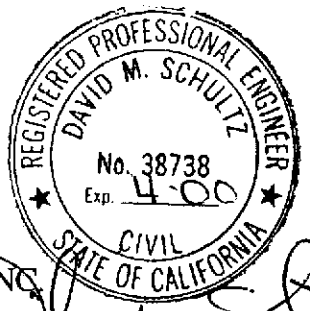
aqua science engineers inc.

follow up on stkpl soil disposal.

November 30, 1999

ENVIRONMENTAL PROTECTION
99 DEC -6 AM 11:28

REPORT
DETAILING
SOIL REMEDIATION ACTIVITIES
at
Former California Brake & Clutch Property
2221 Union Street
Oakland, California



Submitted by:
AQUA SCIENCE ENGINEERS, INC.
208 W. El Pintado
Danville, CA 94526
(925) 820-9391

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1.0 INTRODUCTION

This report details the methods and findings of Aqua Science Engineers, Inc. (ASE's) soil remediation project at the former California Brake & Clutch property located at 2221 Union Street in Oakland, California (Figure 1). These activities were designed to remediate the soil in the immediate area surrounding the outdoor drain (Figure 2). The goal was to achieve residual VOC concentrations in soil below the Oakland RBCA cleanup goals for vapor intrusion from subsurface soil to an indoor air scenario.

2.0 SITE HISTORY

The site is currently vacant and for sale by a Trustee of the property. The site houses two buildings, a concrete-surfaced yard and a dirt lot. Most recently, the site was the home of California Brake and Clutch. A recent Phase I Environmental Site Assessment prepared for the site identified a surface water drain located in the exterior yard area (Figure 2). The Phase I suggested drilling a soil boring near the drain for the collection of soil samples.

2.1 Hand Auger Drilling

On June 22, 1999, ASE removed the dirt and debris from the bottom of the drain, cored through the concrete bottom of the drain, and using a hand auger, drilled soil boring BH-A to a depth of 3-feet below the bottom of the drain (Figure 2). Soil samples BH-A @ 1' and BH-A @ 3' were collected from the boring. Soil sample BH-A @ 1' was analyzed by Chromalab, Inc. of Pleasanton, California (ELAP #1094) for total petroleum hydrocarbons as gasoline (TPH-G) and diesel (TPH-D) by EPA Method 8015M, benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX) by EPA Method 8020, methyl tertiary butyl ether (MTBE) by EPA Method 8020, oil and grease by Standard Method 5520E, halogenated volatile organic compounds (HVOCs) by EPA Method 8010, and the LUFT five metals by EPA Method 6010. The only compound identified in the soil above action levels was tetrachloroethene (PCE) at 390 parts per million (ppm). Soil sample BH-A @ 3' was placed on hold at the laboratory. It was not subsequently analyzed because it was saturated, and had the same appearance and odor as the 1' sample.

2.2 Geoprobe Assessment

On July 12, 1999, ASE drilled six (6) soil borings at the site using a Geoprobe in an effort to delineate the extent of VOCs in soil and groundwater. Four of the borings were placed near the outdoor drain. Two of the borings were drilled inside one of the buildings at the location of two former parts cleaning bins that used methyl-ethyl-ketone (MEK) as a cleaning solvent (Figure 2). Detectable concentrations of PCE, up to 53 parts per billion (ppb), were identified in soil samples collected from borings BH-B and BH-C, near the former outdoor drain. Up to 230 ppb trichloroethene (TCE) and 17 ppb cis-1,2-dichloroethene (cis-1,2-DCE) were identified in soil samples collected from boring BH-C. None of the samples collected from the remaining soil borings contained detectable concentrations of any of the VOCs analyzed.

Grab water samples were collected from all seven of the borings. Detectable concentrations of VOCs were identified in all water samples except from borehole BH-G. Water samples from borehole BH-A had the most significant concentrations: 1,300 ppb PCE, 1,500 ppb TCE, and 190 ppb cis-1,2-DCE. The remaining compounds and concentrations were as follows: 42 ppb PCE in borehole BH-E; 170 ppb TCE in borehole BH-B; 130 ppb cis-1,2-DCE in borehole BH-B; 21 ppb trans-1,2-DCE in borehole BH-B; and 11 ppb 1,1-DCE in borehole BH-F. For complete details regarding the Geoprobe assessment activities, see the ASE report dated July 28, 1999.

2.3 Oil/Water Separator Identification

An unidentified underground pipe was noted exiting the outdoor drain. A request was made by Ms. Eva Chu of the Alameda County Health Care Services Agency (ACHCSA) to identify the endpoint of this pipe. On August 13, 1999, ASE subcontracted Subtronic Corporation to identify the pipe's path underground. An oil/water separator was identified approximately 15-feet northwest of the outdoor drain. The separator measured 4-feet square and approximately 3-feet deep. The underground piping connected the two units. An exit pipe was noted leaving the separator to the west and exiting the property underground, likely into a storm sewer pipe.

2.4 August 1999 Soil Borings and Well Installation

On August 27, 1999, Gregg Drilling of Martinez, California, drilled soil borings MW-1, MW-2, and MW-3 at the site using a Rhino drill rig equipped with 8-inch diameter hollow-stem augers (Figure 3). Groundwater monitoring wells MW-1, MW-2, and MW-3 were subsequently constructed in their respective borings.

The soil sample collected from soil boring MW-1 contained 53 ppb TCE and 180 ppb PCE. The soil sample collected from soil boring MW-2 contained 31 ppb PCE. The soil sample collected from soil boring MW-3 contained no HVOCs above the laboratory reporting limits.

The groundwater sample collected from monitoring well MW-1 contained 3.9 ppb cis-1,2-DCE, 58 ppb 1,1-DCA, 3.2 ppb TCE and 9.9 ppb PCE. The groundwater sample collected from monitoring well MW-2 contained 1.7 ppb cis-1,2-DCE, 4.5 ppb TCE and 48 ppb PCE. The groundwater sample collected from monitoring well MW-3 contained 34 ppb cis-1,2-DCE, 22 ppb 1,2-DCA, 21 ppb TCE and 38 ppb PCE. There were no other HVOCs detected in any of the groundwater samples analyzed above the laboratory reporting limits. For complete details regarding the monitoring well installation activities, see the ASE report dated September 27, 1999.

2.5 October 1999 Soil Boring and Well Installation

Using the three monitoring wells described in Section 2.4 above, the groundwater flow direction was measured and found to have a flow component toward the west. Because there was no monitoring well installed west of the outdoor drain, a fourth well was required. On October 27, 1999, ASE installed groundwater monitoring well MW-4 at the site in the location depicted on Figure 3. Soil and groundwater samples collected during this assessment were analyzed for VOCs by EPA Method 8010. The soil sample collected from boring MW-4 contained non-detectable concentrations of all the VOCs analyzed. The groundwater sample collected from monitoring well MW-4 contained 0.68 ppb PCE, 0.74 ppb TCE, 14 ppb 1,1-DCA, and 21 ppb cis-1,2-DCE 2.7 ppb 1,1-DCE, 2.1 ppb 1,2-DCA, 12 ppb chloroethane and 6.4 ppb vinyl chloride. For complete details regarding the installation of monitoring well MW-4 and the most recent four well sampling event, see the ASE report dated November 22, 1999.

3.0 SCOPE OF WORK (SOW)

On October 18, 1999, a meeting was held at the office of Ms. Eva Chu of the ACHCSA. This meeting was attended by the Trustee of the property, the potential buyer of the property and his realtor, and ASE. It was explained to Ms. Chu that due to the impending property transfer, rapid case closure would be necessary. It was discussed that only the soil surrounding the outdoor drain contained VOCs above the Oakland RBCA cleanup goals for vapor intrusion from subsurface soil to an indoor air scenario. None of the groundwater samples collected to date from any of the seven soil borings or four monitoring wells contained any VOC above the Oakland RBCA cleanup goals for vapor intrusion from groundwater to an indoor air scenario. Therefore, ASE prepared the following scope of work to remediate the soil in the immediate area surrounding the outdoor drain. The goal was to achieve residual VOC concentrations in soil below the Oakland RBCA cleanup goals for vapor intrusion from subsurface soil to an indoor air scenario. The plan was verbally approved by Ms. Chu in a telephone conversation prior to mobilization to the site.

ASE's specific scope of work was to:

1) Prepare a site-specific health and safety plan and notify Underground Service Alert to have all known public utility lines marked.

2) Sawcut the cement surface in the area to be excavated (Figure 4). Dispose of the concrete at a local recycler.

3) Excavate the soil in the immediate area around and beneath the drain. ASE estimated an excavation size of approximately 10-feet by 10-feet by 6-feet deep. The depth of the excavation would depend on the depth to groundwater within the excavation.

4) Spread the excavated soil on plastic adjacent to the excavation.

5) Collect soil samples from within the excavation after soil removal activities were completed. The locations of these samples would most likely be at the bottom/sidewall interface along the perimeter of the excavation.

6) Collect one composite soil sample from the stockpiled soil.

7) Analyze the excavation and stockpiled soil sample for VOCs by EPA Method 8260. Analyze the stockpiled soil sample for semi-volatile organic compounds (SVOCs) by EPA Method 8270.

8) Backfill and compact the excavation immediately with imported material.

9) Resurface the excavation with concrete, and replace the drain to allow for drainage of the yard.

10) Use the stockpiled soil analytical results to profile the material into a disposal facility.

11) Prepare this report detailing the methods and findings of the project.

4.0 EXCAVATE AND STOCKPILE CONTAMINATED SOIL

On November 15, 1999 the concrete surface surrounding the outdoor drain was sawcut by Del Secco Diamond Core & Saw, Inc. On November 18, 1999, ASE mobilized to the site with the excavation contractor, Dale's Excavating for excavation activities. ASE's senior project manager, David Allen, directed the remediation activities. Using a backhoe, the concrete surface and drain above the contaminated soil was removed and hauled to a local recycler. Soil was removed from the excavation and stockpiled on top of and covered with plastic sheeting. An organic vapor meter (OVM) was utilized to determine when all the contaminated soil had been removed. Low OVM readings, up to 30 ppm were found in the soil directly beneath the site of the removed drain from 2-feet below ground surface (bgs) to approximately 3.5-feet bgs. After this soil was removed, OVM readings of the soil between 4-feet bgs and the final depth of 6.5-feet bgs were zero. The final excavation boundaries were 10-feet by 10-feet by 6.5-feet deep. ASE estimates that approximately 24 cubic yards of soil was removed from the excavation. A cross section of the excavation was a light brown silty sand from below the concrete to 2.5-feet bgs, an olive gray, wet clay from 2.5-feet to 6.5-feet bgs, and a brown/black, wet silt with organic material (roots) below the clay.

5.0 COLLECTION OF SOIL SAMPLES

When the excavation activities were completed, ASE collected confirmation soil samples from the bottom of the excavation using the backhoe bucket. Four samples were collected at 7-feet below grade near

the bottom/sidewall interface. The soil samples were labeled BOEX-NE-7', BOEX-SW-7', BOEX-NW-7' and BOEX-SE-7', see Figure 4 for sample locations. The stockpiled soil sampled as a composite of three locations from within the stockpiled soil. The samples were collected in brass tubes. Each sample was immediately trimmed, sealed with Teflon tape and plastic caps, secured with duct tape, labeled with the site location, sample designation, date and time the sample was collected, and the initials of the person collecting the sample. The samples were placed into an ice chest containing wet ice for delivery under chain of custody to the CAL-EPA certified analytical laboratory.

6.0 SOIL SAMPLE ANALYTICAL RESULTS

The excavation bottom soil samples and stockpiled soil sample were analyzed by CAL-EPA certified environmental laboratory Chromalab, Inc. of Pleasanton, California, ELAP #1094, for VOCs by EPA Method 8260. The stockpiled soil sample was also analyzed for SVOCs by EPA Method 8270. Analytical results are tabulated in Table One. A copy of the certified analytical report is attached in Appendix A.

No VOCs were identified above reporting limits in any of the four bottom of excavation soil samples. 180 ppb PCE and 14 ppb TCE were identified in the composite soil sample collected from the stockpiled soil. No SVOCs were identified above reporting limits in the stockpiled soil sample.

7.0 BACKFILLING AND RESURFACING THE EXCAVATION

The excavation was backfilled with base rock and compacted to 6-inches below grade on November 18, 1999. The excavation will be resurfaced with concrete to match the existing surfaces; the removed drain will be reinstalled using new piping and a new box. Resurfacing is scheduled for December 2, 1999.

8.0 OFF-SITE DISPOSAL OF THE CONTAMINATED SOIL

The stockpiled soil is currently being profiled for disposal at a local non-hazardous landfill facility. Upon receipt of a confirmation number, the stockpiled soil will be removed from the site. Soil offhaul activities are tentatively scheduled for the week of November 29, 1999.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The soil remediation activities appear to have removed the source of PCE in soil that was previously identified in a hand-augered soil sample collected from below the bottom of the outdoor drain. Prior to excavation activities, PCE in the soil beneath the drain was found at 390 ppm. Post excavation confirmation soil samples collected from the soil beneath the location of the former drain resulted in no identified VOCs above laboratory reporting limits. The contaminated soil is scheduled for off-site disposal in the near future.

ASE recommends this case be reviewed for "No Further Action/Closure" based on the following:

- The source of PCE laden soil beneath the outdoor drain has been delineated, removed from the subsurface, and is scheduled to be removed from the site.

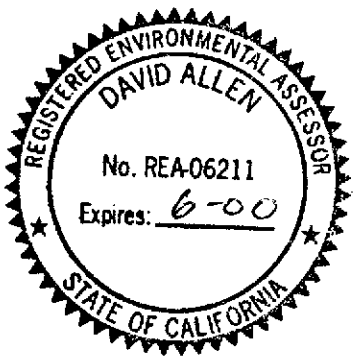
- None of the concentrations of VOCs in soil samples collected from any of the six Geoprobe soil borings, four groundwater monitoring wells, or remediation confirmation samples exceed the Oakland RBCA for vapor intrusion from soil to an indoor-air scenario in an industrial setting.

- None of the concentrations of VOCs in groundwater samples collected from any of the six Geoprobe soil borings or four groundwater monitoring wells exceed the Oakland RBCA for vapor intrusion from groundwater at 6-feet bgs to an indoor-air scenario in an industrial setting.

ASE is scheduled to conduct **one** additional groundwater monitoring well sampling event in February 2000. Should you have any questions or comments, please call us at (925) 820-9391.

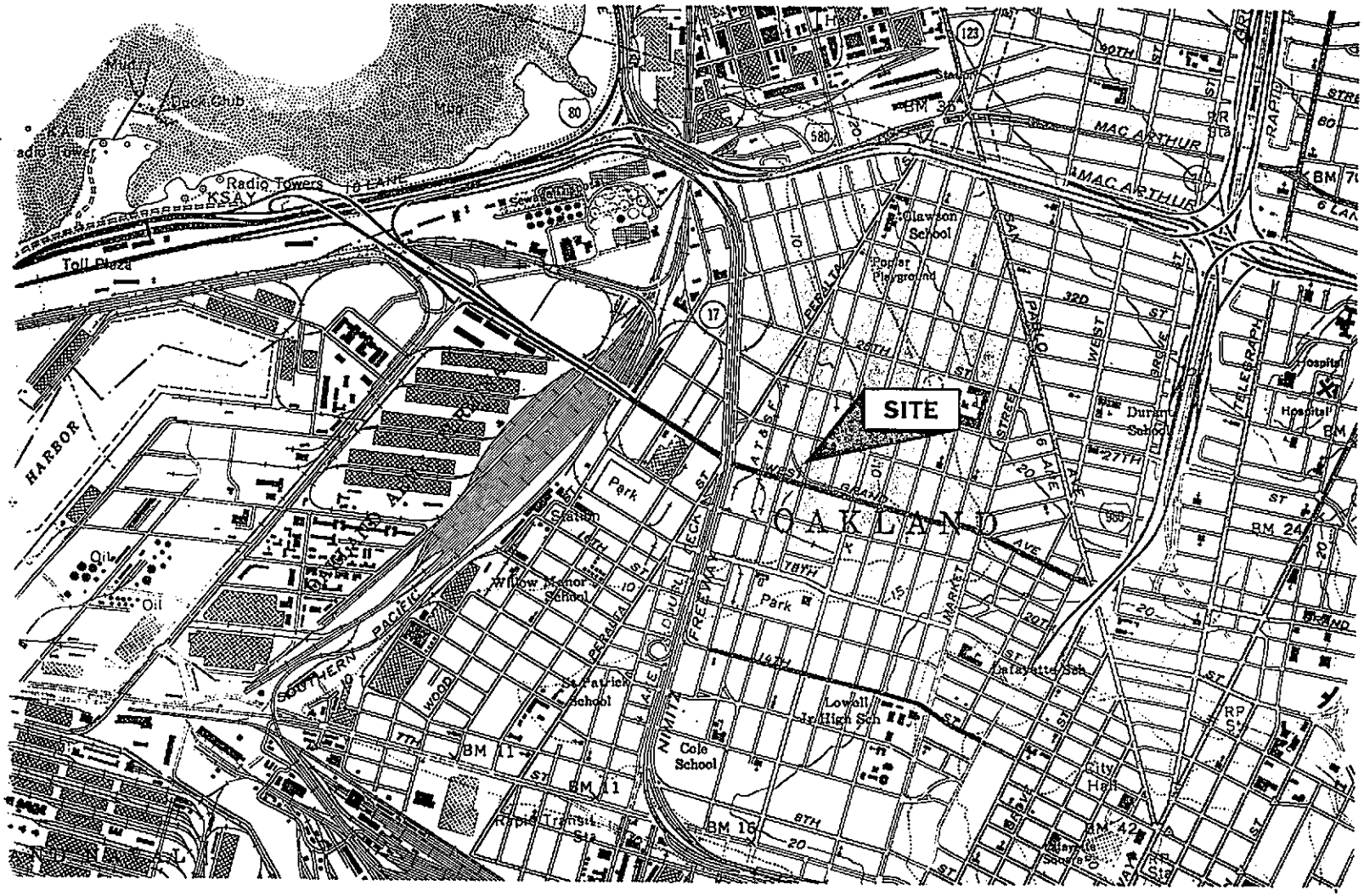
Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



David Allen, R.E.A.
Senior Project Manager

Copies to: Ms. Eva Chu, ACHCSA
Mr. John Kendall, Trustee
Ms. Anne Bruff, Wells & Bennett Realtors



NORTH

LOCATION MAP

2221 Union Street
Oakland, California

AQUA SCIENCE ENGINEERS, INC. | Figure 1

NEIGHBORING PROPERTY

FENCED-IN,
DIRT SURFACE
YARD

FENCE

OIL / WATER SEPARATOR

BH-B

OUTDOOR DRAIN

BH-G

BH-A

BH-C

BUILDING

SIDEWALK

FENCE

BH-D

MEZZANINE

BUILDING

SIDEWALK

BH-F

BH-E

PARTS CLEANING BINS

NEIGHBORING PROPERTY

UNION STREET

SIDEWALK

0 30 60 90

SCALE IN FEET

NORTH

LEGEND

BH-G ● ASE Soil Boring

SOIL BORING LOCATION MAP

2221 UNION STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | FIGURE 2

NEIGHBORING PROPERTY

FENCED-IN,
DIRT SURFACE
YARD

FENCE

OIL / WATER SEPARATOR

MW-1

OUTDOOR DRAIN

MW-2

MW-4

BUILDING

SIDEWALK

UNION STREET

FENCE

MEZZANINE

BUILDING

SIDEWALK

MW-3

PARTS CLEANING BINS

NEIGHBORING PROPERTY

SIDEWALK

0 30 60 90

SCALE IN FEET

NORTH

LEGEND

MW-4 — ASE Monitoring Well

MONITORING WELL LOCATION MAP

2221 UNION STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | FIGURE 3

NEIGHBORING PROPERTY

FENCED-IN,
DIRT SURFACE
YARD

FENCE

OIL / WATER SEPARATOR

FORMER OUTDOOR DRAIN

STOCKPILED SOIL

STKP (A-C), TYPICAL

BOEX-NW-7'

BOEX-NE-7'

BOEX-SW-7'

BOEX-SE-7'

EXCAVATION
BOUNDARY

BUILDING

SIDEWALK

FENCE

MEZZANINE

BUILDING

SIDEWALK

NEIGHBORING PROPERTY

UNION STREET

SIDEWALK

SIDEWALK

LEGEND

BOEX-NW-7' ● Confirmation Soil Sample

STKP (A-C) ○ Stockpiled Soil Sample, Composite

0 30 60 90

SCALE IN FEET

NORTH

EXCAVATION SITE PLAN

2221 UNION STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | FIGURE 4

TABLE ONE

Summary of Chemical Analysis of **Soil Samples** after Soil Remediation Activities

VOCs and SVOCs

All results are in **parts per billion**.

SAMPLE NAME	DATE COLLECTED	PCE	TCE	REMAINING VOCs	ALL SVOCs
BOTTOM OF EXCAVATION					
BOEX-NE-7'	11/18/99	< 5.0	< 5.0	< 5 - < 10	NA
BOEX-SW-7'	11/18/99	< 5.0	< 5.0	< 5 - < 10	NA
BOEX-NW-7'	11/18/99	< 5.0	< 5.0	< 5 - < 10	NA
BOEX-SE-7'	11/18/99	< 5.0	< 5.0	< 5 - < 10	NA
STOCKPILED SOIL					
STKP (A-C)	11/18/99	180	14	< 11 - < 110	< 0.02 - < 2.0
OAKLAND RBCA		92,000	330,000	VARIES	VARIES

NOTES:

Non-detectable concentrations are noted by the less than sign (<) followed by the laboratory detection limit.

Oakland Risk Based Corrective Action (RBCA) cleanup goal for vapor intrusion from subsurface soil to an INDOOR AIR Scenario.

APPENDIX A

Certified Analytical Results
of Soil Samples

Aqua Science Engineers, Inc.
208 West El Pintado Road
Danville, CA 94526

Attn.: Mr. Dave Allen

Project: 3515
Union Street

Dear Mr. Allen,

Attached is our report for your samples received on Friday November 19, 1999
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after December 19, 1999 unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919

Sincerely,

Vincent Vancil

Volatile Organic Compounds

Aqua Science Engineers, Inc.

208 West El Pintado Road
Danville, CA 94526

Attn: Dave Allen

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #: 3515

Project: Union Street

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
STKP(A-C)	Soil	11/18/1999 14:25	1

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8260A
Prep Method: 5030

Volatile Organic Compounds

Sample ID: **STKP(A-C)**
Project: 3515 Union Street
Sampled: 11/18/1999 14:25
Matrix: Soil

Lab Sample ID: **1999-11-0388-001**
Received: 11/19/1999 10:20
Extracted: 11/29/1999 16:19
QC-Batch: 1999/11/29-01.07

Sample/Analysis Flag: o (See Legend & Note section)

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Acetone	ND	110	ug/Kg	2.21	11/29/1999 16:19	
Benzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Bromodichloromethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Bromoform	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Bromomethane	ND	22	ug/Kg	2.21	11/29/1999 16:19	
Carbon tetrachloride	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Chlorobenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Chloroethane	ND	22	ug/Kg	2.21	11/29/1999 16:19	
2-Butanone(MEK)	ND	110	ug/Kg	2.21	11/29/1999 16:19	
2-Chloroethylvinyl ether	ND	110	ug/Kg	2.21	11/29/1999 16:19	
Chloroform	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Chloromethane	ND	22	ug/Kg	2.21	11/29/1999 16:19	
Dibromochloromethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,2-Dichlorobenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,3-Dichlorobenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,4-Dichlorobenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,2-Dibromo-3-chloropropane	ND	110	ug/Kg	2.21	11/29/1999 16:19	
1,2-Dibromoethane	ND	22	ug/Kg	2.21	11/29/1999 16:19	
Dibromomethane	ND	22	ug/Kg	2.21	11/29/1999 16:19	
Dichlorodifluoromethane	ND	22	ug/Kg	2.21	11/29/1999 16:19	
1,1-Dichloroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,2-Dichloroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,1-Dichloroethene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
cis-1,2-Dichloroethene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
trans-1,2-Dichloroethene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,2-Dichloropropane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
cis-1,3-Dichloropropene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
trans-1,3-Dichloropropene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Ethylbenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
2-Hexanone	ND	110	ug/Kg	2.21	11/29/1999 16:19	
Methylene chloride	ND	11	ug/Kg	2.21	11/29/1999 16:19	
4-Methyl-2-pentanone (MIBK)	ND	110	ug/Kg	2.21	11/29/1999 16:19	
Naphthalene	ND	22	ug/Kg	2.21	11/29/1999 16:19	

To: **Aqua Science Engineers, Inc.**

Attn.: Dave Allen

Test Method: 8260A

Prep Method: 5030

Volatile Organic Compounds

Sample ID:	**STKP(A-C)**	Lab Sample ID:	**1999-11-0388-001**
Project:	3515 Union Street	Received:	11/19/1999 10:20
		Extracted:	11/29/1999 16:19
Sampled:	11/18/1999 14:25	QC-Batch:	1999/11/29-01.07
Matrix:	Soil		

Sample/Analysis Flag: o (See Legend & Note section)

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Styrene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,1,2,2-Tetrachloroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Tetrachloroethene	180	11	ug/Kg	2.21	11/29/1999 16:19	
Toluene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,1,1-Trichloroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
1,1,2-Trichloroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Trichloroethene	14	11	ug/Kg	2.21	11/29/1999 16:19	
1,1,1,2-Tetrachloroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Vinyl acetate	ND	110	ug/Kg	2.21	11/29/1999 16:19	
Vinyl chloride	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Total xylenes	ND	22	ug/Kg	2.21	11/29/1999 16:19	
Trichlorotrifluoroethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Carbon disulfide	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Isopropylbenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Bromobenzene	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Bromochloromethane	ND	44	ug/Kg	2.21	11/29/1999 16:19	
Trichlorofluoromethane	ND	11	ug/Kg	2.21	11/29/1999 16:19	
Surrogate(s)						
4-Bromofluorobenzene	104.2	74-121	%	1.00	11/29/1999 16:19	
1,2-Dichloroethane-d4	90.9	70-121	%	1.00	11/29/1999 16:19	
Toluene-d8	105.0	81-117	%	1.00	11/29/1999 16:19	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8260A
Prep Method: 5030

Batch QC Report
Volatile Organic Compounds

Method Blank | **Soil** | **QC Batch # 1999/11/29-01.07**

MB: 1999/11/29-01.07-001 | Date Extracted: 11/29/1999 15:39

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Acetone	ND	50	ug/Kg	11/29/1999 15:39	
Benzene	ND	5.0	ug/Kg	11/29/1999 15:39	
Bromodichloromethane	ND	5.0	ug/Kg	11/29/1999 15:39	
Bromoform	ND	5.0	ug/Kg	11/29/1999 15:39	
Bromomethane	ND	10.0	ug/Kg	11/29/1999 15:39	
Carbon tetrachloride	ND	5.0	ug/Kg	11/29/1999 15:39	
Chlorobenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
Chloroethane	ND	10	ug/Kg	11/29/1999 15:39	
2-Butanone(MEK)	ND	50	ug/Kg	11/29/1999 15:39	
2-Chloroethylvinyl ether	ND	50	ug/Kg	11/29/1999 15:39	
Chloroform	ND	5.0	ug/Kg	11/29/1999 15:39	
Chloromethane	ND	10	ug/Kg	11/29/1999 15:39	
Dibromochloromethane	ND	5.0	ug/Kg	11/29/1999 15:39	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
1,2-Dibromo-3-chloropropane	ND	50	ug/Kg	11/29/1999 15:39	
1,2-Dibromoethane	ND	10	ug/Kg	11/29/1999 15:39	
Dibromomethane	ND	10	ug/Kg	11/29/1999 15:39	
Dichlorodifluoromethane	ND	10	ug/Kg	11/29/1999 15:39	
1,1-Dichloroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
1,2-Dichloroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
1,1-Dichloroethene	ND	5.0	ug/Kg	11/29/1999 15:39	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	11/29/1999 15:39	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	11/29/1999 15:39	
1,2-Dichloropropane	ND	5.0	ug/Kg	11/29/1999 15:39	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	11/29/1999 15:39	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	11/29/1999 15:39	
Ethylbenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
2-Hexanone	ND	50	ug/Kg	11/29/1999 15:39	
Methylene chloride	ND	5.0	ug/Kg	11/29/1999 15:39	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/Kg	11/29/1999 15:39	
Naphthalene	ND	10	ug/Kg	11/29/1999 15:39	
Styrene	ND	5.0	ug/Kg	11/29/1999 15:39	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
Tetrachloroethene	ND	5.0	ug/Kg	11/29/1999 15:39	
Toluene	ND	5.0	ug/Kg	11/29/1999 15:39	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8260A
Prep Method: 5030

Batch QC Report
Volatile Organic Compounds

Method Blank | **Soil** | **QC Batch # 1999/11/29-01.07**

MB: 1999/11/29-01.07-001 | Date Extracted: 11/29/1999 15:39

Compound	Result	Rep.Limit	Units	Analyzed	Flag
1,1,1-Trichloroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
Trichloroethene	ND	5.0	ug/Kg	11/29/1999 15:39	
1,1,1,2-Tetrachloroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
Vinyl acetate	ND	50	ug/Kg	11/29/1999 15:39	
Vinyl chloride	ND	5.0	ug/Kg	11/29/1999 15:39	
Total xylenes	ND	10	ug/Kg	11/29/1999 15:39	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	11/29/1999 15:39	
Carbon disulfide	ND	5.0	ug/Kg	11/29/1999 15:39	
Isopropylbenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
Bromobenzene	ND	5.0	ug/Kg	11/29/1999 15:39	
Bromochloromethane	ND	20	ug/Kg	11/29/1999 15:39	
Trichlorofluoromethane	ND	5.0	ug/Kg	11/29/1999 15:39	
Surrogate(s)					
4-Bromofluorobenzene	101.4	74-121	%	11/29/1999 15:39	
1,2-Dichloroethane-d4	95.2	70-121	%	11/29/1999 15:39	
Toluene-d8	98.4	81-117	%	11/29/1999 15:39	

To: **Aqua Science Engineers, Inc.**
Attn: Dave Allen

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/11/29-01.07**

LCS: 1999/11/29-01.07-002 Extracted: 11/29/1999 14:22 Analyzed: 11/29/1999 14:22
LCSD: 1999/11/29-01.07-003 Extracted: 11/29/1999 15:01 Analyzed: 11/29/1999 15:01

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	98.3	99.4	100.0	100.0	98.3	99.4	1.1	69-129	20		
Chlorobenzene	106	105	100.0	100.0	106.0	105.0	0.9	61-121	20		
1,1-Dichloroethene	92.8	96.4	100.0	100.0	92.8	96.4	3.8	65-125	20		
Toluene	106	104	100.0	100.0	106.0	104.0	1.9	70-130	20		
Trichloroethene	98.9	98.7	100.0	100.0	98.9	98.7	0.2	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	496	498	500	500	99.2	99.6		74-121			
1,2-Dichloroethane-d4	458	482	500	500	91.6	96.4		70-121			
Toluene-d8	512	513	500	500	102.4	102.6		81-117			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-11-0388

To: **Aqua Science Engineers, Inc.**

Attn.: Dave Allen

Test Method: 8260A

Prep Method: 5030

Batch QC Report

Volatile Organic Compounds

Matrix Spike (MS / MSD) **Soil** **QC Batch # 1999/11/29-01.07**

Sample ID: **CPT-05-2.0** Lab Sample ID: 1999-11-0435-015

MS: 1999/11/29-01.07-004 Extracted: 11/29/1999 22:48 Analyzed: 11/29/1999 22:48 Dilution: 1.0

MSD: 1999/11/29-01.07-005 Extracted: 11/29/1999 23:27 Analyzed: 11/29/1999 23:27 Dilution: 1.0

Compound	Conc. [ug/Kg]			Exp.Conc. [ug/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
1,1-Dichloroethene	92.3	92.5	ND	97.3	98.6	94.9	93.8	1.2	65-125	20		
Trichloroethene	92.6	93.8	ND	97.3	98.6	95.2	95.1	0.1	74-134	20		
Chlorobenzene	100	102	ND	97.3	98.6	102.8	103.4	0.6	61-121	20		
Surrogate(s)												
4-Bromofluorobenzene	503	511		500	500	100.6	102.2		74-121			
1,2-Dichloroethane-d4	486	494		500	500	97.2	98.8		70-121			
Toluene-d8	490	492		500	500	98.0	98.4		81-117			

To: **Aqua Science Engineers, Inc.**
Attn:Dave Allen

Test Method: 8260A
Prep Method: 5030

Legend & Notes

Volatile Organic Compounds

Analysis Flags

o Reporting limits were raised due to high level of analyte present in the sample.

Semi-volatile Organic Compounds

Aqua Science Engineers, Inc.

208 West El Pintado Road
Danville, CA 94526

Attn: Dave Allen

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #: 3515

Project: Union Street

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
STKP(A-C)	Soil	11/18/1999 14:25	1

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8270A
Prep Method: 3550/8270A

Semi-volatile Organic Compounds

Sample ID:	**STKP(A-C)**	Lab Sample ID:	**1999-11-0388-001**
Project:	3515 Union Street	Received:	11/19/1999 10:20
		Extracted:	11/23/1999
Sampled:	11/18/1999 14:25	QC-Batch:	1999/11/23-01.11
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Phenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Bis(2-chloroethyl)ether	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2-Chlorophenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
1,3-Dichlorobenzene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
1,4-Dichlorobenzene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Benzyl alcohol	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
1,2-Dichlorobenzene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2-Methylphenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Bis(2-chloroisopropyl) ether	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
4-Methylphenol	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
N-Nitroso-di-n-propylamine	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Hexachloroethane	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Nitrobenzene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Isophorone	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2-Nitrophenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,4-Dimethylphenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Bis(2-chloroethoxy) methane	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,4-Dichlorophenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
1,2,4-Trichlorobenzene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Naphthalene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
4-Chloroaniline	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Hexachlorobutadiene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
4-Chloro-3-methylphenol	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
2-Methylnaphthalene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Hexachlorocyclopentadiene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,4,6-Trichlorophenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,4,5-Trichlorophenol	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2-Chloronaphthalene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2-Nitroaniline	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
Dimethyl phthalate	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
Acenaphthylene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
3-Nitroaniline	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Acenaphthene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,4-Dinitrophenol	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
4-Nitrophenol	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8270A
Prep Method: 3550/8270A

Semi-volatile Organic Compounds

Sample ID:	**STKP(A-C)**	Lab Sample ID:	**1999-11-0388-001**
Project:	3515 Union Street	Received:	11/19/1999 10:20
		Extracted:	11/23/1999
Sampled:	11/18/1999 14:25	QC-Batch:	1999/11/23-01.11
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dibenzofuran	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,4-Dinitrotoluene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
2,6-Dinitrotoluene	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Diethyl phthalate	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
4-Chlorophenyl phenyl ether	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Fluorene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
4-Nitroaniline	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
2-Methyl-4,6-dinitrophenol	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
N-Nitrosodiphenylamine	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
4-Bromophenyl phenyl ether	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Hexachlorobenzene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Pentachlorophenol	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
Phenanthrene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Anthracene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Di-n-butyl phthalate	ND	2.0	mg/Kg	1.00	11/23/1999 20:29	
Fluoranthene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Pyrene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Butyl benzyl phthalate	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
3,3-Dichlorobenzidine	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Benzo(a)anthracene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
bis(2-Ethylhexyl) phthalate	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
Chrysene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Di-n-octyl phthalate	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
Benzo(b)fluoranthene	ND	0.10	mg/Kg	1.00	11/23/1999 20:29	
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Benzo(a)pyrene	ND	0.020	mg/Kg	1.00	11/23/1999 20:29	
Indeno(1,2,3-c,d)pyrene	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Dibenzo(a,h)anthracene	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Benzo(g,h,i)perylene	ND	0.20	mg/Kg	1.00	11/23/1999 20:29	
Benzoic acid	ND	0.50	mg/Kg	1.00	11/23/1999 20:29	
Surrogate(s)						
Nitrobenzene-d5	55.0	23-120	%	1.00	11/23/1999 20:29	
2-Fluorobiphenyl	61.8	30-115	%	1.00	11/23/1999 20:29	
p-Terphenyl-d14	107.0	18-137	%	1.00	11/23/1999 20:29	
Phenol-d5	65.6	24-113	%	1.00	11/23/1999 20:29	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8270A
Prep Method: 3550/8270A

Semi-volatile Organic Compounds

Sample ID:	**STKP(A-C)**	Lab Sample ID:	**1999-11-0388-001**
Project:	3515 Union Street	Received:	11/19/1999 10:20
		Extracted:	11/23/1999
Sampled:	11/18/1999 14:25	QC-Batch:	1999/11/23-01.11
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Surrogate(s)						
2-Fluorophenol	63.4	25-121	%	1.00	11/23/1999 20:29	
2,4,6-Tribromophenol	46.6	19-122	%	1.00	11/23/1999 20:29	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8270A
Prep Method: 3550/8270A

Batch QC Report

Semi-volatile Organic Compounds

Method Blank | **Soil** | **QC Batch # 1999/11/23-01.11**

MB: 1999/11/23-01.11-001 | Date Extracted: 11/23/1999

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Phenol	ND	0.10	mg/Kg	11/23/1999 16:02	
Bis(2-chloroethyl)ether	ND	0.10	mg/Kg	11/23/1999 16:02	
2-Chlorophenol	ND	0.10	mg/Kg	11/23/1999 16:02	
1,3-Dichlorobenzene	ND	0.10	mg/Kg	11/23/1999 16:02	
1,4-Dichlorobenzene	ND	0.10	mg/Kg	11/23/1999 16:02	
Benzyl alcohol	ND	0.20	mg/Kg	11/23/1999 16:02	
1,2-Dichlorobenzene	ND	0.10	mg/Kg	11/23/1999 16:02	
2-Methylphenol	ND	0.10	mg/Kg	11/23/1999 16:02	
Bis(2-chloroisopropyl) ether	ND	0.10	mg/Kg	11/23/1999 16:02	
4-Methylphenol	ND	0.20	mg/Kg	11/23/1999 16:02	
N-Nitroso-di-n-propylamine	ND	0.10	mg/Kg	11/23/1999 16:02	
Hexachloroethane	ND	0.10	mg/Kg	11/23/1999 16:02	
Nitrobenzene	ND	0.10	mg/Kg	11/23/1999 16:02	
Isophorone	ND	0.10	mg/Kg	11/23/1999 16:02	
2-Nitrophenol	ND	0.10	mg/Kg	11/23/1999 16:02	
2,4-Dimethylphenol	ND	0.10	mg/Kg	11/23/1999 16:02	
Bis(2-chloroethoxy) methane	ND	0.10	mg/Kg	11/23/1999 16:02	
2,4-Dichlorophenol	ND	0.10	mg/Kg	11/23/1999 16:02	
1,2,4-Trichlorobenzene	ND	0.10	mg/Kg	11/23/1999 16:02	
Naphthalene	ND	0.10	mg/Kg	11/23/1999 16:02	
4-Chloroaniline	ND	0.20	mg/Kg	11/23/1999 16:02	
Hexachlorobutadiene	ND	0.10	mg/Kg	11/23/1999 16:02	
4-Chloro-3-methylphenol	ND	0.20	mg/Kg	11/23/1999 16:02	
2-Methylnaphthalene	ND	0.10	mg/Kg	11/23/1999 16:02	
Hexachlorocyclopentadiene	ND	0.10	mg/Kg	11/23/1999 16:02	
2,4,6-Trichlorophenol	ND	0.10	mg/Kg	11/23/1999 16:02	
2,4,5-Trichlorophenol	ND	0.10	mg/Kg	11/23/1999 16:02	
2-Chloronaphthalene	ND	0.10	mg/Kg	11/23/1999 16:02	
2-Nitroaniline	ND	0.50	mg/Kg	11/23/1999 16:02	
Dimethyl phthalate	ND	0.50	mg/Kg	11/23/1999 16:02	
Acenaphthylene	ND	0.10	mg/Kg	11/23/1999 16:02	
3-Nitroaniline	ND	0.10	mg/Kg	11/23/1999 16:02	
Acenaphthene	ND	0.10	mg/Kg	11/23/1999 16:02	
2,4-Dinitrophenol	ND	0.50	mg/Kg	11/23/1999 16:02	
4-Nitrophenol	ND	0.50	mg/Kg	11/23/1999 16:02	
Dibenzofuran	ND	0.10	mg/Kg	11/23/1999 16:02	
2,4-Dinitrotoluene	ND	0.10	mg/Kg	11/23/1999 16:02	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8270A
Prep Method: 3550/8270A

Batch QC Report

Semi-volatile Organic Compounds

Method Blank | **Soil** | **QC Batch # 1999/11/23-01.11**

MB: 1999/11/23-01.11-001

Date Extracted: 11/23/1999

Compound	Result	Rep.Limit	Units	Analyzed	Flag
2,6-Dinitrotoluene	ND	0.20	mg/Kg	11/23/1999 16:02	
Diethyl phthalate	ND	0.50	mg/Kg	11/23/1999 16:02	
4-Chlorophenyl phenyl ether	ND	0.10	mg/Kg	11/23/1999 16:02	
Fluorene	ND	0.10	mg/Kg	11/23/1999 16:02	
4-Nitroaniline	ND	0.50	mg/Kg	11/23/1999 16:02	
2-Methyl-4,6-dinitrophenol	ND	0.50	mg/Kg	11/23/1999 16:02	
N-Nitrosodiphenylamine	ND	0.10	mg/Kg	11/23/1999 16:02	
4-Bromophenyl phenyl ether	ND	0.10	mg/Kg	11/23/1999 16:02	
Hexachlorobenzene	ND	0.10	mg/Kg	11/23/1999 16:02	
Pentachlorophenol	ND	0.50	mg/Kg	11/23/1999 16:02	
Phenanthrene	ND	0.10	mg/Kg	11/23/1999 16:02	
Anthracene	ND	0.10	mg/Kg	11/23/1999 16:02	
Di-n-butyl phthalate	ND	2.0	mg/Kg	11/23/1999 16:02	
Fluoranthene	ND	0.10	mg/Kg	11/23/1999 16:02	
Pyrene	ND	0.10	mg/Kg	11/23/1999 16:02	
Butyl benzyl phthalate	ND	0.50	mg/Kg	11/23/1999 16:02	
3,3-Dichlorobenzidine	ND	0.20	mg/Kg	11/23/1999 16:02	
Benzo(a)anthracene	ND	0.10	mg/Kg	11/23/1999 16:02	
bis(2-Ethylhexyl) phthalate	ND	0.50	mg/Kg	11/23/1999 16:02	
Chrysene	ND	0.10	mg/Kg	11/23/1999 16:02	
Di-n-octyl phthalate	ND	0.50	mg/Kg	11/23/1999 16:02	
Benzo(b)fluoranthene	ND	0.10	mg/Kg	11/23/1999 16:02	
Benzo(k)fluoranthene	ND	0.20	mg/Kg	11/23/1999 16:02	
Benzo(a)pyrene	ND	0.02	mg/Kg	11/23/1999 16:02	
Indeno(1,2,3-c,d)pyrene	ND	0.20	mg/Kg	11/23/1999 16:02	
Dibenzo(a,h)anthracene	ND	0.20	mg/Kg	11/23/1999 16:02	
Benzo(g,h,i)perylene	ND	0.20	mg/Kg	11/23/1999 16:02	
Benzoic acid	ND	0.50	mg/Kg	11/23/1999 16:02	
Surrogate(s)					
Nitrobenzene-d5	50.0	23-120	%	11/23/1999 16:02	
2-Fluorobiphenyl	57.2	30-115	%	11/23/1999 16:02	
p-Terphenyl-d14	106.4	18-137	%	11/23/1999 16:02	
Phenol-d5	54.8	24-113	%	11/23/1999 16:02	
2-Fluorophenol	28.6	25-121	%	11/23/1999 16:02	
2,4,6-Tribromophenol	43.0	19-122	%	11/23/1999 16:02	

To: **Aqua Science Engineers, Inc.**

Attn: Dave Allen

Test Method: 8270A

Prep Method: 3550/8270A

Batch QC Report

Semi-volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/11/23-01.11**

LCS: 1999/11/23-01.11-002 Extracted: 11/23/1999 Analyzed: 11/23/1999 18:21

LCSD: 1999/11/23-01.11-003 Extracted: 11/23/1999 Analyzed: 11/23/1999 17:34

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Phenol	1.07	1.16	2.00	2.00	53.5	58.0	8.1	20-90	35		
2-Chlorophenol	1.20	1.13	2.00	2.00	60.0	56.5	6.0	27-123	35		
1,4-Dichlorobenzene	0.580	0.530	1.000	1.000	58.0	53.0	9.0	28-104	30		
N-Nitroso-di-n-propylamin	0.590	0.550	1.000	1.000	59.0	55.0	7.0	25-114	39		
1,2,4-Trichlorobenzene	0.510	0.460	1.000	1.000	51.0	46.0	10.3	38-107	35		
4-Chloro-3-methylphenol	1.39	1.31	2.00	2.00	69.5	65.5	5.9	26-103	33		
Acenaphthene	0.560	0.520	1.000	1.000	56.0	52.0	7.4	49-102	30		
4-Nitrophenol	1.31	1.39	2.00	2.00	65.5	69.5	5.9	17-109	35		
2,4-Dinitrotoluene	0.630	0.580	1.000	1.000	63.0	58.0	8.3	28-89	38		
Pentachlorophenol	1.11	0.990	2.00	2.00	55.5	49.5	11.4	11-114	35		
Pyrene	0.770	0.810	1.000	1.000	77.0	81.0	5.1	25-117	35		
Surrogate(s)											
Nitrobenzene-d5	14.0	12.6	25	25	56.0	50.4		23-120			
2-Fluorobiphenyl	15.6	14.2	25	25	62.4	56.8		30-115			
p-Terphenyl-d14	20.4	21.6	25	25	81.6	86.4		18-137			
Phenol-d5	26.9	28.7	50	50	53.8	57.4		24-113			
2-Fluorophenol	26.1	26.5	50	50	52.2	53.0		25-121			
2,4,6-Tribromophenol	26.4	24.7	50	50	52.8	49.4		19-122			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-11-0388

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8270A
Prep Method: 3550/8270A

Batch QC Report

Semi-volatile Organic Compounds

Matrix Spike (MS / MSD) **Soil** **QC Batch # 1999/11/23-01.11**

Sample ID: **STKP(A-C)** Lab Sample ID: 1999-11-0388-001

MS: 1999/11/23-01.11-004 Extracted: 11/23/1999 Analyzed: 11/23/1999 19:03 Dilution: 1.0
MSD: 1999/11/23-01.11-005 Extracted: 11/23/1999 Analyzed: 11/23/1999 19:46 Dilution: 1.0

Compound	Conc. [mg/Kg]			Exp.Conc. [mg/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Phenol	1.10	0.840	ND	1.98	1.98	55.6	42.4	26.9	20-90	35		
2-Chlorophenol	0.950	0.770	ND	1.98	1.98	48.0	38.9	20.9	27-123	35		
1,4-Dichlorobenzene	0.140	0.180	ND	0.989	0.991	14.2	18.2	24.7	28-104	30	mso	mso
N-Nitroso-di-n-propylami	0.530	0.360	ND	0.989	0.991	53.6	36.3	38.5	25-114	39		
1,2,4-Trichlorobenzene	0.240	0.220	ND	0.989	0.991	24.3	22.2	9.0	38-107	35	mso	mso
4-Chloro-3-methylphenol	1.30	0.830	ND	1.98	1.98	65.7	41.9	44.2	26-103	33		rpd
Acenaphthene	0.470	0.330	ND	0.989	0.991	47.5	33.3	35.1	49-102	30	mso	mso,rp
4-Nitrophenol	1.18	0.990	ND	1.98	1.98	59.6	50.0	17.5	17-109	35		
2,4-Dinitrotoluene	0.540	0.400	ND	0.989	0.991	54.6	40.4	29.9	28-89	38		
Pentachlorophenol	0.840	0.660	ND	1.98	1.98	42.4	33.3	24.0	11-114	35		
Pyrene	0.860	0.880	ND	0.989	0.991	87.0	88.8	2.0	25-117	35		
Surrogate(s)												
Nitrobenzene-d5	6.20	5.92		25	25	24.8	23.7		23-120			
2-Fluorobiphenyl	9.78	7.41		25	25	39.1	29.6		30-115			sl
p-Terphenyl-d14	23.5	23.5		25	25	94.0	94.0		18-137			
Phenol-d5	24.7	19.5		50	50	49.4	39.0		24-113			
2-Fluorophenol	18.0	16.5		50	50	36.0	33.0		25-121			
2,4,6-Tribromophenol	21.7	15.5		50	50	43.4	31.0		19-122			

99110388

49177

Aqua Science Engineers, Inc.
208 W. El Pintado Road
Danville, CA 94526
(925) 820-9391
FAX (925) 837-4853

Chain of Custody

PAGE 1 OF 1

SAMPLER (SIGNATURE) D. Allen (PHONE NO.)

PROJECT NAME UNION STREET JOB NO. 3515

ADDRESS 2221 UNION ST., OAKLAND DATE 11/18

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-GASOLINE (EPA 5030/8015)	TPH-DIESEL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	PURGEABLE AROMATICS (EPA 602/8020)	VOLATILE ORGANICS (EPA 624/8260)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (5) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140) (EPA 608/8080)	ORGANOCHLORINE HERBICIDES (EPA 8150)	FUEL OXYGENATES (EPA 8260)				COMPOSITE 3:1
STKP(A-C)	11/18	14:25	Soil	3						X	X											X

RELINQUISHED BY: D. Allen (signature) (time) 12:13

D. Allen (printed name) 11/19/99 (date)

Company- ASE Inc.

RECEIVED BY: (signature) (time)

(printed name) (date)

Company-

RELINQUISHED BY: (signature) (time)

(printed name) (date)

Company-

RECEIVED BY LABORATORY: (signature) (time) 12:13

ORNEVA 11/19/99 (printed name) (date)

Company-

COMMENTS:

STANDARD TAT

Aqua Science Engineers, Inc.
208 West El Pintado Road
Danville, CA 94526

Attn.: Mr. Dave Allen

Project: 3515
Union Street

Dear Mr. Allen,

Attached is our report for your samples received on Friday November 19, 1999. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after December 19, 1999 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

Sincerely,

Vincent Vancil

Halogenated Volatile Organics Compounds

Aqua Science Engineers, Inc.

208 West El Pintado Road
Danville, CA 94526

Attn: Dave Allen

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #: 3515

Project: Union Street

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
BOEX-NE-7'	Soil	11/18/1999 13:30	1
BOEX-SW-7'	Soil	11/18/1999 13:35	2
BOEX-NW-7'	Soil	11/18/1999 13:40	3
BOEX-SE-7'	Soil	11/18/1999 13:45	4

To: **Aqua Science Engineers, Inc.**

Attn.: Dave Allen

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	BOEX-NE-7	Lab Sample ID:	1999-11-0367-001
Project:	3515 Union Street	Received:	11/19/1999 12:29
		Extracted:	11/22/1999 15:04
Sampled:	11/18/1999 13:30	QC-Batch:	1999/11/22-01.07
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	11/22/1999 15:04	
Vinyl chloride	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Chloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Methylene chloride	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Chloroform	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Trichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Chlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Bromoform	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Chloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Bromomethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:04	
Surrogate(s)						
4-Bromofluorobenzene	103.7	74-121	%	1.00	11/22/1999 15:04	
1,2-Dichloroethane-d4	98.5	70-121	%	1.00	11/22/1999 15:04	
Toluene-d8	98.8	81-117	%	1.00	11/22/1999 15:04	

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8260A
Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	BOEX-SW-7`	Lab Sample ID:	1999-11-0367-002
Project:	3515 Union Street	Received:	11/19/1999 12:29
		Extracted:	11/22/1999 15:43
Sampled:	11/18/1999 13:35	QC-Batch:	1999/11/22-01.07
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	11/22/1999 15:43	
Vinyl chloride	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Chloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Methylene chloride	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Chloroform	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Trichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Chlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Bromoform	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Chloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Bromomethane	ND	5.0	ug/Kg	1.00	11/22/1999 15:43	
Surrogate(s)						
4-Bromofluorobenzene	110.4	74-121	%	1.00	11/22/1999 15:43	
1,2-Dichloroethane-d4	92.7	70-121	%	1.00	11/22/1999 15:43	
Toluene-d8	98.1	81-117	%	1.00	11/22/1999 15:43	

To: Aqua Science Engineers, Inc.

Attn.: Dave Allen

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	BOEX-NW-7	Lab Sample ID:	1999-11-0367-003
Project:	3515 Union Street	Received:	11/19/1999 12:29
		Extracted:	11/22/1999 17:39
Sampled:	11/18/1999 13:40	QC Batch:	1999/11/22-01.07
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	11/22/1999 17:39	
Vinyl chloride	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Chloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Methylene chloride	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Chloroform	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Trichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Chlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Bromoform	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Chloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Bromomethane	ND	5.0	ug/Kg	1.00	11/22/1999 17:39	
Surrogate(s)						
4-Bromofluorobenzene	108.7	74-121	%	1.00	11/22/1999 17:39	
1,2-Dichloroethane-d4	98.7	70-121	%	1.00	11/22/1999 17:39	
Toluene-d8	100.5	81-117	%	1.00	11/22/1999 17:39	

To: **Aqua Science Engineers, Inc.**

Attn.: Dave Allen

Test Method: 8260A

Prep Method: 5030

Halogenated Volatile Organics Compounds

Sample ID:	BOEX-SE-7	Lab Sample ID:	**1999-11-0367-004**
Project:	3515 Union Street	Received:	11/19/1999 12:29
		Extracted:	11/22/1999 18:18
Sampled:	11/18/1999 13:45	QC-Batch:	1999/11/22-01.07
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/Kg	1.00	11/22/1999 18:18	
Vinyl chloride	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Chloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Trichlorofluoromethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,1-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Methylene chloride	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,1-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Chloroform	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Carbon tetrachloride	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,2-Dichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Trichloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,2-Dichloropropane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Bromodichloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
2-Chloroethylvinyl ether	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Tetrachloroethene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Dibromochloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Chlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Bromoform	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Chloromethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Bromomethane	ND	5.0	ug/Kg	1.00	11/22/1999 18:18	
Surrogate(s)						
4-Bromofluorobenzene	112.0	74-121	%	1.00	11/22/1999 18:18	
1,2-Dichloroethane-d4	101.0	70-121	%	1.00	11/22/1999 18:18	
Toluene-d8	99.7	81-117	%	1.00	11/22/1999 18:18	

To: Aqua Science Engineers, Inc.

Attn.: Dave Allen

Test Method: 8260A

Prep Method: 5030

Batch QC Report

Halogenated Volatile Organics Compounds

Method Blank | **Soil** | **QC Batch # 1999/11/22-01.07**

MB: 1999/11/22-01.07-001 | Date Extracted: 11/22/1999 12:24

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Bromodichloromethane	ND	5.0	ug/Kg	11/22/1999 12:24	
Bromoform	ND	5.0	ug/Kg	11/22/1999 12:24	
Bromomethane	ND	10.0	ug/Kg	11/22/1999 12:24	
Carbon tetrachloride	ND	5.0	ug/Kg	11/22/1999 12:24	
Chlorobenzene	ND	5.0	ug/Kg	11/22/1999 12:24	
Chloroethane	ND	10	ug/Kg	11/22/1999 12:24	
2-Chloroethylvinyl ether	ND	50	ug/Kg	11/22/1999 12:24	
Chloroform	ND	5.0	ug/Kg	11/22/1999 12:24	
Chloromethane	ND	10	ug/Kg	11/22/1999 12:24	
Dibromochloromethane	ND	5.0	ug/Kg	11/22/1999 12:24	
1,2-Dichlorobenzene	ND	5.0	ug/Kg	11/22/1999 12:24	
1,3-Dichlorobenzene	ND	5.0	ug/Kg	11/22/1999 12:24	
1,4-Dichlorobenzene	ND	5.0	ug/Kg	11/22/1999 12:24	
Dichlorodifluoromethane	ND	10	ug/Kg	11/22/1999 12:24	
1,1-Dichloroethane	ND	5.0	ug/Kg	11/22/1999 12:24	
1,2-Dichloroethane	ND	5.0	ug/Kg	11/22/1999 12:24	
1,1-Dichloroethene	ND	5.0	ug/Kg	11/22/1999 12:24	
cis-1,2-Dichloroethene	ND	5.0	ug/Kg	11/22/1999 12:24	
trans-1,2-Dichloroethene	ND	5.0	ug/Kg	11/22/1999 12:24	
1,2-Dichloropropane	ND	5.0	ug/Kg	11/22/1999 12:24	
cis-1,3-Dichloropropene	ND	5.0	ug/Kg	11/22/1999 12:24	
trans-1,3-Dichloropropene	ND	5.0	ug/Kg	11/22/1999 12:24	
Methylene chloride	ND	5.0	ug/Kg	11/22/1999 12:24	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/Kg	11/22/1999 12:24	
Tetrachloroethene	ND	5.0	ug/Kg	11/22/1999 12:24	
1,1,1-Trichloroethane	ND	5.0	ug/Kg	11/22/1999 12:24	
1,1,2-Trichloroethane	ND	5.0	ug/Kg	11/22/1999 12:24	
Trichloroethene	ND	5.0	ug/Kg	11/22/1999 12:24	
Vinyl chloride	ND	5.0	ug/Kg	11/22/1999 12:24	
Trichlorotrifluoroethane	ND	5.0	ug/Kg	11/22/1999 12:24	
Trichlorofluoromethane	ND	5.0	ug/Kg	11/22/1999 12:24	
Surrogate(s)					
4-Bromofluorobenzene	100.4	74-121	%	11/22/1999 12:24	
1,2-Dichloroethane-d4	93.0	70-121	%	11/22/1999 12:24	
Toluene-d8	97.6	81-117	%	11/22/1999 12:24	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-11-0367

To: **Aqua Science Engineers, Inc.**
Attn: Dave Allen

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Halogenated Volatile Organics Compounds

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 1999/11/22-01.07**

LCS: 1999/11/22-01.07-002 Extracted: 11/22/1999 11:07 Analyzed: 11/22/1999 11:07
LCSD: 1999/11/22-01.07-003 Extracted: 11/22/1999 11:45 Analyzed: 11/22/1999 11:45

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Chlorobenzene	99.5	103	100.0	100.0	99.5	103.0	3.5	61-121	20		
1,1-Dichloroethene	90.2	98.0	100.0	100.0	90.2	98.0	8.3	65-125	20		
Trichloroethene	92.6	95.9	100.0	100.0	92.6	95.9	3.5	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	482	496	500	500	96.4	99.2		74-121			
1,2-Dichloroethane-d4	437	452	500	500	87.4	90.4		70-121			
Toluene-d8	487	484	500	500	97.4	96.8		81-117			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-11-0367

To: **Aqua Science Engineers, Inc.**
Attn.: Dave Allen

Test Method: 8260A
Prep Method: 5030

Batch QC Report

Halogenated Volatile Organics Compounds

Matrix Spike (MS/MSD) Soil **QC Batch # 1999/11/22-01.07**

Sample ID: **BOEX-SW-7** Lab Sample ID: 1999-11-0367-002

MS: 1999/11/22-01.07-004 Extracted: 11/22/1999 16:22 Analyzed: 11/22/1999 16:22 Dilution: 1.0

MSD: 1999/11/22-01.07-005 Extracted: 11/22/1999 17:00 Analyzed: 11/22/1999 17:00 Dilution: 1.0

Compound	Conc. [ug/Kg]			Exp.Conc. [ug/Kg]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
1,1-Dichloroethene	93.0	97.5	ND	94.5	96.2	98.4	101.4	3.0	65-125	20		
Trichloroethene	91.1	96.5	ND	94.5	96.2	96.4	100.3	4.0	74-134	20		
Chlorobenzene	96.0	102	ND	94.5	96.2	101.6	106.0	4.2	61-121	20		
Surrogate(s)												
4-Bromofluorobenzene	578	562		500	500	115.6	112.4		74-121			
1,2-Dichloroethane-d4	479	482		500	500	95.8	96.4		70-121			
Toluene-d8	491	495		500	500	98.2	99.0		81-117			

11-0367 4/19/18 **RUSH**

Aqua Science Engineers, Inc.
208 W. El Pintado Road
Danville, CA 94526
(925) 820-9391
FAX (925) 837-4853

Chain of Custody

PAGE 1 OF 1

SAMPLER (SIGNATURE) D. Allen (PHONE NO.)

PROJECT NAME UNION STREET JOB NO. 3515

ADDRESS 2221 UNION STREET, OAKLAND DATE 11/18

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-GASOLINE (EPA 5030/8015)	TPH-DIESEL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	PURGEABLE AROMATICS (EPA 602/8020)	VOLATILE ORGANICS (EPA 624/8240)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (5) (EPA 6010+7000)	CAM17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140) (EPA 608/8080)	ORGANOCHLORINE HERBICIDES (EPA 8150)	FUEL OXYGENATES (EPA 8260)					COMPOSITE
BOEX-NE-7'	11/18	13:30	SOIL	1				X															
BOEX-SW-7'	11/18	13:35	SOIL	1				X															
BOE-NW-7'	11/18	13:40	SOIL	1				X															
BOEX-SE-7'	11/18	13:45	SOIL	1				X															

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:	COMMENTS:
(signature) (time) 12:14	(signature) (time)	(signature) (time)	(signature) (time) 12:14	48-hour RUSH
D. Allen 11/17			CRISELDA 11/19/99	
(printed name) (date)	(printed name) (date)	(printed name) (date)	(printed name) (date)	
Company- ASE, Inc.	Company-	Company-	Company- CN	