SUBSURFACE INVESTIGATION REPORT

for:

706 Harrison Street
Oakland, California

prepared for:

Mr. Bo Gin
Oakland Auto Parts and Tires
288 11th Street
Oakland, California 94706

March 10, 1995

CAMBRIA
Environmental Technology, Inc.

SUBSURFACE INVESTIGATION REPORT

for:

706 Harrison Street
Oakland, California

prepared by:

Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, California 94608
Cambria Project #23-116-02

All work performed by Cambria Environmental Technology, Inc. for the project at 706 Harrison Street, Oakland, California was conducted under my supervision. To the best of my knowledge, the data contained herein are true and accurate and satisfy the scope of work prescribed by the client for this project. The data, findings, recommendations, specifications or professional opinions presented herein were prepared in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied.

David Elias
Project Geologist

N. Scott MacLeod, R.G.
Principal Geologist

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cc: Jennifer Eberle, Alameda County Department of Environmental Health, UST Local Oversight Program, 1131 Harbor Bay Pkwy., 2nd Floor, Alameda, CA 94502
Ed Howell, RWQCB 2101 Webster Street, Suite 500, Oakland, CA 94612

EXECUTIVE SUMMARY

This report presents the results of the subsurface investigation conducted by Cambria Environmental Technology, Inc. (Cambria) at 706 Harrison Street in Oakland, California (Figure 1). The site is located in a commercial area and is downgradient of one active Shell Oil Company service station and crossgradient of a former Unocal service station. (corner 7th + Harrison).
the market across Harrison
Between November 28 and December 2, 1994, Cambria drilled nine soil borings and installed four ground water monitoring wells and three combination soil vapor extraction/air sparging wells at the site. Up to 15,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) were detected in soil samples collected at the water table from four of the nine borings. TPHg concentrations in the vadose zone, as high as 410 ppm were detected beneath a former pump island.

Up to 2,500 parts per billion (ppb) TPHg and 32 ppb benzene were detected in ground water samples collected from onsite wells. No TPHg were detected in ground water samples collected from offsite monitoring wells MW-5 thru MW-7. **Ground water depth is about 17 ft and flows toward the southwest.**

Based on the distribution of hydrocarbons in onsite soil and ground water and the southwestern ground water flow direction, hydrocarbons may extend offsite a limited distance to the southwest beneath Seventh Street. Although no hydrocarbons were detected in soil samples collected from well MW-5, low concentrations of benzene and xylenes were detected in the ground water samples collected from this well.

Cambria installed monitoring well MW-4 upgradient of the potential onsite hydrocarbon sources and immediately downgradient of the adjacent Shell service station to investigate the possibility of an upgradient hydrocarbon source. No significant hydrocarbon concentrations were detected in soil samples collected from this well. However, field indications suggested that soil samples collected at the water table contained hydrocarbons. Concentrations of 2,500 ppb TPHg and 32 ppb TPHg benzene were detected in ground water sampled from MW-4. These determinations indicate that the hydrocarbons detected in ground water from well MW-4 may originate from the active Shell service station that is upgradient of the site.

INTRODUCTION

OBJECTIVES

This report presents the results of the subsurface investigation conducted by Cambria Environmental Technology, Incorporated (Cambria) at 706 Harrison Street in Oakland, California. The objectives of this investigation were to summarize the available site history and previous environmental investigations, assess the extent of hydrocarbons in soil and ground water beneath the property, determine whether hydrocarbons are migrating onto the site from upgradient sources, determine whether hydrocarbons are migrating downgradient across Seventh Street and across Harrison Street, and install three nested wells for future soil vapor extraction and ground water air sparging.

SITE BACKGROUND

Site Location: The site is located at the northeast corner of 7th Street and Harrison Street in Oakland, California (Figure 1). Topography in the area slopes generally southward towards the Oakland Harbor. The site is located about one half mile southwest of Lake Merrit and about one half mile northeast of the Oakland Harbor.

Adjacent Hydrocarbon Sources: Six active or former gasoline service stations are located within one block of the site. Union 76 sites occupy the northwest corner of Harrison Street and Seventh Street and the southeast corner of Harrison Street and Eighth Street. A Texaco site occupies the southwest corner of Harrison Street and Eighth Street. An Exxon site occupies the southwest corner of Alice Street and Eighth Street. An Arco site occupies a lot on the east side of Alice Street between Seventh Street and Eighth Street. An active Shell site occupies the northern adjacent lot, immediately upgradient of the subject site.

PREVIOUS INVESTIGATIONS

August 1988 Soil Borings: In August 1988, Frank Lee and Associates of Fremont, California drilled seven onsite soil borings to a maximum depth of 20 ft. A maximum of 19 ppm total petroleum fuel hydrocarbons and 0.83 ppm benzene were detected in a composite soil sample collected from a boring drilled adjacent to the existing USTs, located at the southwestern corner of the site.

January 1991 Tank Removals: In January 1991, Tank Protection Engineers of Union City, California removed four 1000-gallon gasoline USTs, two 6000-gallon gasoline USTs, and one waste oil tank. Up to 9,400 ppm total petroleum hydrocarbons as gasoline (TPHg) and 75 ppm benzene were detected in the confirmation soil samples collected.

February 1993 Overexcavations: In February 1993, Dennis Bates and Associates (DBA) of Monterey, California overexcavated an unspecified volume of hydrocarbon-bearing soil from three excavations in the vicinity of the former UST locations. Since they did not shore the excavations, they were unable to remove all of the hydrocarbon contaminated soil. A soil sample collected at 16 ft depth contained 4,300 ppm TPHg and 66 ppm benzene.

July 1993 Monitoring Well and Soil Vapor Extraction Well Installation: In July 1993, DBA installed monitoring wells MW-1, MW-2 and MW-3 and soil vapor extraction wells VW-1 and VW-2. Maximum concentrations of 6000 ppm TPH-G and 210 ppm benzene were detected in the 17 ft depth soil sample collected from VW-2.

December 1993 Soil Borings: In December 1993, DBA collected shallow soil samples from a former pump island location. A maximum of 17 ppm organic lead was detected in a soil sample collected from two ft depth.

April 1994 Soil Vapor Extraction Test: In April 1994, Remediation Testing and Design (RTD) of Santa Cruz, California conducted a soil vapor extraction feasibility study. Up to 8,353 parts per million by volume (ppmv) TPHg were detected in the vapor samples. RTD concluded that soil vapor extraction was an effective remedial alternative for this site.

Quarterly Monitoring: Quarterly ground water samples have been collected from the site wells since August 1993.

INVESTIGATION RESULTS

The results of Cambria's November and December 1994 subsurface investigation are summarized below. Copies of excavation, encroachment and drilling permits are presented in Appendix A. Boring log and well construction diagrams are presented in Appendix B. Analytic results for soil and ground water are presented in Tables 1 and 2, respectively, and the analytic reports are presented in Appendix C. Our standard field procedures are presented in Appendix D. Well survey results are presented in Appendix E.

good!

SOIL BORINGS

Personnel Present:	Project Geologist David Elias conducted all field work under the supervision of Registered Geologist N. Scott MacLeod.
Permits:	Alameda County Zone 7 monitoring well permits are presented in Appendix A.
Drilling Company:	Soils Exploration Services of Benicia, California
Drilling Dates:	November 28 to December 2, 1994.
Drilling Methods:	8-inch hollow-stem augers for all borings and wells.
Number of Borings:	Nine (Figure 2).
Boring Depths:	26.5 to 32 ft below grade (Appendix B).
Sediment Lithology:	The site is underlain by sand, silty sand and sandy silt to about 30 ft depth, and sandy clay to the total depth explored of 32 ft depth (Appendix B).

Soil Analyses: Selected soil samples were analyzed for:

- TPHg by modified EPA Method 8015, and
- Benzene, ethylbenzene, toluene and xylenes (BETX) by EPA Method 8020.

Waste Disposal: Soil cuttings were stockpiled on and covered with plastic sheeting. Soil will be disposed of at a later date.

WELL CONSTRUCTION

Ground water monitoring well MW-4 was installed at the northern property line, immediately adjacent to the upgradient Shell station to monitor upgradient sources potentially impacting the subject property. Ground water monitoring wells MW-5, MW-6 and MW-7 were installed downgradient of the site, across Harrison Street and Seventh Street to monitor downgradient hydrocarbon migration (Figure 2). Soil vapor extraction/air sparge wells VW-3, VW-4 and VW-5 were installed in the former tankpit for future soil vapor extraction and groundwater air sparging remediation.

During all of the well installations, flowing sands impeded the well construction. In addition, Cambria jack-hammered through up to three layers of concrete, asphalt, brick and cobble during the three offsite well constructions.

Well Materials: Wells MW-4 thru MW-7 were constructed using two-inch diameter, 0.010-inch slotted Schedule 40 PVC well screen and well casing. Wells VW-3 thru VW-5 were constructed using two-inch diameter, 0.010-inch slotted Schedule 40 PVC well screen and well casing nested with one-inch diameter, 0.010-inch slotted Schedule 40 PVC well screen and well casing.

Screened Interval: Ground water stabilized in the soil borings at about 17 ft depth . Therefore, we constructed monitoring wells MW-4 thru MW-7 to screen between five ft above and ten ft below the water table. We constructed soil vapor extraction wells/air sparging wells VW-3 thru VW-5 to screen about ten ft above the water table. The one-inch nested sparging wells were constructed to screen from about ten to eleven ft below the water table (Appendix B).

Development Method: Wells were developed using surge block agitation and bailer evacuation.

Ground Water Analyses: Ground water samples from the borings and wells were analyzed for:

- TPHg by modified EPA Method 8015, and
- BETX by EPA Method 8020.

Flow Direction: Ground water flows toward the southwest. (Figure 3).

Waste Disposal: Purge water from the borings and wells and steam clean rinseate were stored in D.O.T. approved 55-gallon drums pending disposal.

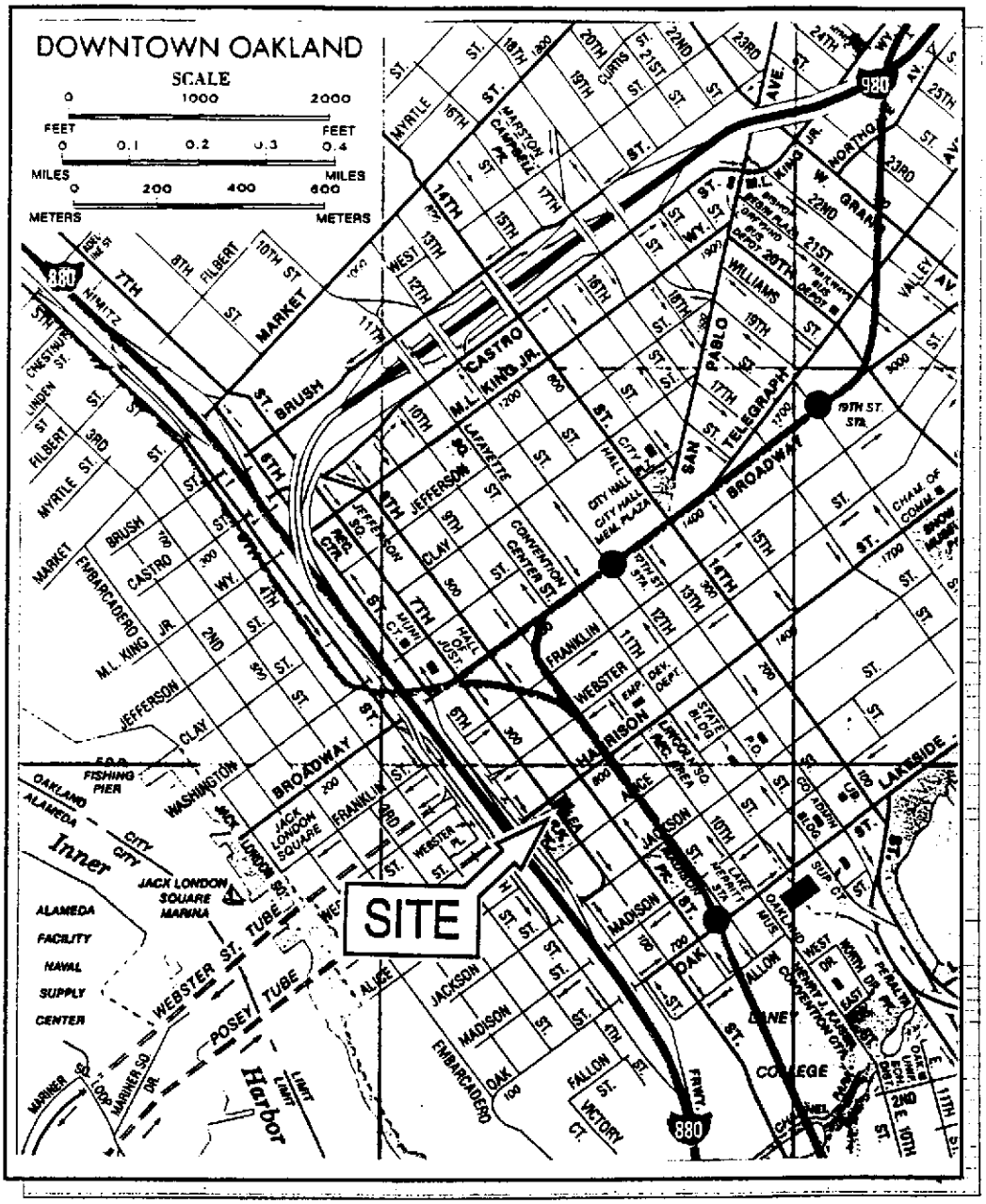
Well Elevation Survey: Top-of-casing elevations were measured by Tucker and Associates Surveying on December 29, 1994. The survey report is included as Appendix E.

HYDROCARBON DISTRIBUTION IN SOIL

Maximum concentrations of 15,000 ppm TPHg and 160 ppm benzene were detected in soil samples collected from borings VW-3, VW-4, and SB-I. Only 0.012 ppm toluene were detected in boring VW-5, located in the southernmost extent of the former tankpit, adjacent to the downgradient property line (Figure 2). No hydrocarbon concentrations were detected in any of the soil samples collected from downgradient monitoring wells MW-5, MW-6, and MW-7. Therefore, hydrocarbons in soil do not appear to extend offsite.

HYDROCARBON DISTRIBUTION IN GROUND WATER

No hydrocarbons were detected in downgradient monitoring wells MW-6 and MW-7. Low BETX concentrations were detected in the groundwater sample collected from downgradient monitoring well MW-5. Although 2,500 ppb TPHg and 32 ppb benzene were detected in the ground water sample collected from MW-4, the hydrocarbons appear to originate from the upgradient active Shell service station. Analytic results for ground water collected during this investigation indicate that hydrocarbon concentrations in groundwater do not extend significantly beyond the downgradient property lines.



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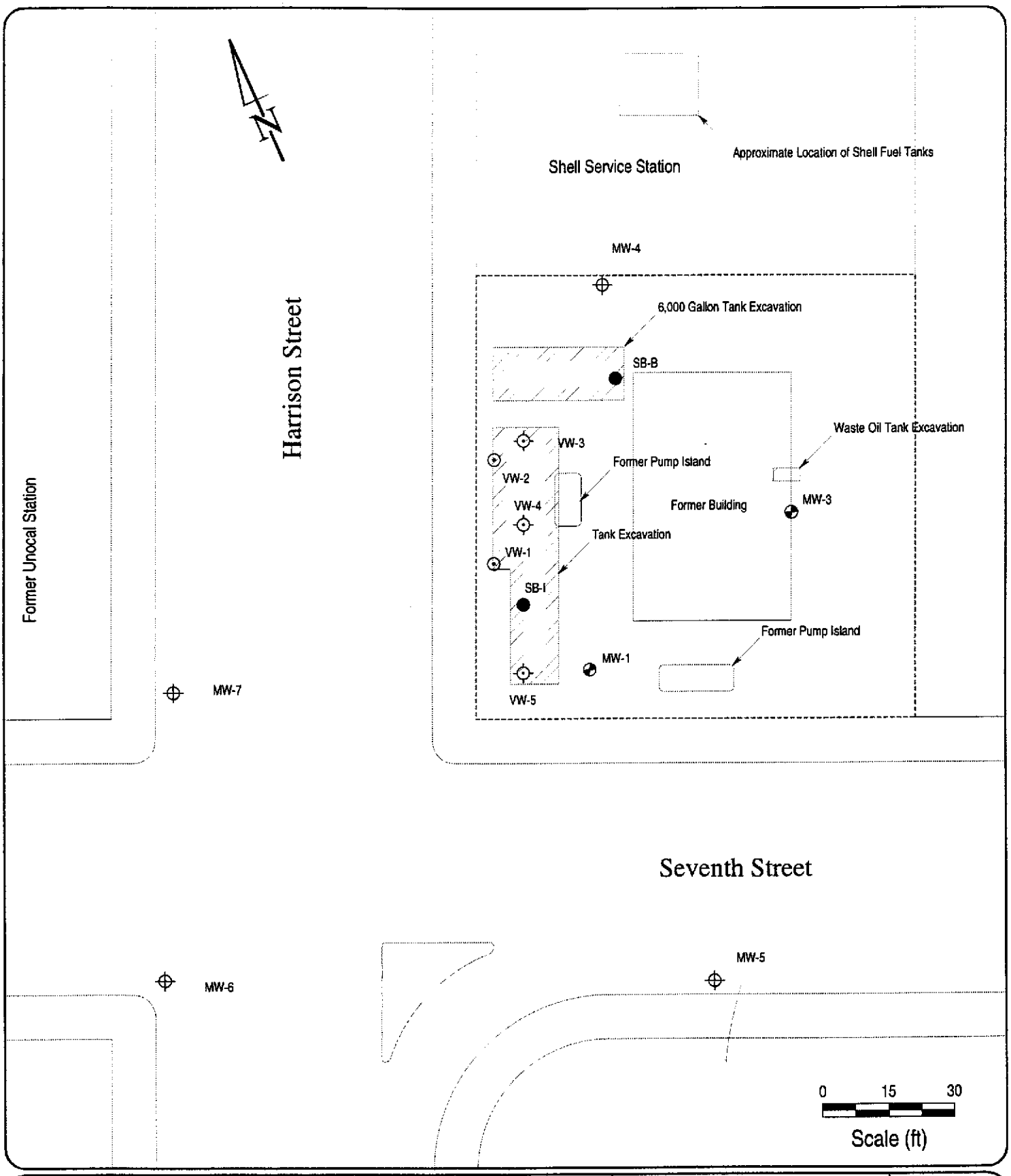
Site Location Map

Former Arco Station
706 Harrison Street
Oakland, California

FIGURE
1



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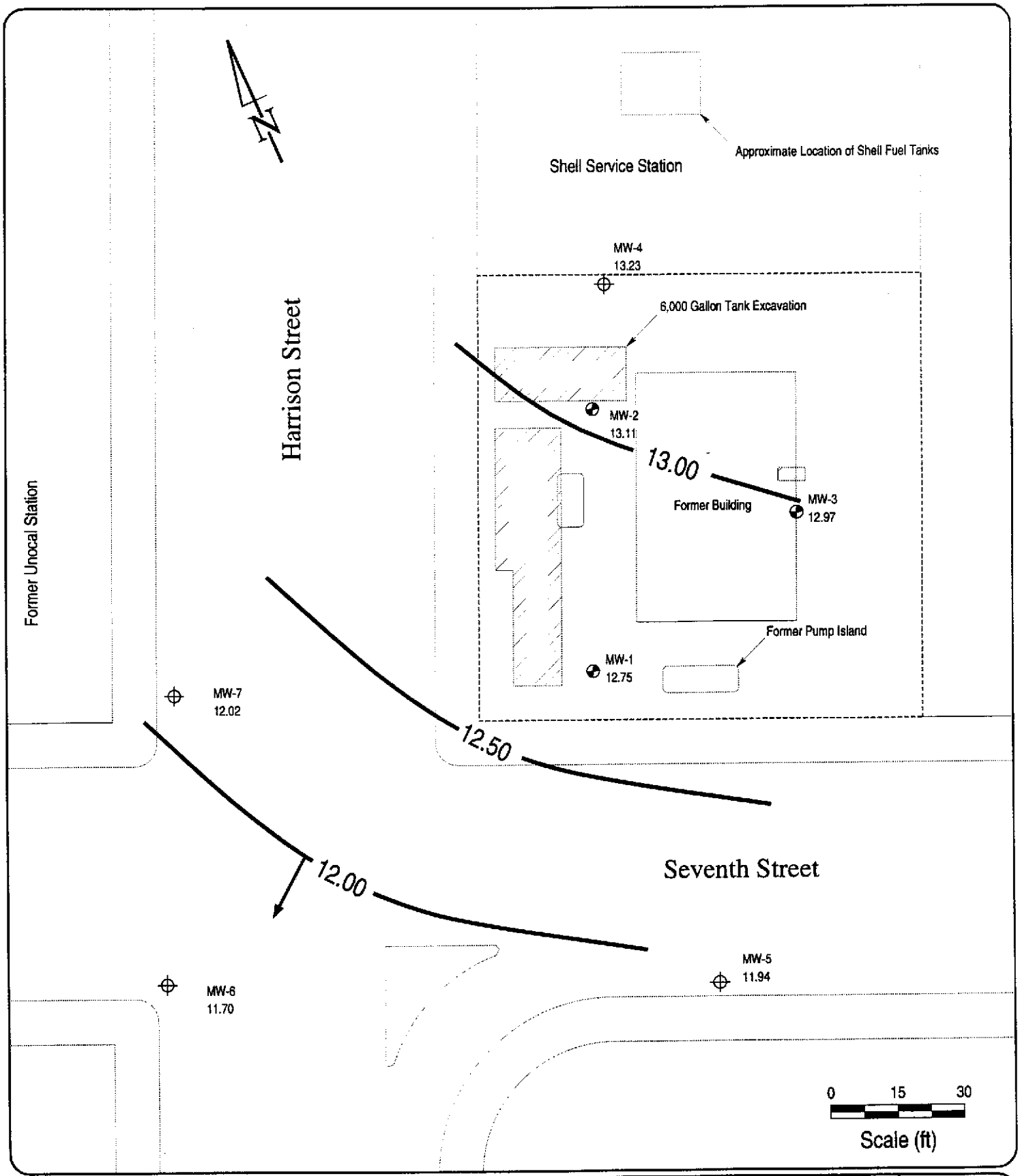
- New Ground Water Monitoring Well
- New SVE/Sparging Well
- New Soil Boring
- Previously Installed Monitoring Well
- Previously Installed SVE Well

Well and Boring Locations

Former Arco Station
706 Harrison Street
Oakland, California

FIGURE
2



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Environmental Technology, Inc.

⊕ New Ground Water Monitoring Well
◕ Previously Installed Monitoring Well
X.XX Ground Water Elevation (ft above msl)
← Ground Water Flow Direction

Ground Water Elevation
December 29, 1994

Former Arco Station
706 Harrison Street
Oakland, California

FIGURE
3

Table 1. Ground Water Analytic Data - Former Arco Station - 706 Harrison Street Oakland, California

Well ID	Date Sampled	Depth to Water (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentrations in parts per billion (μg/L)				
MW-4	12/16/94	18.10	2,500	32	6.5	4.5	17
MW-5	12/16/94	16.07	nd	1.1	nd	nd	2.4
MW-6	12/16/94	17.74	nd	nd	nd	nd	nd
MW-7	12/16/94	17.07	nd	nd	nd	nd	nd

Abbreviations

TPHg = Total petroleum hydrocarbons as gasoline

nd = not detected

Notes

TPHg analyzed by modified EPA Method 8015

Benzene, ethylbenzene, toluene and xylenes analyzed by EPA Method 8020

Table 2. Soil Analytic Data - Former Arco Station - 706 Harrison Street Oakland, California

Borings/ well ID	Date Sampled	Sample Depth (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentrations in parts per million (mg/kg)				
SB-A/MW-4	11/28/94	16.0	nd	nd	nd	nd	nd
SB-A/MW-4[a]	11/28/94	17.5	nd	nd	nd	nd	nd
SB-A/MW-4	11/28/94	26.0	nd	~~nd~~ 0.021	nd	nd	nd
SB-A/MW-4[ab]	11/28/94	26.0	nd	~~0.021~~ Nd	nd	nd	nd
SB-B	11/28/94	11.0	nd	nd	nd	nd	nd
SB-B	11/28/94	16.0	nd	nd	nd	nd	nd
SB-B	11/28/94	26.0	1.1	**0.18**	0.054	0.024	0.071
SB-C/VW-3	11/28/94	11.0	**410**	nd	2.0	3.7	22
SB-C/VW-3	11/28/94	18.0	**14,000**	120	620	220	1,100
SB-C/VW-3	11/28/94	26.0	nd	0.059	0.041	0.0028	0.050

Table 2 continued on next page...

Table 2. Soil Analytic Data - Former Arco Station - 706 Harrison Street Oakland, California

Borings/ well ID	Date Sampled	Sample Depth (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentrations in parts per million (mg/kg)				
SB-D/VW-4	11/29/94	17.5	15,000	160	700	240	1,200
SB-E/VW-5	11/30/94	11.0	nd	nd	nd	nd	nd
SB-E/VW-5	11/30/94	17.0	nd	nd	nd	nd	nd
SB-E/VW-5	11/30/94	26.0	nd	nd	0.012	nd	nd
SB-F/MW-5	11/30/94	18.0	nd	nd	nd	nd	nd
SB-G/MW-6	12/1/94	16.0	nd	nd	nd	nd	nd
SB-H/MW-7	12/2/94	16.0	nd	nd	nd	nd	nd
SB-H/MW-7	12/2/94	18.0	nd	nd	nd	nd	nd
SB-H/MW-7	12/2/94	26.0	nd	nd	nd	nd	nd
SB-I	12/2/94	11.0	nd	nd	nd	nd	nd

Table 2 continued on next page...

Table 2. Soil Analytic Data - Former Arco Station - 706 Harrison Street Oakland, California

Borings/ well ID	Date Sampled	Sample Depth (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes
			Concentrations in parts per million (mg/kg)				
SB-1	12/2/94	18.0	1,200	nd	12	13	78
SB-1	12/2/94	26.0	4.4	nd	0.013	0.018	0.055

Abbreviations

TPHg = Total petroleum hydrocarbons as gasoline

nd = not detected

Notes

a = sample analyzed after the 14 day holding time

b = sample reanalyzed to confirm anomalous results

TPHg analyzed by modified EPA Method 8015

Benzene, ethylbenzene, toluene and xylenes analyzed by EPA Method 8020

Table 3. Depth to Water and Ground Water Elevations

Former Arco Station, 706 Harrison Street., Oakland, California

stabilized

Well ID	Date Surveyed	Top of Casing Elevation (ft)	Depth to Water (ft)	Ground Water Elevation (ft)
MW-1	12/29/94	29.15	16.40	12.75
MW-2	12/29/94	30.51	17.40	13.11
MW-3	12/29/94	29.77	16.80	12.97
MW-4	12/29/94	31.18	17.95	13.23
MW-5	12/29/94	28.04	16.10	11.94
MW-6	12/29/94	29.10	17.40	11.70
MW-7	12/29/94	29.67	17.65	12.02

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 7th and Harrison St.
OAKLAND, CA

CLIENT
Name Bo Gin
Address 259 11th St. Voice
City Oakland, CA Zip 94607

APPLICANT
Name Cambria Environmental Technology Fax 510-420-9170
Address 1144 65th St Suite C Voice 510-420-0700
City Oakland Zip 94608

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	X
Monitoring	X	Well Destruction	

PROPOSED WATER SUPPLY WELL USE

Domestic		Industrial		Other	
Municipal		Irrigation			

DRILLING METHOD:

Mud Rotary		Air Rotary		Auger	X
Cable		Other			

DRILLER'S LICENSE NO. 582696
SES.

WELL PROJECTS

Drill Hole Diameter	8 in.	Maximum Depth	35 ft.
Casing Diameter	2 in.		
Surface Seal Depth	10 ft.	Number	4 total

GEOTECHNICAL PROJECTS

Number of Borings	5	Maximum Depth	35 ft.
Hole Diameter	2 in.		

ESTIMATED STARTING DATE 11/7/94
ESTIMATED COMPLETION DATE 11/10/94

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

APPLICANT'S SIGNATURE [signature] Date 11-3-94

FOR OFFICE USE

PERMIT NUMBER 94710
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 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 WELLS, INCLUDING PIEZOMETERS
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. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(C.) 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.

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

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 4 Nov 94
Wyman Hong

91992

CITY OF OAKLAND

OFFICE OF PLANNING & BUILDING • 1330 BROADWAY • OAKLAND, CALIFORNIA [illegible]

November 2, 1994

Building Services Department

(510) 238-3502
TDD (510) 238-3254
FAX (510) 238-7226

Mr. Bo K. Gin
706 Harrison Street
Oakland, CA 94607

Dear Mr. Gin:

RE: MINOR ENCROACHMENT PERMIT FOR 706 Harrison STREET

Enclosed are the Minor Encroachment Permit and Agreement and the Conditions For Granting a Minor Encroachment Permit allowing you to place three monitoring wells within the public right-of-way of Harrison and 7th Streets.

Before the permit will become effective, however, it must be signed by the person(s) having the legal authority to do so, properly notarized with notary acknowledgement attached, and returned to this office to the attention of Roger Tam for recordation, along with the appropriate insurance certificate.

You must also obtain a street excavation permit from the Engineering Information Counter, 2nd Floor, 1330 Broadway, prior to the start of the proposed work in the City right-of-way. For questions regarding the street excavation permit, call the Engineering Information Counter at (510) 238-4777 between 8 a.m. and 4 p.m., Monday through Friday.

If you have any other questions regarding this minor encroachment permit, please call Roger Tam at (510) 238-2110.

Very truly yours,

KAY WINER
Director of Planning & Building

By Philip A. Grubstick
PHILIP A. GRUBSTICK
Engineering Services Manager

Enclosures

RT:rt

file: harrison.mw\covr-ltr(6)

NOTICE TO ALL APPLICANTS

PLEASE SIGN this instrument in the presence of a NOTARY PUBLIC.

Sign name(s) EXACTLY as you print or type your name(s) and title(s) in instrument (same spelling, match middle initial(s), etc.). Otherwise, it cannot be recorded.

RETURN all originals to our office (to the attention of ROGER TAM, Office of Planning & Building, City of Oakland, 1330 Broadway, 2nd Floor, Oakland, CA 94612) for recordation. You may make copies for your files since the recorded document will not be mailed to you after it is recorded in the Office of Recorder, Alameda County, California.

NOTICE TO NOTARY PUBLIC

Please DO NOT MAKE ANY changes or any additions of any nature on this instrument. PRINT your name in notarization form and sign only in space provided.

Affix Notary Seal (do not place seal over any inked or colored portion; it will not be microfilmed and will be returned unrecorded, causing a delay in the transaction) onto an acknowledgement slip(s) only.

If document is signed in California:

You MUST attach a California All-Purpose Acknowlegement Slip(s), fill in all necessary information and check appropriate box(es).

file: encrnote.doc
Updated 10/15/93

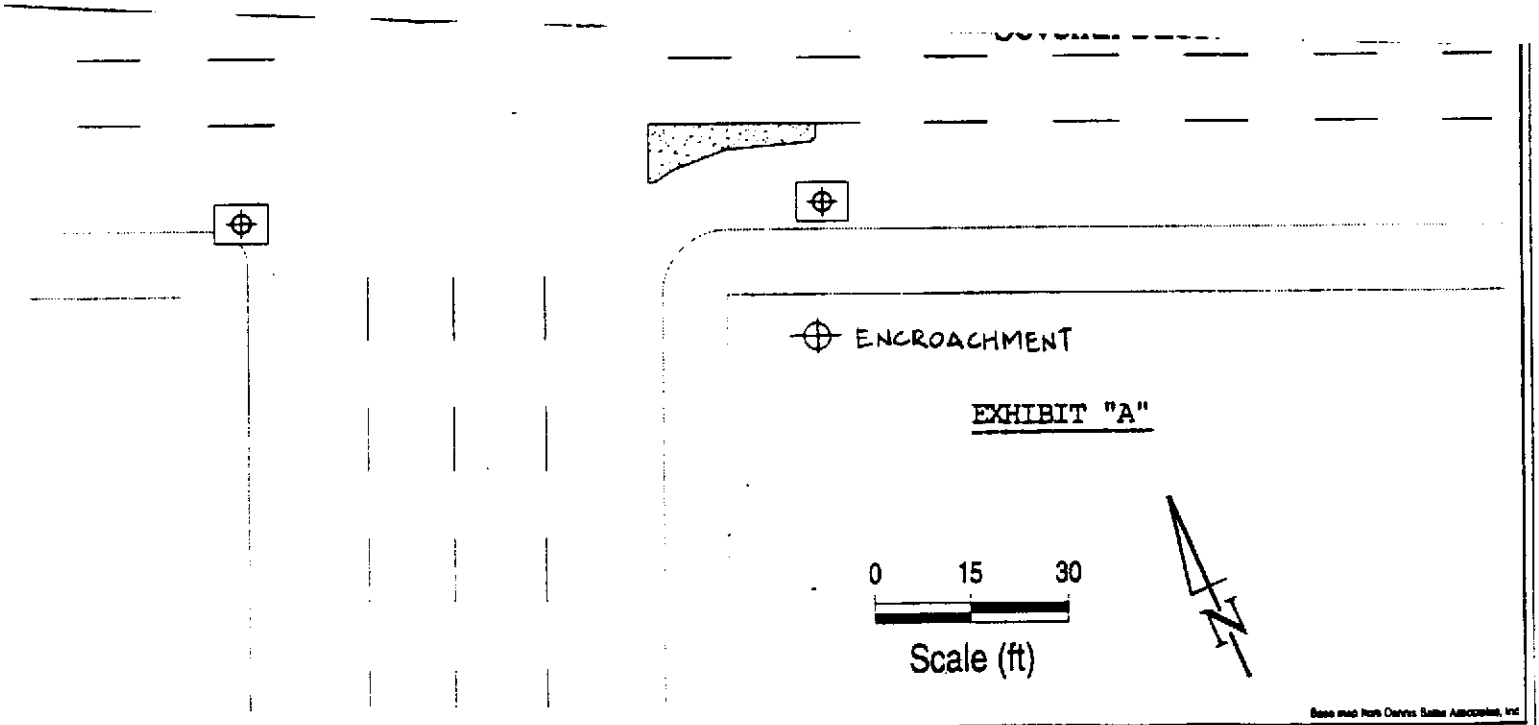

Figure 1. Proposed Well and Boring Locations - Former Arco Station - 706 Harrison Street, Oakland, California

CAMBRIA

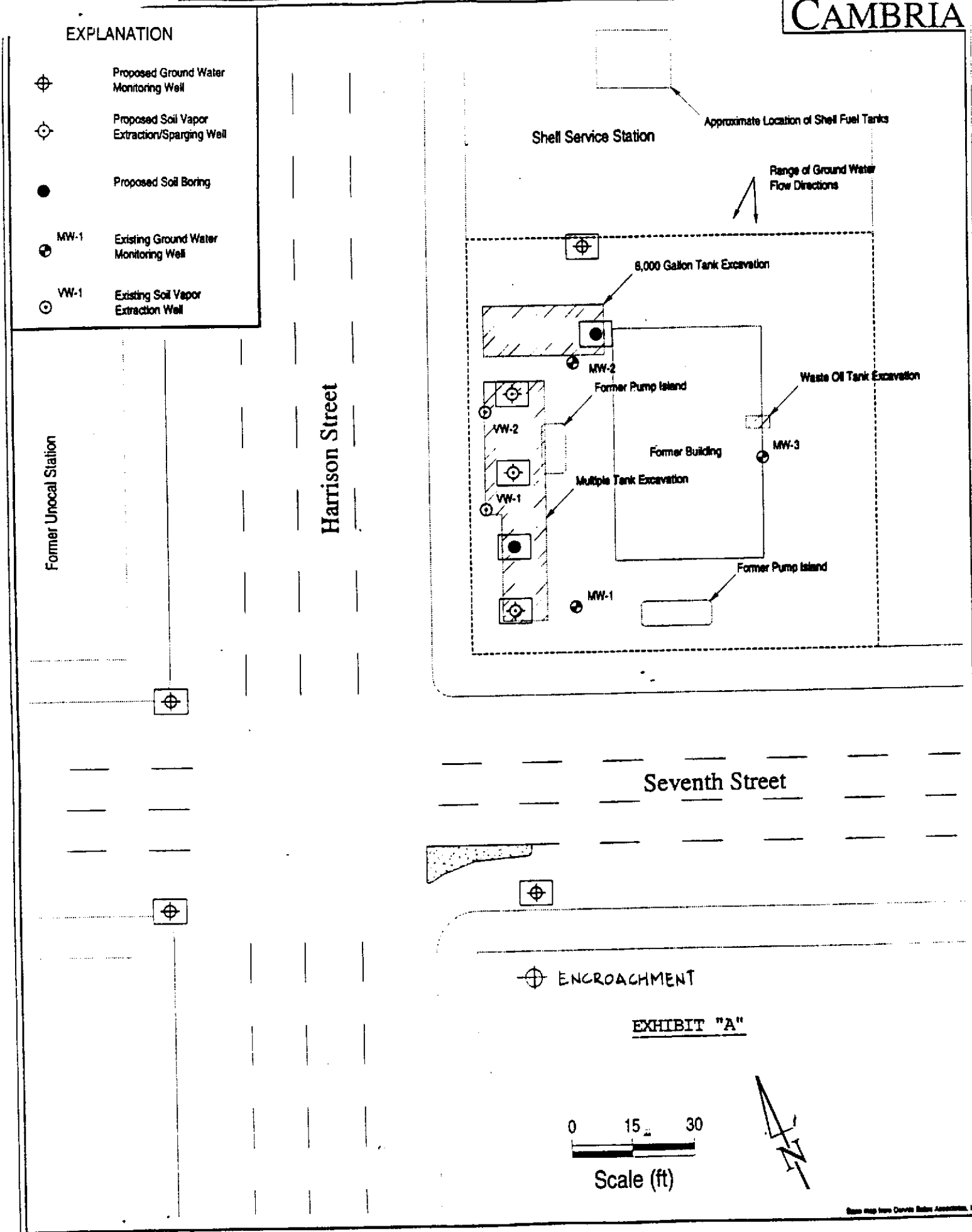

Figure 1. Proposed Well and Boring Locations - Former Arco Station - 706 Harrison Street, Oakland, California

City of Oakland
Director of Planning & Building
1330 Broadway, 2nd Floor
Oakland, CA 94612

When Recorded Mail to:
Director of Planning & Building
City of Oakland
1330 Broadway, 2nd Floor
Oakland, CA 94612

TAX ROLL PARCEL NUMBER
(ASSESSOR'S REFERENCE NUMBER)

001	0185	026	00
MAP	BLOCK	PARCEL	SUB

SPACE ABOVE FOR RECORDER'S USE ONLY

Address: 706 Harrison Street, Oakland

MINOR ENCROACHMENT PERMIT AND AGREEMENT

Bo K. Gin and Chi Ying Gin, owner(s) of that certain property described in the Grant Deed recorded May 8, 1975, Series No. 75-061055, Reel 3959, Image 522, in the Office of the Recorder, Alameda County, California and commonly known as 706 Harrison Street, is (are) hereby granted a Conditional Revocable Permit to encroach into the public right of way area of Harrison and 7th Streets with three monitoring well(s). The location of said encroachment shall be as delineated in Exhibit 'A' attached hereto and made a part hereof.

State of California
County of ALAMEDA
} SS.

Title or Type of Document: ENCROACHMENT & Permit
Number of Pages _____ Date of Document _____
Signer(s) Other than named below _____

On November 07, 1994 before me, Jim B. Hom,
Notary Public, personally appeared Bo K. Gin and Chi Ying Gin,
personally known to me (~~or proved to me on the basis of satisfactory evidence~~) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature _____ (Seal)

OFFICIAL SEAL
JIM B. HOM
NOTARY PUBLIC - CALIFORNIA
ALAMEDA COUNTY
My Comm Expires Feb 10, 1995

FD-1 (Revised 11/92)

Director of Planning & Building
1330 Broadway, 2nd Floor
Oakland, CA 94612

When Recorded Mail to:
Director of Planning & Building
City of Oakland
1330 Broadway, 2nd Floor
Oakland, CA 94612

TAX ROLL PARCEL NUMBER
(ASSESSOR'S REFERENCE NUMBER)

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The permittee(s) agree(s) to comply with and be bound by the conditions for granting an Encroachment Permit attached hereto and made a part hereof.

This agreement shall be binding upon the present owner(s) of the property described above, and (~~his~~, ~~her~~, ~~its~~, their) successors in interest thereof.

In witness whereof, (~~I~~, we) have set (~~my~~, our) signature(s) this day of , 1994.

Name:

Name:

<-- Please attach California all-purpose acknowledgment slip here

BELOW FOR OFFICIAL USE ONLY

Dated

By:
CALVIN N. WONG
Acting Deputy Director
Building Services
For
KAY WINER
Director of Planning & Building

RT:rt
file:harrison.mw\pcr&agt(6)

TO: Bo K. Gin and Chi Ying Gin
(APN: 01-0185-25)

Address: 706 Harrison Street, Oakland

RE: Minor Encroachment Permit for Monitoring Well in Harrison and 7th Streets

CONDITIONS FOR GRANTING A MINOR ENCROACHMENT PERMIT

1. That this permit shall be revocable at the pleasure of the Director of Planning & Building.

2. That the permittee, by the acceptance, either expressed or implied, of the minor encroachment permit hereby disclaims any right, title, or interest in or to any portion of the public sidewalk or street area, and agrees that said temporary use of said area does not constitute an abandonment on the part of the City of Oakland of any of its rights for street purposes and otherwise.

3. The permittee shall maintain in force and effect at all times that said encroachment occupies said public sidewalk or street area, good and sufficient public liability insurance in the amount of $300,000 for each occurrence, and property damage insurance in the amount of $50,000 for each occurrence, both including contractual liability insuring the City of Oakland against any and all claims arising out of the existence of said encroachment in said public sidewalk or street area, and that a certificate of such insurance and subsequent notices of the renewal thereof, shall be filed with the Director of Planning & Building of the City of Oakland, and that such certificate shall state that said insurance coverage shall not be canceled or be permitted to lapse without thirty (30) days written notice to said Director of Planning & Building. The Permittee also agrees that the City may review the type and amount of insurance required of the Permittee every five (5) years and may require the permittee to increase the amount of and/or change the type of insurance coverage required.

4. That the permittee, by the acceptance, either expressed or implied, of this revocable permit shall be solely and fully responsible for the repair or replacement of any portion or all of said improvements in the event that said improvements shall have failed or have been damaged to the extent of creating a menace or of becoming a hazard to the safety of the general public; and that the permittee shall be liable for the expenses connected therewith.

5. That upon the termination of the permission herein granted, permittee shall immediately remove said encroachment from the sidewalk and street area, and any damage resulting therefrom shall be repaired to the satisfaction of the Director of Planning & Building.

6. That the permittee shall file with the City of Oakland for recordation a Minor Encroachment Permit and Agreement, and shall be bound by and comply with all the terms and conditions of said permit.

7. That said permittee shall obtain an excavation permit prior to the construction and a separate excavation permit prior to the removal of the ground water monitoring wells.

8. That said permittee shall provide to the City of Oakland an AS BUILT plan showing the actual location of the ground water monitoring wells and the results of all data collected from the monitoring wells.

9. That said permittee shall remove the monitoring wells and repair any damage to the sidewalk or street area in accordance with City standards two (2) years after construction or as soon as monitoring is complete.

10. That said permittee shall notify the Office of Planning & Building after the monitoring well(s) is/are removed and the sidewalk or street area restored to initiate the procedure to rescind the minor encroachment permit.

11. That monitoring well covers installed within the sidewalk area shall have a skidproof surface. A precast concrete utility box may be used in conjunction with the bolted cast iron cover with City approval.

12. That the ground water monitoring well casting and cover shall be cast iron and shall meet H-20 load rating. The cover shall be secured with a minimum of two stainless steel bolts. Bolts and cover shall be mounted flush with the surrounding surface.

13. That the permittee acknowledges that the City makes no representations or warranties as to the conditions beneath said encroachment. By accepting this revocable permit, permittee agrees that it will use the encroachment area at its own risk, is responsible for the proper coordination of its activities with all other permittees, underground utilities, contractors, or workmen operating within the encroachment area and for the safety of itself and any of its personnel in connection with its entry under this revocable permit.

14. That the permittee acknowledges that the City is unaware of the existence of any hazardous substances beneath the

encroachment area, and hereby waives and fully releases and forever discharges the City and its officers, directors, employees, agents, servants, representatives, assigns and successors from any and all claims, demands, liabilities, damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs), whether direct or indirect, known or unknown, foreseen or unforeseen, that may arise out of or in any way connected with the physical condition, or required remediation of the excavation area or any law or regulation applicable thereto, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601 et seq.), the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 6901 et seq.), the Clean Water Act (33 U.S.C. Section 466 et Seq.), the Safe Drinking Water Act (14 U.S.C. Sections 1401-1450), the Hazardous Materials Transportation Act (49 U.S.C. Section 1801 et seq.), the Toxic Substance Control Act (15 U.S.C. Sections 2601-2629), the California Hazardous Waste Control Law (California Health and Safety Code Sections 25100 et seq.), the Porter-Cologne Water Quality Control Act (California Health and Safety Code Section 13000 et seq.), the Hazardous Substance Account Act (California Health and Safety Code Section 25300 et seq.), and the Safe Drinking Water and Toxic Enforcement Act (California Health and Safety Code Section 25249.5 et seq.).

15. Permittee further acknowledges that it understands and agrees that it hereby expressly waives all rights and benefits which it now has or in the future may have, under and by virtue of the terms of California Civil Code Section 1542, which reads as follows: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."

16. Permittee recognizes that by waiving the provisions of this section, permittee will not be able to make any claims for damages that may exist, and to which, if known, would materially affect his/her decision to execute this encroachment agreement, regardless of whether permittee's lack of knowledge is the result of ignorance, oversight, error, negligence, or any other cause.

17. (a) That the permittee, by the acceptance of this revocable permit, agrees and promises to indemnify, defend, and hold harmless the City of Oakland, its officers, agents, and employees, to the maximum extent permitted by law, from any and all claims, demands, liabilities, damages, actions, causes of action, penalties, fines, liens, judgments, costs, or expenses whatsoever (including, without limitation, attorneys' fees and costs;

collectively referred to as "claims"), whether direct or indirect, known or unknown, foreseen or unforeseen, to the extent that such claims were caused by the permittee, its agents, employees, contractors or representatives.

(b) That, if any contamination is discovered below or in the immediate vicinity of the encroachment, and the contaminants found are of the type used, housed, stored, processed or sold on or from the Harrison and 7th Streets, Oakland, California site, such shall amount to a rebuttable presumption that the contamination below, or in the immediate vicinity of, the encroachment was caused by the permittee, its agents, employees, contractors or representatives.

(c) That the permittee shall comply with all applicable federal, state, county and local laws, rules, and regulations governing the installation, maintenance, operation and abatement of the encroachment.

(d) That the permittee hereby does remise, release, and forever discharge, and agree to defend, indemnify and save harmless, the City, its officers, agents and employees and each of them, from any and all actions, claims, and demands of whatsoever kind or nature, and any damage, loss or injury which may be sustained directly or by the undersigned and any other person or persons, and arising out of, or by reason of, the occupation of said public property, and the future removal of the above-mentioned encroachment.

18. That the hereinabove conditions shall be binding upon the permittee and the successive owners and assigns thereof.

19. That said Minor Encroachment Permit and Agreement shall take effect when all the conditions hereinabove set forth shall have been complied with to the satisfaction of the Director of Planning & Building, and shall become null and void upon the failure of the permittee to comply with all conditions hereinabove set forth.

350.2 (REV. 8/90)

X9401568

19 ± Excavation

( )

40 ± Applications

235 ± Total

CITY OF OAKLAND

PERMIT TO EXCAVATE IN STREETS OR OTHER WORK AS SPECIFIED

LOCATION OF WORK: _____ (Street or Address) BETWEEN _____ (Street/Ave.) AND _____ (Specify)

PERMISSION TO EXCAVATE IN THE PUBLIC RIGHT-OF-WAY IS HEREBY GRANTED TO:

APPLICANT _____

ADDRESS _____ PHONE #: _____

TYPE OF WORK: GAS____ ELECTRIC____ WATER____ TELEPHONE____ CABLE TV____ SEWER____ OTHER _____ (Specify)

NATURE OF WORK: _____

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5. Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to it's issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 70044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale. (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption in this subdivision on more than two structures more than once during any three-year period. (Sec. 7044. Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law).

☐ I am exempt under Sec. _____, B&PC for this reason _____

Signature _____ Date _____

WORKER'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab C).

Policy # _____ Company Name _____

☐ Certified copy is hereby furnished.

☑ Certified copy is filed with the city building inspection dept.

Signature _____ Date 11/17/94

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature _____ Date _____

NOTICE TO APPLICANT. If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith imply with such provisions or this permit shall be deemed revoked.

PERMIT VOID 90 DAYS FROM DATE OF ISSUE UNLESS EXTENSION GRANTED BY DIRECTOR OF PUBLIC WORKS.

Approximate Starting Date DATE 11-1-94

Approximate Completion Date DATE 11-4-94

HOLIDAY RESTRICTION (1 NOV — 1 JAN) YES ✓ NO _____

LIMITED OPERATION AREA (7AM – 9AM / 4PM – 6PM) YES ✓ NO _____

DATE STREET LAST RESURFACED DATE 1974

SPECIAL PAVING DETAIL REQUIRED YES _____ NO ✓

24-HOUR EMERGENCY PHONE NUMBER _____

PERMIT NOT VALID WITHOUT 24 HOUR NUMBER.

Telephone 238-3668 Forty-eight (48) HOURS BEFORE ACTUAL CONSTRUCTION.

ATTENTION

State law requires that contractor/owner call Underground Service Alert two working days before excavating to have below-ground utilities located. This permit is not valid unless applicant has secured an inquiry identification number issued by Underground Service Alert.

Call Toll Free: 800-642-2444 USA ID Number 358206

This permit issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code.

This permit is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance.

CONTRACTOR

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

LICENSE # AND CLASS _____ CITY BUSINESS TAX # _____

X _____ Date 11/17/94

Signature of Contractor Owner or Agent

☑ Agent for ☐ Contractor ☐ Owner

OFFICIAL USE ONLY

UTILITY COMPANY REPORT

Supervisor _____

Completion Date _____

CITY INSPECTOR'S REPORT

	BACKFILL	PAVING
Initials		
Hours		
Date		
Concrete		
Asphalt		
Sidewalk		

Size of Cut: Sq. Ft. _____ Inches _____

Paved by _____ Type _____

Bill No. _____

Charges Backfill _____

Paving _____

Paving Insp. _____

Traffic Striping Replaced _____ Date

APPROVED

Engineering Services TMP Date 11/17/94

Planning _____ Date _____

Field Services _____ Date _____

Construction _____ Date _____

Traffic Engineering TMP Date 11/17/94

Electrical Engineering _____ Date _____

DIRECTOR OF PUBLIC WORKS

APPROVED BY: _____

DATE: 11/17/94

EXTENSION GRANTED BY: _____

DATE: _____

APPENDIX B

Boring and Well Construction Logs

DRILLING LOG

Client: **Mr. Bo K. Gin**

Project No: **23116** Phase Task **001**

Well ID **MW-4** Boring ID **SB-A**

Location **706 Harrison Street Oakland, CA**

Surface Elev. **N/A ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample Interval	Lithologic Description
0	Ground Surface		
5	6 15 30		**Silty SAND**(SM);Brown; loose; damp; 20% silt, 80% fine to medium sand; moderate estimated hydraulic conductivity.
10	15 27 27		2% gravel and dense.
15	20 42 50 20 50 50		Occasional black manganese oxide blems.
20			**SAND**;(SW-SM); grayish green; moist; 10% silt, 90% very fine to moderate sand; possible presence of solvent.
25	20 33 40		
30	25 33 40		**Sandy CLAY** (CL);Light brown; very stiff; moist; 70% clay, 30% fine to very fine sand; low to medium plasticity; low estimated hydraulic conductivity.
35			

TPHg (ppm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
			0	T.O.C. Elev. 31.18
				Locking cap with traffic rated vault
			5	
			10	
			15	
nd nd			16 17 18 19 20	▽: 1st water
			25	
nd			30	
			35	Bottom of well

Driller **Soils Exploration**

Logged By **David Elias**

Drilling Started **11/28/94**

Drilling Completed **11/28/94**

Construction Completed **11/28/94**

Development Completed **12/16/94**

Water Bearing Zones **17.5 to 31.5 ft**

Development Yield **N/A**

Well Casing **2"** Dia. **0'** to **9.5'**

Casing Type **Schedule 40 PVC**

Well Screen **2"** Dia. **9.5'** to **29.5'**

Screen Type **Schedule 40 PVC**

Slot Size **0.010-inch**

Drilling Mud **N/A**

Grout Type **Portland Type I-II**

Bentonite Seal **6.5 to 8.5 ft**

Sand Pack **Monterey sand**

Sand Pack Type **#2/12**

Static Water Level **17.50** ft Depth

Date **N/A**

Notes: **Northeast end of lot**

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Mr. Bo K. Gin**

Project No: **23116** Phase Task **001**

Boring ID **SB-B**

Location **706 Harrison Street Oakland, CA**

Surface Elev. **N/A ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface						0	
5	18 25 27		**Silty SAND** (SM);Reddish brown; dense; damp; 1% clay, 39% silt. 60% fine to medium sand ; moderate estimated hydraulic conductivity.				5	
10	20 30 33		Reddish brown mottled gray	nd			10	
15	6 30 50		**SAND** (SW);Gray; very dense; damp; 2% silt, 98% fine sand; high estimated hydraulic conductivity; hydrocarbon odor: possible solvent.	nd			15	
20	16 25 33		Moist with hydrocarbon odor.				20	
25	17 30 50		Wet with no odor.	1			25	Bottom of boring
30							30	
35							35	

Driller **Soils Exploration**

Logged By **David Elias**

Water-Bearing Zones

Drilling Started **11/28/94**

Drilling Completed **11/28/94**

Grout Type **Portland Type I-II**

Notes: **Northeast end of lot near MW-2**

BOR 23116 2/15/95

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: Mr. Bo K. Gin

Project No: 23116 Phase Task 001

Well ID VW-3 Boring ID SB-C

Location 706 Harrison Street Oakland, CA

Surface Elev. N/A ft. Page 1 of 1

Depth Feet	Blow Count	Sample Interval	Lithologic Description
0	Ground Surface		
5			**Clayey SAND** (SC); Dark gray fill material; damp; 20% clay, 10% silt; 60% medium to very coarse sand, 10% gravel; low estimated hydraulic conductivity.
10	12 18 25		**Silty SAND** (SM);Reddish brown; medium dense; damp; 40% silt, 60% fine sand; moderate estimated hydraulic conductivity; no hydrocarbon odor.
15	27 33 35		20% silt, 80% fine to medium sand; very dense.
20	12 30 50		Gray, 90% fine to medium sand; moist; strong hydrocarbon odor.
25	29 50		Brown.
30	10 22 53		
35	20 36 50		Mild hydrocarbon odor. Moist to wet.

TPHg (ppm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
			0	T.O.C. Elev. N/A
				Locking well caps with trafffic rated vault.
			5	2" VEW
410			10	
			15	
14,000			20	Bottom of 2" well. bentonite
nd			25	1" air sparging well
			30	Bottom of 1" well.
			35	

Driller Soils Exploration

Logged By David Elias

Drilling Started 11/28/94

Drilling Completed 11/28/94

Construction Completed 11/28/94

Development Completed N/A

Water Bearing Zones 18.2 to 29.5 ft

Development Yield N/A

Well Casing 2"/ 1" Dia. 0'/ 0' to 8'/ 27'

Casing Type Schedule 40 PVC

Well Screen 2" Dia. 8' to 18'

Screen Type Schedule 40 PVC

Slot Size 0.010-inch

Drilling Mud N/A

Grout Type Portland Type I-II

Bentonite Seal 5 to 6 and 23.5 to 25.5

Sand Pack Monterey sand

Sand Pack Type #1/20

Static Water Level 18.20 ft Depth

Date N/A

Notes: Located west side of lot near multiple tank excavation.

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: Mr. Bo K. Gin

Project No: 23116 Phase Task 001

Well ID VW-4 Boring ID SB-D

Location 706 Harrison Street Oakland, CA

Surface Elev. N/A ft, Page 1 of 1

Depth Feet	Blow Count	Sample Interval	Lithologic Description
0	Ground Surface		
0–5			**Clayey SAND** (SC); Dark gray fill material; damp; 20% clay, 10% silt; 60% fine sand, 10% gravel; low estimated hydraulic conductivity.
5–10			**Silty SAND** (SM); Brown; damp; 40% silt, 60% fine sand ; moderate estimated hydraulic conductivity; no hydrocarbon odor.
10–15			Moderate hydrocarbon odor; 1% clay.
15–20	11 13 22		**Clayey to Silty SAND**(SC-SM); light brown; damp; 5% clay, 35% silt, 60% fine sand; low to moderate hydraulic conductivity. **SAND**(SW); Gray, wet; 5% silt, 95% very fine to medium sand; high estimated hydraulic conductivity; strong hydrocarbon odor.
20–25			
25–30			**Silty SAND**; (SM); grey; wet; 40% silt, 60% fine sand; strong hydrocarbon odor.
30–35			

Depth Feet	TPHg (ppm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
					T.O.C. Elev. N/A
0				0	
5				5	
10	<1			10	
15	<1			15	
20				20	
25				25	
30				30	Bottom of boring
35				35	

Driller	Soils Exploration	Development Yield	N/A	Bentonite Seal	5 to 7 and 19 to 25.5
Logged By	David Elias	Well Casing	2"/1" Dia. 0'/0' to 8.0'/29.5	Sand Pack	Monterey sand
Drilling Started	11/29/94	Casing Type	Schedule 40 PVC	Sand Pack Type	#2/12
Drilling Completed	11/29/94	Well Screen	2"/1" Dia. 8'/28.5 to 18'/29.5	Static Water Level	18.00 ft Depth
Construction Completed	11/29/94	Screen Type	Schedule 40 PVC	Date	N/A
Development Completed	N/A	Slot Size	0.010-inch	Notes:	Located west side of lot near multiple tank excavation.
Water Bearing Zones	18.0 to 29.5 ft	Drilling Mud	N/A		
		Grout Type	Portland Type I-II		

WELL 23116 2/15/95

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: Mr. Bo K. Gin

Project No: 23116 Phase Task 001

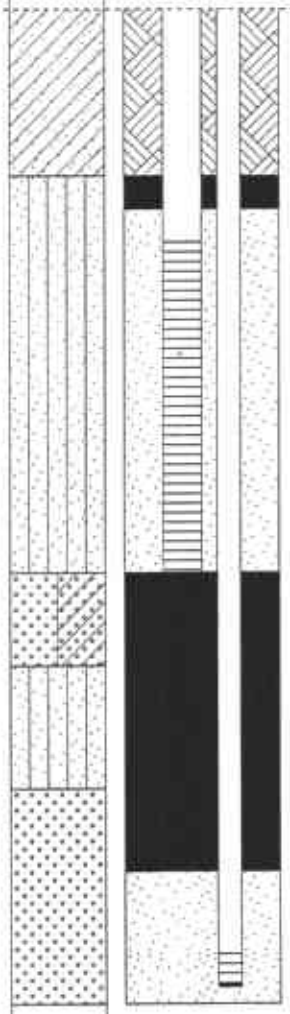
Well ID VW-5 Boring ID SB-E

Location 706 Harrison Street Oakland, CA

Surface Elev. N/A ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)
0	Ground Surface				
5				**Silty to Clayey SAND** (SC); Dark brown fill material; damp; 5% clay, 40% silt, 55% medium to very coarse sand; low estimated hydraulic conductivity.	
10	11 11 11			**Silty SAND** (SM); Reddish brown; medium dense; damp; 20% silt, 80% fine sand ; moderate estimated hydraulic conductivity. No hydrocarbon odor.	
15	3 1 1			Moderate hydrocarbon odor. 1% clay.	nd
20	12 16 19			**Clayey to Silty SAND**(SW-SC); brown; wet; dense; 5% clay, 10% silt, 85% fine to medium sand.	nd
25	20 44 96			**Silty SAND**(SM); greenish brown; very dense; damp to moist; 30% silt; 70% very fine to medium sand; moderate estimated hydraulic conductivity; moderate hydrocarbon odor.	
30	32 50			**SAND**; (SW); reddish brown; wet; very dense; 5% silt, 95% fine sand; no hydrocarbon odor, high estimated hydraulic conductivity.	nd
35					

Graphic Log / Well Construction Graphics



Depth Feet	Well Construction Details
0	T.O.C. Elev. N/A
30	Bottom of boring

Driller	Soils Exploration	Development Yield	N/A	Bentonite Seal	5 to 6 and 18 to 26
Logged By	David Elias	Well Casing	2"/1" Dia. 0'/0' to 7.0'/28.5	Sand Pack	Monterey sand
Drilling Started	11/30/94	Casing Type	Schedule 40 PVC	Sand Pack Type	#2/12
Drilling Completed	11/30/94	Well Screen	2"/1" Dia. 7'/28.5 to 17'/29.5	Static Water Level	ft Depth
Construction Completed	11/30/94	Screen Type	Schedule 40 PVC	Date	N/A
Development Completed	N/A	Slot Size	0.010-inch	Notes:	Located south west side of lot near multiple tank excavation.
Water Bearing Zones	N/A	Drilling Mud	N/A		
		Grout Type	Portland Type I-II		

WELL 23116 2/15/95

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: Mr. Bo K. Gin

Project No: 23116 Phase Task 001

Well ID MW-6 Boring ID SB-G

Location 706 Harrison Street Oakland, CA

Surface Elev. N/A ft. Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				Asphalt
				Concrete
				Silty SAND (SM);Reddish brown; damp; 15% silt, 85% very fine to fine sand; moderate estimated hydraulic conductivity. No hydrocarbon odor.
5				
				Sandy to Silty CLAY (CL-ML); Brown; damp; 45% clay, 20% silt, 35% sand; medium plasticity; low estimated hydraulic conductivity.
10				**Silty SAND to Sandy SILT** (SM); Light brown; damp; 2% clay, 49% silt, 49% sand; non plastic; low to moderate estimated hydraulic conductivity.
				Color change to grayish green.
15	13 26 28			
				Silty SAND (SM);Grayish green mottled gray and reddish brown; damp; 1% clay; 19% silt, 80% fine to medium sand.
20				
25				**Sandy SILT** (SM);Brown; moist; 55% silt, 45% fine sand; non-plastic; moderate estimated hydraulic conductivity. No hydrocarbon odor.
30				
35				

TPHg (ppm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
				T.O.C. Elev. 29.10
			0	Locking cap with traffic rated vault
nd			5	
			10	
			15	
			20	
			25	Bottom of well
			30	
			35	

Driller Soils Exploration

Logged By David Elias

Drilling Started 12/1/94

Drilling Completed 12/1/94

Construction Completed 12/01/94

Development Completed 12/16/94

Water Bearing Zones 17.2 to 27.5 ft

Development Yield N/A

Well Casing 2" Dia. 0' to 11.5'

Casing Type Schedule 40 PVC

Well Screen 2" Dia. 11.5' to 26.5'

Screen Type Schedule 40 PVC

Slot Size 0.010-inch

Drilling Mud N/A

Grout Type Portland Type I-II

Bentonite Seal 8.5 to 10.5 ft

Sand Pack Monterey sand

Sand Pack Type #1/20

Static Water Level 17.20 ft Depth

Date N/A

Notes: Harrison Street south of 7th

WELL 23116 2/15/95

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: Mr. Bo K. Gin

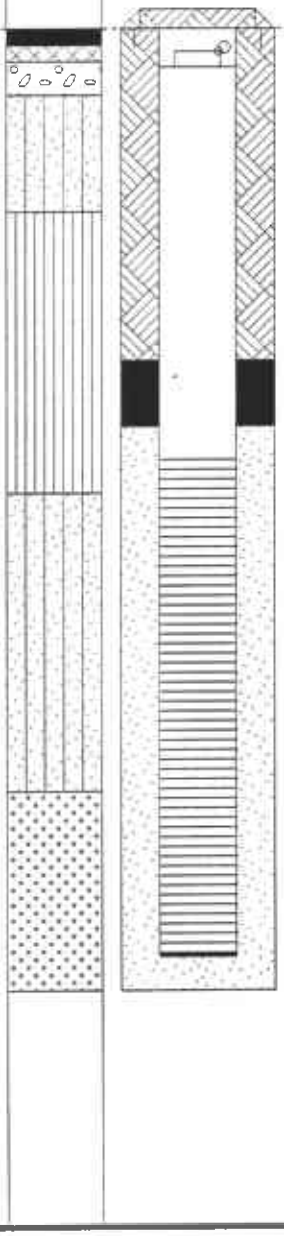
Project No: 23116 Phase Task 001

Well ID MW-7 Boring ID SB-H

Location 706 Harrison Street Oakland, CA

Surface Elev. N/A ft, Page 1 of 1

Depth Feet	Blow Count	Sample Interval	Lithologic Description	TPHg (ppm)
0	Ground Surface			
			Asphalt / Brick / Concrete	
			Silty SAND (SM); Light brown; damp; 30% silt, 70% sand; moderate estimated hydraulic conductivity.	
5			**Sandy SILT** (ML); Brown; damp; 55% silt, 45% very fine to medium sand; non-plastic; moderate estimated hydraulic conductivity. No hydrocarbon odor.	
10			Silt increasing to 65%, very fine to fine sand to 35%, color change to gray.	
15	10 25 15		**Silty SAND**; (SM); Grey; 20% silt, 80% sand; moderate estimated hydraulic conductivity. No hydrocarbon odor.	nd
	27 50		40% silt, 60% sand, wet.	nd
20	10 29 42			
25	22 36 44		**SAND**; (SW); brown; 3% silt, 97% very fine to fine sand; high estimated hydraulic conductivity; no hydrocarbon odor.	nd
30				
35				



Depth Feet	Well Construction Details
0	T.O.C. Elev. 29.67
0	Locking cap with traffic rated vault
30	Bottom of well

Driller Soils Exploration

Logged By David Elias

Drilling Started 12/2/94

Drilling Completed 12/2/94

Construction Completed 12/2/94

Development Completed 12/16/94

Water Bearing Zones

Development Yield N/A

Well Casing 2" Dia. 0' to 13'

Casing Type Schedule 40 PVC

Well Screen 2" Dia. 13' to 28'

Screen Type Schedule 40 PVC

Slot Size 0.010-inch

Drilling Mud N/A

Grout Type Portland Type I-II

Bentonite Seal 10 to 12 ft

Sand Pack Monterey sand

Sand Pack Type #1/20

Static Water Level ft Depth

Date N/A

Notes: Harrison Street north of 7th Street.

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Mr. Bo K. Gin**

Project No: **23116** Phase Task **001**

Boring ID **SB-I**

Location **706 Harrison Street Oakland, CA**

Surface Elev. **N/A ft,**

Page **1** of **1**

Depth Feet	Blow Count	Sample Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface						0	
			Clayey to Silty SAND (SM);Dark gray fill; medium dense; dry to damp; 5% clay, 35% silt, 60% medium to very coarse sand; low estimated hydraulic conductivity.					
5	12 10 5						5	
			Sandy SILT (ML); Brown mottled grey; stiff; 60% silt, 40% very fine to fine sand; non-plastic; moderate estimated hydraulic conductivity; moderate hydrocarbon odor.					
10	4 11 20			nd			10	
15							15	
			SAND (SW);Gray; very dense; damp; 4% silt, 96% fine sand; high estimated hydraulic conductivity; strong hydrocarbon odor.					
	12 50			1,200				
20							20	
	17 44 50							
25							25	
	32 50			4				Bottom of boring
30							30	
35							35	

Driller **Soils Exploration**

Logged By **David Elias**

Water-Bearing Zones

Drilling Started **12/2/94**

Drilling Completed **12/2/94**

Grout Type **Portland Type I-II**

Notes: **Southwest end of lot near MW-1**

BOR 23116 2/15/95

Cambria Environmental Technology, Inc.

APPENDIX C

Analytic Results for Soil and Ground Water

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Cambria Env. Technology
1144 65th Street
Suite C
Oakland, CA 94608

Date: 12/14/1994
NET Client Acct. No: 98900
NET Pacific Job No: 94.05862
Received: 11/30/1994

Client Reference Information

Bo Gin 706 Harrison Street, Oakland, CA

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBA/MW4-16.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226757

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/07/1994	1551
DILUTION FACTOR*	1						12/07/1994	1551
as Gasoline	ND		1	mg/kg	5030		12/07/1994	1551
METHOD 8020 (GC,Solid)	--						12/07/1994	1551
Benzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Toluene	ND		2.5	ug/kg	8020		12/07/1994	1551
Ethylbenzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Xylenes (Total)	ND		2.5	ug/kg	8020		12/07/1994	1551
SURROGATE RESULTS	--						12/07/1994	1551
Bromofluorobenzene (SURR)	92			% Rec.	5030		12/07/1994	1551

Client Name: Cambria Env. Technology
Client Acct: 98900
NET Job No: 94.05862
Date: 12/14/1994
ELAP Cert: 1386
Page: 3

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBA/MW4-26.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226759

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/07/1994	1551
DILUTION FACTOR*	1						12/07/1994	1551
as Gasoline	ND		1	mg/kg	5030		12/07/1994	1551
METHOD 8020 (GC,Solid)	--						12/07/1994	1551
Benzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Toluene	ND		2.5	ug/kg	8020		12/07/1994	1551
Ethylbenzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Xylenes (Total)	ND		2.5	ug/kg	8020		12/07/1994	1551
SURROGATE RESULTS	--						12/07/1994	1551
Bromofluorobenzene (SURR)	97			% Rec.	5030		12/07/1994	1551

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SB-B-11.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226762

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/07/1994	1551
DILUTION FACTOR*	1						12/07/1994	1551
as Gasoline	ND		1	mg/kg	5030		12/07/1994	1551
METHOD 8020 (GC,Solid)	--						12/07/1994	1551
Benzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Toluene	ND		2.5	ug/kg	8020		12/07/1994	1551
Ethylbenzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Xylenes (Total)	ND		2.5	ug/kg	8020		12/07/1994	1551
SURROGATE RESULTS	--						12/07/1994	1551
Bromofluorobenzene (SURR)	96			% Rec.	5030		12/07/1994	1551

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SB-B-16.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226763

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/MB015	--						12/07/1994	1551
DILUTION FACTOR*	1						12/07/1994	1551
as Gasoline	ND		1	mg/kg	5030		12/07/1994	1551
METHOD 8020 (GC,Solid)	--						12/07/1994	1551
Benzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Toluene	ND		2.5	ug/kg	8020		12/07/1994	1551
Ethylbenzene	ND		2.5	ug/kg	8020		12/07/1994	1551
Xylenes (Total)	ND		2.5	ug/kg	8020		12/07/1994	1551
SURROGATE RESULTS	--						12/07/1994	1551
Bromofluorobenzene (SURR)	98			% Rec.	5030		12/07/1994	1551

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SB-B-26.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226765

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/07/1994	1551
DILUTION FACTOR*	1						12/07/1994	1551
as Gasoline	1.1		1	mg/kg	5030		12/07/1994	1551
METHOD 8020 (GC,Solid)	--						12/07/1994	1551
Benzene	180		2.5	ug/kg	8020		12/07/1994	1551
Toluene	54		2.5	ug/kg	8020		12/07/1994	1551
Ethylbenzene	24		2.5	ug/kg	8020		12/07/1994	1551
Xylenes (Total)	71		2.5	ug/kg	8020		12/07/1994	1551
SURROGATE RESULTS	--						12/07/1994	1551
Bromofluorobenzene (SURR)	107			% Rec.	5030		12/07/1994	1551

Client Name: Cambria Env. Technology
Client Acct: 98900
NET Job No: 94.05862

Date: 12/14/1994
ELAP Cert: 1386
Page: 7

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBC/VW3-11.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226767

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/08/1994	1554
DILUTION FACTOR*	200						12/08/1994	1554
as Gasoline	410		200	mg/kg	5030		12/08/1994	1554
METHOD 8020 (GC,Solid)	--						12/09/1994	1555
Benzene	ND		500	ug/kg	8020		12/09/1994	1555
Toluene	2,000		500	ug/kg	8020		12/09/1994	1555
Ethylbenzene	3,700		500	ug/kg	8020		12/09/1994	1555
Xylenes (Total)	22,000		500	ug/kg	8020		12/09/1994	1555
SURROGATE RESULTS	--						12/08/1994	1554
Bromofluorobenzene (SURR)	117			% Rec.	5030		12/08/1994	1554

Client Name: Cambria Env. Technology Date: 12/14/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05862 Page: 8

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBC/VW3-18.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226769

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/08/1994	1554
DILUTION FACTOR*	1,000						12/08/1994	1554
as Gasoline	14,000		1,000	mg/kg	5030		12/08/1994	1554
METHOD 8020 (GC,Solid)	--						12/09/1994	1555
Benzene	120,000		2,500	ug/kg	8020		12/09/1994	1555
Toluene	620,000		2,500	ug/kg	8020		12/09/1994	1555
Ethylbenzene	220,000		2,500	ug/kg	8020		12/09/1994	1555
Xylenes (Total)	1,100,000		2,500	ug/kg	8020		12/09/1994	1555
SURROGATE RESULTS	--						12/08/1994	1554
Bromofluorobenzene (SURR)	125			% Rec.	5030		12/08/1994	1554

Client Name: Cambria Env. Technology Date: 12/14/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05862 Page: 9

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBC/VW3-26.0
Date Taken: 11/28/1994
Time Taken:
NET Sample No: 226771

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/08/1994	1554
DILUTION FACTOR*	1						12/08/1994	1554
as Gasoline	ND		1	mg/kg	5030		12/08/1994	1554
METHOD 8020 (GC,Solid)	--						12/09/1994	1555
Benzene	59	C	2.5	ug/kg	8020		12/09/1994	1555
Toluene	41	C	2.5	ug/kg	8020		12/09/1994	1555
Ethylbenzene	2.8	C	2.5	ug/kg	8020		12/09/1994	1555
Xylenes (Total)	50	C	2.5	ug/kg	8020		12/09/1994	1555
SURROGATE RESULTS	--						12/08/1994	1554
Bromofluorobenzene (SURR)	78			% Rec.	5030		12/08/1994	1554

C : Positive result confirmed by secondary column or GC/MS analysis.

Ref: Bo Gin 706 Harrison Street, Oakland, CA

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)							
as Gasoline	101.8	5.09	5.00	mg/kg	12/07/1994	dfw	1551
Benzene	112.4	28.1	25.0	ug/kg	12/07/1994	dfw	1551
Toluene	108.4	27.1	25.0	ug/kg	12/07/1994	dfw	1551
Ethylbenzene	109.6	27.4	25.0	ug/kg	12/07/1994	dfw	1551
Xylenes (Total)	107.3	80.5	75.0	ug/kg	12/07/1994	dfw	1551
Bromofluorobenzene (SURR)	1.3	1.3	100	% Rec.	12/07/1994	dfw	1551
TPH (Gas/BTXE,Solid)							
as Gasoline	111.0	5.55	5.00	mg/kg	12/09/1994	aal	1555
Benzene	95.6	23.9	25.0	ug/kg	12/09/1994	aal	1555
Toluene	92.0	23.0	25.0	ug/kg	12/09/1994	aal	1555
Ethylbenzene	89.6	22.4	25.0	ug/kg	12/09/1994	aal	1555
Xylenes (Total)	87.7	65.8	75.0	ug/kg	12/09/1994	aal	1555
Bromofluorobenzene (SURR)	96.0	96	100	% Rec.	12/09/1994	aal	1555
TPH (Gas/BTXE,Solid)							
as Gasoline	105.0	5.25	5.00	mg/kg	12/10/1994	pbg	1556
Benzene	93.6	23.4	25.0	ug/kg	12/10/1994	pbg	1556
Toluene	102.4	25.6	25.0	ug/kg	12/10/1994	pbg	1556
Ethylbenzene	92.8	23.2	25.0	ug/kg	12/10/1994	pbg	1556
Xylenes (Total)	93.1	69.8	75.0	ug/kg	12/10/1994	pbg	1556
Bromofluorobenzene (SURR)	94.0	94	100	% Rec.	12/10/1994	pbg	1556

Ref: Bo Gin 706 Harrison Street, Oakland, CA

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/07/1994	dfw	1551
Benzene	ND	2.5	ug/kg	12/07/1994	dfw	1551
Toluene	ND	2.5	ug/kg	12/07/1994	dfw	1551
Ethylbenzene	ND	2.5	ug/kg	12/07/1994	dfw	1551
Xylenes (Total)	ND	2.5	ug/kg	12/07/1994	dfw	1551
Bromofluorobenzene (SURR)	94		% Rec.	12/07/1994	dfw	1551
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/09/1994	aal	1555
Benzene	ND	2.5	ug/kg	12/09/1994	aal	1555
Toluene	ND	2.5	ug/kg	12/09/1994	aal	1555
Ethylbenzene	ND	2.5	ug/kg	12/09/1994	aal	1555
Xylenes (Total)	ND	2.5	ug/kg	12/09/1994	aal	1555
Bromofluorobenzene (SURR)	94		% Rec.	12/09/1994	aal	1555
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/10/1994	pbg	1556
Benzene	ND	2.5	ug/kg	12/10/1994	pbg	1556
Toluene	ND	2.5	ug/kg	12/10/1994	pbg	1556
Ethylbenzene	ND	2.5	ug/kg	12/10/1994	pbg	1556
Xylenes (Total)	ND	2.5	ug/kg	12/10/1994	pbg	1556
Bromofluorobenzene (SURR)	74		% Rec.	12/10/1994	pbg	1556

Ref: Bo Gin 706 Harrison Street, Oakland, CA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Solid)											226974
as Gasoline	94.2	111.4	16.6	5.00	ND	4.71	5.575	mg/kg	12/07/1994	1551	226974
Benzene	92.1	109.4	17.1	139	ND	128	152	ug/kg	12/07/1994	1551	226974
Toluene	97.5	108.4	10.5	510	ND	497	553	ug/kg	12/07/1994	1551	226974
TPH (Gas/BTXE,Solid)											227234
as Gasoline	78.0	75.0	3.9	5.00	ND	3.90	3.75	mg/kg	12/09/1994	1555	227234
Benzene	87.2	84.4	3.3	141	ND	123	119	ug/kg	12/09/1994	1555	227234
Toluene	90.6	87.2	3.8	446	ND	404	389	ug/kg	12/09/1994	1555	227234
TPH (Gas/BTXE,Solid)											226357
as Gasoline	85.0	86.0	1.2	5.00	ND	4.25	4.30	mg/kg dw	12/10/1994	1556	226357
Benzene	90.8	95.4	4.9	130	ND	118	124	ug/kg dw	12/10/1994	1556	226357
Toluene	85.0	87.9	3.4	414	ND	352	364	ug/kg dw	12/10/1994	1556	226357

NET®

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. **Do not** multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
abb.93

4096

CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

CHAIN OF CUSTODY

1144 65th Street, Suite C, Oakland, CA 94608
(510) 420-0700 Fax: (510) 420-9170

Cambria Manager: DAVID ELIAS

Cambria Sampler: DAVID ELIAS

Client: BC GIN

Site Address: 786 HARRISON ST. OAKLAND, CA

ANALYSES

LAB: NET

SAMPLE ID	DATE	TIME	MATRIX	# OF SAMPLES	HOLD	8 10 TEX								COMMENTS
SB9/MW4-6.0	11/28/94		SOIL	1	X									analysis routine per DE dated 12/5/94
" -11.0					X									
" -16.0						X								
" -17.5					X									
" -26.0				2		X								
" -31.0				1	X									
SB-B SB8 -6.0					X									
" -11.0						X								
" -16.0						X								
" -21.0					X									Temp recd - 1.1°C
" -26.0						X								

Relinquished by: Dan Elias
Received by: [signature]
Time/Date: 19:00 11-29-94

Relinquished by: [signature]
Received by: [signature]
Time/Date: 11/29/94 11:45

Relinquished by: [signature]
Received by:
Time/Date: 11/29/94 1630

Relinquished by:
Received by: [signature]
Time/Date: 11-30-94 0700

SIGNED SECURE SEAL

CUSTODY SEALED 11/29/94 [signature] Seal intact

4096

CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

CHAIN OF CUSTODY

1144 65th Street, Suite C, Oakland, CA 94608
(510) 420-0700 Fax: (510) 420-9170

Cambria Manager: DAVID ELIAS

Cambria Sampler: DAVID ELIAS

Client: Bo GIN

Site Address: 706 HARRISON ST. OAKLAND, CA

LAB: NET

SAMPLE ID	DATE	TIME	MATRIX	# OF SAMPLES	HOLD	5/BTEX								COMMENTS
SBC/VW3-6.0	11-28-94		SOIL	1	X									
" -11.0	↓		↓	↓	~~X~~	X								
" -15.5	↓		↓	↓	X									
" -18.0	↓		↓	↓	~~X~~	X								
" -21.0	↓		↓	↓	X									
" -26.0	↓		↓	↓	↓	X								

Stored securely

Relinquished by: DAVID Elias	Relinquished by: [signature]	Relinquished by: [signature]	Relinquished by:
Received by: [signature]	Received by: [signature]	Received by:	Received by: [signature]
Time/Date: 19:00/11-28-94	Time/Date: 11/28/94 1124	Time/Date: 11/29/94 16:00	Time/Date: 11-30-94 / 0700

11/29/94 [signature]
Seal intact.

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Cambria Env. Technology
1144 65th Street
Suite C
Oakland, CA 94608

Date: 12/20/1994
NET Client Acct. No: 98900
NET Pacific Job No: 94.05861
Received: 12/02/1994

Client Reference Information

Bo Gin 706 Harrison Street, Oakland, CA

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Client Name: Cambria Env. Technology Date: 12/20/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05861 Page: 2

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBD/VW4-17.5
Date Taken: 11/29/1994
Time Taken:
NET Sample No: 226748

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/13/1994	1558
DILUTION FACTOR*	5,000						12/13/1994	1558
as Gasoline	15,000		5,000	mg/kg	5030		12/13/1994	1558
METHOD 8020 (GC,Solid)	--						12/13/1994	1558
Benzene	160,000		12,000	ug/kg	8020		12/13/1994	1558
Toluene	700,000		12,000	ug/kg	8020		12/13/1994	1558
Ethylbenzene	240,000		12,000	ug/kg	8020		12/13/1994	1558
Xylenes (Total)	1,200,000		12,000	ug/kg	8020		12/13/1994	1558
SURROGATE RESULTS	--						12/13/1994	1558
Bromofluorobenzene (SURR)	118			% Rec.	5030		12/13/1994	1558

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBE/VW5-11.0
Date Taken: 11/30/1994
Time Taken:
NET Sample No: 226750

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/12/1994	1557
DILUTION FACTOR*	1						12/12/1994	1557
as Gasoline	ND		1	mg/kg	5030		12/12/1994	1557
METHOD 8020 (GC,Solid)	--						12/12/1994	1557
Benzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Toluene	ND		2.5	ug/kg	8020		12/12/1994	1557
Ethylbenzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Xylenes (Total)	ND		2.5	ug/kg	8020		12/12/1994	1557
SURROGATE RESULTS	--						12/12/1994	1557
Bromofluorobenzene (SURR)	97			% Rec.	5030		12/12/1994	1557

Client Name: Cambria Env. Technology Date: 12/20/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05861 Page: 4

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBE/VWS-17.0
Date Taken: 11/30/1994
Time Taken:
NET Sample No: 226751

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/12/1994	1557
DILUTION FACTOR*	1						12/12/1994	1557
as Gasoline	ND		1	mg/kg	5030		12/12/1994	1557
METHOD 8020 (GC,Solid)	--						12/12/1994	1557
Benzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Toluene	ND		2.5	ug/kg	8020		12/12/1994	1557
Ethylbenzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Xylenes (Total)	ND		2.5	ug/kg	8020		12/12/1994	1557
SURROGATE RESULTS	--						12/12/1994	1557
Bromofluorobenzene (SURR)	99			% Rec.	5030		12/12/1994	1557

Client Name: Cambria Env. Technology Date: 12/20/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05861 Page: 5

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBE/VWS-26.0
Date Taken: 11/30/1994
Time Taken:
NET Sample No: 226753

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/12/1994	1557
DILUTION FACTOR*	1						12/12/1994	1557
as Gasoline	ND		1	mg/kg	5030		12/12/1994	1557
METHOD 8020 (GC,Solid)	--						12/12/1994	1557
Benzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Toluene	12	C	2.5	ug/kg	8020		12/12/1994	1557
Ethylbenzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Xylenes (Total)	ND		2.5	ug/kg	8020		12/12/1994	1557
SURROGATE RESULTS	--						12/12/1994	1557
Bromofluorobenzene (SURR)	103			% Rec.	5030		12/12/1994	1557

C : Positive result confirmed by secondary column or GC/MS analysis.

Ref: Bo Gin 706 Harrison Street, Oakland, CA

SAMPLE DESCRIPTION: SBF/MW5-18.0
Date Taken: 11/30/1994
Time Taken:
NET Sample No: 226754

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/12/1994	1557
DILUTION FACTOR*	1						12/12/1994	1557
as Gasoline	ND		1	mg/kg	5030		12/12/1994	1557
METHOD 8020 (GC,Solid)	--						12/12/1994	1557
Benzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Toluene	ND		2.5	ug/kg	8020		12/12/1994	1557
Ethylbenzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Xylenes (Total)	ND		2.5	ug/kg	8020		12/12/1994	1557
SURROGATE RESULTS	--						12/12/1994	1557
Bromofluorobenzene (SURR)	100			% Rec.	5030		12/12/1994	1557

Ref: Bo Gin 706 Harrison Street, Oakland, CA

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)							
as Gasoline	107.0	5.35	5.00	mg/kg	12/12/1994	dfw	1557
Benzene	99.4	24.85	25.0	ug/kg	12/12/1994	dfw	1557
Toluene	89.2	22.30	25.0	ug/kg	12/12/1994	dfw	1557
Ethylbenzene	92.8	23.20	25.0	ug/kg	12/12/1994	dfw	1557
Xylenes (Total)	86.5	64.85	75.0	ug/kg	12/12/1994	dfw	1557
Bromofluorobenzene (SURR)	101.0	101	100	% Rec.	12/12/1994	dfw	1557
TPH (Gas/BTXE,Solid)							
as Gasoline	97.0	4.85	5.00	mg/kg	12/13/1994	lss	1558
Benzene	94.0	23.5	25.0	ug/kg	12/13/1994	lss	1558
Toluene	89.6	22.4	25.0	ug/kg	12/13/1994	lss	1558
Ethylbenzene	89.2	22.3	25.0	ug/kg	12/13/1994	lss	1558
Xylenes (Total)	87.3	65.5	75.0	ug/kg	12/13/1994	lss	1558
Bromofluorobenzene (SURR)	97.0	97	100	% Rec.	12/13/1994	lss	1558

Ref: Bo Gin 706 Harrison Street, Oakland, CA

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/12/1994	dfw	1557
Benzene	ND	2.5	ug/kg	12/12/1994	dfw	1557
Toluene	ND	2.5	ug/kg	12/12/1994	dfw	1557
Ethylbenzene	ND	2.5	ug/kg	12/12/1994	dfw	1557
Xylenes (Total)	ND	2.5	ug/kg	12/12/1994	dfw	1557
Bromofluorobenzene (SURR)	108		% Rec.	12/12/1994	dfw	1557
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/13/1994	lss	1558
Benzene	ND	2.5	ug/kg	12/13/1994	lss	1558
Toluene	ND	2.5	ug/kg	12/13/1994	lss	1558
Ethylbenzene	ND	2.5	ug/kg	12/13/1994	lss	1558
Xylenes (Total)	ND	2.5	ug/kg	12/13/1994	lss	1558
Bromofluorobenzene (SURR)	112		% Rec.	12/13/1994	lss	1558

Ref: Bo Gin 706 Harrison Street, Oakland, CA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Solid)											226735
as Gasoline	89.0	91.0	2.2	5.00	ND	4.45	4.55	mg/kg	12/12/1994	1557	226735
Benzene	105.8	105.1	0.7	137	ND	145	144	ug/kg	12/12/1994	1557	226735
Toluene	101.9	97.7	4.1	481	ND	490	470	ug/kg	12/12/1994	1557	226735
TPH (Gas/BTXE,Solid)											227055
as Gasoline	96.0	96.0	0.0	5.00	ND	4.80	4.80	mg/kg dw	12/13/1994	1558	227055
Benzene	101.4	100.0	1.4	147	ND	149	147	ug/kg dw	12/13/1994	1558	227055
Toluene	102.2	97.4	4.7	494	ND	505	481	ug/kg dw	12/13/1994	1558	227055

® KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. Do not multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
abb.93

4101

CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

CHAIN OF CUSTODY

1144 65th Street, Suite C, Oakland, CA 94608
(510) 420-0700 Fax: (510) 420-9170

Cambria Manager: DAVID ELIAS

Cambria Sampler: DAVID ELIAS

Client: BC GIN

Site Address: 706 HARRISON ST. OAKLAND, CA

LAB: NET

ANALYSES: HOLD; BTEX

SAMPLE ID	DATE	TIME	MATRIX	# OF SAMPLES	HOLD	BTEX									COMMENTS
SBD/VW4-17.5	11/29/94		SOIL	1	*	X									analysis per DE to LD 12/5/94
SBE/VW5-6.0	11/30/94		↓	↓	X										
" -11.0	"					X									
" -17.0	"					X									
" -21.0	"				X										
" -26.0	"					X									
SBF/MW5-18.0	"		↓	↓	↓	X									

STORED SEPARATELY

CUSTODY SEAL 12/1/94 [signature]

Seal intact J.S.

Relinquished by: David Elias	Relinquished by: [signature]	Relinquished by: [signature]	Relinquished by:
Received by: [signature]	Received by: [signature]	Received by:	Received by: [signature]
Time/Date: 11/29/94 Cooler	Time/Date: 12/1/94 12:45	Time/Date: 12/1/94 17:30	Time/Date: 12-2-94 0700

Temp. read. -0.4°C

CAMBRIA Environmental Technology, Inc.

1144 65th Street, Suite C • Oakland, CA 94608 • (510) 420-0700 • Fax (510) 420-9170

FAX TRANSMITTAL

TO: LINDA DeMARTINO

FROM: DAVID ENIAS

COMPANY: NET

DATE: 12-5-94

FAX NUMBER: 707-526-9623

PROJECT NUMBER: 23-116

SUBJECT: 706 HARRISON
BOLIN

PAGES TO FOLLOW:

HARD COPY TO FOLLOW:

COMMENTS:

PLEASE ANALYZE THE FOLLOWING 6 SAMPLES FOR TPH-G/BETX. PLEASE CALL IF THE CHROMATOGRAMS SHOW DISCRETE PEAKS OR IF TPH-G APPEARS TO BE DIESEL, WE WILL RECOMMEND ADDITIONAL ANALYSES.

SBA/MW-4 - 16.0
" - 26.0
SBB - 11.0
" - 16.0
" - 26.0
SBC/VW3 - 11.0
" - 18.0
" - 26.0
SBD/VW4 - 17.5
SBE/VW5 - 11.0
- 17.0
- 26.0
SBF/MW5 - 18.0

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Cambria Env. Technology
1144 65th Street
Suite C
Oakland, CA 94608

Date: 12/22/1994
NET Client Acct. No: 98900
NET Pacific Job No: 94.05870
Received: 12/06/1994

Client Reference Information

706 Harrison St., Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Client Name: Cambria Env. Technology
Client Acct: 98900
NET Job No: 94.05870

Date: 12/22/1994
ELAP Cert: 1386
Page: 2

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBG/MW6-16.0
Date Taken: 12/01/1994
Time Taken:
NET Sample No: 226794

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/13/1994	1558
DILUTION FACTOR*	1						12/13/1994	1558
as Gasoline	ND		1	mg/kg	5030		12/13/1994	1558
METHOD 8020 (GC,Solid)	--						12/13/1994	1558
Benzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Toluene	ND		2.5	ug/kg	8020		12/13/1994	1558
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1994	1558
SURROGATE RESULTS	--						12/13/1994	1558
Bromofluorobenzene (SURR)	93			% Rec.	5030		12/13/1994	1558

Client Name: Cambria Env. Technology Date: 12/22/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05870 Page: 3

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBH/MW7-16.0
Date Taken: 12/02/1994
Time Taken:
NET Sample No: 226795

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/12/1994	1557
DILUTION FACTOR*	1						12/12/1994	1557
as Gasoline	ND		1	mg/kg	5030		12/12/1994	1557
METHOD 8020 (GC,Solid)	--						12/12/1994	1557
Benzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Toluene	ND		2.5	ug/kg	8020		12/12/1994	1557
Ethylbenzene	ND		2.5	ug/kg	8020		12/12/1994	1557
Xylenes (Total)	ND		2.5	ug/kg	8020		12/12/1994	1557
SURROGATE RESULTS	--						12/12/1994	1557
Bromofluorobenzene (SURR)	102			% Rec.	5030		12/12/1994	1557

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBH/MW7-18.0
Date Taken: 12/02/1994
Time Taken:
NET Sample No: 226796

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/13/1994	1558
DILUTION FACTOR*	1						12/13/1994	1558
as Gasoline	ND		1	mg/kg	5030		12/13/1994	1558
METHOD 8020 (GC,Solid)	--						12/13/1994	1558
Benzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Toluene	ND		2.5	ug/kg	8020		12/13/1994	1558
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1994	1558
SURROGATE RESULTS	--						12/13/1994	1558
Bromofluorobenzene (SURR)	89			% Rec.	5030		12/13/1994	1558

Client Name: Cambria Env. Technology Date: 12/22/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05870 Page: 5

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBH/MW7-26.0
Date Taken: 12/02/1994
Time Taken:
NET Sample No: 226797

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/13/1994	1558
DILUTION FACTOR*	1						12/13/1994	1558
as Gasoline	ND		1	mg/kg	5030		12/13/1994	1558
METHOD 8020 (GC,Solid)	--						12/13/1994	1558
Benzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Toluene	ND		2.5	ug/kg	8020		12/13/1994	1558
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1994	1558
SURROGATE RESULTS	--						12/13/1994	1558
Bromofluorobenzene (SURR)	92			% Rec.	5030		12/13/1994	1558

Client Name: Cambria Env. Technology
Client Acct: 98900
NET Job No: 94.05870

Date: 12/22/1994
ELAP Cert: 1386
Page: 6

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBI-11.0
Date Taken: 12/02/1994
Time Taken:
NET Sample No: 226798

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/13/1994	1558
DILUTION FACTOR*	1						12/13/1994	1558
as Gasoline	ND		1	mg/kg	5030		12/13/1994	1558
METHOD 8020 (GC,Solid)	--						12/13/1994	1558
Benzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Toluene	ND		2.5	ug/kg	8020		12/13/1994	1558
Ethylbenzene	ND		2.5	ug/kg	8020		12/13/1994	1558
Xylenes (Total)	ND		2.5	ug/kg	8020		12/13/1994	1558
SURROGATE RESULTS	--						12/13/1994	1558
Bromofluorobenzene (SURR)	98			% Rec.	5030		12/13/1994	1558

Client Name: Cambria Env. Technology Date: 12/22/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.05870 Page: 7

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBI-18.0
Date Taken: 12/02/1994
Time Taken:
NET Sample No: 226799

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/18/1994	1566
DILUTION FACTOR*	1						12/18/1994	1566
as Gasoline	1,200	FG	1	mg/kg	5030		12/18/1994	1566
METHOD 8020 (GC,Solid)	--						12/18/1994	1566
Benzene	ND	FE	2.5	ug/kg	8020		12/16/1994	1573
Toluene	12,000	FI	2.5	ug/kg	8020		12/16/1994	1568
Ethylbenzene	13,000	FI	2.5	ug/kg	8020		12/16/1994	1568
Xylenes (Total)	78,000	FI	2.5	ug/kg	8020		12/16/1994	1568
SURROGATE RESULTS	--						12/18/1994	1566
Bromofluorobenzene (SURR)	113			% Rec.	5030		12/18/1994	1566

FE : Compound quantitated at a 50X dilution factor.
FG : Compound quantitated at a 200X dilution factor.
FI : Compound quantitated at a 1000X dilution factor.

Client Name: Cambria Env. Technology
Client Acct: 98900
NET Job No: 94.05870

Date: 12/22/1994
ELAP Cert: 1386
Page: 8

Ref: 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SBI-26.0
Date Taken: 12/02/1994
Time Taken:
NET Sample No: 226800

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/14/1994	1560
DILUTION FACTOR*	1						12/14/1994	1560
as Gasoline	4.4		1	mg/kg	5030		12/14/1994	1560
METHOD 8020 (GC,Solid)	--						12/14/1994	1560
Benzene	ND		2.5	ug/kg	8020		12/14/1994	1560
Toluene	13		2.5	ug/kg	8020		12/14/1994	1560
Ethylbenzene	18		2.5	ug/kg	8020		12/14/1994	1560
Xylenes (Total)	55		2.5	ug/kg	8020		12/14/1994	1560
SURROGATE RESULTS	--						12/14/1994	1560
Bromofluorobenzene (SURR)	111			% Rec.	5030		12/14/1994	1560

Ref: 706 Harrison St., Oakland

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)							
as Gasoline	107.0	5.35	5.00	mg/kg	12/12/1994	dfw	1557
Benzene	99.4	24.85	25.0	ug/kg	12/12/1994	dfw	1557
Toluene	89.2	22.30	25.0	ug/kg	12/12/1994	dfw	1557
Ethylbenzene	92.8	23.20	25.0	ug/kg	12/12/1994	dfw	1557
Xylenes (Total)	86.5	64.85	75.0	ug/kg	12/12/1994	dfw	1557
Bromofluorobenzene (SURR)	101.0	101	100	% Rec.	12/12/1994	dfw	1557
TPH (Gas/BTXE,Solid)							
as Gasoline	97.0	4.85	5.00	mg/kg	12/13/1994	lss	1558
Benzene	94.0	23.5	25.0	ug/kg	12/13/1994	lss	1558
Toluene	89.6	22.4	25.0	ug/kg	12/13/1994	lss	1558
Ethylbenzene	89.2	22.3	25.0	ug/kg	12/13/1994	lss	1558
Xylenes (Total)	87.3	65.5	75.0	ug/kg	12/13/1994	lss	1558
Bromofluorobenzene (SURR)	97.0	97	100	% Rec.	12/13/1994	lss	1558
TPH (Gas/BTXE,Solid)							
as Gasoline	107.0	5.35	5.00	mg/kg	12/14/1994	lss	1560
Benzene	99.2	24.8	25.0	ug/kg	12/14/1994	lss	1560
Toluene	94.4	23.6	25.0	ug/kg	12/14/1994	lss	1560
Ethylbenzene	93.2	23.3	25.0	ug/kg	12/14/1994	lss	1560
Xylenes (Total)	89.5	67.1	75.0	ug/kg	12/14/1994	lss	1560
Bromofluorobenzene (SURR)	108.0	108	100	% Rec.	12/14/1994	lss	1560
TPH (Gas/BTXE,Solid)							
as Gasoline	102.0	5.10	5.00	mg/kg	12/19/1994	dfw	1573
Benzene	99.2	24.80	25.0	ug/kg	12/19/1994	dfw	1573
Toluene	92.6	23.15	25.0	ug/kg	12/19/1994	dfw	1573
Ethylbenzene	94.4	23.60	25.0	ug/kg	12/19/1994	dfw	1573
Xylenes (Total)	87.4	65.55	75.0	ug/kg	12/19/1994	dfw	1573
Bromofluorobenzene (SURR)	87.0	87	100	% Rec.	12/19/1994	dfw	1573

Ref: 706 Harrison St., Oakland

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/12/1994	dfw	1557
Benzene	ND	2.5	ug/kg	12/12/1994	dfw	1557
Toluene	ND	2.5	ug/kg	12/12/1994	dfw	1557
Ethylbenzene	ND	2.5	ug/kg	12/12/1994	dfw	1557
Xylenes (Total)	ND	2.5	ug/kg	12/12/1994	dfw	1557
Bromofluorobenzene (SURR)	108		% Rec.	12/12/1994	dfw	1557
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/13/1994	lss	1558
Benzene	ND	2.5	ug/kg	12/13/1994	lss	1558
Toluene	ND	2.5	ug/kg	12/13/1994	lss	1558
Ethylbenzene	ND	2.5	ug/kg	12/13/1994	lss	1558
Xylenes (Total)	ND	2.5	ug/kg	12/13/1994	lss	1558
Bromofluorobenzene (SURR)	112		% Rec.	12/13/1994	lss	1558
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/14/1994	lss	1560
Benzene	ND	2.5	ug/kg	12/14/1994	lss	1560
Toluene	ND	2.5	ug/kg	12/14/1994	lss	1560
Ethylbenzene	ND	2.5	ug/kg	12/14/1994	lss	1560
Xylenes (Total)	ND	2.5	ug/kg	12/14/1994	lss	1560
Bromofluorobenzene (SURR)	106		% Rec.	12/14/1994	lss	1560
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/19/1994	dfw	1573
Benzene	ND	2.5	ug/kg	12/19/1994	dfw	1573
Toluene	ND	2.5	ug/kg	12/19/1994	dfw	1573
Ethylbenzene	ND	2.5	ug/kg	12/19/1994	dfw	1573
Xylenes (Total)	ND	2.5	ug/kg	12/19/1994	dfw	1573
Bromofluorobenzene (SURR)	107		% Rec.	12/19/1994	dfw	1573

Ref: 706 Harrison St., Oakland

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Solid)											226735
as Gasoline	89.0	91.0	2.2	5.00	ND	4.45	4.55	mg/kg	12/12/1994	1557	226735
Benzene	105.8	105.1	0.7	137	ND	145	144	ug/kg	12/12/1994	1557	226735
Toluene	101.9	97.7	4.1	481	ND	490	470	ug/kg	12/12/1994	1557	226735
TPH (Gas/BTXE,Solid)											227055
as Gasoline	96.0	96.0	0.0	5.00	ND	4.80	4.80	mg/kg dw	12/13/1994	1558	227055
Benzene	101.4	100.0	1.4	147	ND	149	147	ug/kg dw	12/13/1994	1558	227055
Toluene	102.2	97.4	4.7	494	ND	505	481	ug/kg dw	12/13/1994	1558	227055
TPH (Gas/BTXE,Solid)											226830
as Gasoline	92.0	90.0	2.2	5.00	ND	4.60	4.50	mg/kg dw	12/14/1994	1560	226830
Benzene	86.7	86.7	0.0	165	ND	143	143	ug/kg dw	12/14/1994	1560	226830
Toluene	88.7	88.9	0.2	479	ND	425	426	ug/kg dw	12/14/1994	1560	226830
TPH (Gas/BTXE,Solid)											231260
as Gasoline	79.0	75.0	5.2	5.00	ND	3.95	3.75	mg/kg	12/19/1994	1573	231260
Benzene	86.8	93.4	7.3	152	19	151	161	ug/kg	12/19/1994	1573	231260
Toluene	82.3	83.0	0.8	486	8.8	409	412	ug/kg	12/19/1994	1573	231260

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. Do not multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
abb.93

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CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

CHAIN OF CUSTODY

1144 65th Street, Suite C, Oakland, CA 94608
(510) 420-0700 Fax: (510) 420-9170

Page 1 of ____

Cambria Manager: DAVID ELIAS
Cambria Sampler: DAVID ELIAS
Client: BP GIN
Site Address: 706 HARRISON ST. OAKLAND, CA

LAB: NET

SAMPLE ID	DATE	TIME	MATRIX	# OF SAMPLES	ANALYSES: TPH-g/BETX	ANALYSES: HOLD	COMMENTS
SB6/MW6-16.0	12-1-94		SOIL	1	X		
SB11/MW7-16.0	12-2-94				X		
" -18.0 HOLD					X		
" -21.0 HOLD						X	
" -26.0					X		
SB1-6.0						X	
SB1-11.0					X		
" -18.0					X		
" -21.0						X	
" -26.0					X		

STORED SECURELY

Relinquished by: David Elias
Received by: David Elias
Time/Date: 18:43 / 12-1-94

Relinquished by: David Elias
Received by: B.J. Lambe
Time/Date: 12-5-94 10:48

Relinquished by: B.J. Lambe
Received by:
Time/Date: 12/5/94 17:03

Relinquished by:
Received by: J. Jorgensen
Time/Date: 12/6/94 07:00

Temp. recd. 10.6°C

(12/5/94 B.J. Lambe)
Seal intact

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Cambria Env. Technology
1144 65th Street
Suite C
Oakland, CA 94608

Date: 12/27/1994
NET Client Acct. No: 98900
NET Pacific Job No: 94.06130
Received: 11/30/1994

Client Reference Information

Bo Gin 706 Harrison St., Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: Bo Gin 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SB-A-17.5
Date Taken: 11/28/1994
Time Taken: 09:48
NET Sample No: 231414**

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/20/1994	1575
DILUTION FACTOR*	1						12/20/1994	1575
as Gasoline	ND		1	mg/kg	5030		12/20/1994	1575
METHOD 8020 (GC,Solid)	--						12/20/1994	1575
Benzene	ND		2.5	ug/kg	8020		12/20/1994	1575
Toluene	ND		2.5	ug/kg	8020		12/20/1994	1575
Ethylbenzene	ND		2.5	ug/kg	8020		12/20/1994	1575
Xylenes (Total)	ND		2.5	ug/kg	8020		12/20/1994	1575
SURROGATE RESULTS	--						12/20/1994	1575
Bromofluorobenzene (SURR)	92			% Rec.	5030		12/20/1994	1575

** Sample analyzed after the 14 day holding time had expired, per client's request.

Client Name: Cambria Env. Technology Date: 12/27/1994
Client Acct: 98900 ELAP Cert: 1386
NET Job No: 94.06130 Page: 3

Ref: Bo Gin 706 Harrison St., Oakland

SAMPLE DESCRIPTION: SB-A-26.0
Date Taken: 11/28/1994
Time Taken: 10:00
NET Sample No: 231415**

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Solid)								
METHOD 5030/M8015	--						12/20/1994	1575
DILUTION FACTOR*	1						12/20/1994	1575
as Gasoline	ND		1	mg/kg	5030		12/20/1994	1575
METHOD 8020 (GC,Solid)	--						12/20/1994	1575
Benzene	21	C	2.5	ug/kg	8020		12/20/1994	1575
Toluene	ND		2.5	ug/kg	8020		12/20/1994	1575
Ethylbenzene	ND		2.5	ug/kg	8020		12/20/1994	1575
Xylenes (Total)	ND		2.5	ug/kg	8020		12/20/1994	1575
SURROGATE RESULTS	--						12/20/1994	1575
Bromofluorobenzene (SURR)	110			% Rec.	5030		12/20/1994	1575

** Sample analyzed after the 14 day holding time had expired, per client's request.
C : Positive result confirmed by secondary column or GC/MS analysis.

Ref: Bo Gin 706 Harrison St., Oakland

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)							
as Gasoline	109.4	5.47	5.00	mg/kg	12/20/1994	dfw	1575
Benzene	96.4	24.1	25.0	ug/kg	12/20/1994	dfw	1575
Toluene	94.8	23.7	25.0	ug/kg	12/20/1994	dfw	1575
Ethylbenzene	99.6	24.9	25.0	ug/kg	12/20/1994	dfw	1575
Xylenes (Total)	105.6	79.2	75.0	ug/kg	12/20/1994	dfw	1575
Bromofluorobenzene (SURR)	103.0	103	100	% Rec.	12/20/1994	dfw	1575

Ref: Bo Gin 706 Harrison St., Oakland

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Solid)						
as Gasoline	ND	1	mg/kg	12/20/1994	dfw	1575
Benzene	ND	2.5	ug/kg	12/20/1994	dfw	1575
Toluene	ND	2.5	ug/kg	12/20/1994	dfw	1575
Ethylbenzene	ND	2.5	ug/kg	12/20/1994	dfw	1575
Xylenes (Total)	ND	2.5	ug/kg	12/20/1994	dfw	1575
Bromofluorobenzene (SURR)	108		% Rec.	12/20/1994	dfw	1575

Ref: Bo Gin 706 Harrison St., Oakland

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Solid)											230700
as Gasoline	94.6	86.0	9.5	5.12	ND	4.85	4.40	mg/kg dw	12/20/1994	1575	230700
Benzene	78.8	72.4	8.5	115	ND	90.4	83.1	ug/kg dw	12/20/1994	1575	230700
Toluene	93.2	87.9	5.9	389	ND	363	342	ug/kg dw	12/20/1994	1575	230700

NET® KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. **Do not** multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

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Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
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4096

CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

1144 65th Street, Suite C, Oakland, CA 94608
(510) 420-0700 Fax: (510) 420-9170

CHAIN OF CUSTODY

Cambria Manager: DAVID ELIAS

Cambria Sampler: DAVID ELIAS

Client: BOLIN

Site Address: 706 HARRISON ST. OAKLAND, CA

LAB: NET

SAMPLE ID	DATE	TIME	MATRIX	# OF SAMPLES	ANALYSES: HEAD	ANALYSES: 8015/8020	COMMENTS
SBA/MW4-6.0	11/29/94		SOIL	1	X		Analysis: routine TAT DEHP 12/5/94
" -11.0					X		
" -16.0						X	
" -17.5					X		
" -26.0						X	
" -31.0					X		
SB-B - 6.0					X		
" -11.0						X	
" -16.0						X	
" -21.0					X		Temp rec'd 1.1°C
" -26.0						X	

Relinquished by: David Elias
Received by: [signature]
Time/Date: 10:00 11-29-94

Relinquished by: [signature]
Received by: [signature]
Time/Date: 11/29/94 11:11

Relinquished by: [signature]
Received by:
Time/Date: 11/29/94 1600

Relinquished by:
Received by: [signature]
Time/Date: 11-30-94 0700

CUSTODY SEALED 11/29/94 intact

4096

CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

1144 65th Street, Suite C, Oakland, CA 94608
(510) 420-0700 Fax: (510) 420-9170

CHAIN OF CUSTODY

Cambria Manager: DAVID ELIAS
Cambria Sampler: DAVID ELIAS
Client: BC GIN
Site Address: 706 HARRISON ST. OAKLAND, CA

LAB: NET

SAMPLE ID	DATE	TIME	MATRIX	# OF SAMPLES	ANALYSES: HOLD	ANALYSES: 5 BTEX	COMMENTS
SBC/VW3-6.0	11-28-94		SOIL	1	X		
" -11.0	"		"	"	X	X	
" -15.5	"		"	"	X		
" -18.0	"		"	"	X	X	
" -21.0	"		"	"	X		
" -26.0	"		"	"	X	X	

Relinquished by: DAVID Elias
Received by:
Time/Date: 19:00/11-28-94

Relinquished by:
Received by:
Time/Date: 11/29/94 11:41

Relinquished by:
Received by:
Time/Date: 11/29/94 16:00

Relinquished by:
Received by:
Time/Date: 11-30-94 0720

CUSTODY SEAL NO. 11/29/94

Contact

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Scott Macleod
Cambria Env. Technology
1144 65th Street
Suite C
Oakland, CA 94608

Date: 12/29/1994
NET Client Acct. No: 98900
NET Pacific Job No: 94.06164
Received: 12/20/1994

Client Reference Information

706 Harrison. Project No.: 23-116

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: 706 Harrison. Project No.: 23-116

SAMPLE DESCRIPTION: MW-4
Date Taken: 12/16/1994
Time Taken: 08:30
NET Sample No: 231621

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/27/1994	2421
DILUTION FACTOR*	1						12/27/1994	2421
as Gasoline	2.5		0.05	mg/L	5030		12/27/1994	2421
METHOD 8020 (GC,Liquid)	--						12/27/1994	2421
Benzene	32		0.5	ug/L	8020		12/27/1994	2421
Toluene	6.5		0.5	ug/L	8020		12/27/1994	2421
Ethylbenzene	4.5		0.5	ug/L	8020		12/27/1994	2421
Xylenes (Total)	17		0.5	ug/L	8020		12/27/1994	2421
SURROGATE RESULTS	--						12/27/1994	2421
Bromofluorobenzene (SURR)	134	MI		% Rec.	5030		12/27/1994	2421

MI : Matrix Interference Suspected

Ref: 706 Harrison. Project No.: 23-116

SAMPLE DESCRIPTION: MW-5
Date Taken: 12/16/1994
Time Taken: 13:00
NET Sample No: 231622

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/27/1994	2421
DILUTION FACTOR*	1						12/27/1994	2421
as Gasoline	ND		0.05	mg/L	5030		12/27/1994	2421
METHOD 8020 (GC,Liquid)	--						12/27/1994	2421
Benzene	1.1	C	0.5	ug/L	8020		12/27/1994	2421
Toluene	ND		0.5	ug/L	8020		12/27/1994	2421
Ethylbenzene	ND		0.5	ug/L	8020		12/27/1994	2421
Xylenes (Total)	2.4	C	0.5	ug/L	8020		12/27/1994	2421
SURROGATE RESULTS	--						12/27/1994	2421
Bromofluorobenzene (SURR)	93			% Rec.	5030		12/27/1994	2421

C : Positive result confirmed by secondary column or GC/MS analysis.

Ref: 706 Harrison. Project No.: 23-116

SAMPLE DESCRIPTION: MW-6
Date Taken: 12/16/1994
Time Taken: 11:30
NET Sample No: 231623

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/27/1994	2421
DILUTION FACTOR*	1						12/27/1994	2421
as Gasoline	ND		0.05	mg/L	5030		12/27/1994	2421
METHOD 8020 (GC,Liquid)	--						12/27/1994	2421
Benzene	ND		0.5	ug/L	8020		12/27/1994	2421
Toluene	ND		0.5	ug/L	8020		12/27/1994	2421
Ethylbenzene	ND		0.5	ug/L	8020		12/27/1994	2421
Xylenes (Total)	ND		0.5	ug/L	8020		12/27/1994	2421
SURROGATE RESULTS	--						12/27/1994	2421
Bromofluorobenzene (SURR)	95			% Rec.	5030		12/27/1994	2421

Ref: 706 Harrison. Project No.: 23-116

SAMPLE DESCRIPTION: MW-7
Date Taken: 12/16/1994
Time Taken: 10:00
NET Sample No: 231624

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						12/27/1994	2421
DILUTION FACTOR*	1						12/27/1994	2421
as Gasoline	ND		0.05	mg/L	5030		12/27/1994	2421
METHOD 8020 (GC,Liquid)	--						12/27/1994	2421
Benzene	ND		0.5	ug/L	8020		12/27/1994	2421
Toluene	ND		0.5	ug/L	8020		12/27/1994	2421
Ethylbenzene	ND		0.5	ug/L	8020		12/27/1994	2421
Xylenes (Total)	ND		0.5	ug/L	8020		12/27/1994	2421
SURROGATE RESULTS	--						12/27/1994	2421
Bromofluorobenzene (SURR)	115			% Rec.	5030		12/27/1994	2421

Ref: 706 Harrison. Project No.: 23-116

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)							
as Gasoline	100.0	1.00	1.00	mg/L	12/27/1994	jmh	2421
Benzene	93.6	4.68	5.00	ug/L	12/27/1994	jmh	2421
Toluene	91.2	4.56	5.00	ug/L	12/27/1994	jmh	2421
Ethylbenzene	100.2	5.01	5.00	ug/L	12/27/1994	jmh	2421
Xylenes (Total)	97.3	14.6	15.0	ug/L	12/27/1994	jmh	2421
Bromofluorobenzene (SURR)	113.0	113	100	% Rec.	12/27/1994	jmh	2421
TPH (Gas/BTXE,Liquid)							
as Gasoline	111.0	1.11	1.00	mg/L	12/28/1994	aal	2424
Benzene	96.8	4.84	5.00	ug/L	12/28/1994	aal	2424
Toluene	90.2	4.51	5.00	ug/L	12/28/1994	aal	2424
Ethylbenzene	91.0	4.55	5.00	ug/L	12/28/1994	aal	2424
Xylenes (Total)	85.3	12.8	15.0	ug/L	12/28/1994	aal	2424
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	12/28/1994	aal	2424

Ref: 706 Harrison. Project No.: 23-116

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/27/1994	jmh	2421
Benzene	ND	0.5	ug/L	12/27/1994	jmh	2421
Toluene	ND	0.5	ug/L	12/27/1994	jmh	2421
Ethylbenzene	ND	0.5	ug/L	12/27/1994	jmh	2421
Xylenes (Total)	ND	0.5	ug/L	12/27/1994	jmh	2421
Bromofluorobenzene (SURR)	105		% Rec.	12/27/1994	jmh	2421
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	12/28/1994	aal	2424
Benzene	ND	0.5	ug/L	12/28/1994	aal	2424
Toluene	ND	0.5	ug/L	12/28/1994	aal	2424
Ethylbenzene	ND	0.5	ug/L	12/28/1994	aal	2424
Xylenes (Total)	ND	0.5	ug/L	12/28/1994	aal	2424
Bromofluorobenzene (SURR)	107		% Rec.	12/28/1994	aal	2424

Ref: 706 Harrison. Project No.: 23-116

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Liquid)											231499
as Gasoline	103.0	116.0	11.9	1.00	ND	1.03	1.16	mg/L	12/27/1994	2421	231499
Benzene	97.3	101.8	4.4	22.0	ND	21.4	22.4	ug/L	12/27/1994	2421	231499
Toluene	98.6	107.9	8.9	79.6	ND	78.5	85.9	ug/L	12/27/1994	2421	231499
TPH (Gas/BTXE,Liquid)											231885
as Gasoline	96.0	101.0	5.0	1.00	ND	0.96	1.01	mg/L	12/28/1994	2424	231885
Benzene	90.4	95.2	5.2	35.5	ND	32.1	33.8	ug/L	12/28/1994	2424	231885
Toluene	91.7	95.5	4.1	103	ND	94.5	98.4	ug/L	12/28/1994	2424	231885

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. **Do not** multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than the applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993
abb.93

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NET NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

COMPANY: CAMBRIA
ADDRESS:
PHONE: FAX:
PROJECT NAME/LOCATION: 706 Harrison
PROJECT NUMBER: 23-116
PROJECT MANAGER: Dave E.

REPORT TO:
INVOICE TO:
P.O. NO.
NET QUOTE NO.

Ben Wells

SAMPLED BY: BEN WELLS (PRINT NAME) — Ben Wells (SIGNATURE)

(PRINT NAME) — SIGNATURE

ANALYSES: TPH-g, BTEX

Date	Time	Sample			# and Type of Containers					TPH-g	BTEX								COMMENTS
12/16	8:30	MW-4	⊕		X					X	X								Water Samples
↓	1:00	MW-5	↓		↓					↓	↓								
↓	11:30	MW-6	↓		↓					↓	↓								
↓	10:00	MW-7	↓		↓					↓	↓								

(12/19/94 [signature]) Seal intact

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT: 0.6°C
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS DATE

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:
Ben Wells	12/16/94 14:00	David Elias	David Elias	12-19-94 11:56	[signature]

METHOD OF SHIPMENT: NCS

REMARKS:

Relinquished By: [signature] 12/19/94 17:00 / Recd. by: J. Sorensen 12-20-94 / 07:00

[left margin, vertical:] ...ED DELIVERED

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK

APPENDIX D

Standard Field Procedures

STANDARD FIELD PROCEDURES

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

SOIL BORING AND SAMPLING

Objectives

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

Soil Boring and Sampling

Soil borings are typically drilled using solid flight or hollow-stem augers. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using split-barrel samplers lined with steam-cleaned brass or stainless steel tubes that are driven through the hollow auger stem into undisturbed sediments at the bottom of the borehole. Samples are driven using a 140 pound hammer dropped 30 inches.

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

Sample Analysis

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

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor

concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the stratigraphy and ground water depth to select soil samples for analysis.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe. If wells are completed in the borings, the well installation, development and sampling procedures summarized below are followed.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

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

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

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

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

Well Development

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

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

Ground Water Sampling

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

APPENDIX E

Well Survey Report

Tucker & Associates
SURVEYING & MAPPING

Cambria Environmental Technology, Inc. December 29, 1994
1144 65th Street, Suite C
Oakland CA 94608

Subject: Monitoring wells at former Arco Station- 706 Harrison Street, Oakland California.

Well Name	T.O.C. Elev.	Rim Elev.	Description/note
MW-1	29.15		fd. mark N. side 2" PVC
MW-2	30.51		" " "
MW-3	29.77		" " "
MW-4	31.18	31.47	fd. mark N. side 2" PVC
MW-5	28.04	28.34	" " "
MW-6	29.10	29.32	" " "
MW-7	29.67	29.88	" " "

Notes:

Elevations are on Mean Sea Level(NGVD29) Datum and were established using MW-1, MW-2, and MW-3 as reference Bench marks with elevations supplied by Cambria.

Rim elevations were taken at same orientation as T.O.C. elevations.

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