August 18, 2015

Rita and Tony Sullins
Don Sul Inc.
187 North L Street
Livermore, CA 94550

Re: Transmittal Letter
Site Location: Arrow Rentals
187 North L Street, Livermore, CA 94550

Dear Mr. Wickham:

On behalf of Rita and Tony Sullins, Don Sul Inc., Ground Zero Analysis, Inc. (GZA) prepared the First 2015 Semi-Annual Groundwater Monitoring, dated August 18, 2015 that was sent to your office via electronic delivery per Alameda County's guidelines.

I declare under penalty of law that the information and/or recommendations contained in the above referenced document or report is true and correct to the best of my knowledge.

Respectfully submitted,

Rita / Tony Sullins
Property Owner
Don Sul Inc.
187 North L Street
Livermore, CA 94550

GROUND ZERO ANALYSIS, INC.

1172 Kansas Avenue, Suite A
Modesto, CA 95351
209.522.4119 – PH
209.522.4227 - FAX
groundzeroanalysis.com

REPORT

First Semi-Annual Groundwater Monitoring and Remediation Effectiveness

Arrow Rentals Service
187 North L St.
Livermore, CA 94550

Project No. 1262.2
August 18, 2015

Prepared for:
Tony & Rita Sullins
Arrow Rentals Service
187 North L St.
Livermore, CA 94550

Prepared by:
Ground Zero Analysis, Inc.
1172 Kansas Ave.
Modesto, California 95351
(209) 522-4119

GROUND ZERO ANALYSIS, INC.

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August 18, 2015

Project No.: 1262.2
Project Name: Sullins (L St.)

Tony & Rita Sullins
Arrow Rentals Service
187 North L Street
Livermore, CA 94550

RE: Report: First Semi-Annual Groundwater Monitoring and Remediation Effectiveness
Location: 187 North L Street, Livermore, CA 94550.
(ACEH Fuel Leak Case No. RO0000394)

Dear Mr. & Ms. Sullins:

Ground Zero Analysis, Inc. (Ground Zero) has prepared the following report for the groundwater monitoring event performed between June 25, 2015 and June 26, 2015 as well as the remediation activities performed during the first half of 2015. Groundwater monitoring of the new wells (MW-9, MW-10 and EW-2) was completed on March 9, 2015. An elevated core of gasoline contamination persists in the location of and down-gradient (northwest) of the former underground storage tanks (USTs) and associated piping. Dual Phase Extraction (DPE) and air sparging (AS) systems which were started on November 15, 2011 and March 21, 2012, respectively, continue to operate.

If you have any questions, please do not hesitate to call me at (209) 522-4119.

Respectfully submitted,

Eric L. Price, PG

cc: Jerry Wickham – ACEH (Via FTP site)

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GROUND ZERO ANALYSIS, INC.

1172 Kansas Avenue, Suite A
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REPORT

Second Semi-Annual Groundwater Monitoring and Remediation Effectiveness

Arrow Rentals Services
187 North L St.
Livermore, CA

Project No. 1262.2
August 18, 2015

1.0 EXECUTIVE SUMMARY

Details of the groundwater monitoring and sampling events that took place on March 9, 2015, June 25, 2015 and June 26, 2015 as well as remediation activities performed during the first half of 2015 are included in this report.

Newly installed groundwater monitoring wells MW-9, MW-10 and EW-2 were purged and sampled on March 9, 2015 and March 10, 2015. The semi-annual groundwater monitoring event was performed on June 25, 2015 and June 26, 2015 in which twenty-five groundwater wells were monitored, of which fourteen wells were dry or had insufficient volume of water and were not purged or sampled.

Ground Zero is currently implementing the Corrective Action Plan (CAP) which includes the operation of dual phase extraction (DPE) and air sparging (AS) systems to treat the residual contamination at the site.

The site history and geologic setting are summarized in Ground Zero's *1st Semi-Annual Groundwater Monitoring and Remedial Effectiveness Report* dated July 24, 2014. A vicinity map is included as Figure 1 and a site map is included as Figure 2.

2.0 GROUNDWATER MONITORING

2.1 Groundwater Elevation and Flow

March 9, 2015 and March 10, 2015

Newly installed groundwater monitoring wells MW-9 and MW-10 and EW-2 were purged and sampled on March 9, 2015 and March 10, 2015, respectively. The average groundwater elevation recorded during the event was 437.73 feet above mean sea level (amsl) and the average depth to water (DTW) was 42.61 feet below ground surface (bgs). The intermediate groundwater flow was to the west-northwest with a gradient of approximately 0.032 feet per foot (ft/ft).

June 25, 2015 and June 26, 2015

All of the Sites shallow depth groundwater monitoring wells were reported to be dry during the June 2015 monitoring event. The average groundwater elevation recorded in the intermediate monitoring wells was 432.81 feet amsl and the average DTW was 47.90 feet bgs. Groundwater elevation has decreased 3.31 feet since the June 2014 monitoring event.

Between 1989 and 2015, DTW has ranged from approximately 20 to 55 feet bgs. The December 2014 event representing the lowest groundwater elevation recorded at the Site. Groundwater elevation has decreased by 30 feet between April 1996 and June 2015. Well locations on- and off-site are shown on Figure 2 and on-site well locations are shown on Figure 3.

The wells are categorized according to the aquifer interval which the screened section intercepted. Well construction details are summarized in Table 1 and shown in vertical view on Figure 4. Hydrographs depicting the change in groundwater elevation for the shallow, intermediate and deep wells are included in Attachment A. Well categories are discussed below:

Shallow Wells (screened 20 – 45 feet bgs):

W-1s, W-Bs, W-3s, W-Es, and either {MW-4, MW-5, MW-6, MW-7 and MW-8} or {MW-105, MW-106, MW-107 and MW-108} depending on groundwater elevation

Intermediate Wells (screened 40 – 60 feet bgs):

W-1, W-3, W-A, MW-104, MW-205, MW-206, MW-207, MW-208, MW-9, MW-10 and EW-2

- Well W-1 is considered intermediate and is monitored; however the well is not utilized for groundwater gradient measurements due to modifications to the well top for remediation purposes.
- Monitoring well W-2 cannot be located following the construction of the housing complex to the south and southeast of the site.

- Monitoring well W-3 could not be monitored since an access agreement could not be obtained from Signature Properties.

Deep Wells (screened ~ 65 feet bgs):

MW-204, MW-305, MW-306, MW-307, MW-308

Deepest Wells (screened > 70 feet bgs):

MW-304, MW-404

Horizontal Groundwater Gradients

During the March 2015 groundwater monitoring event, the intermediate groundwater flow was to the west-northwest at a gradient of approximately 0.032 ft/ft.

During the June 2015 groundwater monitoring event, all of the shallow wells were reported to be dry. The groundwater flow in the intermediate aquifer was calculated to be to the west-northwest at a gradient of approximately 0.036 ft/ft. Elevation data from groundwater monitoring wells W-1 and W-A were not used in the calculation of the groundwater gradient due to modifications to the well heads to allow for DPE. Elevation data from CMT wells MW-104, MW-205, MW-206, MW-207 and MW-208.

The historical shallow and intermediate groundwater elevation data are summarized in Table 2 and Table 3. The deep groundwater elevation data is summarized in Table 4.

Figure 5 illustrates the intermediate aquifer groundwater gradient map for the March 2015 monitoring event. Figure 6 and Figure 7 illustrate the intermediate and deep aquifer groundwater gradient maps for the June 2015 monitoring event, respectively. A groundwater gradient map for the shallow groundwater monitoring wells was not included since all of the wells were dry.

Vertical Groundwater Gradients

Ground Zero calculated vertical gradients for the following well pairs using data collected during the June 2015 monitoring event:

- MW-204/304 negative (or downward) at -0.012 ft/ft
- MW-205/305 negative (or downward) at -0.079 ft/ft
- MW-206/306 negative (or downward) at -0.046 ft/ft
- MW-207/307 negative (or downward) at -0.018 ft/ft

Figure 3 shows the location of the well pairs used for calculating vertical groundwater gradient in this report. Vertical gradients are summarized in Table 5.

2.2 Groundwater Sampling Procedure

On March 9, 2015, March 10, 2015, June 25, 2015 and June 26, 2015, Ground Zero staff recorded DTW measurements as well as purged and sampled the selected groundwater

monitoring wells. The wells were purged of at least three well volumes of stagnant water prior to sample collection unless the well was dewatered during purging. During the March 2015 event, EW-2 was sampled with a disposable bailer.

When pH, temperature, and electrical conductivity (EC) measurements had stabilized to within 10%, the groundwater monitoring wells are sampled. Care is taken to minimize sample agitation. The Continuous Multichannel Tubing (CMT®) wells are purged by hand and field parameters are not collected.

All groundwater samples were carefully transferred to the appropriate containers, checked for headspace, uniquely labeled, temporarily stored in an ice chest refrigerated to a temperature of less than 6°C, and delivered under chain-of-custody protocol to BC Labs of Bakersfield, California (ELAP #1186) for analysis.

All well purge water was placed in a 55 gallon Department of Transportation (DOT) approved container. Upon completing the groundwater monitoring event, all purge water was pumped from drums and into the DPE system for remediation prior to being discharged to the sanitary sewer system.

Groundwater monitoring field logs are included in Attachment B.

2.3 Laboratory Analyses

The groundwater samples were analyzed for:

- Benzene, Toluene, Ethyl Benzene and Xylene (BTEX) by EPA method 8260B
- Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA method 8260B
- Methyl *tert*-butyl ether (MTBE) by EPA method 8260B

Current analytical results from the June 2015 groundwater monitoring event are summarized in Table 6. Historical laboratory analytical results are summarized in Table 7. Laboratory analytical results and chain of custody documentation are included in Attachment C.

3.0 FINDINGS AND DISCUSSION

3.1 Field Parameters

March 9, 2015

Groundwater parameters were not collected from EW-2 since the well was sampled with a disposable bailer.

- Dissolved Oxygen (DO) readings were 3.12 mg/L (MW-9) and 3.68 mg/L (MW-10).
- EC readings were 1,091 µmhos/cm (MW-9) and 1,070 µmhos/cm (MW-10).
- Oxygen Reduction Potential (ORP) readings were 122.1 mV (MW-9) and 121.4 mV (MW-10)
- pH readings were 6.86 (MW-9) and 6.70 (MW-10).

- Temperature readings were 19.87 °C (MW-9) and 19.57 °C (MW-10).

June 25, 2015 and June 26, 2015

- DO readings were collected from wells MW-9 (3.94 mg/L) and MW-10 (4.44 mg/L). DO readings were not collected from W-1, W-A and EW-2 since these wells were purged and sampled with a disposable bailer.
- EC ranged from 964 µmhos/cm (MW-10) to 1,466 µmhos/cm (W-A)
- ORP ranged from -107.2 mV (W-1) to 122.5 mV (MW-9)
- pH ranged from 6.75 (EW-2) to 7.30 (MW-10)
- Temperature ranged from 19.8 °C (MW-10) to 21.8 °C (EW-2)

The field parameter results are summarized in Table 8. Field notes are included in Attachment A.

3.2 Laboratory Analytical Data

Due to low groundwater levels, the shallow CMT® wells have not been sampled since the DPE system was started in November 2011. It is anticipated that as groundwater levels rise in the shallow wells, decreased concentrations will likely be reported due to extensive vadose zone remediation between 25 and 45 feet bgs.

March 9, 2015 and March 10, 2015

Intermediate Aquifer

- The highest concentration of TPHg was reported as 60,000 micrograms per liter (µg/L) in EW-2, while down gradient wells MW-9 and MW-10 reported concentrations of 31 µg/L and 25 µg/L, respectively.
- The highest concentration of benzene was reported as 7,000 µg/L in EW-2, while down gradient well MW-9 reported a concentration of 6.5 µg/L. There was no benzene reported above laboratory detection limits in MW-10.

June 25, 2015 and June 26, 2015

Shallow Aquifer

- CMT® wells MW-4 thru MW-8 and MW-105 thru MW-108 were dry during the June 2015 groundwater monitoring event and were not sampled.
- Groundwater monitoring wells W-1s, W-3s and W-Bs were dry during the June 2015 groundwater monitoring event and were not sampled.

Intermediate Aquifer

- CMT® wells MW-104 and MW-205 thru MW-208 had insufficient water column to be purged and sampled during the June 2015 groundwater monitoring event.
- The highest concentration of TPHg was reported as 19,000 µg/L in W-1.

- The highest concentration of benzene was reported as 2,100 µg/L in W-A.
- An intermediate well TPHg groundwater plume map is included as Figure 8.
- An intermediate well benzene groundwater plume map is included as Figure 9.

Deep Aquifer

- The highest concentration of TPHg was reported as 1,800 µg/L in MW-204.
- The highest concentration of benzene was reported as 260 µg/L in MW-204.
- A deep well TPHg groundwater plume map is included as Figure 10.
- A deep well benzene groundwater plume map is included as Figure 11.
- The groundwater plume is localized in the vicinity of the former USTs and associated piping trenches and appears to be centered near well W-A.

Deepest Aquifer

- TPHg and benzene concentrations decreased in MW-304.
- MW-404 was not sampled during the June 2015 event.

4.0 REMEDIATION SYSTEM STATUS & EFFECTIVENESS

A DPE and AS remediation systems were installed at the site and operations commenced in November 2011 and March 2012, respectively. The well configuration is discussed as follows:

- Vadose zone well EW-1 is a vapor extraction well
- Shallow depth well W-1s is a vapor extraction well
- Intermediate depth well W-1 serves as either a DPE well or an AS well
- Intermediate depth well W-A serves as either a DPE well or an AS well.
- Intermediate depth well EW-2 serves as a DPE well.

Remediation wells W-1s and EW-1 are screened within the Upper Unit (screened across 10 to 45 feet bgs). Remediation wells W-1, W-A and EW-2 are screened within the Lower Unit (screened across 42 to 60 feet bgs).

The shallow, intermediate and deep groundwater monitoring wells located in the core of the plume show decreasing trends in chemicals of concern. Charts 1 through 3 show the decreasing trend of benzene over time in these wells. The deepest zone in the plumes core represented by MW-304 and MW-404 indicate a stable plume. Chart 4 shows stable benzene conditions in MW-304. Chart 5 shows a slightly increasing trend in benzene concentrations detected in MW-404. However, the removal of one outlier indicates a slightly decreasing trend as shown in Chart 6.

4.1 System Operation

The extracted vapors are treated with a thermal oxidizer and then discharged to ambient air under permit from the Bay Area Air Quality Management District (BAAQMD). The treated water is discharged to the municipal sewer system under permit from the City of Livermore.

The groundwater extracted by DPE is initially separated from the vapor phase via a knockout tank, with groundwater residing in the tank and the vapor phase continues on to the thermal oxidizer for treatment. The water is then pumped from the tank to an air stripper column to remove volatile organic petroleum hydrocarbons. The vapors generated by the air stripper are plumbed back to the thermal oxidizer joining the DPE extracted vapors. The treated groundwater is plumbed to two (2) 2,000 lbs. granulated activated carbon vessels in series after leaving the air stripper. The water is then monitored with an LEL sensor for contaminant levels while being discharged to the sewer system under associated permit requirements.

System operation commenced on November 15, 2011 (soil vapor extraction only), in compliance with the Alameda County Environmental Health (ACEH) directive extension. Various system repairs and modifications were completed following the initial start-up and full operation of the DPE system (soil vapor extraction only) began on November 29, 2011. Upon issuance of the groundwater discharge permit, the DPE system began full operation and extraction and treatment of both groundwater and soil vapor on January 18, 2012.

The DPE system operated for a total of approximately 1,674 hours or approximately 70 days during the first half of 2015. Ground Zero believes that the hour meter was not operating properly throughout the first half of 2015 due to discrepancies in the actual time that the system ran versus the time period recorded by the hour meter.

The DPE system was shut down for the following time periods:

- January 1, 2015 thru January 2, 2015 – the DPE system shut down due to a storage tank high water alarm caused by a malfunctioning pump.
- March 10, 2015 at 10:00 AM thru March 11, 2015 at 3:40 PM – the DPE system was shut down for routine maintenance.
- March 14, 2015 thru June 26, 2015 – the DPE system was shut down while Ground Zero negotiated a payment arrangement with the California Underground Storage Tank Cleanup Fund in order to continue operating the DPE system.
- The DPE system was briefly started on June 26, 2015 and was immediately shut down due to a damaged fresh air dilution valve.
- June 26, 2015 thru July 23, 2015 – the DPE system was shut down for repairs:
    - On July 1, 2015, the process air inlet valve and the air dilution valve were replaced.
    - On July 23, 2015, a new hour meter was installed.

The DPE system was restarted on July 23, 2015. Due to the extensive period of time that the system was shut down (March 14, 2015 thru July 23, 2015), Ground Zero will take this opportunity to collect rebound samples from the DPE system during the August 2015 operation and maintenance event.

4.2 Treatment System Data

During the first half of 2015, the DPE system operated for 1,674 hours and removed a total of approximately 466 pounds or approximately 72 gallons of gasoline hydrocarbons as TPHg. As of the end of the 2nd Quarter 2015, the DPE system has removed a total of approximately 5,990 pounds, or approximately 920 gallons of gasoline hydrocarbons as TPHg in both vapor and groundwater phases.

Soil Vapor Extraction Mass Removal

During the first half of 2015, the DPE system removed approximately 462 pounds, or approximately 71 gallons of soil vapor gasoline hydrocarbons as TPHg. As of the end of the 2nd Quarter 2015, the DPE system has removed approximately 5,856 pounds, or approximately 900 gallons of vapor phase TPHg.

The mass of TPHg removed by the thermal oxidizer is summarized in Table 9. The soil vapor extraction monitoring and laboratory data are summarized in Table 10.

Groundwater Extraction Mass Removal

The influent groundwater stream is sampled monthly and the analytical results are used to calculate the mass removed. During the first half of 2015, the DPE system removed approximately 4.1 pounds, or approximately 0.6 gallons, of gasoline hydrocarbons as TPHg. As of the end of the 2nd Quarter 2015, the DPE system had removed approximately 134 pounds, or approximately 21 gallons of TPHg from groundwater extraction.

The mass of TPHg removed by groundwater extraction and treated by air stripping and running through granular activated carbon is summarized in Table 11. The groundwater extraction monitoring and laboratory data are summarized in Table 12.

Assumptions

- The concentration of TPHg removed by the system is assumed to be constant for the time period prior to the sample collection and following the previous sample collection.
- The volume of airflow is assumed to be constant for the time period prior to the sampling event and following the previous sampling event.
- Concentration of aqueous phase removal is based on actual analytical results taken from the line following the knockout drum and prior to the first groundwater storage tank. It is likely the concentrations, thus the mass removed from the extraction wells, is higher at the well than is measured at the sampling point for the following reasons:

- The groundwater extraction is achieved by high vacuum and soil vapor extraction from the wells, which result in withdraws of both soil vapor and groundwater.
- This air/water mixture is transported through 90 feet of piping to the DPE unit where the two phases are separated in the knockout drum. So in essence, the piping system acts as a linear air stripper causing the VOCs in the water to transfer into the vapor phase.

5.0 CONCLUSIONS & RECOMMENDATIONS

Conclusions

1. The intermediate groundwater plume appears to attenuate to the northeast at CMT® Cluster 6, to the west at MW-9 and to the southwest at MW-10.

2. Concentrations reported in intermediate well EW-2 appear to be decreasing and Ground Zero believes this is a result of the DPE remediation occurring in this well. Further groundwater monitoring will confirm this.

3. Down-gradient intermediate depth groundwater monitoring wells MW-9 and MW-10 represent the down gradient edge of the intermediate groundwater plume.

4. Concentrations in deep groundwater monitoring wells MW-204 and MW-307 appear to be fluctuating, but on an overall decreasing trend. Concentrations in deep wells MW-305, MW-306 and MW-308 appear to be fluctuating and stable, neither decreasing nor increasing.

5. Concentrations reported in the deep wells suggest that remediation is occurring in the core of the plume based on decreasing concentrations in core well MW-204. However, unstable trends in wells MW-305, MW-307 and MW-308 make it difficult to understand what is occurring in the deep aquifer up-gradient and down-gradient of the contaminant core. However, the new extraction well installed near MW-305 will likely drive the concentrations down.

6. The June 2015 groundwater monitoring event reported a decrease in contaminant concentrations in MW-304 and MW-404.

7. Remediation by DPE and air sparging in wells W-A, W-1 and EW-2 appears to have decreased the contaminant mass in the core of the plume, as observed in monitoring wells W-1, W-A, EW-2, W-1s, MW-104 and MW-204.

Recommendations

1. Close EW-1 and W-1s to the extent possible to concentrate vapor extraction vacuum around EW-2, which is the core of the highest concentrations of chemicals of concern detected at the site.

2. Continue remediation activities as well as operation and maintenance.

3. Discuss with the vendor the transition timeline for DPE system to be converted from thermal oxidation to catalytic oxidation (Cat-Ox). The highest operating costs are in the propane at up to $5,000.00 per month. Cat-Ox would significantly decrease operating costs and extend the remediation budget.

6.0 LIMITATIONS

This report was prepared in accordance with the generally accepted standard of care and practice in effect at the time Services were rendered. It should be recognized that definition and evaluation of environmental conditions is an inexact science and that the state or practice of environmental geology/hydrology is changing and evolving and that standards existing at the present time may change as knowledge increases and the state of the practice continues to improve. Further, that differing subsurface soil characteristics can be experienced within a small distance and therefore cannot be known in an absolute sense. All conclusions and recommendations are based on the available data and information.

The tasks proposed and completed during this project were reviewed and approved by the local regulatory agency for compliance with the law. No warranty, expressed or implied, is made.

7.0 SIGNATURES & CERTIFICATION

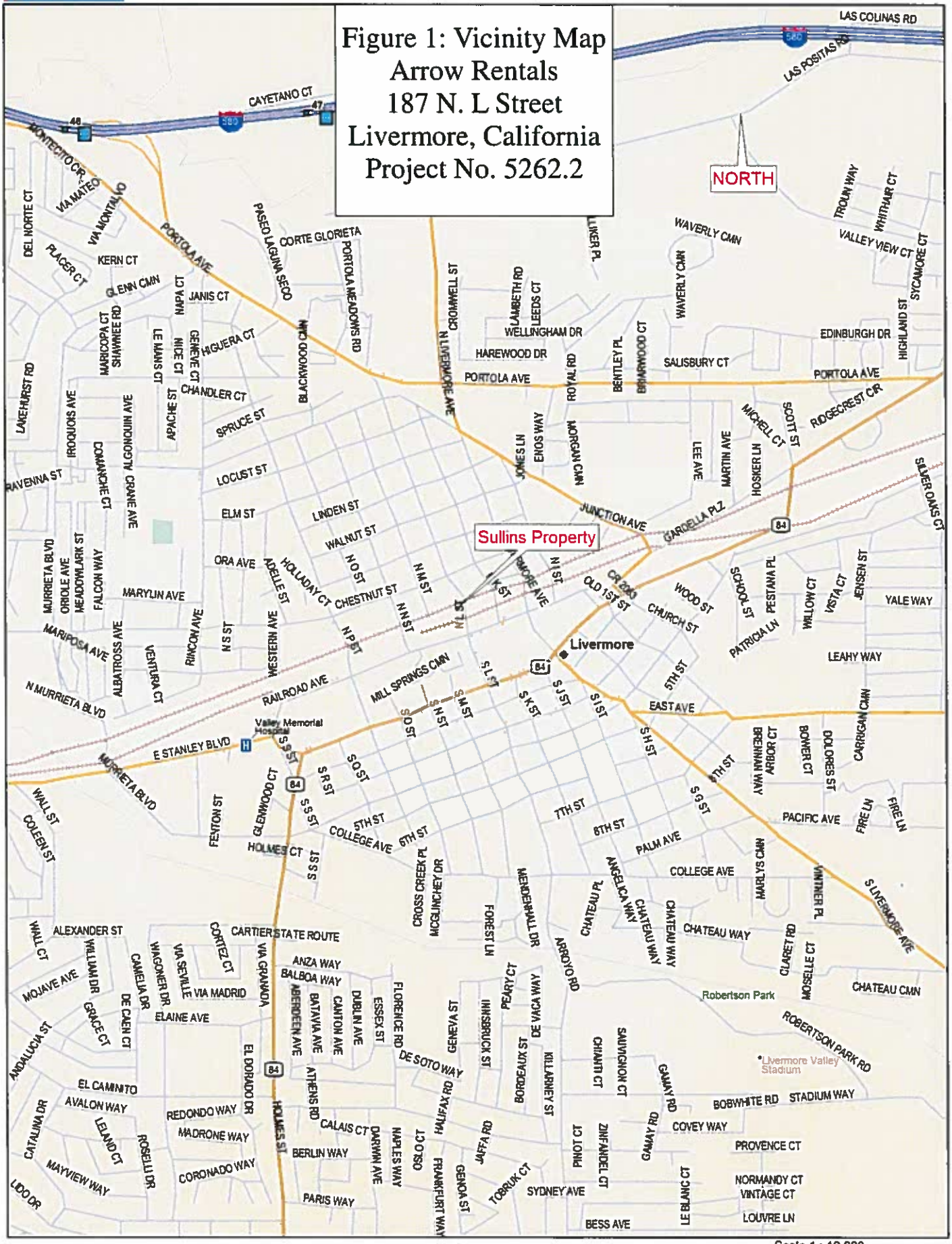
This report was prepared by:

Andrew Dorn, B.Sc. Geology
Staff Geologist
California GIT (#411)

This report was prepared under the direction of:

Eric L. Price, PG #8414

Figure 1: Vicinity Map
Arrow Rentals
187 N. L Street
Livermore, California
Project No. 5262.2



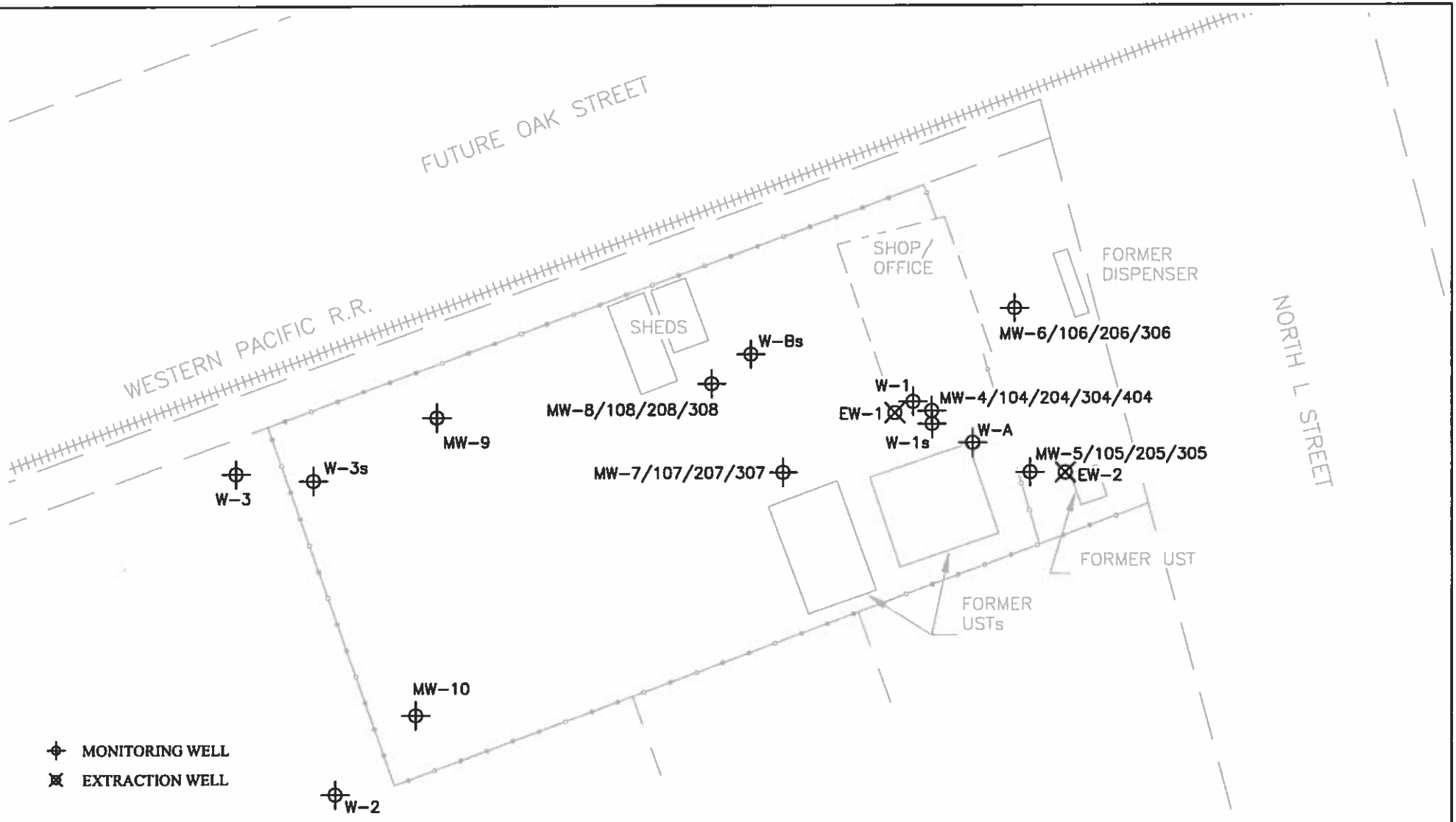
TN
MN (13.6°E)

Scale 1 : 19,200
1" = 1,600.0 ft
Data Zoom 13-4

NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

FIGURE 2	GROUND ZERO ANALYSIS, INC.	SITE MAP
Sullins (Arrow Rentals) 187 North L Street Livermore, California		



NOTE:
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STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

N

By:	AD
Job No:	1262.2 Date: 01-03-14
Scale:	1" = 50 feet
File:	12622 Graphics 12-03-13

GROUND ZERO ANALYSIS, INC.

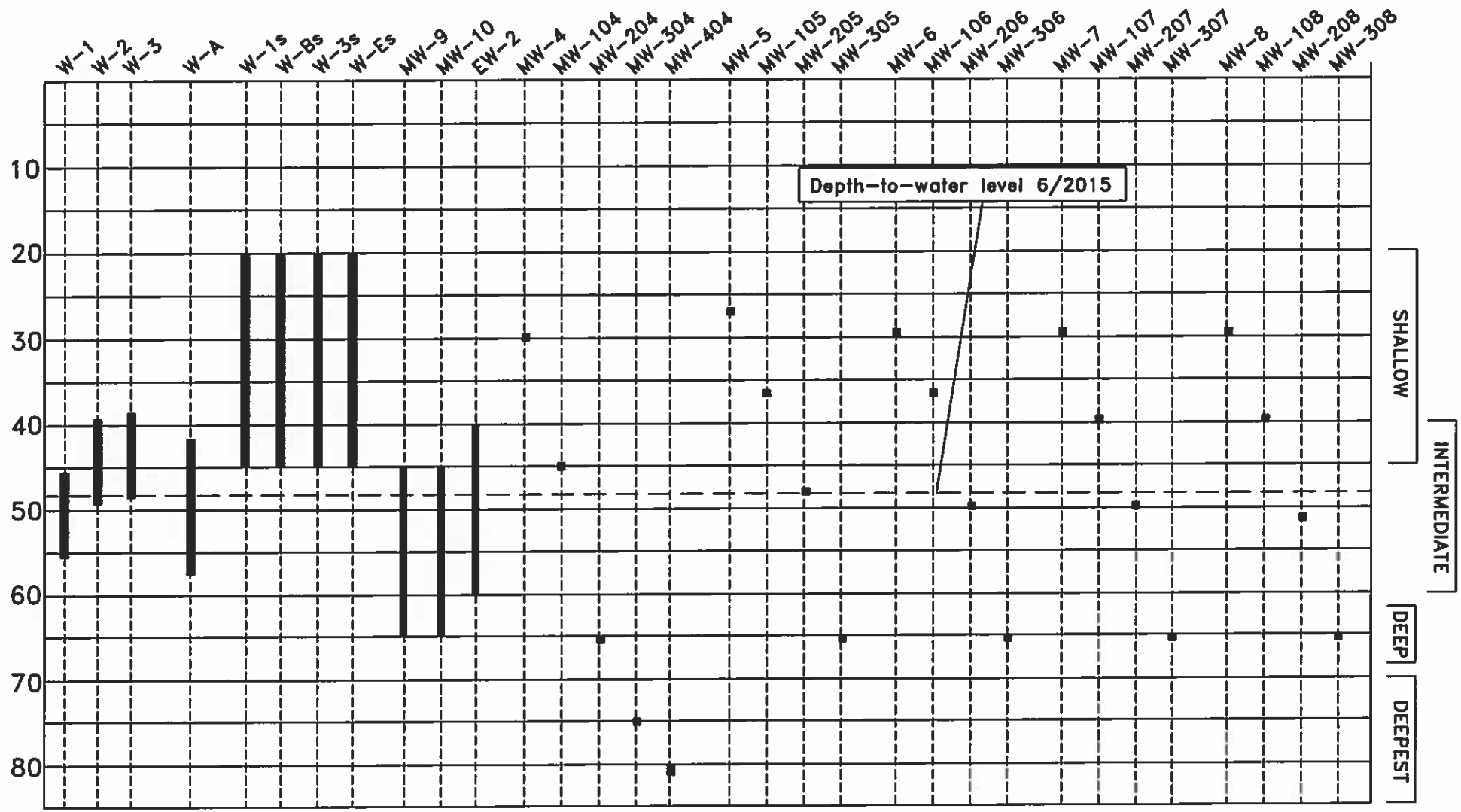
SITE DETAIL MAP

ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

FIGURE
3

Figure 4:

Well Screened Interval Diagram



Sullins
187 North L Street
Livermore, CA

Ground Zero Analysis, Inc.

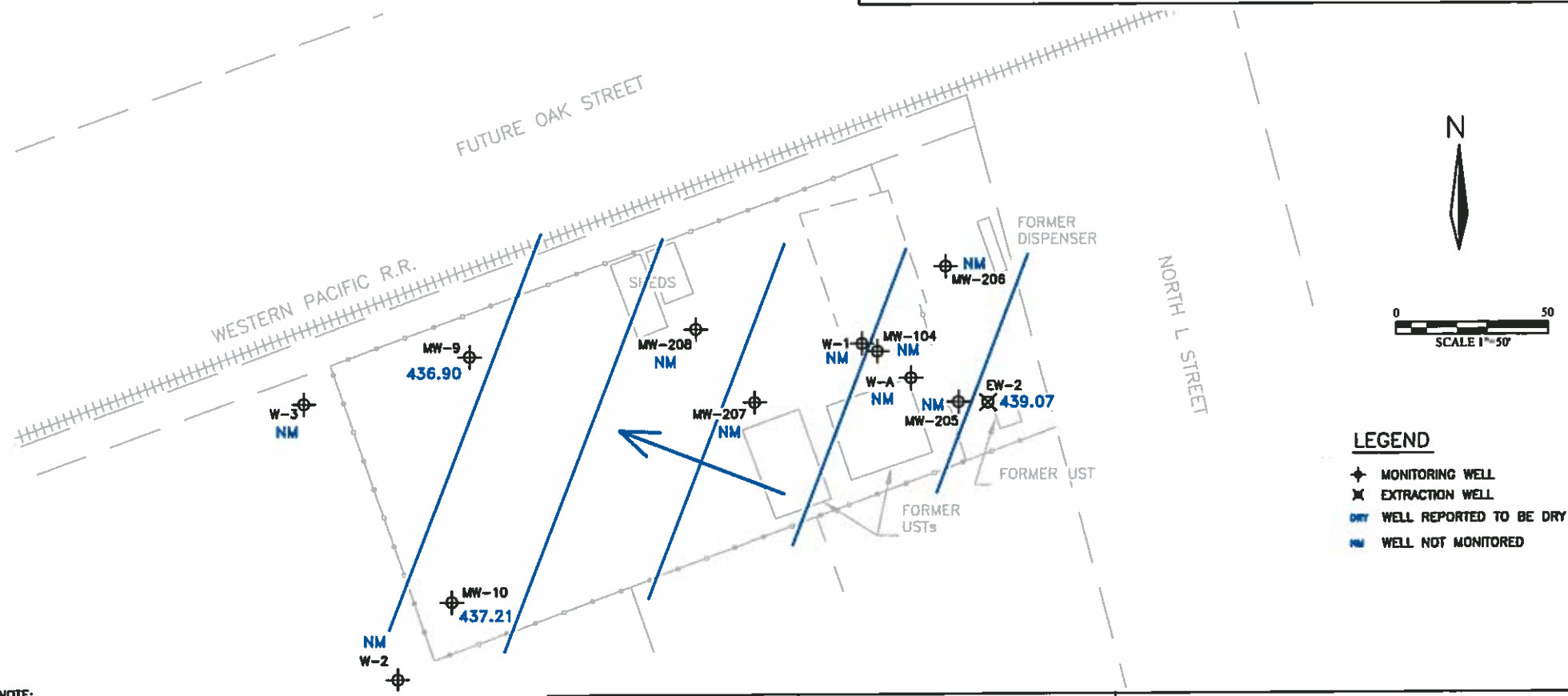
3/17/15

	DATE	BEARING	GRADIENT
1	10/16/06	N63°W	0.012
2	04/17/07	S68°W	0.022
3	12/19/07	N76°W	0.04
4	04/07/08	NORTHWEST	VARIABLE
5	10/25/11	N53°W	0.025
6	05/30/12	S89°W	0.020
7	11/19/12	N36°W	0.015
8	08/24/13	N73°W	0.014
9	12/03/13	N32°W	0.013
10	06/17/14	N74°W	0.076
11	12/02/14	DRY	
12	03/09/15	N69°W	0.032

ROSE DIAGRAM

0.001 0.01 0.1 1

GROUNDWATER GRADIENT FT/FT



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- DRY WELL REPORTED TO BE DRY
- NM WELL NOT MONITORED

NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

By:	AD
Job No:	1262.2 Date: 07-29-15
Scale:	1" = 50 feet
File:	12622 Graphics 6-25-15

GROUND ZERO ANALYSIS, INC.

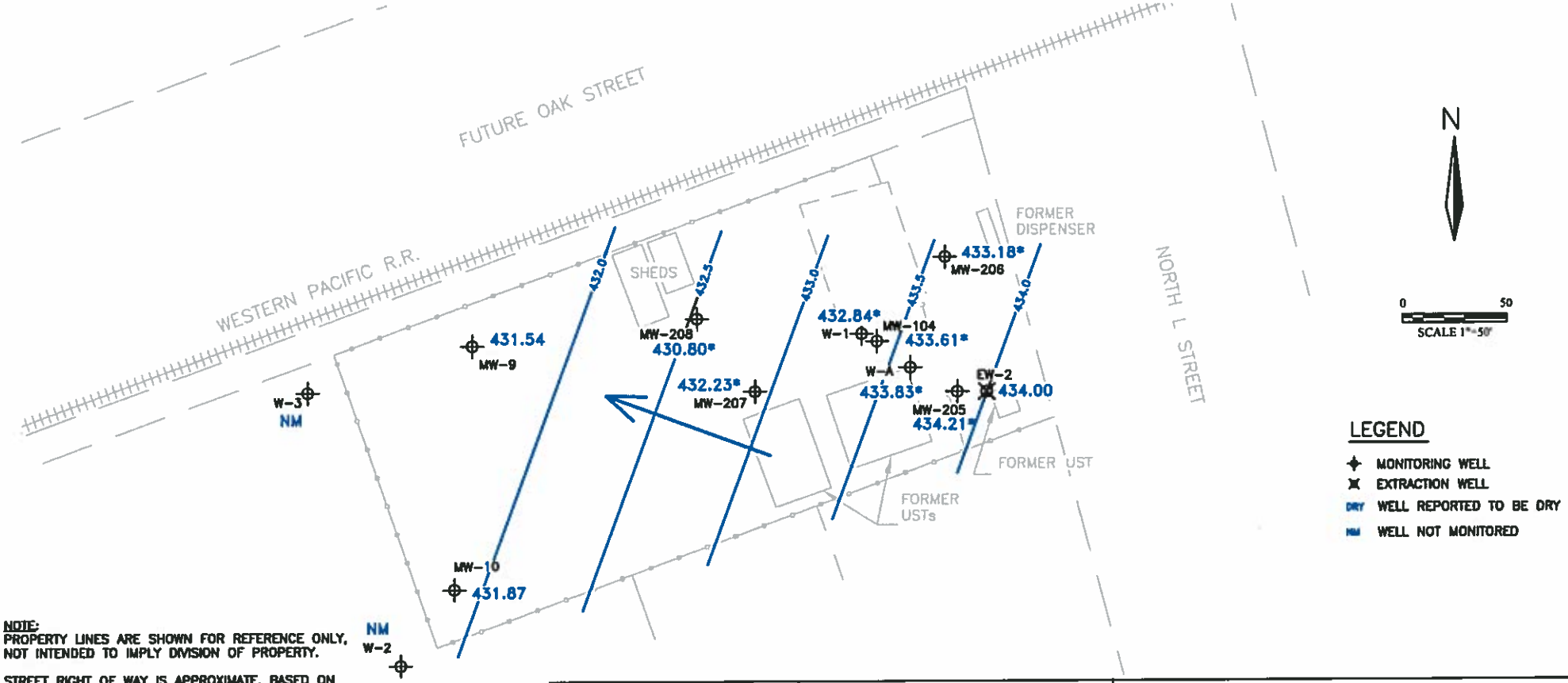
FIGURE 5: GROUNDWATER GRADIENT MAP
INTERMEDIATE WELLS - MARCH 9, 2015
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

	DATE	BEARING	GRADIENT
1	10/16/06	N63°W	0.012
2	04/17/07	S88°W	0.022
3	12/19/07	N76°W	0.04
4	04/07/08	NORTHWEST	VARIABLE
5	10/25/11	N53°W	0.025
6	05/30/12	S89°W	0.020
7	11/19/12	N36°W	0.015
8	08/24/13	N73°W	0.014
9	12/03/13	N32°W	0.013
10	06/17/14	N74°W	0.076
11	12/02/14	DRY	
12	03/09/15	N69°W	0.032
13	06/25/15	N70°W	0.036

ROSE DIAGRAM

0.001 0.01 0.1 1

GROUNDWATER GRADIENT FT/FT



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- DRY WELL REPORTED TO BE DRY
- NM WELL NOT MONITORED

NOTE:
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STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

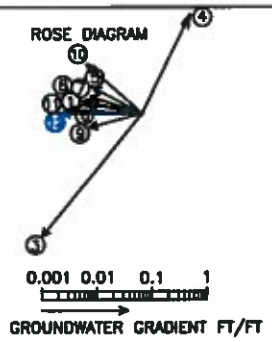
* WELLS W-A, W-1, MW-104, MW-205, MW-206, MW-207 & MW-208 WERE LEFT OUT OF GRADIENT CALCULATIONS DUE TO ANOMALOUS VALUES AND MODIFICATION TO WELL TOP

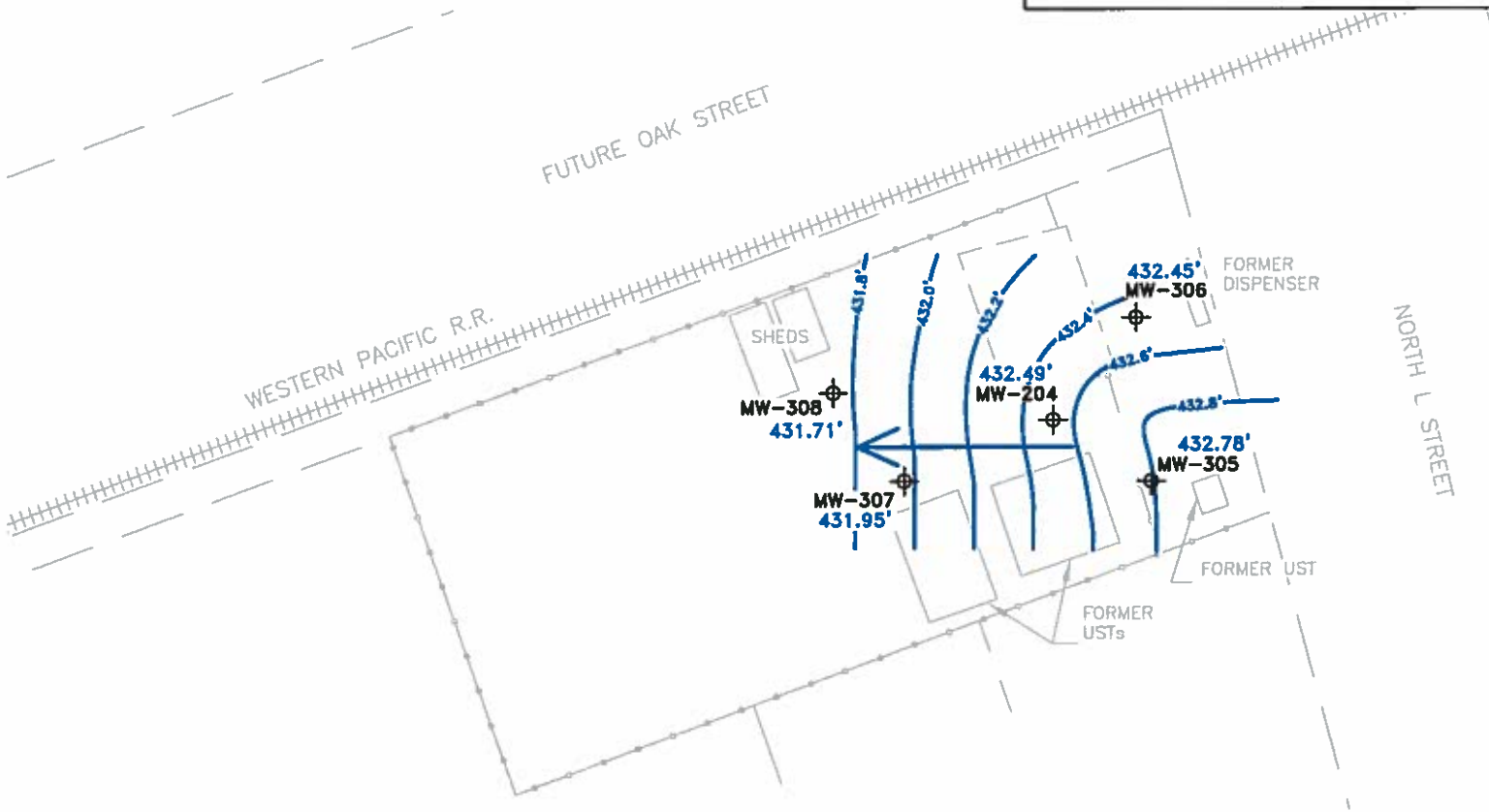
By:	AD
Job No:	1262.2 Date: 07-29-15
Scale:	1" = 50 feet
File:	12622 Graphics 6-25-15

GROUND ZERO ANALYSIS, INC.

FIGURE 6: GROUNDWATER GRADIENT MAP
INTERMEDIATE WELLS - JUNE 25, 2015
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

	DATE	BEARING	GRADIENT
1	10/16/06	N78°W	0.0140
2	04/17/07	UNDETERMINED	
3	12/19/07	S39°W	0.1800
4	04/07/08	N26°E	0.1000
5	10/25/11	N64°W	0.0114
6	05/30/12	N79°W	0.0100
7	11/19/12	N72°W	0.0089
8	06/24/13	N76°W	0.0091
9	12/03/13	S75°W	0.010
10	08/17/14	N49°W	0.012
11	12/02/14	N87°W	0.012
12	06/25/15	WEST	0.030





LEGEND

- MONITORING WELL
- EXTRACTION WELL
- 432.78' GROUNDWATER ELEVATION

GROUNDWATER FLOW DETERMINED USING CMT WELLS MW-305, MW-307 and MW-308.

CONTOUR INTERVAL = 0.2 FEET

NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

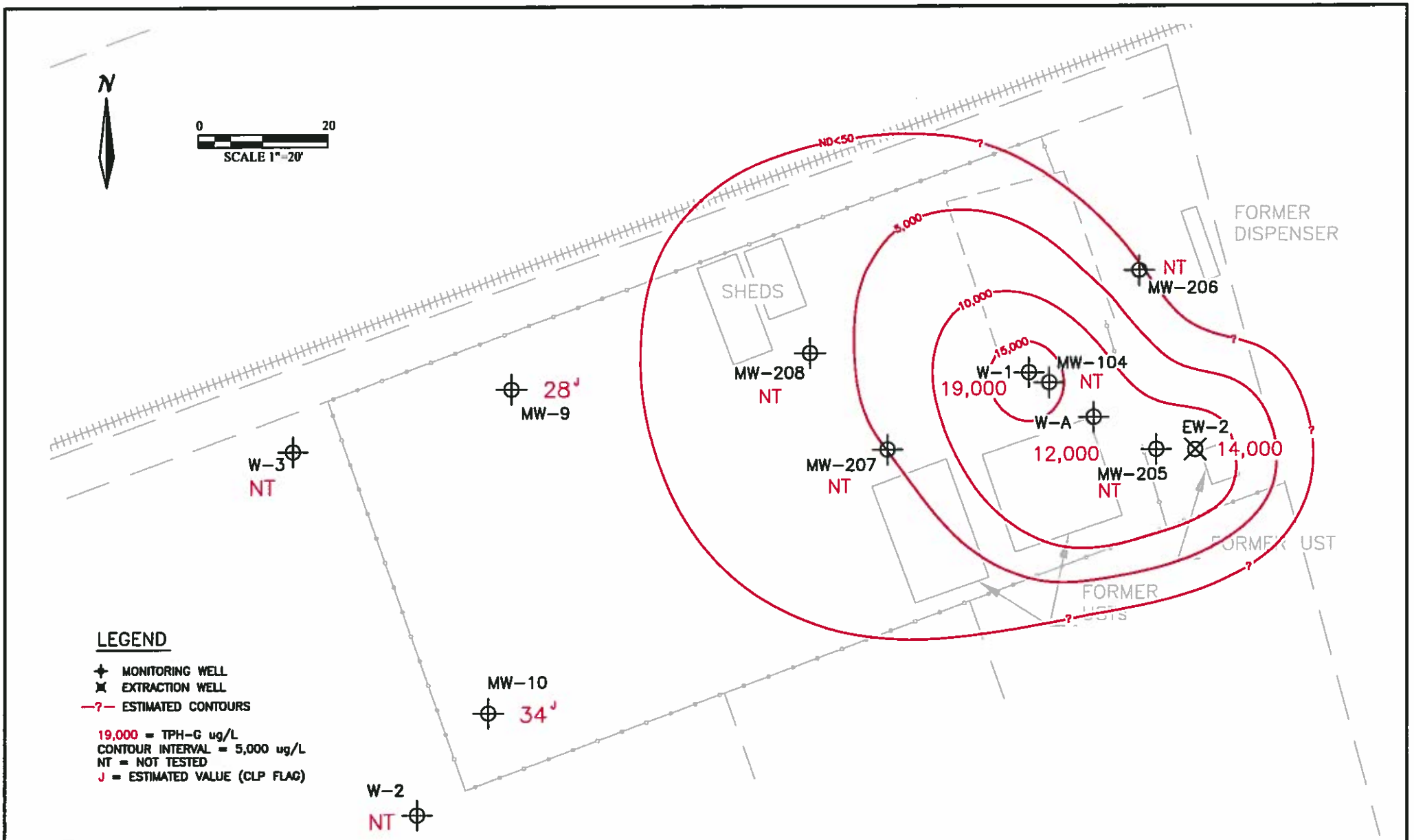
STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

FIGURE 7

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

GROUND ZERO ANALYSIS, INC

DEEP AQUIFER GROUNDWATER GRADIENT MAP - JUNE 25, 2015



NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

By:	AD
Job No:	1262.2 Date: 07-29-15
Scale:	1" = 50 feet
File:	12622 Graphics 8-25-15

GROUND ZERO ANALYSIS, INC.

FIGURE 8: INTERMEDIATE WELL TPH-G CONCENTRATIONS
JUNE 25, 2015 & JUNE 26, 2015
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

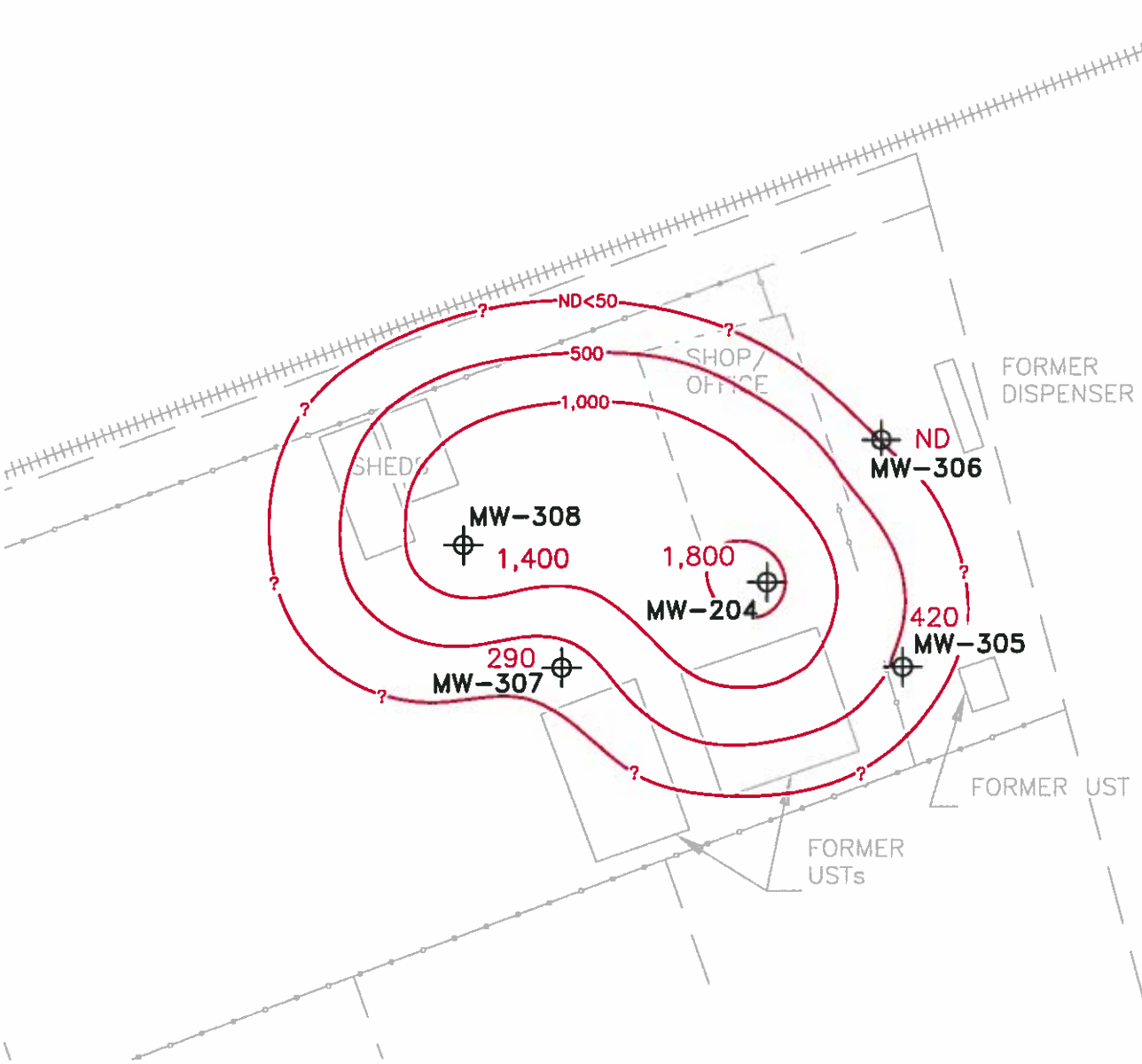
NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

By:	AD
Job No:	1262.2 Date: 07-29-15
Scale:	1" = 50 feet
File:	12622 Graphics 8-25-15

GROUND ZERO ANALYSIS, INC.

FIGURE 9: INTERMEDIATE WELL BENZENE CONCENTRATIONS
JUNE 25, 2015 & JUNE 26, 2015
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- ESTIMATED CONTOURS
- 1,800 = TPH-G CONCENTRATION (ug/L)
- CONTOUR INTERVAL = 500 ug/L

NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY.
NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

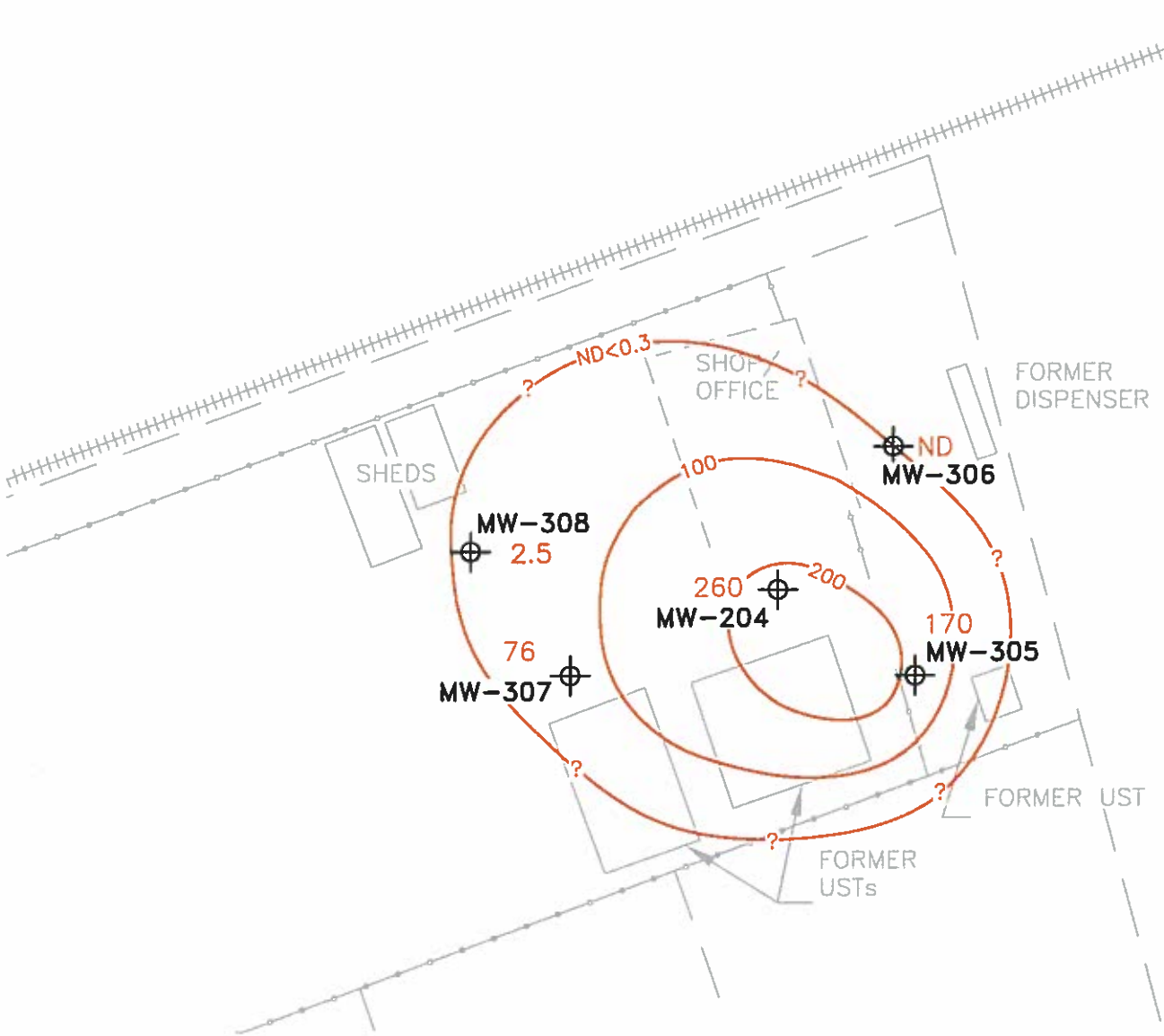
FIGURE 10

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

GROUND ZERO ANALYSIS, INC

DEEP AQUIFER TPH-G GROUNDWATER PLUME MAP

JUNE 25, 2015 & JUNE 26, 2015



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- —?— ESTIMATED CONTOURS
- 260 = BENZENE CONCENTRATION (ug/L)
- CONTOUR INTERVAL = 100 ug/L

NOTE:
PROPERTY LINES ARE SHOWN FOR REFERENCE ONLY, NOT INTENDED TO IMPLY DIVISION OF PROPERTY.

STREET RIGHT OF WAY IS APPROXIMATE, BASED ON ASSESSOR'S PARCEL MAPS AND INFORMATION PROVIDED BY WOODWARD-CLYDE CONSULTANTS

FIGURE 11

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

GROUND ZERO ANALYSIS, INC.

DEEP AQUIFER BENZENE GROUNDWATER PLUME MAP

JUNE 25, 2015 & JUNE 26, 2015

Summary Tables

TABLE 1
Summary of Well Construction

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Aquifer	Well/Boring Type	Well/Boring Number	Status	Date Drilled	Total Depth (ft)	Boring Diameter (in)	Well Casing Diameter (in)	Casing Type	Slot Size (in)	Sand Type	Well Screen		Filter Pack		Annular Seal		Grout Seal	
											From	To	From	To	From	To	From	To
Shallow	Vapor Extraction	W-1s	Active	03/11/96	45	?	6	PVC	0.010	#2/12	45	20	45	17	17	15	15	S
	Monitoring	W-Bs	Active	03/12/96	45	?	6	PVC	0.010	#2/12	45	20	45	18	18	16	16	S
	Monitoring	W-3s	Active	03/12/96	45	?	4	PVC	0.010	#2/12	45	20	45	18	18	16	16	S
	Monitoring	W-Es	Active	03/13/96	45	?	2	PVC	0.010	#2/12	45	20	45	18	18	16	16	S
	Monitoring	MW-4	Active	10/02/06	82	8	-	MCT	-	#2/12	30	29	30	20	16	14	14	S
	Monitoring	MW-5	Active	10/09/06	68	8	-	MCT	-	#2/12	27	26	29	24	24	21.5	21.5	S
	Monitoring	MW-6	Active	10/10/06	68	8	-	MCT	-	#2/12	30	29	31	27	27	24	24	S
	Monitoring	MW-7	Active	10/04/06	69.5	8	-	MCT	-	#2/12	30	29	30	20	-	-	6	S
	Monitoring	MW-8	Active	10/05/06	66.5	8	-	MCT	-	#2/12	30	29	30	30	20	18	18	S
	Monitoring	MW-9	Active	01/27/15	65	8	2	PVC	0.010	#2/12	65	45	65	43	43	40	40	S
	Monitoring	MW-10	Active	01/27/15	65	8	2	PVC	0.010	#2/12	65	45	65	43	43	40	40	S
	Monitoring	MW-105	Active	10/09/06	37	8	-	MCT	-	#2/12	37	36	39	34	35	29	-	-
	Monitoring	MW-106	Active	10/10/06	37	8	-	MCT	-	#2/12	37	36	39	35	35	31	-	-
	Monitoring	MW-107	Active	10/04/06	40	8	-	MCT	-	#2/12	40	39	42	37	37	30	-	-
	Monitoring	MW-108	Active	10/05/06	40	8	-	MCT	-	#2/12	40	39	42	37	37	30	-	-
	Vapor Extraction	EW-1	Active	10/03/06	25	10	4	PVC	0.010	#2/12	25	10	25	9.5	9.5	7.5	7.5	S
	Vapor Extraction	EW-2	Active	01/26/15	60	8	2	PVC	0.010	#2/12	60	40	60	38	38	35	35	S
Intermediate	Vapor Extraction	W-1	Active	05/25/89	56.5	8	2	PVC	0.010	#2/12	55.5	45.5	55.5	41.5	41.5	39	39	S
	Monitoring	W-2	Active	05/26/89	51.5	8	2	PVC	0.010	#2/12	49	39	49	36	36	22.5	22.5	S
	Monitoring	W-3	Active	05/26/89	51.5	8	2	PVC	0.010	#2/12	48	38	48	34.5	34.5	32.5	32.5	S
	Vapor Extraction	W-A	Active	07/12/90	63	12	4	PVC	0.010	#2/12	57.5	42	63	40	40	36.5	36.5	S
	Monitoring	W-B *	Active	07/13/90	55	12	4	PVC	0.010	#2/12	55	40	55	32	32	30	30	S
	Monitoring	W-C *	Active	07/11/90	55	8	2	PVC	0.010	#2	55	45	55	37.5	37.5	35	35	S
	Monitoring	W-D *	Active	07/12/90	57.5	8	2	PVC	0.010	#2/12	57.5	42	57.5	39.5	34	32	32	S
	Monitoring	W-E *	Active	07/10/90	61	8	2	PVC	0.010	#2/12	60.5	40.5	61	37	30	29	29	S
	Monitoring	MW-104	Active	10/02/06	51	8	-	MCT	-	#2/12	50.5	49.5	52	48	45	30	-	-
	Monitoring	MW-205	Active	10/09/06	48	8	-	MCT	-	#2/12	48	47	50	45	45	39	-	-
	Monitoring	MW-206	Active	10/10/06	50	8	-	MCT	-	#2/12	50	49	52	47	47	39	-	-
	Monitoring	MW-207	Active	10/04/06	50	8	-	MCT	-	#2/12	50	49	52	47	47	42	-	-
	Monitoring	MW-208	Active	10/05/06	52	8	-	MCT	-	#2/12	52	51	54	49	49	42	-	-
Deep	Monitoring	MW-204	Active	10/02/06	66.5	8	-	MCT	-	#2/12	66.5	65.5	68	64	64	52	-	-
	Monitoring	MW-305	Active	10/09/06	68	8	-	MCT	-	#2/12	66	65	68	63	63	50	-	-
	Monitoring	MW-306	Active	10/10/06	68	8	-	MCT	-	#2/12	66	65	68	63	63	52	-	-
	Monitoring	MW-307	Active	10/04/06	69.5	8	-	MCT	-	#2/12	66	65	68	63	63	52	-	-
	Monitoring	MW-308	Active	10/05/06	66.5	8	-	MCT	-	#2/12	66	65	66	63	63	54	-	-
Deepest	Monitoring	MW-304	Active	10/02/06	75.5	8	-	MCT	-	#2/12	75.5	74.5	76	73	73	68	-	-
	Monitoring	MW-404	Active	10/02/06	82	8	-	MCT	-	#2/12	81.5	80	81.5	79.5	80	76	-	-

* = well was destroyed in 2008

TABLE 2
Summary of Groundwater Elevation and Gradient - Water Table Wells

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Date		Elevation of Groundwater*																								Avg. Elv.	Avg. DTW	Gradient	Bearing
		W-1s	DTW	W-3s	DTW	W-Bs	DTW	W-Es	DTW																	(feet)	(feet)	(ft/ft)	
	top of casing	479.09		476.98		478.82		474.66																					
	top of screen	459.09	20	456.98	20	458.82	20	454.66	20																				
	bottom of screen	434.09	45	431.98	45	433.82	45	429.66	45																				
6/2/1989		435.93		432.48		-		-																		434.21	43.83		
7/25/1990		-		-		434.20		431.58																		432.89	43.85		
1/1/1992																										-	41.00		
4/24/1996		461.14		459.28		460.77		456.21																		459.35	18.04		
11/22/1996		454.09		451.53		453.12		446.66																		451.35	26.04		
7/15/1997		448.68		447.81		449.20		443.20																		447.22	30.17		
10/29/1997		442.64	36.45	441.53		442.19		437.98																		441.09	36.30		
4/27/1998		460.48	18.61	457.25		459.96		455.39																		458.27	19.12		
10/23/1998		445.11	33.98	444.01		445.60		440.16																		443.72	33.67		
4/9/1999		453.14	25.95	451.02		452.78		447.25																		451.05	26.34		
10/5/1999		446.66	32.43	445.20		446.72		441.47																		445.01	32.38		
4/5/2000		453.12	25.97	451.96		453.77		448.04																		451.72	25.67		
10/26/2000		447.91	31.18	446.50		448.14		442.43																		446.25	31.14		
4/16/2001		447.80	31.29	446.51		446.89		442.63																		445.96	31.43		
11/13/2001		435.69	43.40	433.32		443.59		431.05																		435.91	41.48		
2/15/2002		442.46		-		-		-																		442.46	34.93		
3/15/2002		441.32		-	-	-	-	-																		441.32	36.07		
4/16/2002		441.79		-	-	-	-	-																		441.79	35.60		
4/30/2002		441.80	37.29	439.19		441.50		437.09																		439.90	37.49		
9/30/2002		439.17	39.92	437.01		439.39		434.90																		437.52	39.87		
3/19/2003		446.83	32.26	445.03		446.74		441.80																		445.10	32.29		
9/16/2003		440.88		438.50		441.40		436.14																		439.23	38.16		
4/29/2004		448.99	30.10	447.39	29.59	448.83	29.99	443.43	31.23																	447.16	30.23	0.019	West
7/7/2006		450.40	28.69	448.61	28.37	450.25	28.57	444.21	30.45																	448.37	29.02	0.019	N76°W

*Data prior to July 7, 2006 from *Environmental Sampling Services* 5/27/04 Groundwater Monitoring Report

Date		Elevation of Groundwater - Wells Surveyed October 16, 2006 in accordance with SWRCB Geotracker Requirements																												Avg. Elv.	Avg. DTW	Gradient	Bearing
		W-1s **	DTW	W-3s	DTW	W-Bs	DTW	W-Es	DTW	MW-4	DTW	MW-5	DTW	MW-6	DTW	MW-7	DTW	MW-8	DTW	MW-105	DTW	MW-106	DTW	MW-107	DTW	MW-108	DTW						
																												(feet)	(feet)	(ft/ft)	
	top of casing	481.19		479.12		480.92		476.78		480.84		481.12		480.79		480.91		480.64		481.12		480.79		480.91		480.64							
	top of screen	461.19	20	459.12	20	460.92	20	456.78	20	451.84	29	455.12	26	451.79	29	451.91	29	451.64	29	445.12	36	444.79	36	441.91	39	441.64	39						
	bottom of screen	436.19	45	434.12	45	435.92	45	431.78	45	450.84	30	454.12	27	450.79	30	450.91	30	450.64	30	444.12	37	443.79	37	440.91	40	440.64	40						
10/16/06		447.81	33.38	446.17	32.95	447.93	32.99	442.75	34.03	-	-	-	-	-	-	-	-	-	-	447.97	33.15	447.11	33.68	446.77	34.14	446.34	34.30	446.61	33.58	0.014	N68°W
04/17/07		449.64	31.55	448.35	30.77	449.51	31.41	444.58	32.20	454.09	26.75	-	-	-	-	-	-	-	-	-	-	-	-	448.92	31.99	-	-	448.20	31.58	0.016	N71°W
12/19/07		438.88	42.31	437.46	41.66	444.51	36.41	433.10	43.68	-	-	-	-	-	-	-	-	-	-	-	-	443.07	37.72	442.26	38.65	442.60	38.04	440.27	39.78	0.033	S74°W
04/07/08		446.97	34.22	-	-	446.76	34.16	442.34	34.44	453.30	27.54	-	-	445.99	34.80	-	-	452.15	28.49	447.38	33.74	445.18	35.61	445.86	35.05	446.36	34.28	447.23	33.23	0.012	N64°W
10/09/08		435.40	43.69	-	-	-	-	431.01	43.65	-	-	-	-	-	-	-	-	-	-	431.68	49.44	431.31	49.48	-	-	430.56	50.08	431.99	47.27	0.010	N87°W
04/08/11		452.00	27.09	452.20	26.92	453.81	27.11	446.59	28.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	451.15	27.30	0.0221	N56°W
10/26/11		445.90	35.29	443.72	35.40	445.92	35.00	441.13	35.65	-	-	-	-	-	-	-	-	-	-	445.57	35.55	446.15	34.64	444.99	35.92	444.59	36.05	445.26	35.41	0.0129	S68°W
05/30/12		442.92	38.27	439.98	39.14	441.85	39.07	437.10	39.68	-	-	-	-	-	-	-	-	-	-	445.63	35.49	443.61	37.18	442.19	38.76	-	-	441.89	38.23	0.0129	N82°W
11/19/12		440.42	40.77	440.12	39.00	441.63	39.29	434.44	42.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	439.15	40.35	0.0153	N63°W
06/24/13		443.59	37.60	442.17	36.95	443.60	37.32	439.46	37.32	-	-	-	-	-	-	-	-	-	-	445.69	35.43	444.72	36.07	443.81	37.10	443.35	37.29	443.30	36.89	0.0097	N75°W
12/03/13		446.72	34.47	443.22	35.90	446.29	34.63	440.70	36.08	-	-	-	-	-	-	-	-	-	-	446.29	34.83	446.08	34.71	444.86	36.05	444.47	36.17	444.83	35.36	0.0192	S54°W
06/16/14		440.52	40.67	435.89	43.23	438.53	42.39	433.33	43.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	437.07	42.44	0.0255	S59°W
12/02/14		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
06/25/15		-	-	-	-	-	-	433.32	43.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

"-" = well dry or depth to water measurement could not be obtained

Starting 10/26/11 - Gradient calculated using a 3-point problem with monitoring wells W-Bs, W-Es and W-3s. + The well top of W-1s was modified for the DPE system.

** = The well top of W-1s was modified in November 2011 for the DPE system, therefore the depth-to-water data is irrevelant and was not used for groundwater contour or avg. groundwater elevation calculations

TABLE 3
Summary of Groundwater Elevation and Gradient - Intermediate Wells

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Date	Elevation of Groundwater - Wells Surveyed Octpber 16, 2006 in accordance with SWRCB Geotracker Requirements																							
		W-1**	DTW	W-A**	DTW	MW-9	DTW	MW-10	DTW	EW-2	DTW	MW-104	DTW	MW-205	DTW	MW-206	DTW	MW-207	DTW	MW-208	DTW	Avg. Elv.	Avg. DTW	Gradient	Bearing
	top of casing	480.77		481.04		479.87		479.86		481.27		480.84		481.12		480.79		480.91		480.64		(feet)	(feet)	(ft/ft)	
	top of screen	435.27	45.5	439.04	42	434.87	45	434.86	45	441.27	40	431.34	49.5	434.12	47	431.79	49	431.91	49	429.64	51				
	bottom of screen	425.27	55.5	423.54	57.5	414.87	65	414.86	65	421.27	60	430.34	50.5	433.12	48	430.79	50	430.91	50	428.64	52				
10/16/2006		-	-	-	-	-	-	-	-	-	-	444.85	35.99	446.75	34.37	447.03	33.76	446.27	34.64	445.12	35.52	446.00	35.76	0.012	N63°W
4/17/2007		-	-	-	-	-	-	-	-	-	-	-	-	-	-	448.57	32.22	447.13	33.78	447.05	33.59	447.58	33.20	0.022	S68°W
12/19/2007		-	-	438.36	42.68	-	-	-	-	-	-	435.98	44.86	-	-	436.10	44.69	434.33	46.58	433.92	46.72	435.74	45.11	0.04	N76°W
4/7/2008		-	-	446.72	34.32	-	-	-	-	-	-	443.10	37.74	444.84	36.28	446.38	34.41	444.84	36.07	443.66	36.98	444.92	35.97	northwest	variable
10/8-9/2008		-	-	-	-	-	-	-	-	-	-	431.08	49.76	434.51	46.61	431.32	49.47	-	-	430.68	49.96	431.90	48.95	0.12	N20°W
4/8/2011		-	-	453.38	27.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	453.38	27.66	N/A	N/A
10/26/2011		445.28	35.49	445.60	35.44	-	-	-	-	-	-	444.83	36.01	444.00	37.12	443.25	37.54	442.79	38.12	442.05	38.59	443.75	37.14	0.025	N52°W
** 5/30/2012		441.21	39.56	441.50	39.54	-	-	-	-	-	-	441.78	39.06	442.43	38.69	441.39	39.40	440.37	40.54	440.05	40.59	441.25	39.63	0.020	S89°W
** 11/19/2012		439.12	41.65	438.12	42.92	-	-	-	-	-	-	439.29	41.55	439.08	42.04	438.11	42.68	437.70	43.21	437.35	43.29	438.40	42.48	0.015	N36°W
** 6/24/2013		443.53	37.24	444.19	36.85	-	-	-	-	-	-	443.76	37.08	444.33	36.79	443.74	37.05	442.74	38.17	442.47	38.17	443.54	37.34	0.014	N73°W
** 12/3/2013		444.43	36.34	445.11	35.93	-	-	-	-	-	-	444.54	36.30	445.13	35.99	444.74	36.05	444.77	36.14	444.37	36.27	444.73	36.15	0.013	N32°W
** 6/16/14		436.71	44.06	436.97	44.07	-	-	-	-	-	-	437.15	43.69	437.70	43.42	436.64	44.15	435.92	44.99	431.78	48.86	436.12	44.75	0.076	N74°W
12/2/2014		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/9/2015		-	-	-	-	436.90	42.97	437.21	42.65	439.07	42.20	-	-	-	-	-	-	-	-	-	-	437.73	42.61	0.032	N69°W
6/25/2015		432.84	47.93	433.83	47.21	431.54	48.33	431.87	47.99	434.00	47.27	433.61	47.23	434.21	46.91	433.18	47.61	432.23	48.68	430.80	49.84	432.81	47.90	0.036	N70°W

"-" = well dry or depth to water measurement could not be obtained
Starting 10/26/11 - Gradient calculated using a 3-point problem with CMT wells 205, 206 & 208
** = The well tops of W-A and W-1 were modified for the DPE system, therefore the depth-to-water data is irrevelant and was not used for groundwater contour or avg. groundwater elevation calculations

TABLE 4
Summary of Groundwater Elevation and Gradient - Deep Deepest Wells

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Date		Elevation of Groundwater - Wells Surveyed October 16, 2006 in accordance with SWRCB Geotracker Requirements																	
		DEEP WELLS										GROUNDWATER				DEEPEST WELLS			
		MW-304	DTW	MW-305	DTW	MW-306	DTW	MW-307	DTW	MW-308	DTW	Avg. Elv.	Avg. DTW	Gradient	Bearing	MW-304	DTW	MW-404	DTW
	top of casing	480.84		481.12		480.79		480.91		480.64		(feet)	(feet)	(ft/ft)		480.84		480.84	
	top of screen	415.34	65.5	416.12	65	415.79	65	415.91	65	415.64	65					406.34	74.5	400.84	80.0
	bottom of screen	414.34	66.5	415.12	66	414.79	66	414.91	66	414.64	66					405.34	75.5	399.34	81.5
10/16/2006		447.09	33.75	447.44	33.68	447.29	33.50	446.63	34.28	446.37	34.27	446.96	33.90	0.014	N78°W	442.76	38.08	444.37	36.47
4/17/2007		-	-	448.49	32.63	449.08	31.71	-	-	-	-	448.79	32.17	-	-	-	-	448.82	32.02
12/19/2007		435.73	45.11	-	-	443.19	37.60	435.20	45.71	434.93	45.71	437.26	43.53	0.18	S39°W	435.45	45.39	435.51	45.33
4/7/2008		446.42	34.42	446.56	34.56	442.68	38.11	446.86	34.05	445.59	35.05	445.62	35.24	0.1	N26°E	441.42	39.42	446.18	34.66
10/8-9/2008		429.90	50.94	444.51	36.61	432.28	48.51	-	-	442.09	38.55	437.20	43.65	-	-	-	-	432.20	48.64
4/8/2011		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/26/2011		445.22	35.62	445.74	35.38	445.34	35.45	-	-	445.55	35.09	445.46	35.39	0.0114	N64°W	445.14	35.70	445.07	35.77
5/30/2012		441.06	39.78	441.37	39.75	440.96	39.83	440.56	40.35	440.24	40.40	440.84	40.02	0.0100	N79°W	440.95	39.89	440.85	39.99
11/19/2012		438.53	42.31	438.84	42.28	438.46	42.33	438.04	42.87	437.72	42.92	438.32	42.54	0.0089	N72°W	438.40	42.44	438.33	42.51
6/24/2013		443.75	37.09	444.05	37.07	443.69	37.10	443.16	37.75	442.87	37.77	443.50	37.36	0.0091	N78°W	443.66	37.18	443.50	37.34
12/3/2013		444.78	36.06	445.01	36.11	444.67	36.12	444.14	36.77	443.97	36.67	444.51	36.35	0.0100	S75°W	444.66	36.18	444.54	36.30
6/16/2014		436.62	44.22	436.89	44.23	436.57	44.22	436.11	44.80	436.10	44.54	436.46	44.40	0.012	N49°W	436.51	44.33	436.40	44.44
12/2/2014		425.26	55.58	426.04	55.08	425.69	55.10	425.33	55.58	425.11	55.53	425.49	55.37	0.012	N87°W	425.72	55.12	425.62	55.22
6/25/2015		432.49	48.35	432.78	48.34	432.45	48.34	431.95	48.96	431.71	48.93	432.28	48.58	0.030	West	432.38	48.46	432.24	48.60

"-" = well dry or depth to water measurement could not be obtained
Starting 10/26/11 - Gradient calculated using a 3-point problem with CMT wells 305, 307 & 308

TABLE 5
Summary of Vertical Groundwater Gradients

Sullins (Arrow Rentals)
187 North L Street
Livermore, CA

Date	Well Pair	Mid Points (TS-BS & TS-BS)	gw/ts	bs/bs	GW Elevation (Head)	Vertical Head diff.	Vertical Dist diff.	Vertical Gradient
16-Oct-06	MW-104	430.84	431.34	430.34	444.85	2.240	16.00	0.140
	MW-204	414.84	415.34	414.34	447.09			
16-Oct-06	MW-205	433.62	434.12	433.12	446.75	0.690	18.00	0.038
	MW-305	415.62	416.12	415.12	447.44			
19-Apr-07	MW-107	441.41	441.91	440.91	448.92	-1.790	10.00	-0.179
	MW-207	431.41	431.91	430.91	447.13			
19-Apr-07	MW-206	431.29	431.79	430.79	446.75	0.510	16.00	0.032
	MW-306	415.29	415.79	414.79	447.44			
19-Dec-07	MW-204	414.84	415.34	414.34	435.73	-0.280	9.00	-0.031
	MW-304	405.84	406.34	405.34	435.45			
19-Dec-07	MW-304	405.84	406.34	405.34	435.45	0.060	5.75	0.010
	MW-404	400.09	400.84	399.34	435.51			
19-Dec-07	MW-207	431.41	431.91	430.91	434.33	0.870	16.00	0.054
	MW-307	415.41	415.91	414.91	435.20			
7-Apr-08	MW-204	414.84	415.34	414.34	446.42	-5.000	9.00	-0.556
	MW-304	405.84	406.34	405.34	441.42			
7-Apr-08	MW-205	433.62	434.12	433.12	446.75	1.720	18.00	0.096
	MW-305	415.62	416.12	415.12	447.44			
7-Apr-08	MW-206	431.29	431.79	430.79	446.75	-3.700	16.00	-0.231
	MW-306	415.29	415.79	414.79	447.44			
7-Apr-08	MW-207	431.41	431.91	430.91	444.84	2.020	16.00	0.126
	MW-307	415.41	415.91	414.91	446.86			
8-Oct-08	MW-204	414.84	415.34	414.34	429.90		9.00	N/A
	MW-304	405.84	406.34	405.34	-			
8-Oct-08	MW-205	433.62	434.12	433.12	434.51	10.000	18.00	0.556
	MW-305	415.62	416.12	415.12	444.51			
8-Oct-08	MW-206	431.29	431.79	430.79	431.32	0.960	16.00	0.060
	MW-306	415.29	415.79	414.79	432.28			
8-Oct-08	MW-207	431.41	431.91	430.91	-		16.00	N/A
	MW-307	415.41	415.91	414.91	-			
25-Oct-11	MW-204	414.84	415.34	414.34	445.22	-0.080	9.00	-0.009
	MW-304	405.84	406.34	405.34	445.14			
25-Oct-11	MW-205	433.62	434.12	433.12	444.00	1.740	18.00	0.097
	MW-305	415.62	416.12	415.12	445.74			
25-Oct-11	MW-206	431.29	431.79	430.79	443.25	2.090	16.00	0.131
	MW-306	415.29	415.79	414.79	445.34			
25-Oct-11	MW-207	431.41	431.91	430.91	442.79		16.00	N/A
	MW-307	415.41	415.91	414.91	-			
30-May-12	MW-204	414.84	415.34	414.34	441.06	-0.110	9.00	-0.012
	MW-304	405.84	406.34	405.34	440.95			
30-May-12	MW-205	433.62	434.12	433.12	442.43	-1.060	18.00	-0.059
	MW-305	415.62	416.12	415.12	441.37			
30-May-12	MW-206	431.29	431.79	430.79	441.39	-0.430	16.00	-0.027
	MW-306	415.29	415.79	414.79	440.96			
30-May-12	MW-207	431.41	431.91	430.91	440.37	0.190	16.00	0.012
	MW-307	415.41	415.91	414.91	-			
19-Nov-12	MW-204	414.84	415.34	414.34	438.53	-0.130	9.00	-0.014
	MW-304	405.84	406.34	405.34	438.40			
19-Nov-12	MW-205	433.62	434.12	433.12	439.08	-0.240	18.00	-0.013
	MW-305	415.62	416.12	415.12	438.84			
19-Nov-12	MW-206	431.29	431.79	430.79	438.11	0.350	16.00	0.022
	MW-306	415.29	415.79	414.79	438.46			
19-Nov-12	MW-207	431.41	431.91	430.91	437.70	0.340	16.00	0.021
	MW-307	415.41	415.91	414.91	438.04			
24-Jun-13	MW-204	414.84	415.34	414.34	443.75	-0.090	9.00	-0.010
	MW-304	405.84	406.34	405.34	443.66			
24-Jun-13	MW-205	433.62	434.12	433.12	444.33	-0.280	18.00	-0.016
	MW-305	415.62	416.12	415.12	444.05			
24-Jun-13	MW-206	431.29	431.79	430.79	443.74	-0.050	16.00	-0.003
	MW-306	415.29	415.79	414.79	443.69			
24-Jun-13	MW-207	431.41	431.91	430.91	442.74	0.420	16.00	0.026
	MW-307	415.41	415.91	414.91	443.16			
3-Dec-13	MW-204	414.84	415.34	414.34	444.78	-0.120	9.00	-0.013
	MW-304	405.84	406.34	405.34	444.66			
3-Dec-13	MW-205	433.62	434.12	433.12	445.13	-0.120	18.00	-0.007
	MW-305	415.62	416.12	415.12	445.01			
3-Dec-13	MW-206	431.29	431.79	430.79	444.74	-0.070	16.00	-0.004
	MW-306	415.29	415.79	414.79	444.67			
3-Dec-13	MW-207	431.41	431.91	430.91	444.77	-0.630	16.00	-0.039
	MW-307	415.41	415.91	414.91	444.14			
16-Jun-14	MW-204	414.84	415.34	414.34	436.62	-0.110	9.00	-0.012
	MW-304	405.84	406.34	405.34	436.51			
16-Jun-14	MW-205	433.62	434.12	433.12	437.70	-0.810	18.00	-0.045
	MW-305	415.62	416.12	415.12	436.89			
16-Jun-14	MW-206	431.29	431.79	430.79	436.64	-0.070	16.00	-0.004
	MW-306	415.29	415.79	414.79	436.57			
16-Jun-14	MW-207	431.41	431.91	430.91	435.92	0.190	16.00	0.012
	MW-307	415.41	415.91	414.91	436.11			
25-Jun-15	MW-204	414.84	415.34	414.34	432.49	-0.110	9.00	-0.012
	MW-304	405.84	406.34	405.34	432.38			
25-Jun-15	MW-205	433.62	434.12	433.12	434.21	-1.430	18.00	-0.079
	MW-305	415.62	416.12	415.12	432.78			
25-Jun-15	MW-206	431.29	431.79	430.79	433.18	-0.730	16.00	-0.046
	MW-306	415.29	415.79	414.79	432.45			
25-Jun-15	MW-207	431.41	431.91	430.91	432.23	-0.280	16.00	-0.018
	MW-307	415.41	415.91	414.91	431.95			

TABLE 6
Summary of Groundwater Analytical Data - 2nd Quarter 2015

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-1	6/26/2015	19,000 [A01]	470 [A01]	91 [A01]	350 [A01]	1,100 [A01]	-
EW-2	6/26/2015	14,000 [A01]	740 [A01]	31 [A01]	1,300 [A01]	1,100 [A01]	8.1 [A01]
W-A	6/26/2015	12,000 [A01]	2,100 [A01]	64 [A01]	160 [A01]	1,000 [A01]	-
W-1s	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-3s	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-Bs	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-Es	6/25/2015	NS	NS	NS	NS	NS	NS
MW-4	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-5	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-6	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-7	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-8	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-9	6/26/2015	28 [J]	1.6	<0.3	<0.3	<0.6	<1
MW-10	6/26/2015	34 [J]	<0.3	<0.3	<0.3	<0.6	<1
MW-104	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-105	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-106	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-107	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-108	6/25/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-204	6/26/2015	1,800	260 [A01]	11	41	82	6.4
MW-205	6/25/2015	NS	NS	NS	NS	NS	NS
MW-206	6/25/2015	NS	NS	NS	NS	NS	NS
MW-207	6/25/2015	NS	NS	NS	NS	NS	NS
MW-208	6/25/2015	NS	NS	NS	NS	NS	NS
MW-304	6/26/2015	810	69 [A01]	4.2	33	60	-
MW-305	6/26/2015	420	170 [A01]	1.6	12	21	-
MW-306	6/25/2015	<50	<0.3	<0.3	<0.3	<0.6	-
MW-307	6/26/2015	290	76	1.2	18	16	-
MW-308	6/25/2015	1,400	2.5	1.2	3.1	1.2	-
MW-404	6/25/2015	NS	NS	NS	NS	NS	NS

NS - not sampled

[J] - Estimated value (CLP Flag)

[A01] - Detection and quantitation limits are raised due to sample dilution

TABLE 7
Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	ETBE	DIPE	TAME	TBA	1,2 DCA	EDB
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-1	11/1988 (?)	210,000	300,000	29,000	30,000	5,400	24,000	-	-	-	-	-	-	-
	9/13/1995	666,000	-	65,000	78,000	6,400	36,000	<12500	-	-	-	-	-	-
	10/19/2006	77,000	-	9,700	11,000	2,000	10,000	-	-	-	-	-	-	-
	10/20/2006	118,000	-	4,600	7,200	3,900	11,000	-	-	-	-	-	-	-
	12/20/2007	140,000	-	20,000	17,000	3,000	16,000	<2000	-	-	-	-	-	-
	4/8/2011	68,900	-	13,800	8,150	1,520	11,600	<200	-	-	-	-	-	-
	10/26/2011	76,000	-	15,000	6,100	910	11,000	-	-	-	-	-	-	-
	5/30/2012	25,000	-	4,500	810	600	1,900	-	-	-	-	-	-	-
	11/19/2012	36,000	-	6,300	1,700	1,900	6,200	-	-	-	-	-	-	-
	6/26/2013	43,000	-	6,200	1,700	1,900	5,500	190	-	-	-	-	-	-
	12/5/2013	15,000	-	2,100	500	440	1,900	13	-	-	-	-	-	-
	6/17/2014	25,000	-	2,200	210	1,500	2,900	23	-	-	-	-	-	-
	12/3/2014	DRY												
	6/26/2015	19,000	-	470	91	350	1,100	-	-	-	-	-	-	-
W-2	11/1988 (?)	360	<50	6.7	2.1	0.5	1.3	-	-	-	-	-	-	-
	9/13/1995	90	-	<0.5	<0.5	<0.5	<0.5	<5	-	-	-	-	-	-
	4/8/2011	well location unknown												
W-3	11/1988 (?)	11,000	2,200	290	120	150	140	-	-	-	-	-	-	-
	9/13/1995	27,000	-	5,600	290	460	280	<2500	-	-	-	-	-	-
	4/7/2011	193	-	7.8	<0.5	0.5	<1	<0.5	-	-	-	-	-	-
	10/26/2011	no access agreement												
EW-2	3/10/2015	60,000	-	7,000	4,000	1,600	10,000	<0.5	-	-	-	-	-	-
	6/26/2015	14,000	-	740	31	1,300	1,100	8.1	-	-	-	-	-	-
W-A	1990	18,000	2,400	6,800	5,500	620	3,400	-	-	-	-	-	-	-
(dup)	1990	-	-	6,900	5,600	620	6,800	-	-	-	-	-	-	-
	10/20/2006	450	-	48	19	21	33	-	-	-	-	-	-	-
	10/29/2007	40,000	-	4,000	350	1,600	3,000	<100	-	-	-	-	-	-
	4/8/2011	13,200	-	2,370	128	439	523	<20	-	-	-	-	-	-
	10/26/2011	18,000	-	3,500	410	970	870	-	-	-	-	-	-	-
	6/7/2012	37,000	-	3,500	700	660	1700	-	-	-	-	-	-	-
	11/21/2012	7,500	-	1,900	110	300	440	-	-	-	-	-	-	-
	6/25/2013	10,000	-	2,800	370	520	1,100	56	-	-	-	-	-	-
	12/5/2013	2,800	-	930	54	59	220	7.2	-	-	-	-	-	-
	6/17/2014	6,100	-	2,200	84	170	250	21	-	-	-	-	-	-
	12/3/2014	DRY												
	6/26/2015	12,000	-	2,100	64	160	1,000	-	-	-	-	-	-	-
W-B	1990	13,000	1,700	22,000	7,900	2,000	4,000	-	-	-	-	-	-	-
(dup)	1990	21,000	1,600	21,000	7,300	1,800	3,700	-	-	-	-	-	-	-
		Abandoned April 14, 2008												
W-C	1990	<10	<100	<1	<1	<1	<1	-	-	-	-	-	-	-
		Abandoned April 14, 2008												
W-D	1990	100	<100	1	2	2	1	-	-	-	-	-	-	-
		Abandoned April 14, 2008												
W-E	1990	<10	<100	<1	<1	<1	<1	-	-	-	-	-	-	-
	9/13/1995	95	-	4	<0.5	<0.5	<0.5	18	-	-	-	-	-	-
		Abandoned April 14, 2008												
W-1s	3/22/1996	6,500	-	580	470	85	1,100	<500	-	-	-	-	-	-
	11/22/1996	170,000	-	13,000	18,000	3,500	18,000	<10000	-	-	-	-	-	-
	7/15/1997	140,000	38,000	12,000	12,000	2,600	16,000	<800	-	-	-	-	-	-
	10/29/1997	650,000	180,000	14,000	19,000	7,800	35,000	<3000	-	-	-	-	-	-
	4/27/1998	6,700	2,200	410	250	77	870	<30	-	-	-	-	-	-
	10/23/1998	99,000	18,000	9,800	9,400	1,800	11,000	<600	-	-	-	-	-	-
	4/9/1999	70,000	24,000	6,500	7,000	1,800	8,900	360	-	-	-	-	-	-
	10/5/1999	82,000	60,000	5,500	4,500	2,500	14,000	<300	-	-	-	-	-	-
	4/5/2000	47,000	15,000	4,300	2,300	1,500	6,100	170	-	-	-	-	-	-
	10/26/2000	50,000	1,200	3,800	1,800	1,700	7,600	<50	-	-	-	-	-	-
	4/18/2001	54,000	6,800	5,200	1,800	1,500	7,000	<330	-	-	-	-	-	-
	11/13/2001	750,000	-	9,500	7,800	7,200	33,000	<2000	-	-	-	-	-	-
	4/30/2002	66,000	8,200	6,000	2,700	2,300	11,000	<1200	-	-	-	-	-	-
	9/30/2002	51,000	1,200	5,600	1,500	2,000	9,400	<1000	-	-	-	-	-	-
	3/19/2003	49,000	9,800	3,400	880	1,300	7,300	<500	-	-	-	-	-	-
	9/16/2003	53,000	24,000	4,100	1,200	1,400	6,600	<1000	-	-	-	-	-	-
	4/29/2004	39,000	5,900	3,700	1,200	810	4,700	<2500	-	-	-	-	-	-
	7/7/2006	23,000	<500	4,000	710	1,200	2,900	<100	<500	<500	<500	<1000	<50	<50
	10/17/2006	35,000	<470	5,000	1,300	1,500	3,500	-	-	-	-	-	-	-
	10/19/2006	40,000	-	6,000	3,800	1,300	4,300	-	-	-	-	-	-	-
	10/20/2006	32,000	-	2,100	2,700	1,200	3,600	-	-	-	-	-	-	-
	4/19/2007	21,000	-	2,200	460	1,200	1,800	<200	-	-	-	-	-	-
	10/29/2007	68,000	-	19,000	830	2,700	4,000	<400	-	-	-	-	-	-
	4/8/2008	30,000	-	2,600	340	1,800	1,700	<120	-	-	-	-	-	-
	10/9/2008	39,000	-	3,900	340	1,400	2,000	<250	-	-	-	-	-	-
	4/8/2011	13,400	-	2,040	239	1,180	877	<20	-	-	-	-	-	-
	10/26/2011	12,000	-	2,900	280	520	530	-	-	-	-	-	-	-
	5/30/2012	11,000	-	490	83	140	740	-	-	-	-	-	-	-
	11/21/2012	3,600	-	320	47	33	180	-	-	-	-	-	-	-
	6/26/2013	1,700	-	530	11	8.1	18	<10	-	-	-	-	-	-
	12/4/2013	1,100	-	140	16	7.8	120	7.4	-	-	-	-	-	-
	6/17/2014	320	-	9.3	<1	<1	<2	<1	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												

TABLE 7
Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	ETBE	DIPE	TAME	TBA	1,2 DCA	EDB
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-3s	3/22/1996	180	-	13	6.9	5.3	14	<5	-	-	-	-	-	-
	11/22/1996	3,280	-	270	29	63	100	<100	-	-	-	-	-	-
	7/15/1997	2,100	340	230	7	33	51	<20	-	-	-	-	-	-
	10/29/1997	2,880	750	630	31	71	69	<30	-	-	-	-	-	-
	4/27/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<3	-	-	-	-	-	-
	10/23/1998	3,800	1,000	500	28	90	37	35	-	-	-	-	-	-
	4/9/1999	960	430	240	4	37	3	<12	-	-	-	-	-	-
	10/5/1999	1,500	1,000	290	9.5	53	9.8	<6	-	-	-	-	-	-
	4/5/2000	810	320	150	3	9	5.7	<5	-	-	-	-	-	-
	10/26/2000	310	120	83	3.5	6.4	1.2	<5	-	-	-	-	-	-
	4/18/2001	2,300	1,600	320	8	16	7	<20	-	-	-	-	-	-
	11/13/2001	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/30/2002	1,400	490	320	5.5	24	5	<25	-	-	-	-	-	-
	3/19/2003	5,300	1,500	920	24	140	27	<25	-	-	-	-	-	-
	3/19/2003	5,300	1,500	920	24	140	27	<25	-	-	-	-	-	-
	9/16/2003	1,600	1,400	270	1.7	5.2	<0.5	<5	-	-	-	-	-	-
	4/29/2004	1,300	400	210	5.1	23	4.5	<25	-	-	-	-	-	-
	7/7/2006	110	<500	44	0.77	<0.5	<0.5	<1	<5	<5	<5	<10	<0.5	<0.5
	10/17/2006	1,300	<50	95	<2	2	<2	-	-	-	-	-	-	-
	4/19/2007	320	-	83	<2.5	<2.5	<2.5	<5	-	-	-	-	-	-
	12/19/2007	69	-	1.3	<0.5	<0.5	<1	<2	-	-	-	-	-	-
	4/8/2011	937	-	422	<5	6.5	<10	<5	-	-	-	-	-	-
	10/25/2011	190	-	5.2	0.76	1.3	2.1	-	-	-	-	-	-	-
	5/30/2012	110	-	33	0.51	1.1	0.5	-	-	-	-	-	-	-
	11/19/2012	71	-	<0.3	<0.3	<0.3	<0.6	-	-	-	-	-	-	-
	6/25/2013	85	-	6	0.82	0.36	0.75	<1.0	-	-	-	-	-	-
	12/3/2013	16	-	6.2	<0.5	<0.5	<1	<0.5	-	-	-	-	-	-
	6/17/2014	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												
W-3s	3/22/1996	61,000	-	9,800	8,000	2,200	11,000	<5000	-	-	-	-	-	-
	11/22/1996	47,000	-	5,100	3,100	1,400	7,800	<2500	-	-	-	-	-	-
	7/15/1997	66,000	17,000	7,800	4,900	1,900	10,000	<600	-	-	-	-	-	-
	10/29/1997	44,000	27,000	6,000	500	1,500	6,400	380	-	-	-	-	-	-
	4/27/1998	63,000	17,000	6,100	5,400	1,900	9,100	<600	-	-	-	-	-	-
	10/23/1998	48,000	9,600	6,700	1,200	1,500	6,200	<300	-	-	-	-	-	-
	4/9/1999	39,000	12,000	4,100	1,900	1,400	5,600	<300	-	-	-	-	-	-
	10/5/1999	38,000	7,300	3,500	390	1,600	5,900	<60	-	-	-	-	-	-
	4/5/2000	34,000	9,600	3,500	1,200	1,400	4,700	<150	-	-	-	-	-	-
	10/26/2000	23,000	650	2,500	210	1,100	2,600	150	-	-	-	-	-	-
	4/18/2001	20,000	2,500	2,400	180	880	1,800	<20	-	-	-	-	-	-
	11/13/2001	17,000	3,600	2,000	130	1,100	1,700	<150	-	-	-	-	-	-
	4/30/2002	13,000	2,300	1,000	35	660	360	<170	-	-	-	-	-	-
	9/30/2002	7,100	1,500	940	28	260	93	<250	-	-	-	-	-	-
	3/19/2003	14,000	3,900	1,200	77	820	900	<120	-	-	-	-	-	-
	9/16/2003	9,400	1,900	1,300	36	580	160	<150	-	-	-	-	-	-
	4/29/2004	15,000	3,300	2,400	170	1,300	950	<200	-	-	-	-	-	-
	7/7/2006	11,000	<50	1,900	160	820	440	<40	<200	<200	<200	<400	<20	<20
	10/17/2006	6,500	<47	1,000	37	410	83	-	-	-	-	-	-	-
	10/20/2006	630	<47	39	8.5	1.7	20	-	-	-	-	-	-	-
	4/19/2007	12,000	-	1,500	100	900	620	<100	-	-	-	-	-	-
	12/19/2007	8,200	-	360	<50	380	<100	<200	-	-	-	-	-	-
	4/8/2008	4,400	-	410	15	460	71	<50	-	-	-	-	-	-
	4/8/2011	6,960	-	1,280	56.2	632	432	<10	-	-	-	-	-	-
	10/25/2011	4,900	-	250	23	230	38	-	-	-	-	-	-	-
	5/30/2012	310	-	7.6	0.46	18	3	-	-	-	-	-	-	-
	11/19/2012	1,100	-	31	3.9	23	17	-	-	-	-	-	-	-
	6/25/2013	580	-	34	2.4	3.9	1.8	6.1	-	-	-	-	-	-
	12/12/2013	1,600	-	62	3.8	31	5.1	<0.5	-	-	-	-	-	-
	6/17/2014	190	-	26	1.3	0.67	2.5	<0.5	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												
W-Es	3/22/1996	<50	-	<0.5	<0.5	<0.5	<0.5	<5	-	-	-	-	-	-
	11/22/1996	280	-	24	0.6	1.8	2.2	<5	-	-	-	-	-	-
	7/15/1997	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/29/1997	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/27/1998	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/23/1998	82	69	<0.5	0.8	<0.5	0.8	4	-	-	-	-	-	-
	4/9/1999	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/5/1999	68	88	<0.5	<0.5	<0.5	<1.0	4	-	-	-	-	-	-
	4/5/2000	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/26/2000	110	<50	0.7	<0.5	<0.5	<1.0	<5	-	-	-	-	-	-
	4/18/2001	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/13/2001	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/30/2002	-	-	-	-	-	-	-	-	-	-	-	-	-
	9/30/2002	-	-	-	-	-	-	-	-	-	-	-	-	-
	3/19/2003	86	61	<0.5	<0.5	<0.5	<0.5	<5	-	-	-	-	-	-
	4/17/2007	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/29/2004	55	87	0.62	<0.5	<0.5	<0.5	<5	-	-	-	-	-	-
	7/7/2006	<25	<50	<0.5	<0.5	<0.5	<0.5	2.4	<5	<5	<5	<10	<0.5	<0.5
	10/17/2006	<50	<50	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-
	4/17/2007	<50	-	<0.5	<0.5	<0.5	<0.5	<1	-	-	-	-	-	-
	12/19/2007	<50	-	<0.5	<0.5	<0.5	<1	<2	-	-	-	-	-	-
	4/7/2008	<50	-	<0.5	<0.5	<0.5	<1	<5	-	-	-	-	-	-
	10/8/2008	<50	-	<0.5	<0.5	<0.5	<1	<5	-	-	-	-	-	-
	4/8/2011	<50	-	<0.5	<0.5	<0.5	<1	0.5	-	-	-	-	-	-
	10/26/2011	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/29/2012	<50	-	<0.5	<0.5	<0.5	<1	0.84	-	-	-	-	-	-
	11/19/2012	-	-	-	-	-	-	-	-	-	-	-	-	-
	6/25/2013	<50	-	<0.3	<0.3	<0.3	<0.6	1	-	-	-	-	-	-
	12/3/2013	-	-	-	-	-	-	-	-	-	-	-	-	-
	6/17/2014	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 7
Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	ETBE	DIPE	TAME	TBA	1,2 DCA	EDB
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-4	10/16/2006	DRY												
	4/17/2007	DRY												
	10/29/2007	460,000	-	24,000	21,000	3,800	19,000	<500	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2011	DRY												
	10/26/2011	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/30/2012	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-5	10/16/2006	DRY												
	4/19/2007	DRY												
	12/19/2007	DRY												
	4/8/2011	DRY												
	10/26/2011	DRY												
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-6	10/16/2006	DRY												
	4/17/2007	DRY												
	12/19/2007	DRY												
	4/8/2011	220	-	3.2	<0.5	<0.5	<1	<0.5	-	-	-	-	-	-
	10/26/2011	DRY												
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-7	10/16/2006	DRY												
	4/17/2007	DRY												
	12/19/2007	DRY												
	4/8/2011	DRY												
	10/26/2011	DRY												
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-8	10/16/2006	DRY												
	4/17/2007	DRY												
	12/19/2007	DRY												
	4/8/2011	765	-	119	<2	3.8	6.0	<2	-	-	-	-	-	-
	10/26/2011	DRY												
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-9	3/9/2015	31 J	-	6.5	<0.5	0.62	<1	<0.5	-	-	-	-	-	-
	6/26/2015	28 J	-	1.6	<0.3	<0.3	<0.6	<1	-	-	-	-	-	-
MW-10	3/9/2015	25 J	-	<0.5	<0.5	<0.5	<1	<0.5	-	-	-	-	-	-
	6/26/2015	34 J	-	<0.3	<0.3	<0.3	<0.6	<1	-	-	-	-	-	-
MW-104	10/19/2006	960	-	250	170	20	83	-	-	-	-	-	-	-
	4/18/2007	DRY												
	10/29/2007	1,300	-	210	82	110	300	<5	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	32,000	-	7,100	1,400	680	1,800	<250	-	-	-	-	-	-
	4/8/2011	18,500	-	13,700	212	266	384	250	-	-	-	-	-	-
	10/26/2011	25,000	-	8,400	120	490	740	-	-	-	-	-	-	-
	5/30/2012	18,000	-	4,200	280	490	1,300	<10	-	-	-	-	-	-
	11/19/2012	12,000	-	6,100	280	310	530	32	-	-	-	-	-	-
	6/25/2013	15,000	-	6,600	160	490	490	120	-	-	-	-	-	-
	12/3/2013	6,000	-	830	100	150	350	20	-	-	-	-	-	-
	6/17/2014	7,200	-	2,400	76	320	510	30	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-105	10/16/2006	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/19/2007	13,000	-	4,300	950	490	1,500	<250	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	DRY												
	10/9/2008	11,000	-	3,500	70	40	110	<50	-	-	-	-	-	-
	4/8/2011	11,300	-	5,870	135	518	1,110	<40	-	-	-	-	-	-
	10/26/2011	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												

TABLE 7
Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	ETBE	DIPE	TAME	TBA	1,2 DCA	EDB
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-106	10/16/2006	56	-	2.2	<0.5	0.57	<0.5	-	-	-	-	-	-	-
	4/19/2007	240	-	7.6	<0.5	<0.5	<0.5	<1	-	-	-	-	-	-
	10/29/2007	86	-	<0.5	<0.5	<0.5	<0.5	<1	-	-	-	-	-	-
	12/20/2007	54	-	1.0	<0.5	<0.5	<1	<2	-	-	-	-	-	-
	4/8/2008	DRY												
	10/8/2008	90	-	0.6	<0.5	<0.5	<1	<5	-	-	-	-	-	-
	4/14/2009	-	-	-	-	-	-	-	-	-	-	-	-	-
	4/8/2011	247	-	9.3	<0.5	<0.5	<1	<0.5	-	-	-	-	-	-
	10/26/2011	190	-	1.7	<0.3	<0.3	<0.6	-	-	-	-	-	-	-
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-107	10/19/2006	320	-	430	290	33	140	-	-	-	-	-	-	-
	4/19/2007	7,400	-	3,400	150	140	140	<200	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	18,000	-	6,100	700	360	480	<50	-	-	-	-	-	-
	4/8/2011	20,400	-	15,100	<200	360	<400	<200	-	-	-	-	-	-
	10/26/2011	16,000	-	6,400	28	140	200	-	-	-	-	-	-	-
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-108	10/16/2006	3,300	-	790	46	<20	65	-	-	-	-	-	-	-
	4/19/2007	<20,000	-	5,400	<200	480	220	<400	-	-	-	-	-	-
	10/29/2007	310	-	55	3.2	10	14	1.9	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	2,200	-	1,100	24	26	140	<25	-	-	-	-	-	-
	10/9/2008	2,100	-	490	8.4	35	48	<12	-	-	-	-	-	-
	4/8/2011	4,000	-	1,640	10.8	123	84.2	89.6	-	-	-	-	-	-
	10/26/2011	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/30/2012	DRY												
	11/19/2012	DRY												
	6/25/2013	DRY												
	12/3/2013	DRY												
	6/17/2014	DRY												
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-204	10/19/2006	5,800	-	560	420	110	580	-	-	-	-	-	-	-
	4/18/2007	<10,000	-	2,700	650	210	970	<200	-	-	-	-	-	-
	10/29/2007	710	-	18	9.9	11	34	<1	-	-	-	-	-	-
	12/20/2007	22,000	-	4,700	1,100	590	1,400	<800	-	-	-	-	-	-
	4/8/2008	9,800	-	1,800	340	520	560	<50	-	-	-	-	-	-
	10/8/2008	18,000	-	9,200	360	130	370	<100	-	-	-	-	-	-
	4/8/2011	2,520	-	1,140	27.8	72.8	30.6	<10	-	-	-	-	-	-
	10/26/2011	7,400	-	1,900	38	250	480	-	-	-	-	-	-	-
	5/30/2012	3,800	-	770	44	76	170	17	-	-	-	-	-	-
	11/19/2012	4,800	-	1,900	88	220	470	<20	-	-	-	-	-	-
	6/25/2013	3,500	-	660	27	230	310	<20	-	-	-	-	-	-
	12/5/2013	3,100	-	390	32	120	190	3.9	-	-	-	-	-	-
	6/17/2014	2,300	-	790	37	100	210	0.51	-	-	-	-	-	-
	12/3/2014	1,800	-	1,600	39	130	270	<0.5	-	-	-	-	-	-
	6/26/2015	1,800	-	260	11	41	82	6.4	-	-	-	-	-	-
MW-205	10/16/2006	<2000	-	880	63	<20	54	-	-	-	-	-	-	-
	10/17/2006	5,100	-	2,000	190	52	220	-	-	-	-	-	-	-
	4/18/2007	<40,000	-	14,000	550	<400	<400	<800	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	31,000	-	28,000	640	510	1,400	<250	-	-	-	-	-	-
	4/8/2011	33,600	-	25,000	232	640	448	<200	-	-	-	-	-	-
	10/26/2011	26,000	-	11,000	130	240	380	-	-	-	-	-	-	-
	5/29/2012	40,000	-	15,000	150	860	1,100	<10	-	-	-	-	-	-
	11/21/2012	5,100	-	1,700	26	210	360	<20	-	-	-	-	-	-
	6/25/2013	37,000	-	13,000	120	980	970	57	-	-	-	-	-	-
	12/5/2013	12,000	-	3,400	30	270	370	28	-	-	-	-	-	-
	6/17/2014	9,900	-	4,300	63	200	120	41	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-206	10/16/2006	<50	-	0.72	<0.5	<0.5	<0.5	-	-	-	-	-	-	-
	4/18/2007	<50	-	0.96	<0.5	<0.5	<0.5	<1	-	-	-	-	-	-
	12/19/2007	84	-	0.71	<0.5	<0.5	<1	<2	-	-	-	-	-	-
	4/8/2008	60	-	1.8	<0.5	<0.5	<1	<5	-	-	-	-	-	-
	4/8/2011	1,170	-	115	<10	<10	<20	<10	-	-	-	-	-	-
	10/26/2011	160	-	5.7	0.40	0.25	<0.6	-	-	-	-	-	-	-
	5/29/2012	1,500	-	250	100	38	170	-	-	-	-	-	-	-
	11/21/2012	73	-	1.4	<0.3	<0.3	<0.6	-	-	-	-	-	-	-
	6/24/2013	78	-	2.3	0.87	0.44	0.62	1.8	-	-	-	-	-	-
	12/4/2013	68	-	3	<0.5	<0.5	<1	1.2	-	-	-	-	-	-
	6/17/2014	73	-	0.87	<0.5	<0.5	<1	1.3	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												

TABLE 7
Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	ETBE	DIPE	TAME	TBA	1,2 DCA	EDB
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-287	10/19/2006	1,000	-	170	52	18	67	-	-	-	-	-	-	-
	4/18/2007	<25,000	-	9,700	480	<250	250	<500	-	-	-	-	-	-
	12/19/2007	DRY												
	4/7/2008	32,000	-	12,000	350	580	790	<250	-	-	-	-	-	-
	4/8/2011	19,500	-	15,000	<100	180	<200	108	-	-	-	-	-	-
	10/26/2011	18,000	-	7,600	38	160	280	-	-	-	-	-	-	-
	5/29/2012	24,000	-	11,000	87	310	340	190	-	-	-	-	-	-
	11/21/2012	21,000	-	14,000	65	310	190	148	-	-	-	-	-	-
	6/24/2013	25,000	-	12,000	77	300	180	120	-	-	-	-	-	-
	12/4/2013	13,000	-	7,200	68	330	210	93	-	-	-	-	-	-
	6/17/2014	6,600	-	5,900	53	240	110	84	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-288	10/17/2006	1,500	-	520	39	<10	100	-	-	-	-	-	-	-
	4/19/2007	<10,000	-	2,500	<100	<100	<100	<200	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	19,000	-	3,900	230	550	1,200	<200	-	-	-	-	-	-
	4/8/2011	12,300	-	5,820	75	432	270	<50	-	-	-	-	-	-
	10/26/2011	7,400	-	1,600	97	60	210	-	-	-	-	-	-	-
	5/29/2012	11,000	-	2,600	42	220	170	<10	-	-	-	-	-	-
	11/21/2012	11,000	-	3,500	37	310	130	39	-	-	-	-	-	-
	6/24/2013	5,000	-	1,100	18	34	50	45	-	-	-	-	-	-
	12/4/2013	5,300	-	540	15	150	84	17	-	-	-	-	-	-
	6/17/2014	3,300	-	1,100	34	77	110	31	-	-	-	-	-	-
	12/3/2014	DRY												
	6/25/2015	DRY												
MW-304	10/19/2006	3,300	-	290	240	56	530	-	-	-	-	-	-	-
	4/19/2007	<10,000	-	3,100	450	<100	420	<200	-	-	-	-	-	-
	12/20/2007	1,500	-	360	43	32	110	<40	-	-	-	-	-	-
	4/7/2008	820	-	100	36	36	98	<5	-	-	-	-	-	-
	4/8/2011	2,850	-	457	32.3	93.5	262	<5	-	-	-	-	-	-
	10/26/2011	6,500	-	1,600	45	190	350	-	-	-	-	-	-	-
	5/30/2012	1,600	-	190	13	39	100	-	-	-	-	-	-	-
	11/19/2012	5,100	-	1,600	67	250	500	-	-	-	-	-	-	-
	6/25/2013	6,100	-	2,000	87	220	480	<20	-	-	-	-	-	-
	12/5/2013	1,600	-	270	31	94	230	<0.5	-	-	-	-	-	-
	6/17/2014	3,000	-	1,300	96	62	390	9	-	-	-	-	-	-
	12/3/2014	2,000	-	1,500	53	120	250	<0.5	-	-	-	-	-	-
	6/26/2015	810	-	69	4.2	33	60	-	-	-	-	-	-	-
MW-305	10/16/2006	<50	-	1.8	<0.5	<0.5	0.67	-	-	-	-	-	-	-
	4/19/2007	<20,000	-	3,600	<200	<200	<200	<400	-	-	-	-	-	-
	12/19/2007	DRY												
	4/8/2008	290	-	42	14	8.1	28	<5	-	-	-	-	-	-
	4/8/2011	862	-	193	10.4	27.6	69.1	<5	-	-	-	-	-	-
	10/26/2011	1,300	-	250	37	20	49	-	-	-	-	-	-	-
	5/29/2012	920	-	260	3.6	18	30	-	-	-	-	-	-	-
	11/21/2012	3,700	-	1,300	17	170	230	-	-	-	-	-	-	-
	6/25/2013	1,800	-	560	12	41	75	<20	-	-	-	-	-	-
	12/4/2013	2,700	-	1,200	21	88	240	0.36	-	-	-	-	-	-
	6/17/2014	2,300	-	940	36	130	150	3.8	-	-	-	-	-	-
	12/3/2014	630	-	140	4.2	49	67	<0.5	-	-	-	-	-	-
	6/26/2015	420	-	170	1.6	12	21	-	-	-	-	-	-	-
MW-306	10/16/2006	<50	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-
	4/19/2007	<50	-	3.1	<0.5	<0.5	<0.5	<1	-	-	-	-	-	-
	12/20/2007	<50	-	0.54	<0.5	<0.5	<1	<2	-	-	-	-	-	-
	4/7/2008	<50	-	<0.5	<0.5	<0.5	<1	<5	-	-	-	-	-	-
	4/8/2011	<50	-	10.4	<0.5	<0.5	<1	<0.5	-	-	-	-	-	-
	10/26/2011	75	-	0.5	<0.3	<0.3	<0.6	-	-	-	-	-	-	-
	5/30/2012	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/21/2012	44	-	1.2	<0.3	<0.3	<0.6	-	-	-	-	-	-	-
	6/24/2013	<50	-	0.8	<0.3	<0.3	0.24	<1	-	-	-	-	-	-
	12/4/2013	47	-	<0.5	<0.5	<0.5	<1	<0.5	-	-	-	-	-	-
	6/17/2014	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/3/2014	21	-	2.3	0.34	<0.5	0.52	<0.5	-	-	-	-	-	-
	6/25/2015	<50	-	<0.3	<0.3	<0.3	<0.6	-	-	-	-	-	-	-
MW-307	10/19/2006	<50	-	2.3	1.5	<0.5	4.7	-	-	-	-	-	-	-
	4/18/2007	<4000	-	1,300	250	78	310	<80	-	-	-	-	-	-
	12/19/2007	1,500	-	200	50	59	140	<40	-	-	-	-	-	-
	4/7/2008	2,500	-	720	110	69	160	<25	-	-	-	-	-	-
	4/8/2011	70	-	24.3	3.8	0.6	3.3	<0.5	-	-	-	-	-	-
	10/26/2011	-	-	-	-	-	-	-	-	-	-	-	-	-
	5/29/2012	2,000	-	540	4.2	57	110	4.5	-	-	-	-	-	-
	11/19/2012	-	-	-	-	-	-	-	-	-	-	-	-	-
	6/24/2013	1,300	-	480	7.2	43	54	<20	-	-	-	-	-	-
	12/3/2013	-	-	-	-	-	-	-	-	-	-	-	-	-
	6/17/2014	1,100	-	520	8.3	43	28	1.6	-	-	-	-	-	-
	12/3/2014	460	-	230	8.4	49	42	<0.5	-	-	-	-	-	-
	6/26/2015	290	-	76	1.2	18	16	-	-	-	-	-	-	-
MW-308	10/16/2006	<50	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-
	4/19/2007	<10,000	-	1,600	<100	<100	<100	<200	-	-	-	-	-	-
	12/19/2007	190	-	25	1.5	7.2	8.4	<4	-	-	-	-	-	-
	4/7/2008	770	-	150	10	48	45	<5	-	-	-	-	-	-
	4/8/2011	3,240	-	1,230	18.6	187	125	<10	-	-	-	-	-	-
	10/26/2011	2,900	-	610	9.2	73	53	-	-	-	-	-	-	-
	5/29/2012	1,200	-	89	5.1	18	25	-	-	-	-	-	-	-
	11/21/2012	4,800	-	930	46	160	210	-	-	-	-	-	-	-
	6/24/2013	2,600	-	610	22	110	87	<20	-	-	-	-	-	-
	12/12/2013	3,200	-	520	14	140	75	0.6	-	-	-	-	-	-
	6/17/2014	3,000	-	1,300	20	110	58	9.1	-	-	-	-	-	-
	12/3/2014	1,000	-	92	3.0	39	20	0.21	-	-	-	-	-	-
	6/25/2015	1,300	-	2.5	1.2	3.1	1.2	-	-	-	-	-	-	-

TABLE 7
Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	ETBE	DIPE	TAME	TBA	1,2 DCA	EDB
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-404	10/19/2006	1,700	-	120	73	27	280	-	-	-	-	-	-	-
	4/18/2007	<10,000	-	1,400	440	130	550	<200	-	-	-	-	-	-
	12/19/2007	2,200	-	160	63	92	300	<40	-	-	-	-	-	-
	4/8/2008	DRY												
	4/8/2011	119	-	90.8	1.4	1.0	2.6	<0.5	-	-	-	-	-	-
	10/26/2011	1,500	-	400	9.1	46	65	-	-	-	-	-	-	-
	5/30/2012	1,200	-	260	11	34	80	-	-	-	-	-	-	-
	11/19/2012	1,100	-	230	<6.0	46	84	-	-	-	-	-	-	-
	6/25/2013	98	-	840	22	60	140	<20	-	-	-	-	-	-
	12/5/2013	2,500	-	540	57	140	290	3.2	-	-	-	-	-	-
	6/17/2014	6,500	-	4,500	100	130	240	21	-	-	-	-	-	-
	12/3/2014	900	-	270	11	50	93	<0.5	-	-	-	-	-	-
	6/25/2015	-	-	-	-	-	-	-	-	-	-	-	-	-

pre- 2006 data adapted from *Environmental Sampling Services* 5/27/04 Groundwater Monitoring Report
"-" = not analyzed
' = estimated Value (CLP Flag)

TABLE 8
Summary of Field Parameters

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Date	W-1s					W-3s					W-Bs					W-Es				
	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO
7/7/2006	-	-	-	-128.5	0.13	-	-	-	-	0.07	-	-	-	-107.3	0.09	7.05	339	20.9	32.9	0.06
12/29/2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/8/2008	6.76	514	24.8	-95.5	-	-	-	-	-	-	-	-	-	-	0.28	7.07	503	25.1	121.4	6.85
10/8-9/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7-8/2011	6.17	967	19.1	-221.5	0.37	6.63	964	18.1	40.7	0.72	6.61	780	18.5	-198.2	0.02	7.03	790	19.5	141.3	1.06
10/26/2011	6.65	1012	18.1	-121.5	0.16	6.65	914	17.9	-57.6	0.52	6.51	722	17.6	-115.8	0.38	-	-	-	-	-
5/30/2012	6.60	1574	21.4	-351.9	0.00	6.89	761	20.3	-66.9	0.11	6.88	676	20.9	-87.3	0.79	-	-	-	-	-
11/19/2012	6.16	1301	18.6	-119.7	0.06	6.75	834	17.2	-65.1	0.19	7.04	825	17.2	-39.2	0.18	-	-	-	-	-
6/24/2013	6.71	1333	21.9	-159.8	0.07	6.43	1243	20.3	-60.2	1.03	6.75	919	21.2	-92.1	0.84	7.09	951	21.8	160.6	0.61
12/3-5/2013	6.73	1086	20.4	-50.0	0.35	6.57	1003	18.4	72.8	1.27	6.86	810	19.4	-53.1	1.19	-	-	-	-	-
6/16-17/2014	6.47	1309	21.3	-79.0	0.31	-	-	-	-	-	7.05	803	21.0	-50.1	1.64	-	-	-	-	-
12/2-3/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/9-10/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/25-26/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Date	W-3					W-A					MW-9					MW-10				
	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO
4/7-8/2011	6.94	928	18.3	-185.7	0.10	6.85	907	18.9	-254.5	0.04	-	-	-	-	-	-	-	-	-	-
10/26/2011	-	-	-	-	-	6.70	1019	18.0	-120.2	0.15	-	-	-	-	-	-	-	-	-	-
5/30/2012	-	-	-	-	-	6.83	1127	20.3	-90.3	0.15	-	-	-	-	-	-	-	-	-	-
11/19/2012	-	-	-	-	-	6.92	1185	18.0	-139.9	0.17	-	-	-	-	-	-	-	-	-	-
6/24/2013	-	-	-	-	-	6.84	1255	20.5	-124.1	1.85	-	-	-	-	-	-	-	-	-	-
12/3-5/2013	-	-	-	-	-	7.03	1210	20.2	-118.1	0.70	-	-	-	-	-	-	-	-	-	-
6/16-17/2014	-	-	-	-	-	6.42	1352	20.7	-135.0	0.17	-	-	-	-	-	-	-	-	-	-
12/2-3/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/9-10/2015	-	-	-	-	-	-	-	-	-	-	6.86	1091	19.9	122.1	3.12	6.70	1070	19.6	121.4	3.68
6/25-26/2015	-	-	-	-	-	6.77	1466	21.2	-90.4	NC	7.18	972	19.9	122.5	3.94	7.30	964	19.8	105.2	4.44

" - " = insufficient data no result reported

TABLE 9
Estimation of Mass Removal Via Soil Vapor Extraction

Sullins (Arrow Rentals)
187 North L Streeet
Livermore, California

Sample Date	Flow	TPH-G	Meter	Days	Operation Duration			Volume Removed		Pounds Removed
	CFM	mg/m3		total days	days in period	hours	min	cubic feet	cubic meters	pounds
11/15/11			10,382	0						
12/08/11	90	2,380	10,437	2	2	55	3,300	297,000	8,410	44
01/05/12	136	3,360	10,961	24	22	524	31,440	4,275,840	121,078	897
03/08/12	152	3,490	11,841	61	37	880	52,800	8,025,600	227,259	1,749
05/16/12	99	251	13,496	130	69	1,655	99,300	9,830,700	278,374	154
04/11/13	56	37	16,119	239	109	2,623	157,380	8,813,280	249,564	20
08/22/13	133	130	17,925	314	75	1,806	108,360	14,411,880	408,098	117
09/03/13	65	710	18,211	326	12	286	17,160	1,115,400	31,585	49
09/20/13	127	330	18,619	343	17	408	24,480	3,108,960	88,036	64
10/11/13	102.5	99	18,957	357	14	338	20,280	2,078,700	58,862	13
10/22/13	95	210	19,221	368	11	264	15,840	1,504,800	42,611	20
11/06/13	80	120	19,584	383	15	363	21,780	1,742,400	49,339	13
01/15/14	155	600	20,281	412	29	697	41,820	6,482,100	183,552	243
01/30/14	87.5	180	20,640	427	15	359	21,540	1,884,750	53,370	21
02/11/14	125	250	20,928	439	12	288	17,280	2,160,000	61,164	34
03/18/14	28	0.9	21,266	454	14	338	20,280	567,840	16,079	0.03
04/01/14	102.5	85	21,601	467	14	335	20,100	2,060,250	58,340	11
04/15/14	28	1,100	21,604	468	0	3.0	180	5,040	143	0.35
04/28/14	125	560	21,914	481	13	310	18,600	2,325,000	65,837	81
05/09/14	95	1,000	21,916	481	0	2.0	120	11,400	323	0.71
06/26/14	60	1,200	21,968	483	2	52	3,120	187,200	5,301	14
07/10/14	72.5	170	21,975	483	0	7.0	420	30,450	862	0.32
07/25/14	87.5	1,100	21,979	483	0	4.0	240	21,000	595	1.44
08/12/14	76	190	22,410	501	18	431	25,860	1,965,360	55,653	23
09/23/14	110	2,000	22,688	513	12	278	16,680	1,834,800	51,956	229
10/02/14	103	12,000	22,735	515	2	47	2,820	290,460	8,225	218
11/06/14	110	10,000	23,041	527	13	306	18,360	2,019,600	57,189	1,261
12/02/14	105	13,000	23,059	528	1	18	1,080	113,400	3,211	92
03/11/15	36	3,800	24,009	568	40	950	57,000	2,052,000	58,106	487
									TOTAL	5,856

TABLE 10
Summary of DPE System Soil Vapor Extraction Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Well	Date	TPH-Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	PID
		mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	ppm
SVE-INF	12/8/2011	2380	7.1	5.6	2.9	15.5	200
	1/5/2012	3360	29.8	15.8	23.6	70.4	262
	3/8/2012	3490	30.4	28.6	12	55.2	282
	5/16/2012	251	7.86	4.43	2.34	9.56	51.1
	4/11/2013	37	13	2.9	2.1	5.9	-
	9/23/2014	2,000	12	6.4	1.9	11	737
	10/2/2014	12,000	36	10	<50	37	248
	11/6/2014	10,000	52	22	20	140	1917
	12/2/2014	13,000	97	22	16	110	1772
	3/11/2015	3,800	26	13	8.2	26	390
SVE-INF UPPER	8/22/2013*	13	0.064	0.076	0.0096	0.078	12.5
(EW-1 & W-1s)	9/3/2013	130	2.2	2.2	4.3	19	23.8
	9/20/2013*	330	0.85	1.5	<2.5	1.3	36.9
	10/11/2013	91	2.4	1.6	4.0	14	32.9
	10/22/2013*	210	1.5	3.7	<2.5	2.6	51.1
	11/6/2013	44	0.77	1.2	3.7	12	35.9
	1/15/2014*	600	1.3	1.2	0.09	1.3	72.9
	1/30/2014	31	1.5	2.6	0.19	0.32	85.2
	2/11/2014*	250	0.72	0.79	0.093	0.52	45.1
	7/25/2014	1,100	3.4	0.58	0.57	3.2	150
	8/12/2014	190	0.31	0.17	0.046	0.69	358
SVE-INF LOWER	8/22/2013	410	59	13	4.9	22	73.6
(W-1 & W-A)	9/3/2013*	710	38	9.5	8.3	28	81.4
	9/20/2013	-	-	-	-	-	-
	10/11/2013*	99	12	2.7	3.1	8.6	69.1
	10/22/2013	410	29	7.1	0.87	4.2	130
	11/6/2013*	120	15	4.5	7.7	22	60.9
	1/15/2014	1,800	50	12	2.2	12	205
	1/30/2014*	180	19	42	2	3.7	220
	2/11/2014	200	<1	3.2	0.44	1.5	149.2
	3/18/2014	0.89	<20	0.01	0.011	0.041	-
	4/1/2014	85	16	1.8	4.6	10	-
	4/15/2014	1,100	46	11	17	49	99.9
	4/28/2014	560	21	4.5	4.3	12	-
	5/9/2014	1,000	76	12	13	28	159
	6/26/2014	1,200	15	1.7	1.9	5.6	290
	7/10/2014	170	7.5	8.5	11	31	294
	8/12/2014	61	0.15	0.19	ND<0.5	0.51	183
W-1 SVE-INF	5/16/2013	100	16	4.8	5.2	11	48.1
W-A SVE-INF	5/16/2013	39	2.3	0.64	0.83	1.7	16.1
EW-1 SVE-INF	5/16/2013	22	0.065	0.069	0.12	0.54	7.6
W-1s SVE-INF	5/16/2013	85	<0.08	0.16	0.35	1.4	32.6

* = sample collected following 2 weeks of extraction from the upper/lower zone

TABLE 11
Estimation of Mass Removal Via Groundwater Extraction

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Date/Time	Hours		GW Removed		Lab	Removal Calculations			
	Meter	in period	Cummulative (gallons)	In Period (gallons)	(ug/L)	(grams/L)	(grams/gal.)	(lbs./gal.)	(lbs./period)
12/7/2011	10428	-	0	-	-	-	-	-	0.00
12/13/2011	10442	13.5	1060	1060	2400	0.00240	0.00063	0.00000140	0.67
1/13/2012	11137	695.1	1378	318	6400	0.00640	0.00169	0.00000373	0.54
1/18/2012	11244	106.9	1445	67	3800	0.00380	0.00100	0.00000221	0.07
1/19/2012	11256	11.7	3180	1735	2800	0.00280	0.00074	0.00000163	1.28
3/8/2012	11841	585.7	7700	4520	190	0.00019	0.00005	0.00000011	0.23
4/3/2012	12466	624.6	19873	12173	810	0.00081	0.00021	0.00000047	2.60
5/3/2012	13186	719.8	38308	18435	1000	0.00100	0.00026	0.00000058	4.87
5/16/2012	13496	310.6	43854	5546	2800	0.00280	0.00074	0.00000163	4.10
6/7/2012	13498	1.8	43993	139	5000	0.00500	0.00132	0.00000291	0.18
7/9/2012	13661	163.2	46169	2176	2600	0.00260	0.00069	0.00000151	1.49
8/16/2012	14369	707.9	55565	9396	2300	0.00230	0.00061	0.00000134	5.71
9/13/2012	15041	671.4	69172	13607	1800	0.00180	0.00048	0.00000105	6.47
10/16/2012	15073	32.3	70660	1488	1800	0.00180	0.00048	0.00000105	0.71
12/13/2012	15532	459.2	83968	13308	1800	0.00180	0.00048	0.00000105	6.33
2/4/2013	16107	574.6	83968	0	1300	0.00130	0.00034	0.00000076	0.00
2/14/2013	16113	6.5	84680	712	1300	0.00130	0.00034	0.00000076	0.24
4/10/2013	16114	0.8	84680	0	2000	0.00200	0.00053	0.00000116	0.00
4/26/2013	16322	208.0	86053	1373	2000	0.00200	0.00053	0.00000116	0.73
5/3/2013	16490	167.6	86810	757	1600	0.00160	0.00042	0.00000093	0.32
5/16/2013	16527	37.0	89138	2328	1600	0.00160	0.00042	0.00000093	0.98
6/6/2013*	16585	58.1	92164	3026	2071	0.00207	0.00055	0.00000121	1.66
6/26/2013*	16729	144.5	96926	4762	2071	0.00207	0.00055	0.00000121	2.61
7/31/2013*	17395	665.7	134007	37081	2071	0.00207	0.00055	0.00000121	20.29
8/22/2013*	17925	530.0	146673	12666	2071	0.00207	0.00055	0.00000121	6.93
9/3/2013	18211	285.8	170214	23541	1200	0.00120	0.00032	0.00000070	7.46
9/27/2013	18623	412.1	170214	0	1300	0.00130	0.00034	0.00000076	0.00
10/11/2013	18957	334.0	202421	32207	870	0.00087	0.00023	0.00000051	7.40
10/22/2013	19221	264.1	202421	0	1700	0.00170	0.00045	0.00000099	0.00
11/6/2013	19584	363.0	236820	34399	1400	0.00140	0.00037	0.00000082	12.72
1/15/2014	20281	697.0	236820	0	2600	0.00260	0.00069	0.00000151	0.00
1/30/2014	20640	359.0	262180	25360	2500	0.00250	0.00066	0.00000146	16.75
2/11/2014	20928	288.0	262180	0	1700	0.00170	0.00045	0.00000099	0.00
2/25/2014	21263	335.5	267519	5339	1700	0.00170	0.00045	0.00000099	2.40
3/18/2014	21266	3.0	267705	186	2600	0.00260	0.00069	0.00000151	0.13
4/1/2014	21601	335.0	289708	22003	340	0.00034	0.00009	0.00000020	1.98
4/15/2014	21604	2.5	290023	315	2000	0.00200	0.00053	0.00000116	0.17
4/28/2014	21914	310.6	307746	17723	1800	0.00180	0.00048	0.00000105	8.43
5/9/2014	21916	1.6	307746	0	2300	0.00230	0.00061	0.00000134	0.00
6/26/2014	21968	52.0	307746	0	610	0.00061	0.00016	0.00000036	0.00
7/10/2014	21975	7.0	311948	4202	2,000	0.00200	0.00053	0.00000116	2.22
8/12/2014	22410	435.0	311956	8	2,500	0.00250	0.00066	0.00000146	0.01
9/23/2014	22688	278.0	312643	687	2,200	0.00220	0.00058	0.00000128	0.40
11/6/2014	23041	353.0	314037	1394	1,700	0.00170	0.00045	0.00000099	0.63
12/2/2014	23059	18.0	314037	0	2,700	0.00270	0.00071	0.00000157	0.00
3/11/2015	24009	950.0	317846	3809	4,100	0.00410	0.00108	0.00000239	4.13
								Total	**134**

* = TPH-G concentration for this date is an average of the lab data from all previous events

TABLE 12
Summary of DPE System Groundwater Extraction Data

Sullins (Arrow Rentals)
187 North L Street
Livermore, California

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-Gasoline	MTBE
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
GW-INF	12/13/2011	110	9.4	2.5	510	2,400	-
(GW INF KO)	1/13/2012	110	120	74	510	6,400	-
(W-1 & W-A)	1/18/2012	44	54	39	360	3,800	-
	1/19/2012	37	43	39	280	2,800	-
	3/8/2012	7.3	8.3	2.3	19	190	-
	4/3/2012	8.6	9.7	3.4	36	810	-
	5/3/2012	300	160	26	280	2,800	-
	6/7/2012	72	89	23	260	5,000	-
	7/9/2012	110	51	21	120	2,600	-
	8/16/2012	47	35	19	99	2,300	-
	9/13/2012	74	26	14	70	1,800	-
	10/16/2012	140	44	46	110	1,800	-
	2/4/2013	130	40	32	110	1,300	-
	4/10/2013	200	58	48	160	2,000	
	5/7/2013	<0.3	<0.3	<0.3	<0.6	<50	-
	5/16/2013	96	30	32	110	1,600	5.5
	8/22/2013	<0.3	<0.3	<0.3	<0.6	<50	-
	9/3/2013*	190	35	26	150	1,200	-
	9/27/2013	94	30	12	120	1,300	-
	10/11/2013*	99	18	24	88	870	-
	10/22/2013	130	62	30	210	1,700	-
	11/6/2013*	120	22	35	140	1,400	-
	1/15/2014	43	18	19	150	2,600	-
	1/30/2014	98	30	45	170	2,500	2.4
	2/11/2014	100	35	20	150	1,700	<12
	2/25/2014	150	45	27	180	1,700	4.2
	3/18/2014	61	14	18	80	2,600	-
	4/1/2014	19	2.6	4.9	19	340	-
	4/15/2014	52	10	14	53	2,000	-
	4/28/2014	17	3	7.7	22	1,800	-
	5/9/2014	98	22	33	120	2,300	3.4
	6/26/2014	17	1	2.5	9.1	610	0.87
	7/10/2014	96	17	34	170	2,000	ND<0.5
	8/12/2014	81	41	18	350	2,500	-
	9/23/2014	97	51	38	450	2,200	-
	11/6/2014	130	42	28	460	1,700	1.3
	12/2/2014	190	65	50	550	2,700	2.0
	3/11/2015	200	120	99	510	4,100	ND<5
W-1 GW-INF	5/16/2013	96	30	32	110	1,600	5.5
W-A GW-INF	5/16/2013	67	15	16	54	1,000	2.6

* = sample collected following 2 weeks of extraction from the upper/lower zone

Charts

CHART 1: W-1s - Benzene vs. Time

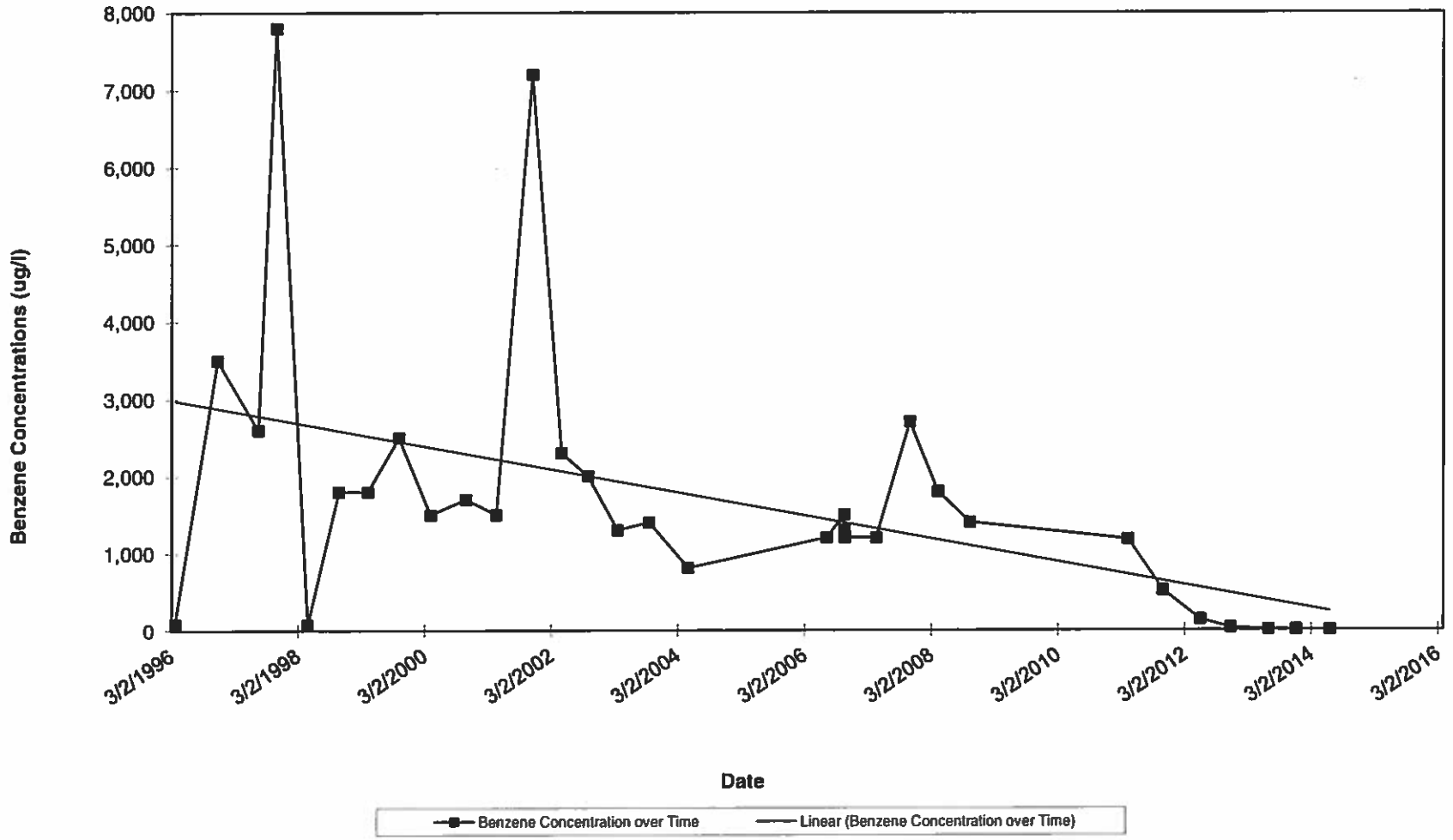


CHART 2: MW-104 - Benzene vs. Time

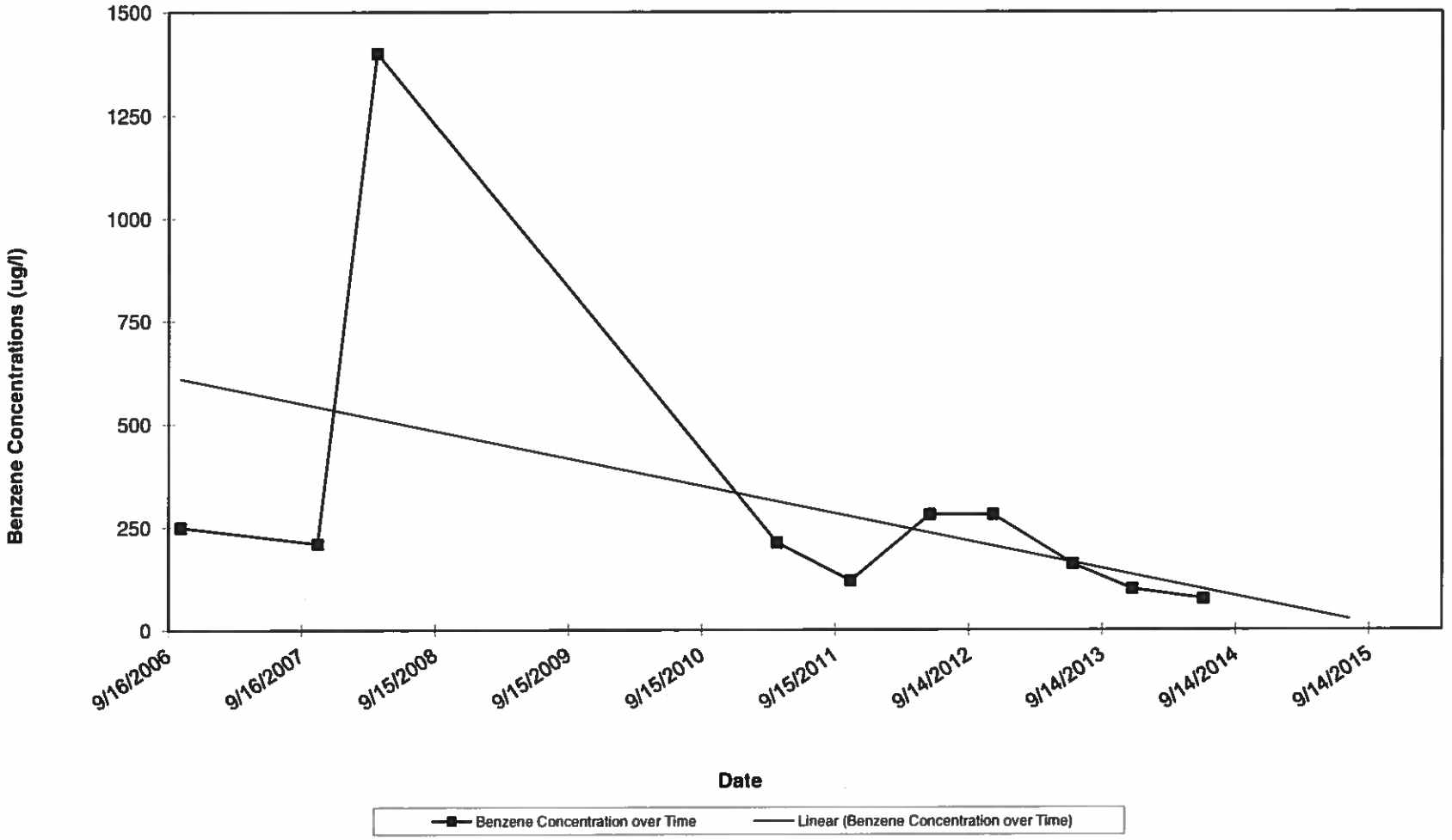


CHART 3: MW-204 - Benzene vs. Time

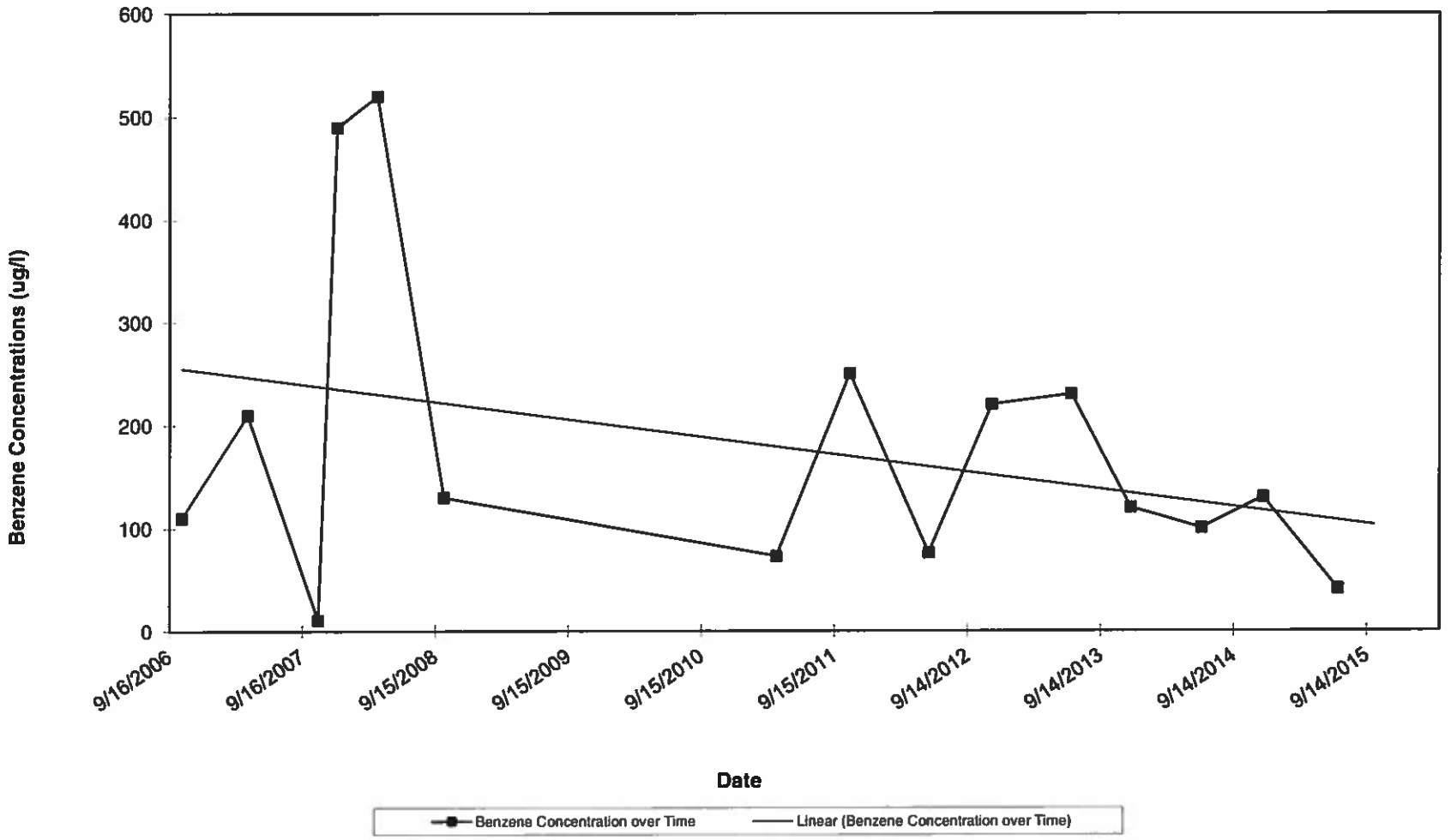


CHART 4: MW-304 - Benzene vs. Time

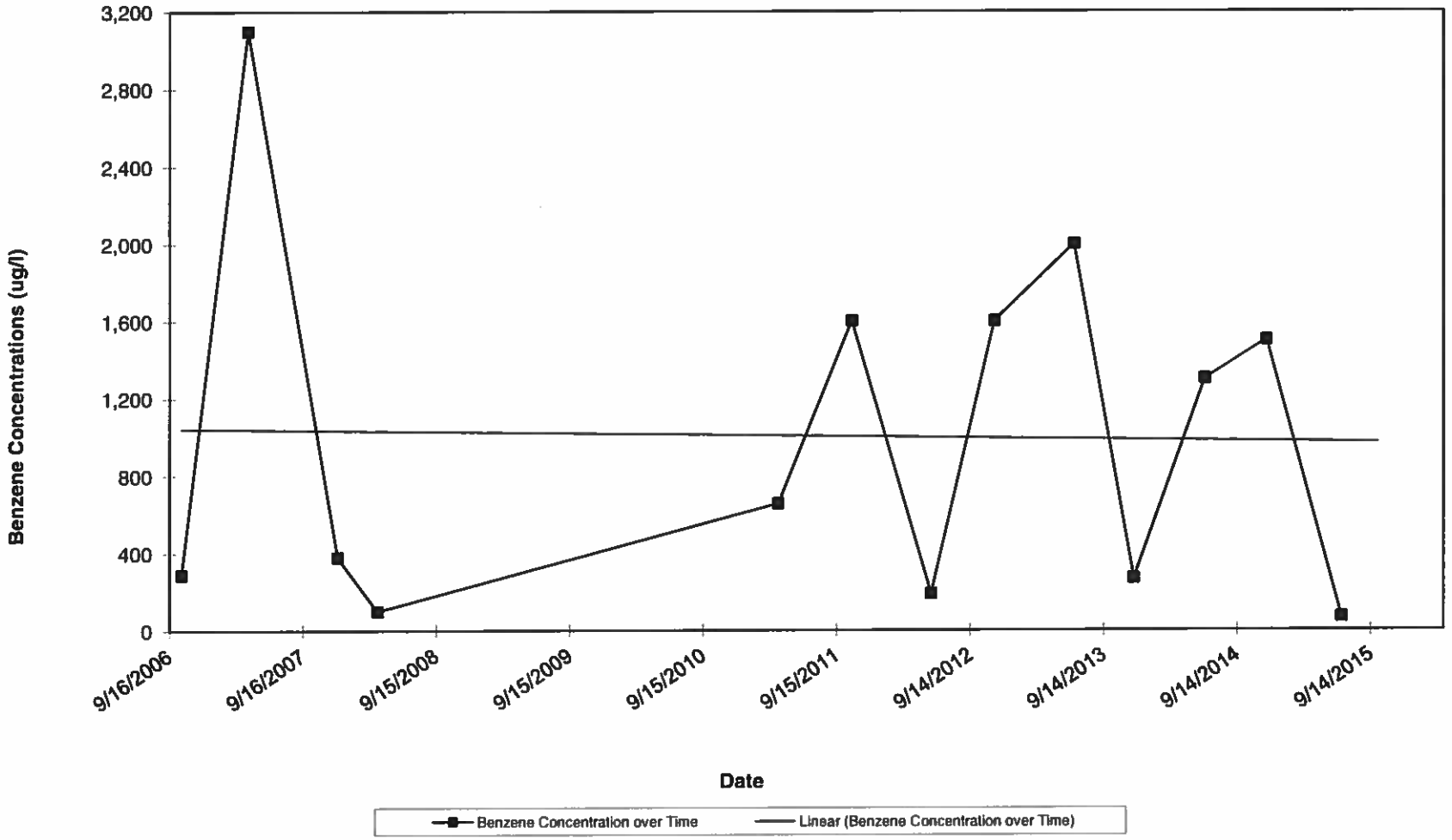


CHART 5: MW-404 - Benzene vs. Time

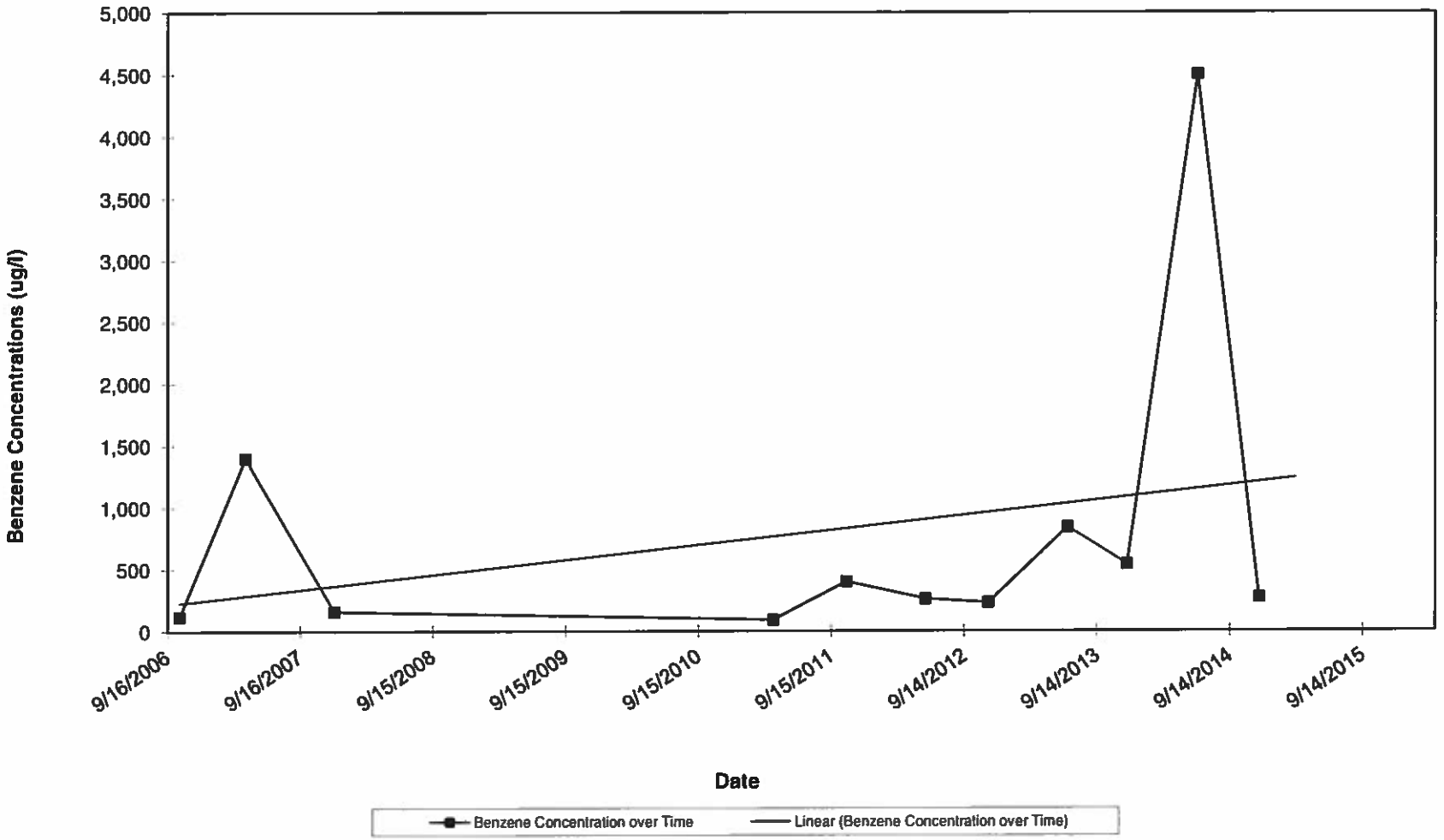
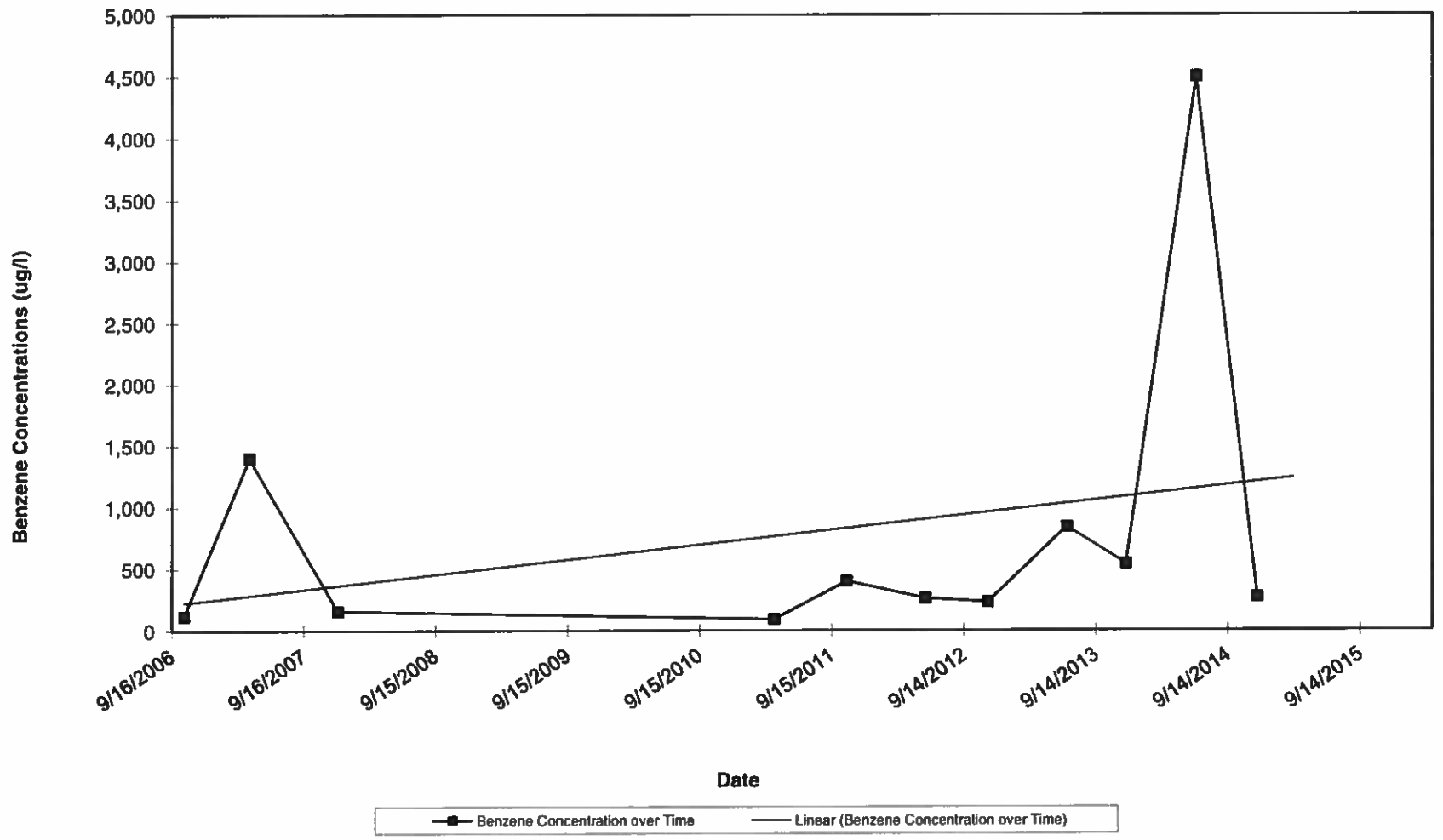


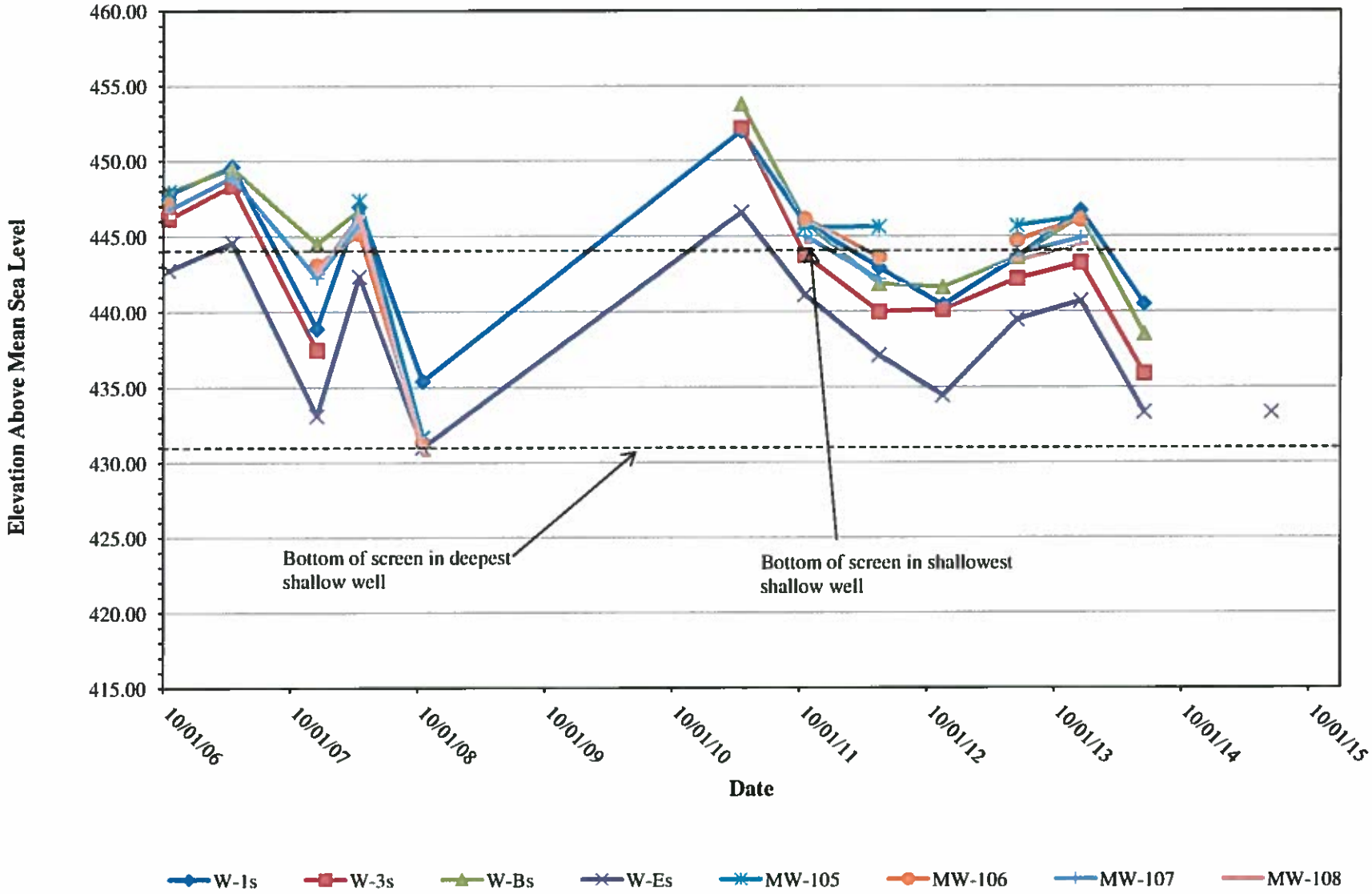
CHART 6: MW-404 - Benzene vs. Time (Less Outlier)



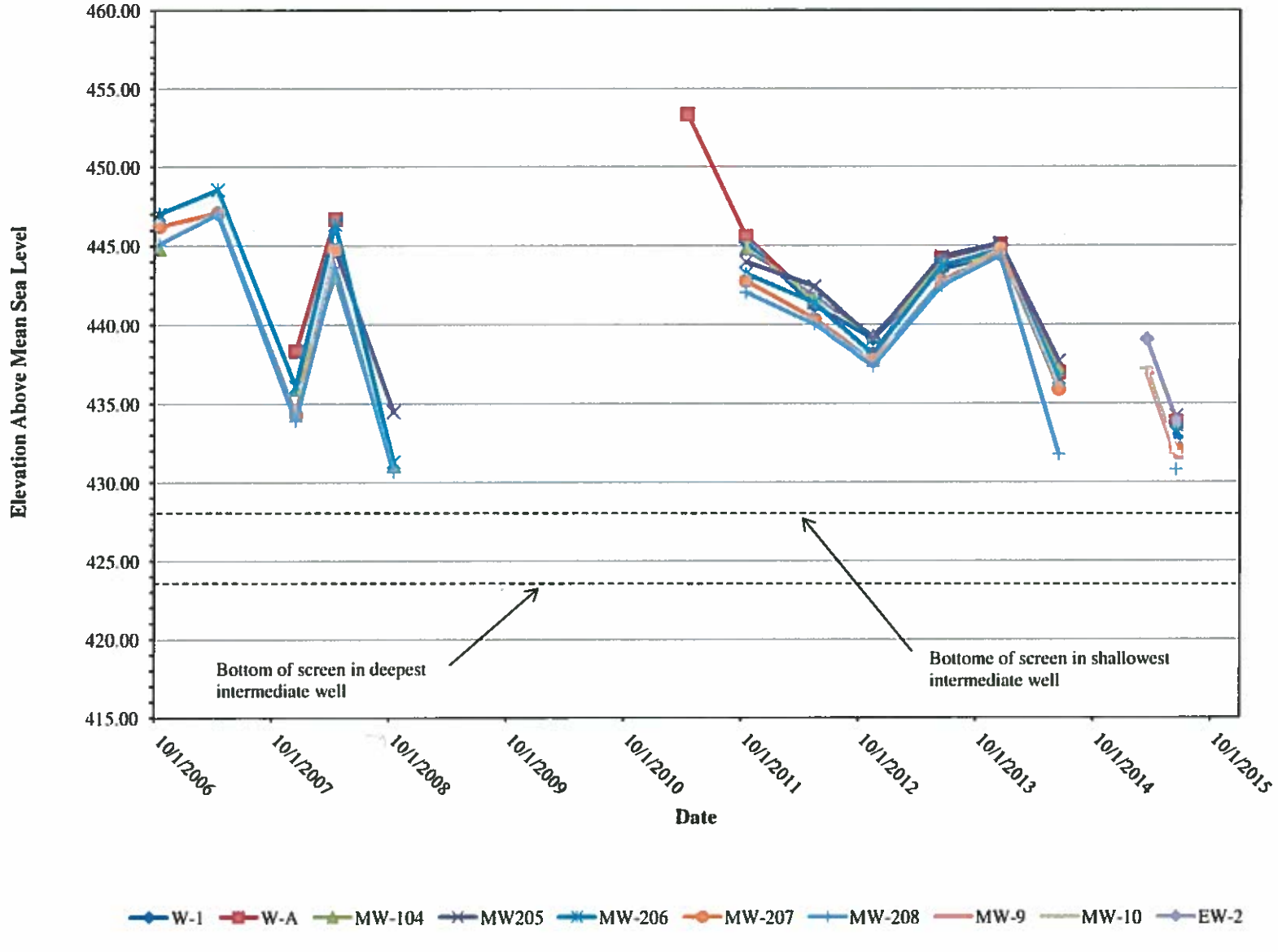
Attachment A

Hydrographs

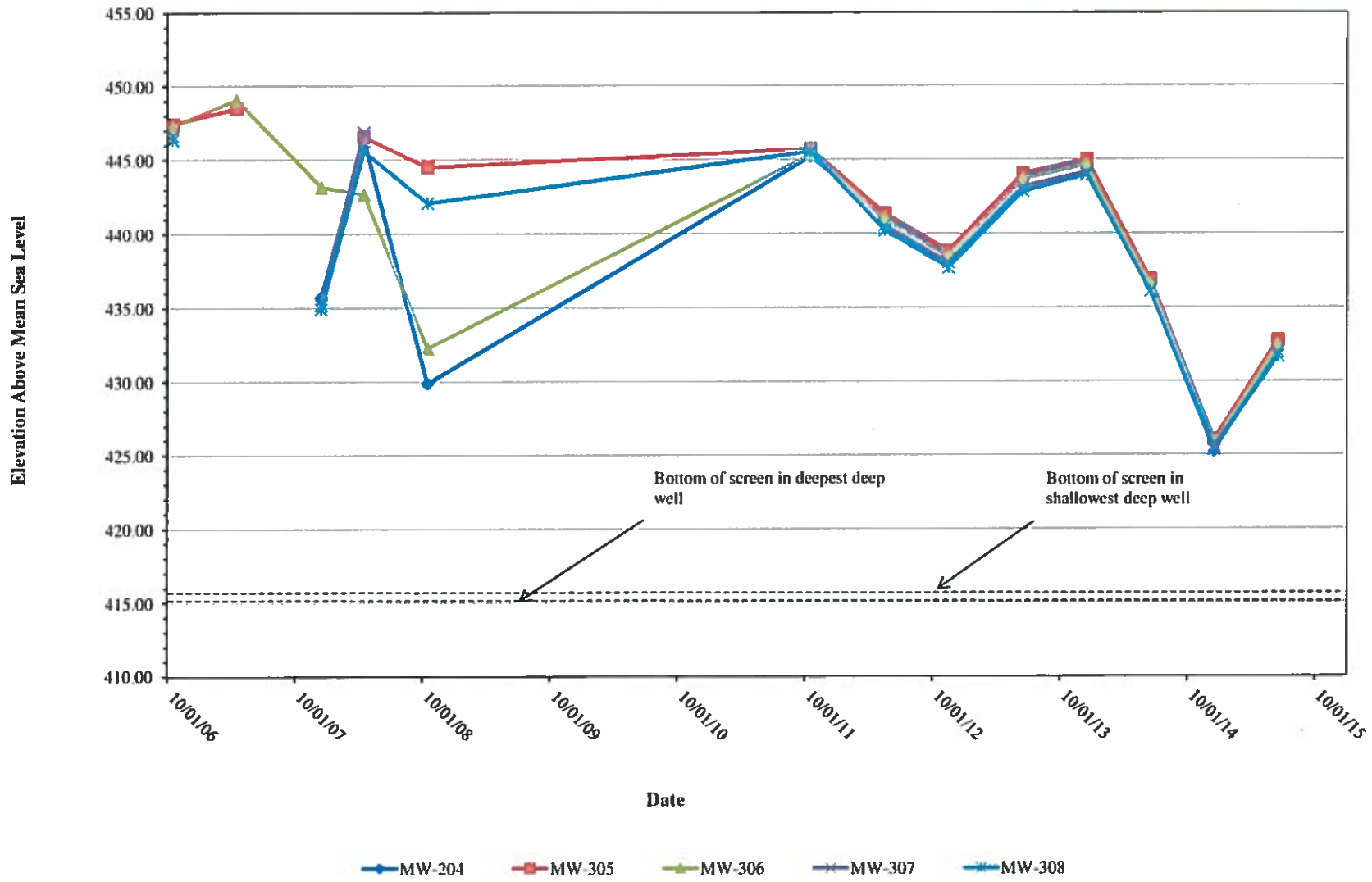
Hydrograph: Shallow Groundwater Monitoring Wells



Hydrograph: Intermediate Groundwater Monitoring Wells



Hydrograph: Deep Groundwater Monitoring Wells



Attachment B

Groundwater Monitoring Field Logs

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262 Task 3

Project Location: 187 North L Street Livermore Ca

Well I.D.: MW- 9

Date: 3/09/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1329	0	19.90	1083	6.65	171.5	3.39	LT Brown silt
1336	4.0	19.89	1085	6.69	144.8	3.48	no odor
1345	8.0	19.87	1089	6.82	129.7	3.2	
1351	11.0	19.86	1090	6.85	123.0	3.13	
1354	12.0	19.87	1091	6.86	122.1	3.12	off
1410							Sample Time

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other

Pumping Rate: .5 gal/min

Well Constructed TD (ft):	65.00	
* Well TD (ft):	64.98	
Silt Thickness (ft):	0.00	
Initial DTW (ft):	42.97	
Water column height (ft):	22.01	22.01
One casing volume (gal):	3.7	3.7
** Final DTW (ft):	42.99	
Casing diameter (in):	2	

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

____ # amber liters ____ preserved ____ non-preserved

____ # polys ____ ____ preserved ____ non-preserved

____ # polys ____ ____ preserved ____ non-preserved

Notes: Ground Dropped 4'

Sampled By:

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262 Task 3

Project Location: 187 North L Street Livermore, Ca

Well I.D.: MW- 10

Date: 3/09/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1454	0	19.57	1080	7.14	142.2	4.02	water clear
1502	4.0	19.56	1078	6.75	136.1	3.86	no odor
1510	8.0	19.55	1074	6.72	126.1	3.73	↓ Bubbles at bottom
1514	10.0	19.58	1071	6.71	122.5	3.70	↓
1518	12.0	19.57	1070	6.70	121.4	3.68	↓
1525							Sampled

Purge Method: ☒ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☐ Other

Pumping Rate: .5 gal/min

Well Constructed TD (ft):	65.00
* Well TD (ft):	65.41
Silt Thickness (ft):	0.00
Initial DTW (ft):	42.65
Water column height (ft):	22.76
One casing volume (gal):	3.9
** Final DTW (ft):	42.72
Casing diameter (in):	2

Sample Containers used: 4 # VOAs HCl preserved ___ non-preserved

___ # amber liters ___ preserved ___ non-preserved

___ # polys ___ ___ preserved ___ non-preserved

___ # polys ___ ___ preserved ___ non-preserved

Notes: Ground dropped 3'

Sampled By:

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums:

Gallons per foot of casing: 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Water Level Monitoring Record

Project Name: Soilins
Date: 3/9/15

Project No.: 5262 Task 3
Technician: A.S

MP = Measuring Point
I = Inaccessible
GL = Ground Level

Well Condition*:
G = Good F=fair
P = Poor R=Replace

Well No.	Sample Order	Time	Well Casing Dia.	Water Level Below MP (100th/foot)	Total Depth (100th/foot)	Depth to Floating Product (100th/foot)	Floating Product Thickness (100th/foot)	Surficial Seal* (Grout)	Concrete Seal*	Lid Secure*	Gasket*	Lock*	Expanding Cap*	Water in Well Box (Y or N)	Remarks
MW-9	1	1207	2	42.97	64.98			4' chip	✓	✓	✓	✓	✓	N	← Model 101
MW-10	2	1214	2	42.65	65.41			3' chip	✓	✓	✓	✓	✓	N	← Model 101 102 42.62
EW-2	3	1230	2	42.20	59.85			✓	✓	✓	✓	✓	✓	N	← Soilinst. Model 102

Notes:

Ground Zero Analysis, Inc.
1172 Kansas Avenue, Modesto, CA 95351

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project Sullins
Project # 5262 Task 3
Location 137 North L Street Livermore
Weather Sunny

Date 3/9/15
Time on job 0930 to 1700
Record Keeper A. Sierra
Wind Slight
Temp 73°F

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Anthony Sierra	GZA	1048	1612

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0930	prep
1000	Jesse Modesto, arrived on site 1048
1114	← System shut down
	Moved some Trucks and heavy equipment to access MW-9,10
1148	Removed Lids & Plugs in wells EW-2, MW-9, MW-10
	WLP used to Monitor DTW. DTB.
	Note: 1" extraction hose is down Well EW-2
	Waiting wells to equilibrate
1200	Monitored DTW. DTB. MW-9,10. EW-2
	(See water Level Monitoring Record for the different WLP's used.)
	used Waterra & dedicated Hose to Purge and Sample
	Wells
	Purged and Sampled MW-9 and 10 Purge Water
	Dumped into DPE Storage Tank
	Sampled Wells for TPHG, Btex, & MTBE by 8260
	unable to Purge & Sample EW-2 due to the 1" extraction hose down well

1557 Start up System, System at Temp 1608

Continued On Next Page

Leave Site 1612 1700 off

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullivans

Project No.: 5294

Project Location:

Well I.D.: MW-208

Date: 6/25/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
							Insufficient water to purge & sample
							Not Sampled

Pumping Rate: _____ gal / min

Purge Method: water

Well Constructed TD (ft):	
Casing Diameter (in):	
* Well TD (ft):	52
Silt Thickness (ft):	
Initial DTW (ft):	49.84
Water Column Height (ft):	2.16
One Casing Volume (gal):	0.024
** Final DTW (ft):	
** % Recharge:	

Sample Method: water

Sample Containers used:

4	# VOAs	HCl preserved ___ non-preserved
___	# amber liters	___ preserved ___ non-preserved
___	# polys ___	___ preserved ___ non-preserved
___	# polys ___	___ preserved ___ non-preserved

Notes:

Sampled By: Mark Pierson (Print) (Sign)

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Swilins

Project No.: 5294

Project Location: 187 North L Street
Livermore, Ca

Well I.D.: MW 206

Date: 6/25/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
							Insufficient Water to Purge & Sample

Pumping Rate: _____ gal / min

Purge Method: _____

Well Constructed TD (ft): 50.00

Casing Diameter (in): _____

* Well TD (ft): _____

Silt Thickness (ft): _____

Initial DTW (ft): 47.61

Water Column Height (ft): 2.39

One Casing Volume (gal): .03

** Final DTW (ft): _____

** % Recharge: _____

Sample Method: _____

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: _____

(Print) Anthony Sierra (Sign) Anthony Sierra

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5294

Project Location: _____

Well I.D.: MW-306

Date: 6/25/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1435	.2						Lt Brown odor
1450	.4						no odor
1505	.6						6
1520							Sampled

Pumping Rate: _____ gal / min

Purge Method: CMT

Well Constructed TD (ft): 66.00

Casing Diameter (in): ,011

* Well TD (ft): _____

Silt Thickness (ft): _____

Initial DTW (ft): 48.34

Water Column Height (ft): 17.66

One Casing Volume (gal): .2

** Final DTW (ft): _____

** % Recharge: _____

Sample Method: _____

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: Anthony Sloma (Print) Anthony Sloma (Sign)

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullivan

Project No.: 5294

Project Location:

Well I.D.: MW-308

Date: 6/25/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
	0.75						purged ~0.75 gal of water by hand - check valve plugged 2 times
1520							collected sample

Pumping Rate: _____ gal / min

Purge Method: waterra

Well Constructed TD (ft):

Casing Diameter (in):

* Well TD (ft): 66.0

Silt Thickness (ft):

Initial DTW (ft): 48.93

Water Column Height (ft): 17.07

One Casing Volume (gal): 0.19

** Final DTW (ft):

** % Recharge:

Sample Method: waterra

Sample Containers used: 4 # VOAs HCL preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Notes:

Sampled By: Matt P. Larsen (Print) (Sign)

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location: _____

Well I.D.: MW-104

Date: 6/26/15

Samples Sent To: _____

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
							Insufficient Water to Purge & Sample

Pumping Rate: _____ gal / min

Purge Method: _____

Well Constructed TD (ft): 50.50

Casing Diameter (in): _____

* Well TD (ft): _____

Silt Thickness (ft): _____

Initial DTW (ft): 47.23

Water Column Height (ft): 3.27

One Casing Volume (gal): .05

** Final DTW (ft): _____

** % Recharge: _____

Sample Method: _____

Sample Containers used: 4 # VOAs HCl preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Notes: _____

Sampled By: _____

(Print) Anthony Sisma (Sign) Anthony Sisma

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location: _____

Well I.D.: MW-205

Date: 6/26/15

Samples Sent To: _____

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
							Insufficient Water to Purge or Sample.

Pumping Rate: _____ gal / min

Purge Method: _____

Well Constructed TD (ft): 48.00

Casing Diameter (in): _____

* Well TD (ft): _____

Silt Thickness (ft): _____

Initial DTW (ft): 46.91

Water Column Height (ft): 1.09

One Casing Volume (gal): .01

** Final DTW (ft): _____

** % Recharge: _____

Sample Method: _____

Sample Containers used: 4 # VOAs 4 preserved ___ non-preserved

___ # amber liters ___ preserved ___ non-preserved

___ # polys ___ ___ preserved ___ non-preserved

___ # polys ___ ___ preserved ___ non-preserved

Notes: _____

Sampled By: _____

(Print) Arthur Sims (Sign) Arthur Sims

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

CMT 4

Project Name: Sulliny

Project No.: 5262

Project Location: 187 North L Street Livermore, Ca

Well I.D.: MW-404 I

Date: 6/26/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks

Pumping Rate: _____ gal / min

Purge Method: _____

Sample Containers used: 4 # VOAs HCl preserved ___ non-preserved

_____ # amber liters ___ preserved ___ non-preserved

_____ # polys _____ ___ preserved ___ non-preserved

_____ # polys _____ ___ preserved ___ non-preserved

Well Constructed TD (ft):	81.50
Casing Diameter (in):	CMT
* Well TD (ft):	48.60
Silt Thickness (ft):	
Initial DTW (ft):	48.60
Water Column Height (ft):	32.9
One Casing Volume (gal):	4
** Final DTW (ft):	
** % Recharge:	

Sample Method: _____

Notes: attempting to Place Tubing back down well after Monitoring. Tubing would go beyond 34', obstruction

Sampled By: (Print) Anthony Sousa (Sign) Anthony Sousa

* = measured ** = @ sampling

Gallons per foot of casing: 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5294

Project Location:

Well I.D.: MW-9

Date: 6/26/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0822	0	20.78	962	7.20	164.4	3.39	lt brn
0827	3.5	19.97	972	7.12	145.8	3.64	lt brn
0831	7	19.95	971	7.16	133.2	3.86	lt brn
0835	10.5	19.94	972	7.18	122.5	3.94	lt brn
0841							collected sample

Pumping Rate: _____ gal / min

Purge Method: Waterra

Well Constructed TD (ft):

Casing Diameter (in): 2

* Well TD (ft): 64.81

Silt Thickness (ft):

Initial DTW (ft): 48.33

Water Column Height (ft): 16.48

One Casing Volume (gal): 2.8

** Final DTW (ft): 48.58

** % Recharge: 98

Sample Method: Waterra

Sample Containers used: 4 # VOAs HCL preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Notes:

Sampled By: Mark Pierson (Print) (Sign)

* = measured ** = @ sampling

Gallons per foot of casing: 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5294

Project Location:

Well I.D.: MW-307

Date: 6/26/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0823	.2						Lt Brown silt
0829	.2						no odor
0835	.2						+
0850							Sampled

Pumping Rate: _____ gal / min

Purge Method: Dedicated Ctm Tubing

Well Constructed TD (ft):	66.00
Casing Diameter (in):	Cmt
* Well TD (ft):	
Silt Thickness (ft):	
Initial DTW (ft):	48.96
Water Column Height (ft):	17.04
One Casing Volume (gal):	.2
** Final DTW (ft):	
** % Recharge:	

Sample Method: Dedicated Tubing

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes:

Sampled By: Anthony Scamm (Print) Anthony Scamm (Sign)

* = measured ** = @ sampling

Gallons per foot of casing: 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5294

Project Location: _____

Well I.D.: MW-207

Date: 6/26/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0900							Insufficient Water to Purge or Sample.

Pumping Rate: _____ gal / min

Purge Method: dedicated CMT Tubing

Well Constructed TD (ft): 50.00

Casing Diameter (in): _____

* Well TD (ft): _____

Silt Thickness (ft): _____

Initial DTW (ft): 48.68

Water Column Height (ft): 1.32

One Casing Volume (gal): .81

** Final DTW (ft): _____

** % Recharge: _____

Sample Method: dedicated Tubing

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: _____

(Print) Arthur Sloma (Sign) Arthur Sloma

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location: _____

Well I.D.: MW-10

Date: 6/26/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0907	0	21.90	960	7.64	150.0	4.17	lt brn - no bubbles in YSI flow cell
0912	3	19.78	962	7.40	120.3	4.68	lt brn
0915	6	19.77	963	7.32	112.4	4.51	lt brn
0917	9	19.76	964	7.30	105.2	4.44	lt brn
0923							collected samples

Pumping Rate: _____ gal / min

Purge Method: w/ terra

Well Constructed TD (ft): _____

Casing Diameter (in): 2

* Well TD (ft): 65.15

Silt Thickness (ft): _____

Initial DTW (ft): 47.99

Water Column Height (ft): 17.16

One Casing Volume (gal): 2.9

** Final DTW (ft): 48.27

** % Recharge: 98

Sample Method: w/ terra

Sample Containers used: 4 # VOAs HCl preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Notes: _____

Sampled By: Mark Person (Print) (Sign)

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location:

Well I.D.: MW 304 2

Date: 6/26/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0930	.3						Slight odor
0936	.6						Lt dark/ish sed
0941	.9						NO sheen
1000							Sampled

Pumping Rate: _____ gal / min

Purge Method: dedicated Ctm Tubing

Well Constructed TD (ft): 75.5

Casing Diameter (in): Cmt

* Well TD (ft):

Silt Thickness (ft):

Initial DTW (ft): 48.46

Water Column Height (ft): 27.04

One Casing Volume (gal): .3

** Final DTW (ft):

** % Recharge:

Sample Method: dedicated Tubing

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes:

Sampled By: Anthony Scurra (Print) Anthony Scurra (Sign)

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location:

Well I.D.: MW-204 3

Date: 6/26/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1010	.2						Slight Gas odor
1018	.4						dark Brown silt
1028	.6						as before.
1045							Sampled

Pumping Rate: _____ gal / min

Purge Method: dedicated CMT Tubing

Well Constructed TD (ft): 66.5

Casing Diameter (in): CMT

* Well TD (ft):

Silt Thickness (ft):

Initial DTW (ft): 48.35

Water Column Height (ft): 18.15

One Casing Volume (gal): .2

** Final DTW (ft):

** % Recharge:

Sample Method: dedicated Tubing

Sample Containers used: 4 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes:

Sampled By: Anthony Sloma (Print) (Sign) Anthony Sloma

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location: _____

Well I.D.: LW-A

Date: 6/26/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1012	0	21.90	1417	7.08	-17.4	—	Clear
1024	2	21.21	1466	6.71	-90.4	—	Gray/black
1033	4						Bailed Dry
1058							Collected Sample

Pumping Rate: _____ gal / min

Purge Method: disposable bailer

Sample Containers used: 4 # VOAs HCL preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Well Constructed TD (ft):	
Casing Diameter (in):	4
* Well TD (ft):	51.32
Silt Thickness (ft):	
Initial DTW (ft):	47.21
Water Column Height (ft):	4.11
One Casing Volume (gal):	2.6
** Final DTW (ft):	47.33
** % Recharge:	97
Sample Method:	disposable bailer

Notes: /

Sampled By: Mark Pierson (Print) Mark Pierson (Sign)

* = measured ** = @ sampling

Gallons per foot of casing: 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

48.83

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log CMT 5

Project Name: Sullivis

Project No.: 5262

Project Location:

Well I.D.: MW-305 I

Date: 6/26/15

Samples Sent To: BC Lab

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1145	.2						Brownish silt
1152	.2						Slight Gas Odor
1158	.2						"
							Total Purge .6
1225							Sampled

Pumping Rate: _____ gal / min

Purge Method: dedicated CMT Tubing

Well Constructed TD (ft):	66'
Casing Diameter (in):	
* Well TD (ft):	
Silt Thickness (ft):	
Initial DTW (ft):	48.34
Water Column Height (ft):	17.66
One Casing Volume (gal):	.2
** Final DTW (ft):	
** % Recharge:	

Sample Method: dedicated Tubing

Sample Containers used: 4 # VOAs HCl preserved ___ non-preserved

___ # amber liters ___ preserved ___ non-preserved

___ # polys ___ ___ preserved ___ non-preserved

___ # polys ___ ___ preserved ___ non-preserved

Notes:

Sampled By:

(Print) Anthony Scorsa (Sign) Anthony Scorsa

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins

Project No.: 5262

Project Location:

Well I.D.: W-1

Date: 6/26/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1151	0	22.24	1113	6.90	-119.3	—	clear
1158	1	21.76	1376	6.80	-107.2		Black
1204	1.5						Bailed dry
1257							collected sample

Pumping Rate: _____ gal / min

Purge Method: disposable bailer

Sample Containers used: 4 # VOAs HCL preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Well Constructed TD (ft):

Casing Diameter (in): 2

* Well TD (ft): 54.45

Silt Thickness (ft):

Initial DTW (ft): 47.93

Water Column Height (ft): 6.52

One Casing Volume (gal): 1.1

** Final DTW (ft): 49.20

** % Recharge: 80

Sample Method: disposable bailer

Notes:

Sampled By: Mark Pierson (Print) (Sign)

* = measured ** = @ sampling

Gallons per foot of casing: 2" dia. = 0.17, 3" dia. = 0.38, 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

49.23

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sollins

Project No.: 5262

Project Location:

Well I.D.: EW-2

Date: 6/26/15

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1235	0	21.73	1130	7.09	-37.5		gray - black
1245	2	21.33	1138	6.80	-73.7		gray
1248	4	21.04	1125	6.79	-78.0		N.A.
1255	6	21.81	1122	6.75	-78.3		N.A.
1311							sampled

Pumping Rate: _____ gal / min

Purge Method: disposable bailer

Well Constructed TD (ft):	
Casing Diameter (in):	2
* Well TD (ft):	59.38
Silt Thickness (ft):	
Initial DTW (ft):	47.27
Water Column Height (ft):	12.11
One Casing Volume (gal):	2
** Final DTW (ft):	47.69
** % Recharge:	95
Sample Method:	disposable bailer

Sample Containers used: 4 # VOAs HCl preserved ___ non-preserved

_____ # amber liters _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

_____ # polys _____ _____ preserved ___ non-preserved

Notes:

Sampled By: Mark Fisher (Print) (Sign)

* = measured ** = @ sampling

Gallons per foot of casing. 2" dia. = 0.17, 3" dia. = 0.38 4" dia. = 0.65, 5" dia. = 1.02, 6" dia. = 1.48

Water Level Monitoring Record

Project Name: Sullins
Date: 6/25/15

Project No. 5262
Technician A.S, M

MP = Measuring Point
I = Inaccessible
GL = Ground Level

Well Condition*:
G = Good F=fair
P = Poor R=Replace

Well No.	Sample Order	Time	Well Casing Dia.	Water Level Below MP (100th/foot)	Total Depth (100th/foot)	Depth to Floating Product (100th/foot)	Floating Product Thickness (100th/foot)	Surficial Seal* (Grout)	Concrete Seal*	Lid Secure*	Gasket*	Lock*	Expanding Cap*	Water in Well Box (Y or N)	Remarks
W-E5	1	1109	2	43.46	44.15										
W-35	2	1122	4	dry											
MW 9	3	1125	2	48.33	64.81			Grout dropped 4'							
MW-10	4	1131	2	47.99	65.15			Grout dropped 4'							
W-B5	5	1135	6	dry	44.55										
W-15	6	1139	6	dry	44.61										
W-1	7	1142	2	47.93	54.45										
W-A	8	1146	4	47.21	51.32										
106	9	1151	cmt	dry	38.00										

Notes:

Ground Zero Analysis, Inc.
1172 Kansas Avenue, Modesto, CA 95351

Water Level Monitoring Record

Project Name: Sullins
Date: 6/25/15

Project No.: 5262
Technician: A.S.

MP = Measuring Point
I = Inaccessible
GL = Ground Level

Well Condition*:
G = Good F=Fair
P = Poor R=Replace

Well No.	Sample Order	Time	Well Casing Dia.	Water Level Below MP (100th/foot)	Total Depth (100th/foot)	Depth to Floating Product (100th/foot)	Floating Product Thickness (100th/foot)	Surficial Seal* (Grout)	Concrete Seal*	Lid Secure*	Gasket*	Lock*	Expanding Cap*	Water in Well Box (Y or N)	Remarks
MW-206	10	1154	cmt	47.61	50.00										
MW-306	11	1157	cmt	48.34	66.00										
MW-108	12	1200	cmt	dry	40.00										
MW-208	13	1202	cmt	49.84	52.00										
MW-308	14	1204	cmt	48.93	66.00										
MW-107	15	1207	cmt	dry	40.00										
MW-207	16	1208	cmt	48.68	50.00										
MW-307	17	1210	cmt	48.96	66.00										
MW 204	18	1213	cmt	48.35	66.50										

Notes:

Ground Zero Analysis, Inc.
1172 Kansas Avenue, Modesto, CA 95351

Water Level Monitoring Record

Project Name: Sullins
Date: 6/25/15

Project No.: 5262
Technician: A.S

MP = Measuring Point
I = Inaccessible
GL = Ground Level

Well Condition*:
G = Good F=fair
P = Poor R=Replace

Well No.	Sample Order	Time	Well Casing Dia.	Water Level Below MP (100th/foot)	Total Depth (100th/foot)	Depth to Floating Product (100th/foot)	Floating Product Thickness (100th/foot)	Surficial Seal* (Grout)	Concrete Seal*	Lid Secure*	Gasket*	Lock*	Expanding Cap*	Water in Well Box (Y or N)	Remarks
MW-304	19	1214	cmt	48.46	75.50										
MW-404	20	1216	cmt	48.60	81.50										
MW-104	21	1221	cmt	47.23	50.50										
MW-105	22	1224	cmt	dry	37.00										
MW-205	23	1226	cmt	46.91	48.00										
MW-305	24	1228	cmt	48.34	66.00										
EW-2	25	1231	2	47.27	59.38										

Notes:

Ground Zero Analysis, Inc.
1172 Kansas Avenue, Modesto, CA 95351

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project Sullins
Project # 5262
Location
Weather HOT

Date 6/25/15
Time on job 0742 to
Record Keeper M Pierson
Wind slight
Temp 100

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
M Pierson	GZA	0918	1550
A Scenna	GZA	0918	1550

Time	Field Activities
1005	All wells open
	removed extraction tubing from EW-2, W-1, W-4
1515	All wells closed

Daily Field Report

Project Name: Sullins	Field Technician: AS	Date: 6/25/15
Project Activity: Ground Water Sampling	Job Number: 5262	Page: of

Leave Modesto 0818, arrive on site 0918

Opened all well lids and removed extraction tubing from EW-2, W-1, W-A.

Removed lids and plugs from all wells

Removed CMT hoses and declogged check valves at the end of each CMT Hose. Waited 15-30 minutes for wells to stabilize.

One Water level probe used to monitor all wells on site

Put hoses back down CMT Wells.

A number of the wells are dry, some had so very little water in the water column that there was insufficient water to purge or sample each well.

Despite some wells having two feet of water, removed the hose, impossible to retrieve water. I began to purge well,

Note upon trying to put back MW 404 the hose would not go beyond 34 feet. Some sort of obstruction. This well is 81.5 feet deep, but obstruction kept it from going down beyond 34 feet Was able to Purge and Sample well - 306

Secured Site, Leave Site 1548, Modesto office

, Job off

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project Sullens
Project # 5262
Location
Weather

Date 6/26/15
Time on job 0636 to
Record Keeper M. Pierson
Wind | Temp

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
M Pierson	GZA	0748	1515
A Sierra	GZA	0748	

Time	Field Activities
	Calibrated pH & DO meter
XXX	There are 5 drums of water that need to be pumped into the water treatment system
XXX	MW-9 & 10 need 4' of grout added
1330-1400	Lunch
	Install stingers in extraction wells
	started DPE - found that the shaft on the fresh air ejection valve is broken, need valve part #
	Eclispe 128V-AB 3NPT
	501229
	& Extraction valve is frozen in place order Two valves

shutdown DPE

Replace 3/4" ID hose on EW-2 with vacuum hose

Daily Field Report

Project Name: Sullivan	Field Technician: AS	Date: 06/26/15
Project Activity: Ground Water Sampling	Job Number: 5262	Page: of

Leavy Modesto office 0636, on site 0748

Began by purging and sampling wells 307, 204, 304, 305

We then reinstalled the knock down wells EW-2, W-1 & WA LUNCH 1330 to 1400

Upon starting up system noticed that the fresh air & dilution valve arms are broken off, and the other valve is frozen, need to order Two new valves,

Valve name eclipse 128V-AB 3NPT, # 501229

Shut system down, power off

Locked up site

Leavy site at 1515, arrive Modesto 1640 unload.

off 1700

Attachment C

Laboratory Analytical Data Sheets

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 03/17/2015

Project Manager

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Client Project:	1262.2
BCL Project:	Sullins
BCL Work Order:	1506056
Invoice ID:	B198421

Enclosed are the results of analyses for samples received by the laboratory on 3/11/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

Table of Contents

Chain of Custody and Cooler Receipt Form for 1506056 Page 1 of 2

GROUND ZERO ANALYSIS, INC.
1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gza@groundzeroanalysis.com

Chain of Custody

Page 1 of 1

15-060056

Billing To: Ground Zero Analysis, Inc.

Laboratory: BC LABS

Project #: 1262.2
Project Name: Sullivan's
Site Address: 187 N. L STREET
Global ID No.: T0600100116
EDF Report: X Yes ☐ No
Purchase Order #

Turnaround Time: G = Standard
1 day 2 day 3 day 5 day

Email Lab Report (.pdf): X Yes ☐ No
Email EDF Lab Report (.zip): ☐ Yes ☐ No
Mail Lab Report: ☐ Yes ☐ No

Client: Ground Zero Analysis, Inc. — Plot Attn: Ground Zero Analysis, Inc.
Client Address: 1172 Kansas Avenue — Type of Event(s): (GRAB) Sys Monitoring Drilling Other
City, State, Zip: Modesto, CA 95351 — Client Email: gza@groundzeroanalysis.com
Client Phone: (209) 522-4119 — Client Fax: (209) 522-4227

Sampling Info: Sampled By (Initials): AO/AS, GZA

Special Instructions / Remarks

Analysis Requested

	Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	TPH-G, BTEX, MTBE 8260
-1	3-9-15	1410		MW-9	4	W	HCL	X
-2	3-9-15	1525		MW-10	4	W	HCL	X
-3	3-10-15	1025		EW-2	4	W	HCL	X

CHK-BY DISTRIBUTION
FAX
SUB-OUT ☐

	Signature	Print Name	Company	Date:	Time:
Received by:		ANDREW DORN	GZA	3-11-15	1005
Relinquished by:		Ross Dickey	BCLabs	3/11/15	1005
Received by:		Ross Dickey	BCLabs	3/11/15	1720

REC. @ 3.8°C 3-11-15 17:30 REL. @ 3.8°C 3-11-15 2150

Please return cooler / ice chest to Ground Zero Analysis, Inc.

Rev. 3/2014

Chain of Custody and Cooler Receipt Form for 1506056 Page 2 of 2

BC LABORATORIES INC. **COOLER RECEIPT FORM** Rev. No. 18 09/04/14 Page 1 Of 1

Submission #: 15-060056

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐ Box ☐
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐

COC Received
☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 208 Date/Time 3/11/15 2153

Temperature: (A) 0.9 °C / (C) 0.7 °C Analyst Init KLB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL 0 96	ABCD	ABCD	ABCD							
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: VVI Date/Time: 3/12/15 0855 (S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC)

A = Actual / C = Corrected

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1506056-01	**COC Number:**	---	**Receive Date:**	03/11/2015 21:50
	Project Number:	Sullins	**Sampling Date:**	03/09/2015 14:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-9	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-9	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1506056-02	**COC Number:**	---	**Receive Date:**	03/11/2015 21:50
	Project Number:	Sullins	**Sampling Date:**	03/09/2015 15:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-10	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-10	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1506056-03	**COC Number:**	---	**Receive Date:**	03/11/2015 21:50
	Project Number:	Sullins	**Sampling Date:**	03/10/2015 10:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EW-2	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): EW-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1506056-01 | **Client Sample Name:** Sullins, MW-9, 3/9/2015 2:10:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**6.5**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND	**Z2**	1
Ethylbenzene	**0.62**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND	**Z2**	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z2	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z2	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z2	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z2	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z2	1
Total Purgeable Petroleum Hydrocarbons	**31**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND	**J,Z2**	1
1,2-Dichloroethane-d4 (Surrogate)	96.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/15	03/13/15 16:06	JMS	MS-V12	1	BYC1143

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1506056-02 | **Client Sample Name:** Sullins, MW-10, 3/9/2015 3:25:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND	Z2	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND	Z2	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z2	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND	Z2	1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND	Z2	1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND	Z2	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND	Z2	1
Total Purgeable Petroleum Hydrocarbons	25	ug/L	50	7.2	Luft-GC/MS	ND	J,Z2	1
1,2-Dichloroethane-d4 (Surrogate)	95.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/15	03/13/15 16:24	JMS	MS-V12	1	BYC1143

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1506056-03 | **Client Sample Name:** Sullins, EW-2, 3/10/2015 10:25:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**7000**	**ug/L**	**120**	**21**	**EPA-8260B**	ND	A01	1
Ethylbenzene	**1600**	**ug/L**	**120**	**24**	**EPA-8260B**	ND	A01	1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND	Z1,Z2	2
Toluene	**4000**	**ug/L**	**120**	**23**	**EPA-8260B**	ND	A01	1
Total Xylenes	**10000**	**ug/L**	**250**	**90**	**EPA-8260B**	ND	A01	1
p- & m-Xylenes	**8100**	**ug/L**	**120**	**70**	**EPA-8260B**	ND	A01	1
o-Xylene	**2200**	**ug/L**	**120**	**20**	**EPA-8260B**	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	**60000**	**ug/L**	**12000**	**1800**	**Luft-GC/MS**	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	87.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	75 - 125 (LCL - UCL)		EPA-8260B		S09	2
Toluene-d8 (Surrogate)	94.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	81.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	81.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/15	03/16/15 14:36	JMS	MS-V12	250	BYC1143
2	EPA-8260B	03/13/15	03/13/15 16:41	JMS	MS-V12	1	BYC1143

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYC1143						
Benzene	BYC1143-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYC1143-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BYC1143-BLK1	ND	ug/L	0.50	0.11	
Toluene	BYC1143-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYC1143-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYC1143-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYC1143-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BYC1143-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**BYC1143-BLK1**	**107**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYC1143-BLK1**	**97.2**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYC1143-BLK1**	**102**	%	**80 - 120 (LCL - UCL)**		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYC1143										
Benzene	BYC1143-BS1	LCS	25.370	25.000	ug/L	101		70 - 130		
Toluene	BYC1143-BS1	LCS	25.090	25.000	ug/L	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYC1143-BS1	LCS	9.8700	10.000	ug/L	98.7		75 - 125		
Toluene-d8 (Surrogate)	BYC1143-BS1	LCS	10.010	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYC1143-BS1	LCS	9.9500	10.000	ug/L	99.5		80 - 120		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYC1143	Used client sample: N										
Benzene	MS	1502150-76	ND	26.740	25.000	ug/L		107		70 - 130	
	MSD	1502150-76	ND	25.380	25.000	ug/L	5.2	102	20	70 - 130	
Toluene	MS	1502150-76	ND	26.140	25.000	ug/L		105		70 - 130	
	MSD	1502150-76	ND	24.740	25.000	ug/L	5.5	99.0	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1502150-76	ND	10.290	10.000	ug/L		103		75 - 125	
	MSD	1502150-76	ND	10.270	10.000	ug/L	0.2	103		75 - 125	
Toluene-d8 (Surrogate)	MS	1502150-76	ND	10.110	10.000	ug/L		101		80 - 120	
	MSD	1502150-76	ND	10.020	10.000	ug/L	0.9	100		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1502150-76	ND	9.9500	10.000	ug/L		99.5		80 - 120	
	MSD	1502150-76	ND	10.150	10.000	ug/L	2.0	102		80 - 120	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/17/2015 16:35
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
Z1	50uL of antifoamer solution added to sample VOA.
Z2	Liquid from 2 samples VOAs was combined for testing due to the amount of solild material within each sample container.

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 03/18/2015

Project Manager

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Client Project:	5262
BCL Project:	Sullins
BCL Work Order:	1506157
Invoice ID:	B198459

Enclosed are the results of analyses for samples received by the laboratory on 3/12/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

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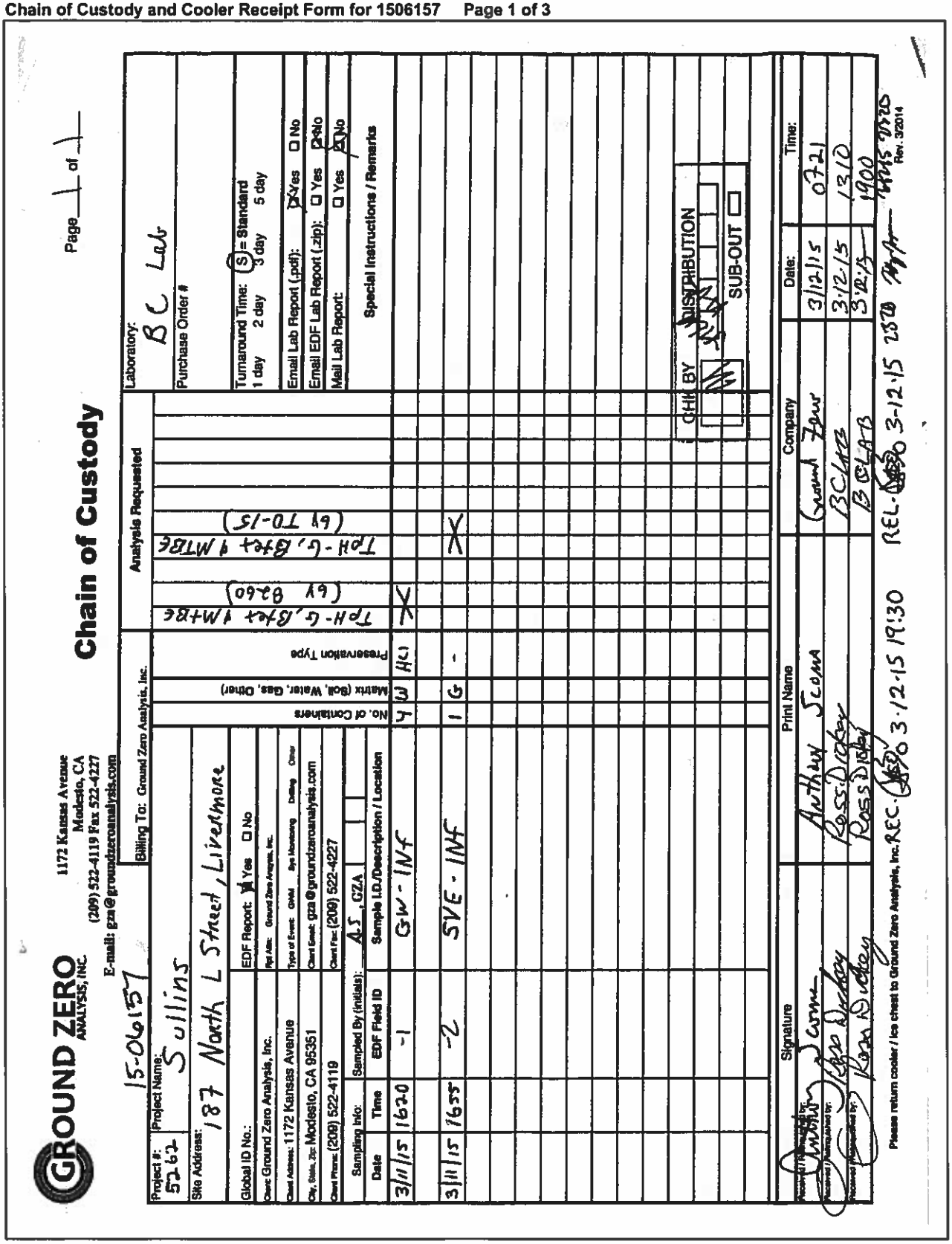
Chain of Custody and Cooler Receipt Form for 1506157 Page 1 of 3



GROUND ZERO ANALYSIS, INC.
1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gza@groundzeroanalysis.com

Page 1 of 1

Chain of Custody

15-06157

Project #: 5262
Project Name: Sullins
Site Address: 187 North L Street, Livermore
Global ID No.:
Client: Ground Zero Analysis, Inc.
Client Address: 1172 Kansas Avenue
City, State, Zip: Modesto, CA 95351
Client Phone: (209) 522-4119
EDF Report: Yes No
Pipl Attn: Ground Zero Analysis, Inc.
Type of Event: GWM Bpt Monitoring Drilling Other
Client Email: gza@groundzeroanalysis.com
Client Fax: (209) 522-4227
Sampled By (initials): AS, GZA

Billing To: Ground Zero Analysis, Inc.

Laboratory: BC Lab
Purchase Order #

Turnaround Time: (S) = Standard
1 day 2 day 3 day 5 day

Email Lab Report (.pdf): Yes No
Email EDF Lab Report (.zip): Yes No
Mail Lab Report: Yes No

Special Instructions / Remarks

Sampling Info: Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	Analysis Requested: TPH-G, Btex + MTBE (by 8260)	TPH-G, Btex + MTBE (by TO-15)
3/11/15	1620	-1	GW - INF	4	W	HCl	X	
3/11/15	1655	-2	SVE - INF	1	G	-		X

CHK BY DISTRIBUTION
SUB-OUT

	Signature	Print Name	Company	Date:	Time:
Received by:		Anthony Scoma	Ground Zero	3/12/15	0721
Relinquished by:	Rossi Dudley	Rossi Dudley	BCLabs	3/12/15	1310
Received by:	Rossi Dudley	Rossi Dudley	BC LAB	3/12/15	1900

REC. 3-12-15 19:30 REL. 3-12-15 2310 WHS

Please return cooler / ice chest to Ground Zero Analysis, Inc. REC. 3-12-15 2310 WHS Rev: 3/2014

Chain of Custody and Cooler Receipt Form for 1506157 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 1 Of 2

Submission #: 15.06157

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Federal Express ☐ UPS ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: PE Thermometer ID: 208 Date/Time 3/12/15 2325

Temperature: (A) 1.5 °C / (C) 1.3 °C Analyst Init KIB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
OT GENERAL MINERAL/ GENERAL										
PT PS UNPRESERVED										
OT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
loz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
0ml VOA VIAL TRAVEL BLANK										
0ml VOA VIAL	REC'D									
PT EPA 413.1, 413.2, 418.1										
PT ODOR										
ADIOLOGICAL										
ACTERIOLOGICAL										
0 ml VOA VIAL- 504										
PT EPA 508/608/8080										
PT EPA 515.1/8150										
PT EPA 525										
PT EPA 525 TRAVEL BLANK										
0ml EPA 547										
0ml EPA 531.1										
z Amber EPA 548										
T EPA 549										
T EPA 632										
T EPA 8015M										
T AMBER										
OZ. JAR										
OZ. JAR										
OIL SLEEVE										
B VIAL										
ASTIC BAG										
ERROUS IRON										
CORE										
RT KIT										
a Canister										

s:_____

nbering Completed By: _____ Date/Time: 3-13-15 0011 I:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC1

/ C = Corrected

Chain of Custody and Cooler Receipt Form for 1506157 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 18 09/04/14 Page 2 of 2

Submission #: 15.06157

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☐ None ☐ Box ☒
Other ☐ (Specify)_____

FREE LIQUID
YES ☐ NO ☐

Refrigerant: Ice ☐ Blue Ice ☐ None ☒ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: _____ Container: Tedlar Thermometer ID: _____

Temperature: (A) Room °C / (C) temp °C

Date/Time 3/12/15

Analyst Init KB 2323

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG Tedlar		A								
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:_____

Sample Numbering Completed By: _____ Date/Time 3.13.15 0012 [S:\WPDocs\WordPerfect\LAB_DOCS\FORMS\SAMREC]

A = Actual / C = Corrected

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1506157-01	**COC Number:**	---	**Receive Date:**	03/12/2015 23:20
	Project Number:	Sullins	**Sampling Date:**	03/11/2015 16:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	GW-INF	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID:	T0600100116
			Location ID (FieldPoint):	GW-INF
			Matrix:	W
			Sample QC Type (SACode):	CS
			Cooler ID:	
1506157-02	**COC Number:**	---	**Receive Date:**	03/12/2015 23:20
	Project Number:	Sullins	**Sampling Date:**	03/11/2015 16:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	SVE-INF	**Lab Matrix:**	Air
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Vapor or Air
			Delivery Work Order:	
			Global ID:	T0600100116
			Location ID (FieldPoint):	SVE-INF
			Matrix:	GS
			Sample QC Type (SACode):	CS
			Cooler ID:	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1506157-01 | **Client Sample Name:** Sullins, GW-INF, 3/11/2015 4:20:00PM, Andrew Dom

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**200**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01,Z1**	1
Ethylbenzene	**99**	**ug/L**	**5.0**	**0.98**	**EPA-8260B**	ND	**A01,Z1**	1
Methyl t-butyl ether	ND	ug/L	5.0	1.1	EPA-8260B	ND	A01,Z1	1
Toluene	**120**	**ug/L**	**5.0**	**0.93**	**EPA-8260B**	ND	**A01,Z1**	1
Total Xylenes	**510**	**ug/L**	**10**	**3.6**	**EPA-8260B**	ND	**A01,Z1**	1
p- & m-Xylenes	**390**	**ug/L**	**5.0**	**2.8**	**EPA-8260B**	ND	**A01,Z1**	1
o-Xylene	**120**	**ug/L**	**5.0**	**0.82**	**EPA-8260B**	ND	**A01,Z1**	1
Total Purgeable Petroleum Hydrocarbons	**4100**	**ug/L**	**500**	**72**	**Luft-GC/MS**	ND	**A01,Z1**	1
1,2-Dichloroethane-d4 (Surrogate)	75.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	91.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	03/13/15	03/16/15 20:30	JMS	MS-V12	10	BYC1344

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Compounds by GC/MS (EPA Method TO-15 at STP)

BCL Sample ID: 1506157-02 | **Client Sample Name:** Sullins, SVE-INF, 3/11/2015 4:55:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**26000**	**ug/m3**	**2000**	**220**	**EPA-TO-15**	ND	**A01**	1
Ethylbenzene	**8200**	**ug/m3**	**500**	**23**	**EPA-TO-15**	ND	**A01**	2
Methyl t-butyl ether	ND	ug/m3	200	42	EPA-TO-15	ND	A01	2
Toluene	**13000**	**ug/m3**	**2000**	**200**	**EPA-TO-15**	ND	**A01**	1
p- & m-Xylenes	**20000**	**ug/m3**	**500**	**49**	**EPA-TO-15**	ND	**A01**	2
o-Xylene	**6000**	**ug/m3**	**500**	**31**	**EPA-TO-15**	ND	**A01**	2
Total Xylenes	**26000**	**ug/m3**	**1000**	**80**	**EPA-TO-15**	ND	**A01**	2
Total Petroleum Hydrocarbons	**3800000**	**ug/m3**	**200000**	**39000**	**EPA-TO-15**	ND	**A01**	1
4-Bromofluorobenzene (Surrogate)	128	%	70 - 130 (LCL - UCL)		EPA-TO-15			1
4-Bromofluorobenzene (Surrogate)	114	%	70 - 130 (LCL - UCL)		EPA-TO-15			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-TO-15	03/13/15	03/16/15 14:30	MJB	MS-A1	1000	BYC1221
2	EPA-TO-15	03/13/15	03/14/15 12:49	MJB	MS-A1	100	BYC1221

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYC1344						
Benzene	BYC1344-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYC1344-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BYC1344-BLK1	ND	ug/L	0.50	0.11	
Toluene	BYC1344-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYC1344-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYC1344-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYC1344-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BYC1344-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**BYC1344-BLK1**	**98.6**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYC1344-BLK1**	**96.3**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYC1344-BLK1**	**98.9**	%	**80 - 120 (LCL - UCL)**		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYC1344										
Benzene	BYC1344-BS1	LCS	18.530	25.000	ug/L	74.1		70 - 130		
Toluene	BYC1344-BS1	LCS	20.990	25.000	ug/L	84.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYC1344-BS1	LCS	8.8200	10.000	ug/L	88.2		75 - 125		
Toluene-d8 (Surrogate)	BYC1344-BS1	LCS	9.8300	10.000	ug/L	98.3		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYC1344-BS1	LCS	9.8600	10.000	ug/L	98.6		80 - 120		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYC1344	Used client sample: N										
Benzene	MS	1502150-78	ND	19.160	25.000	ug/L		76.6		70 - 130	
	MSD	1502150-78	ND	18.040	25.000	ug/L	6.0	72.2	20	70 - 130	
Toluene	MS	1502150-78	ND	20.180	25.000	ug/L		80.7		70 - 130	
	MSD	1502150-78	ND	19.930	25.000	ug/L	1.2	79.7	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1502150-78	ND	9.0500	10.000	ug/L		90.5		75 - 125	
	MSD	1502150-78	ND	9.0100	10.000	ug/L	0.4	90.1		75 - 125	
Toluene-d8 (Surrogate)	MS	1502150-78	ND	9.8800	10.000	ug/L		98.8		80 - 120	
	MSD	1502150-78	ND	9.9100	10.000	ug/L	0.3	99.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1502150-78	ND	9.2000	10.000	ug/L		92.0		80 - 120	
	MSD	1502150-78	ND	9.8800	10.000	ug/L	7.1	98.8		80 - 120	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Compounds by GC/MS (EPA Method TO-15 at STP)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYC1221						
Benzene	BYC1221-BLK1	ND	ug/m3	2.0	0.22	
Ethylbenzene	BYC1221-BLK1	ND	ug/m3	5.0	0.23	
Methyl t-butyl ether	BYC1221-BLK1	ND	ug/m3	2.0	0.42	
Toluene	BYC1221-BLK1	ND	ug/m3	2.0	0.20	
p- & m-Xylenes	BYC1221-BLK1	ND	ug/m3	5.0	0.49	
o-Xylene	BYC1221-BLK1	ND	ug/m3	5.0	0.31	
Total Xylenes	BYC1221-BLK1	ND	ug/m3	10	0.80	
Total Petroleum Hydrocarbons	BYC1221-BLK1	ND	ug/m3	200	39	
4-Bromofluorobenzene (Surrogate)	**BYC1221-BLK1**	**103**	%	**70 - 130 (LCL - UCL)**		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Compounds by GC/MS (EPA Method TO-15 at STP)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYC1221										
Benzene	BYC1221-BS1	LCS	14.201	15.974	ug/m3	88.9		70 - 130		
	BYC1221-BSD1	LCSD	14.166	15.974	ug/m3	88.7	0.2	70 - 130	30	
Ethylbenzene	**BYC1221-BS1**	LCS	**30.577**	**21.711**	**ug/m3**	**141**		**70 - 130**		
	BYC1221-BSD1	LCSD	**30.912**	**21.711**	**ug/m3**	**142**	**1.1**	**70 - 130**	**30**	
Toluene	BYC1221-BS1	LCS	20.632	18.842	ug/m3	110		70 - 130		
	BYC1221-BSD1	LCSD	21.220	18.842	ug/m3	113	2.8	70 - 130	30	
p- & m-Xylenes	**BYC1221-BS1**	LCS	**67.924**	**43.421**	**ug/m3**	**156**		**70 - 130**		
	BYC1221-BSD1	LCSD	**68.688**	**43.421**	**ug/m3**	**158**	**1.1**	**70 - 130**	**30**	
o-Xylene	**BYC1221-BS1**	LCS	**33.942**	**21.711**	**ug/m3**	**156**		**70 - 130**		
	BYC1221-BSD1	LCSD	**34.099**	**21.711**	**ug/m3**	**157**	**0.5**	**70 - 130**	**30**	
Total Xylenes	**BYC1221-BS1**	LCS	**101.87**	**65.132**	**ug/m3**	**156**		**70 - 130**		
	BYC1221-BSD1	LCSD	**102.79**	**65.132**	**ug/m3**	**158**	**0.9**	**70 - 130**	**30**	
4-Bromofluorobenzene (Surrogate)	BYC1221-BS1	LCS	71.9	71.6	ug/m3	100		70 - 130		
	BYC1221-BSD1	LCSD	73.6	71.6	ug/m3	103	2.3	70 - 130		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95354

Reported: 03/18/2015 9:47
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
Z1	50uL of antifoamer solution added to sample VOA

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 07/06/2015

Project Manager

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Client Project:	5262
BCL Project:	Sullins
BCL Work Order:	1515785
Invoice ID:	B207422

Enclosed are the results of analyses for samples received by the laboratory on 6/29/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

Table of Contents

GROUND ZERO ANALYSIS, INC.
1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gza@groundzeroanalysis.com

Chain of Custody

Page 1 of 1

15-15785

Billing To: Ground Zero Analysis, Inc.

Project #:	Project Name:
5262	Sullens

Site Address: 187 North L Street, Livermore, CA

Global ID No.: T0600100116 EDF Report: ☒ Yes ☐ No

Client: Ground Zero Analysis, Inc. Rpt Attn: Ground Zero Analysis, Inc.

Client Address: 1172 Kansas Avenue Type of Event: (GWM) Sys Monitoring Drilling Other

City, State, Zip: Modesto, CA 95351 Client Email: gza@groundzeroanalysis.com

Client Phone: (209) 522-4119 Client Fax: (209) 522-4227

Sampling Info: Sampled By (initials): MP, GZA

Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	Analysis Requested: TPH-G, BTEX (8015/8021)	Analysis Requested: TPH-G, BTEX, MTBE, EDB, 8021
6/26/15	1045	-1	MW-204	4	W	HCl		X
6/26/15	1000	-2	MW-304	↓	↓	↓	X	
6/26/15	1225	-3	MW-305				X	
6/25/15	1520	-4	MW-306				X	
6/26/15	0850	-5	MW-307				X	
6/26/15	0841	-6	MW-9					X
	0923	-7	MW-10					X
	1058	-8	W-A				X	
	1257	-9	W-1				X	
↓	1311	-10	EW-2					X
6/25/16	1520	-11	MW-308	↓	↓	↓	X	

Laboratory: BC Lab

Purchase Order #

Turnaround Time: (Std.) Standard
1 day 2 day 3 day 5 day

Email Lab Report (.pdf): ☒ Yes ☐ No

Email EDF Lab Report (.zip): ☒ Yes ☐ No

Mail Lab Report: ☐ Yes ☒ No

Special Instructions / Remarks

TPHG RL = 50 µg/L
BTEX RL = 0.5 µg/L
MTBE RL = 0.5 µg/L

CHK BY

DISTRIBUTION

SUB-OUT

Received / Relinquished by:	Signature	Print Name	Company	Date:	Time:
Received / Relinquished by:		Mark Pierson	GZA	6/26/15	16:55
Received / Relinquished by:		Ross Dickey	BC LAB	6.29.15	1600
Received / Relinquished by:		Ross Dickey	BC LAB	6.29.15	1745

REC. 6/29/15 17:45 REL 6/29/15 1700 6/29/15 2100

Please return cooler / ice chest to Ground Zero Analysis, Inc.

Rev. 3/2014

Chain of Custody and Cooler Receipt Form for 1515785 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 15-15785

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____	Other ☐ (Specify)_____	

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 208 Date/Time 6/29/15 0800

Temperature: (A) 1.7 °C / (C) 1.5 °C Analyst Init KJB

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525	—			—	—		—	—		—
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 8015M										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
Tedlar Bag										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments: —

Sample Numbering Completed By: KJB Date/Time: 6/29/15 0805 (S:\AWP\Dept\Word Perfect\LAB_DOCS\FORMS\SAMREC.rev 19)

Rev. No:19 05/06/2015

A = Actual / C = Corrected

Chain of Custody and Cooler Receipt Form for 1515785 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #:

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☐ BC Lab Field Service ☒ Other ☐ (Specify)____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)____	YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Containers ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.97 Container: VOA Thermometer ID: 208 Date/Time 6/29/15

Temperature: (A) 1.7 °C / (C) 1.5 °C Analyst Init KJB 0800

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	ABOD									
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz Amber EPA 548										
QT EPA 549										
QT EPA 8015M										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
Tedlar Bag										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments:

Sample Numbering Completed By: KJB Date/Time: 6/29/15 0800

Rev. No:19 05/08/2015

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1515785-01	**COC Number:**	—	**Receive Date:**	06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:**	06/26/2015 10:45
	Sampling Location:	—	**Sample Depth:**	—
	Sampling Point:	MW-204	**Lab Matrix:**	Water
	Sampled By:	GZA of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-204	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1515785-02	**COC Number:**	---	**Receive Date:**	06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:**	06/26/2015 10:00
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-304	**Lab Matrix:**	Water
	Sampled By:	GTIM	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-304	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1515785-03	**COC Number:**	---	**Receive Date:**	06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:**	06/26/2015 12:25
	Sampling Location:	—	**Sample Depth:**	---
	Sampling Point:	MW-305	**Lab Matrix:**	Water
	Sampled By:	GTIM	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-305	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1515785-04	COC Number:	---	Receive Date: 06/29/2015 22:00
	Project Number:	Sullins	Sampling Date: 06/25/2015 15:20
	Sampling Location:	---	Sample Depth: —
	Sampling Point:	MW-306	Lab Matrix: Water
	Sampled By:	GTIM	Sample Type: Water
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-306
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1515785-05	COC Number:	---	Receive Date: 06/29/2015 22:00
	Project Number:	Sullins	Sampling Date: 06/26/2015 08:50
	Sampling Location:	—	Sample Depth: ---
	Sampling Point:	MW-307	Lab Matrix: Water
	Sampled By:	GTIM	Sample Type: Water
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-307
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1515785-06	COC Number:	—	Receive Date: 06/29/2015 22:00
	Project Number:	Sullins	Sampling Date: 06/26/2015 08:41
	Sampling Location:	—	Sample Depth: ---
	Sampling Point:	MW-9	Lab Matrix: Water
	Sampled By:	GTIM	Sample Type: Water
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-9
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1515785-07	**COC Number:**	---	**Receive Date:** 06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:** 06/26/2015 09:23
	Sampling Location:	---	**Sample Depth:** —
	Sampling Point:	MW-10	**Lab Matrix:** Water
	Sampled By:	GTIM	**Sample Type:** Water
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-10
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1515785-08	**COC Number:**	—	**Receive Date:** 06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:** 06/26/2015 10:58
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	W-A	**Lab Matrix:** Water
	Sampled By:	GTIM	**Sample Type:** Water
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): W-A
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1515785-09	**COC Number:**	—	**Receive Date:** 06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:** 06/26/2015 12:57
	Sampling Location:	---	**Sample Depth:** —
	Sampling Point:	W-1	**Lab Matrix:** Water
	Sampled By:	GTIM	**Sample Type:** Water
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): W-1
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1515785-10	**COC Number:**	---	**Receive Date:**	06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:**	06/26/2015 13:11
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EW-2	**Lab Matrix:**	Water
	Sampled By:	GTIM	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): EW-2	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1515785-11	**COC Number:**	---	**Receive Date:**	06/29/2015 22:00
	Project Number:	Sullins	**Sampling Date:**	06/25/2015 15:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-308	**Lab Matrix:**	Water
	Sampled By:	GTIM	**Sample Type:**	Water
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-308	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-01 | **Client Sample Name:** Sullins, MW-204, 6/26/2015 10:45:00AM, GZA

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**260**	**ug/L**	**1.5**	**0.48**	**EPA-8021B**	ND	A01	1
Toluene	**11**	**ug/L**	**0.30**	**0.13**	**EPA-8021B**	ND		2
Ethylbenzene	**41**	**ug/L**	**0.30**	**0.12**	**EPA-8021B**	ND		2
Methyl t-butyl ether	**6.4**	**ug/L**	**1.0**	**0.12**	**EPA-8021B**	ND		2
Total Xylenes	**82**	**ug/L**	**0.60**	**0.41**	**EPA-8021B**	ND		2
Gasoline Range Organics (C4 - C12)	**1800**	**ug/L**	**50**	**8.8**	**Luft**	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	86.5	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	92.2	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (FID Surrogate)	141	%	70 - 130 (LCL - UCL)		Luft		A19,S09	3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 17:44	AKM	GC-V9	5	BYF2573
2	EPA-8021B	07/01/15	07/02/15 17:06	AKM	GC-V9	1	BYF2573
3	Luft	07/01/15	07/02/15 17:06	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-02 | **Client Sample Name:** Sullins, MW-304, 6/26/2015 10:00:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**69**	**ug/L**	**0.60**	**0.19**	**EPA-8021B**	ND	A01	1
Toluene	**4.2**	**ug/L**	**0.30**	**0.13**	**EPA-8021B**	ND		2
Ethylbenzene	**33**	**ug/L**	**0.30**	**0.12**	**EPA-8021B**	ND		2
Total Xylenes	**60**	**ug/L**	**0.60**	**0.41**	**EPA-8021B**	ND		2
Gasoline Range Organics (C4 - C12)	**810**	**ug/L**	**50**	**8.8**	**Luft**	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	85.5	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	86.5	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (FID Surrogate)	114	%	70 - 130 (LCL - UCL)		Luft			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 13:23	AKM	GC-V9	2	BYF2573
2	EPA-8021B	07/01/15	07/02/15 12:57	AKM	GC-V9	1	BYF2573
3	Luft	07/01/15	07/02/15 12:57	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-03 | **Client Sample Name:** Sullins, MW-305, 6/26/2015 12:25:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**170**	**ug/L**	**1.5**	**0.48**	**EPA-8021B**	ND	A01	1
Toluene	**1.6**	**ug/L**	**0.30**	**0.13**	**EPA-8021B**	ND		2
Ethylbenzene	**12**	**ug/L**	**0.30**	**0.12**	**EPA-8021B**	ND		2
Total Xylenes	**21**	**ug/L**	**0.60**	**0.41**	**EPA-8021B**	ND		2
Gasoline Range Organics (C4 - C12)	**420**	**ug/L**	**50**	**8.8**	**Luft**	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	85.3	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	86.0	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (FID Surrogate)	101	%	70 - 130 (LCL - UCL)		Luft			3
a,a,a-Trifluorotoluene (FID Surrogate)	99.7	%	70 - 130 (LCL - UCL)		Luft			4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 14:24	AKM	GC-V9	5	BYF2573
2	EPA-8021B	07/01/15	07/02/15 13:37	AKM	GC-V9	1	BYF2573
3	Luft	07/01/15	07/02/15 13:37	AKM	GC-V9	1	BYF2573
4	Luft	07/01/15	07/01/15 14:24	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-04 | **Client Sample Name:** Sullins, MW-306, 6/25/2015 3:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	0.097	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	0.12	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	8.8	Luft	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	86.9	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	94.9	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 12:02	AKM	GC-V9	1	BYF2573
2	Luft	07/01/15	07/01/15 12:02	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-05 | **Client Sample Name:** Sullins, MW-307, 6/26/2015 8:50:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**76**	**ug/L**	**0.30**	**0.097**	**EPA-8021B**	ND		1
Toluene	**1.2**	**ug/L**	**0.30**	**0.13**	**EPA-8021B**	ND		1
Ethylbenzene	**18**	**ug/L**	**0.30**	**0.12**	**EPA-8021B**	ND		1
Total Xylenes	**16**	**ug/L**	**0.60**	**0.41**	**EPA-8021B**	ND		1
Gasoline Range Organics (C4 - C12)	**290**	**ug/L**	**50**	**8.8**	**Luft**	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	86.0	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	94.5	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 13:03	AKM	GC-V9	1	BYF2573
2	Luft	07/01/15	07/01/15 13:03	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-06 | **Client Sample Name:** Sullins, MW-9, 6/26/2015 8:41:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**1.6**	**ug/L**	**0.30**	**0.097**	**EPA-8021B**	ND		1
Toluene	ND	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	0.12	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	0.12	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	**28**	**ug/L**	**50**	**8.8**	**Luft**	ND	J	2
a,a,a-Trifluorotoluene (PID Surrogate)	85.3	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	98.7	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 12:43	AKM	GC-V9	1	BYF2573
2	Luft	07/01/15	07/01/15 12:43	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-07 | **Client Sample Name:** Sullins, MW-10, 6/26/2015 9:23:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	0.097	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	0.12	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	0.12	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	**34**	**ug/L**	**50**	**8.8**	**Luft**	**ND**	**J**	2
a,a,a-Trifluorotoluene (PID Surrogate)	85.9	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	101	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 12:22	AKM	GC-V9	1	BYF2573
2	Luft	07/01/15	07/01/15 12:22	AKM	GC-V9	1	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-08 | **Client Sample Name:** Sullins, W-A, 6/26/2015 10:58:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2100	ug/L	15	4.8	EPA-8021B	ND	A01	1
Toluene	64	ug/L	15	6.5	EPA-8021B	ND	A01	1
Ethylbenzene	160	ug/L	15	6.0	EPA-8021B	ND	A01	1
Total Xylenes	1000	ug/L	30	20	EPA-8021B	ND	A01	1
Gasoline Range Organics (C4 - C12)	12000	ug/L	2500	440	Luft	ND	A01	2
a,a,a-Trifluorotoluene (PID Surrogate)	89.6	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	96.9	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 19:05	AKM	GC-V9	50	BYF2573
2	Luft	07/01/15	07/01/15 19:05	AKM	GC-V9	50	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-09 | **Client Sample Name:** Sullins, W-1, 6/26/2015 12:57:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**470**	**ug/L**	**3.0**	**0.97**	**EPA-8021B**	ND	A01	1
Toluene	**91**	**ug/L**	**3.0**	**1.3**	**EPA-8021B**	ND	A01	1
Ethylbenzene	**350**	**ug/L**	**3.0**	**1.2**	**EPA-8021B**	ND	A01	1
Total Xylenes	**1100**	**ug/L**	**6.0**	**4.1**	**EPA-8021B**	ND	A01	1
Gasoline Range Organics (C4 - C12)	**19000**	**ug/L**	**500**	**88**	**Luft**	ND	A01	2
a,a,a-Trifluorotoluene (PID Surrogate)	97.0	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	144	%	70 - 130 (LCL - UCL)		Luft		A19,S09	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/02/15	07/02/15 15:59	AKM	GC-V9	10	BYF2573
2	Luft	07/02/15	07/02/15 15:59	AKM	GC-V9	10	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-10 | **Client Sample Name:** Sullins, EW-2, 6/26/2015 1:11:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**740**	**ug/L**	**3.0**	**0.97**	**EPA-8021B**	ND	A01	1
Toluene	**31**	**ug/L**	**0.60**	**0.26**	**EPA-8021B**	ND	A01	2
Ethylbenzene	**1300**	**ug/L**	**6.0**	**2.4**	**EPA-8021B**	ND	A01	3
Methyl t-butyl ether	**8.1**	**ug/L**	**2.0**	**0.24**	**EPA-8021B**	ND	A01	2
Total Xylenes	**1100**	**ug/L**	**6.0**	**4.1**	**EPA-8021B**	ND	A01	1
Gasoline Range Organics (C4 - C12)	**14000**	**ug/L**	**500**	**88**	**Luft**	ND	A01	4
a,a,a-Trifluorotoluene (PID Surrogate)	87.9	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	106	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (PID Surrogate)	85.7	%	70 - 130 (LCL - UCL)		EPA-8021B			3
a,a,a-Trifluorotoluene (FID Surrogate)	110	%	70 - 130 (LCL - UCL)		Luft			4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/01/15	07/01/15 18:04	AKM	GC-V9	10	BYF2573
2	EPA-8021B	07/02/15	07/02/15 15:39	AKM	GC-V9	2	BYF2573
3	EPA-8021B	07/01/15	07/01/15 18:25	AKM	GC-V9	20	BYF2573
4	Luft	07/01/15	07/01/15 18:04	AKM	GC-V9	10	BYF2573

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1515785-11 | **Client Sample Name:** Sullins, MW-308, 6/25/2015 3:20:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**2.5**	**ug/L**	**0.30**	**0.097**	**EPA-8021B**	ND		1
Toluene	**1.2**	**ug/L**	**0.30**	**0.13**	**EPA-8021B**	ND		1
Ethylbenzene	**3.1**	**ug/L**	**0.30**	**0.12**	**EPA-8021B**	ND		1
Total Xylenes	**1.2**	**ug/L**	**0.60**	**0.41**	**EPA-8021B**	ND		1
Gasoline Range Organics (C4 - C12)	**1400**	**ug/L**	**50**	**8.8**	**Luft**	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	102	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	164	%	70 - 130 (LCL - UCL)		Luft		A19,S09	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	07/02/15	07/02/15 13:17	AKM	GC-V9	1	BYG0098
2	Luft	07/02/15	07/02/15 13:17	AKM	GC-V9	1	BYG0098

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYF2573						
Benzene	BYF2573-BLK1	ND	ug/L	0.30	0.097	
Toluene	BYF2573-BLK1	ND	ug/L	0.30	0.13	
Ethylbenzene	BYF2573-BLK1	ND	ug/L	0.30	0.12	
Methyl t-butyl ether	BYF2573-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BYF2573-BLK1	ND	ug/L	0.60	0.41	
Gasoline Range Organics (C4 - C12)	BYF2573-BLK1	ND	ug/L	50	8.8	
a,a,a-Trifluorotoluene (PID Surrogate)	**BYF2573-BLK1**	**87.5**	**%**	**70 - 130 (LCL - UCL)**		
a,a,a-Trifluorotoluene (FID Surrogate)	**BYF2573-BLK1**	**95.2**	**%**	**70 - 130 (LCL - UCL)**		
QC Batch ID: BYG0098						
Benzene	BYG0098-BLK1	ND	ug/L	0.30	0.097	
Toluene	BYG0098-BLK1	ND	ug/L	0.30	0.13	
Ethylbenzene	BYG0098-BLK1	ND	ug/L	0.30	0.12	
Total Xylenes	BYG0098-BLK1	ND	ug/L	0.60	0.41	
Gasoline Range Organics (C4 - C12)	BYG0098-BLK1	ND	ug/L	50	8.8	
a,a,a-Trifluorotoluene (PID Surrogate)	**BYG0098-BLK1**	**85.0**	**%**	**70 - 130 (LCL - UCL)**		
a,a,a-Trifluorotoluene (FID Surrogate)	**BYG0098-BLK1**	**93.0**	**%**	**70 - 130 (LCL - UCL)**		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYF2573										
Benzene	BYF2573-BS1	LCS	40.702	40.000	ug/L	102		85 - 115		
Toluene	BYF2573-BS1	LCS	35.944	40.000	ug/L	89.9		85 - 115		
Ethylbenzene	BYF2573-BS1	LCS	36.390	40.000	ug/L	91.0		85 - 115		
Methyl t-butyl ether	BYF2573-BS1	LCS	39.373	40.000	ug/L	98.4		85 - 115		
Total Xylenes	BYF2573-BS1	LCS	108.39	120.00	ug/L	90.3		85 - 115		
Gasoline Range Organics (C4 - C12)	BYF2573-BS1	LCS	944.50	1000.0	ug/L	94.4		85 - 115		
a,a,a-Trifluorotoluene (PID Surrogate)	BYF2573-BS1	LCS	34.443	40.000	ug/L	86.1		70 - 130		
a,a,a-Trifluorotoluene (FID Surrogate)	BYF2573-BS1	LCS	37.885	40.000	ug/L	94.7		70 - 130		
QC Batch ID: BYG0098										
Benzene	BYG0098-BS1	LCS	39.107	40.000	ug/L	97.8		85 - 115		
Toluene	BYG0098-BS1	LCS	35.604	40.000	ug/L	89.0		85 - 115		
Ethylbenzene	BYG0098-BS1	LCS	35.172	40.000	ug/L	87.9		85 - 115		
Total Xylenes	BYG0098-BS1	LCS	105.80	120.00	ug/L	88.2		85 - 115		
Gasoline Range Organics (C4 - C12)	BYG0098-BS1	LCS	980.92	1000.0	ug/L	98.1		85 - 115		
a,a,a-Trifluorotoluene (PID Surrogate)	BYG0098-BS1	LCS	34.122	40.000	ug/L	85.3		70 - 130		
a,a,a-Trifluorotoluene (FID Surrogate)	BYG0098-BS1	LCS	38.607	40.000	ug/L	96.5		70 - 130		

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported: 07/06/2015 15:26
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYF2573	Used client sample: N										
Benzene	MS	1513811-48	ND	40.357	40.000	ug/L		101		70 - 130	
	MSD	1513811-48	ND	41.587	40.000	ug/L	3.0	104	20	70 - 130	
Toluene	MS	1513811-48	ND	35.659	40.000	ug/L		89.1		70 - 130	
	MSD	1513811-48	ND	36.760	40.000	ug/L	3.0	91.9	20	70 - 130	
Ethylbenzene	MS	1513811-48	ND	36.027	40.000	ug/L		90.1		70 - 130	
	MSD	1513811-48	ND	37.253	40.000	ug/L	3.3	93.1	20	70 - 130	
Methyl t-butyl ether	MS	1513811-48	ND	39.387	40.000	ug/L		98.5		70 - 130	
	MSD	1513811-48	ND	40.500	40.000	ug/L	2.8	101	20	70 - 130	
Total Xylenes	MS	1513811-48	ND	107.33	120.00	ug/L		89.4		70 - 130	
	MSD	1513811-48	ND	111.13	120.00	ug/L	3.5	92.6	20	70 - 130	
Gasoline Range Organics (C4 - C12)	MS	1513811-48	ND	957.58	1000.0	ug/L		95.8		70 - 130	
	MSD	1513811-48	ND	885.00	1000.0	ug/L	7.9	88.5	20	70 - 130	
a,a,a-Trifluorotoluene (PID Surrogate)	MS	1513811-48	ND	34.999	40.000	ug/L		87.5		70 - 130	
	MSD	1513811-48	ND	34.820	40.000	ug/L	0.5	87.0		70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1513811-48	ND	37.235	40.000	ug/L		93.1		70 - 130	
	MSD	1513811-48	ND	39.755	40.000	ug/L	6.5	99.4		70 - 130	
QC Batch ID: BYG0098	Used client sample: N										
Benzene	MS	1513811-64	ND	40.931	40.000	ug/L		102		70 - 130	
	MSD	1513811-64	ND	37.987	40.000	ug/L	7.5	95.0	20	70 - 130	
Toluene	MS	1513811-64	ND	36.148	40.000	ug/L		90.4		70 - 130	
	MSD	1513811-64	ND	34.087	40.000	ug/L	5.9	85.2	20	70 - 130	
Ethylbenzene	MS	1513811-64	ND	36.407	40.000	ug/L		91.0		70 - 130	
	MSD	1513811-64	ND	34.214	40.000	ug/L	6.2	85.5	20	70 - 130	
Total Xylenes	MS	1513811-64	ND	108.97	120.00	ug/L		90.8		70 - 130	
	MSD	1513811-64	ND	102.06	120.00	ug/L	6.5	85.0	20	70 - 130	
Gasoline Range Organics (C4 - C12)	MS	1513811-64	ND	852.92	1000.0	ug/L		85.3		70 - 130	
	MSD	1513811-64	ND	880.88	1000.0	ug/L	3.2	88.1	20	70 - 130	
a,a,a-Trifluorotoluene (PID Surrogate)	MS	1513811-64	ND	34.390	40.000	ug/L		86.0		70 - 130	
	MSD	1513811-64	ND	34.127	40.000	ug/L	0.8	85.3		70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1513811-64	ND	36.280	40.000	ug/L		90.7		70 - 130	
	MSD	1513811-64	ND	37.868	40.000	ug/L	4.3	94.7		70 - 130	

Ground Zero Analysis, Inc.
1172 Kansas Avenue
Modesto, CA 95351

Reported:	07/06/2015 15:26
Project:	Sullins
Project Number:	5262
Project Manager:	Project Manager

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
A19	Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.
S09	The surrogate recovery on the sample for this compound was not within the control limits.

Attachment D

Remedial Operation and Maintenance Field Logs

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project: SULLINS
Project #: 1262.2
Location:
Weather: SUNNY

Date: 1-2-2015
Time on job: 1100 to 1710
Record Keeper: ANDREW D.
Wind: 2 SMPH
Temp: 55°

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
ANDREW DORN	GROUND ZERO	1350	1600

Time	Location of Work / Work Performed / Field Equipment Used / etc.
	TRAFFIC ACCIDENT ON HWY 580
1350	ARRIVED ON-SITE - SYSTEM OFF DUE TO HIGH STORAGE TANK WATER LEVEL
1355	BEGAN EVACUATING GW FROM KO DRUM & STORAGE TANK
	- VALVES BETWEEN KO DRUM/STORAGE TANK & STORAGE TANK/AIR STRIPPER
	HAVE BEEN OPENED - TIMING BETWEEN 3 TANKS IS OFF
	- CLOG AFTER STORAGE TANK PUMP & BEFORE ENTRAINMENT SEPARATOR
	→ KO DRUM WAS PUMPING INTO STORAGE TANK TOO FAST & STORAGE TANK COULD
	NOT PUMP GW OUT FASTI ENUGH DUE TO CLOG
	- ENTRAINMENT SEPARATOR CLOGGED
1440	CONTINUED MAINTENANCE PRIOR TO STARTING
1500	STARTED DPE SYSTEM
1523	SVE-EFF 0.3 PPM
1526	SVE-INF = 25.0 PPM
1540	COLLECTED SVE-INF SAMPLE - COULD NOT SUBMIT - TOO LATE FOR LAB P/U
1550	COULD NOT COLLECT GW-INF SAMPLE - NO GW

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project Sullins
Project # 5262 Task 7
Location Livermore
Weather Sunny

Date 02/02/15
Time on job 0918 to
Record Keeper AS
Wind NA
Temp 72°F

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Anthony Sierra	Ground Zero	1048	

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0918	prep.
0948	Leave Modesto office
1048	on site, System in operation Propane is at 7%
	Wells on line W-1, W-1S, W-A, Monitor System.
	PID Influent .7, Called Andrew to report Low reading.
	closed of W-1s and Dilution valve
	opened up EW-1
	Note no water pumping from W-1 & W-A
	Pulled Stingers, Monitored DTW then measured to have
	Stingers set at 1' to 2' below water level,
Time 1312	Began Monitor
1315	System Shut Down @ Propane.
	Leave 1330 Modesto 1430 ott

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project SULLINS
Project # 1262.2
Location
Weather

Date 3-10-2015
Time on job 0830 to 1700
Record Keeper ANDREW DORN
Wind
Temp

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
ANDREW DORN	GZA	1000	1520
ANTHONY SCOMA	GZA	0955	1520

Time	Field Activities
1000	ARRIVED ON-SITE – SYSTEM IS OPERATING BUT ABOUT TO SHUT DOWN BECAUSE
	STORAGE TANK PUMP FAILED
1012	BEGAN CLEARING KO DRUM STORAGE TANK & AIR STRIPPER
1015	SHUTDOWN DPE SYSTEM – EW-2 WAS BEING PUMPED FROM
1025	BEGAN SAMPLING EW-2 W/ PENCIL BAILER
1130	FINISHED SAMPLING EW-2 – BAILER WAS STUCK, NEED TO REMOVE PVC-T & HOSING TO
	ACCESS WELL AND REMOVE BAILER
1140	BEGAN MAINTENANCE OF AIR STRIPPER
	DISASSEMBLED LINES FROM KO DRUM TO KO DRUM PUMP
	DISASSEMBLED LINES FROM KO DRUM PUMP TO BAKER TANK
	DISASSEMBLED LINES FROM BAKER TANK TO BAKER TANK (STORAGE PUMP)
	DISASSEMBLED LINES FROM BAKER TANK PUMP TO ENTRAINMENT SEPARATOR TO AIR STRIP.
	DISASSEMBLED AIR STRIPPER AND LINE LEADING AIR STRIPPER
	DISASSEMBLED SITE GLASSES ON KO DRUM, BAKER TANK & AIR STRIPPER

3/11/15 Sullins 1262-6 field Notes from A. Scoma

Traveling to Modesto first, at about 6:42 AM. With the pressure washers provided to me by Eric, it took about 1 hour to jet out and clean the trays of the air stripper. Spoke with Andrew before I left Modesto office. He explained what to do, removing the sludge that is in the baker tank. At 9:36 AM left Modesto Office.

Arrived on site 10:24 AM. With the shop vac, and a rented pressure washer began to clean out all sludge from the baker tank along and with all the water in the bottom base of the air stripper. At this time, at about 12 noon, Andrew arrived and together we began to clean and put the trays from the air stripper, the pumps, the brackets, and the unions back together.

Started the system; the first start up was 15:40 PM. As the system was turning on and powering up, Andrew and I went to the well heads, number W1, WA, and EW2. We went to each of the well heads to confirm that the water was pumping from each of these wells. We confirmed that all Wells were pumping. At this time Andrew left the site. Calibrated the PID, and began to monitor the system. While the system was pumping very quickly, it filled up the knockout drum. When I looked, and was waiting for the entrapment pump to automatically start, I noticed that the pump did not kick in. I noticed on the main panel it was on auto, but the pump did not engage, like it was supposed to. So the water continued to fill the knockout drum until it filled it up to a point where it caused an alarm, "high water line, automatic system shut down". I went over to the main panel, and could not understand why the pump did not kick in. I switched the pump to manual, and it started up. The entrapment pump started pumping the water from the knockout drum. I drained enough water from the knockout drum to where it would not go past the emergency auto shut off line, and the system started up again. I had the entrapment pump back on auto, the valve open to where the water would run more freely and fill up the baker tank. I restarted the system, had the entrapment pump on auto, the system was running, water was filling the knockout drum as usual. This time the entrapment pump did turn on and I was expecting the water level line in the knockout drum to start dropping. It did not drop, and I looked to see if water was filling up the baker tank, the valve was open and it should have filled the tank, but it did not happen. I was expecting there to be a clog in the PVC pump line that runs from the entrapment pump to the baker tank. I removed the union and there was water coming out. I went over to the main panel, switched the pump back to manual and saw that it was pumping water to the entrapment pump. I attached the pipe and union, put it back together, and started up the system. Upon start-up of the system, the entrapment pump kicked in. I could clearly see water, and the water level dropping in the knockout drum. It was working fine; water was going into the baker tank. I continued to monitor, sampled the influent, and monitored the Effluent and Influent system with PID. At this time, the water level was filling up the knockout drum, it was on auto, but the water level filled up to high, and the system got shut down.

At this time I am on the phone with Eric, explaining the situation. The system went down, and then as the system was shutting down, the entrapment pump suddenly kicked in and began to pump the water into the baker tank. Eric told me to start the system back up and wrap it up and see what would happen. At this time I picked up everything and left at 17:30 PM. Got home at 18:54 PM.

GROUND ZERO ANALYSIS, INC.

COPY

Daily Field Record

Project Sullins
Project # 5262
Location
Weather Hot

Date July 1, 2015 Page 1 of 2
Time on job 0812 to
Record Keeper M Pierson
Wind Hot
Temp Hot

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
M Pierson	GZA	1015	1629

Time	Field Activities
	Replaced faulty Process air inlet control valve on the DPE.
	Replaced faulty air dilution valve on DPE.
1155	Started DPE
	The hour meter on the DPE is growling & not advancing. Need new meter
	Cramer
	53374-2 115V 60Hz CW 1/20 Rpm
	K06
	635G Hrs-tens RD BEZ
	10071
	Extraction stinger has fallen in to EW-2
	I could not remove stinger from EW-2, after many attempts - Almost got it!

GROUND ZERO ANALYSIS, INC.

Daily Field Record Continued

Project Name Sullins Project # 5262 Date 7/1/15

Technician M Alessa

Time	Field Activities
	grout was about 4' below TOC in MW-9 & MW-10. I mixed 2 bags of portland cement for each well & brought the level of grout a few inches below TOC in each well
~1500	DPE went down due to High temp - restarted
1600	DPE went down due to High temps again the automatic gas valve was opening & closing even though temp was 1500°. Temp was fluctuating between 1500 & 1500° which is too high
	Unit shut down due to High temp Six times even though I never saw the temp go above 1560°. ↑ should probably call Rob Carlsen about this

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Page 1 of 1

Project Sullins
Project # 5262
Location
Weather

Date 7/23/15
Time on job 0800 to
Record Keeper M Pierson
Wind
Temp

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
M Pierson		0938	1517

Time	Field Activities
	hour meter was finally installed new liquid meter that started with a reading of 0.0.
1010	
	Retrieved stinger that had fallen into EW-2. I reconfigured the extraction piping by purchasing a few plumbing fittings and installing them.
	waited till Air stripper went thru a cycle to be sure the entire system was working.
	In extraction VAC was greater than 20 inch Hg then the D.P. would have a high temp alarm & shut down.
1500	It appears there was a small air leak at a bolt on the extraction pump allowing air in the pump so that it would not always move water.

A.P. was running when I left the site