

Excavation area

0 50 Feet

Scale approximate

Pacific Aerial Surveys, Negative AV625-10-26, dated 11/29/1994

GEOMATRIX

1994 EXCAVATION LOCATION
460 Grand Avenue
Oakland, California

Project No.
7315.000

Figure
2

GEOMATRIX

Attachment 1

File Index

460 Grand Avenue, Oakland, California

Date	From (Author)	To (Recipient)	Description
7/19/01	Geomatrix Consultants/M. Peischl	Alameda County Environmental Health Division/D. Hwang	Report presenting soil sample results at 460 Grand Avenue, Oakland, CA
6/28/00	The Legal Solutions Group/J. Gibson	Chevron Products/B. Hunter	Letter requesting assistance from Chevron to resolve property use restriction issue
1/25/00	T&R/P. Hubbard	Chevron Products/B. Hunter	Letter (only) transmitting a copy of the Grand Avenue RBCA document
12/10/99	The Legal Solutions Group/J. Gibson	Chevron Products/B. Hunter	Letter requesting assistance from Chevron regarding administrative resistance from the County concerning property use restriction
12/9/99	Treadwell & Rollo/P. Peischl	Chevron Products/B. Hunter	Facsimile transmitting Treadwell & Rollo's 8/20/99 letter to City of Oakland Fire Services Agency requesting that the Case Closure Summary be amended to allow unrestricted residential land use.
9/27/99	Treadwell & Rollo/P. Peischl	City of Oakland Fire Services Agency/L. Griffin	Unexecuted Agency request for concurrence with Alameda County HazMat that the lead regulatory agency for review of the Oakland RBCA Tier 2 screening will be the City of Oakland Fire Services Agency, Hazardous Materials Management Program
8/20/99	The Legal Solutions Group/J. Gibson	Treadwell & Rollo/P. Peischl	Facsimile transmitting the parcel number (10-779-15-1) for the 460 Grand Avenue property and review comments to Treadwell & Rollo's 8/20/99 letter repor
8/20/99	Treadwell & Rollo/P. Peischl	City of Oakland Fire Services Agency/L. Griffin	Letter report w/attachments requesting that the Case Closure Summary be amended to allow unrestricted residential land use.
8/19/99	Treadwell & Rollo/P. Peischl	The Legal Solutions Group/J. Gibson	Facsimile (only) transmitting draft letter to request that the setback requirement be removed from the 460 Grand Avenue case
5/18/99 and 5/25/99	Treadwell & Rollo/P. Peischl	Treadwell & Rollo/File	5/18/99 meeting notes and 5/25/99 telephone notes w/Jack Gibson regarding 460 Grand Avenue
4/22/99	Pacific Aerial Surveys	Treadwell & Rollo/Carrie Austin	Invoice #54873 for site study cancellation
4/20/99	Treadwell & Rollo/P. Peischl	The Legal Solutions Group/J. Gibson	Letter (only) transmitting a draft letter report regarding environmental conditions at 460 Grand Avenue for review and comment
4/16/99	Treadwell & Rollo/P. Peischl	The Legal Solutions Group/J. Gibson	Draft letter report w/attachments regarding environmental conditions at 460 Grand Avenue
4/2/99	Chevron/P. Briggs	Treadwell & Rollo/P. Peischl	Facsimile transmitting a copy of the 12/3/98 Remedial Action Completion Certificate from Alameda County Health Care Services and a copy of the 12/13/98 Chevron letter to J. Gibson denoting the completion of the site investigation and NFA status
4/1/99	Treadwell & Rollo/P. Peischl	Chevron/P. Briggs	Facsimile (only) transmitting acknowledgement of the receipt of copies of documents regarding the closure of the 460 Grand Avenue site
3/23/99	The Legal Solutions Group/J. Gibson	Treadwell & Rollo/P. Tringale	Letter enclosing an executed, modified copy of the Authorization to Proceed on the work for 460 Grand Avenue
3/19/99	Treadwell & Rollo/P. Peischl & P. Tringale	The Legal Solutions Group/J. Gibson	Letter enclosing the unexecuted Authorization to Proceed for consultation services related to the 460 Grand Avenue property

File Index

460 Grand Avenue, Oakland, California

Date	From (Author)	To (Recipient)	Description
11/19/98	Chevron/P. Briggs	Alameda County Health Care Services/D. Hwang	Letter (only) enclosing a 11/17/98 Well Destruction Report and copies of the State of California Well Completion Reports and the Alameda County Public Works Agency permit with a request for issuance of a Remedial Action Completion Certificate
10/6/98	Chevron/P. Briggs	The Legal Solutions Group/J. Gibson	Letter stating Chevron has been requested by the Alameda County Environmental Health Department to destroy the wells so the site can be closed
11/19/96	Alameda County Health Care Services/J. Eberle and M. Logan	Chevron/P. Briggs	Letter listing the documents that were received regarding 460 Grand Avenue and stating the process of the Case Closure Summary
10/2/96	Chevron/P. Briggs	Alameda County Health Care Services/J. Eberle	Letter (only) enclosing a copy of the amended 9/30/96 RBCA Tier 2 Risk Evaluation
2/13/96	Chevron/M. Miller	Alameda County Health Care Services/J. Eberle	Letter enclosing the 1/16/96 Quarterly Groundwater Sampling Report for 460 Grand Avenue prepared by Gettler-Ryan, Inc.
2/10/95	Robert E. Falaschi	Treadwell & Rollo/P. Tringale	Letter enclosing Chevron's 1/26/95 Quarterly Groundwater Sampling report and Chevron's 2/8/95 draft copy of a work plan for further borings requested by J. Eberle of the Alameda County Health Care Services
2/6/95	Chevron/M. Miller	Robert E. Falaschi	Facsimile transmitting a draft Work Plan dated 2/3/95 prepared by Pacific Environmental Group for the installation of two temporary and one permanent off-site groundwater monitoring wells at 460 Grand Avenue site
8/17/94	Robert E. Falaschi	Treadwell & Rollo/P. Tringale & J. Ordons	Facsimile transmitting 8/15/94 Chevron letter to Alameda County Health Care Services with the 7/25/94 quarterly Groundwater Sampling Report prepared by Sierra Environmental Services
6/14/94	Touchstone Developments/J. Monroe	Chevron Products/M. Miller	Letter enclosing additional tables for the final excavation sidewall and bottom samples collected during 1/94 and revised Figure 3 regarding sidewall sample W0-7
5/6/94	Adams, Gibson & MacPhee/J. Gibson	Treadwell & Rollo/P. Tringale	Letter stating the following documents (now attached) will be sent under separate cover: 4/25/94 letter from Chevron to Alameda County Health Care Services enclosing the 3/11/94 Soil Excavation and Remediation Report prepared by Touchstone Developments
3/4/94	Chevron Products/M. Miller	Robert E. Falaschi c/o Adams, Gibson & MacPhee/J. Gibson	Letter enclosing the 2/16/94 Compaction Report prepared by Construction Materials Testing, Inc.
1/31/94	Treadwell & Rollo/P. Tringale	Robert E. Falaschi	Facsimile transmitting preliminary field notes dated 1/28/94 regarding a brief site visit to 460 Grand Avenue
6/25/93	Chevron Products/M. Miller	Alameda County Health Care Services/J. Eberle	Letter enclosing a ground water elevation contour map dated 5/3/93 prepared by Pacific Environmental Group
5/5/93	Chevron Products/M. Miller	Alameda County Health Care Services/J. Eberle	Letter enclosing Figure 1 Site Plan by Touchstone Developments and a copy of the laboratory data prepared by Superior Precision Analytical documenting soil samples taken during overexcavation activities at 460 Grand Avenue
4/20/93	Treadwell & Rollo/P. Tringale	Jack Gibson	Facsimile transmitting a facsimile from Chevron to Treadwell & Rollo attaching Figure 1 Site Plan by Touchstone Developments and a copy of the laboratory data prepared by Superior Precision Analytical documenting soil samples taken during overexcavation activities at 460 Grand Avenue
3/24/93	Jack Gibson	Chevron/J. Robbins	Draft agreement between Falaschi Brothers and Chevron

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460 Grand Avenue, Oakland, California

Date	From (Author)	To (Recipient)	Description
3/24/93	Treadwell & Rollo/P. Tringale	File	3/24/93 meeting notes with Chevron
3/23/93	Treadwell & Rollo/S. Eckard & P. Tringale	Adams, Gibson & MacPhee/J. Gibson	Letter regarding Project Status and Recommendations for the 460 Grand Avenue site
2/3/93	Treadwell & Rollo/P. Tringale	Adams, Gibson & MacPhee/J. Gibson	Letter regarding Review of Engineering Drawings for the 460 Grand Avenue site
1/28/93	Chevron/M. Miller	Robert E. Falaschi	Letter enclosing the engineering drawings regarding the 460 Grand Avenue site
1/25/93	Treadwell & Rollo/P. Tringale	Falaschi Construction/R. Falaschi	Letter of transmittal (only) attaching requested letters regarding Grand Avenue and information regarding San Leandro plume
1/15/93	Pacific Environmental Group/D. Madsen & S. Krcik	Chevron Products/M. Miller	Site Assessment Report by Pacific Environmental Group for the 460 Grand Avenue site
1/15/93	Chevron Products/M. Miller	Alameda County Health Care Services/J. Eberle	Letter (only) forwarding the Site Assessment Report dated 1/5/93 prepared by Pacific Environmental Group and field sampling activities report dated 1/12/93 prepared by Touchstone Developments
1/15/93	Treadwell & Rollo/P. Tringale	John Gibson	Facsimile recommending one additional well and additional analyses for solvents in groundwater for 460 Grand Avenue site
1/12/93	Touchstone Developments/J. Monroe	Chevron Products/M. Miller	Field Sampling Activities Report
1/7/93	Adams, Gibson & MacPhee/J. Gibson	Treadwell & Rollo/P. Tringale	Facsimile transmitting 11/17/92 letter from Chevron/J. Robbins to Alameda County District Attorney's Office/M. Thomson confirming contents of 11/16/92 meeting with J. Eberle, J. Gibson and M. Thomson
12/16/92	Chevron/M. Miller	Alameda County Health Care Services/J. Eberle	Letter summarizing activities at 460 Grand Avenue site pursuant to Chevron's letter from J. Robbins to M. Thomson of the Alameda County District Office dated 1/17/92
4/8/92	Pacific Aerial Surveys	File	Aerial survey drawing No. AV4230-10-26
1/13/92	Treadwell & Rollo/P. Tringale	File	1/13/92 meeting notes with Chevron
4/23/91	Treadwell & Rollo/J. Rosso	Falaschi Brothers c/o J. Adams of Adams, Sadler & Hovis	Letter regarding observations of a site visit on 4/19/91
2/25/91	Alameda County Health Care Services/G. Wistar	Adams, Sadler & Hovis/J. Adams	Letter regarding site investigation and remediation requirements following underground tank removals at 460 Grand Avenue site
1/29/91	Treadwell & Associates	Falaschi	Report entitled "Removal of Inactive Underground Storage Tanks, 460 Grand Avenue, Oakland, California" with incomplete attachments
12/28/90	Treadwell & Associates/J. Rosso	Falaschi Brothers c/o J. Adams of Adams, Sadler & Hovis	Letter attaching figures and tables summarizing soil and groundwater analytical results at 460 Grand Avenue
12/10/90	Professional Practice Insurance	Treadwell & Associates (Insureds)	Certificate of Insurance; Certificate Holder named Falaschi Brothers and Joseph A. Adams, Receiver of Adams, Sadler & Hovis
12/4/90	Joseph Adams, Receiver	Regulatory Agency	Underground Storage Tank Unauthorized Release/Contamination Site Report

File Index

460 Grand Avenue, Oakland, California

Date	From (Author)	To (Recipient)	Description
10/15/90	Adams, Sadler & Hovis/S. Baker	Treadwell & Associates/J. Rosso	Letter (only) transmitting two executed copies of the Grand Avenue contract
5/11/90	Treadwell & Associates/J. Rosso & D. Treadwell	Robert E. Falaschi c/o Falaschi Brothers	Letter regarding Consulting Services - Underground Storage Tanks, Grand Avenue at Bellevue in Oakland
3/19/90	Adams, Sadler & Hovis/J. Adams	Chevron Corporation/Legal Dept.	Letter regarding the property located at the corner of Grand Avenue and Bellevue in Oakland
1/31/90	Alameda County Health Care Services/G. Wistar	Falaschi Brothers/R. Falaschi	Notice of Violation
3/30/89	Bay Area Air Quality Management District	Alameda County Department of Environmental Health Hazardous Materials	Advisory: Reporting Form for Regulation 8, Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks
3/30/88	Pacific Aerial Surveys	File	Photo: current service station
4/1/85	Alameda County Department of Environmental Health Hazardous Materials	File	Procedure for Obtaining Approval for Plans and Specifications for Compliance with State Statutes Pertaining to Underground Storage of Hazardous Substances
7/7/59	Pacific Aerial Surveys	File	Photo: circa, 1946 Station
undated	File	File	Chevron contact information
undated	Unknown	File	Drawing of circa 1946 service station
undated	Unknown	File	One-page map of Oakland, Grand Avenue area
undated	Unknown	File	Drawing of current station
undated	Treadwell & Associates	File	Figure 2 - Site Plan - 460 Grand Avenue (at Bellevue) with markups

GEOMATRIX

Attachment 2

ATTACHMENT 2

Case Closure Summary

19 November 1996

01-0611

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 11/19/96

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pky**
City/State/Zip: **Alameda CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Jennifer Eberle** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Former Gulf Service Station #0006**
Site facility address: **460 Grand Ave., Oakland CA 94610**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **3615**
ULR filing date: **12/4/90** SWEEPS No: **N/A**

Responsible Parties: **Addresses:** **Phone Numbers:**
Phil Briggs, Chevron Products Co., PO Box 5004, San Ramon CA 94583-0804 (510-842-9136)

Falaschi Brothers, c/o Jack Gibson, The Legal Solutions Group, 1629-5th Ave., San Rafael CA 94901 (415-460-0100 ext.13)

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	10,000	gasoline	removed	11/29/90
2	10,000	gasoline	removed	11/29/90
3	10,000	gasoline	removed	11/29/90
4	250	waste oil	removed	11/29/90
5	250	waste oil	removed	01/05/94

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: apparent piping leak
Site characterization complete? YES
Monitoring Wells installed? YES Number: four
Proper screened interval? YES
Highest GW depth below ground surface (DTW): 2.31'bgs on 3/22/95 in C-3
Lowest GW depth: 7.31'bgs on 9/20/95 in C-4
Flow direction: consistently south, towards Lake Merritt
Most sensitive current use at present: vacant lot

Leaking Underground Fuel Storage Tank Program

Are drinking water wells affected? NO Aquifer name: n/a
Is surface water affected? Probably not, since the downgradient well C-4 has been ND
Nearest SW name: Lake Merritt is approx 550' south of the site
Report(s) on file at **Alameda County, 1131 Harbor Bay Pky, Alameda CA 94502**

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	four USTs	disposed to Erickson, #89891087 and #89891108,	11/29 & 30/90
Tank's Contents and Rinsate	10,235 gal	disposed to Refineries Services, #89804855, #89802491, and #89804851	11/27 & 28/90
Soil	approx 350 yd3	disposed to Forward Landfill	Jan 1994
	approx 450 yd3	disposed to Redwood Landfill	Jan 1994
Groundwater	10,000 gal	disposed to Chevron's Richmond refinery	1/26/93

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	1,700 [a]	2,300 [i]	2,300 [e]	80 [g]
TPH (Diesel)	7,100 [b]	200 [c]	170 [f]	NA [g]
Benzene	1.2 [b]	13 [i]	53 [e]	0.93 [g]
Toluene	10 [b]	80 [i]	160 [e]	ND [g]
Ethylbenzene	47 [a]	83 [i]	36 [e]	ND [g]
Xylene	260 [a]	440 [i]	160 [e]	ND [g]
Oil & Grease	24,000 [b]	ND [c]	ND [f]	ND [h]
PCE	1.0 [b]	0.074 [d]	ND [f]	ND [h]
1,1,1-TCA	0.25 [b]	0.042 [d]	ND [f]	ND [h]
1,2-DCB	ND [b]	0.048 [d]	ND [f]	ND [h]
1,2-DCA	ND [b]	0.028 [d]	ND [f]	3.5 [h]
Cd	0.8 [b]	10.8 [d]	ND [f]	ND [h]
Cr	12 [b]	58 [d]	ND [f]	190 [h]
Pb	40 [b]	12 [d]	ND [f]	70 [h]
Ni	22 [b]	74 [d]	ND [f]	360 [h]
Zn	41 [b]	83 [d]	70 [f]	380 [h]
MTBE				8.7

[a] from piping samples collected 12/4/90
[b] from waste oil tank excavation, collected 11/29/90
[c] from final excavation samples which were in the long term vadose zone (0-5.5'bgs), as used for the risk evaluation, collected Jan 1-21, 1994
[d] from final excavation samples (HVOCs in WX-3 and WO-9, and metals in H-S and WX-3), collected Jan 1-21, 1994
[e] from grab water sample from open fuel tank excavation, collected 11/29/90
[f] from grab water sample from open waste oil tank excavation, collected 12/4/92
[g] from last round of MW sampling, collected 12/12/95
[h] from MW sampling conducted on 12/16/92
[i] from soil sampling in borehole for well C-2, 12/14/92

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Undetermined
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Undetermined
Does corrective action protect public health for current land use? see comments in section V. regarding the risk evaluation
Site management requirements: **Commercial site development is acceptable with the site in its present condition. Residential site development is acceptable, providing that either 1) the development includes a 15' setback distance from Grand Ave., or 2) soil is excavated within the 15' setback zone, soil samples are collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and possibly another revised Risk Evaluation).**

Should corrective action be reviewed if land use changes? **YES**; see comments above
Monitoring wells Decommisioned: Not yet
Number Decommisioned: 0 Number Retained: 4
List enforcement actions taken: Pre-Enforcement Review Panel 7/27/93, Legal Request for Submittal of a Technical Report signed by Steven Ritchie of the RWQCB and dated 9/27/93
List enforcement actions rescinded: none

V. ADDITIONAL COMMENTS, DATA, ETC.

The property was reportedly first developed in the late 1940s, and operated as a service station by a series of parties. The property was reportedly purchased by Gulf Oil Co. in 1961, when the existing USTs were replaced with three new 10,000-gallon gasoline USTs. Gulf Oil Co. reportedly operated the service station from 1961 through 1978. The Falschi brothers reportedly purchased the property in August 1978, and reportedly removed the fuel dispensers and emptied the USTs. The station had reportedly not been used since 1978.

On 11/29/90, four USTs were removed, under purview of Gil Wistar of Alameda County. There were three 10,000-gallon fuel USTs and one 250-gallon waste oil UST. According to Mr. Wistar's notes, Fuel Tank #1 had deep pitting and no apparent holes, while Fuel Tank #2 had deep pitting and at least 2 small holes. Fuel Tank #3 appeared to be in better condition, while Waste Oil Tank #4 had numerous small holes. There were two tank excavations: one for the fuel USTs and one for the waste oil UST. Seven soil samples were collected and one grab water sample was collected (from the fuel tank pit). Four piping samples were collected on 12/4/90. **See Figure 1 and 2, and Tables 1 through 4.**

Results from the six fuel tank soil samples were unremarkable: ND TPHg and ND benzene except for one hit of 0.019 mg/kg benzene; maximum lead result was 3.8 mg/kg. The water sample contained 2,300 ug/L TPHg, ND TPHd, and 53 ug/L benzene. The maximum concentrations from the piping samples included 1,700 mg/kg TPHg and 0.0066 mg/kg benzene. The waste oil tank soil sample contained 400 mg/kg TPHg, 7,100 mg/kg TPHd, 24,000 mg/kg O&G, 1.2 mg/kg benzene, 1.0 mg/kg PCE, and 0.25 mg/kg 1,1,1-TCA. The stockpiled soils were apparently not sampled.

On 12/4/92, the stockpiled soils were sampled, groundwater was pumped out of the excavations, the pit water from the waste oil tank excavation was sampled, and pit water from the fuel tank excavation was resampled. Results from the fuel tank stockpiled soils indicated ND TPHg and ND BTEX. Results from the waste oil tank stockpiled soils indicated ND TPHg, ND BTEX, 8400 mg/kg O&G, ND HVOCs, 190 mg/kg TPHd, ND Cd, 23 mg/kg Cr, 88 mg/kg Pb, 30 mg/kg Ni, and 340 mg/kg Zinc. Results from the fuel tank pit water sample indicated ND TPHg, ND BTEX and ND Pb. Results from the waste oil tank pit water sample indicated ND TPHg, ND BTEX, 170 ug/L TPHd, ND HVOCs, ND Cd, ND Cr, ND Pb, ND Ni, and 0.07 mg/L Zn. **See Table 5 and Figure 2A.**

Three monitoring wells were installed on 12/14/92 and 12/15/92. Soils were sampled in the boreholes. **See Figure 5, 5A, 5B, 5C for locations and boring logs, and Table 6** for results. The downgradient boring (C2) near the pump island had significant soil concentrations.

On 3/19/93, the former waste oil tank pit, located at the northeast edge of the property, was overexcavated and resampled. Four sidewall samples were collected at 6'bgs. There was water in the excavation. Results indicated up to 21,000 mg/kg O&G, 730 mg/kg TPHg, 3,200 mg/kg TPHd, 2.1 mg/kg benzene, 0.320 mg/kg 1,1,1-TCA, 0.610 mg/kg PCE, and 0.065 mg/kg 1,2-DCB in sample WE. The results were not tabulated. **See Figure 4.**

On 12/28/93, the service station was demolished. This allowed better access to the former waste oil tank pit in the northeastern edge of the property, for the purpose of removing residual soil contamination. On 1/3/94, another UST was discovered below the former service station. It appeared to be a 250-gallon waste oil UST. Soil samples (WX series) were collected from the overexcavation of the former waste oil tank pit in the northeastern edge of the property. In addition, an oil/water separator was removed; soil samples (SM series) were collected. Two hydraulic hoists were removed; soil samples HS and HN were collected. Sample results in these locations were unremarkable, with the exception of sample WX-3 from the northern edge of the property (1,300 mg/kg TPHd and 970 mg/kg TOG at 3'bgs); **see Figure 6 & 7, Tables 7 & 8.**

On 1/5/94, the pump islands were excavated. There was a strong gasoline odor. Several samples (IX series) were collected in the pump island excavation. The newly-discovered 250-gallon waste oil UST was removed. There were 2 large corrosion holes on the top; the bottom and sides appeared intact. Approximately 150 gallons of waste oil were pumped out on 1/4/94. Four soil samples were initially collected from the newly-discovered 250-gallon waste oil UST excavation (WO series). **See Table 7 and Figure 6.**

On 1/20/94 and 1/21/94, further overexcavation ensued in the areas of the former islands and the newly discovered waste oil UST/hydraulic hoists. The data is compiled in **Tables 7 and 8. See Figures 5, 6, and 7 also.**

During these activities, approximately 350 yd3 of soil were removed from the waste oil tank excavation and disposed at Forward Landfill. Approximately 450 yd3 of soil were removed from the pump island excavation and disposed at Redwood Landfill. This makes a total of approximately 800 yd3 of soil removed from this site.

The final sampling locations are depicted in Figure 7, with the exception of sample WO-7, which was overexcavated. The residual benzene concentrations left in place are samples WO-8, WO-9, IX-7, IX-11, IX-12, IX-13, IX-14, IX-15, IX-16, IX-17, IX-18, IX-19, IX-21, and IX-22.

Further subsurface investigation was conducted offsite and downgradient in Grand Avenue in May 1995. A fourth monitoring well (C4) was installed; two additional borings were attempted but not completed, due to the presence of utilities. **See Figure 9 for the boring log of C4.**

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Pacific Aerial Surveys, Negative AV4230-10-26, dated 4/8/1992

EXPLANATION

Property boundary

Excavation area

0 50 Feet

Scale approximate

GEOMATRIX

1992 UST EXCAVATION LOCATION
460 Grand Avenue
Oakland, California

Project No.
7315.000

Figure
1

Groundwater was sampled and monitored for 8 events between 12/16/92 and 12/12/95 in the first three wells, and for 3 events between 6/5/95 and 12/12/95 in the downgradient well (C4). **See Table 9.** Results indicated low to ND concentrations of benzene and TPHg. Groundwater flow direction was consistently south, towards Lake Merritt. **See Figure 8.**

An ASTM RBCA Tier 2 risk evaluation was prepared by Chevron Research and Technology Company (CRTC), dated 5/20/96. They evaluated indoor inhalation for a residential scenario, for both soil and groundwater conditions. The risk evaluation was amended to address the concerns of the soil sampling selection and correct the solutions to the equations. The soil samples selected contained benzene at a depth of 0 to 5.5'bgs, the expected long term vadose zone. These samples included WO-8, WO-9, IX-11, IX-13, IX-15, and IX-18. Two scenarios were evaluated: conservative and plausible. The conservative scenario used the maximum site benzene concentration in groundwater and the average of the six benzene impacted soil samples, not including ND samples. The plausible scenario used the 12/12/95 (final) benzene concentration in groundwater (well C2), and the average benzene concentration of the 14 soil samples taken in the 0-5.5'bgs interval, including ND samples.

Results of the amended risk evaluation indicated a risk value of 4.05×10^{-5} for the conservative scenario, and a risk value of 1.7×10^{-5} for the plausible scenario. These risk values are combined values for soil and groundwater. **These are acceptable risk values for commercial/industrial development of the site.**

The risk assessment was revised again, since the soil sampling results from the three monitoring wells (C1 to C3) were not included in calculating the benzene concentrations. The revised results were transmitted to the County via fax from CRTC dated 1/10/97. The benzene concentrations were calculated using the arithmetic average. After some debate, it was decided that this was the best method for small UST sites such as this; the geometric average is used on large Superfund sites. It was also decided to use the calculated risk for the *plausible scenario*, and not the conservative scenario. The risk was calculated to be 8.85×10^{-5}. Since this number approaches 1×10^{-4}, **the risk was considered acceptable for a commercial/industrial scenario.**

Residential site development would be acceptable, providing that either 1) the development should include a 15' setback distance from Grand Ave., or 2) soil will be excavated within the 15' setback zone, soil samples are collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and another revised Risk Evaluation).

No further investigations are recommended since this site appears to meet the SF Bay RWQCB's definition of a low risk groundwater case. To summarize, the reasons that this case should be closed are as follows:

* The sources have been removed (five USTs, 10,000 gallons of water from the excavation, and approximately 800 cubic yards of contaminated soil);

* The site has been adequately characterized;

* The groundwater downgradient well (C4) has been ND for BTEX and TPHg;

* Although there is a sensitive environmental receptor in the site vicinity (Lake Merritt lies approximately 600 feet from the site), this distance is a significant and unlikely distance for a hydrocarbon plume to travel;

* There is no significant risk to human health, based on the tier 2 risk evaluation. **The risk is acceptable for commercial/industrial development of the site. Residential site development would be acceptable, providing that either 1) the development should include a 15' setback distance from Grand Ave., or 2) soil will be excavated within the 15' setback zone, soil samples are collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and another revised Risk Evaluation).**

VI. LOCAL AGENCY REPRESENTATIVE DATA

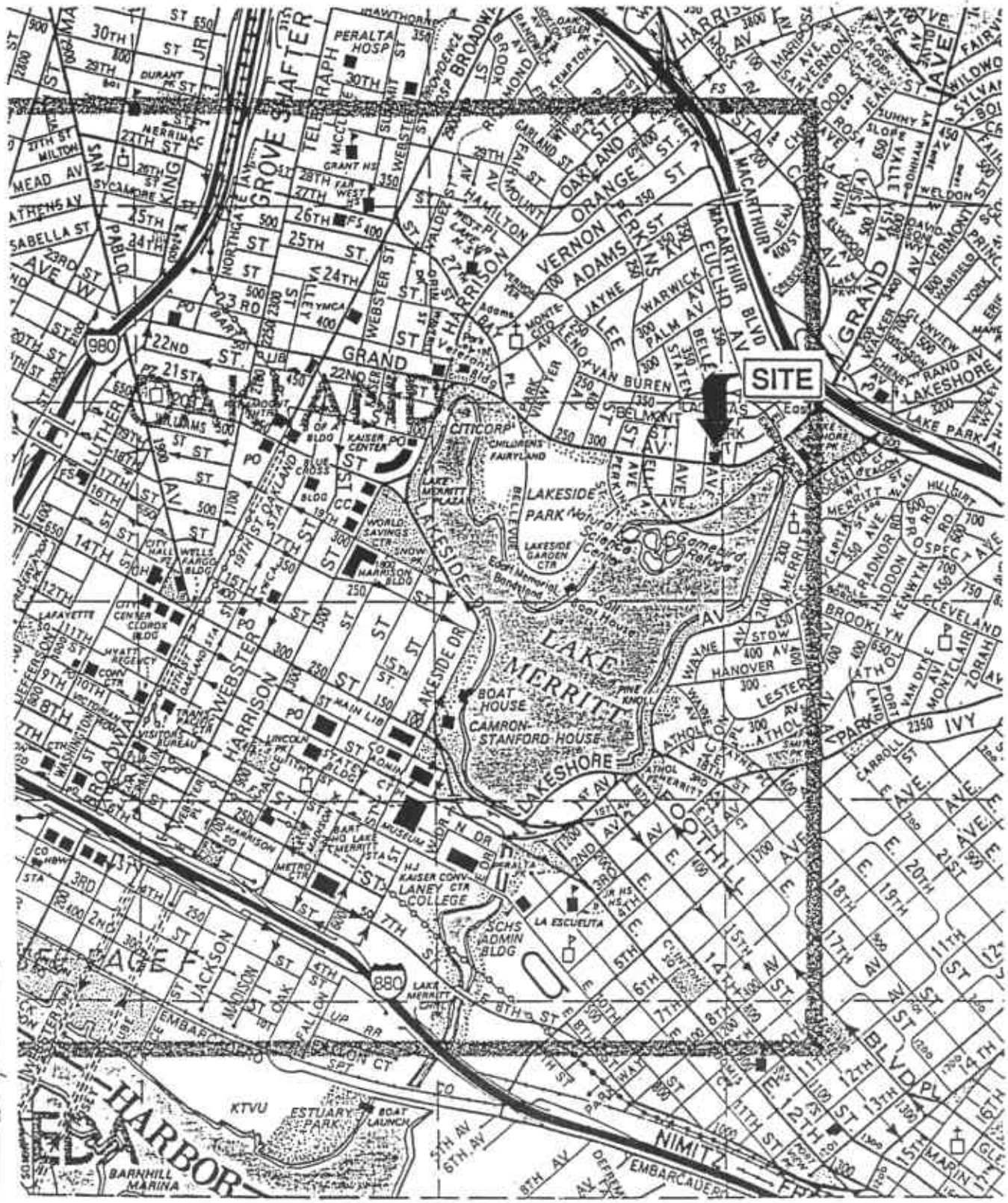
Name: Jennifer Eberle Title: Hazardous Materials Specialist
Signature: Eberle Date: 1-30-97

Reviewed by
Name: Madhulla Logan Title: Hazardous Materials Specialist
Signature: Madhulla Date: 4-1-97

Name: Tom Peacock Title: Manager of LOP
Signature: Thomas Peacock Date: 4-1-97

VII. RWQCB NOTIFICATION

Date Submitted to RWQCB: 4-2-97 RWQCB Response: Approved
RWQCB Staff Name: Kevin Graves Title: Associate Water Resources Control Engineer
Date: 4/21/97



0 2200

Approximate Scale in Feet

Reference: Thomas Brothers Map, 1988

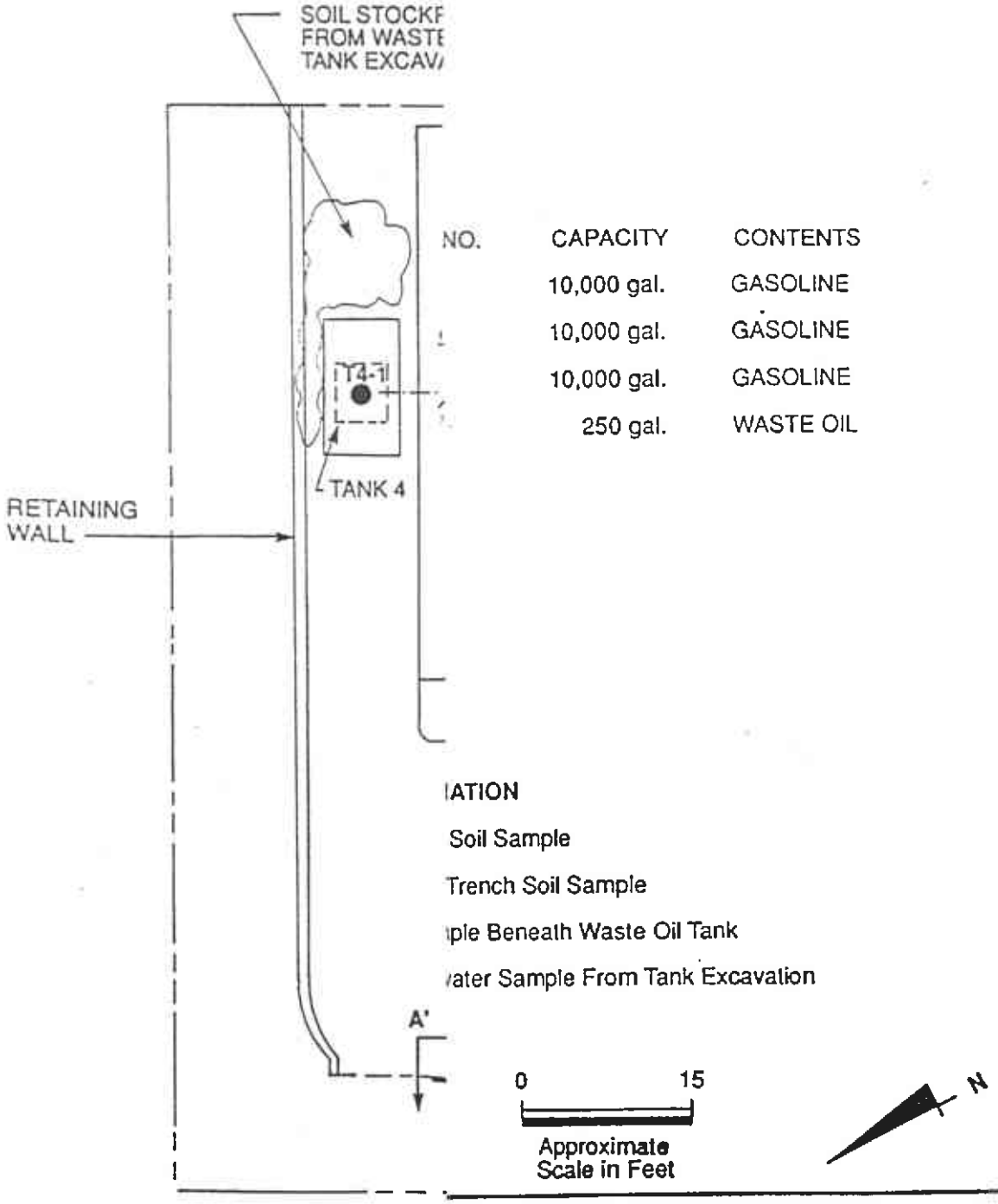
460 GRAND AVENUE (at BELLEVUE)
OAKLAND, CALIFORNIA

VICINITY MAP

TREADWELL & ASSOCIATES, INC.
Consulting Engineers and Scientists

Project No. 1132A

Figure 1



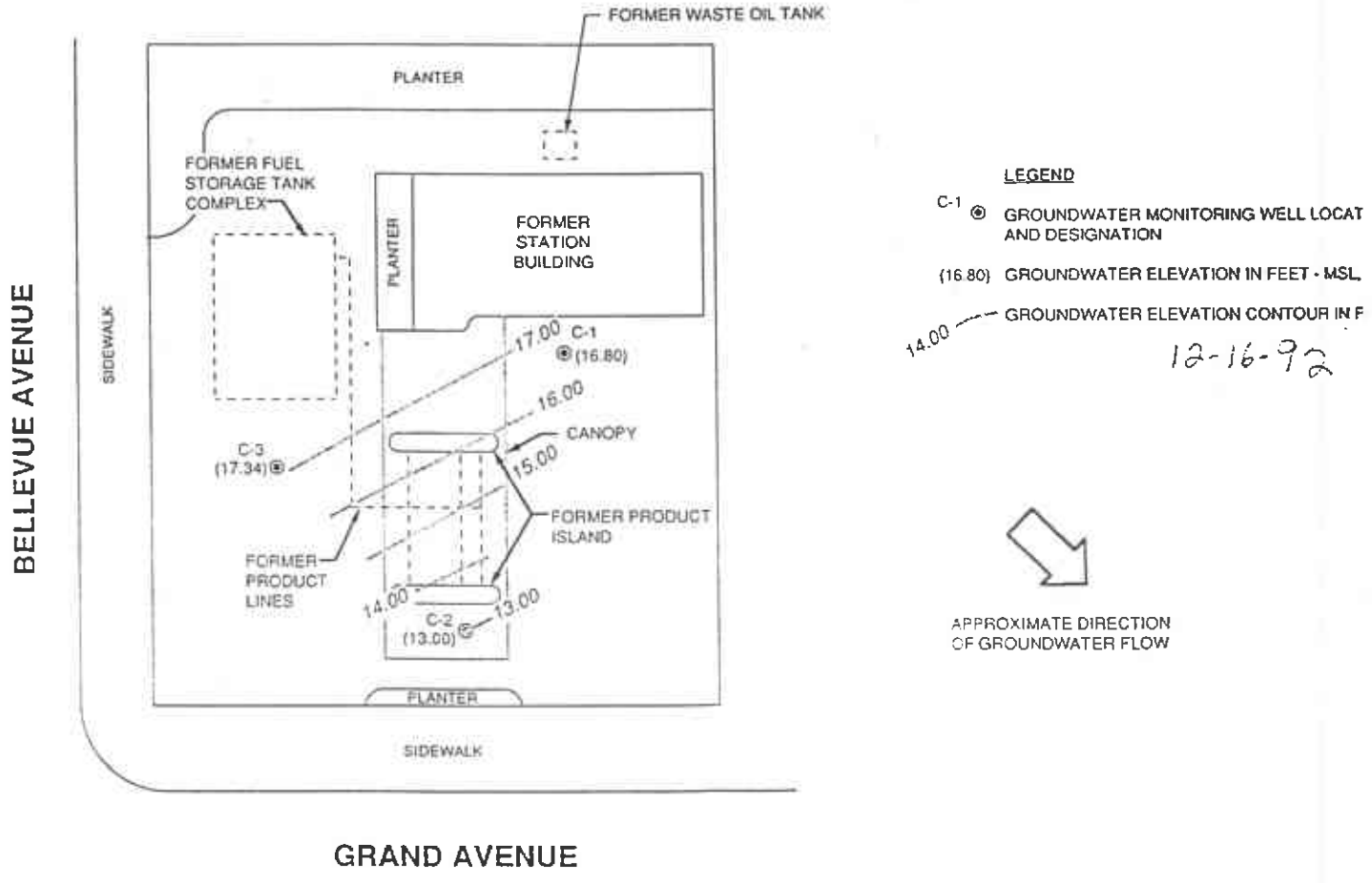
460 GRAND AVENUE (at BELLEVUE)
OAKLAND, CALIFORNIA

SITE PLAN

Project No. 1132A | Figure 2

TREADWELL & ASSOCIATES, INC.
Consulting Engineers and Scientists

Figure 3



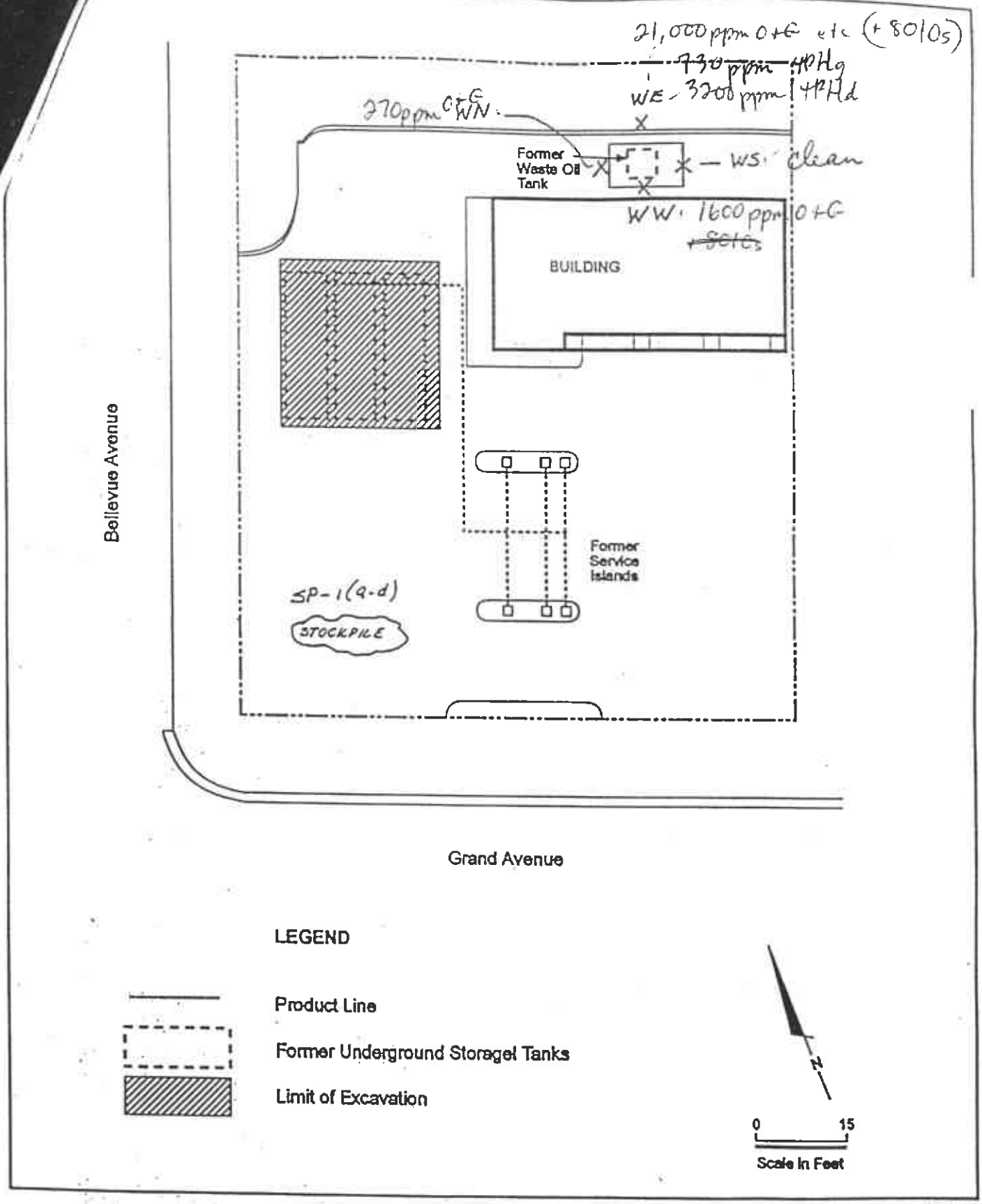
MAP TAKEN I

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 20 40 FEET

FORMER GULF SERVICE STATION 0006
460 Grand Avenue at Bellevue Avenue
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

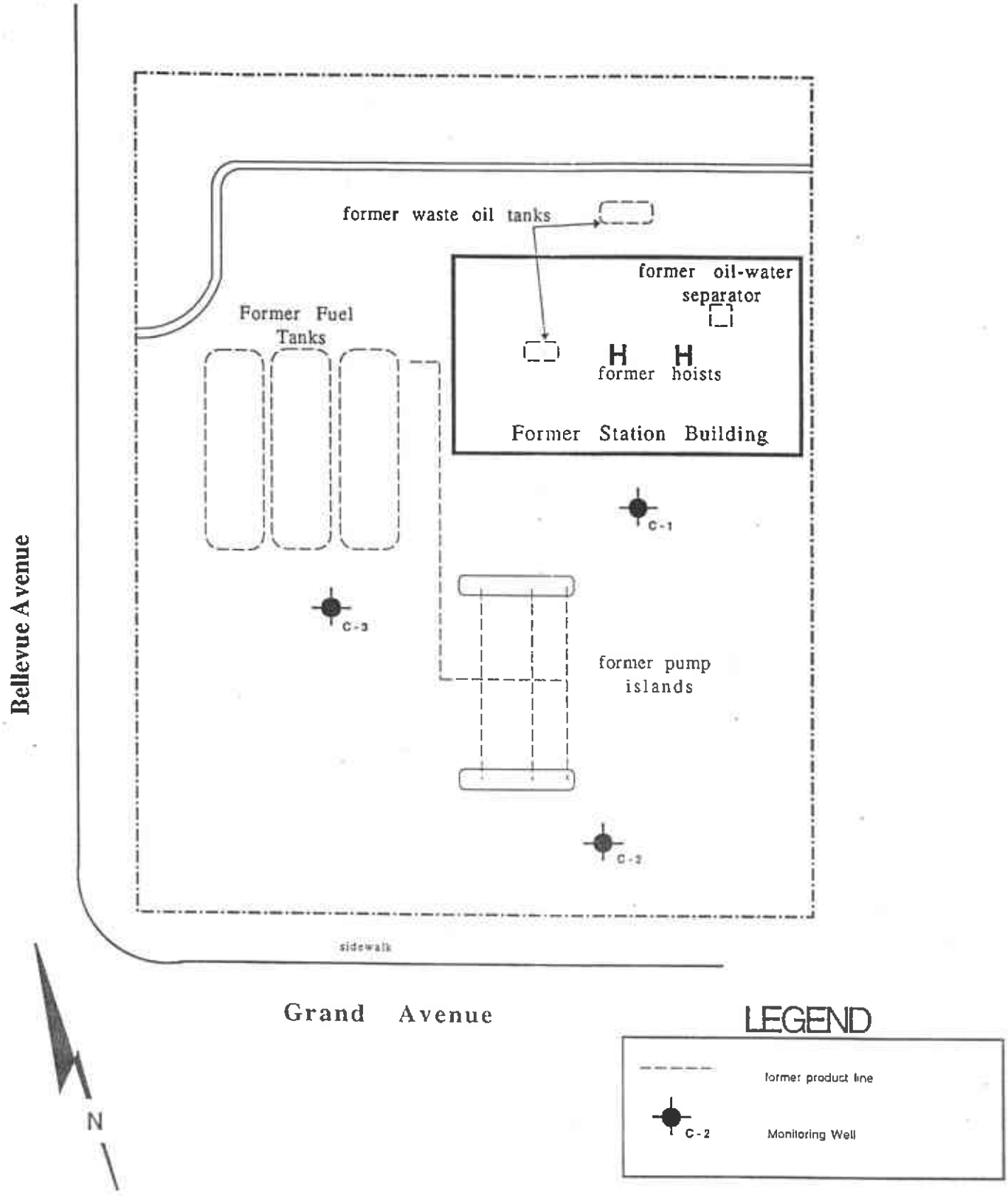


Touchstone Developments
Environmental Management

Site Plan
Former Chevron Station 9-0006
460 Grand Avenue at Bellevue
Oakland, California

FIGURE 4

PROJECT NUMBER	DRAWN	APPROVED	DATE
0006-1	PM		1/93



scale 1" = 20'

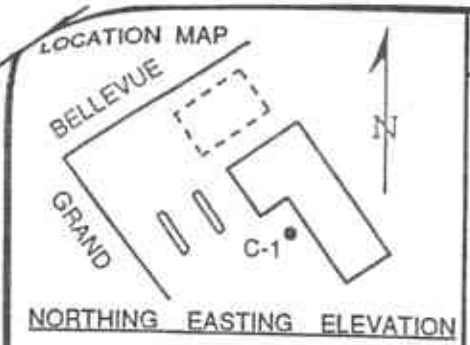
Touchstone Developments
Environmental Management

Site Plan
460 Grand Avenue
Oakland, California

Figure 4 5

3-13-94 | mjt

Project Number 0006-2



PACIFIC ENVIRONMENTAL GROUP, INC.

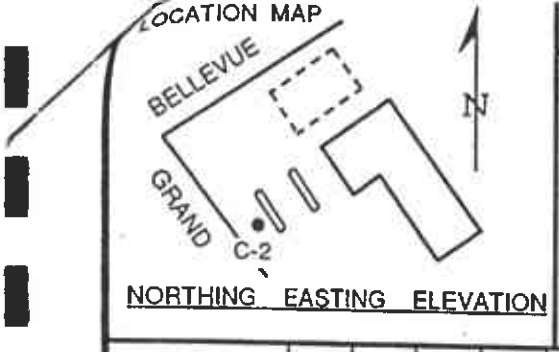
WELL NO. C-1
PAGE 1 OF 1

PROJECT NO. 325-31.01
LOGGED BY: DEM
DRILLER: BAYLANDS
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2/12 SAND

CLIENT: CHEVRON
DATE DRILLED: 12/14/92
LOCATION: 460 GRAND AVE., OAK
HOLE DIAMETER: 8"
HOLE DEPTH: 20'
WELL DIAMETER: 2"
WELL DEPTH: 15'
CASING STICKUP: -0.37'

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT				0			FILL	Asphalt.
				2			ML	CLAYEY SILT: medium to light brown (5Y 4/3); low plasticity; blue gray mottling to 2 cm; micaceous; trace fine to medium sand; no product odor.
				4				
	Dp	142	push	6				
SAND				8			CL	
	Dp	1.0	22	10				CLAY: olive brown (5Y 5/3); silty; micaceous; very stiff; no product odor.
				12				
	Wt/ Sat	ND	18	14			SP	SAND: medium brown (2.5Y 4/4); <5% fines; fine to medium sand; orange brown mottling; micaceous; medium dense; no product odor.
				16				
	Dry/ Dp	ND	30	18				
BENTONITE				20			CL	CLAY: yellowish brown (10YR 5/4); silty; low plasticity; micaceous; trace 1 mm wide orange brown liesegang banding; very stiff; no product odor.
				22				
				24				
				26				BOTTOM OF BORING AT 20'
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

Fig. 5A



PACIFIC ENVIRONMENTAL GROUP, INC.

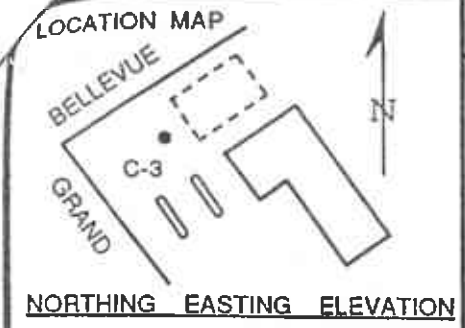
WELL NO. C-2
PAGE 1 OF 1

PROJECT NO. 325-31.01
LOGGED BY: DEM
DRILLER: BAYLANDS
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2/12 SAND

CLIENT: CHEVRON
DATE DRILLED: 12/14/92
LOCATION: 460 GRAND AVE., OAK
HOLE DIAMETER: 8"
HOLE DEPTH: 16-1/2"
WELL DIAMETER: 2"
WELL DEPTH: 15'
CASING STICKUP: -0.34'

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT				0			FILL	Asphalt.
				2			ML	SANDY SILT (2.5Y5/3); low plasticity; 15-25% fine sand; stiff; faint product odor.
				4				
	Dry	1.4	12	6				
				8				
SAND	Dry	13	16	10			CL	CLAY: (10YR5/4); low plasticity; orange brown mottling; blue gray mottling; stiff; no product odor.
				12				
	Mst/ Wt	11.8	17	14			SC	CLAYEY SAND (2.5Y5/3); 30-40% fines; micaceous; sandier and wet at 15-1/2 to 16'; medium dense; no product odor.
	Dry	ND	29	16			ML	CLAYEY SILT: (5Y5/3); low plasticity; micaceous; 1-2 mm wide orange brown; liesegang banding; very stiff; no product odor.
BENTONITE				18				
				20				BOTTOM OF BORiNG AT 16-1/2'
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

Fig 5B



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

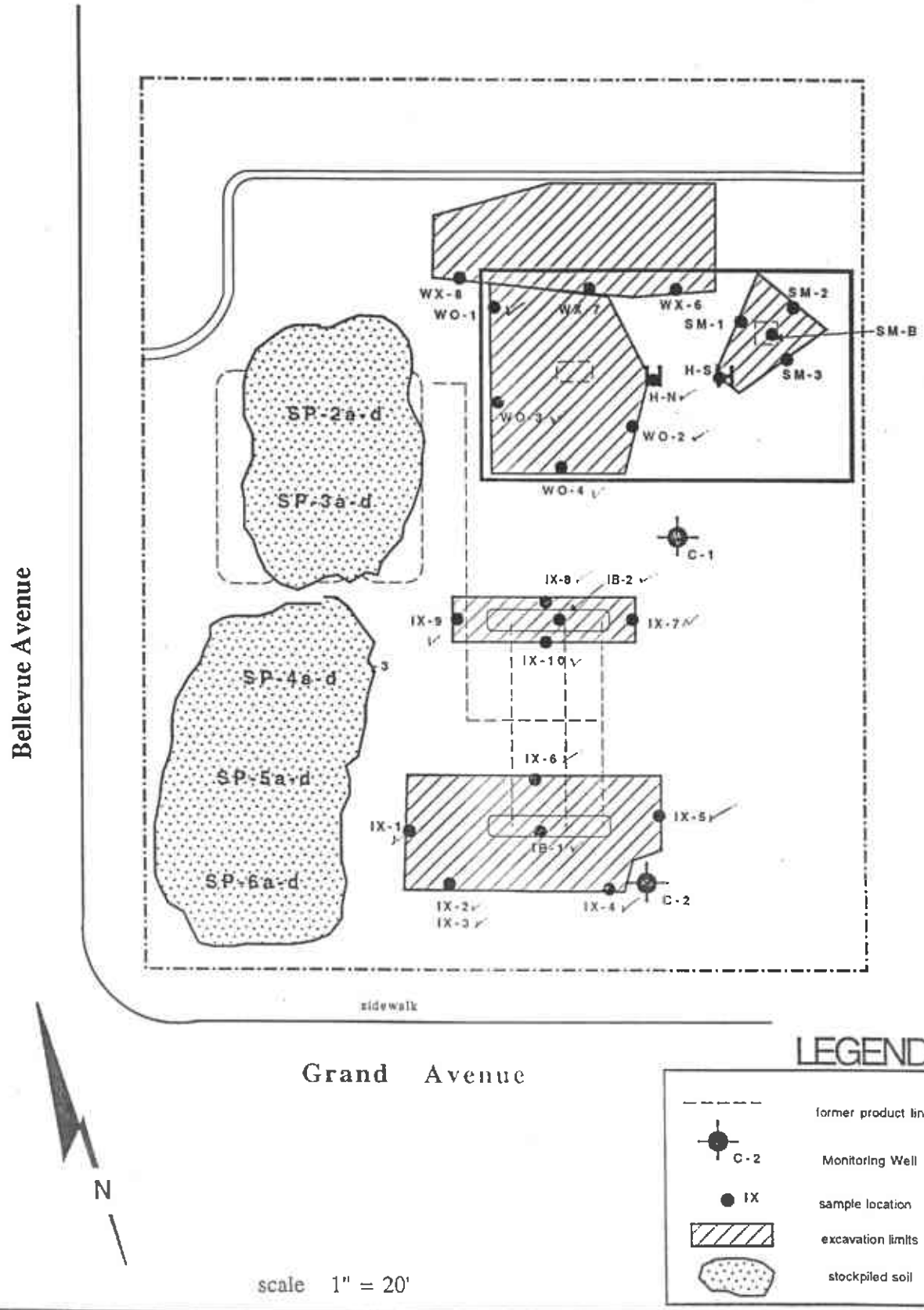
WELL NO. C-3
PAGE 1 OF 1

PROJECT NO. 325-31.01
LOGGED BY: DEM
DRILLER: BAYLANDS
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2/12 SAND

CLIENT: CHEVRON
DATE DRILLED: 12/15/92
LOCATION: 460 GRAND AVE., OAK
HOLE DIAMETER: 7-1/4"
HOLE DEPTH: 15'
WELL DIAMETER: 2"
WELL DEPTH: 15'
CASING STICKUP: -0.34'

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT				0			FILL	Asphalt.
				2			SC	CLAYEY SAND: (5GY 4/1); 15-25% fines; fine sand; dense; faint to moderate product odor.
				4				
	Dp	320	40	6			CL	CLAY: (5G 5/1); low plasticity; micaceous; medium brown mottling; silty; hard; no to faint product odor.
				8				
SAND	Dp	0.6	19	10				@8-1/2': (2.5Y 4/2); silty; blue green mottling; trace 1-2 cm nodules fine gray sand; stiff; no product odor.
	Sat	ND		12			SC	CLAYEY SAND: medium brown; 30-40% fines; fine to medium sand; medium dense; no product odor.
BENTONITE	Dry/ Dp	ND	16	14			CL	CLAY: (5Y 4/2); silty; low plasticity; micaceous; 10-20% blue green mottling; stiff; no product odor.
				16				
				18				BOTTOM OF BORING AT 15'
				20				
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

Fig 5C



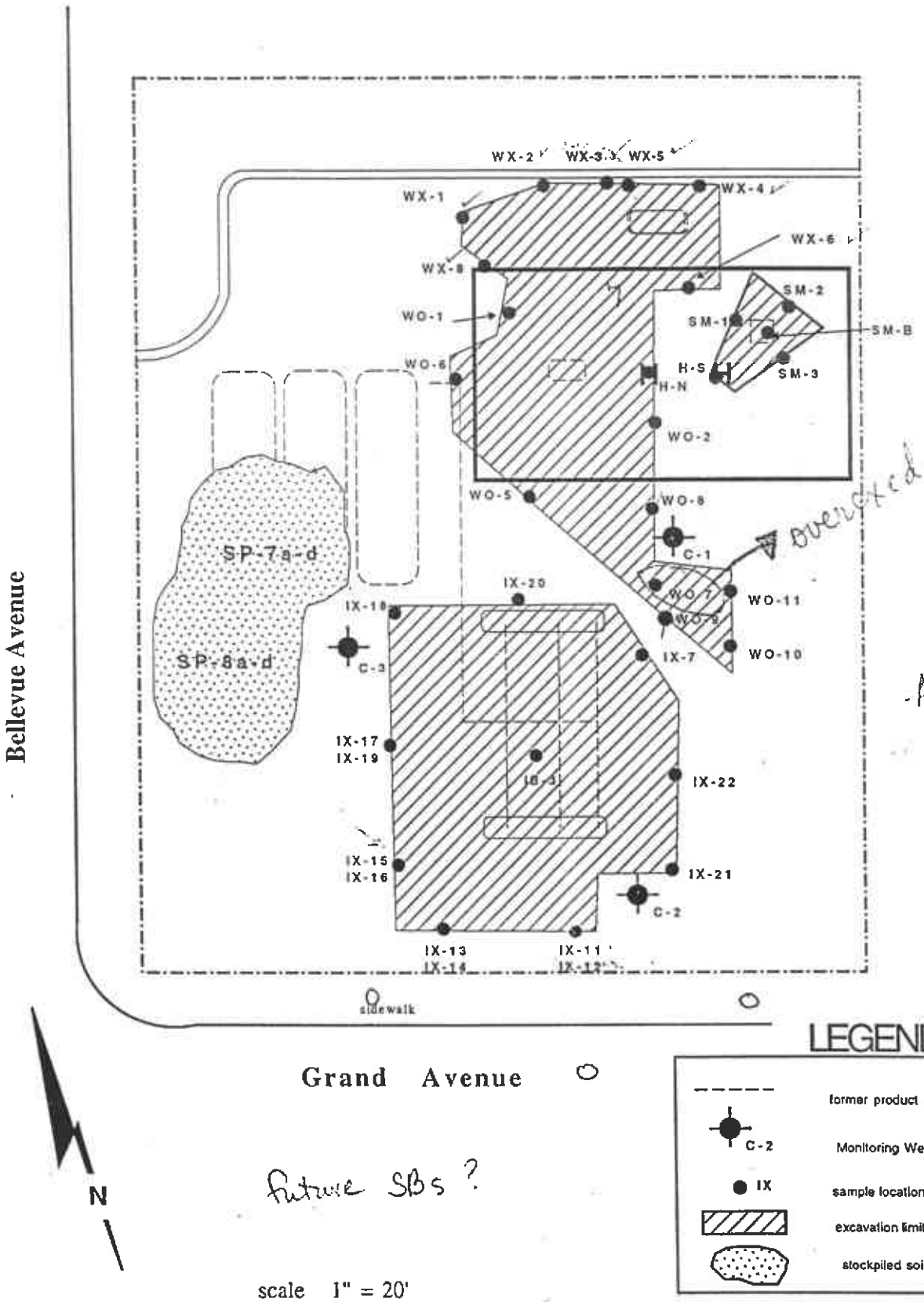
Touchstone Developments
Environmental Management

Excavation & Sampling
in progress
460 Grand Avenue
Oakland, California

Figure 2 6

3-13-94 | mjt

Project Number 0006-2



Overexcavated

Soils left in place
> 1000 ppm TPH
> 100 ppm TPH

future SBs ?

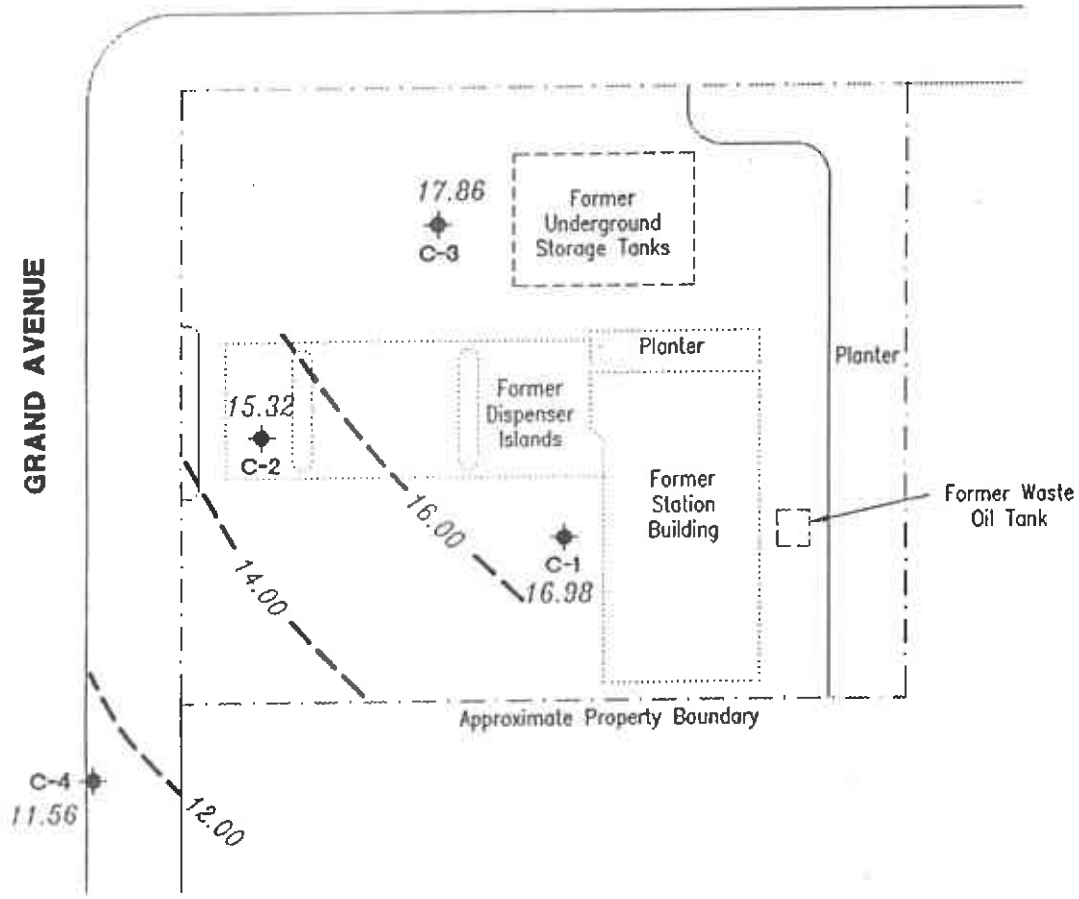
Touchstone Developments
Environmental Management

Final Excavation & Sample Locations
460 Grand Avenue
Oakland, California

Figure 4 7

3-13-94 | mjt

Project Number 0006-2



EXPLANATION

- Groundwater monitoring well
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 — Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.08 Ft./Ft.

N

0 30

Scale in Feet

Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Former Gulf Service Station No. 0006
460 Grand Avenue
Oakland, California

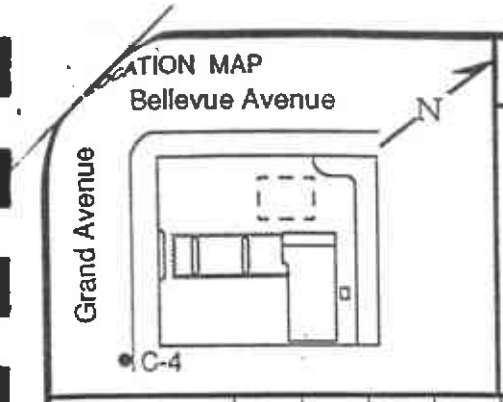
FIGURE
Fig. 8

JOB NUMBER
5208.80

REVIEWED BY

DATE
December 12, 1995

REVISED DATE



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. C-4
PAGE 1 OF 1

PROJECT NO. 325-031.01
LOGGED BY: CTH
DRILLER: V&W
DRILLING METHOD: HSA
SAMPLING METHOD: CALMOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2 x 12 SAND

CLIENT: CHEVRON
DATE DRILLED: 5-4-95
LOCATION: 460 Grand Avenue
HOLE DIAMETER: 8"
HOLE DEPTH: 21.5'
WELL DIAMETER: 2"
WELL DEPTH: 20'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT, BENTONITE, SAND				0				CONCRETE: 0-6"
				2			ML	ARTIFICIAL FILL: 6"-1.5' SILT: light yellowish brown; low plasticity; minor orange brown mottling; very stiff; no product odor.
	Dry	0	30	6				
				8			ML	CLAYEY SILT: light yellowish brown; low plasticity; orange brown streaks; very stiff; no product odor.
	Mst	1.2	38	10				
	Static			12				
				14			SP	SAND: dark yellowish brown; 5% fines; orange brown; mottling; minor mica; dense; no product odor.
	Mst	1.3	41	16				
	First water			18			ML	SILT: light yellowish brown; low plasticity; minor orange brown mottling; very stiff; no product odor.
	Wt	0	39	20				
				22				BOTTOM OF BORING AT 21.5'
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

Fig. 9

TABLE 1

SIDEWALL SOIL SAMPLE ANALYTICAL DATA 11-29-90

FUEL TANK EXCAVATION

460 Grand Avenue
Oakland, California

Sample No.	TVPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Total Xylenes (mg/kg)	Ethyl Benzene (mg/kg)	Lead (mg/kg)
T1-1	ND	ND	0.10	ND	ND	NT
T1-2	ND	ND	0.097	ND	ND	3.8
T2-1	ND	ND	0.14	ND	ND	NT
T2-2	ND	0.019	0.065	ND	ND	ND
T3-1	ND	ND	0.220	ND	ND	NT
T3-2	ND	ND	0.063	ND	ND	3.4
Detection Limit	1.0	0.005	0.005	0.005	0.005	2.5

Notes:

TVPH = total volatile petroleum hydrocarbons
mg/kg = milligram per kilogram
ND = not detected at or above reporting limit
NT = not tested

TABLE 2

ANALYTICAL DATA FOR WATER SAMPLE W-1 11-29-90

FUEL TANK EXCAVATION

460 Grand Avenue
Oakland, California

Sample No.	TVPH as Gasoline (mg/l)	TEPH as Diesel (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Total Xylenes (mg/l)	Ethyl Benzene (mg/l)
W-1	2.3 = 2,300ppb	ND	0.053 = 53ppb	0.160	0.160	0.036

Notes:

TVPH = total volatile petroleum hydrocarbons
TEPH = total extractable petroleum hydrocarbons
mg/l = milligrams per liter
ND = not detected at or above reporting limit

12-4-90

TABLE 3

PIPELINE TRENCH SOIL SAMPLE ANALYTICAL DATA

460 Grand Avenue
Oakland, California

These were collected from 6" into the native soil from the product line trench.

Sample No.	TVPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Total Xylenes (mg/kg)	Ethyl Benzene (mg/kg)
P-1	1,700	ND	8.7	260	47
P-2	90	ND	1.7	4.7	0.89
P-3	ND	0.0066	0.18	0.033	0.0053
P-4	ND	ND	0.036	0.0055	ND

Notes:

TVPH = total volatile petroleum hydrocarbons
mg/kg = milligram per kilogram
ND = not detected at or above reporting limit

TABLE 4

ANALYTICAL DATA FOR SOIL SAMPLE T4-1 11-29-90

WASTE OIL TANK EXCAVATION

460 Grand Avenue
Oakland, California

Constituent	Sample T4-1 Concentration (mg/kg)
TVPH as Gasoline	400
TEPH as Diesel	7,100
Oil & Grease	24,000
Tetrachloroethylene	1.0
1,1,1-Trichloroethane	0.25
Benzene	1.2
Toluene	10
Total Xylenes	35
Ethyl Benzene	5.2
Cadmium	0.8
Chromium	12
Lead	40
Nickel	22
Zinc	41

Notes:

mg/kg = milligram per kilogram
TVPH = total volatile petroleum hydrocarbons
TEPH = total extractable petroleum hydrocarbons

~~TABLE A:~~ Analytical Summary Table 5 - 12-4-92

Fuel Tank Stockpile Samples (Soil)

Sample ID #	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8
Sample Date	12/4/92							
Laboratory	Superior							
TPH-Gas	Not detected at or above the detection limit (ND)							
Benzene	ND							
Toluene	ND							
Ethylbenzene	ND							
Xylene(ppm)	ND							

Fuel Tank Excavation Water Sample

Sample ID #	FT-1
Sample Date	12/4/92
Laboratory	Superior
TPH-Gas	ND
Benzene	ND
Toluene	ND
Ethylbenzene	ND
Xylenes	ND
Total Lead	ND

Waste Oil Tank Excavation and Stockpile Samples

Sample ID #	W-1(Soil) 58 ppm	WT-1(Water) 0.170 ppm
Sample Date	12/4/92	12/4/92
Laboratory	Superior	Superior
TPH-Gas	ND	ND
Benzene	ND	ND
Toluene	ND	ND
Ethylbenzene	ND	ND
Xylenes	ND	ND
TPH-Diesel	190	0.170 ppm = 170 ppb
Oil&Grease	8400	ND
Nickel	30	~~17~~ ND
Cadmium	ND	ND
Chromium	23	ND
Lead	88	ND
Zinc	340	0.07 = 70 ppb
8010	ND	ND

Table 6

~~Table 2~~

Summary of Soil Analytical Results
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

Former Gulf Service Station 0006
460 Grand Avenue
Oakland, California

Boring Number	Sample Date	Sample Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
C-1	12/14/92	5 - 6-1/2	8.6*	ND	ND	0.024	0.012
		8-1/2 - 10	ND	ND	ND	ND	ND
C-2	12/14/92	5 - 6-1/2	2,300	13	80	83	440
		8-1/2 - 10	ND	ND	0.006	ND	0.017
C-3	12/15/92	5 - 6-1/2	0.6	0.008	ND	0.012	ND
		8-1/2 - 10	ND	ND	ND	ND	ND
EB-1	12/15/92	6-1/2 - 7	3.3	0.094	0.30	0.16	0.73
Detection Limits:			0.3	0.005	0.005	0.005	0.005

TPH = Total petroleum hydrocarbons
ppm = Parts per million
ND = Not detected
* A typical chromatograph pattern; see certified analytical reports.

Table 1

~~Table A~~: Analytical Summary for Over-excavation Samples (in ppm)

Waste Oil Tank Excavation Sampling Results

Sample ID	Depth (FT)	TPH-gas	Benzene	Toluene	Ethyl Benzene	Xylenes	TPH-D	TOG	8010	8270	Metals
WX-1	6	ND	ND	ND	ND	ND	2	ND	ND	ND	*
WX-2	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
WX-3	3	30	ND	ND	ND	0.95	1300	970	*	*	*
WX-4	6	ND	ND	ND	ND	ND	470	ND	ND	ND	*
WX-5	6	ND	ND	ND	ND	ND	24	ND	ND	ND	*
WX-6	6	ND	ND	ND	ND	ND	3	ND	ND	ND	*
WX-7	6	ND	ND	ND	ND	ND	14	ND	ND	ND	*
WX-8	6	ND	ND	ND	ND	ND	2	ND	ND	ND	*
WO-1	6	ND	ND	ND	ND	0.008	ND	ND	ND	ND	*
WO-2	6	ND	ND	ND	ND	0.011	ND	ND	ND	ND	*
WO-3	6.5	170	ND	ND	0.36	0.34	4400	120	ND	ND	*
WO-4	6.5	27	ND	0.007	0.064	0.18	130	210	ND	ND	*
WO-5	5	ND	ND	ND	ND	0.005	ND	ND	NA	NA	NA
WO-6	5	5*	ND	ND	ND	0.011	17*	ND	NA	NA	NA
WO-7	5	16*	ND	0.008	ND	0.066	51*	ND	NA	NA	NA
WO-8	4.5	10*	0.005	0.007	0.007	0.031	200*	ND	NA	NA	NA
WO-9	5.5	49	0.077	0.71	0.99	6.43	10	ND	*	ND	NA
WO-10	5	18	ND	ND	0.084	0.36	90	ND	ND	ND	NA
WO-11	4.5	ND	ND	ND	ND	0.006	2	ND	ND	ND	NA

Pump Island Excavation Sampling Results

Sample ID	Depth (FT)	TPH-gas	Benzene	Toluene	Ethyl Benzene	Xylenes
IB-1	9	ND	ND	ND	ND	ND
IB-2	7	ND	ND	ND	ND	ND
IB-3	9	ND	ND	ND	ND	ND
IX-1	8.5	18	0.97	2.2	0.4	2.5
IX-2	8.5	1900	2	11	15	66
IX-3	3	390	1.3	5.8	1.9	8.7
IX-4	7	84	0.89	3.2	2.6	16
IX-5	8	4	0.73	0.62	0.12	0.62
IX-6	7	ND	ND	ND	ND	0.008
IX-7	7	ND	0.016	0.013	0.017	0.066
IX-8	6	1	0.023	0.21	0.056	0.38
IX-9	7	1	0.005	0.064	0.032	0.21
IX-10	7.5	ND	ND	ND	ND	ND
IX-11	5	3	0.6	0.24	0.097	0.5
IX-12	9	2600	12	120	46	240
IX-13	5.5	21	0.41	0.077	0.19	0.13
IX-14	10	7	1	0.92	0.2	0.78
IX-15	5	9	1.2	1.2	0.13	0.68
IX-16	9.5	780	3.7	31	20	100
IX-17	6	7	0.25	1.2	0.32	1.9
IX-18	4	15	0.18	0.49	0.52	3.1
IX-19	8.5	ND	0.11	0.01	0.055	0.029
IX-20	5	ND	ND	0.006	ND	0.008
IX-21	6	900	1.7	35	16	110
IX-22	6	14	0.26	0.94	0.17	1.5

HITS

* = see certified analytical reports
NA = analysis not requested
ND = not detected
TPH-gas = Total petroleum hydrocarbons calculated as gasoline
TPH-D = Total petroleum hydrocarbons calculated as diesel
TOG = Total oil and grease

✓ hits left in place

highest hits:

1,300	TPHd	WX-3	3' bgs
970	TOG	WX-3	"
2,600	TPHg	IX-12	9' bgs
12	benzene	IX-12	"

Table 8

~~Table B~~: Analytical Summary for Hoist & Sump Excavation Samples (in ppm)

Hoist Sampling Results

1-3-94

Sample ID	Depth (FT)	TPH-gas	Benzene	Toluene	Ethyl Benzene	Xylenes	TPH-D	TOG	8010	8270	Metals
H-N	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
H-S	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	*

Oil-Water Separator Sampling Results

1-3-94

Sample ID	Depth (FT)	TPH-gas	Benzene	Toluene	Ethyl Benzene	Xylenes	TPH-D	TOG	8010	8270	Metals
SM-B	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	*
SM-1	5	1	ND	ND	ND	0.012	10	ND	*	ND	*
SM-2	5	ND	ND	ND	ND	ND	3	ND	ND	ND	*
SM-3	5	ND	ND	ND	ND	ND	5	ND	ND	ND	*

✓ hits left in place

~~Table C~~: Analytical Summary for Stockpile Samples (in ppm)

Stockpile Sampling Results

waste oil

1-5-94

1-20

Pump Island

Sample ID	TPH-gas	Benzene	Toluene	Ethyl Benzene	Xylenes	TPH-D	TOG	8010	8270	Metals
SP-2a-d	47*	ND	0.093	0.26	1.9	1200	2500	*	ND	*
SP-3a-d	33*	ND	0.065	0.54	0.17	220	100	*	ND	*
SP-4a-d	150	ND	3	3	20	NA	NA	NA	NA	ND
SP-5a-d	1300	0.8	30	21	120	NA	NA	NA	NA	NA
SP-6a-d	2600	1.8	86	40	230	NA	NA	NA	NA	NA
SP-7a-d	130*	ND	2.2	2.9	20	NA	NA	NA	NA	NA
SP-8a-d	180*	ND	1.4	3.5	27	NA	NA	NA	NA	NA

< 10X STLC
ND Soluble Pb
ND org. Pb

Aerated Stockpile Sampling Results

1-19

1-26

Sample ID	TPH-gas	Benzene	Toluene	Ethyl Benzene	Xylenes
SP-4a-d	33	ND	0.096	0.086	1
SP-5a-d	88	0.006	0.19	0.19	2.4
ASP-6a-d	36	ND	0.11	0.067	0.72
ASP-7a-d	53	ND	0.059	0.23	1.8
ASP-8a-d	14	0.29	0.89	0.27	1.3

hits

* = see certified analytical reports
NA = analysis not requested
ND = not detected
TPH-gas = Total petroleum hydrocarbons calculated as gasoline
TPH-D = Total petroleum hydrocarbons calculated as diesel
TOG = Total oil and grease

Table 9

~~Table 1.~~ Water Level Data and Groundwater Analytical Results - Former Gulf Service Station 0006, 460 Grand Avenue, Oakland, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness* (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
C-1/	12/16/92[2,3,4,5]	5.68	16.80	0	<50	<0.5	<0.3	<0.3	<0.4	—
22.48[1]	6/22/94	5.55	16.93	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/26/94	6.07	16.41	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/94	5.28	17.20	0	<50	2.9	3.8	<0.5	<0.5	—
	3/22/95	2.86	19.62	0	<50	<0.5	<0.5	<0.5	<0.5	—
	6/5/95	4.86	17.62	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/20/95	5.82	16.66	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/95	**5.50**	**16.98**	**0**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**8.7**
C-2/	12/16/92[2,3,6,7]	7.49	13.00	0	640	63	83	37	90	—
20.49[1]	6/22/94	5.48	15.01	0	200	2.8	4.5	1.5	15	—
	9/26/94	6.02	14.47	0	<50	1.1	1.1	<0.5	0.5	—
	12/12/94	5.17	15.32	0	77	2.8	4.6	3.4	15	—
	3/22/95	2.60	17.89	0	590	<0.5	<0.5	38	130	—
	6/5/95	5.29	15.20	0	<50	<0.5	<0.5	1.9	4.9	—
	9/20/95	5.59	14.90	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/95	**5.17**	**15.32**	**0**	**80**	**0.93**	**<0.50**	**<0.50**	**<0.50**	**5.1**
C-3/	12/16/92[2,3,5,8]	5.17	17.34	0	<50	<0.4	<0.3	<0.3	<0.4	—
22.51[1]	6/22/94	5.10	17.41	0	140	5.6	3	4.2	4.4	—
	9/26/94	5.66	16.85	0	51	4.2	4.2	0.7	1.5	—
	12/12/94	4.60	17.91	0	<50	2.6	3.6	1.1	4.2	—
	3/22/95	2.31	20.20	0	<50	<0.5	<0.5	<0.5	<0.5	—
	6/5/95	4.61	17.90	0	<50	0.6	<0.5	<0.5	<0.5	—
	9/20/95	5.09	17.42	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/95	**4.65**	**17.86**	**0**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.91**
C-4/										
18.44[9]	6/5/95	7.24	11.20	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/20/95	7.31	11.13	0	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/95	**6.88**	**11.56**	**0**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.60**
Trip Blank										
TB-LB	6/22/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	—
	9/26/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	—
	3/22/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	—
	6/5/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	—
	9/20/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	—
	12/12/95	**—**	**---**	**---**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.60**

Table 9

~~Table 1.~~ Water Level Data and Groundwater Analytical Results - Former Gulf Service Station 0006, 460 Grand Avenue, Oakland, California (continued)

EXPLANATION:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Groundwater elevation
TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-teritary-butyl ether
ppb = Parts per billion
— = Not analyzed/not applicable

ANALYTICAL METHODS:

TPH(G) = EPA Method 8015/5030
BTEX = EPA Method 8020
MTBE = EPA Method 8020

NOTES:

Water level elevation data and laboratory analytic results prior to March 22, 1995 were compiled from Quarterly Monitoring Reports prepared for Chevron by Sierra Environmental Services.

NOTES: (continued)

* Product thickness was measured with an MMC flexi-dip interface probe on and after June 22, 1994.

1 TOC elevation is actually top of box elevation.
2 TPH(D) was also analyzed but not detected at detection limits of 50 ppb.
3 Motor oil was also analyzed but not detected at detection limits of 200 ppb.
4 Cadmium, chromium, lead, nickel and zinc were also analyzed but not detected at detection limits of 0.005, 0.01, 0.05, 0.02, and 0.01 ppm, respectively.
5 Analysis by EPA method 8010 for Halogenated Volatile Organic Compounds (HVOCs) was also performed. HVOCs were not detected at detection limits of 0.2 to 4.0 ppb.
6 Cadmium, chromium, lead, nickel and zinc were also analyzed. Chromium, Nickel and zinc were detected at 0.05, 0.08 and 0.08 ppm, respectively. Other metals not detected.
7 Analysis by EPA method 8010 for HVOCs was also performed. 1,2-Dichloroethane was detected at 3.5 ppb. Other HVOCs were not detected at detection limits of 0.2 to 4.0 ppb.
8 Cadmium, chromium, lead, nickel and zinc were also analyzed. Chromium, lead, nickel and zinc were detected at 0.19, 0.07, 0.36 and 0.38 ppm, respectively. Cadmium was not detected at detection limits of 0.005 ppm.
9 TOC for well C-4 was surveyed June 9, 1995 by Mission Engineers of Santa Clara, California.

GEOMATRIX

Attachment 3

ATTACHMENT 3

Well Abandonment at Former Chevron (Gulf)
Service Station No. 0006

Gettler-Ryan, Inc.

17 November 1998

GETTLER-RYAN INC.

November 17, 1998

Mr. Phil Briggs
Chevron Products Company
P.O. 6004
San Ramon, California 94583

Subject: **Well Abandonment at Former Chevron (Gulf) Service Station No. 0006, 460 Grand Avenue, Oakland, California**

Mr. Briggs:

At the request of Chevron Products Company (Chevron), Gettler-Ryan Inc. (GR) abandoned four wells at the subject site (Figure 1). On November 6, 1998, GR observed Bay Area Exploration Inc. (C57-720904) abandon wells C-1 through C-4. A copy of the permit issued by Alameda County Health Care Services Agency (ACHCSA) are attached. Locations of the former wells are shown on the attached site plan (Figure 2). A summary of well abandonment activities is presented in Table 1. Copies of the State of California Well Completion Reports are attached.

Four 2-inch diameter wells (C-1 through C-4) were backfilled to the top of casing with neat cement using a tremie pipe and pump. Prior to removal of the wellhead boxes, a pressure of approximately 20 pounds per square inch was applied to the top of the well casing for 2 minutes. The well box was then removed and the upper 3 feet of each well were drilled out. Each of the borings was then backfilled with native material.

The wells have been properly abandoned as required by California Department of Water Resources Water Well Standards (Bulletins 74-81 and 74-90) and ACHCSA guidelines. If you have any questions, please call us in our Dublin office at (925) 551-7555.

Sincerely,
Gettler-Ryan Inc. by

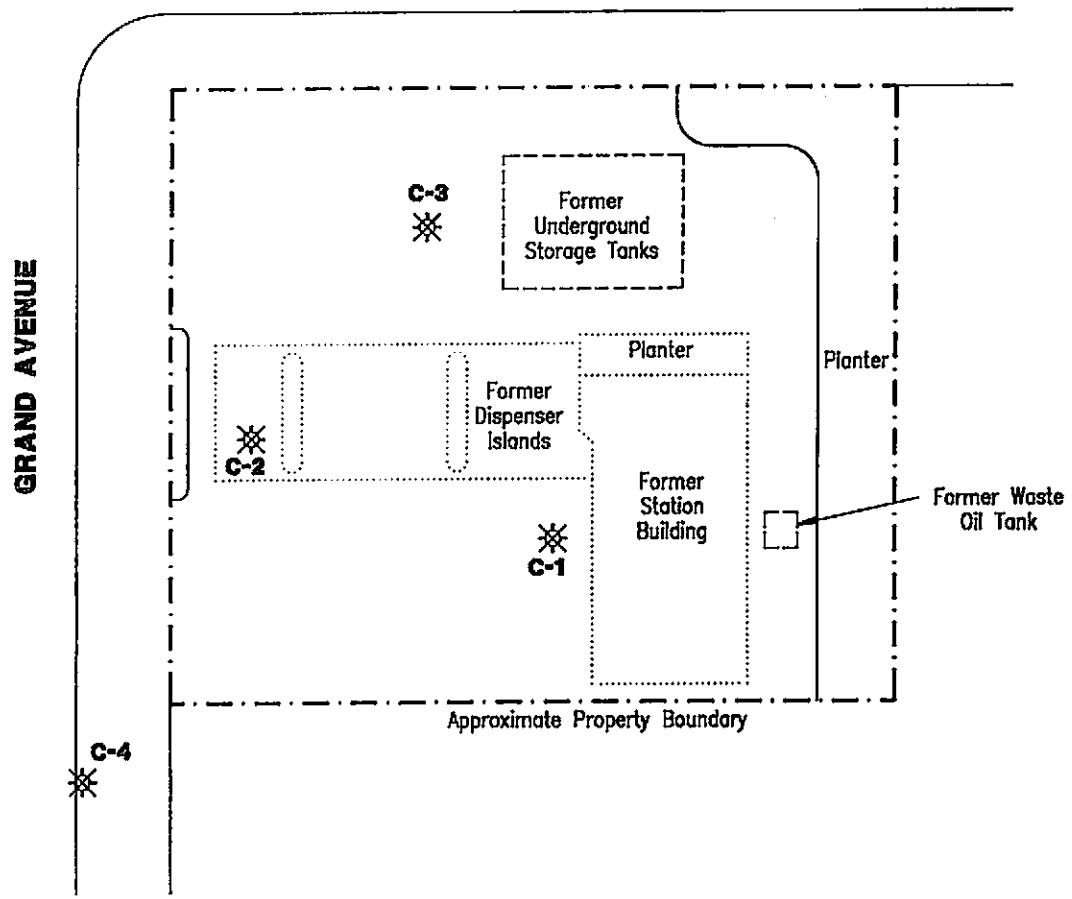
Clyde J. Galantine
Project Geologist

Stephen J. Carter, R.G. 5577
Senior Geologist

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

Attachments:
Figure 1. Site Plan
Table 1. Summary of Well Abandonment
Well Abandonment Permit
State of California Well Completion Reports

345208.02-1



EXPLANATION

※ Abandoned monitoring well

N

0 30

Scale in Feet

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

SITE PLAN
Former Gulf Service Station No. 0006
460 Grand Avenue
Oakland, California

FIGURE
1

JOB NUMBER
345208.02

REVIEWED BY

DATE
November, 1998

REVISED DATE

WELL DESTRUCTION AND ABANDONMENT

DATE: NOVEMBER 6, 1998 GR/GSI Job #: 345208.02

Geologsit/Engineer CLYDE GALANTINE

Client/Station #: FORMER CHEVRON (GULF) NO. 0006

Address: 460 GRAND AVENUE, OAKLAND, CA

Well ID #	Casing Diamter (in.)	Depth to Water (Ft. TOC)	Measured Well Depth (ft. bgs)	Installed Well Depth (ft. bgs)	Drilled Depth (ft. bgs)
C-1	2	5.67	15.4	15	-------
C-2	2	5.79	14.8	15	-------
C-3	2	5.08	15.1	15	-------
C-4	2	7.01	20.34	20	-------

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Chevron #0006
410 Grand Avenue
Oakland CA

California Coordinates Source _____ ft. Accuracy # ____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name Chevron Products Company Phone (925) 842-9136
Address P.O. Box 6004 Zip 94583
City San Ramon, CA

APPLICANT:
Name Gettler-Ryan Inc. Fax (916) 631-1317
Address 6747 Sierra Court #J Phone (916) 631-1310
City Dublin Zip 94568

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☐	Well Destruction	X (4)

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other Monitoring	X

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☐		

DRILLER'S LICENSE NO. C57 - 522125

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum Depth 20 ft.
Casing Diameter 2 in. Number 4
Surface Seal Depth 4 ft.

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum Depth _____ ft.
Hole Diameter _____ in.

ESTIMATED STARTING DATE 11/16/98
ESTIMATED COMPLETION DATE 11/20/98

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Stephen Carter DATE 10/27/98
For Gettler-Ryan Inc.

OCT 27 1998 16:54

FOR OFFICE USE

PERMIT NUMBER 98WR455
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
(2.) Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie

(F.) WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED _____ DATE 10/27/98

916 631 1317 PAGE.02

GEOMATRIX

Attachment 4

ATTACHMENT 1

Remedial Action Completion Certificate

3 December 1998

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

P.R.B.
DEC 1 98

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATE

StID 3615 former Gulf Service Station #0006, 460 Grand Ave., Oakland, CA, 94610
(3-10,000, 2-250 gallons tanks removed)

December 3, 1998

Phillip R. Briggs, Project Manager Site Assessment & Remediation
Chevron Products Co.
6001 Bollinger Canyon Rd.
Bldg. L, Rm. 1110
PO Box 6004
San Ramon, CA 94583-0904

Dear Mr. Briggs:

This letter confirms the completion of site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

cc: Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Leroy Griffin, OFD

GEOMATRIX

Attachment 5

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

July 19, 2001
Project No. 7315.000.0

Mr. Don Hwang
Alameda County Environmental Health Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Local Case No. 3615—Former Gulf Service Station #0006
460 Grand Avenue, Oakland, California

Dear Mr. Hwang:

This letter report presents the results of soil sampling performed by Geomatrix Consultants, Inc. (Geomatrix), on behalf of John C. Gibson, receiver for the Falaschi Brothers, at 460 Grand Avenue, Oakland, California (Figure 1). The objective of this sampling was to evaluate current conditions in soil at the location with an elevated concentration of benzene detected in 1992 (13 milligrams per kilogram [mg/kg], 5 feet below ground surface [bgs] at former Well C-2, Figure 2). The results will be used to re-evaluate the need for institutional controls for future residential land use, as required by the Case Closure Summary (Alameda County-HazMat, November 19, 1996). The Case Closure Summary includes a property use restriction, as follows:

> Residential site development would be acceptable, provided that either 1) the development should include a 15' setback distance from Grand Ave., or 2) soil will be excavated within the 15' setback zone, soil samples collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and another revised Risk Evaluation).

Geomatrix advanced five shallow soil borings (B-1 through B-5; Figure 2) on June 29, 2001, using hand auger equipment. All augering and soil sampling equipment was cleaned prior to use and between each boring. Soil samples were collected at approximately 2 and 4.5 feet bgs and retained in 2.5-inch diameter, 6-inch long brass tubes. Teflon sheets were placed on the ends of the tubes, which were then capped, labeled, sealed in plastic bags, and stored in an ice-cooled chest. Following collection of the soil samples, excess soil cuttings were placed back in the borings.

The samples were submitted to STL Chromalab, of Pleasanton, California, a California-certified analytical laboratory, under Geomatrix chain-of-custody procedures. Copies of the

laboratory report and the chain of custody are included in Attachment A. The chemical analytical program included the following methods:

- Total petroleum hydrocarbons quantified as gasoline (TPHg) by U.S. EPA Method 8015; and
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by U.S. EPA Method 8020 (soil) ~~or 8021B (water)~~.

Chemical analyses were requested for the two samples collected at B-1, immediately adjacent to former Well C-2. The remaining samples were placed on hold, pending results for the samples from B-1.

The historical analytical data for samples within the vadose zone (0 to 5 feet bgs—according to the Case Closure Summary, groundwater is approximately 5 feet bgs) are summarized in Table 1 and Figure 2, along with the results from the recent boring B-1. (Comparison of the B-1 benzene data (<0.0050 mg/kg at 4.3 feet bgs) with the 1992 former Well C-2 data (13 mg/kg at 5 feet bgs) indicate that benzene in soil has biodegraded over time at that location. Therefore, the 1992 benzene concentration of 13 mg/kg at 5 feet bgs was not included in the data set used for comparison to the residential RBSLs.[1]

As shown on Table 1, the average concentration of BTEX within the vadose zone is less than the respective residential RBSLs. In addition, the results of resampling near former Well C-2 indicate that naturally occurring biodegradation reduced the benzene concentration from 13 mg/kg in 1992 to less than the laboratory reporting limit at that location in 2001. It is likely that BTEX detected in 1992 and 1994 at other locations at the Site have also been significantly reduced over time. As a result, the setback included in the 1996 Case Closure Summary does not appear to be warranted at this time based on current site conditions.

The 1996 Case Closure Summary includes a clause that states "[r]esidential development is acceptable, providing that...soil samples are collected under the purview of this Agency, and laboratory analysis indicates the samples an either non-detect or within acceptable concentrations." Therefore, it is requested that the Case Closure Summary be amended to allow unrestricted residential land use.

[1] Risk-Based Screening Levels, Regional Water Quality Control Board, August 2000.

We appreciate your prompt attention to this request. Please call me at (510) 663-4226 if you have any questions or need additional information.

Sincerely,
GEOMATRIX CONSULTANTS, INC.

Margaret K. (Peggy) Peischl, P.E.
Senior Engineer

The following complete this letter report:

Table 1	Summary of Analytical Data
Figure 1	Vicinity Map
Figure 2	Site Plan
Attachment A	Chemical Analytical Laboratory Report

MKP/abr
I:\Project\7000s\7315\7-8 Ala Co request revised.doc

cc: Roger D. Brewer, RWQCB
Jack C. Gibson, Esq.

GEOMATRIX

TABLE 1

SUMMARY OF ANALYTICAL RESULTS—SOIL SAMPLES

Former Gulf Service Station #0006
460 Grand Avenue
Oakland, California

Results reported in milligrams per kilogram (mg/kg)

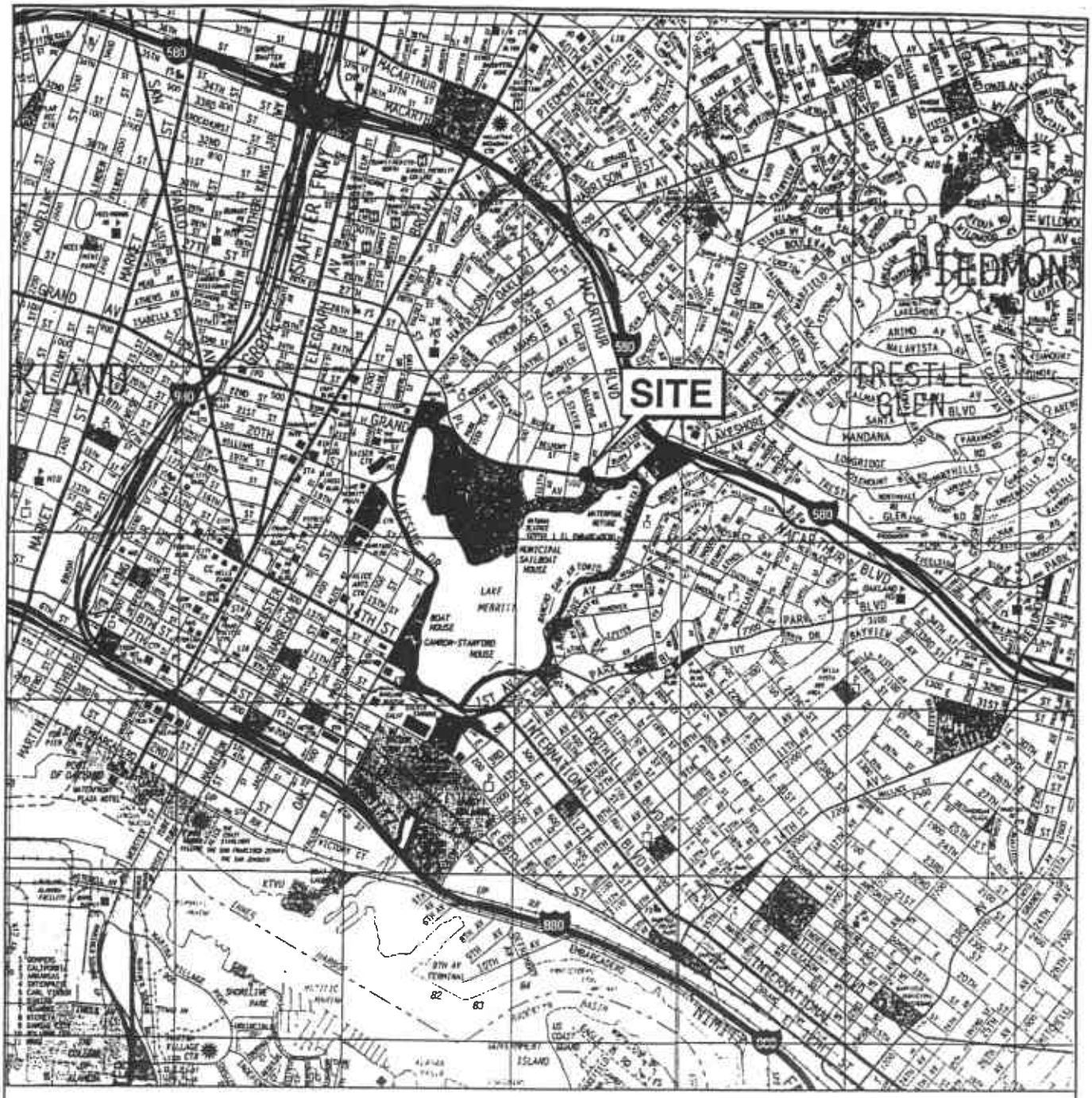
Date	Sample ID	Sample Depth (feet bgs)	TPHg	Benzene	Toluene	Ethylbenzene	Total Xylenes
December-92	C-2	5	2,300 [1]	13 [1]	80 [1]	83 [1]	440 [1]
December-92	C-1	5	8.6	<0.0050	<0.0050	0.024	0.012
December-92	C-3	5	0.008	0.008	<0.0050	0.012	<0.0050
January-94	IX-11	5	3	0.6	0.24	0.097	0.5
January-94	IX-15	5	9	1.2	1.2	0.13	0.68
January-94	IX-18	4	15	0.18	0.49	0.52	3.1
January-94	IX-20	5	<1.0 [2]	<0.0050	0.006	<0.0050	0.008
January-94	WX-3	3	30	<0.0050	<0.0050	<0.0050	0.95
January-94	WO-5	5	<1.0	<0.0050	<0.0050	<0.0050	0.005
January-94	WO-6	5	5	<0.0050	<0.0050	<0.0050	0.011
January-94	WO-7	5	16	<0.0050	0.008	<0.0050	0.066
January-94	WO-8	4.5	10	0.005	0.007	0.007	0.031
January-94	WO-10	5	18	<0.0050	<0.0050	0.084	0.36
January-94	WO-11	4.5	<1.0	<0.0050	<0.0050	<0.0050	0.006
June-01	B-1-2.0	2.0	<1.0	<0.0050	0.014	<0.0050	<0.0050
June-01	B-1-4.3	4.3	<1.0	<0.0050	0.032	<0.0050	<0.0050
Sample Mean			8	0.13	0.13	0.06	0.38
RBSLs[3]			---	0.18	8.4	24	1.0
Region IX PRGs[4]			---	0.65	520	230	210

Notes:

1. These data are superceded by the new data collected on June 29, 2001, at boring B-1.
2. "<" indicates compound not detected above the laboratory reporting limit shown.
3. Risk-Based Screening Levels, RWQCB (August 2000)—Residential.
4. U.S. EPA Region IX Preliminary Remediation Goals (November 1, 2000)—Residential.

Abbreviations:

TPHg = total petroleum hydrocarbons as gasoline
bgs = below ground surface



GEOMATRIX

SITE LOCATION MAP
460 Grand Avenue
Oakland, California

Project No.
7315.000

Figure
1

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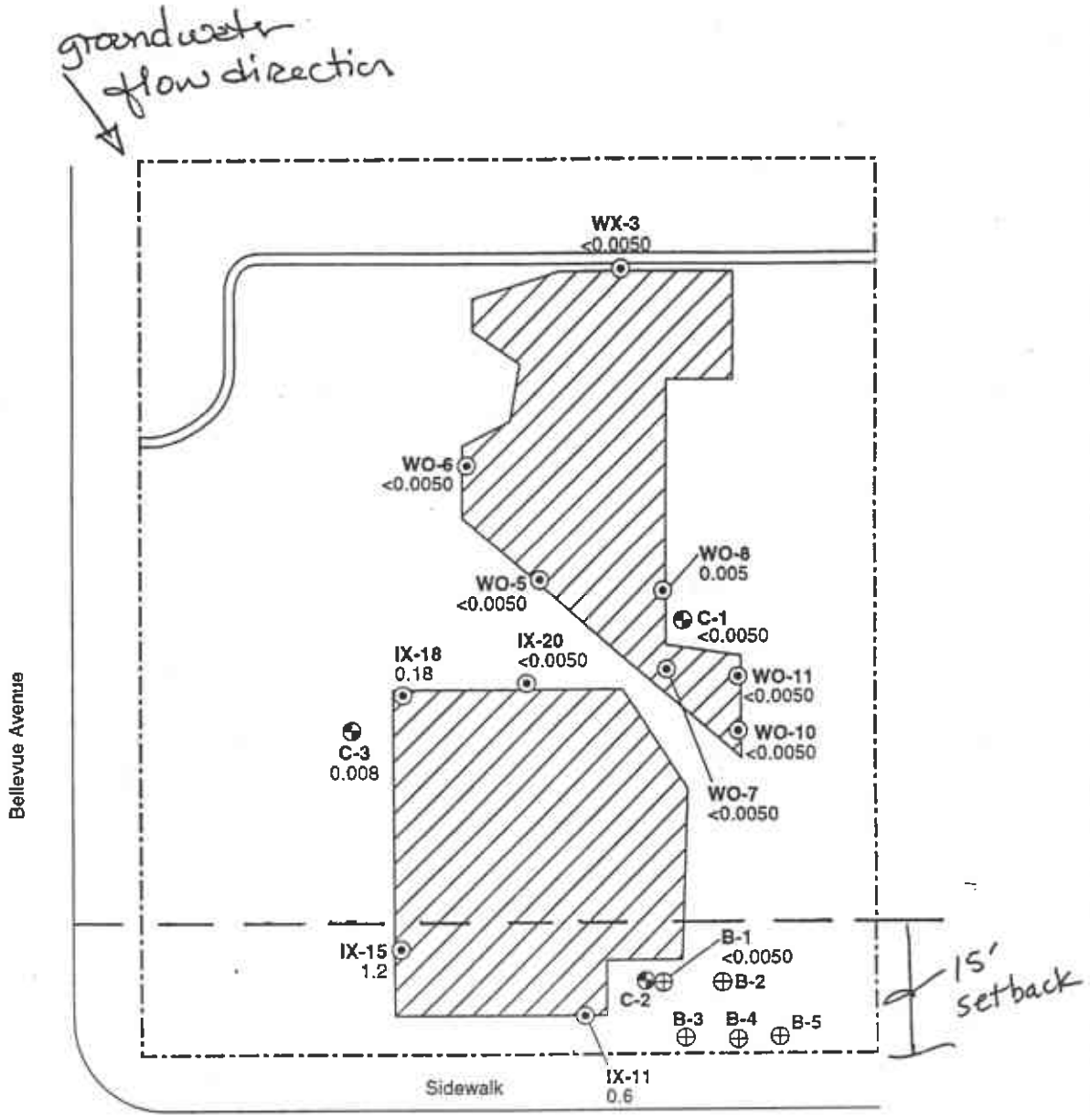

EXPLANATION

- C-2 ◔ Former monitoring well location
- IX-11 ⊙ 1994 confirmation sample location
- B-1 ⊕ 2001 shallow soil boring location
- 0.6 Benzene concentration in milligrams per kilogram
- <0.0050 Benzene not detected above laboratory reporting limit indicated in milligrams per kilogram
- ▨ Excavation limits

0 20 Feet

Source: Touchstone Developments Environmental Management, 3/13/1994

GEOMATRIX

SITE PLAN
460 Grand Avenue
Oakland, California

Project No. 7315.000

Figure 2

S:\7300s\7315\7315.000\s_0107_fig_02.ai

STL ChromaLab
Environmental Services (CA 1094)

Submission #: 2001-06-0570
Date: July 3, 2001

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Peggy Peischl

Attached is our report for your samples received on Friday June 29, 2001
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 13, 2001 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919. You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0570

Gas/BTEX

Geomatrix Consultants

Attn: Peggy Peischl

Project #: 7315.000

2101 Webster Street, 12th Floor
Oakland, CA 94612

Phone: (510) 663-4226 Fax: (510) 663-4141

Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
B-1-2.0	Soil	06/29/2001 10:54	1
B-1-4.3	Soil	06/29/2001 13:05	2

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0570

To: **Geomatrix Consultants**

Attn.: Peggy Peischl

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID:	**B-1-2.0**	Lab Sample ID:	**2001-06-0570-001**
Project:	7315.000	Received:	06/29/2001 16:07
		Extracted:	07/02/2001 17:54
Sampled:	06/29/2001 10:54	QC-Batch:	2001/07/02-01.02
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	07/02/2001 17:54	
Benzene	ND	0.0050	mg/Kg	1.00	07/02/2001 17:54	
Toluene	0.014	0.0050	mg/Kg	1.00	07/02/2001 17:54	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	07/02/2001 17:54	
Xylene(s)	ND	0.0050	mg/Kg	1.00	07/02/2001 17:54	
Surrogate(s)						
Trifluorotoluene	65.0	53-125	%	1.00	07/02/2001 17:54	
Trifluorotoluene-FID	56.1	53-125	%	1.00	07/02/2001 17:54	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0570

To: **Geomatrix Consultants**

Attn.: Peggy Peischl

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX

Sample ID: **B-1-4.3**

Project: 7315.000

Sampled: 06/29/2001 13:05

Matrix: Soil

Lab Sample ID: **2001-06-0570-002**

Received: 06/29/2001 16:07

Extracted: 07/02/2001 20:35

QC-Batch: 2001/07/02-01.02

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	07/02/2001 20:35	
Benzene	ND	0.0050	mg/Kg	1.00	07/02/2001 20:35	
Toluene	0.032	0.0050	mg/Kg	1.00	07/02/2001 20:35	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	07/02/2001 20:35	
Xylene(s)	ND	0.0050	mg/Kg	1.00	07/02/2001 20:35	
Surrogate(s)						
Trifluorotoluene	64.6	53-125	%	1.00	07/02/2001 20:35	
Trifluorotoluene-FID	58.8	53-125	%	1.00	07/02/2001 20:35	

To: **Geomatrix Consultants**

Attn.: Peggy Peischl

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX

Method Blank | **Soil** | **QC Batch # 2001/07/02-01.02**

MB: 2001/07/02-01.02-001 | Date Extracted: 07/02/2001 09:32

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	07/02/2001 09:32	
Benzene	ND	0.0050	mg/Kg	07/02/2001 09:32	
Toluene	ND	0.0050	mg/Kg	07/02/2001 09:32	
Ethyl benzene	ND	0.0050	mg/Kg	07/02/2001 09:32	
Xylene(s)	ND	0.0050	mg/Kg	07/02/2001 09:32	
Surrogate(s)					
Trifluorotoluene	113.4	53-125	%	07/02/2001 09:32	
4-Bromofluorobenzene-FID	94.2	58-124	%	07/02/2001 09:32	

To: **Geomatrix Consultants**

Attn: Peggy Peischl

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2001/07/02-01.02**

LCS: 2001/07/02-01.02-002 Extracted: 07/02/2001 10:04 Analyzed 07/02/2001 10:04

LCSD: 2001/07/02-01.02-003 Extracted: 07/02/2001 10:36 Analyzed 07/02/2001 10:36

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	0.463	0.446	0.500	0.500	92.6	89.2	3.7	75-125	35		
Benzene	0.0977	0.0979	0.1000	0.1000	97.7	97.9	0.2	77-123	35		
Toluene	0.100	0.100	0.1000	0.1000	100.0	100.0	0.0	78-122	35		
Ethyl benzene	0.0968	0.0975	0.1000	0.1000	96.8	97.5	0.7	70-130	35		
Xylene(s)	0.278	0.281	0.300	0.300	92.7	93.7	1.1	75-125	35		
Surrogate(s)											
Trifluorotoluene	534	546	500	500	106.8	109.2		53-125			
4-Bromofluorobenzene-FI	547	530	500	500	109.4	106.0		58-124			

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0570

To: **Geomatrix Consultants**

Attn.: Peggy Peischl

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2001/07/02-01.02**

Sample ID: **B-1-2.0** Lab Sample ID: 2001-06-0570-001

MS: 2001/07/02-01.02-019 Extracted: 07/02/2001 19:31 Analyzed: 07/02/2001 19:31 Dilution: 1.0

MSD: 2001/07/02-01.02-020 Extracted: 07/02/2001 20:03 Analyzed: 07/02/2001 20:03 Dilution: 1.0

Compound	Conc. [mg/Kg]			Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Gasoline	0.283	0.283	ND	0.499	0.496	56.7	57.1	0.7	65-135	35	mso	mso
Surrogate(s)												
4-Bromofluorobenzene-F	294	295		500	500	58.8	59.0		58-124			

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0570

To: **Geomatrix Consultants**

Attn.: Peggy Peischl

Test Method: 8020

Prep Method: 5030

Batch QC Report

Gas/BTEX

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2001/07/02-01.02**

Sample ID: **B-1-2.0** Lab Sample ID: 2001-06-0570-001

MS: 2001/07/02-01.02-017 Extracted: 07/02/2001 18:26 Analyzed: 07/02/2001 18:26 Dilution: 1.0

MSD: 2001/07/02-01.02-018 Extracted: 07/02/2001 18:58 Analyzed: 07/02/2001 18:58 Dilution: 1.0

Compound	Conc. [mg/Kg]			Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Benzene	0.0606	0.0583	ND	0.0996	0.0994	60.8	58.7	3.5	65-135	35	mso	mso
Toluene	0.0820	0.0798	0.0136	0.0996	0.0994	68.7	66.6	3.1	65-135	35		
Ethyl benzene	0.0625	0.0571	ND	0.0996	0.0994	62.8	57.4	9.0	65-135	35	mso	mso
Xylene(s)	0.185	0.170	ND	.300	0.298	61.7	57.0	7.9	65-135	35	mso	mso
Surrogate(s)												
Trifluorotoluene	395	376		500	500	79.0	75.2		53-125			

2001-06-0370

60169

CHAIN-OF-CUSTODY RECORD

№ 13663

Date: 6/29/01

Page 1 of 1

Project No.: 7315.000

Samplers (Signatures):

Date	Time	Sample Number
6/29/01	1054	B-1-2.0
	1305	B-1-4.3
	1130	B-2-2.0
	1140	B-2-5.0
	1154	B-3-2.0
	1310	B-3-4.4
	1237	B-4-2.0
	1300	B-4-5.0
	1344	B-5-2.0
↓	1353	B-5-5.0

ANALYSES

EPA Method 8010	EPA Method 8020	EPA Method 8020 (BTEX only)	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH's / BTEX	HOLD
							X	
							X	X
							X	X
							X	X
							X	X
							X	X
							X	X
							X	X
							X	X
							X	X
							X	X

REMARKS

Cooled	Soil (S), Water (W), or Vapor (V)	Acidified	Number of containers
Y	S	N	1
↓	↓	↓	↓

Additional Comments

Turnaround time: STANDARD

Results to: Reggy Peischl

Total No. of containers: 10

Relinquished by (signature):

Printed Name: BRYAN SEARS

Company: Geomatrix

Date: 6/29/01 Time: 1450

Received by (signature):

Printed Name:

Company: STL-CL

Date: 6/29/01 Time: 1455

Relinquished by (signature):

Printed Name:

Company:

Date: Time:

Received by (signature):

Printed Name:

Company:

Date: Time:

Relinquished by (signature):

Printed Name:

Company:

Date: Time:

Received by (signature): Denise Harrington

Printed Name: D Harrington

Company: STL-CL

Date: 6/29/01 Time: 1607

Method of Shipment: Lab Courier

Laboratory Comments and Log No.:

Cooler rec'd sealed DSH

2.4°C

Geomatrix Consultants
2101 Webster Street
12th Floor
Oakland, CA 94612
510 663 4100

Forms(PF).012 (Revised 4/00)

GEOMATRIX

Attachment 6

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

September 24, 2001
Project No. 7315.000.0

Mr. Don Hwang
Alameda County Environmental Health Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Local Case No. 3615—Former Gulf Service Station #0006
460 Grand Avenue, Oakland, California

Dear Mr. Hwang:

As requested by Mr. Roger Brewer, Regional Water Quality Control Board (RWQCB), in a telephone conversation today, this letter provides additional information and clarification to the Geomatrix Consultants, Inc. (Geomatrix) letter report dated July 19, 2001. The letter report presented the results of soil sampling performed by Geomatrix on behalf of John C. Gibson, receiver for the Falaschi Brothers, at the 460 Grand Avenue site located in Oakland, California. The objective of the June 29, 2001 sampling was to evaluate current conditions in soil at the location where an elevated concentration of benzene was detected in 1992 (13 milligrams per kilogram [mg/kg], 5 feet below ground surface [bgs] at former Well C-2). The results were used to re-evaluate the need for institutional controls for future residential land use, as required by the Case Closure Summary (Alameda County-HazMat, November 19, 1996). The Case Closure Summary includes a property use restriction, as follows:

> Residential site development would be acceptable, provided that either 1) the development should include a 15' setback distance from Grand Ave., or 2) soil will be excavated within the 15' setback zone, soil samples collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and another revised Risk Evaluation).

In June 2001, two soil samples (one at 2.0 feet bgs and one at 4.3 feet bgs) were collected near former Well C-2. The chemical analytical results for these samples indicated that benzene was not detected in vadose-zone soil above the laboratory reporting limit of 0.0050 mg/kg. In addition, during the final year of monitoring at Well C-2 in 1995 before the wells were destroyed as part of site closure, benzene was detected in groundwater at less than the Maximum Contaminant Level (MCL) for one quarter but was not detected for three quarters (Case Closure Summary, 1996). Comparison with the 1992 soil data for the former Well C-2

(13 mg/kg at 5 feet bgs) suggests that benzene in soil has biodegraded over time at that location. If benzene remains in soil in this area, it is very limited in extent as defined by the boundaries of the excavation and the additional samples.

The 1992 boring log for Well C-2 indicated sandy silt from 0 to 7 feet bgs, clay from 7 to 11 feet bgs, and groundwater at approximately 6 feet bgs (Case Closure Summary, 1996). For these site conditions, the applicable site-specific target level (SSTL[1]) for benzene in shallow soil (less than 3 feet bgs) is 27 mg/kg and in subsurface soil is 1.4 mg/kg. Both SSTLs are well above the benzene analytical results for site vadose zone soil with the exception of the one 1992 sample at Well C-2. As stated above, the 1992 soil sample result (13 mg/kg at 5 feet bgs) is not likely to represent current conditions or an extensive area of soil. The June 2001 sampling indicates that benzene was not detected in soil at 2.0 and 4.3 feet bgs at a location immediately adjacent to former Well C-2.

Based on our conversation with Mr. Brewer, we understand that the additional information and clarification provided in this letter, along with the data provided in the July 19, 2001 letter report, are sufficient to demonstrate—based on current site conditions—that the setback included in the 1996 Case Closure Summary no longer appears to be warranted and that it is appropriate to allow unrestricted land use.

We appreciate your prompt attention to this request. Please call me at (510) 663-4226 if you have any questions or need additional information.

Sincerely,
GEOMATRIX CONSULTANTS, INC.

Margaret K. (Peggy) Peischl, P.E.
Senior Engineer

Ann M. Holbrow
Senior Toxicologist

I:\Project\7000s\7315\9-21 Ala Co clarification.doc

cc: Roger D. Brewer, RWQCB
Jack C. Gibson, Esq.

[1] Oakland Urban Land Redevelopment Program: Guidance Document, City of Oakland, 1999.

GEOMATRIX

Attachment 7

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 11, 2001

Falaschi Brothers
c/o John C. Gibson, Esq., Receiver
Gibson & MacPhee, Attorneys at Law
1534-5th Ave. Suite 4
San Rafael, CA 94901

Dear Mr. Gibson:

Subject: Former Gulf Service Station #0006 460 Grand Avenue, Oakland, California

Your letter of February 23, 2001, requested a reexamination and reevaluation of the Leaking Underground Fuel Storage Tank Program closure conditions dated November 19, 1996 at the aforementioned site. The Case Closure Summary includes a property use restriction, as follows: Residential site development would be acceptable, provided that either 1) the development should include a 15' setback distance from Grand Ave., or 2) soil will be excavated within the 15' setback zone, soil samples collected under the purview of this Agency, and laboratory analysis indicates the samples are either non-detect or within acceptable concentrations (as per additional calculations and another revised Risk Evaluation).

Additional soil sampling was performed on June 29, 2001 to evaluate current conditions in soil at the location where an elevated concentration of benzene was detected in 1992 (13 milligrams per kilogram [mg/kg], 5 feet below ground surface [bgs] at former monitoring well C-2). In June 2001, two soil samples were collected from soil boring B-1 (one at 2.0 feet bgs and one at 4.3 feet bgs) immediately adjacent to former monitoring well C-2. The chemical analytical results for these samples indicated that benzene was not detected in vadose-zone soil above the laboratory reporting limit of 0.0050 mg/kg. In addition, during the final year of monitoring at monitoring well C-2 in 1995, benzene was detected in groundwater at less than the Maximum Contaminant Level (MCL) for one quarter but was not detected for three quarters. Comparison with the 1992 soil data for the former monitoring well C-2 (13 mg/kg at 5 feet bgs) suggests that benzene in soil has biodegraded over time or is very limited in extent as defined by the boundaries of the excavation and the additional samples. The 1992 boring log for monitoring well C-2 indicated sandy silt from 0 to 7 feet bgs, clay from 7 to 11 feet bgs, and groundwater at approximately 6 feet bgs. For these site conditions, the applicable Oakland Tier 2 site-specific target level (SSTL) for benzene in shallow soil (less than 3 feet bgs) is 27 mg/kg and in subsurface soil is 1.4 mg/kg. Both SSTLs are well above the benzene analytical results for site vadose zone soil with the exception of the one 1992 sample at Well C-2. As stated above, the

1992 soil sample result (13 mg/kg at 5 feet bgs) is not likely to represent current conditions or an extensive area of soil at that location.

Based on a review of these findings by Roger Brewer, Regional Water Quality Control Board (RWQCB), the property use restrictions of a setback or soil excavation included in the 1996 Case Closure Summary no longer appears to be warranted and that it is now appropriate to allow unrestricted land use. Please feel free to contact me if you have any questions or wish to discuss this matter further at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist

C: Roger Brewer, RWQCB

Margaret K. (Peggy) Peischl, Ann M. Holbrow, Geomatrix Consultants, Inc., 2101 Webster St., 12th Floor, Oakland, CA 94612

file

ATTACHMENT 4

Chevron Products Company
Letter Dated 13 December 1998

GEOMATRIX

Attachment 8

Chevron

December 13, 1998

Chevron Products Company
6001 Bollinger Canyon Road
Building L, Room 1110
PO Box 6004
San Ramon, CA 94583-0904

Philip R. Briggs
Project Manager
Site Assessment & Remediation
Phone 925 842-9136
Fax 925 842-8370

Falaschi Brothers
C/o Mr. John C. Gibson
The Legal Solutions Group, L.L.P.
Attorneys at Law
1629 Fifth Avenue
San Rafael, CA 94901-1828

Re: Former Gulf Service Station #0006
460 Grand Avenue
Oakland, California

Dear Mr. Gibson:

Enclosed is a Remedial Action Completion Certificate from Alameda County Environmental Health Services, dated December 3, 1998, that confirms the completion of site investigation and remedial action at the above noted site. No further action related to the underground tank release is required.

This "no further action" notice, does not change Chevron's responsibility to address any petroleum hydrocarbons, that resulted from our past operations, and which are detected at the site in the course of any future construction activities. Chevron needs to be advised at least four to six weeks in advance of any proposed construction activities in order to be able to address these concerns.

If you have any questions or comments call me at (925) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

Cc. Ms. Margaret Dahlen
Treadwell and Rollo, Inc.
555 Montgomery Street, Suite 1300
San Francisco, CA 94111

Ms. Bette Owen, Chevron