

September 15, 2000

Mr. George Muniz
Livermore Valley Joint Unified School District
685 East Jack London Boulevard
Livermore, CA 94550

Subject: Maintenance Yard
2900 Ladd Avenue
Livermore, California

Project No.
3174.3.050.03

*shallow
depth
Need MW-5 installation rpt - coming
Cent. Qmp for MW-5,
SAR for other wells*

00 OCT -5 PM 3:50
ENVIRONMENTAL
PROTECTION

REPORT ON GROUND-WATER SAMPLING

Dear Mr. Muniz:

ENGEO Incorporated is pleased to provide the results from the most recent sampling and laboratory testing of ground-water monitoring wells MW-2 – MW-5 located at 2900 Ladd Avenue in Livermore, California. MW-1 was destroyed in July, 1992, and is not addressed. This report presents the results of the July 2000 sampling event. The scope of services included the following:

- Purging of the four monitoring wells with the recovery of a ground-water sample from each of the wells.
- Laboratory analysis of the ground-water samples for TVPH as gasoline; benzene, toluene, ethyl benzene and xylenes (BTEX); and methyl t-butyl ether (MtBE).
- Preparation of this letter report.

GROUND-WATER SAMPLING

Fieldwork was conducted on July 20 and 21, 2000. Well MW-2 was resampled on August 1, 2000, due to an anomalous laboratory result (see following section). The depth to the top of the ground water was verified and the wells were checked for the presence of free product or petroleum sheen. No free product was observed; however, a sheen was observed on the water recovered from MW-2 and MW-5. Prior to sampling, approximately four casing volumes of water were removed from the wells. Monitoring wells MW-2, MW-3 and MW-4 were purged using a submersible electric pump. Monitoring well MW-5 was purged using a disposable bailer due to the shallow depth of the water column in the well. Water quality parameters including temperature, pH, and conductivity were monitored to allow for adequate purging. The ground-water samples were collected for laboratory testing using a disposable polyethylene bailer. The samples were then decanted into pre-cleaned laboratory glassware and cooled in an ice chest until delivery under a documented chain-of-custody to Chromalab, Inc., in Pleasanton, California. The well sampling information forms and the chain-of-custody are provided as attachments.

LABORATORY ANALYSIS

The ground-water samples were tested for total petroleum hydrocarbons as gasoline TVPH; BTEX; and MtBE. A copy of the laboratory test report is provided as an attachment. Table I provides a summary of the laboratory test results for the current sampling episode. Table II, providing a historical summary of the laboratory analysis data, is included as an attachment.

TABLE I
Laboratory Analysis Summary for the Current Sampling Episode
(Concentrations reported in parts per billion)

Well	DTW	TVPH	B	T	E	X	MtBE
MW2	23.96	2,200	850	240	74	240	<50
MW3	23.35	<50	1.4	3.6	<0.50	3.9	<5.0
MW4	23.91	97	21	6.8	0.66	4.6	11
MW5	20.19	92,000	9,900	15,000	540	17,000	<1,300

DTW: Depth to water (ft.) measured from top of casing (TOC).

NT: Not Tested

An undetermined sampling/analysis error occurred for the July sample collected for MW-2. The well was resampled on August 1, 2000. The data for the August 1st sample is reported for the Table I/Table II and on the ground-water sampling forms. The analysis report for the August sample is consistent with previous sampling events.

The next sampling episode is scheduled for October 2000. With your authorization, a copy of this report has been provided to Ms. Eva Chu with the Alameda County Department of Environmental Health. We appreciate the opportunity to be of continued service to you on this project. If you have any questions, please contact our office.

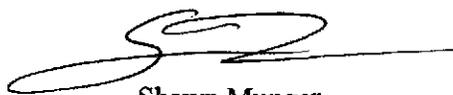
Very truly yours,

ENGEO INCORPORATED



Keith Nowell
Staff Geologist

Reviewed by:



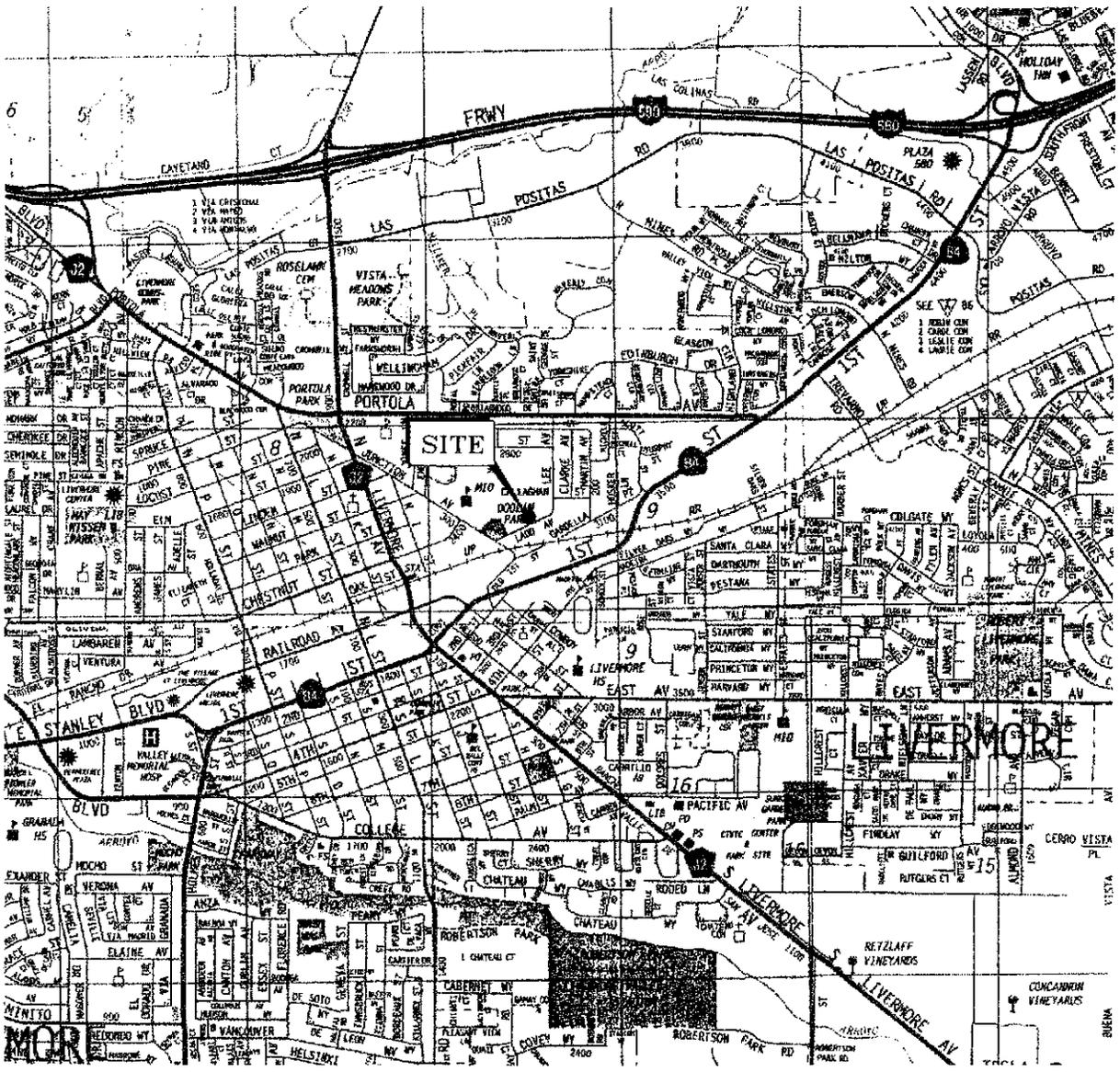
Shawn Munger
Principal - CHG 413

kn/ja:ground

Attachments: Figure 1 - Site Location
Figure 2 - Monitoring Well Locations
Table II - Historical Laboratory Analysis Summary
Ground-Water Sampling Information Forms
Chromalab, Inc., Report
Chain-of-Custody

cc: 1 - Ms. Eva Chu, Alameda County Department of Environmental Health

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BASE MAP SOURCE: THOMAS BROTHERS

N.T.S.

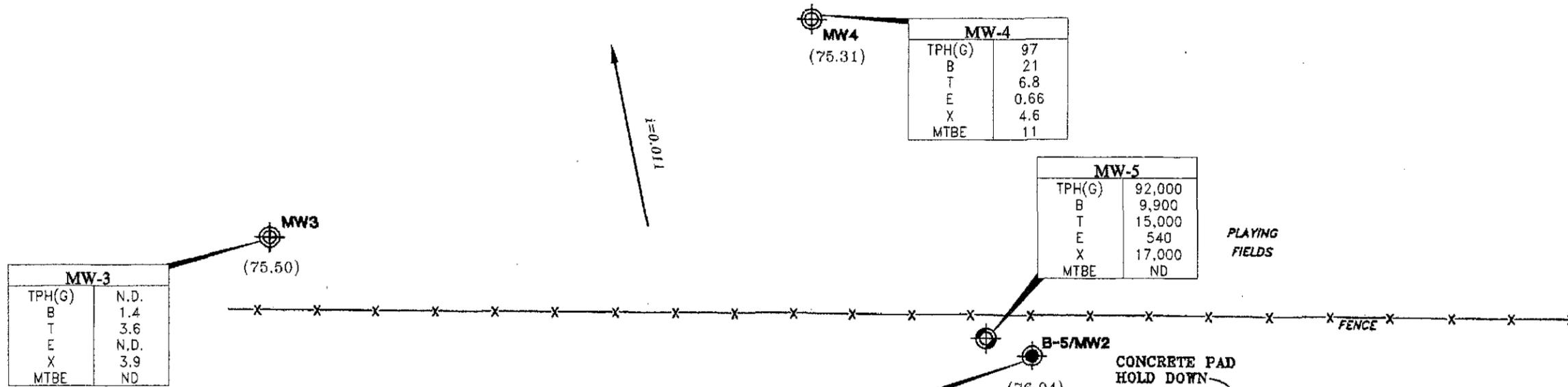


SITE LOCATION
 MAINTENANCE YARD, 2900 LADD AVENUE
 LIVERMORE, CALIFORNIA

PROJECT NO.: 3174.3.050.03
 DATE: SEPTEMBER 2000
 DRAWN BY: SRP CHECKED BY: *[Signature]*

FIGURE NO.
1

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TPH(G)	2,200
B	850
T	240
E	74
X	240
MTBE	ND

EXPLANATION

- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELLS INSTALLED 6/30/94 & 7/1/94
- APPROXIMATE LOCATION OF DECOMMISSIONED MONITORING WELL
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL INSTALLED 4/13/93
- APPROXIMATE LOCATION OF GROUNDWATER MONITORING WELL INSTALLED 6/28/00

TPH(G) GASOLINE

B BENZENE

T TOLUENE

E ETHYL BENZENE

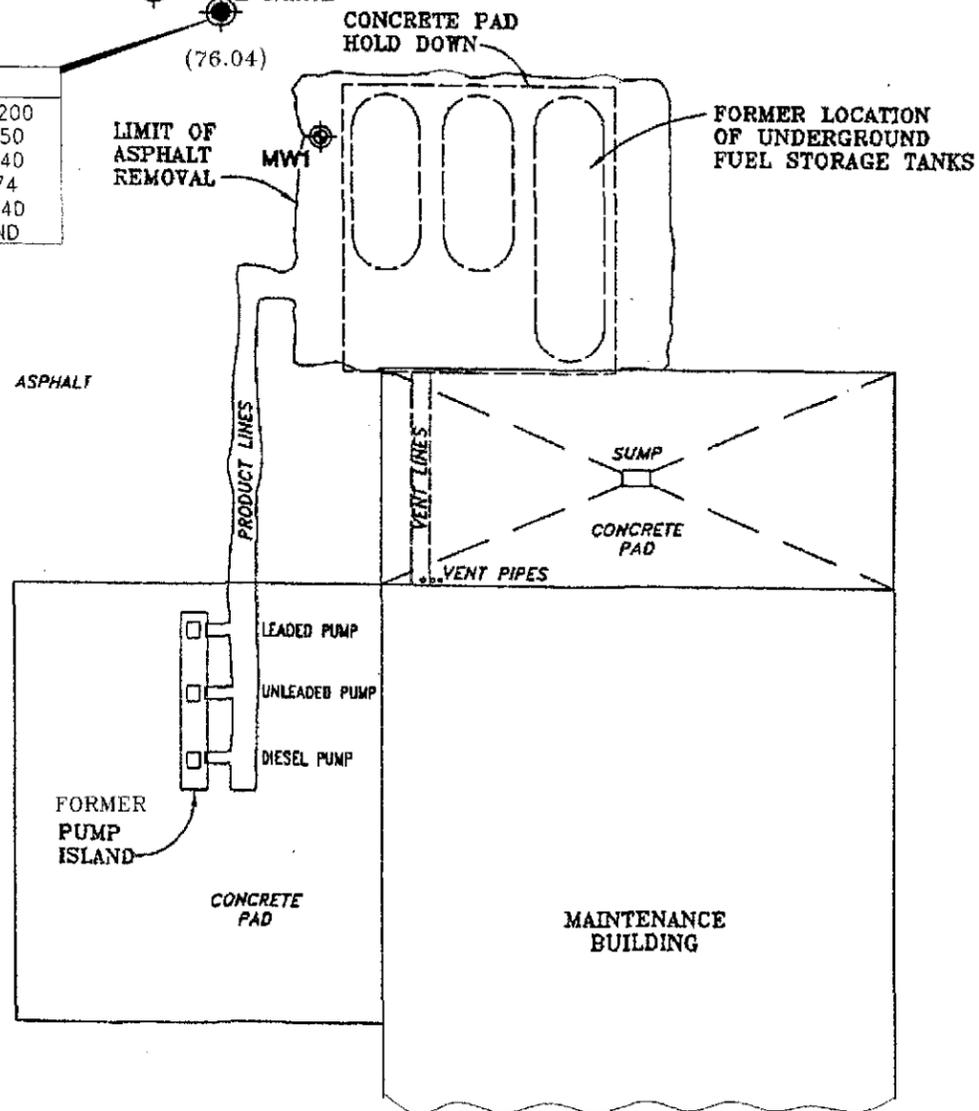
X TOTAL XYLENES

MTBE METHYL-TERTIARY-BUTYL ETHER

ND CONCENTRATION BELOW LABORATORY REPORTING LIMITS

(76.04) CASING ELEVATION, IN FEET, RELATIVE TO 100.0 BENCHMARK

CONCENTRATIONS REPORTED IN PARTS PER BILLION



SOURCE: UNKNOWN



ENGEO
INCORPORATED

MONITORING WELL LOCATIONS
MAINTENANCE YARD 2900 LADD AVENUE
LIVERMORE, CALIFORNIA

PROJECT NO.: 3174.3.050.03

DATE: SEPTEMBER 2000

DRAWN BY: SFF CHECKED BY: *[Signature]*

N.T.S.

FIGURE NO.

2

TABLE II
Historical Data
Laboratory Analysis Summary
(Concentrations reported in parts per billion)

	DTW	TVPHg	B	T	E	X	MtBE
MW2							
4/20/93	30.81	4,500	340	110	8.0	630	NT
5/12/94	31.12	7,000	520	220	35	410	NT
2/8/95	28.04	170	8.9	4.5	2.1	17	NT
5/23/95	17.77	<50	<0.5	<0.5	<0.5	<0.5	NT
9/20/95	25.55	8,400	2,500	1,200	180	940	NT
12/29/95	20.91	640	0.7	<0.5	1.9	4.7	NT
11/01/96	22.63	1,600	390	140	25	120	NT
4/29/97	20.39	4,900	640	240	83	200	<250
8/05/99	26.18	3,000	1,100	370	97	240	<25
8/01/00	23.96	2,200	850	240	74	240	<50
MW3							
7/12/94	38.76	<50	<0.5	<0.5	<0.5	<0.5	NT
2/8/95	27.08	<50	<0.5	<0.5	<0.5	<0.5	NT
5/23/95	17.28	<50	<0.5	<0.5	<0.5	<0.5	NT
9/20/95	25.06	<50	1.4	<0.5	<0.5	<0.5	NT
12/29/95	20.25	50	1.8	<0.5	<0.5	<0.5	NT
11/01/96	22.22	<50	<0.5	<0.5	<0.5	<0.5	NT
4/29/97	20.05	<50	1.7	<0.5	<0.5	<0.5	<5.0
8/05/99	26.07	<50	<0.50	<0.50	<0.50	0.70	<5.0
7/20/00	23.35	<50	1.4	3.6	<0.50	3.9	<5.0
MW4							
7/12/94	39.50	<50	<0.5	<0.5	<0.5	<0.5	NT
2/8/95	27.66	<50	<0.5	<0.5	<0.5	<0.5	NT
5/23/95	17.68	60	<0.5	<0.5	<0.5	<0.5	NT
9/20/95	25.81	<50	<0.5	<0.5	<0.5	<0.5	NT
12/29/95	20.90	<50	<0.5	<0.5	<0.5	<0.5	NT
11/01/96	22.84	<50	2.7	<0.5	<0.5	<0.5	NT
4/29/97	20.57	<50	2.6	<0.5	<0.5	<0.5	9.2
8/05/99	26.64	120	59	<0.50	<0.50	<0.50	19
7/20/00	23.91	97	21	6.8	0.66	4.6	11
MW5¹							
7/21/00	20.19	92,000	9,900	15,000	540	17,000	<1,300

DTW: Depth to water (ft.) measured from top of casing (TOC).

NT: Not Tested

1. Well installed May 28, 2000

**ENGEO INCORPORATED
GROUND-WATER SAMPLING INFORMATION**

Job Name: 2900 Ladd Avenue
 Location: Livermore, California
 Client: LVJUSD

Job Number: 3174.3.050.03
 Date: 08/01/00
 By: B. Fagundes

WELL INFORMATION

Well Number: MW-2
 Total Depth (ft.): 56.72 TOC
 Depth to Water (ft.): 23.96 TOC

Casing Diameter (in.): 2.00
 Screen Length (ft.): 25
 Casing Volume (gal.): 5.7

PURGING INFORMATION

Bailer: _____ Pump: X Rate: 0.3 gpm
 Volume Removed (gal.): 24

Time (init./fin.): 11:45 / 13:09
 Number of Casing Volumes: 4.2

Time	Volume Removed (Gal.)	Total Casing Volumes	Temperature (degrees farenheight)	Conductivity (micromohs)	pH	Comments
11:45	---	---	---	---	---	Initial, petr. odor & film
12:17	6.0	1.1	72.2	872	6.6	Slightly turbid, thin pet. film
12:39	12.0	2.1	71.8	788	6.5	Slightly turbid, thin pet. film
12:53	18.0	3.2	70.7	726	6.4	Slightly turbid, thin pet. film
13:09	24.0	4.2	70.3	718	6.5	Slightly turbid, thin pet. film

SAMPLE INFORMATION

Bailer: X Pump: _____
 Decon Procedure: TSP
 Disposable: X

Distilled Water: _____
 Other: _____

Sample	Time	Size / Number	Preservative	Test	Comments
MW-2	13:30	40 ml 3	HCl	TPHg/BTEX/MTBE	Slightly turbid

**ENGEO INCORPORATED
GROUND-WATER SAMPLING INFORMATION**

Job Name: 2900 Ladd Avenue
 Location: Livermore, California
 Client: LVJUSD

Job Number: 3174.3.050.03
 Date: 07/20/00
 By: B. Fagundes

WELL INFORMATION

Well Number: MW-3
 Total Depth (ft.): 52.50 TOC
 Depth to Water (ft.): 23.35 TOC

Casing Diameter (in.): 2.00
 Screen Length (ft.): 25
 Casing Volume (gal.): 5.1

PURGING INFORMATION

Bailer: Pump: X Rate: 1.3 gpm
 Volume Removed (gal.): 20

Time (init./fin.): 13:10 / 13:25
 Number of Casing Volumes: 3.9

Time	Volume Removed (Gal.)	Total Casing Volumes	Temperature (degrees farenheight)	Conductivity (micromohs)	pH	Comments
13:10	---	---	---	---	---	Initial, No odor, no sheen
13:14	5.0	1.0	76.3	1110	7.3	Clear
13:18	10.0	2.0	70.7	972	6.7	Clear
13:21	15.0	3.0	68.5	895	6.8	Clear
13:25	20.0	3.9	69.3	870	6.8	Clear

SAMPLE INFORMATION

Bailer: X Pump:
 Decon Procedure: TSP
 Disposable: X

Distilled Water:
 Other:

Sample	Time	Size / Number	Preservative	Test	Comments
MW-3	13:42	40 ml 3	HCl	TPHg/BTEX/MTBE	

**ENGEO INCORPORATED
GROUND-WATER SAMPLING INFORMATION**

Job Name: 2900 Ladd Avenue

Job Number: 3174.3.050.03

Location: Livermore, California

Date: 07/20/00

Client: LVJUSD

By: B. Fagundes

WELL INFORMATION

Well Number: MW-4

Casing Diameter (in.): 2.00

Total Depth (ft.): 53.50 TOC

Screen Length (ft.): 25

Depth to Water (ft.): 23.91 TOC

Casing Volume (gal.): 5.2

PURGING INFORMATION

Bailer: Pump: X Rate: 0.2 gpm

Time (init./fin.): 10:50 / 12:20

Volume Removed (gal.): 20.0

Number of Casing Volumes: 3.9

Time	Volume Removed (Gal.)	Total Casing Volumes	Temperature (degrees farenheight)	Conductivity (micromohs)	pH	Comments
10:50	---	---	---	---	---	Initial, No odor, no sheen
11:03	5.0	1.0	69.6	1175	6.9	Clear
11:18	10.0	1.9	70.0	1177	6.9	Clear
11:43	15.0	2.9	73.9	1082	7.0	Clear
12:20	20.0	3.9	75.0	1108	7.2	Clear

SAMPLE INFORMATION

Bailer: X Pump:

Distilled Water:

Decon Procedure: TSP

Other:

Disposable: X

Sample	Time	Size / Number	Preservative	Test	Comments
MW-4	12:43	40 ml / 3	HCl	TPHg/BTEX/MTBE	

**ENGEO INCORPORATED
GROUND-WATER SAMPLING INFORMATION**

Job Name: 2900 Ladd Avenue
 Location: Livermore, California
 Client: LVJUSD

Job Number: 3174.3.050.03
 Date: 07/21/00
 By: B. Fagundes

WELL INFORMATION

Well Number: MW-5
 Total Depth (ft.): 25.00 TOC
 Depth to Water (ft.): 20.19 TOC

Casing Diameter (in.): 2.00
 Screen Length (ft.): 25
 Casing Volume (gal.): 0.8

PURGING INFORMATION

Bailer: X Pump: _____ Rate: _____
 Volume Removed (gal.): 3.5

Time (init./fin.): 11:45 / 12:25
 Number of Casing Volumes: 4.2

Time	Volume Removed (Gal.)	Total Casing Volumes	Temperature (degrees farenheight)	Conductivity (micromohs)	pH	Comments
11:45	---	---	---	---	---	Turbid, pet. sheen & odor
12:25	3.5	4.2	71.1	1391	6.9	Turbid, pet. sheen & odor

SAMPLE INFORMATION

Bailer: X Pump: _____
 Decon Procedure: TSP
 Disposable: X

Distilled Water: _____
 Other: _____

Sample	Time	Size / Number	Preservative	Test	Comments
MW-5	12:30	40 ml 3	HCl	TPH/BTEX/MIBE	

**ENGEO INCORPORATED
GROUND-WATER MONITORING WELL DATA**

Project: 2900 Ladd Avenue

Project No: 3174.3.050.03

Location: Livermore, California

Proj. Date: 7/20/00

GROUND-WATER GRADIENT CALCULATION

Maximum Elevation (ft-msl) 76.04
 Minimum Elevation (ft-msl) 75.31
 Mid Elevation (ft-msl): 75.50
 Distance Max - Min (ft): 67.12
 Equipotential Point: 17.47
 (Feet From Min Point along Min-Max line)
 Gradient, i: 0.0109
 (Vertical feet per linear foot, based on wells MW2,3,4)

WATER ELEVATION DATA

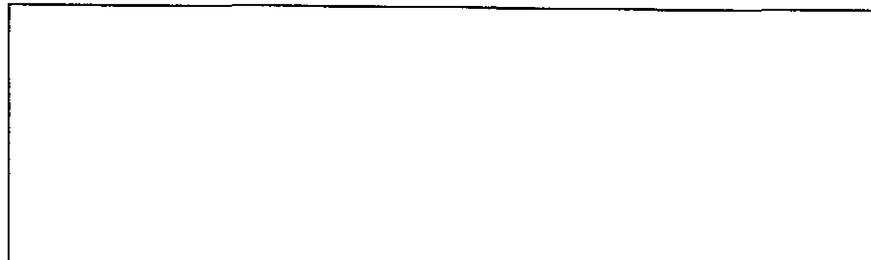
WELL#	Elevation (msl)	Casing Elevation (rel)	Casing Height (ft)	Depth to Water (tc/ft)	Water Elev (msl)	Water Depth (ft)
MW-1	Well destroyed	7/9/1992				
MW-2	100.4	100	0.40	23.96	76.04	24.36
MW-3	99.03	98.85	0.18	23.35	75.50	23.53
MW-4	99.48	99.22	0.26	23.91	75.31	24.17
MW-5				20.19		

WELL CONSTRUCTION DETAILS

WELL#	Installation Date	Boring Diameter (in)	Total Depth (ft)	Casing Diameter (in)	Top of Screen (bgl)	Top of Filter Pack (bgl)
MW-1	14-Dec-90	6.00	67.0	2.00	47.0	40.0
MW-2	13-Apr-93	7.25	57.0	2.00	32.0	30.0
MW-3	01-Jul-94	7.25	53.0	2.00	28.0	26.0
MW-4	30-Jun-94	7.25	53.0	2.00	28.0	26.0
MW-5	28-May-00	8.00	25.0	2.00	15.0	14.0

Distances
 Distances-- based on co-ordinates-- MW-2, MW-3, MW-4

Well	X- coordinate	Y- coordinate	
MW-2	4967.69	4939.74	High well
MW-3	4871.27	5021.17	Mid well
MW-4	4900.86	4933.55	Low well
Distance between high and low wells		67.12	feet



Engeo, Inc.

2401 Crow Canyon Road, Suite 200
San Ramon, CA 94583-1545

Attn.: Bill Fagundes

Project: 3174.3.050.02
Maintenance Yard

Attached is our report for your samples received on Friday July 21, 2000
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 20, 2000
unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: asalimpour@chromalab.com

Sincerely,



Afsaneh Salimpour

Gas/BTEX and MTBE

Engeo, Inc.	☒ 2401 Crow Canyon Road, Suite 200 San Ramon, CA 94583-1545
Attn: Bill Fagundes	Phone: (925) 838-1600 Fax: (925) 838-7425
Project #: 3174.3.050.02	Project: Maintenance Yard

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-2	Water	07/21/2000 14:20	1
MW-5	Water	07/21/2000 12:30	2

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0345

To: Engeo, Inc.

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-2	Lab Sample ID: 2000-07-0345-001
Project: 3174.3.050.02 Maintenance Yard	Received: 07/21/2000 15:41
Sampled: 07/21/2000 14:20	Extracted: 07/25/2000 20:39
Matrix: Water	QC-Batch: 2000/07/25-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/25/2000 20:39	
Benzene	ND	0.50	ug/L	1.00	07/25/2000 20:39	
Toluene	ND	0.50	ug/L	1.00	07/25/2000 20:39	
Ethyl benzene	ND	0.50	ug/L	1.00	07/25/2000 20:39	
Xylene(s)	ND	0.50	ug/L	1.00	07/25/2000 20:39	
MTBE	ND	5.0	ug/L	1.00	07/25/2000 20:39	
Surrogate(s)						
Trifluorotoluene	94.7	58-124	%	1.00	07/25/2000 20:39	
4-Bromofluorobenzene-FID	71.9	50-150	%	1.00	07/25/2000 20:39	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0345

To: **Engeo, Inc.**

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-5	Lab Sample ID: 2000-07-0345-002
Project: 3174.3.050.02 Maintenance Yard	Received: 07/21/2000 15:41
Sampled: 07/21/2000 12:30	Extracted: 07/26/2000 15:30
Matrix: Water	QC-Batch: 2000/07/26-01.03

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	92000	13000	ug/L	250.00	07/26/2000 15:30	
Benzene	9900	130	ug/L	250.00	07/26/2000 15:30	
Toluene	15000	130	ug/L	250.00	07/26/2000 15:30	
Ethyl benzene	540	130	ug/L	250.00	07/26/2000 15:30	
Xylene(s)	17000	130	ug/L	250.00	07/26/2000 15:30	
MTBE	ND	1300	ug/L	250.00	07/26/2000 15:30	
Surrogate(s)						
Trifluorotoluene	104.5	58-124	%	1.00	07/26/2000 15:30	
4-Bromofluorobenzene-FID	108.1	50-150	%	1.00	07/26/2000 15:30	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0345

To: Engeo, Inc.

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/07/25-01.01
MB: 2000/07/25-01.01-001		Date Extracted: 07/25/2000 10:40

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/25/2000 10:40	
Benzene	ND	0.5	ug/L	07/25/2000 10:40	
Toluene	ND	0.5	ug/L	07/25/2000 10:40	
Ethyl benzene	ND	0.5	ug/L	07/25/2000 10:40	
Xylene(s)	ND	0.5	ug/L	07/25/2000 10:40	
MTBE	ND	5.0	ug/L	07/25/2000 10:40	
Surrogate(s)					
Trifluorotoluene	94.6	58-124	%	07/25/2000 10:40	
4-Bromofluorobenzene-FID	85.0	50-150	%	07/25/2000 10:40	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0345

To: **Engeo, Inc.**

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/07/26-01.03
MB: 2000/07/26-01.03-001		Date Extracted: 07/26/2000 07:52

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/26/2000 07:52	
Benzene	ND	0.5	ug/L	07/26/2000 07:52	
Toluene	ND	0.5	ug/L	07/26/2000 07:52	
Ethyl benzene	ND	0.5	ug/L	07/26/2000 07:52	
Xylene(s)	ND	0.5	ug/L	07/26/2000 07:52	
MTBE	ND	5.0	ug/L	07/26/2000 07:52	
Surrogate(s)					
Trifluorotoluene	113.2	58-124	%	07/26/2000 07:52	
4-Bromofluorobenzene-FID	117.0	50-150	%	07/26/2000 07:52	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0345

To: Engeo, Inc.

Test Method: 8020
8015M

Attn: Bill Fagundes

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/25-01.01
LCS: 2000/07/25-01.01-002	Extracted: 07/25/2000 07:46	Analyzed 07/25/2000 07:46
LCSD: 2000/07/25-01.01-003	Extracted: 07/25/2000 08:21	Analyzed 07/25/2000 08:21

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	Recovery	RPD	LCS	LCSD		
Gasoline	510	472	500	500	102.0	94.4	7.7	75-125	20				
Benzene	92.0	93.0	100.0	100.0	92.0	93.0	1.1	77-123	20				
Toluene	86.4	87.1	100.0	100.0	86.4	87.1	0.8	78-122	20				
Ethyl benzene	83.0	84.2	100.0	100.0	83.0	84.2	1.4	70-130	20				
Xylene(s)	242	246	300	300	80.7	82.0	1.6	75-125	20				
Surrogate(s)													
Trifluorotoluene	418	428	500	500	83.6	85.6		58-124					
4-Bromofluorobenzene-FI	371	356	500	500	74.2	71.2		50-150					

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0345

To: Engeo, Inc.

Test Method: 8020
8015M

Attn: Bill Fagundes

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/26-01.03
LCS: 2000/07/26-01.03-002	Extracted: 07/26/2000 08:22	Analyzed 07/26/2000 08:22
LCSD: 2000/07/26-01.03-003	Extracted: 07/26/2000 08:53	Analyzed 07/26/2000 08:53

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD		
Gasoline	615	609	500	500	123.0	121.8	1.0	75-125	20				
Benzene	49.9	48.9	50	50	99.8	97.8	2.0	77-123	20				
Toluene	48.3	47.7	50	50	96.6	95.4	1.3	78-122	20				
Ethyl benzene	49.6	49.4	50	50	99.2	98.8	0.4	70-130	20				
Xylene(s)	150	150	150	150	100.0	100.0	0.0	75-125	20				
Surrogate(s)													
Trifluorotoluene	271	262	250	250	108.4	104.8		58-124					
4-Bromofluorobenzene-FI	581	576	500	500	116.2	115.2		50-150					

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Engeo, Inc.

2401 Crow Canyon Rd., Suite 200
San Ramon, CA 94583-1545

Attn.: Mr. Keith Nowell

Project: 3174.3.050.02
Maintenance Yard LUSUSD

Dear Mr. Nowell,

Attached is our report for your samples received on Thursday July 20, 2000
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 19, 2000
unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: asalimpour@chromalab.com

Sincerely,



Afsaneh Salimpour

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0316

Gas/BTEX and MTBE

Engeo, Inc.

☒ 2401 Crow Canyon Road, Suite 200
San Ramon, CA 94583-1545

Attn:

Phone: (925) 838-1600 Fax: (925) 838-7425

Project #: 3174.3.050.02

Project: Maintenance Yard LUSUSD

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-3	Water	07/20/2000 14:00	1
MW-4	Water	07/20/2000 13:00	2

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0316

To: **Engeo, Inc.**

Test Method: 8020
8015M

Attn.: .

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-3	Lab Sample ID: 2000-07-0316-001
Project: 3174.3.050.02 Maintenance Yard LUSUSD	Received: 07/20/2000 15:39
Sampled: 07/20/2000 14:00	Extracted: 07/24/2000 18:44
Matrix: Water	QC-Batch: 2000/07/24-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/24/2000 18:44	
Benzene	1.4	0.50	ug/L	1.00	07/24/2000 18:44	
Toluene	3.6	0.50	ug/L	1.00	07/24/2000 18:44	
Ethyl benzene	ND	0.50	ug/L	1.00	07/24/2000 18:44	
Xylene(s)	3.9	0.50	ug/L	1.00	07/24/2000 18:44	
MTBE	ND	5.0	ug/L	1.00	07/24/2000 18:44	
Surrogate(s)						
Trifluorotoluene	84.4	58-124	%	1.00	07/24/2000 18:44	
4-Bromofluorobenzene-FID	74.9	50-150	%	1.00	07/24/2000 18:44	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0316

To: Engeo, Inc.

Test Method: 8020
8015M

Attn.: .

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-4	Lab Sample ID: 2000-07-0316-002
Project: 3174.3.050.02 Maintenance Yard LUSUSD	Received: 07/20/2000 15:39
Sampled: 07/20/2000 13:00	Extracted: 07/24/2000 19:20
Matrix: Water	QC-Batch: 2000/07/24-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	97	50	ug/L	1.00	07/24/2000 19:20	
Benzene	21	0.50	ug/L	1.00	07/24/2000 19:20	
Toluene	6.8	0.50	ug/L	1.00	07/24/2000 19:20	
Ethyl benzene	0.66	0.50	ug/L	1.00	07/24/2000 19:20	
Xylene(s)	4.6	0.50	ug/L	1.00	07/24/2000 19:20	
MTBE	11	5.0	ug/L	1.00	07/24/2000 19:20	
Surrogate(s)						
Trifluorotoluene	83.8	58-124	%	1.00	07/24/2000 19:20	
4-Bromofluorobenzene-FID	77.6	50-150	%	1.00	07/24/2000 19:20	

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Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0316

To: Engeo, Inc.

Test Method: 8020
8015M

Attn.: .

Prep Method: 5030

Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/07/24-01.01
MB: 2000/07/24-01.01-001		Date Extracted: 07/24/2000 06:22

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2000 06:22	
Benzene	ND	0.5	ug/L	07/24/2000 06:22	
Toluene	ND	0.5	ug/L	07/24/2000 06:22	
Ethyl benzene	ND	0.5	ug/L	07/24/2000 06:22	
Xylene(s)	ND	0.5	ug/L	07/24/2000 06:22	
MTBE	ND	5.0	ug/L	07/24/2000 06:22	
Surrogate(s)					
Trifluorotoluene	90.4	58-124	%	07/24/2000 06:22	
4-Bromofluorobenzene-FID	75.0	50-150	%	07/24/2000 06:22	

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CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0316

To: Engeo, Inc.

Test Method: 8020
8015M

Attn:

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/07/24-01.01	
LCS:	2000/07/24-01.01-002	Extracted:	07/24/2000 06:57	Analyzed	07/24/2000 06:57
LCSD:	2000/07/24-01.01-003	Extracted:	07/24/2000 07:32	Analyzed	07/24/2000 07:32

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	531	474	500	500	106.2	94.8	11.3	75-125	20		
Benzene	93.5	91.3	100.0	100.0	93.5	91.3	2.4	77-123	20		
Toluene	88.2	85.5	100.0	100.0	88.2	85.5	3.1	78-122	20		
Ethyl benzene	86.0	81.7	100.0	100.0	86.0	81.7	5.1	70-130	20		
Xylene(s)	251	241	300	300	83.7	80.3	4.1	75-125	20		
Surrogate(s)											
Trifluorotoluene	429	410	500	500	85.8	82.0		58-124			
4-Bromofluorobenzene-FI	394	378	500	500	78.8	75.6		50-150			

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2000-07-0316

53435

CHAIN OF CUSTODY RECORD

EMA
TPH - Gasoline/BTEX 8015/8020

PROJECT NUMBER 3174.3.050.02		PROJECT NAME Maintenance Yard LUSUSD					TPH - GASOLINE (EPA 8015/8020)	TPH - DIESEL (EPA 8015/8020/8030)	PURGEABLE AROMATICS BTEX (EPA 002, 8030)	PURGEABLE HALOCARBONS (EPA 001, 8010)	VOLATILE ORGANICS (EPA 004, 8040)	BASE/NEUTRALS, ACIDS (EPA 025, 8270)	TOTAL OIL & GREASE (SMWW 5500 F)	OC PESTICIDES/PCB (EPA 008, 8080)	OP PESTICIDES (EPA 614/8140)	TITLE 26 METALS (17)	PRIORITY METALS (19)	REMARKS REQUIRED DETECTION LIMITS																		
SAMPLED BY: (SIGNATURE/PRINT) Bill Fagundes / Bill Fagundes																																				
SAMPLE NUMBER	DATE	TIME	MATRIX	NUMBER OF CONTAINERS	CONTAINER SIZE	PRESERVATIVE																														
MMW-3	7/20/00	1400	Agencies	3	40ml	HCl																														
MMW-4	7/20/00	1300	Agencies	3	40ml	HCl																														
<table border="1"> <tr> <td rowspan="3">CHT / CHNOFCUS</td> <td>RELINQUISHED BY: (SIGNATURE) Bill Fagundes</td> <td>DATE/TIME 7/20/00 1500</td> <td>RECEIVED BY: (SIGNATURE)</td> <td>RELINQUISHED BY: (SIGNATURE)</td> <td>DATE/TIME</td> <td>RECEIVED BY: (SIGNATURE)</td> </tr> <tr> <td>RELINQUISHED BY: (SIGNATURE)</td> <td>DATE/TIME</td> <td>RECEIVED BY: (SIGNATURE)</td> <td>RELINQUISHED BY: (SIGNATURE)</td> <td>DATE/TIME</td> <td>RECEIVED BY: (SIGNATURE)</td> </tr> <tr> <td>RELINQUISHED BY: (SIGNATURE)</td> <td>DATE/TIME</td> <td>RECEIVED FOR LABORATORY BY: (SIGNATURE) Mufaras</td> <td>DATE/TIME 07/20/00 15:00</td> <td>REMARKS</td> <td></td> </tr> </table>																		CHT / CHNOFCUS	RELINQUISHED BY: (SIGNATURE) Bill Fagundes	DATE/TIME 7/20/00 1500	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) Mufaras	DATE/TIME 07/20/00 15:00	REMARKS	
CHT / CHNOFCUS	RELINQUISHED BY: (SIGNATURE) Bill Fagundes	DATE/TIME 7/20/00 1500	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)																														
	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)																														
	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) Mufaras	DATE/TIME 07/20/00 15:00	REMARKS																															

XXX X
XXX X

3.4



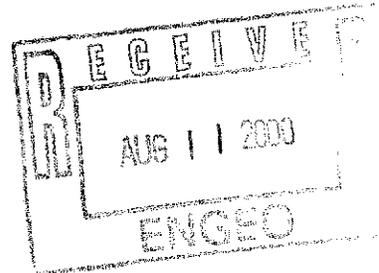
2401 CROW CANYON ROAD • SUITE 200
SAN RAMON, CALIFORNIA 94583-1545
(510)838-1600 • FAX(510)838-7425

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO PROJECT FIELD FILES

Engeo, Inc.
2401 Crow Canyon Road, Suite 200
San Ramon, CA 94583-1545

Attn.: Bill Fagundes

Project: 3174.3.050.02
Maintenance Yard



Attached is our report for your samples received on Tuesday August 1, 2000
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 31, 2000
unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: asalimpour@chromalab.com

Sincerely,

A handwritten signature in cursive script that reads "Afsaneh Salimpour". The signature is written in black ink and has a long, sweeping underline.

Afsaneh Salimpour

Gas/BTEX and MTBE

Engeo, Inc.	<input checked="" type="checkbox"/>	2401 Crow Canyon Road, Suite 200 San Ramon, CA 94583-1545
Attn: Bill Fagundes		Phone: (925) 838-1600 Fax: (925) 838-7425
Project #: 3174.3.050.02		Project: Maintenance Yard

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-2	Water	08/01/2000 13:30	1

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-08-0013

To: **Engeo, Inc.**

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: 2000-08-0013-001	Lab Sample ID: 2000-08-0013-001
Project: 3174.3.050.02 Maintenance Yard	Received: 08/01/2000 14:06
Sampled: 08/01/2000 13:30	Extracted: 08/01/2000 23:31
Matrix: Water	QC-Batch: 2000/08/01-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	2200	50	ug/L	1.00	08/01/2000 23:31	
Benzene	850	5.0	ug/L	10.00	08/02/2000 12:53	
Toluene	240	5.0	ug/L	10.00	08/02/2000 12:53	
Ethyl benzene	74	5.0	ug/L	10.00	08/02/2000 12:53	
Xylene(s)	240	5.0	ug/L	10.00	08/02/2000 12:53	
MTBE	ND	50	ug/L	10.00	08/02/2000 12:53	
Surrogate(s)						
Trifluorotoluene	96.6	58-124	%	1.00	08/02/2000 12:53	
4-Bromofluorobenzene-FID	76.6	50-150	%	1.00	08/01/2000 23:31	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-08-0013

To: Engeo, Inc.

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/08/01-01.01
MB: 2000/08/01-01.01-001		Date Extracted: 08/01/2000 09:01

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	08/01/2000 09:01	
Benzene	ND	0.5	ug/L	08/01/2000 09:01	
Toluene	ND	0.5	ug/L	08/01/2000 09:01	
Ethyl benzene	ND	0.5	ug/L	08/01/2000 09:01	
Xylene(s)	ND	0.5	ug/L	08/01/2000 09:01	
MTBE	ND	5.0	ug/L	08/01/2000 09:01	
Surrogate(s)					
Trifluorotoluene	103.8	58-124	%	08/01/2000 09:01	
4-Bromofluorobenzene-FID	85.2	50-150	%	08/01/2000 09:01	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-08-0013

To: Engeo, Inc.

Test Method: 8020
8015M

Attn.: Bill Fagundes

Prep Method: 5030

Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/08/02-01.03
MB: 2000/08/02-01.03-001		Date Extracted: 08/02/2000 08:36

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Benzene	ND	0.5	ug/L	08/02/2000 08:36	
Toluene	ND	0.5	ug/L	08/02/2000 08:36	
Ethyl benzene	ND	0.5	ug/L	08/02/2000 08:36	
Xylene(s)	ND	0.5	ug/L	08/02/2000 08:36	
MTBE	ND	5.0	ug/L	08/02/2000 08:36	
Surrogate(s)					
Trifluorotoluene	112.4	58-124	%	08/02/2000 08:36	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-08-0013

To: Engeo, Inc.

Test Method: 8020
8015M

Attn: Bill Fagundes

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/08/01-01.01	
LCS:	2000/08/01-01.01-002	Extracted:	08/01/2000 07:20	Analyzed	08/01/2000 07:20
LCSD:	2000/08/01-01.01-003	Extracted:	08/01/2000 08:26	Analyzed	08/01/2000 08:26

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	507	508	500	500	101.4	101.6	0.2	75-125	20		
Benzene	88.4	92.2	100.0	100.0	88.4	92.2	4.2	77-123	20		
Toluene	93.1	95.7	100.0	100.0	93.1	95.7	2.8	78-122	20		
Ethyl benzene	97.8	91.3	100.0	100.0	97.8	91.3	6.9	70-130	20		
Xylene(s)	297	274	300	300	99.0	91.3	8.1	75-125	20		
Surrogate(s)											
Trifluorotoluene	458	471	500	500	91.6	94.2		58-124			
4-Bromofluorobenzene-FI	380	385	500	500	76.0	77.0		50-150			

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-08-0013

To: Engeo, Inc.

Test Method: 8020
8015M

Attn: Bill Fagundes

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/08/02-01.03	
LCS:	2000/08/02-01.03-002	Extracted:	08/02/2000 09:07	Analyzed	08/02/2000 09:07
LCSD:	2000/08/02-01.03-003	Extracted:	08/02/2000 09:38	Analyzed	08/02/2000 09:38

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Benzene	50.6	49.2	50	50	101.2	98.4	2.8	77-123	20		
Toluene	48.9	48.0	50	50	97.8	96.0	1.9	78-122	20		
Ethyl benzene	50.5	49.5	50	50	101.0	99.0	2.0	70-130	20		
Xylene(s)	153	150	150	150	102.0	100.0	2.0	75-125	20		
Surrogate(s)											
Trifluorotoluene	262	254	250	250	104.8	101.6		58-124			

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

