



GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS MATERIALS TESTING

Project No. 3174.3.050.03

March 13, 2002

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



Subject:

Maintenance Yard 2900 Ladd Avenue Livermore, California

REPORT ON GROUNDWATER SAMPLING

Dear Mr. Moniz:

ENGEO Incorporated is pleased to provide the results from the most recent sampling and laboratory testing of groundwater Monitoring Wells MW-2, MW-3 and MW-5 located at 2900 Ladd Avenue in Livermore, California. MW-1 was destroyed in July 1992, and is not addressed. Well MW-4, located in the roller-hockey rink, was paved over and therefore was not sampled for this sampling event. This report presents the results of the January 2002 sampling event. The scope of services included the following:

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

GROUNDWATER SAMPLING

Fieldwork was conducted on January 18, 2002. The depth to the top of the groundwater for the wells 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-5. Prior to sampling, approximately four casing volumes of water were removed from the wells. Monitoring Wells MW-2 and MW-3 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 and pH were monitored to allow for adequate purging. The groundwater 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 Severn Trent Services in Pleasanton, California. The well sampling information forms and the chain of custody are provided as attachments.

No. HG 413

CERTIFIED

LABORATORY ANALYSIS

The groundwater 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 hillion)

| Well | DTW | TVPH | В | Т | Е | X | MtBE |
|------|-------|--------|-------|--------|--------|--------|--------|
| MW2 | 30.85 | 350 | 62 | 0.85 | 0.82 | 2.5 | <5.0 |
| MW3 | 30.50 | <50 | <.50 | <.50 | < 0.50 | <.50 | <5.0 |
| MW4 | | | | | | | _ |
| MW5 | 23.61 | 63,000 | 5,900 | 10,000 | 1,900 | 15,000 | <1,300 |

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

The next sampling episode, for MW5 only, is scheduled for April 2002. 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 us.

Very truly yours,

ENGEO INCORPORATED

Reviewed by:

For Bill Fagundes

Staff Geologist kn/hg:gws

Shawn Munge

Principal - CHG 413

cc:

Attachments: Figure 1 - Site Location

Figure 2 - Monitoring Well Locations

Table II - Historical Laboratory Analysis Summary

Groundwater Sampling Information Forms Severn Trent Services., Laboratory Test Results

Chain of Custody

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



TABLE II Historical Data

Laboratory Analysis Summary (Concentrations reported in parts per billion)

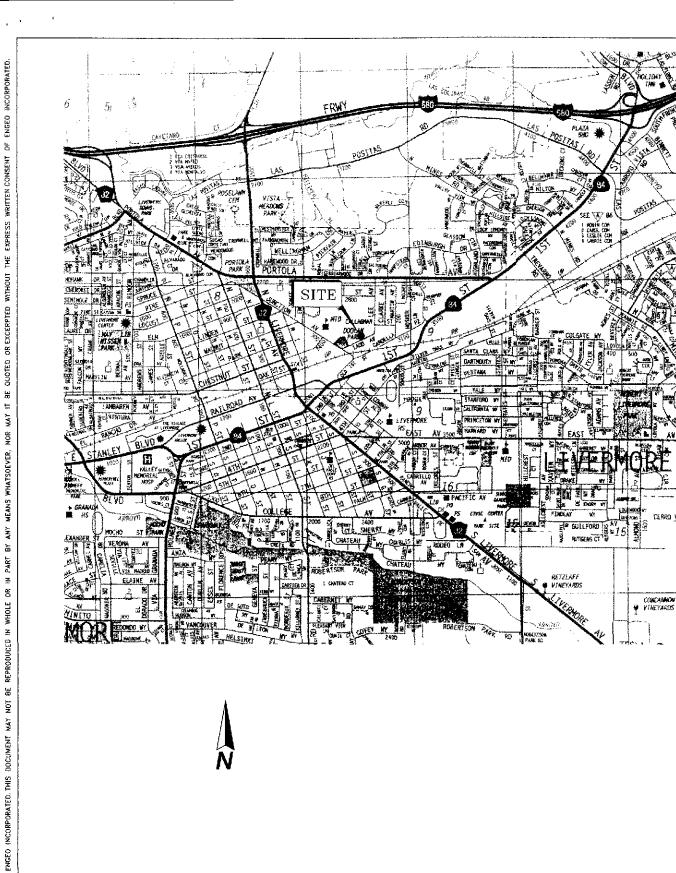
| | (Concentrations reported in parts per billion) | | | | | | | | | |
|----------|--|-------|--------|--------|--------|--------|------|--|--|--|
| | DTW | TVPHg | В | T | E | . X | MtBE | | | |
| MW2 | | | | | | | | | | |
| 4/20/93 | 30.81 | 4,500 | 340 | 110 | 8.0 | 630 | NT | | | |
| 5/12/94 | 31.12 | 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 | | | |
| 1/18/02 | 30.85 | 350 | 62 | 0.85 | 0.82 | 2.5 | <5.0 | | | |
| | | | M | W3 | | | ··· | | | |
| 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 | | | |
| 1/18/02 | 30.50 | <50 | <.50 | <.50 | <.50 | <.50 | <5.0 | | | |
| | | | M | W4 | | | 4 | | | |
| 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 | | | |
| 1/18/02* | NM | NS | NS | NS | NS | NS | NS | | | |



TABLE II (Continued)

| | | | | W5 ¹ | | | |
|---------|-------|--------|-------|-----------------|-------|--------|--------|
| 7/21/00 | 20.19 | 92,000 | 9,900 | 15,000 | 540 | 17,000 | <1,300 |
| 1/18/02 | 23.61 | 63,000 | 5,900 | 10,000 | 1,900 | 15,000 | <1,300 |

^{*} MW-4 is currently inaccessible. DTW: Depth to water (ft.) measured from top of casing (TOC). NT: Not Tested NM: Not Measured NS: Not Sampled ¹ Well installed May 28, 2000



BASE MAP SOURCE: THOMAS BROTHERS

NO SCALE

FIGURE NO.



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SITE LOCATION

MAINTENANCE YARD, 2900 LADD AVENUE

LIVERMORE, CALIFORNIA

PROJECT NO.: 3174.3.050.02

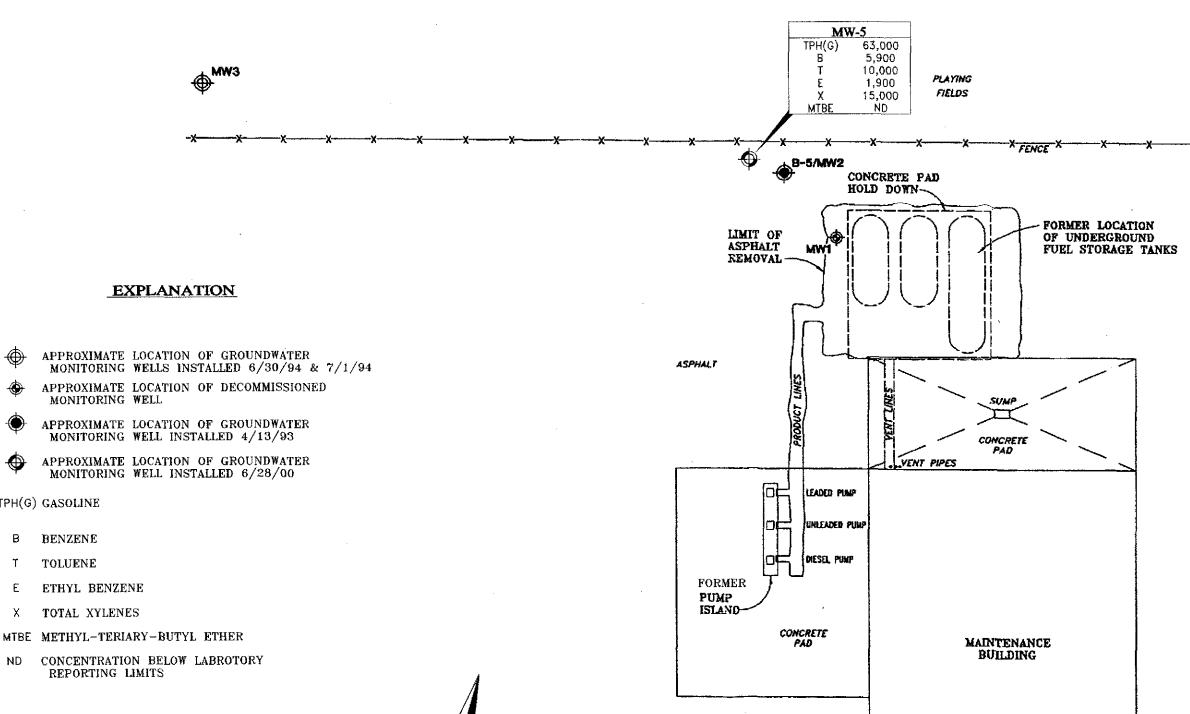
DATE: MARCH 2002

DRAWN BY: SRP

1

_Dwg\3174\3174305002-1SITE-302

CHECKED BY: SM



CONCENTRATIONS REPORTED IN PARTS PER BILLION

TPH(G) GASOLINE

BENZENE

TOLUENE

ETHYL BENZENE

TOTAL XYLENES

REPORTING LIMITS

BASE MAP SOURCE: UNKNOWN

MONITORING WELL LOCATIONS MAINTENANCE YARD, 2900 LADD AVENUE LIVERMORE, CALIFORNIA

PROJECT NO.: 3174.3.050.02 DATE: MARCH 2002

> CHECKED BY: SM Dwa\3174\3174305002-WELLS-302

NO SCALE

FIGURE NO.

1971-2001 - 30 YEARS OF EXCELLENCE

ENGEO INCORPORATED GROUND-WATER SAMPLING INFORMATION

Job Name: 2900 Ladd Avenue Job Number: 3174.3.050.02

Location: Livermore, California Date: January 18, 2002

Client: Livermore Valley Joint Unified School District By: Bill Fagundes

WELL INFORMATION

Well Number: MW-2 Diameter (in): 2

Total Depth (ft): 56.75 (TOC) Screen Length: 25 feet

Depth to Water (ft): 30.85 (TOC)

Casing Volume (gal): 4.4

PURGING INFORMATION

Bailer: Pump: X Rate: 1.0 gpm Time: (init./fin) 1239/1335

Volume Removed (gal): 18 No. of Casing Vol. 4.1

| Time | Volume Removed (Gal.) | Total Casing Volumes | Temp°F | Conc (µmohs/cm) | pН | Comments |
|------|-----------------------------|----------------------------|--------|--------------------|------|-----------------|
| 1239 | | | | | | slightly turbid |
| 1243 | 4.5 | 1.0 | 66.4 | | 7.03 | slightly turbid |
| 1327 | 9 | 2.0 | 66.4 | | 6.97 | slightly turbid |
| 1331 | 13.5 | 3.1 | 66.2 | | 7.02 | slightly turbid |
| 1335 | 18 | 4.1 | 66.4 | | 7.04 | slightly turbid |

SAMPLE INFORMATION

| Bailer: X Pump: Rate: (gpm) | |
|--------------------------------------|------------------------|
| Decon Procedure: TSP: X OR Alquinox: | Dist. H ₂ O |
| Disposable | Other |

| Sample | Time | Size | Presv. | Test | Comments |
|--------|------|----------|--------|------------------------------------|-----------------|
| MW-2 | 1350 | (3) 40ml | HCl | EPA (8015/8020) Gas, BTEX, MTBE | slightly turbid |

ENGEO INCORPORATED GROUND-WATER SAMPLING INFORMATION

| Job Name: 2900 Ladd Avenue | Job Number: 3174,3.050,02 |
|----------------------------|---------------------------|
| | |

Location: Livermore, California Date: January 18, 2002

Client: Livermore Valley Joint Unified School District By: Bill Fagundes

WELL INFORMATION

Well Number: MW-3 Diameter (in): 2

Total Depth (ft): 52.50 (TOC) Screen Length: 25 feet

Depth to Water (ft): 30.50 (TOC)

Casing Volume (gal): 3.7

PURGING INFORMATION

Bailer: Pump: X Rate: 0.89 gpm Time: (init./fin) 1430/1448

Volume Removed (gal): 16 No. of Casing Vol. 4.3

| Time | Volume Removed (Gal.) | Total Casing Volumes | Temp°F | Conc (µmohs/cm) | pН | Comments |
|------|-----------------------------|----------------------------|--------|--------------------|------|--------------------------|
| 1430 | | | | | | slightly turbid |
| 1436 | 4 | 1.1 | 66.0 | | 7.17 | slightly turbid to clear |
| 1441 | 8 | 2.2 | 66.7 | | 7.09 | clear |
| 1445 | 12 | 3.2 | 66.4 | | 7.07 | clear |
| 1448 | 16 | 4.3 | 66.7 | | 7.08 | clear |

SAMPLE INFORMATION

| Bailer: X Pump: Rate: (gpm) | |
|--------------------------------------|------------------------|
| Decon Procedure: TSP: X OR Alquinox: | Dist. H ₂ O |
| Disposable | Other |

| Sample | Time | Size | Presv. | Test | Comments |
|--------|------|----------|--------|------------------------------------|----------|
| MW-3 | 1458 | (3) 40ml | HCI | EPA (8015/8020) Gas, BTEX, MTBE | clear |

ENGEO INCORPORATED GROUND-WATER SAMPLING INFORMATION

| Job Nam | Job Name: 2900 Ladd Avenue Location: Livermore, California Client: Livermore Valley Joint Unified School District | | | | Job Number: 3174.3.050.02 | | |
|-----------|---|-----------------|----------------|-------------|-----------------------------|---------------------------------------|--|
| Location | | | | | Date: January 18, 2002 | | |
| Client: 1 | | | | ol District | By: Bill Fagundes | · · · · · · · · · · · · · · · · · · · | |
| | | | | WELL IN | FORMATION | | |
| Well Nu | mber: M | IW-5 | | | Diameter (in): 2 | | |
| Total De | epth (ft): | 25.0 (TOC) | | | Screen Length: 10 feet | | |
| Depth to | Water (1 | ft): 23.61 (TOO | () | | Casing Volume (gal): 0.25 | | |
| | | | | PURGING I | NFORMATION | | |
| Bailer: | X | Pump: | Rate: | gpm | Time: (init./fin) 1200/1220 | | |
| Volume | Remove | d (gal): 1 | | | No. of Casing Vol: 4 | | |
| | | | | · | | | |

| Time | Volume Removed (Gal.) | Total Casing Volumes | Temp°F | Conc (µmohs/cm) | рН | Comments |
|------|-----------------------------|----------------------------|--------|--------------------|----|---------------------------------|
| 1200 | <u>-</u> - | | | -+ | | slightly turbid, odor, sheen |
| 1220 | 1 | 4 | | | | slightly turbid, odor, sheen |
| | | | | | | |

SAMPLE INFORMATION

| Bailer: X Pump: Rate: (gpm) | |
|--------------------------------------|------------------------|
| Decon Procedure: TSP: X OR Alquinox: | Dist. H ₂ O |
| Disposable | Other |

| Sample | Time | Size | Presv. | Test | Comments |
|--------|------|----------|--------|------------------------------------|----------------------------------|
| MW-5 | 1220 | (3) 40ml | HC1 | EPA (8015/8020) Gas, BTEX, MTBE | slightly turbid, odor, sheen. |

Date: January 25, 2002



Engeo, Inc.

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

Attn:

Bill Fagundes

Project: 3174.3.050.02

2900 Ladd Avenue

Atsanch. Salinipoe

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com www.chromalab.com CA DHS ELAP#1094

Attached is our report for your samples received on Friday January 18, 2002 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 March 4, 2002 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

Project Manager

Gas/BTEX Compounds by 8015M/8021



STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com www.chromalab.com

CA DHS ELAP#1094

| Engeo, Inc. | |
|---------------------|---|
| Attn: Bill Fagundes | Phone: (925) 838-1600 Fax: (925) 838-7425 |
| 3174.3.050.02 | Project: 2900 Ladd Avenue |

Samples Reported

| Sample ID | Matrix | Date Sampled | Lab # |
|--------------|----------------|--------------------------------------|--------|
| MW-2 MW-3 | Water Water | 01/18/2002 13:50 01/18/2002 14:58 | 1 2 |
| MW-5 | Water | 01/18/2002 12:20 | 3 |

Gas/BTEX Compounds by 8015M/8021

Engeo, inc.

Test Method: 8015M

8021B

Prep Method: 5030

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

Tel 925 484 1919

Fax 925 484 1096 www.stl-inc.com

SEVERN

SERVICES

Sample ID: MW-2

Attn: Bill Fagundes

Lab Sample ID: 2002-01-0310-001

Received: 01/

01/18/2002 15:30

Extracted:

01/22/2002 20:55

Sampled:

Project:

01/18/2002 13:50

2900 Ladd Avenue

3174.3.050.02

QC-Batch:

2002/01/22-01.02

CA DHS ELAP#1094

www.chromalab.com

Matrix: Water

| Compound | Result | Rep.Limit | Units | Dilution | Analyzed | Flag |
|--------------------------|--------|-----------|-------|----------|------------------|------|
| Gasoline | 350 | 50 | ug/L | 1.00 | 01/22/2002 20:55 | dp |
| Benzene | 62 | 0.50 | ug/L | 1.00 | 01/22/2002 20:55 | |
| Toluene | 0.85 | 0.50 | ug/L | 1.00 | 01/22/2002 20:55 | |
| Ethyl benzene | 0.82 | 0.50 | ug/L | 1.00 | 01/22/2002 20:55 | |
| Xylene(s) | 2.5 | 0.50 | ug/L | 1.00 | 01/22/2002 20:55 | |
| МТВЕ | ND | 5.0 | ug/L | 1.00 | 01/22/2002 20:55 | |
| Surrogate(s) | | | | | | |
| Trifluorotoluene | 78.0 | 58-124 | % | 1.00 | 01/22/2002 20:55 | |
| 4-Bromofluorobenzene-FID | 85.0 | 50-150 | % | 1.00 | 01/22/2002 20:55 | |

Gas/BTEX Compounds by 8015M/8021

Engeo, Inc.

Test Method: 8015M

8021B

Prep Method: 5030

Lab Sample ID: 2002-01-0310-002

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

SEVERN TRENT

SERVICES

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com www.chromalab.com

CA DHS ELAP#1094

Sample ID: MW-3

Attn: Bill Fagundes

.....

3174.3.050.02

2900 Ladd Avenue

Received:

01/18/2002 15:30

Extracted:

01/22/2002 18:16

Sampled: 01/18/2002 14:58

QC-Batch:

2002/01/22-01.02

Matrix:

Project:

Water

| Compound | Result | Rep.Limit | Units | Dilution | Analyzed | Flag |
|--------------------------|--------|-----------|-------|----------|------------------|------|
| Gasoline | ND | 50 | ug/L | 1.00 | 01/22/2002 18:16 | |
| Benzene | ND | 0.50 | ug/L | 1.00 | 01/22/2002 18:16 | |
| Toluene | ND | 0.50 | ug/L | 1.00 | 01/22/2002 18:16 | |
| Ethyl benzene | ND | 0.50 | ug/L | 1.00 | 01/22/2002 18:16 | |
| Xylene(s) | ND | 0.50 | ug/L | 1.00 | 01/22/2002 18:16 | |
| MTBE | ND | 5.0 | ug/L | 1.00 | 01/22/2002 18:16 | |
| Surrogate(s) | | | | | | |
| Trifluorotoluene | 109.1 | 58-124 | % | 1.00 | 01/22/2002 18:16 | |
| 4-Bromofluorobenzene-FID | 108.9 | 50-150 | % | 1.00 | 01/22/2002 18:16 | |

Gas/BTEX Compounds by 8015M/8021

Engeo, Inc.

Test Method: 8015M

8021B

Prep Method: 5030

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

SERVICES

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com www.chromalab.com

CA DHS ELAP#1094

Sample ID: MW-5

Attn: Bill Fagundes

3174.3.050.02

2900 Ladd Avenue

01/18/2002 15:30

Lab Sample ID: 2002-01-0310-003

Received:

Extracted:

01/22/2002 21:27

Sampled:

Project:

01/18/2002 12:20

QC-Batch:

2002/01/22-01.02

Matrix:

Water

| Compound | Result | Rep.Limit | Units | Dilution | Analyzed | Flag |
|--------------------------|--------|-----------|-------|----------|------------------|------|
| Gasoline | 63000 | 13000 | ug/L | 250.00 | 01/22/2002 21:27 | |
| Benzene | 5900 | 130 | ug/L | 250.00 | 01/22/2002 21:27 | |
| Toluene | 10000 | 130 | ug/L | 250.00 | 01/22/2002 21:27 | |
| Ethyl benzene | 1900 | 130 | ug/L | 250.00 | 01/22/2002 21:27 | |
| Xylene(s) | 15000 | 130 | ug/L | 250.00 | 01/22/2002 21:27 | |
| MTBE | ND | 1300 | ug/L | 250.00 | 01/22/2002 21:27 | |
| Surrogate(s) | | | | | | |
| Trifluorotoluene | 80.2 | 58-124 | % | 250.00 | 01/22/2002 21:27 | |
| 4-Bromofluorobenzene-FID | 86.0 | 50-150 | % | 250.00 | 01/22/2002 21:27 | |

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method:

Method Blank

MB: 2002/01/22-01.02-003

8015M 8021B

Water

Prep Method: 5030

QC Batch # 2002/01/22-01.02

Date Extracted: 01/22/2002 08:10

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

SEVERN

SERVICES

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com www.chromalab.com

CA DHS ELAP#1094

| Compound | Result | Rep.Limit | Unit | Analyzed | Flag |
|--------------------------|--------|-----------|------|------------------|------|
| Gasoline | ND | 50 | ug/L | 01/22/2002 08:10 | |
| Benzene | ND | 0.5 | ug/L | 01/22/2002 08:10 | |
| Toluene | ND | 0.5 | ug/L | 01/22/2002 08:10 | į |
| Ethyl benzene | ND | 0.5 | ug/L | 01/22/2002 08:10 | |
| Xylene(s) | ND | 0.5 | ug/L | 01/22/2002 08:10 | |
| MTBE | ND | 5.0 | ug/L | 01/22/2002 08:10 | |
| Surrogate(s) | | | | | |
| Trifluorotoluene | 92.7 | 58-124 | % | 01/22/2002 08:10 | |
| 4-Bromofluorobenzene-FID | 97.3 | 50-150 | % | 01/22/2002 08:10 | |

Laboratory Control Spike (LCS/LCSD)

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Water

2002/01/22-01.02-004 Extracted: 01/22/2002 08:42 Analyzed: 01/22/2002 08:42

LCSD: 2002/01/22-01.02-005 Extracted: 01/22/2002 09:14 Analyzed: 01/22/2002 09:14

Test Method: 8021B

LCS:

Prep Method: 5030

QC Batch # 2002/01/22-01.02

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

SEVERN

SERVICES

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com

www.chromalab.com

CA DHS ELAP#1094

| Compound | Conc. [| Conc. [ug/L] | | Exp.Coлс. [ug/L] | | Recovery | | Ctrl.Limits [%] | | Flags | |
|------------------|---------|--------------|-------|------------------|------|----------|-----|-----------------|-----|-------|------|
| | LCS | LCSD | LCS | LCSD | LCS | LCSD | [%] | Recover | RPD | LCS | LCSD |
| Benzene | 96.8 | 96.0 | 100.0 | 100.0 | 96.8 | 96.0 | 0.8 | 77-123 | 20 | | |
| Toluene | 91.6 | 91.0 | 100.0 | 100.0 | 91.6 | 91.0 | 0.7 | 78-122 | 20 | | |
| Ethyl benzene | 96.3 | 96.1 | 100.0 | 100.0 | 96.3 | 96.1 | 0.2 | 70-130 | 20 | | |
| Xylene(s) | 282 | 282 | 300 | 300 | 94.0 | 94.0 | 0.0 | 75-125 | 20 | | |
| Surrogate(s) | | | | | | | | | | | |
| Trifluorotoluene | 478 | 477 | 500 | 500 | 95.6 | 95.4 | | 58-124 | | | |

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M

Prep Method: 5030

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/01/22-01.02

LCS: 2002/01/22-01.02-006 Extracted: 01/22/2002 09:46 Analyzed: 01/22/2002 09:46 LCSD: 2002/01/22-01.02-007 Extracted: 01/22/2002 10:18 Analyzed: 01/22/2002 10:18

CA DHS ELAP#1094

| S | ΕĀ | V E | R | N |
|-----|-------|-----|----|---|
| 1 | R | C | N. | Γ |
| . • | SIBIR | VI | ŒS | |
| • | | | _ | |

STL San Francisco 1220 Quarry Lane Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 www.stl-inc.com www.chromalab.com

| Compound | Conc. [ug/L] | | Exp.Conc. | Exp.Conc. [ug/L] | | Recovery | | Ctrl.Limits [%] | | Flags | |
|----------------------|--------------|------|-----------|------------------|-------|----------|-----|-----------------|-----|-------|------|
| | LCS | LCSD | LCS | LCSD | LCS | LCSD | [%] | Recover | RPD | LCS | LCSD |
| Gasoline | 414 | 451 | 500 | 500 | 82.8 | 90.2 | 8.6 | 75-125 | 20 | | |
| Surrogate(s) | | | | | | | | | | | |
| 4-Bromofluorobenzene | 506 | 518 | 500 | 500 | 101.2 | 103.6 | | 50-150 | | | • |

Gas/BTEX Compounds by 8015M/8021

Batch QC Report

Water

Test Method: 8021B

Prep Method: 5030

QC Batch # 2002/01/22-01.02

Matrix Spike (MS/MSD) Sample ID: MW-3 >> MS

Lab ID: 2002-01-0310-002

MS; 2002/01/22-01.02-017 Extracted: 01/22/2002 18:48 Analyzed: 01/22/2002 18:48

1 Dilution:

MSD: 2002/01/22-01.02-018 Extracted: 01/22/2002 19:19 Analyzed: 01/22/2002 19:19

Dilution:

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| Compound | Conc. [ug/l] | | | Exp.Co | Exp.Conc. [ug/L] Recovery [%] | | | | Ctrl.Limits [%] | | Flags | |
|------------------|--------------|------|--------|--------|-------------------------------|------|------|-----|-----------------|-----|-------|-----|
| | MS | MSD | Sample | мѕ | MSD | MS | MSD | [%] | Recovery | RPD | мѕ | MSD |
| Benzene | 90.6 | 86.4 | ND | 100.0 | 100.0 | 90.6 | 86.4 | 4.7 | 65-135 | 20 | | |
| Toluene | 88.5 | 84.6 | ND | 100.0 | 100.0 | 88.5 | 84.6 | 4.5 | 65-135 | 20 | | |
| Ethyl benzene | 92.9 | 90.7 | ND | 100.0 | 100.0 | 92.9 | 90.7 | 2.4 | 65-135 | 20 | | |
| Xylene(s) | 274 | 267 | ND | 300 | 300 | 91.3 | 89.0 | 2.6 | 65-135 | 20 | | |
| Surrogate(s) | | | | | | | | | | | | |
| Trifluorotoluene | 483 | 451 | | 500 | 500 | 96.7 | 90.2 | | 58-124 | | | |

Gas/BTEX Compounds by 8015M/8021

Batch QC Report

Test Method: 8015M

Prep Method: 5030

QC Batch # 2002/01/22-01.02 Water

Matrix Spike (MS / MSD) Sample ID: MW-3 >> MS

Lab ID: 2002-01-0310-002

MS: 2002/01/22-01.02-019 Extracted: 01/22/2002 19:51 Analyzed: 01/22/2002 19:51

Dilution:

MSD: 2002/01/22-01.02-020 Extracted: 01/22/2002 20:23 Analyzed: 01/22/2002 20:23 Dilution: 1

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| Compound | | Conc. [ug/l | Exp.C | onc. [ug/L] F | tecovery | [%] | RPD | Ctrl.Limits | Flags | | | |
|------------------|-----|-------------|--------|---------------|----------|------|-------|-------------|----------|-----|----|-----|
| | мѕ | MSD | Sample | MS | MSD | MS | MSD | [%] | Recovery | RPD | MS | MSD |
| Gasoline | 439 | 460 | ND | 500 | 500 | 87.8 | 92.0 | 4.7 | 65-135 | 20 | | |
| Surrogate(s) | | | | | | | | | | | | |
| 4-Bromofluoroben | 529 | 532 | | 500 | 500 | 105. | 106.3 | | 50-150 | | | |

Gas/BTEX Compounds by 8015M/8021

Legend & Notes

Test Method: 8021B

8015M

Prep Method: 5030

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Pleasanton, CA 94566

CA DHS ELAP#1094

Analyte Flags

dр

Sample contains discrete peak in addition to gasoline.

CHAIN OF CUSTODY RECORD

| PROJECT NUMBER PROJECT NAME | | | | | | | E W | ر | n | y y | n | 8 | щ | r) | U) | Ø | ω | | | | ~ ~ | | A. 0310 |
|---|---|---|---------|----------------------------|-------------------------|----------------|--------------------------------------|-----------------------------------|---|------------------------------|--------------------------------------|--|--------------------------------------|--------------------------------------|---------------------------------|----------|-----------------|-----------|---|---|--------------------------|--------------------------|---------------------------|
| 3174.3.050.02 2900 LADO AVENUE | | | | | | SUNE MT8E | 510) | MATIC 20 | ARBO | UN V | , ACIT | REAS | S/PC | IDE. | METALS | TAL | | 1 | O | | <u> </u> | 01-0310 | |
| SAMPLED BY: (SIGNATURE)/(PRINT) | | | | | | | 0,8 | 50/3 | 58 | 100 | 9240 | ALS 8270 | 사장 | O DO | Ω. | 2 | Σ | | | | | | REMARKS |
| 3174.3.050.02 2900 LADO AVENUE SAMPLED BY: (SIGNATURE) (PRINT) BILL FEYGENDES) | | | | | | , | 1 - GASOLINE (EPA 8016/5030) MT61 | 1 – C | ABLE A | BLE HA | TILE C | VELTT2. | 01L 4 | ESTIC: | >ES1 | 38 | ξŝ | | | | | | REQUIRED DETECTION LIMITS |
| SAMPLE NUMBER | DATE | TIME | MATRIX | NUMBER OF CONTAINERS | CONTAINER SIZE | PRESERVATIVE | 878X (E) | TPH - DIES (PA 8015/3550/3510) | PURGEABLE AROMATICS BTEX (EPA 602, 8020) | PURGEA B) | VOLATILE ORGANICS (FPA 624, 8240) | BASE/NEUTRALS, ACIDS (FPA 625,8270) | TOTAL OIL & GREASE (\$MWW 5520 F) | OC PESTICIDES/PCB (FPA 608, 8080) | OP PESTICIDES (EPA 614/8140) | TITLE 26 | PRICRITY METALS | | | | | | |
| MW-Z | 1-18-0Z 1-18-0Z | 1350 | Agracos | 3 | 40ml VOA | HOI | X | | | | | | | | | | | | | | | | |
| MW-3 | 1-18-02 | 1458 | / | | | | | | | | | | | | | | | | | | | | |
| Money | \searrow | _>< | | ·* | | | | | | | | | | | | | | | | | | | |
| MU-E | 1-18-02 | 17.7.0 | 1/ | V | | | | | | | | | | | | | | | | | | | |
| , , , , , , , , , , , , , , , , , , , | , , , | , , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | W | | | | - | | | | | | | | | | | | | | | | |
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| RELINGUISHED BY: (SIGNATURE) DATE/TIME RECEIVED BY: (SIGNATURE) | | | | | VED BY: (SIGNATU | TURE) | | | | RELINQUISHED BY: (SIGNATURE) | | | | | | | | DATE/TIME | | | RECEIVED BY: (SIGNATURE) | | |
| Rett / 18/02 1525 | | | | | | | | | | | | · | | _ | | | | | | | | | |
| RELINQUISHED BY: (SIGNATURE) DATE/ | | | | TE/TIME RECE | RECEIVED BY: (SIGNATURE | | | | E) | | | RELINCULSIED BY: (SIGNATURE) | | | 1_ | | | DATE/TIME | | | f | RECEIVED BY: (SKGNATURE) | |
| RELINQUISHED BY: (SIGNATURE) DATE/TIME RECEIVED/OR LABOR | | | | | | EVED FOR LABOR | PATORY BY: (SIGNATURE) | | | DATE/TIME | | | REMA | ARK\$ | | | <u></u> L | | | | | | |
| Choul | | | | | | | lu | | | | | | | | <u>3c</u> | | STD TAT 4 | | | | | | |
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