RECEIVED
By Alameda County Environmental Health 9:47 am, Mar 21, 2017

March 16, 2017

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 Ms Soo:

On behalf of Rita and Tony Sullins, Don Sul Inc., Ground Zero Analysis, Inc. (GZA) prepared the following letter that was sent to your office via electronic delivery per Alameda County's guidelines and uploaded into the CA State Water Resources Control Board's Geotracker database.

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

Second Semi-Annual 2016 Groundwater Monitoring & Remediation Effectiveness Report

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

Project No. 1262.2
March 13, 2017

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.

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

March 13, 2017

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

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

RE: Report: Second Semi-Annual 2016 Groundwater Monitoring & Remediation Effectiveness Report
Location: 187 North L Street, Livermore, CA 94550.
(ACEH Fuel Leak Case No. RO0000394)

Dear Mr. & Mrs. Sullins:

Ground Zero Analysis, Inc. has prepared the following *Second Semi-Annual 2016 Groundwater Monitoring & Remedial Effectiveness* report to discuss the groundwater monitoring events performed during the second half of 2016. Select wells were monitored and sampled on August 26, 2016 in order to assess the groundwater contaminant rebound in EW-2, MW-107 and MW-207. During the second semi-annual groundwater monitoring event (fourth quarter), all of the Site wells were attempted to be sampled as requested by Alameda County Department of Environmental Health (ACEH) in a letter dated December 14, 2016. Ground Zero is currently preparing a letter to address the comments made by the ACEH in their letter dated December 14, 2016.

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

Respectfully submitted,
Ground Zero Analysis, Inc.

Gregory P. Stahl, PG

cc: Dilan Roe – ACEH (Via FTP site)

TABLE OF CONTENTS

FIGURES

SUMMARY TABLES

CHARTS

ATTACHMENTS

GROUND ZERO ANALYSIS, INC.

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

REPORT

Second Semi-Annual 2016 Groundwater Monitoring & Remediation Effectiveness Report

Arrow Rentals Services
187 North L St.
Livermore, CA

Project No. 1262.2
March 13, 2017

1.0 EXECUTIVE SUMMARY

Details of the groundwater monitoring and sampling events as well as remediation activities performed during the second half of 2016 are included in this report.

The routine second semi-annual groundwater monitoring event was performed during the fourth quarter of 2016 between December 28, 2016 and December 29, 2016 in which depth-to-water measurements were collected from 30 groundwater wells of which 22 wells were purged and sampled. Six wells (MW-4 through MW-8 and MW-105) were dry or had insufficient volume of water and were not purged or sampled. MW-3s could not be accessed due to a disabled vehicle parked over the well. MW-404 could not be monitored due to an obstruction within the well casing.

An additional groundwater monitoring event was performed on August 26, 2016 and included the collection of groundwater samples from shallow well MW-107 and intermediate wells MW-207 and EW-2. These additional samples were collected to assess a possible rebound of groundwater contaminants. The Dual Phase Extraction (DPE) system was shut down on June 13, 2016 allowing 77 days for rebound prior to the August 2016 groundwater sampling event.

The DPE system did not operate during the third or fourth quarters of 2016 with the exception of a short period of operation on August 26, 2016 in order to consume the remaining propane in the storage tank. The DPE system was turned on following the collection of the groundwater samples.

The site history and geologic setting are summarized in the *1st Semi-Annual Groundwater Monitoring and Remedial Effectiveness Report* submitted by Ground Zero Analysis, Inc. (Ground Zero) on July 24, 2014. A vicinity map is included as Figure 1 and a site map is included as Figure 2. A detailed site map is included as Figure 3.

Recommendations

1. Continue groundwater monitoring activities on a semi-annual basis, occurring during the second and fourth quarters.
2. Attempt to collect groundwater samples from the shallow zone CMT wells (MW-4 through MW-8) if groundwater levels rises.
3. Following a balancing by the DPE systems manufacturer, restart the remediation system.
4. Installation of an additional extraction well up-gradient of CMT well 7, near the former UST pits. A work plan outlining the well installation will be submitted within 60 days.

Ground Zero is currently preparing a letter to address the comments made by the ACEH in their letter dated December 14, 2016 and will submit the letter within 30 days of this report.

2.0 GROUNDWATER MONITORING

2.1 Groundwater Elevation and Flow

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.
- Well W-A 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 wells W-2 and 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

August 2016

Shallow monitoring well MW-107 reported a groundwater elevation of 442.53 feet above mean sea level (amsl) and a depth to water (DTW) of 38.38 feet below ground surface (bgs). The intermediate groundwater monitoring wells reported an average groundwater elevation of 441.15 feet amsl and an average DTW of 39.33 feet bgs. The intermediate groundwater flow was calculated to be to the west-northwest with a horizontal gradient of 0.017 ft/ft.

December 2016

Groundwater monitoring wells from the shallow, intermediate and deep aquifers were purged and sampled during the August 2016 groundwater monitoring event.

Shallow Wells

The average groundwater elevation recorded in the shallow monitoring wells was 446.54 feet amsl and the average DTW was 33.86 feet bgs which represents an increase of 4.01 feet since the previous groundwater monitoring event (August 2016). The shallow wells were dry during the previous fourth quarter groundwater monitoring event performed in November 2015.

Intermediate Wells

The average groundwater elevation recorded in the intermediate monitoring wells was 446.20 feet amsl and the average DTW was 34.52 feet bgs which represents an increase of 5.05 feet since the previous groundwater monitoring event (August 2016) and an increase of 21.29 feet since the previous fourth quarter groundwater monitoring event performed in November 2015.

Deep Wells

The average groundwater elevation recorded in the deep monitoring wells was 446.53 feet amsl and the average DTW was 34.31 feet bgs which represents an increase of 3.27 feet since the previous groundwater monitoring event in which the deep wells were monitored (May 2016) and an increase of 21.80 feet since the previous fourth quarter groundwater monitoring event performed in November 2015.

Between 1989 and present, DTW has ranged from approximately 20 to 56 feet bgs. The November 2015 event represented the lowest groundwater elevation recorded at the Site.

Groundwater elevation had decreased by over 34 feet between April 1996 and November 2015, however groundwater elevation increased by over 22 feet between November 2015 and March 2016. The groundwater elevation in March 2016 was the highest recorded level since the start of the DPE system in November 2011. Groundwater elevations have fluctuated slightly during 2016 but remain above the screen interval of many of the shallow wells. Well locations on- and off-site are shown on Figure 2 and on-site well locations are shown on Figure 3.

2.2 Horizontal Groundwater Gradients

August 2016

During the August 2016 groundwater monitoring event, depth-to-water measurements were only collected from one shallow well and none of the deep wells, therefore a groundwater flow direction and gradient could not be calculated for either the shallow or the deep aquifers. The groundwater flow in the intermediate aquifer was calculated to be to the west-northwest with a gradient of approximately 0.017 ft/ft. Elevation data from MW-9, MW-10 and EW-2 was used to calculate the intermediate groundwater flow. Figure 5 illustrates the intermediate aquifer groundwater gradient map for the August 2016 monitoring event.

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

December 2016

During the December 2016 groundwater monitoring event, depth-to-water measurements were collected from 30 groundwater monitoring wells and the groundwater flow direction and gradient were calculated for the shallow, intermediate and deep aquifers.

Groundwater elevation data collected from the Sites CMT wells appear to be inaccurate when compared to the 2-inch and larger diameter groundwater monitoring wells located at the Site. Ground Zero believes that a slight twist in the CMT well casing is causing longer depth to water measurements which calculates to a lower groundwater elevation.

- The groundwater flow in the shallow aquifer was calculated to be to the west-northwest with a gradient of approximately 0.025 ft/ft. Elevation data from W-Es, W-3s and W-Bs was used to calculate the shallow groundwater flow as shown in Figure 6A. Figure 6B illustrates the groundwater gradient contours using data collected from the shallow Continuous Multichannel Tubing® (CMT) wells only.
- The groundwater flow in the intermediate aquifer was calculated to be to the west-northwest with a gradient of approximately 0.019 ft/ft. Elevation data from EW-2, MW-9 and MW-10 was used to calculate the intermediate groundwater flow as shown in Figure 7A. Figure 7B illustrates the groundwater gradient contours using data collected from the intermediate CMT wells only.
- The groundwater flow in the deep aquifer was calculated to be to the west with a gradient of approximately 0.02 ft/ft. Elevation data from MW-305, MW-306, MW-

307 and MW-308 was used to calculate the deep groundwater flow as shown in Figure 8.

2.3 Vertical Groundwater Gradients

August 2016

Ground Zero calculated the vertical gradient for the MW-107 (shallow) and MW-207 (intermediate) well pair based on data collected during the August 26, 2016 monitoring event. The vertical gradient was calculated to a strong negative (or downward) gradient at a slope of -0.231 ft/ft. Historically the vertical gradient in the MW-107 and MW-207 well pair has been negative, with a strong vertical gradient during spring and summer months and a weaker gradient during winter. Additional monitoring of this well pair will determine if this is a trend.

December 2016

Ground Zero calculated vertical gradients for numerous shallow, intermediate and deep groundwater monitoring well pairs using data collected during the December 2016 monitoring event. The results are as follows:

- Well pair MW-104 (intermediate) and MW-204 (deep) was calculated to have a slight negative (downward) vertical gradient of -0.012 ft/ft. This well pair reported to have a strong positive vertical gradient in October 2006, which is the only other date the vertical gradient was calculated for this pair.
- Well pair MW-204 (deep) and MW-304 (deeper) was calculated to have a slight negative (downward) vertical gradient of -0.011 ft/ft. This well pair has historically reported negative vertical gradients.
- Well pair MW-105 (shallow) and MW-205 (intermediate) was calculated to have a strong negative (downward) vertical gradient of -0.165 ft/ft. December 2016 was the first time the vertical gradient was calculated for this well pair.
- Well pair MW-205 (intermediate) and MW-305 (deep) was calculated to have a positive (upward) vertical gradient of 0.054 ft/ft. Historically this well pair has been calculated to have both negative and positive vertical gradients.
- Well pair MW-106 (shallow) and MW-206 (intermediate) was calculated to have a positive (upward) vertical gradient of 0.067 ft/ft. December 2016 was the first time the vertical gradient was calculated for this well pair.
- Well pair MW-206 (intermediate) and MW-306 (deep) was calculated to have a slightly positive (upward) vertical gradient of 0.001 ft/ft. Historically this well pair has been calculated to have both negative and positive vertical gradients.
- Well pair MW-107 (shallow) and MW-207 (intermediate) was calculated to have a negative (downward) vertical gradient of -0.064 ft/ft. This well pair reported to have a strong negative vertical gradient in April 2007 when it was last calculated.
- Well pair MW-207 (intermediate) and MW-307 (deep) was calculated to have a positive (upward) vertical gradient of 0.031 ft/ft. Historically this well pair has been calculated to have both negative and positive vertical gradients.

- Well pair MW-108 (shallow) and MW-208 (intermediate) was calculated to have a strong negative (downward) vertical gradient of -0.134 ft/ft. December 2016 was the first time the vertical gradient was calculated for this well pair.
- Well pair MW-208 (intermediate) and MW-308 (deep) was calculated to have a positive (upward) vertical gradient of 0.051 ft/ft. December 2016 was the first time the vertical gradient was calculated for this well pair.

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

2.4 Groundwater Sampling Procedure

During the third quarter 2016 groundwater monitoring event (August 26, 2016) and the fourth quarter groundwater monitoring event (December 28, 2016 and December 29, 2016) Ground Zero staff recorded DTW measurements as well as purged and sampled the selected groundwater monitoring wells. Each well sampled was purged of at least three well volumes of stagnant water prior to sample collection unless the well was dewatered during purging. All of the sites 2-inch and larger diameter monitoring wells were purged and sampled with an inertia pump and dedicated tubing or a disposable bailer. CMT wells were purged and sampled using a peristaltic pump and dedicated tubing.

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.

Following purging and prior to sampling, a depth-to-water measurement is collected to ensure that the groundwater level in each well has recharged to at least 80% of its initial level recorded prior to purging.

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.

<u>August 2016</u>

During the August 2016 monitoring event, EW-2 was purged and sampled with a disposable bailer. MW-207 was hand purged using a peristaltic pump with dedicated tubing. MW-107 had a water column of 1.5 feet and was purged dry using a peristaltic pump and dedicated tubing. A sample was collected from each well once the well recharged completely.

December 2016

During the December 2016 monitoring event, Ground Zero collected DTW measurements and attempted to sample all of the Sites wells. Wells MW-4 through MW-8 were dry. W-3s was measured for groundwater depth however the well could not be sampled due to a disabled vehicle parked over the wellhead. MW-105 had a short water column and could not be sampled. MW-404 could not be sampled due to an obstruction within the well casing. Wells W-Es, MW-9, MW-10 and W-1 were purged and sampled with a disposable bailer due to a malfunction of the inertia pump. All wells were allowed to recharge completely, with the exception of W-1s and W-Bs, which have a slow recharge and were reported to recharge 86% and 93%, respectively. The amount of recharge could not be determined for MW-204 and MW-208 since a final DTW measurement was not collected prior to sampling.

Groundwater monitoring field logs for the August 2016 and December 2016 events are included in Attachment B.

2.5 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 for the August 2016 and December 2016 groundwater monitoring events are summarized in Table 6. Historic al 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

August 2016

Field parameters were only collected from EW-2 which are included in Table 8. The sample volume collected from MW-107 and MW-207 was inadequate for the collection of field parameters.

December 2016

- DO readings ranged from 1.17 mg/L (MW-108) to 6.98 mg/L (MW-306).
- EC ranged from 497 µmhos/cm (W-Bs) to 1,470 µmhos/cm (W-1)
- ORP ranged from -217.1 mV (EW-2) to 117.9 mV (W-Es)
- pH ranged from 6.75 (MW-108) to 7.66 (MW-10)
- Temperature ranged from 12.5 ˚C (MW-205) to 20.5 ˚C (W-1s and W-Bs)

Due to a small sample volume, field parameters were not collected from MW-106, MW-107 and MW-208. The field parameter results are summarized in Table 8. Field notes are included in Attachment B.

3.2 Laboratory Analytical Data

Despite an increase in the groundwater elevation beneath the Site, the shallowest CMT wells (MW-4 through MW-8) were not able to be sampled during 2016 and 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 contaminant concentrations will likely be reported due to extensive vadose zone remediation between 25 and 55 feet bgs, similar to decreasing contaminant levels in the other shallow wells (W-1s, W-Bs).

Increased groundwater elevation beneath the Site allowed for shallow monitoring wells MW-106, MW-107 and MW-108 to be sampled for the first time since 2011, prior to the start of remediation.

August 2016

Shallow Aquifer

- MW-107 was reported to contain TPHg (2,600 µg/L), BTEX (4,000 µg/L, 31 µg/L, 120 µg/L and 50 µg/L) and MtBE (21 µg/L).

Intermediate Aquifer

- MW-207 was reported to contain TPHg (2,100 µg/L), BTEX (2,200 µg/L, 13 µg/L, 130 µg/L, 73µg/L) and MtBE (52 µg/L).
- EW-2 was reported to contain TPHg (3,900 µg/L), BTEX (5,000 µg/L, 64 µg/L, 120 µg/L, 100 µg/L) and MtBE (28 µg/L).

December 2016

Shallow Aquifer

- CMT® wells MW-4 through MW-8 were dry and MW-105 could not be sampled due to a short water column. W-3s was inaccessible for sampling.
- TPHg concentrations ranged from 87 µg/L (W-Bs) to 5,600 µg/L (MW-107). W-Es and MW-106 were reported to be non-detect below the laboratory reporting limit of 50 µg/L. A shallow aquifer TPHg groundwater plume map for the December 2016 event is included as Figure 9.
- Benzene concentrations ranged from 5.8 µg/L (W-Bs) to 4,600 µg/L (MW-107). W-Es and MW-106 were reported to be non-detect below the laboratory reporting limit of 0.5 µg/L. A shallow aquifer benzene groundwater plume map for the December 2016 event is included as Figure 10.
- MtBE concentrations ranged from 0.15 µg/L (W-1s) to 24 µg/L (MW-108). W-Es, W-Bs and MW-106 were reported to be non-detect below the laboratory reporting limit of 0.5 µg/L. A shallow aquifer MtBE groundwater plume map for the December 2016 event is included as Figure 11.

Intermediate Aquifer

- TPHg concentrations ranged from 27 µg/L (MW-10) to 5,000 µg/L (EW-2). MW-206 was reported to be non-detect below the laboratory reporting limit of 50 µg/L. An intermediate aquifer TPHg groundwater plume map for the December 2016 event is included as Figure 12.
- Benzene concentrations ranged from 0.29 µg/L (MW-206) to 2,400 µg/L (MW-207). MW-10 was reported to be non-detect below the laboratory reporting limit of 0.5 µg/L. An intermediate aquifer benzene groundwater plume map for the December 2016 event is included as Figure 13.
- MtBE concentrations ranged from 0.12 µg/L (MW-206) to 48 µg/L (MW-207). MW-9 and MW-10 reported to be non-detect below the laboratory reporting limit of 0.5 µg/L. An intermediate aquifer MtBE groundwater plume map for the December 2016 event is included as Figure 14.

Deep Aquifer

- TPHg ranged from 290 µg/L (MW-305) to 1,500 µg/L (MW-204). MW-306 was reported to be non-detect below the laboratory reporting limit of 50 µg/L. A deep aquifer TPHg groundwater plume map for the December 2016 event is included as Figure 15.
- Benzene ranged from 57 µg/L (MW-305) to 170 µg/L (MW-204). MW-306 was reported to be non-detect below the laboratory reporting limit of 0.5 µg/L. A deep aquifer benzene groundwater plume map for the December 2016 event is included as Figure 16.
- MtBE was not reported above laboratory detection limits.

Deepest Aquifer

- MW-304 reported TPHg, benzene and MtBE concentrations of 370 µg/L, 20 µg/L and below laboratory detection limits, respectively.
- MW-404 was not sampled during the December 2016 event due to an obstruction in the well casing.

4.0 REMEDIATION SYSTEM STATUS & EFFECTIVENESS

A DPE and an AS remediation system 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).

Trends from the shallow, intermediate and deep groundwater monitoring wells located in the core of the plume (W-1s, MW-104, MW-204 and MW-304) show decreasing concentrations of the chemicals of concern. Charts 1 through 3 show the decreasing trend of benzene over time in the shallow and intermediate wells W-1s, MW-104 and MW-204. The deepest zone in the plumes core represented by MW-304 and MW-404 indicate a stable plume. Chart 4 shows decreasing 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 stable trend as shown in Chart 6. Monitoring well MW-404 has not been sampled since December 2014 due to an obstruction in the well casing.

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 2,000 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. Effluent water samples are collected and analyzed quarterly as required by the City of Livermore sewer discharge permit.

System operation commenced on November 15, 2011 (soil vapor extraction only), in compliance with the 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.

4.2 Treatment System Data

The DPE system was shut down on June 13, 2016 and did not operate during the second half of 2016 except for a short period on August 29, 2016 following the August 2016 groundwater monitoring event.

As of the May 10, 2016 operation and maintenance event, the DPE system had removed a total of approximately 15,522 pounds, or approximately 2,386 gallons of TPHg in both vapor and groundwater phases. This includes the removal of 15,376 pounds in the vapor phase and 146 gallons in aqueous phase.

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.

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

1. There is no indication of a rebound of contaminant concentrations based on samples collected during the August 2016 and December 2016 monitoring events, with the exception of the sample collected from EW-2 during the August 2016 event. The concentration of benzene in EW-2 increased from 150 µg/L in May 2016 to 5,000 µg/L in August 2016 but decreased to 180 µg/L in December 2016. The DPE system was shut down on June 13, 2016 allowing for 77 days and 199 days of rebound prior to the August 2016 and December 2016 monitoring events, respectively.

2. The groundwater contaminant plume is stable and decreasing in size. The groundwater contaminant concentrations are on a decreasing trend in all of the Sites groundwater monitoring wells with the following exceptions:

   – MW-9 has reported an increasing trend in groundwater contaminants in recent monitoring events. Ground Zero believes the recent increase of groundwater contaminant concentrations is due to groundwater level fluctuations and does not indicate an unstable plume. A contaminant smear zone in soil was observed at approximately 40 feet bgs (an elevation of 440 feet amsl) during the installation of MW-9. Groundwater levels were below the smear zone until the May 2016 monitoring event when the water table came in contact with the smear zone and groundwater contaminant concentrations began to rise. Additional sampling will determine if the increasing trend continues. Chart 7 illustrates the benzene contaminant concentration and groundwater elevation trends in MW-9. A bore log for MW-9 is included in Attachment D.

   – MW-10 and MW-404 are stable with minor fluctuations.

3. Benzene concentrations reported in down-gradient well MW-107 were above 3,000 µg/L benzene during the second half of 2016. Benzene concentrations reported in down-gradient well MW-207 decreased below 3,000 µg/L during the second half of 2016. Both of these wells have reported a decreasing contaminant concentration trend since April 2011. Chart 8 and Chart 9 illustrate the benzene contaminant concentration and groundwater elevation trends in MW-107 and MW-207, respectively.

4. The groundwater contaminant plume has been adequately defined.

   – The shallow groundwater plume appears to be decreasing and attenuates to the east at MW-106, northeast at W-1s, to the north at W-Bs, to the west at W-3s as shown in Figures 9, 10 and 11.

   – The intermediate groundwater plume appears to be stable and attenuates to the northeast at MW-206, to the west at MW-9 and to the southwest at MW-10 as shown in Figures 12, 13 and 14. The minimal contaminant concentrations in down-gradient intermediate depth groundwater monitoring wells MW-9 and MW-10 represent the down gradient edge of the intermediate groundwater plume.

   – The size and concentration of the groundwater contaminant plume decreases with depth.

5. Remediation by DPE and air sparging in wells W-1s, W-1, W-A and EW-2 is effective and has decreased the contaminant mass in the core of the plume based on the decreasing contaminant trend in these wells and core wells, MW-104, MW-204 and MW-205. Charts 1, 11, 12 and 13 illustrate the benzene contaminant concentration and groundwater elevation trends in W-1s, W-1, W-A and EW-2, respectively. Charts 2, 3 and 10 illustrate the benzene contaminant concentration and groundwater elevation trends in core wells MW-104, MW-204 and MW-205, respectively.

6.0 RECCOMENDATIONS

Ground Zero makes the following recommendations:

1. Continue groundwater monitoring activities on a semi-annual basis, occurring during the second and fourth quarters.
2. Attempt to collect groundwater samples from the shallow zone CMT wells (MW-4 through MW-8) if groundwater levels rises.
3. Following a balancing by the DPE systems manufacturer, restart the remediation system.
4. Installation of an additional extraction well up-gradient of CMT well 7, near the former UST pits. A work plan outlining the well installation will be submitted within 60 days.

Ground Zero is currently preparing a letter to address the comments made by the ACEH in their letter dated December 14, 2016 and will submit the letter within 30 days of this report.

7.0 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 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.

8.0 SIGNATURES & CERTIFICATION

This report was prepared by:

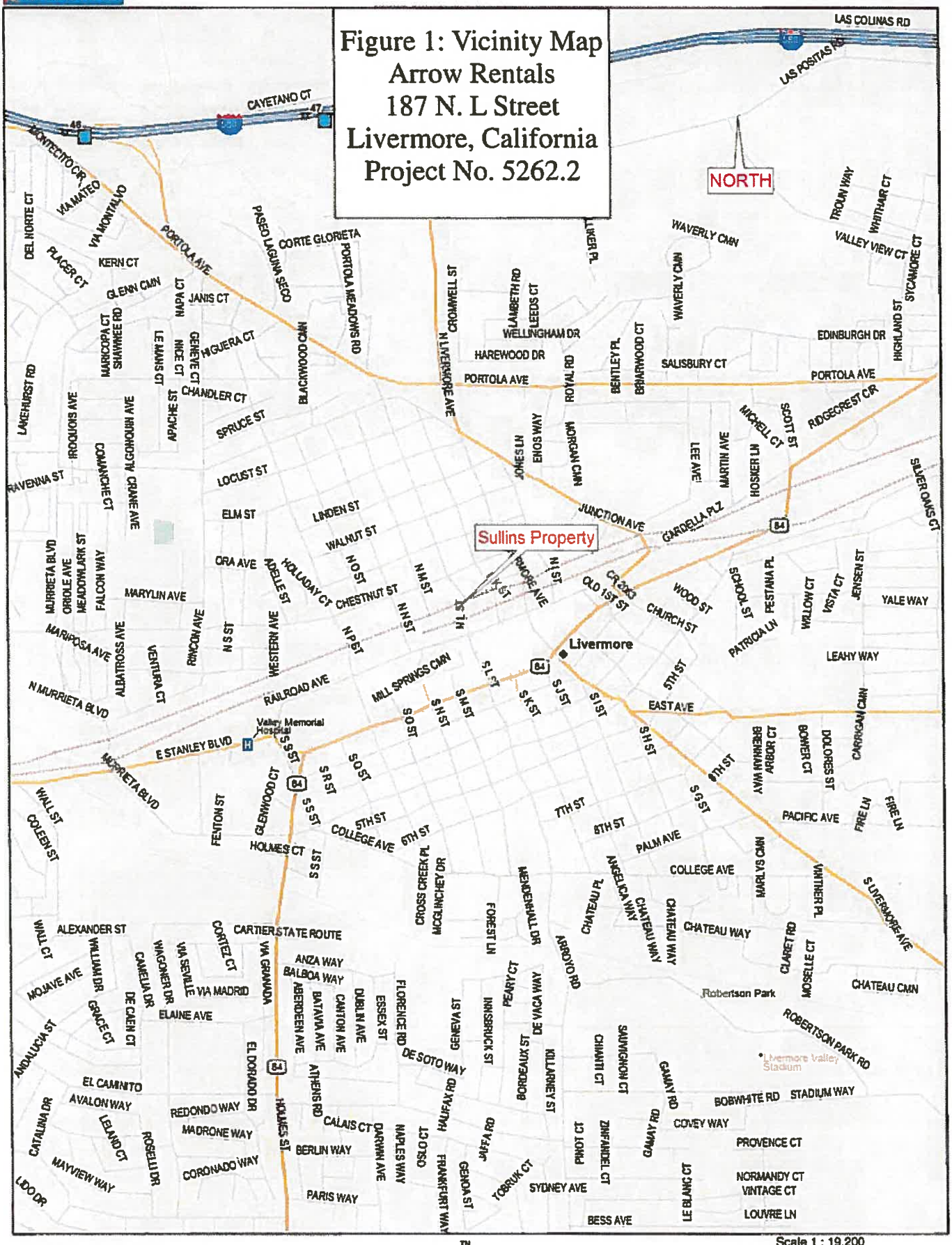
Andrew Dorn, B.Sc. Geology
Staff Geologist
California GIT (#411)

This report was prepared under the direction of:

Gregory P. Stahl, PG 5023
CA Certified Hydrogeologist No. 264

FIGURES

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



Data use subject to license
© 2004 DeLorme. Street Atlas USA® 2005.
www.delorme.com

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

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

GROUND ZERO ANALYSIS, INC.

SITE MAP

N

0 20

SCALE 1"=20'

FUTURE OAK STREET

WESTERN PACIFIC R.R.

NORTH L STREET

W-B

SHEDS

W-Bs

COVERED STORAGE

SHOP/ OFFICE

FORMER DISPENSER

MW-6/106/206/306

MW-9

MW-8/108/208/308

EW-1

W-1

W-1s

MW-4/104/204/304/404

W-A

W-3

W-3s

MW-7/107/207/307

EW-2

MW-5/105/205/305

SHED

EXTENT OF REMEDIAL COMPOUND

MW-10

W-2

W-C

LEGEND

- MONITORING WELL
- EXTRACTION WELL
- MONITORING WELL (NO ACCESS)
- MONITORING WELL (DESTROYED/MISSING)
- DESTROYED MONITORING WELL
- FORMER UST
- FENCE

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 3

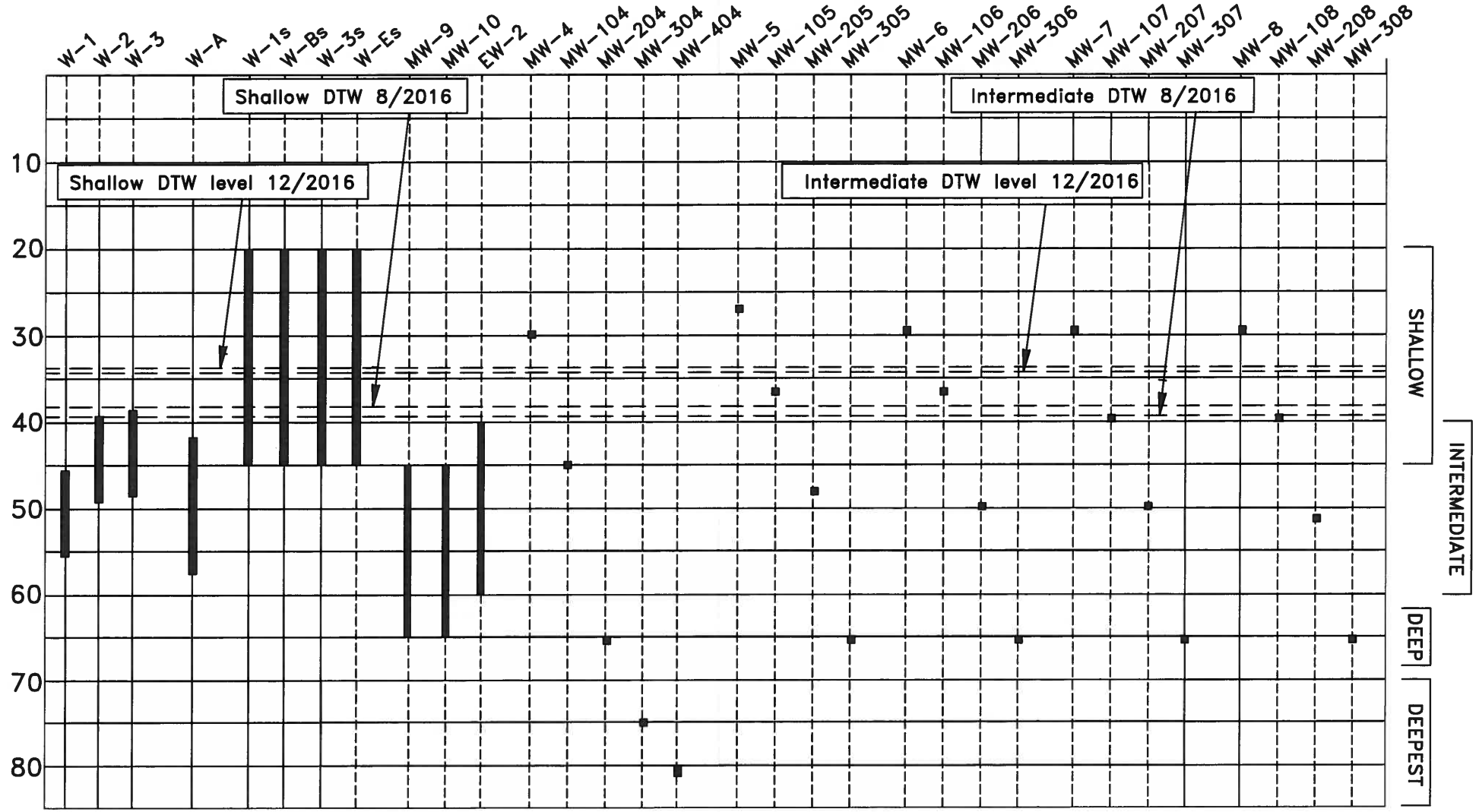
Sullins (Arrow Rentals)
187 North L Street
Livermore, California

GROUND ZERO ANALYSIS, INC.

DETAILED SITE MAP

Figure 4:

Well Screened Interval Diagram
Shallow & Intermediate Aquifers
August 2016 & December 2016



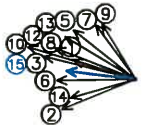
Sullins
187 North L Street
Livermore, CA

Ground Zero Analysis, Inc.

5/25/2016

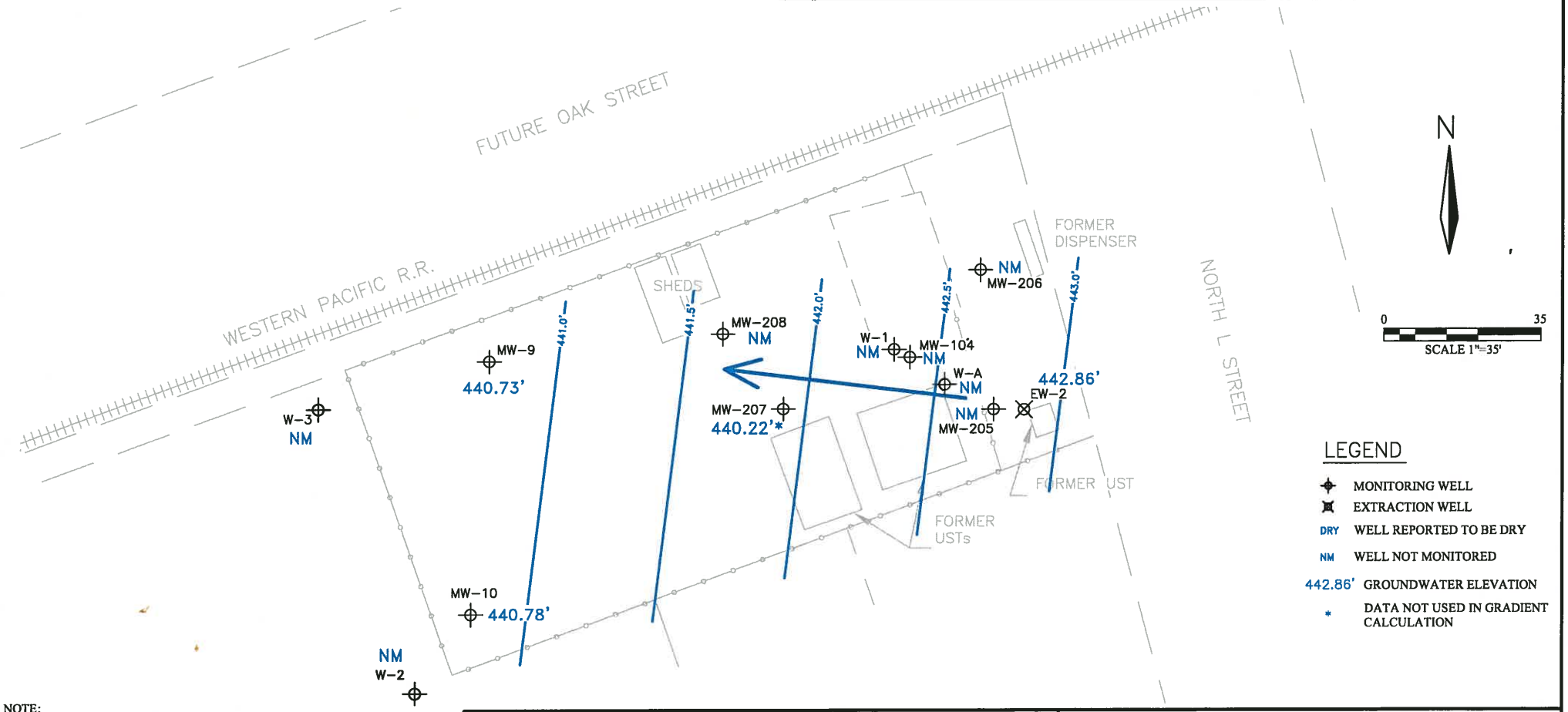
	DATE	BEARING	GRADIENT
1	10/16/06	N63°W	0.012
2	04/17/07	S68°W	0.022
3	12/19/07	N76°W	0.04
4	04/07/08	NORTHWEST	VARIABLE
5	10/25/11	N53°W	0.025
6	05/30/12	S89°W	0.020
7	11/19/12	N36°W	0.015
8	06/24/13	N73°W	0.014
9	12/03/13	N32°W	0.013
10	06/17/14	N74°W	0.076
11	12/02/14	DRY	
12	03/09/15	N69°W	0.032
13	11/16/15	N58°W	0.025
14	05/03/16	S77°W	0.014
15	12/28/16	N83°W	0.017

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
- 442.86' GROUNDWATER ELEVATION
- * DATA NOT USED IN GRADIENT CALCULATION

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 5

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

GROUND ZERO ANALYSIS, INC.

INTERMEDIATE AQUIFER GROUNDWATER GRADIENT MAP

AUGUST 26, 2016

LEGEND

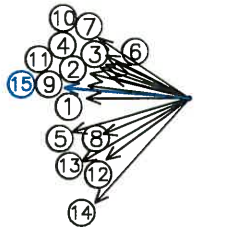
- MONITORING WELL
- EXTRACTION WELL
- DRY — WELL WAS REPORTED DRY
- 448.29' — GROUNDWATER ELEVATION

CMT WELL ELEVATION DATA NOT USED IN GROUNDWATER GRADIENT CALCULATION

GROUNDWATER GRADIENT CALCULATED BY THREE-POINT PROBLEM USING WELLS MW-Bs, MW-Es & MW-3s

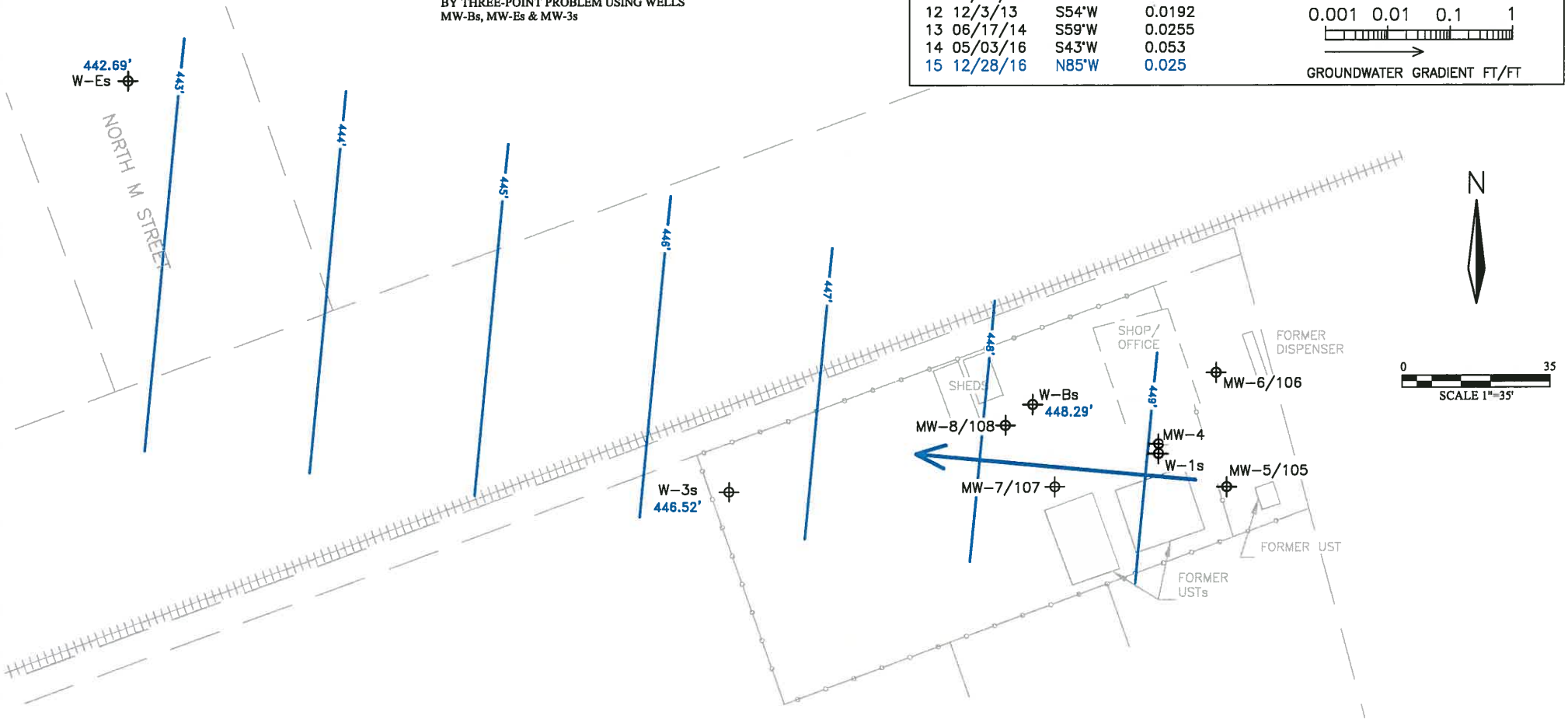
	DATE	BEARING	GRADIENT
1	04/29/04	WEST	0.019
2	07/07/06	N76°W	0.019
3	10/16/06	N68°W	0.014
4	04/17/07	N71°W	0.016
5	12/19/07	S74°W	0.033
6	04/07/08	N64°W	0.012
7	04/08/11	N56°W	0.0221
8	10/25/11	S68°W	0.0129
9	05/30/12	N82°W	0.0193
10	11/19/12	N63°W	0.0153
11	06/24/13	N75°W	0.0097
12	12/3/13	S54°W	0.0192
13	06/17/14	S59°W	0.0255
14	05/03/16	S43°W	0.053
15	12/28/16	N85°W	0.025

ROSE DIAGRAM



0.001 0.01 0.1 1

GROUNDWATER GRADIENT FT/FT



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 6A

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

GROUND ZERO ANALYSIS, INC.

SHALLOW AQUIFER
GROUNDWATER GRADIENT MAP

DECEMBER 28, 2016

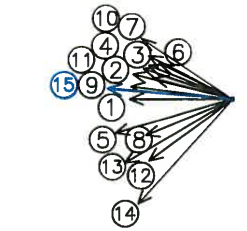
LEGEND

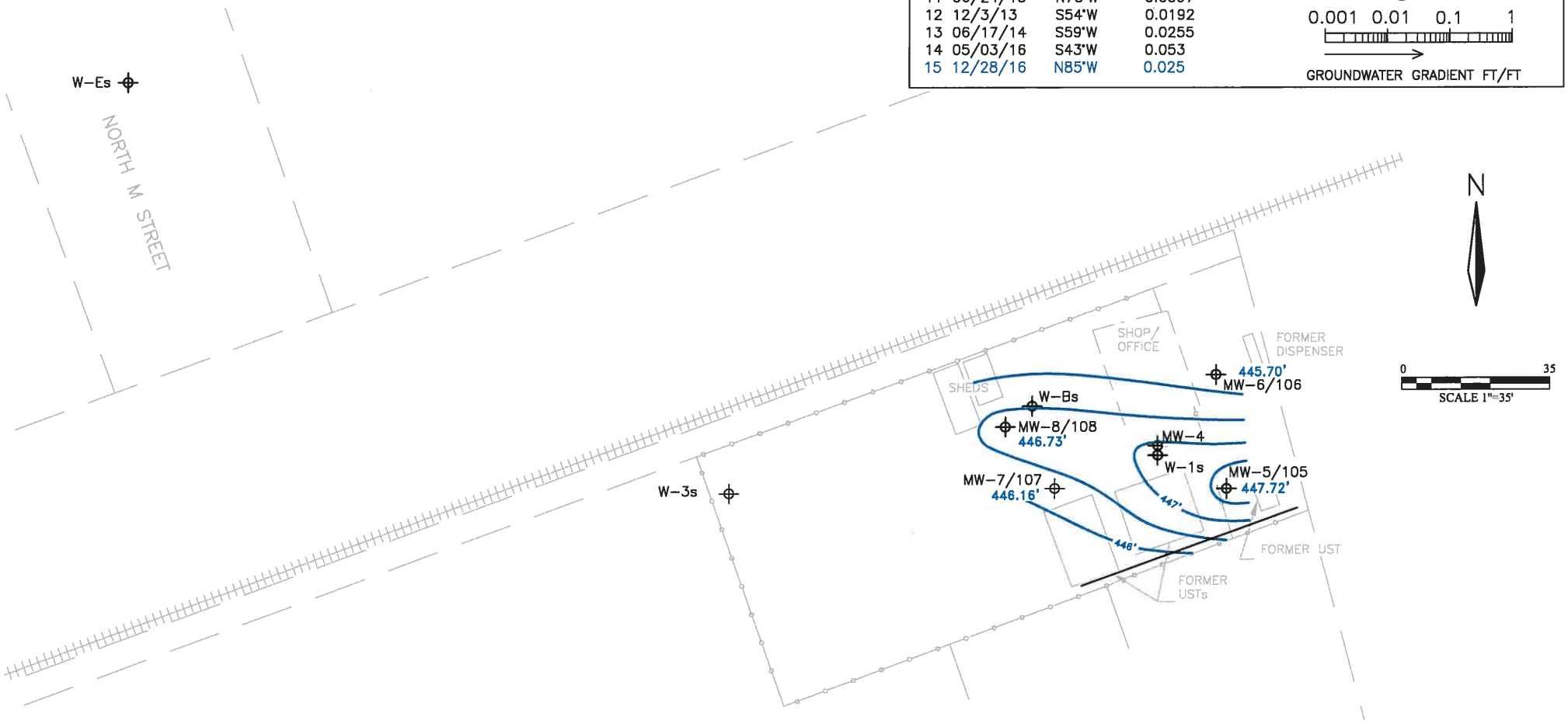
- MONITORING WELL
- EXTRACTION WELL
- DRY — WELL WAS REPORTED DRY
- 448.29' — GROUNDWATER ELEVATION

ELEVATION DATA FROM MW-9, MW-10 & EW-2 NOT USED IN GROUNDWATER GRADIENT CALCULATION

	DATE	BEARING	GRADIENT
1	04/29/04	WEST	0.019
2	07/07/06	N76°W	0.019
3	10/16/06	N68°W	0.014
4	04/17/07	N71°W	0.016
5	12/19/07	S74°W	0.033
6	04/07/08	N64°W	0.012
7	04/08/11	N56°W	0.0221
8	10/25/11	S68°W	0.0129
9	05/30/12	N82°W	0.0193
10	11/19/12	N63°W	0.0153
11	06/24/13	N75°W	0.0097
12	12/3/13	S54°W	0.0192
13	06/17/14	S59°W	0.0255
14	05/03/16	S43°W	0.053
15	12/28/16	N85°W	0.025

ROSE DIAGRAM





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 6B

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

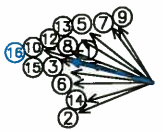
GROUND ZERO ANALYSIS, INC.

SHALLOW AQUIFER GROUNDWATER GRADIENT MAP (CMT WELLS)

DECEMBER 28, 2016

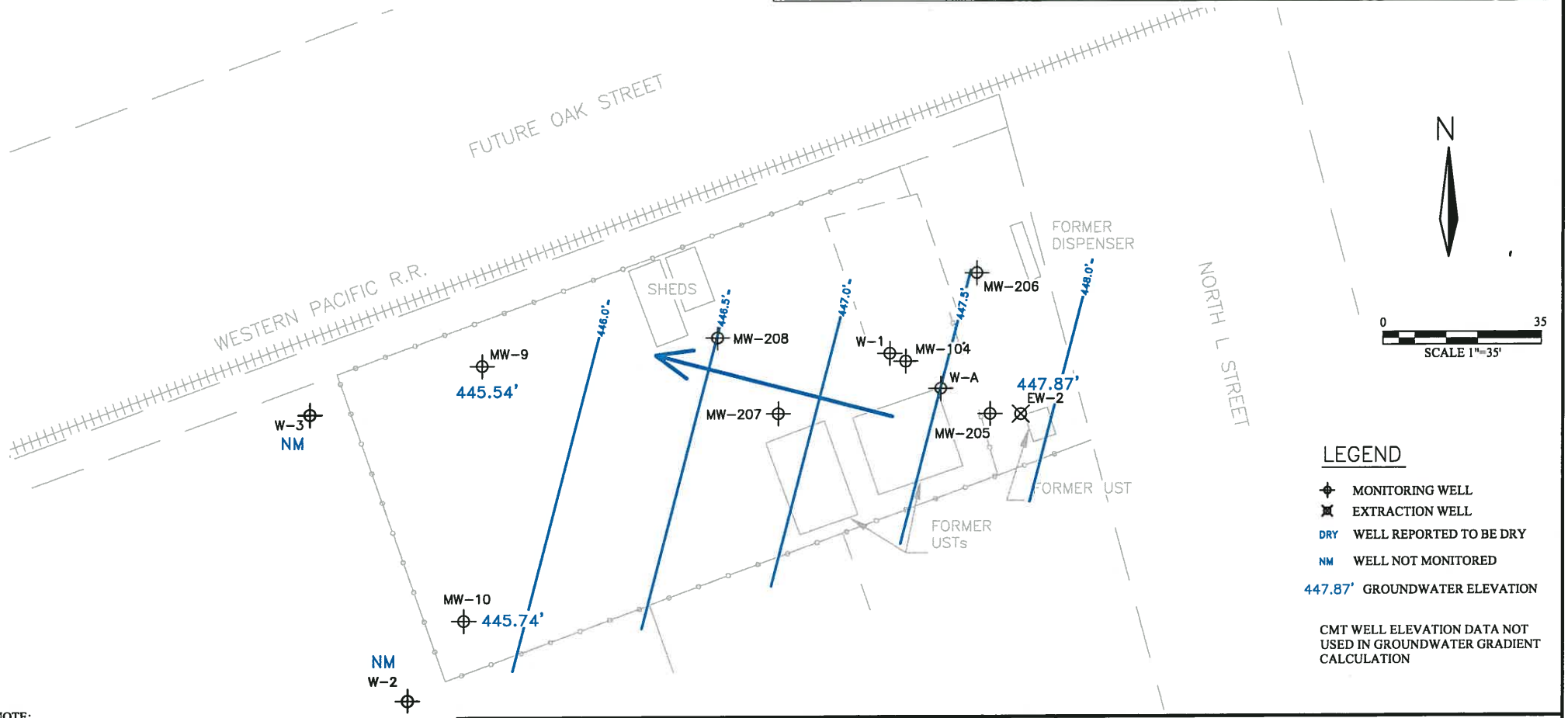
	DATE	BEARING	GRADIENT
1	10/16/06	N63°W	0.012
2	04/17/07	S68°W	0.022
3	12/19/07	N76°W	0.04
4	04/07/08	NORTHWEST	VARIABLE
5	10/25/11	N53°W	0.025
6	05/30/12	S89°W	0.020
7	11/19/12	N36°W	0.015
8	06/24/13	N73°W	0.014
9	12/03/13	N32°W	0.013
10	06/17/14	N74°W	0.076
11	12/02/14	DRY	
12	03/09/15	N69°W	0.032
13	11/16/15	N58°W	0.025
14	05/03/16	S77°W	0.014
15	08/26/16	N83°W	0.017
16	12/28/16	N75°W	0.019

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
- 447.87' GROUNDWATER ELEVATION

CMT WELL ELEVATION DATA NOT USED IN GROUNDWATER GRADIENT CALCULATION

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 7A

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

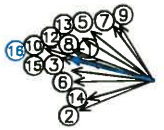
GROUND ZERO ANALYSIS, INC.

INTERMEDIATE AQUIFER GROUNDWATER GRADIENT MAP

DECEMBER 28, 2016

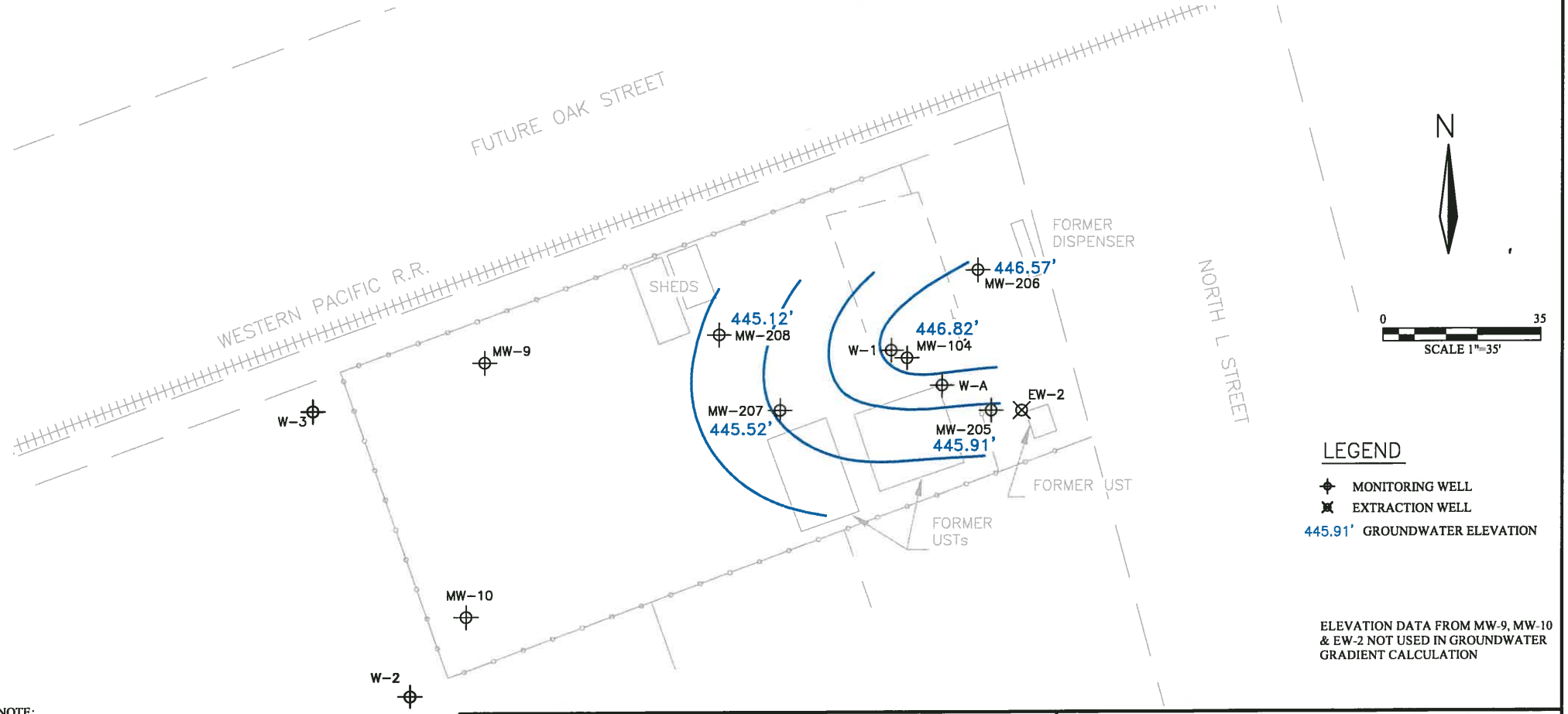
	DATE	BEARING	GRADIENT
1	10/16/06	N63°W	0.012
2	04/17/07	S68°W	0.022
3	12/19/07	N76°W	0.04
4	04/07/08	NORTHWEST	VARIABLE
5	10/25/11	N53°W	0.025
6	05/30/12	S89°W	0.020
7	11/19/12	N36°W	0.015
8	06/24/13	N73°W	0.014
9	12/03/13	N32°W	0.013
10	06/17/14	N74°W	0.076
11	12/02/14	DRY	
12	03/09/15	N69°W	0.032
13	11/16/15	N58°W	0.025
14	05/03/16	S77°W	0.014
15	08/26/16	N83°W	0.017
16	12/28/16	N75°W	0.019

ROSE DIAGRAM



0.001 0.01 0.1 1

GROUNDWATER GRADIENT FT/FT



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- 445.91' GROUNDWATER ELEVATION

ELEVATION DATA FROM MW-9, MW-10 & EW-2 NOT USED IN GROUNDWATER GRADIENT CALCULATION

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 7B

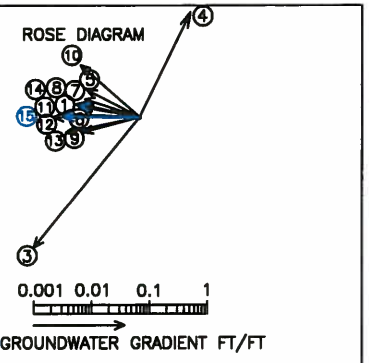
Sullins (Arrow Rentals)
187 North L Street
Livermore, California

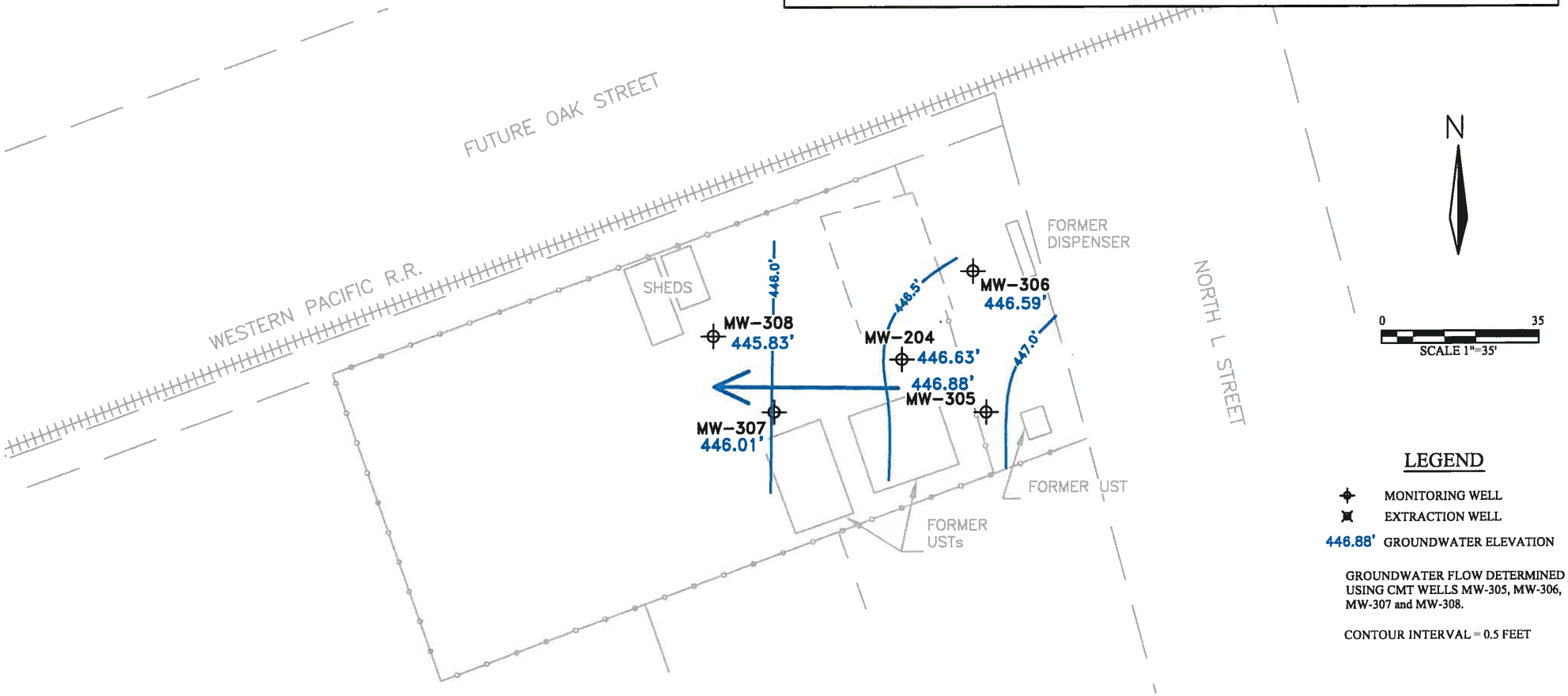
GROUND ZERO ANALYSIS, INC.

INTERMEDIATE AQUIFER GROUNDWATER GRADIENT MAP (CMT WELLS)

DECEMBER 28, 2016

	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	N78°W	0.0091
9	12/03/13	S75°W	0.010
10	06/17/14	N49°W	0.012
11	12/02/14	N87°W	0.012
12	06/25/15	WEST	0.030
13	11/16/15	WEST	0.020
14	05/03/16	N79°W	0.012
15	12/28/16	N89°W	0.020





LEGEND

- MONITORING WELL
- EXTRACTION WELL
- 446.88' GROUNDWATER ELEVATION

GROUNDWATER FLOW DETERMINED USING CMT WELLS MW-305, MW-306, MW-307 and MW-308.

CONTOUR INTERVAL = 0.5 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 8

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

GROUND ZERO ANALYSIS, INC.

DEEP AQUIFER GROUNDWATER GRADIENT MAP

DECEMBER 28, 2016

LEGEND

- MONITORING WELL
- EXTRACTION WELL

5,600 = TPH-G ug/L
NT = NOT TESTED

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

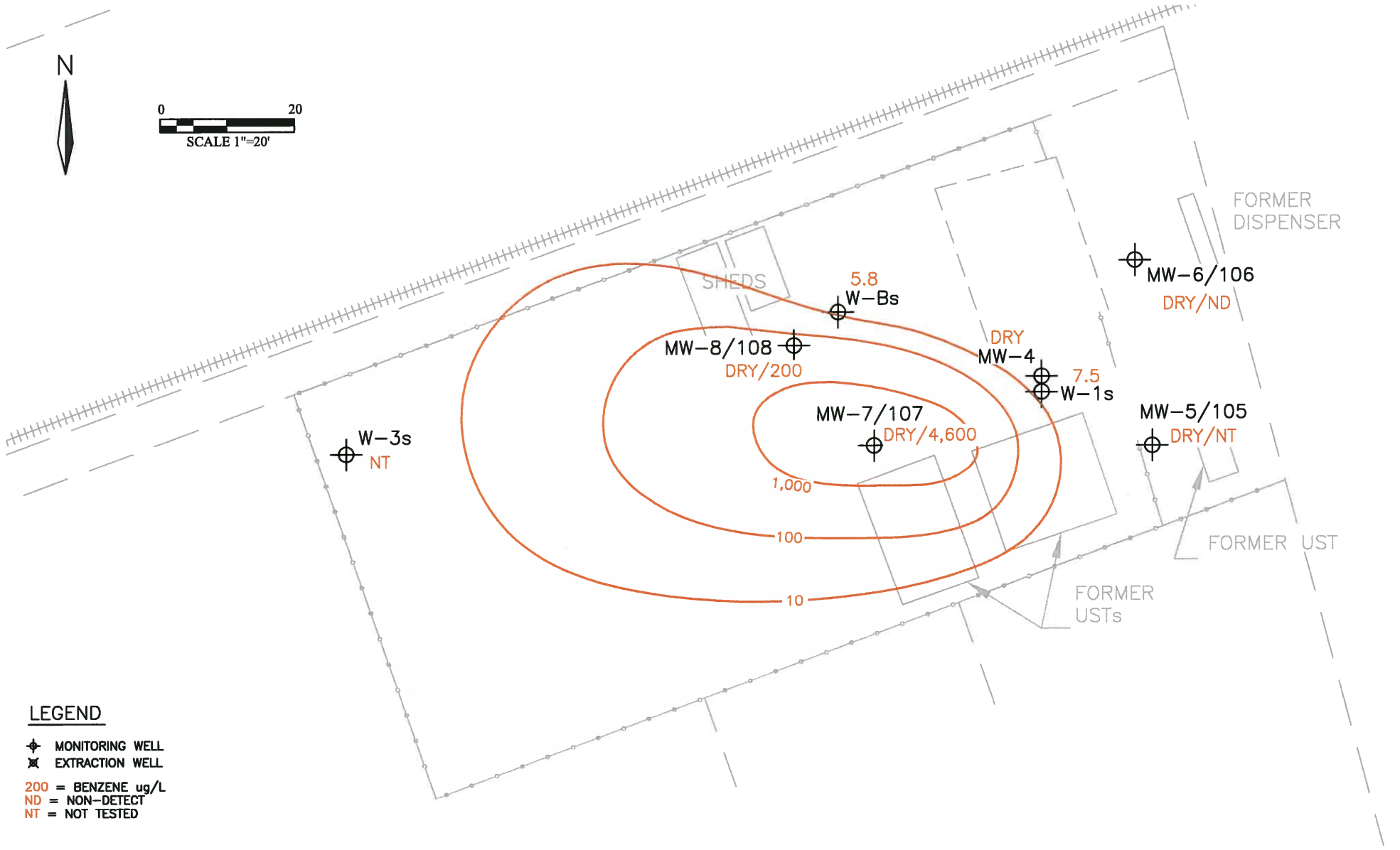
FIGURE 9

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

GROUND ZERO ANALYSIS, INC.

SHALLOW AQUIFER TPH-G GROUNDWATER PLUME MAP

DECEMBER 2016



LEGEND

- MONITORING WELL
- EXTRACTION WELL

200 = BENZENE ug/L
ND = NON-DETECT
NT = NOT TESTED

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

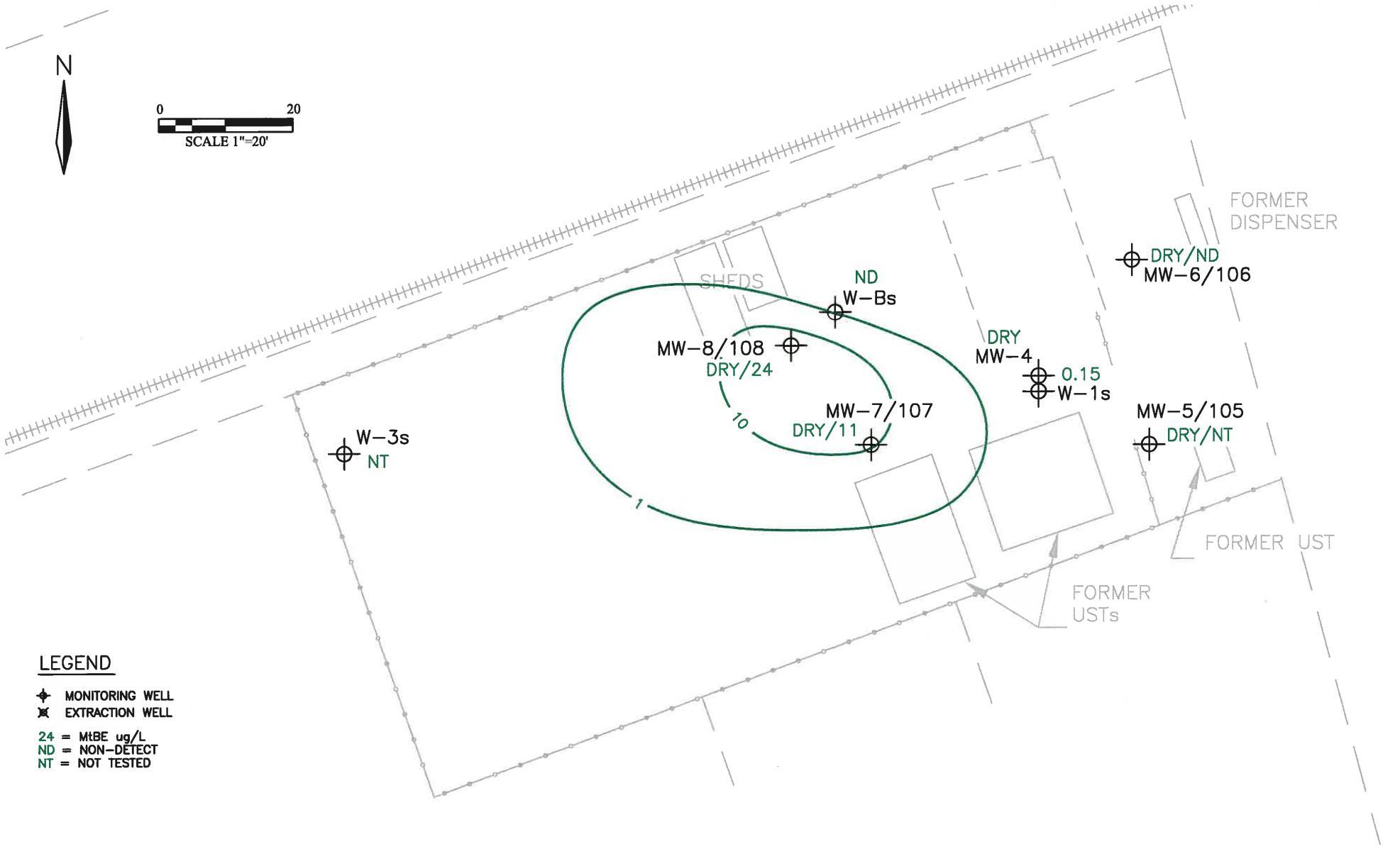
FIGURE 10

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

GROUND ZERO ANALYSIS, INC.

SHALLOW AQUIFER BENZENE GROUNDWATER PLUME MAP

DECEMBER 2016



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

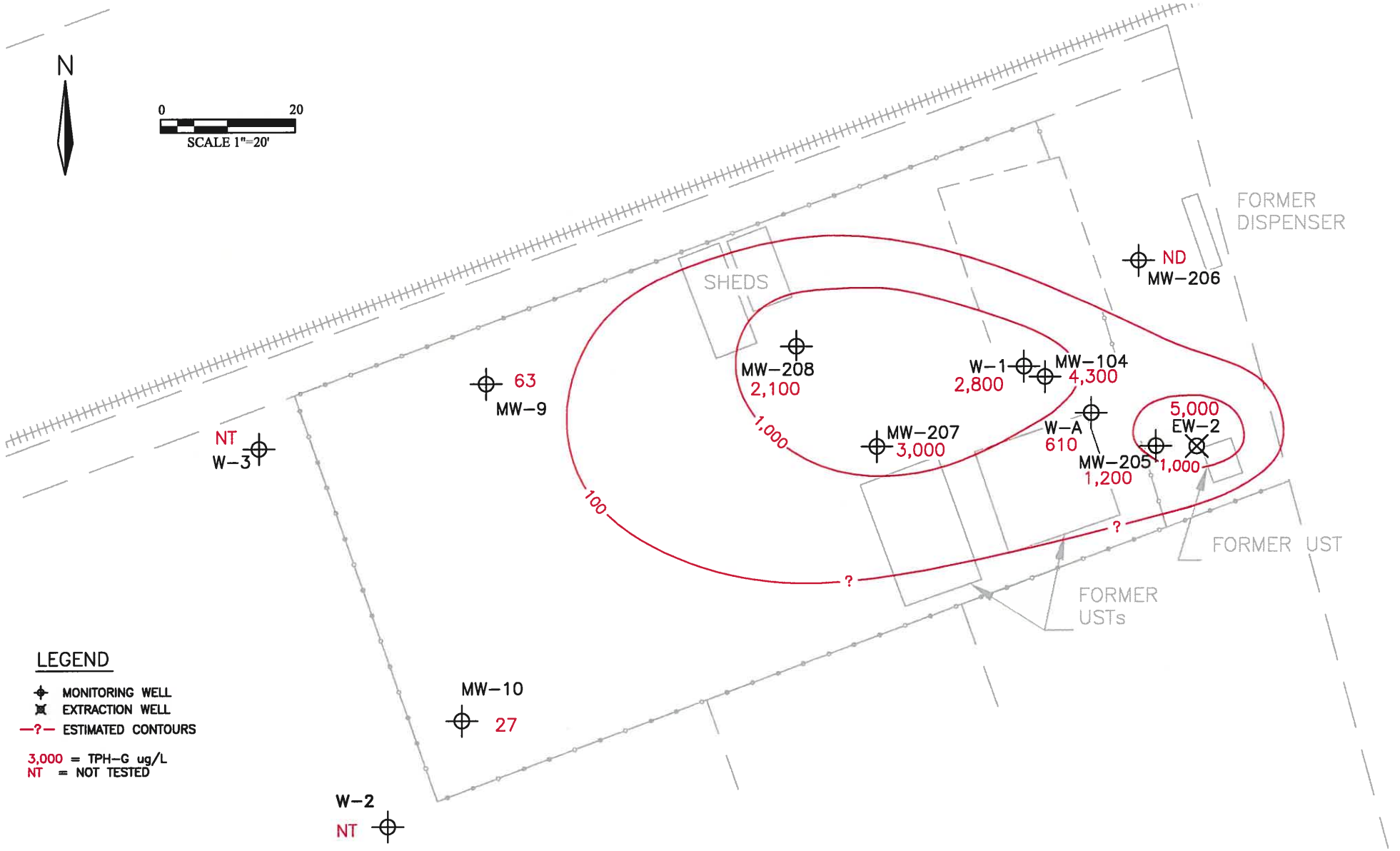
FIGURE 11

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

GROUND ZERO ANALYSIS, INC.

SHALLOW AQUIFER MTBE GROUNDWATER PLUME MAP

DECEMBER 2016



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

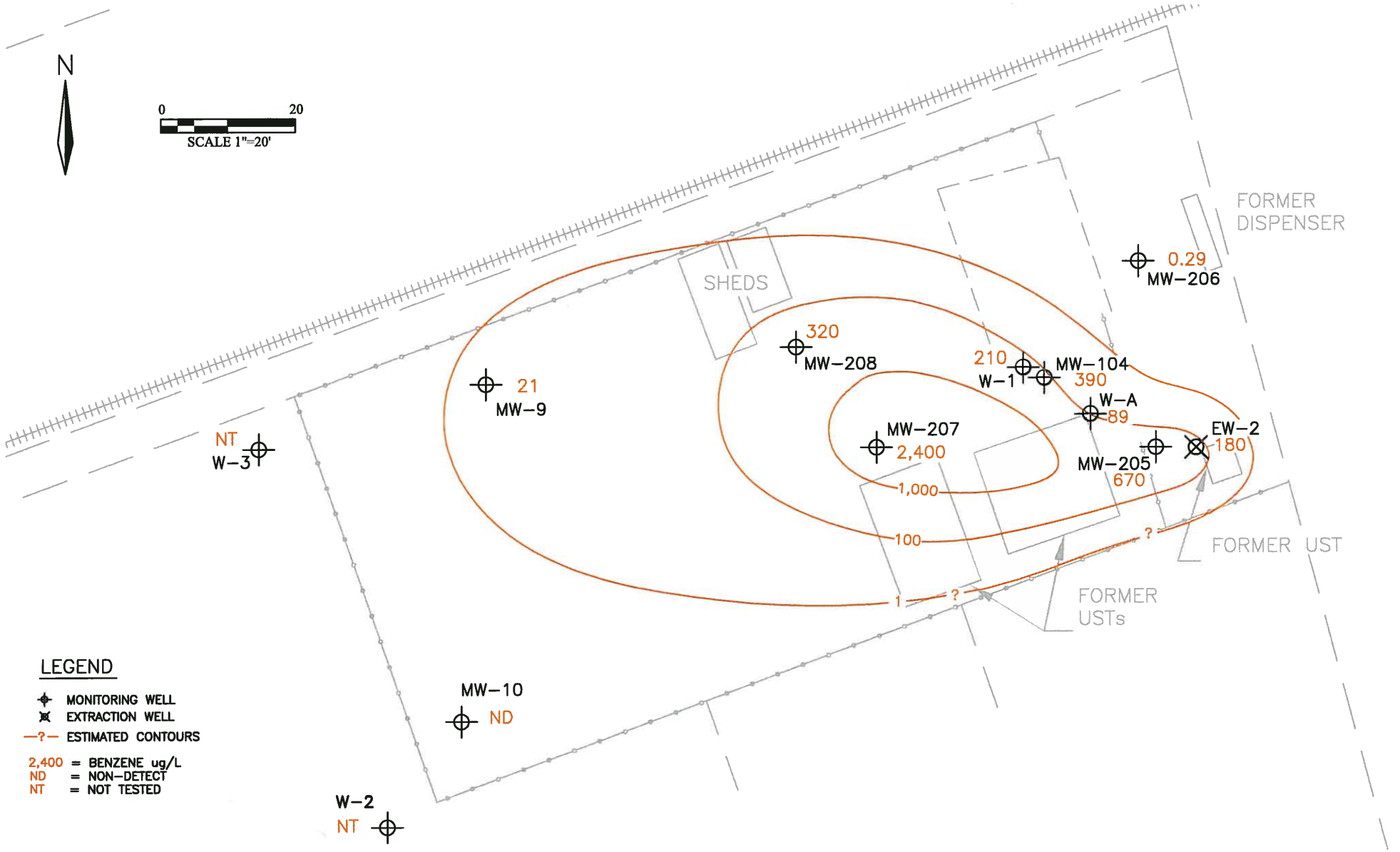
FIGURE 12

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

GROUND ZERO ANALYSIS, INC.

INTERMEDIATE AQUIFER TPH-G GROUNDWATER PLUME MAP

DECEMBER 2016



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

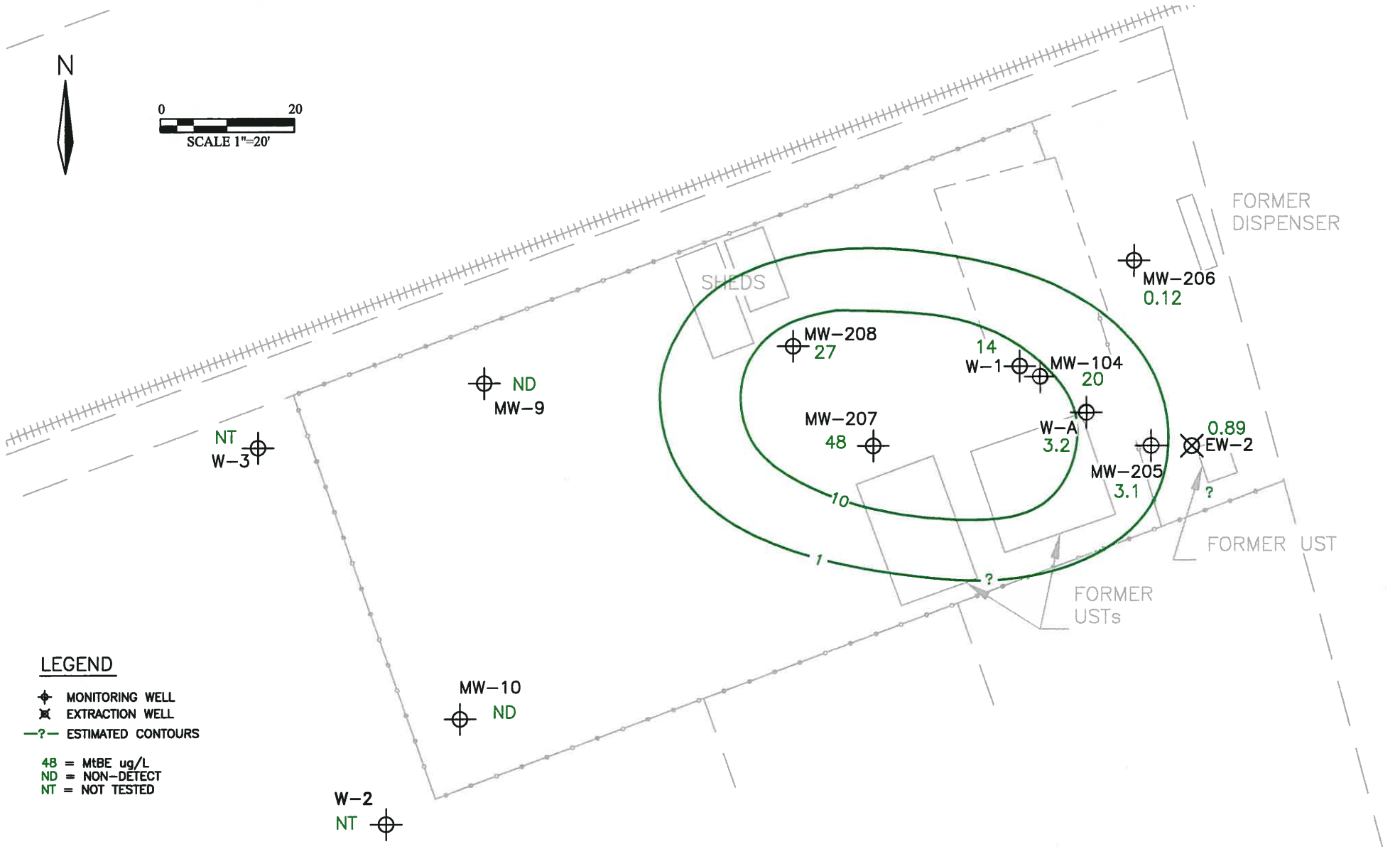
FIGURE 13

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

GROUND ZERO ANALYSIS, INC.

INTERMEDIATE AQUIFER BENZENE GROUNDWATER PLUME

DECEMBER 2016



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

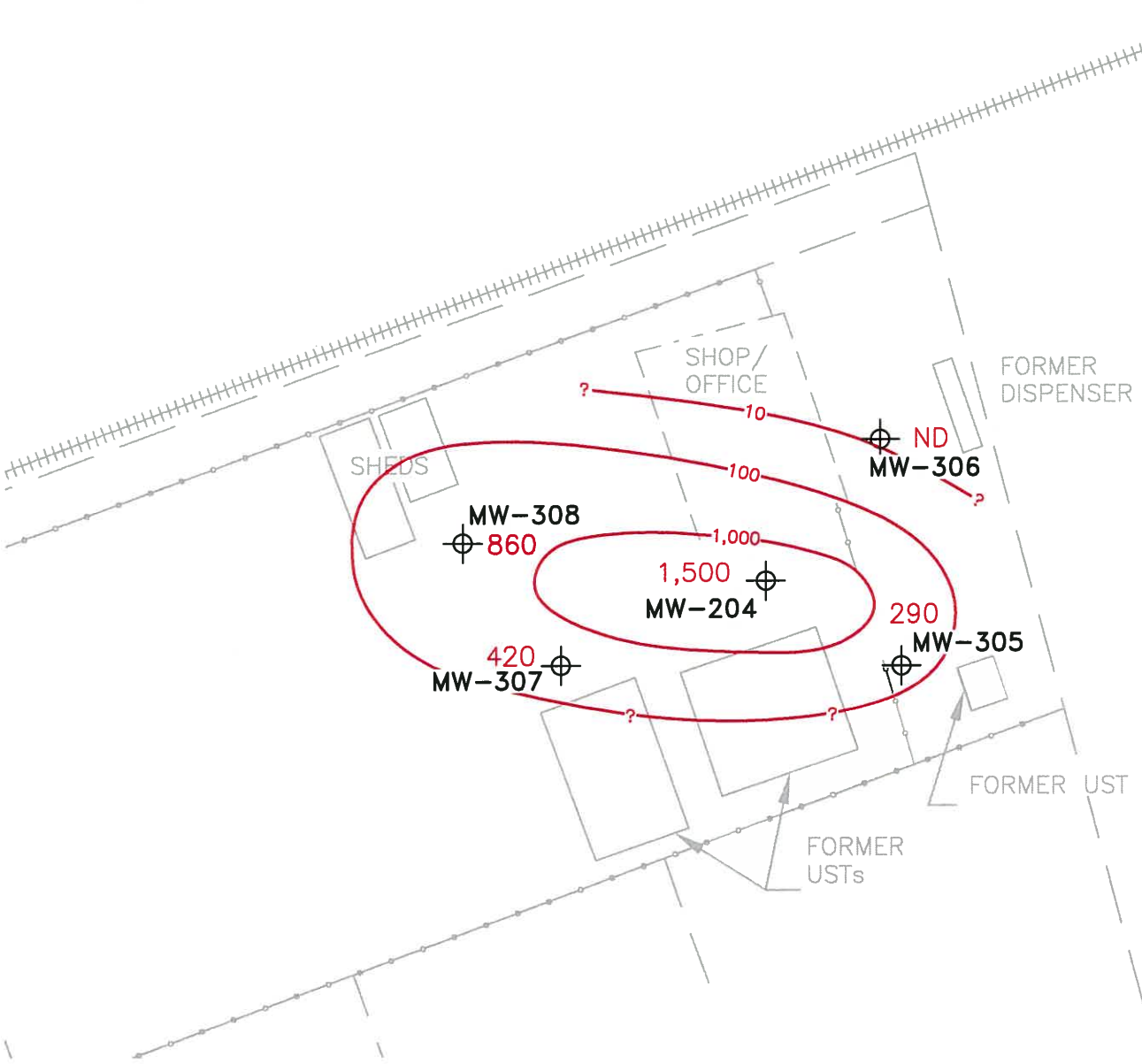
FIGURE 14

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

GROUND ZERO ANALYSIS, INC.

INTERMEDIATE AQUIFER MTBE GROUNDWATER PLUME

DECEMBER 2016



N

0 20

SCALE 1"=20'

LEGEND

- MONITORING WELL
- EXTRACTION WELL
- —?— ESTIMATED CONTOURS
- 420 = TPH-G CONCENTRATION (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

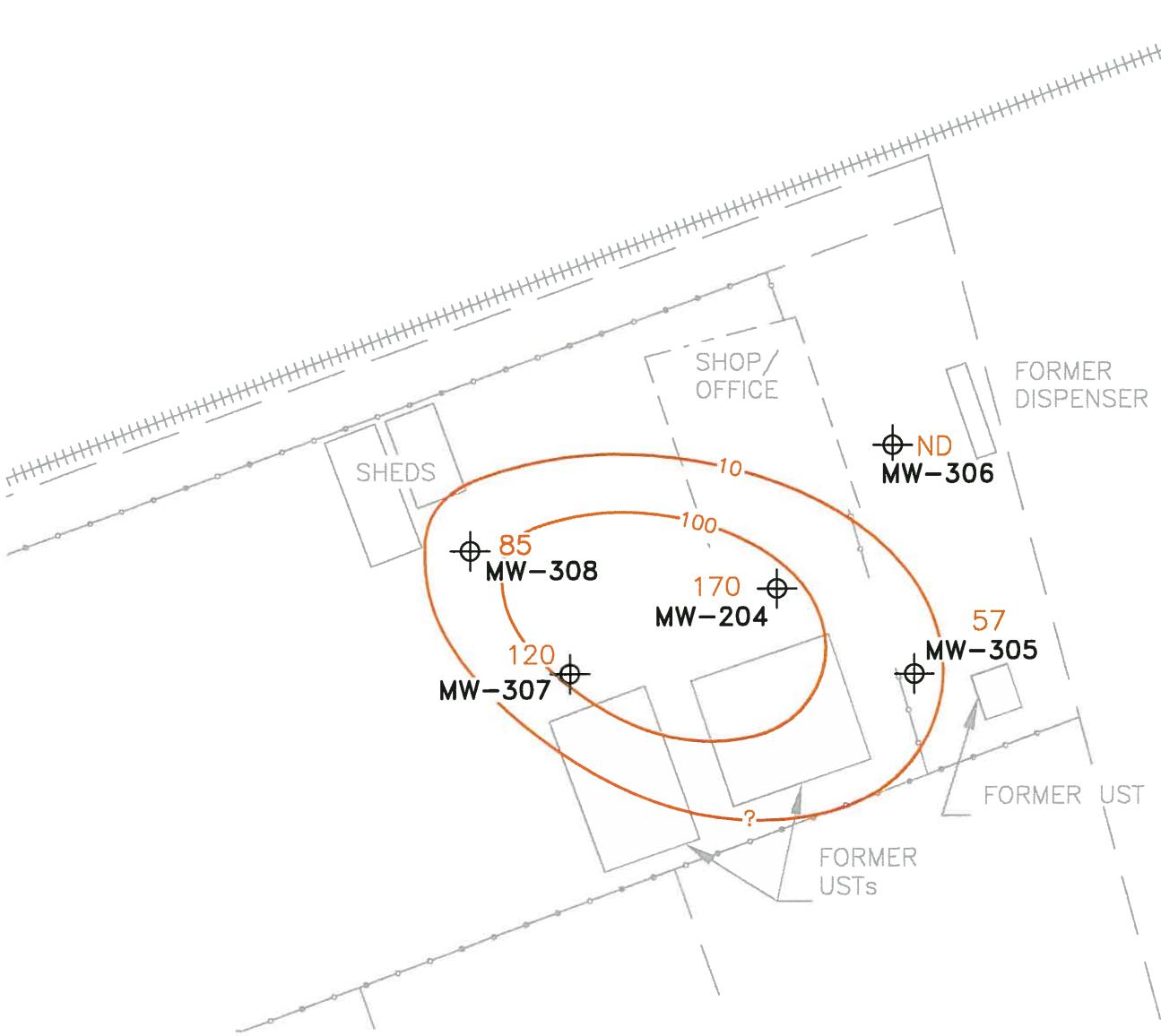
FIGURE 15

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

GROUND ZERO ANALYSIS, INC.

DEEP AQUIFER TPH-G GROUNDWATER PLUME MAP

DECEMBER 2016



N

0 20

SCALE 1"=20'

LEGEND

- MONITORING WELL
- EXTRACTION WELL
- —?— ESTIMATED CONTOURS
- 120 = BENZENE CONCENTRATION (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 16

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

GROUND ZERO ANALYSIS, INC.

DEEP AQUIFER BENZENE GROUNDWATER PLUME MAP

DECEMBER 2016

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-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
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	Missing	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	No Access	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 *	Destroyed	07/13/90	55	12	4	PVC	0.010	#2/12	55	40	55	32	32	30	30	S
	Monitoring	W-C *	Destroyed	07/11/90	55	8	2	PVC	0.010	#2	55	45	55	37.5	37.5	35	35	S
	Monitoring	W-D *	Destroyed	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 *	Destroyed	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	-	-
	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
	Vapor Extraction	EW-2	Active	01/26/15	60	8	2	PVC	0.010	#2/12	60	40	60	38	38	35	35	S
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 - Shallow/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		
4/18/2001		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		434.50																				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																													
		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	Avg. Elv.	Avg. DTW	Gradient	Bearing
																												(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	N57°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	442.15	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/16/15		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
03/10/16		446.28	34.91	-	-	446.42	34.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	446.35	34.71	-	-
05/03/16		446.79	34.40	441.69	37.43	446.58	34.34	439.65	37.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	444.27	36.64	445.38	35.26	444.02	35.87	0.0530	S43°W
08/26/16		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	442.53	38.38	-	-	442.53	38.38	-	-
12/28/16		448.49	32.70	446.52	32.60	448.29	32.63	442.69	34.09	-	-	-	-	-	-	-	-	-	-	447.72	33.40	445.70	35.09	446.16	34.75	446.73	33.91	446.54	33.86	0.0250	N85°W

"-" = 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. (feet)**	**Avg. DTW (feet)**	**Gradient (ft/ft)**	**Bearing**
	top of casing	480.77		481.04		479.87		479.86		481.27		480.84		481.12		480.79		480.91		480.64					
	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
9/15/2015		-	-	-	-	426.47	53.40	426.78	53.08	-	-	-	-	-	-	-	-	-	-	-	-	426.63	53.24	-	-
11/16/2015		-	-	-	-	423.98	55.89	424.53	55.33	426.22	55.05	-	-	-	-	-	-	-	-	-	-	424.91	55.42	0.025	N58°W
3/10/2016		448.11	32.66	-	-	-	-	-	-	-	-	-	-	447.33	33.79	-	-	446.27	34.64	-	-	447.24	33.70	0.069	S13°W
5/3/2016		443.57	37.20	443.69	37.35	442.53	37.34	442.20	37.66	444.74	36.53	443.80	37.04	443.39	37.73	443.32	37.47	442.26	38.65	441.40	39.24	443.09	37.62	0.014	S77°W
8/26/2016		-	-	-	-	440.73	39.14	440.78	39.08	442.86	38.41	-	-	-	-	-	-	440.22	40.69	-	-	441.15	39.33	**0.017**	**N83°W**
12/28/2016		445.97	34.80	446.89	34.15	445.54	34.33	445.74	34.12	447.87	33.40	446.82	34.02	445.91	35.21	446.57	34.22	445.52	35.39	445.12	35.52	446.20	34.52	**0.019**	**N75°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-204	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
11/16/2015		424.78	56.06	425.03	56.09	424.75	56.04	424.27	56.64	424.11	56.53	424.59	56.27	0.020	West	424.73	56.11	-	-
5/3/2016		443.35	37.49	443.63	37.49	443.31	37.48	442.74	38.17	442.51	38.13	443.11	37.75	0.012	N79°W	443.26	37.58	-	-
8/26/2016		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/28/2016		446.63	34.21	446.88	34.24	446.59	34.20	446.01	34.90	445.83	34.81	446.39	34.47	**0.020**	**West**	446.53	34.31	-	-

"-" = 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)	gwl/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	-			

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)	gwl/ts	bs/bs	GW Elevation (Head)	Vertical Head diff.	Vertical Dist diff.	Vertical Gradient
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			

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)	gwl/ts	bs/bs	GW Elevation (Head)	Vertical Head diff.	Vertical Dist diff.	Vertical Gradient
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			
16-Nov-15	MW-204	414.84	415.34	414.34	424.78	-0.050	9.00	-0.006
	MW-304	405.84	406.34	405.34	424.73			
3-May-16	MW-204	414.84	415.34	414.34	443.35	-0.090	9.00	-0.010
	MW-304	405.84	406.34	405.34	443.26			
3-May-16	MW-205	433.62	434.12	433.12	443.39	0.240	18.00	0.013
	MW-305	415.62	416.12	415.12	443.63			
3-May-16	MW-206	431.29	431.79	430.79	443.32	-0.010	16.00	-0.001
	MW-306	415.29	415.79	414.79	443.31			
3-May-16	MW-207	431.41	431.91	430.91	442.26	0.480	16.00	0.030
	MW-307	415.41	415.91	414.91	442.74			
26-Aug-16	MW-107	441.41	441.91	440.91	442.53	-2.310	10.00	-0.231
	MW-207	431.41	431.91	430.91	440.22			
28-Dec-16	MW-104	430.84	431.34	430.34	446.82	-0.190	16.00	-0.012
	MW-204	414.84	415.34	414.34	446.63			
28-Dec-16	MW-204	414.84	415.34	414.34	446.63	-0.100	9.00	-0.011
	MW-304	405.84	406.34	405.34	446.53			
28-Dec-16	MW-105	444.62	445.12	444.12	447.72	-1.810	11.00	-0.165
	MW-205	433.62	434.12	433.12	445.91			
28-Dec-16	MW-205	433.62	434.12	433.12	445.91	0.970	18.00	0.054
	MW-305	415.62	416.12	415.12	446.88			
28-Dec-16	MW-106	444.29	444.79	443.79	445.70	0.870	13.00	0.067
	MW-206	431.29	431.79	430.79	446.57			
28-Dec-16	MW-206	431.29	431.79	430.79	446.57	0.020	16.00	0.001
	MW-306	415.29	415.79	414.79	446.59			
28-Dec-16	MW-107	441.41	441.91	440.91	446.16	-0.640	10.00	-0.064
	MW-207	431.41	431.91	430.91	445.52			
28-Dec-16	MW-207	431.41	431.91	430.91	445.52	0.490	16.00	0.031
	MW-307	415.41	415.91	414.91	446.01			
28-Dec-16	MW-108	441.14	441.64	440.64	446.73	-1.610	12.00	-0.134
	MW-208	429.14	429.64	428.64	445.12			
28-Dec-16	MW-208	429.14	429.64	428.64	445.12	0.710	14.00	0.051
	MW-308	415.14	415.64	414.64	445.83			

TABLE 6
Summary of Groundwater Analytical Data - Second Half of 2016

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	12/28/2016	**2,800** A01	**210** A01	**18** A01	**110** A01	**430** A01	**14** A01
EW-2	8/26/2016	**3,900**	**5,000** A01	**64**	**120**	**100**	**28**
	12/28/2016	**5,000** A01	**180** A01	**2.3** J,A01	**68** A01	**150** A01	**0.89** J,A01
W-A	12/29/2016	**610**	**89** A01	**1.1**	**5.2**	**4.8**	**3.2**
W-1s	12/28/2016	**120**	**7.5**	**0.21** J	**0.50**	**0.76** J	**0.15** J
W-3s	12/29/2016	-	-	-	-	-	-
W-Bs	12/28/2016	**87**	**5.8**	**0.24** J	**2.4**	**4.0**	<0.5
W-Es	12/28/2016	<50	<0.5	<0.5	<0.5	<1.0	<0.5
MW-4	5/3/2016	DRY	DRY	DRY	DRY	DRY	DRY
MW-5	5/3/2016	DRY	DRY	DRY	DRY	DRY	DRY
MW-6	5/3/2016	DRY	DRY	DRY	DRY	DRY	DRY
MW-7	5/3/2016	DRY	DRY	DRY	DRY	DRY	DRY
MW-8	5/3/2016	DRY	DRY	DRY	DRY	DRY	DRY
MW-9	12/28/2016	**63**	**21**	**0.13** J	**4.4**	**0.40** J	<0.5
MW-10	12/28/2016	**27** J	<0.5	<0.5	<0.5	<1.0	<0.5
MW-104	12/29/2016	**4,300** A01	**390** A01	**14** A01	**170** A01	**420** A01	**20** A01
MW-105	12/29/2016	-	-	-	-	-	-
MW-106	12/29/2016	<50	<0.5	<0.5	<0.5	<1.0	<0.5
MW-107	8/26/2016	**2,600** A01	**4,000** A01	**31** A01	**120** A01	**50** A01	**21** A01
	12/29/2016	**5,600** A01	**4,600** A01	**31** A01	**72** A01	**31** A01	**11** A01
MW-108	12/29/2016	**2,300**	**200**	**12**	**49**	**28**	**24**
MW-204	12/29/2016	**1,500** A01	**170** A01	**5.9** A01	**25** A01	**35** A01	<2.5 A01
MW-205	12/29/2016	**1,200**	**670** A01	**2.7**	**150** A01	**66**	**3.1**
MW-206	12/29/2016	<50	**0.29** J	<0.5	<0.5	<1.0	**0.12** J
MW-207	8/26/2016	**2,100** A01	**2,200** A01	**13** A01	**130** A01	**73** A01	**52** A01
	12/29/2016	**3,000** A01	**2,400** A01	**27** A01	**330** A01	**200** A01	**48** A01
MW-208	12/29/2016	**2,100** A01	**320** A01	**9.8** A01	**160** A01	**52** A01	**27** A01
MW-304	12/29/2016	**370**	**20** A01	**2.1**	**19**	**26**	<0.5
MW-305	12/29/2016	**290**	**57**	**0.94**	**25**	**21**	<0.5
MW-306	12/29/2016	<50	<0.5	<0.5	<0.5	<1.0	<0.5
MW-307	12/29/2016	**420**	**120** A01	**1.6**	**27**	**22**	<0.5
MW-308	12/29/2016	**860**	**85**	**3.5**	**18**	**14**	<0.5
MW-404	12/29/2016	-	-	-	-	-	-

NS - not sampled

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

J - Estimated value (CLP Flag)

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
		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	**110,000**	-	**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**	**840**	**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**	**580**	**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**	-
	11/16/2015	DRY						
	3/10/2016	**7,100** [A01]	-	**130** [A01]	**21** [A01]	**93** [A01]	**490** [A01]	**5.7** [A01]
	5/4/2016	**14,000** [A01]	-	**580** [A01]	**45** [A01]	**220** [A01]	**1,000** [A01]	**18** [A01]
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	**2,800** [A01]	-	**210** [A01]	**18** [A01]	**110** [A01]	**430** [A01]	**14** [A01]
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**
	9/15/2015	not sampled						
	11/17/2015	**3,700** [A01]	-	**270** [A01]	**83** [A01]	**150** [A01]	**510** [A01]	**91** [A01]
	3/10/2016	-	-	-	-	-	-	-
	5/5/2016	**9,000** [A01]	-	**150** [A01]	**4.3** [J,A01]	**88** [A01]	**320** [A01]	<5.0 [A01]
	8/26/2016	**3,900**	-	**5,000** [A01]	**64**	**120**	**100**	**28**
	12/28/2016	**5,000** [A01]	-	**180** [A01]	**2.3** [J,A01]	**68** [A01]	**150** [A01]	**0.89** [J,A01]

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-A	1990	**10,000**	**2,400**	**6,800**	**5,500**	**620**	**3,400**	-
(dup)	1990	-	-	**6,900**	**5,600**	**620**	**6,800**	-
	10/20/2006	**450**	-	**40**	**19**	**21**	**33**	-
	10/29/2007	**40,000**	-	**4,000**	**330**	**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**	-
	11/16/2015	DRY						
	3/10/2016	-	-	-	-	-	-	-
	5/5/2016	**2,000** [A01]	-	**230**	**2.9**	**34**	**73**	**5.3**
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**610**	-	**89** [A01]	**1.1**	**5.2**	**4.8**	**3.2**
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**	-
		Abondened April 14, 2008						
W-C	1990	<10	<100	<1.0	<1.0	<1.0	<1.0	-
		Abondened April 14, 2008						
W-D	1990	**100**	<100	**1.0**	**2.0**	**2.0**	**1.0**	-
		Abondened April 14, 2008						
W-E	1990	<10	<100	<1.0	<1.0	<1.0	<1.0	-
	9/13/1995	**95**	-	**4.0**	<0.5	<0.5	<0.5	**18**
		Abondened April 14, 2008						

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-1s	3/22/1996	**6,400**	-	**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
	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**	**4,400**	-
	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**	<1.0	<1.0	<2.0	<1.0
	12/3/2014	DRY						
	6/25/2015	DRY						
	11/16/2015	DRY						
	3/10/2016	**150**	-	**0.55**	<0.5	<0.5	<1.0	<0.5
	5/5/2016	**28** [J]	-	**3.2**	<0.5	<0.5	<1	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	**120**	-	**7.5**	**0.21** [J]	**0.50**	**0.76** [J]	**0.15** [J]

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-3s	3/22/1996	**100**	-	**13**	**6.9**	**5.3**	**14**	<5.0
	11/22/1996	**3,200**	-	**270**	**29**	**63**	**100**	<100
	7/15/1997	**2,100**	**340**	**230**	**7.0**	**33**	**51**	<20
	10/29/1997	**2,800**	**750**	**630**	**31**	**71**	**69**	<30
	4/27/1998	<50	<50	<0.5	<0.5	<0.5	<0.5	<3.0
	10/23/1998	**3,800**	**1,000**	**500**	**28**	**90**	**37**	**35**
	4/9/1999	**980**	**430**	**240**	**4.0**	**37**	**3.0**	<12
	10/5/1999	**1,500**	**1,000**	**290**	**9.5**	**53**	**9.8**	<6.0
	4/5/2000	**810**	**320**	**150**	**3.0**	**9.0**	**5.7**	<5.0
	10/26/2000	**310**	**120**	**83**	**3.5**	**6.4**	**1.2**	<5.0
	4/18/2001	**2,300**	**1,600**	**320**	**8.0**	**16**	**7.0**	<20
	11/13/2001	-	-	-	-	-	-	-
	4/30/2002	**1,400**	**490**	**320**	**5.5**	**24**	**5.0**	<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	<5.0
	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	<1.0
	10/17/2006	**1,300**	<50	**95**	<2.0	**2.0**	<2.0	-
	4/19/2007	**320**	-	**83**	<2.5	<2.5	<2.5	<5.0
	12/19/2007	**69**	-	**1.3**	<0.5	<0.5	<1.0	<2.0
	4/8/2011	**937**	-	**422**	<5.0	**6.5**	<10	<5.0
	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**	**0.82**	**0.36**	**0.75**	<1.0
	12/3/2013	**16**	-	**6.2**	<0.5	<0.5	<1.0	<0.5
	6/17/2014	-	-	-	-	-	-	-
	12/3/2014	DRY						
	6/25/2015	DRY						
	11/16/2015	DRY						
	3/10/2016	-	-	-	-	-	-	-
	5/5/2016	<50	-	<0.5	<0.5	<0.5	<1.0	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	-	-	-	-	-	-	-

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-Bs	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**	**3,800**	**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**	**38**	**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
	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**	**3.0**	-
	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						
	11/16/2015	DRY						
	3/10/2016	**160**	-	**0.38** [J]	<0.5	<0.5	<1.0	<0.5
	5/4/2016	**44** [J]	-	**0.87**	<0.5	<0.5	<1.0	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	**87**	-	**5.8**	**0.24** [J]	**2.4**	**4.0**	<0.5

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-Es	3/22/1996	<50	-	<0.5	<0.5	<0.5	<0.5	<5.0
	11/22/1996	**280**	-	**24**	**0.6**	**1.8**	**2.2**	<5.0
	7/15/1997	-	-	-	-	-	-	-
	10/29/1997	-	-	-	-	-	-	-
	4/27/1998	-	-	-	-	-	-	-
	10/23/1998	**82**	**69**	<0.5	**0.8**	<0.5	**0.8**	**4.0**
	4/9/1999	-	-	-	-	-	-	-
	10/5/1999	**68**	**88**	<0.5	<0.5	<0.5	<1.0	**4.0**
	4/5/2000	-	-	-	-	-	-	-
	10/26/2000	**110**	<50	**0.7**	<0.5	<0.5	<1.0	<5.0
	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	<5.0
	4/17/2007	-	-	-	-	-	-	-
	4/29/2004	**55**	**87**	**0.62**	<0.5	<0.5	<0.5	<5.0
	7/7/2006	<25	<50	<0.5	<0.5	<0.5	<0.5	**2.4**
	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	<1.0
	12/19/2007	<50	-	<0.5	<0.5	<0.5	<1.0	<2.0
	4/7/2008	<50	-	<0.5	<0.5	<0.5	<1.0	<5.0
	10/8/2008	<50	-	<0.5	<0.5	<0.5	<1.0	<5.0
	4/8/2011	<50	-	<0.5	<0.5	<0.5	<1.0	**0.5**
	10/26/2011	-	-	-	-	-	-	-
	5/29/2012	<50	-	<0.5	<0.5	<0.5	<1.0	**0.84**
	11/19/2012	-	-	-	-	-	-	-
	6/25/2013	<50	-	<0.3	<0.3	<0.3	<0.6	**1.0**
	12/3/2013	-	-	-	-	-	-	-
	6/17/2014	-	-	-	-	-	-	-
	12/3/2014	DRY						
	6/25/2015	-	-	-	-	-	-	-
	11/16/2015	DRY						
	3/10/2016	-	-	-	-	-	-	-
	5/4/2016	<50	-	<0.5	<0.5	<0.5	<1.0	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	<50	-	<0.5	<0.5	<0.5	<1.0	<0.5

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
		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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
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	<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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-8	10/16/2006	DRY						
	4/17/2007	DRY						
	12/19/2007	DRY						
	4/8/2011	**765**	-	**119**	<2.0	**3.0**	**6.0**	<2.0
	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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	DRY						
MW-9	3/9/2015	**31** J	-	**6.5**	<0.5	**0.62**	<1.0	<0.5
	6/26/2015	**28** J	-	**1.6**	<0.3	<0.3	<0.6	<1.0
	9/15/2015	**96**	-	**2.2**	<0.5	<0.5	<1.0	<0.5
	11/17/2015	**260**	-	**2.6**	**2.7**	<0.3	**9.2**	<1.0
	3/10/2016	-	-	-	-	-	-	-
	5/4/2016	**150**	-	**17**	**0.12** J	**3.1**	**0.36** J	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	**63**	-	**21**	**0.13** J	**4.4**	**0.40** J	<0.5
MW-10	3/9/2015	**25** J	-	<0.5	<0.5	<0.5	<1.0	<0.5
	6/26/2015	**34** J	-	<0.3	<0.3	<0.3	<0.6	<1.0
	9/15/2015	**12** J	-	<0.5	<0.5	<0.5	<1.0	<0.5
	11/17/2015	**71**	-	<0.3	**0.99**	<0.3	<0.6	<1.0
	3/10/2016	-	-	-	-	-	-	-
	5/4/2016	**23** J	-	<0.5	<0.5	<0.5	<1.0	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/28/2016	**27** J	-	<0.5	<0.5	<0.5	<1.0	<0.5

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-104	10/19/2006	**960**	-	**250**	**170**	**20**	**83**	-
	4/18/2007	DRY						
	10/29/2007	**1,300**	-	**210**	**82**	**110**	**380**	<5.0
	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**
	12/5/2013	**6,000**	-	**840**	**100**	**150**	**350**	**20**
	6/17/2014	**7,200**	-	**2,400**	**76**	**320**	**510**	**30**
	12/3/2014	DRY						
	6/25/2015	DRY						
	11/16/2015	DRY						
	3/10/2016	-	-	-	-	-	-	-
	5/5/2016	**3,200** [A01]	-	**390** [A01]	**14** [A01]	**130** [A01]	**320** [A01]	**14** [A01]
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**4,300** [A01]	-	**390** [A01]	**14** [A01]	**170** [A01]	**420** [A01]	**20** [A01]
MW-105	10/16/2006	-	-	-	-	-	-	-
	4/19/2007	**13,000**	-	**4,300**	**980**	**490**	**1,500**	<250
	12/19/2007	DRY						
	4/8/2008	DRY						
	10/9/2008	**11,000**	-	**3,800**	**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	590						
	6/25/2013	DRY						
	12/3/2013	DRY						
	6/17/2014	DRY						
	12/3/2014	DRY						
	6/25/2015	DRY						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	-	-	-	-	-	-	-

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
		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	<1.0
	10/29/2007	**86**	-	<0.5	<0.5	<0.5	<0.5	<1.0
	12/20/2007	**54**	-	**1.0**	<0.5	<0.5	<1.0	<2.0
	4/8/2008	DRY						
	10/8/2008	**90**	-	**0.6**	<0.5	<0.5	<1.0	<5.0
	4/14/2009	-	-	-	-	-	-	-
	4/8/2011	**247**	-	**9.3**	<0.5	<0.5	<1.0	<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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/3/2016	DRY						
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	<50	-	<0.5	<0.5	<0.5	<1.0	<0.5
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**	**380**	**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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/4/2016	**5,600** [A01]	-	**9,400** [A01]	**12** [A01]	**82** [A01]	**24** [A01]	**24** [A01]
	8/26/2016	**2,600** [A01]	-	**4,000** [A01]	**31** [A01]	**120** [A01]	**50** [A01]	**21** [A01]
	12/29/2016	**5,600** [A01]	-	**4,600** [A01]	**31** [A01]	**72** [A01]	**31** [A01]	**11** [A01]

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-108	10/16/2006	**3,400**	-	**790**	**46**	<20	**65**	-
	4/19/2007	<20,000	-	**5,400**	<200	**400**	**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**	**40**	<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						
	11/16/2015	DRY						
	3/10/2016	DRY						
	5/4/2016	**2,700** [A01]	-	**590** [A01]	**16** [A01]	**45** [A01]	**34** [A01]	**37** [A01]
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**2,300**	-	**200**	**12**	**49**	**28**	**24**
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**	<1.0
	12/20/2007	**22,000**	-	**4,700**	**1,100**	**490**	**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**	**400**	-
	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**
	11/17/2015	**1,800**	-	**380**	**9.6**	**54**	**110**	**6.9**
	3/10/2016	-	-	-	-	-	-	-
	5/5/2016	**2,200** [A01]	-	**430** [A01]	**13** [A01]	**41** [A01]	**58** [A01]	<5.0 [A01]
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**1,500** [A01]	-	**170** [A01]	**5.9** [A01]	**25** [A01]	**35** [A01]	<2.5 [A01]

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
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**	-	**20,000**	**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**	**300**	-
	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**	**900**	**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						
	11/16/2015	DRY						
	3/10/2016	**1,000** [A01]	-	**630** [A01]	**2.4** [A01]	**35** [A01]	**51** [A01]	**3.1** [A01]
	5/3/2016	**2,000** [A01]	-	**1,700** [A01]	**1.9** [J,A01]	**84** [A01]	**29** [A01]	**5.7** [A01]
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**1,200**	-	**670** [A01]	**2.7**	**150** [A01]	**66**	**3.1**
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	<1.0
	12/19/2007	**84**	-	**0.71**	<0.5	<0.5	<1.0	<2.0
	4/8/2008	**60**	-	**1.8**	<0.5	<0.5	<1.0	<5.0
	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**	<0.5	<0.5	<1.0	**1.2**
	6/17/2014	**73**	-	**0.87**	<0.5	<0.5	<1.0	**1.3**
	12/3/2014	DRY						
	6/25/2015	DRY						
	11/16/2015	DRY						
	3/10/2016	-	-	-	-	-	-	-
	5/3/2016	**18** [J]	-	**0.18** [J]	<0.5	<0.5	<1.0	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	<50	-	**0.29** [J]	<0.5	<0.5	<1.0	**0.12** [J]

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-207	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**	**140**
	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						
	11/16/2015	DRY						
	3/10/2016	**2,300** [A01]	-	**1,900** [A01]	**9.8** [A01]	**93** [A01]	**110** [A01]	**38** [A01]
	5/4/2016	**4,300** [A01]	-	**3,500** [A01]	**13** [A01]	**160** [A01]	**64** [A01]	**49** [A01]
	8/26/2016	**2,100** [A01]	-	**2,200** [A01]	**13** [A01]	**130** [A01]	**73** [A01]	**52** [A01]
	12/29/2016	**3,000** [A01]	-	**2,400** [A01]	**27** [A01]	**330** [A01]	**200** [A01]	**48** [A01]
MW-208	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						
	11/16/2015	DRY						
	3/10/2016	-	-	-	-	-	-	-
	5/4/2016	**4,700** [A01]	-	**230** [A01]	**16** [A01]	**260** [A01]	**64** [A01]	**30** [A01]
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**2,100** [A01]	-	**320** [A01]	**9.8** [A01]	**160** [A01]	**52** [A01]	**27** [A01]

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
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**	-	**380**	**43**	**32**	**110**	<40
	4/7/2008	**820**	-	**100**	**36**	**36**	**98**	<5.0
	4/8/2011	**2,880**	-	**657**	**32.3**	**93.5**	**262**	<5.0
	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**	-
	11/17/2015	**1,200**	-	**110** [A01]	**5.6**	**51**	**86**	-
	3/10/2016	-	-	-	-	-	-	-
	5/5/2016	**570**	-	**70**	**2.5**	**31**	**53**	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**370**	-	**20** [A01]	**2.1**	**19**	**26**	<0.5
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**	<5.0
	4/8/2011	**862**	-	**193**	**10.4**	**27.6**	**69.1**	<5.0
	10/26/2011	**1,300**	-	**280**	**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	**640**	-	**140**	**4.2**	**49**	**67**	<0.5
	6/26/2015	**420**	-	**170**	**1.6**	**12**	**21**	-
	11/16/2015	**780**	-	**130** [A01]	**1.7**	**27**	**26**	-
	3/10/2016	-	-	-	-	-	-	-
	5/3/2016	**280**	-	**58**	**0.91**	**18**	**15**	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**290**	-	**57**	**0.94**	**25**	**21**	<0.5

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MW-306	10/16/2006	<50	-	<0.5	<0.5	<0.5	<0.5	-
	4/18/2007	<50	-	**3.1**	<0.5	<0.5	<0.5	<1.0
	12/20/2007	<50	-	**0.54**	<0.5	<0.5	<1.0	<2.0
	4/7/2008	<50	-	<0.5	<0.5	<0.5	<1.0	<5.0
	4/8/2011	<50	-	**10.4**	<0.5	<0.5	<1.0	<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**	<1.0
	12/4/2013	**47**	-	<0.5	<0.5	<0.5	<1.0	<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	-
	11/16/2015	<50	-	<0.3	<0.3	<0.3	<0.6	-
	3/10/2016	-	-	-	-	-	-	-
	5/3/2016	**12** [J]	-	<0.5	<0.5	<0.5	<1.0	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	<50	-	<0.5	<0.5	<0.5	<1.0	<0.5
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**	-
	11/16/2015	**730**	-	**150** [A01]	**2.5**	**26**	**26**	-
	3/10/2016	-	-	-	-	-	-	-
	5/4/2016	**320**	-	**64**	**0.80**	**17**	**16**	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**420**	-	**120** [A01]	**1.6**	**27**	**22**	<0.5

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
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
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**	<4.0
	4/7/2008	**770**	-	**150**	**10**	**48**	**45**	<5.0
	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	**1,400**	-	**2.5**	**1.2**	**3.1**	**1.2**	-
	11/16/2015	**1,200**	-	**70**	**3.2**	**24**	**23**	-
	3/10/2016	-	-	-	-	-	-	-
	5/4/2016	**420**	-	**34**	**1.8**	**12**	**8.6**	<0.5
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	**860**	-	**85**	**3.5**	**18**	**14**	<0.5
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	not sampled						
	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	**980**	-	**270**	**11**	**50**	**93**	<0.5
	6/25/2015	-	-	-	-	-	-	-
	11/16/2015	-	-	-	-	-	-	-
	3/10/2016	-	-	-	-	-	-	-
	5/3/2016	-	-	-	-	-	-	-
	8/26/2016	-	-	-	-	-	-	-
	12/29/2016	-	-	-	-	-	-	-

pre- 2006 data adapted from *Environmental Sampling Services* 5/27/04 Groundwater Monitoring Report
"-" = not analyzed
[J] = estimated Value (CLP Flag)
[A01] = detection and quantitation limits are raised due to sample dilution

TABLE 8
Summary of Field Parameters

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

Date	W-1s					W-3s					W-Bs					W-Es					W-1				
	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	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	6.30	917	19.0	-164.3	0.40
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	-	-	-	-	-	6.45	1073	17.8	-60.9	0.20
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	-	-	-	-	-	6.71	1062	20.7	-98.7	0.95
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	-	-	-	-	-	7.04	965	17.3	-97.0	0.12
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	6.73	1156	20.5	-110.6	0.28
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	-	-	-	-	-	6.82	1051	20.5	-135.6	0.16
6/16-17/2014	6.47	1309	21.3	-79.0	0.31	-	-	-	-	-	7.05	803	21.0	-50.1	1.64	-	-	-	-	-	6.70	1097	21.1	-101.3	0.18
12/2-3/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/9-10/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/25/15 - 6/26/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.80	1376	21.7	-107.2	NC
9/15/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/16/15 - 11/17/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/10/2016	6.89	890	21.2	-14.8	0.50	-	-	-	-	-	6.94	505	20.5	-67.1	1.7	-	-	-	-	-	6.81	978	20.3	-95.9	0.86
5/4/16 - 5/5/16	7.37	933	21.3	-29.7	2.51	6.91	1112	21.2	42.3	1.39	7.16	620	21.0	17.3	2.31	7.31	928	21.3	102.1	1.81	7.16	1342	21.1	-169.3	0.62
8/26/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12/28/16 - 12/29/16	6.99	1108	20.5	-160.3	1.35	-	-	-	-	-	6.96	497	20.5	-57.7	3.03	7.11	970	19.2	117.9	1.36	6.79	1470	16.3	-62.4	1.73

Date	W-3					W-A					MW-9					MW-10					EW-2				
	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	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	6.75	1122	21.8	-78.3	NC
9/15/2015	-	-	-	-	-	-	-	-	-	-	6.66	970	20.1	90.3	3.19	7.08	967	19.8	94.8	4.51	-	-	-	-	-
11/16-17/15	-	-	-	-	-	-	-	-	-	-	6.97	1089	20.2	101.4	3.42	6.96	1084	19.6	142.8	4.21	6.64	1053	19.8	-118.2	0.58
3/10/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/4/16 - 5/5/16	-	-	-	-	-	7.02	1452	20.9	-98.8	2.05	7.69	1101	19.8	47.0	3.55	7.69	1098	20.0	44.7	3.20	7.24	1340	21.1	-97.2	0.42
8/26/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.04	1297	20.2	-60.2	0.70
12/28/16 - 12/29/16	-	-	-	-	-	7.11	1179	20.1	-213.1	1.57	7.42	1101	19.4	27.0	5.86	7.66	1116	15.8	26.8	6.00	6.92	1225	20.0	-217.1	1.21

Date	MW-104					MW-105					MW-106					MW-107					MW-108				
	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	pH	E.C.	Temp °C	ORP	DO
12/28/16 - 12/29/16	7.01	1384	16.5	-138.0	1.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.75	1151	16.4	-153.0	1.17

Date	MW-204					MW-205					MW-206					MW-207					MW-208				
	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	pH	E.C.	Temp °C	ORP	DO
12/28/16 - 12/29/16	7.64	1079	16.5	-174.6	1.57	6.97	994	12.5	-130.3	1.58	7.27	1099	17.9	13.4	3.07	7.18	1384	17.6	-134.2	1.27	-	-	-	-	-

Date	MW-304					MW-305					MW-306					MW-307					MW-308				
	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	pH	E.C.	Temp °C	ORP	DO
12/28/16 - 12/29/16	7.18	1103	15.3	-97.9	3.69	7.61	1129	14.9	-27.8	4.95	7.44	1105	16.7	-1.0	6.98	7.43	1118	14.3	-78.0	4.50	7.30	1113	19.2	-182.7	2.15

" - " = 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
08/18/15	91	20,000	24,776	600	32	767	46,020	4,187,820	118,586	5,229
09/15/15	105	19,000	24,881	604	4	105	6,300	661,500	18,732	785
1/11/2016	151	11,000	25,444	628	23	563	33,804	5,104,404	144,540	3,505
3/16/2016	32	170	25,488	629	2	43	2,586	82,752	2,343	1
5/10/2016	35	-	25,607	634	5	120	7,170	-	-	-
									TOTAL	**15,376**

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/m^3	mg/m^3	mg/m^3	mg/m^3	mg/m^3	ppm
SVE-INF	12/8/2011	**2,380**	**7.1**	**5.6**	**2.9**	**15.5**	200
	1/5/2012	**3,360**	**29.8**	**15.8**	**23.6**	**70.4**	262
	3/8/2012	**3,490**	**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
	8/18/2015	**20,000**	**66**	**22**	**36**	**120**	1001
	9/15/2015	**19,000**	**62**	**14**	**41**	**140**	1208
	1/11/2016	**11,000**	**22**	**8.9**	**1.5**	**12**	1610
	3/16/2016	**170**	**0.18**	**0.48**	**0.31**	**3.5**	-
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
8/18/2015	24,776	767.0	323557	5711	6,700	0.00670	0.00177	0.00000390	10.11
9/15/2015	24,881	105.0	325723	2166	900	0.00090	0.00024	0.00000052	0.51
1/11/2016	25,444	563.0	328360	2637	2,900	0.00290	0.00077	0.00000169	2.02
2/16/2016	25,446	1.5	328370	10	1,800	0.00180	0.00048	0.00000105	0.00
5/10/2016	25,607	161.5	330315	1945	-	-	-	-	-
								Total	**146**

* = 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
	8/18/2015	**210**	**72**	**8.3**	**890**	**6,700**	ND<5
	9/15/2015	**430**	**84**	**190**	**2,000**	**9,000**	**3.2**
	1/11/2016	**40**	**25**	**14**	**190**	**2,900**	**1.4**
	2/16/2016	**7.1**	**16**	**5.1**	**69**	**1,800**	ND<0.5
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

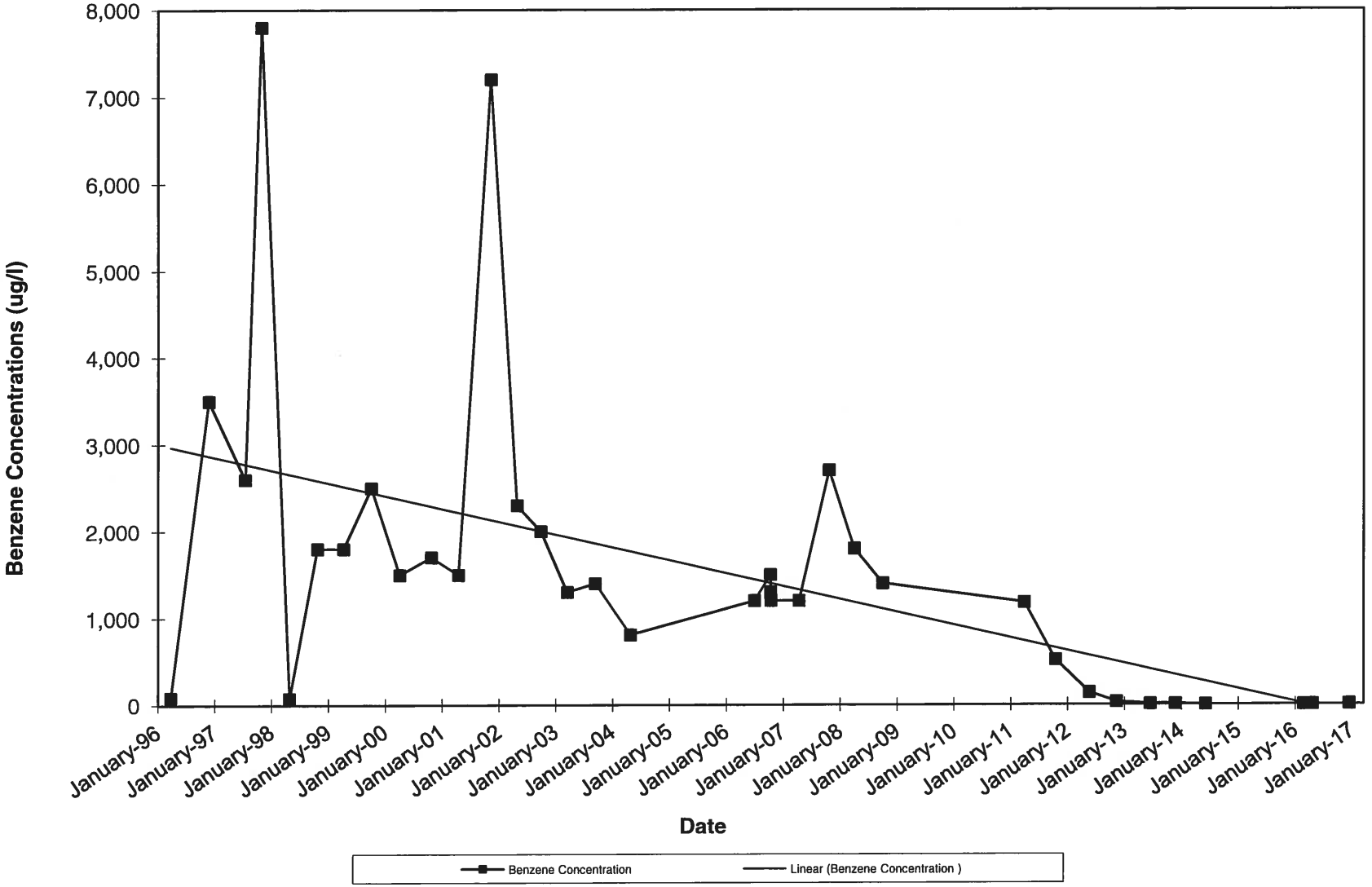


CHART 2: MW-104 - Benzene vs. Time

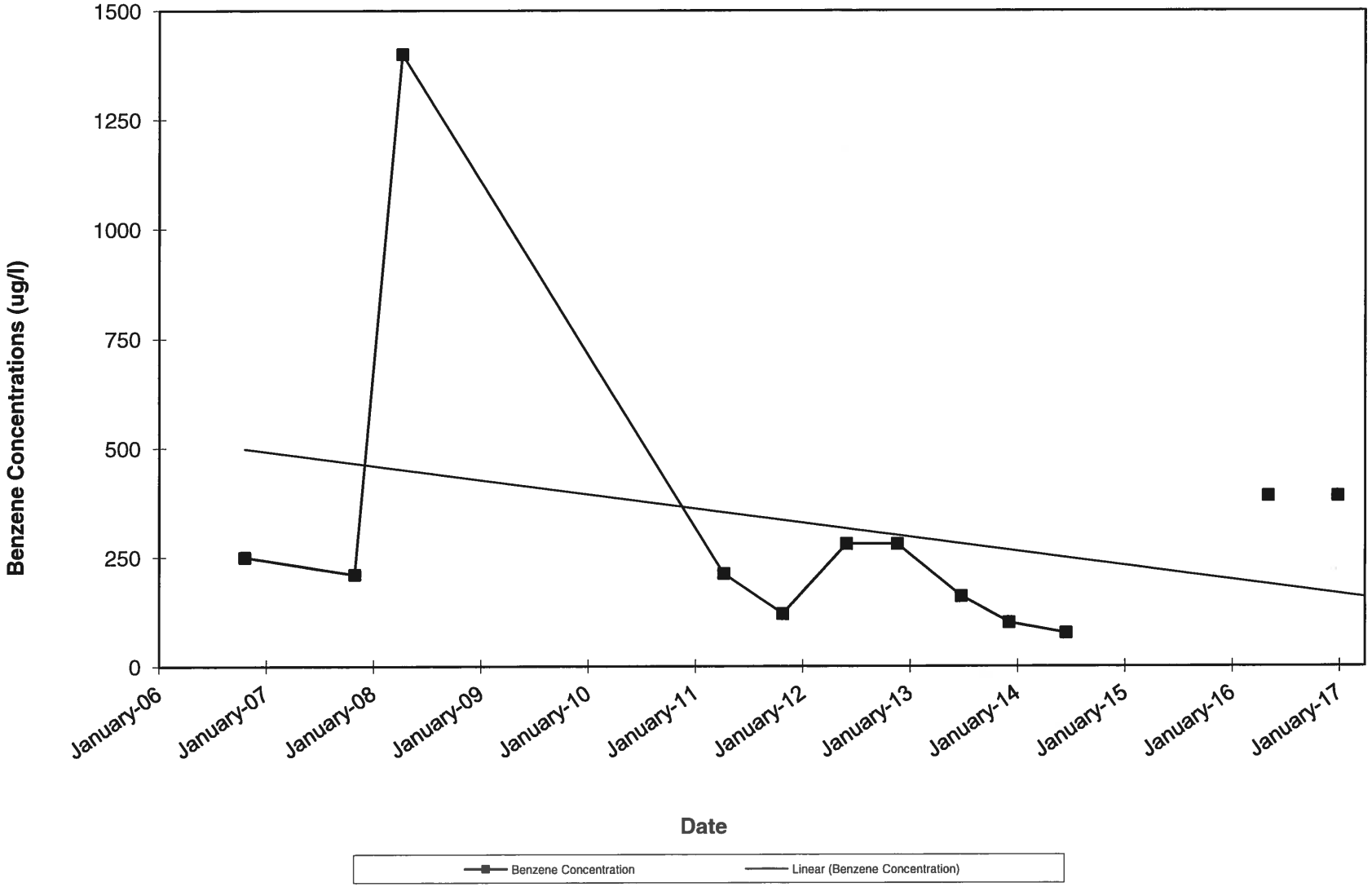


CHART 3: MW-204 - Benzene vs. Time

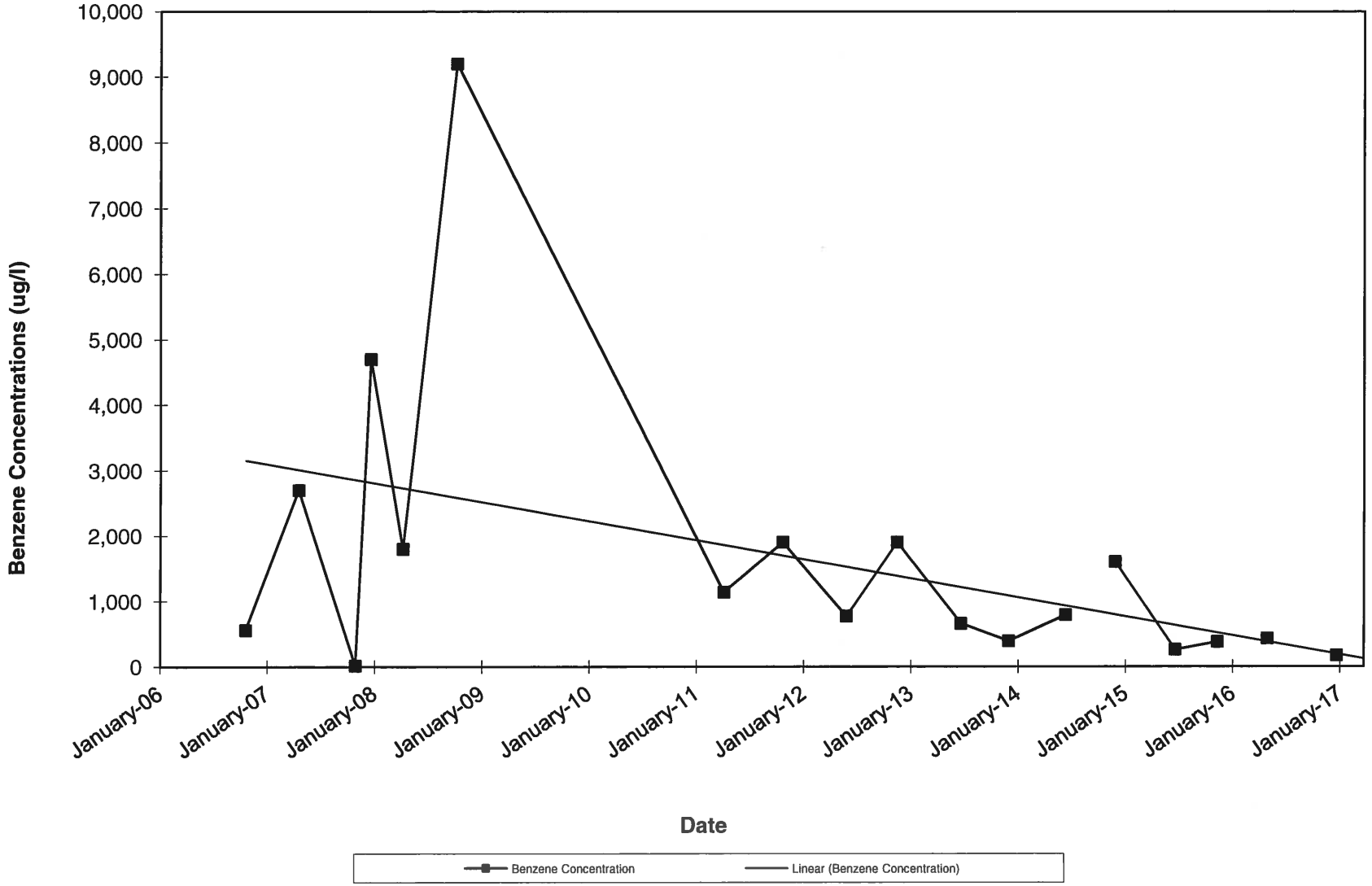


CHART 4: MW-304 - Benzene vs. Time

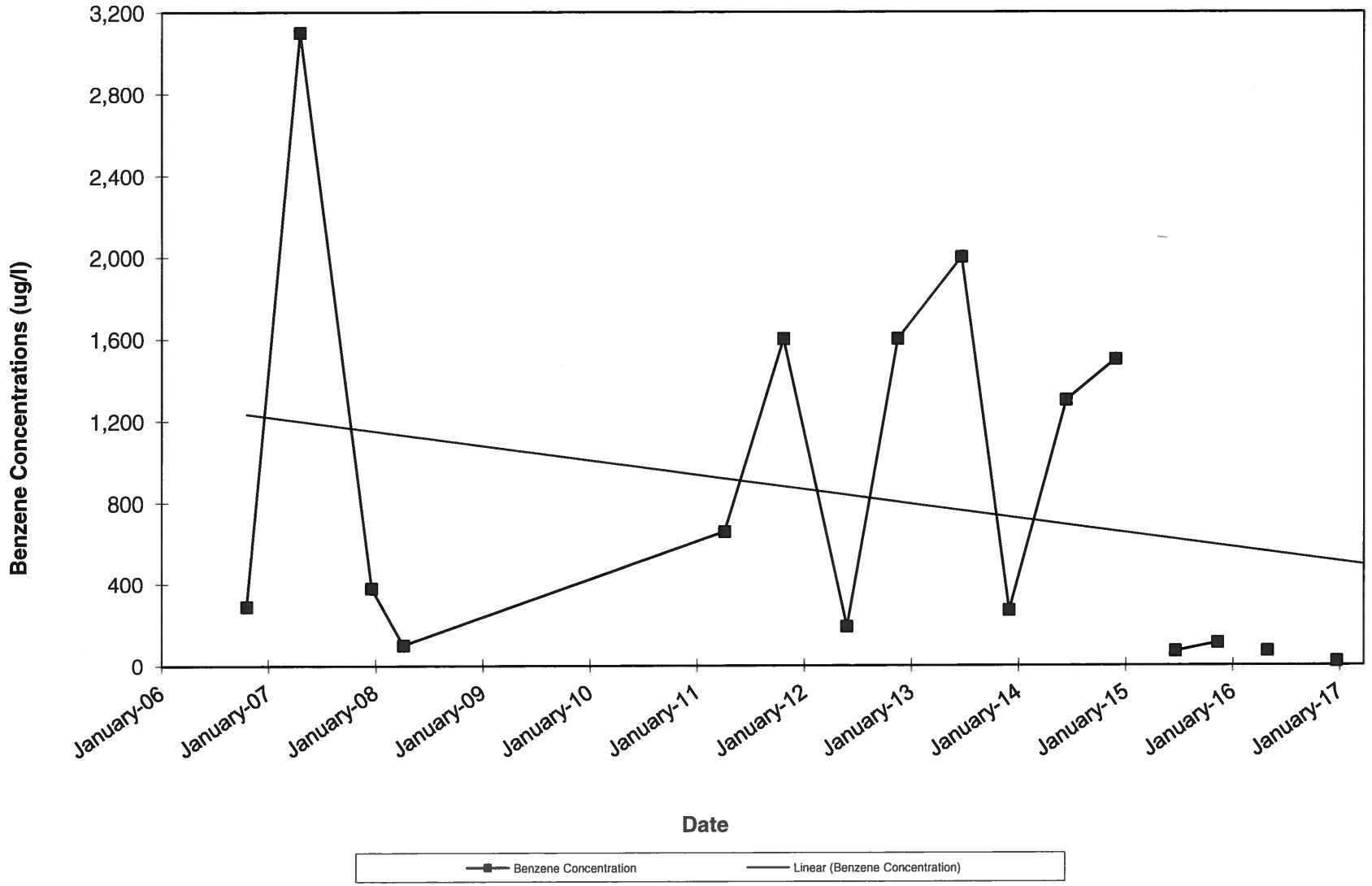


CHART 5: MW-404 - Benzene vs. Time

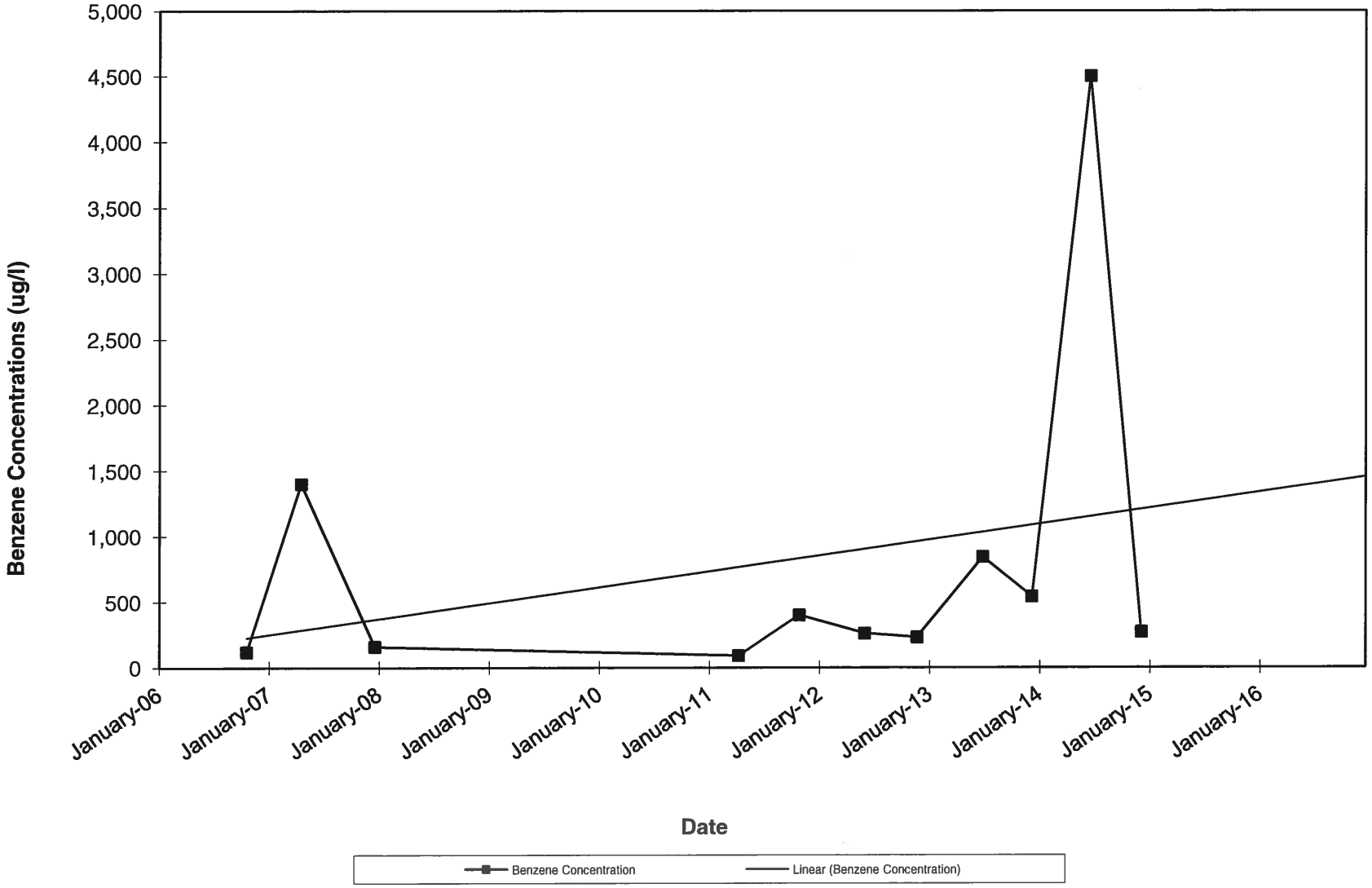


CHART 6: MW-404 - Benzene vs. Time (Less Outlier)

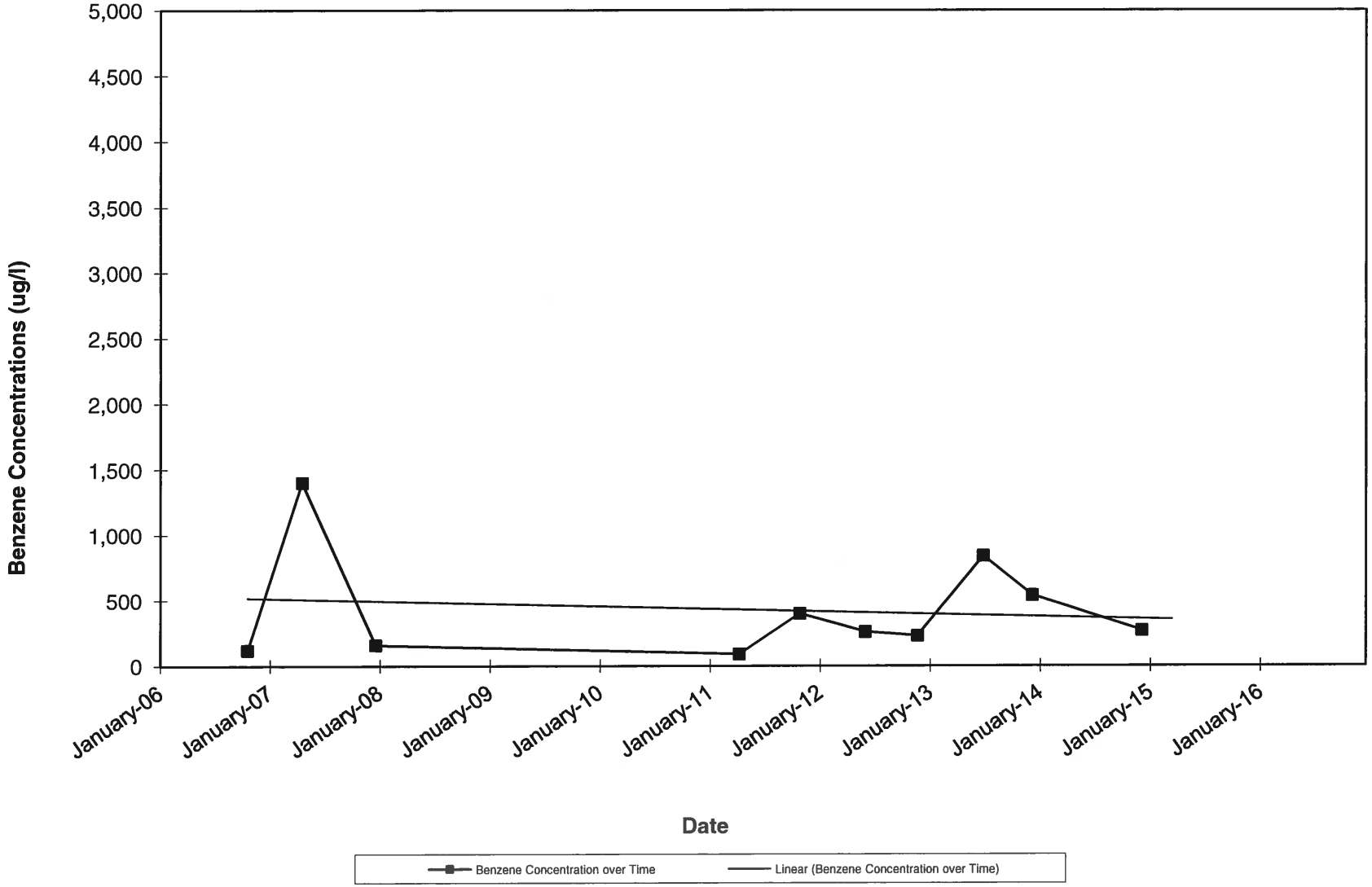


CHART 7

MW-9 Benzene Groundwater Elevation vs. Time

Sullins (Arrow Rentals)

187 North L Street

Livermore, California

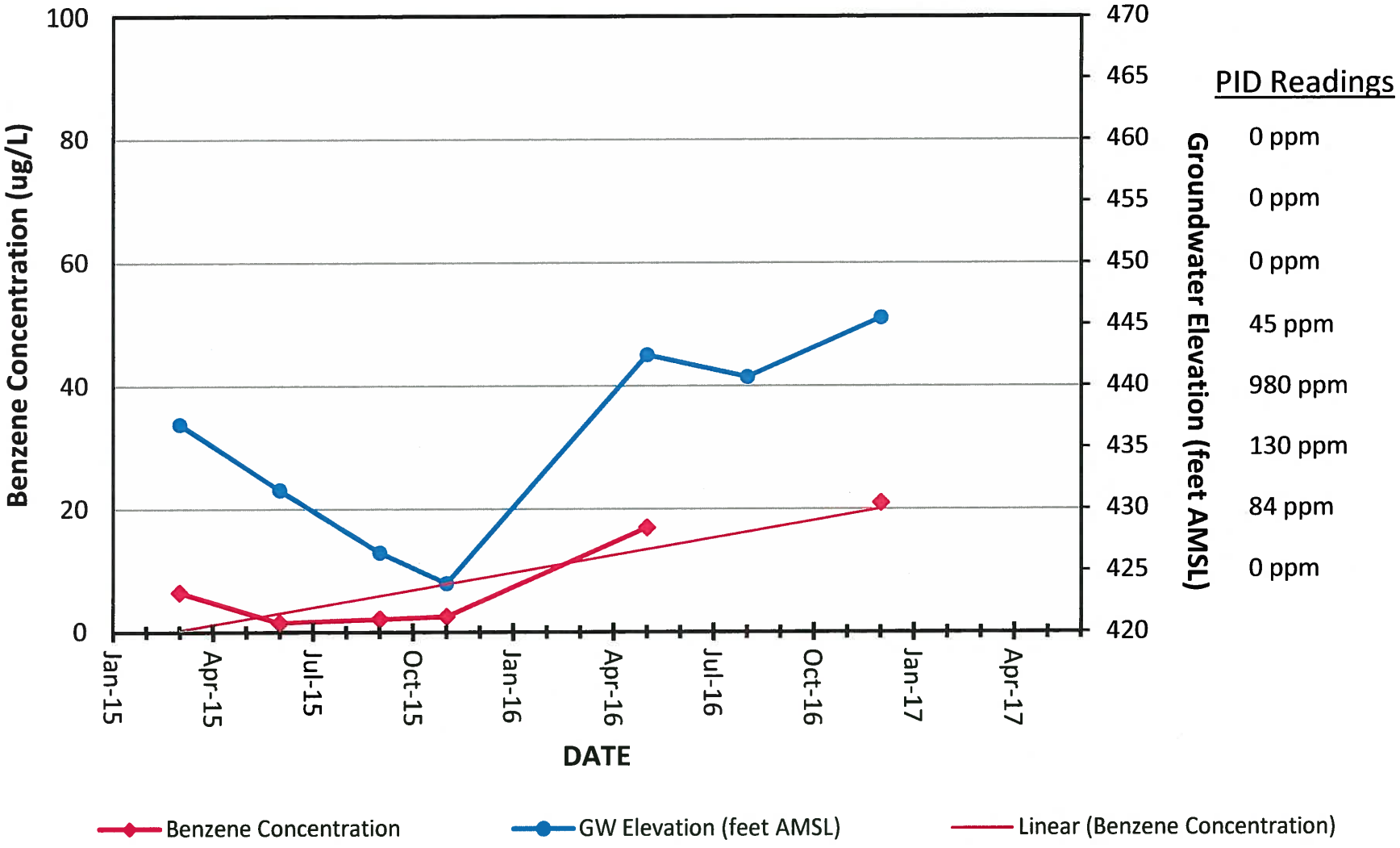


CHART 8

MW-107 Benzene Groundwater Elevation vs. Time

Sullins (Arrow Rentals)

187 North L Street

Livermore, California

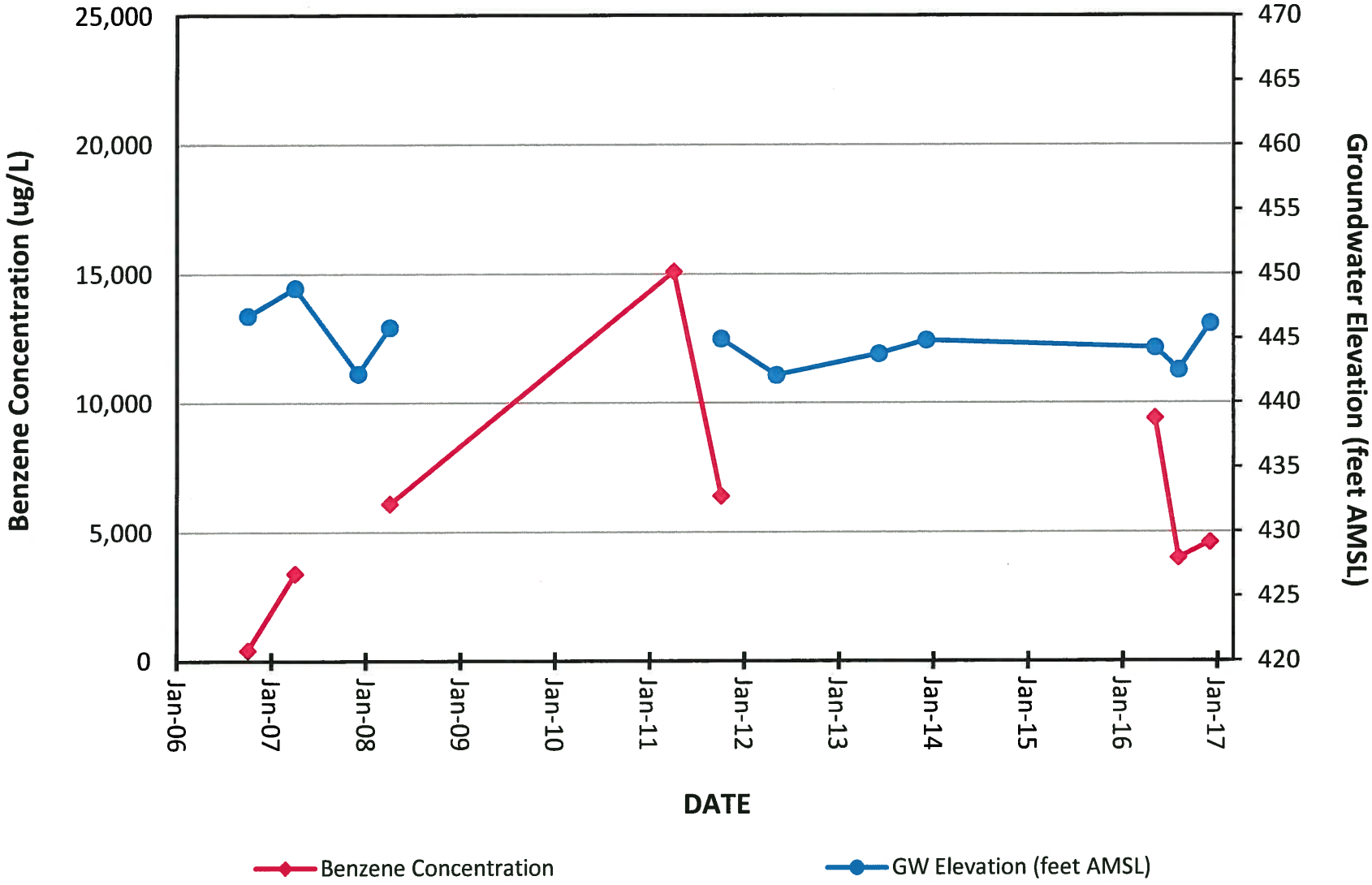


CHART 9

MW-207 Benzene Groundwater Elevation vs. Time

Sullins (Arrow Rentals)

187 North L Street

Livermore, California

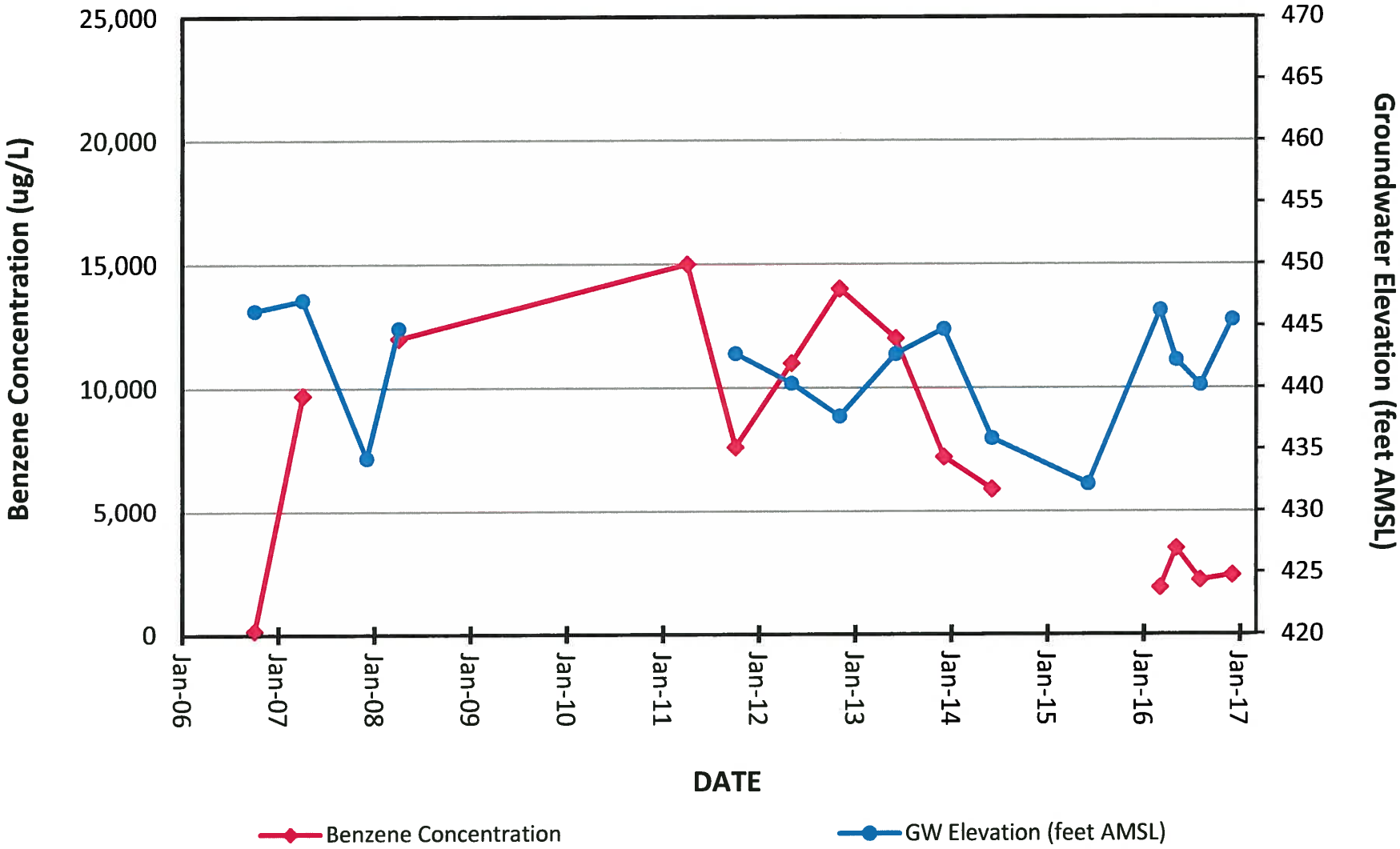


CHART 10

MW-205 Benzene Groundwater Elevation vs. Time

Sullins (Arrow Rentals)

187 North L Street

Livermore, California

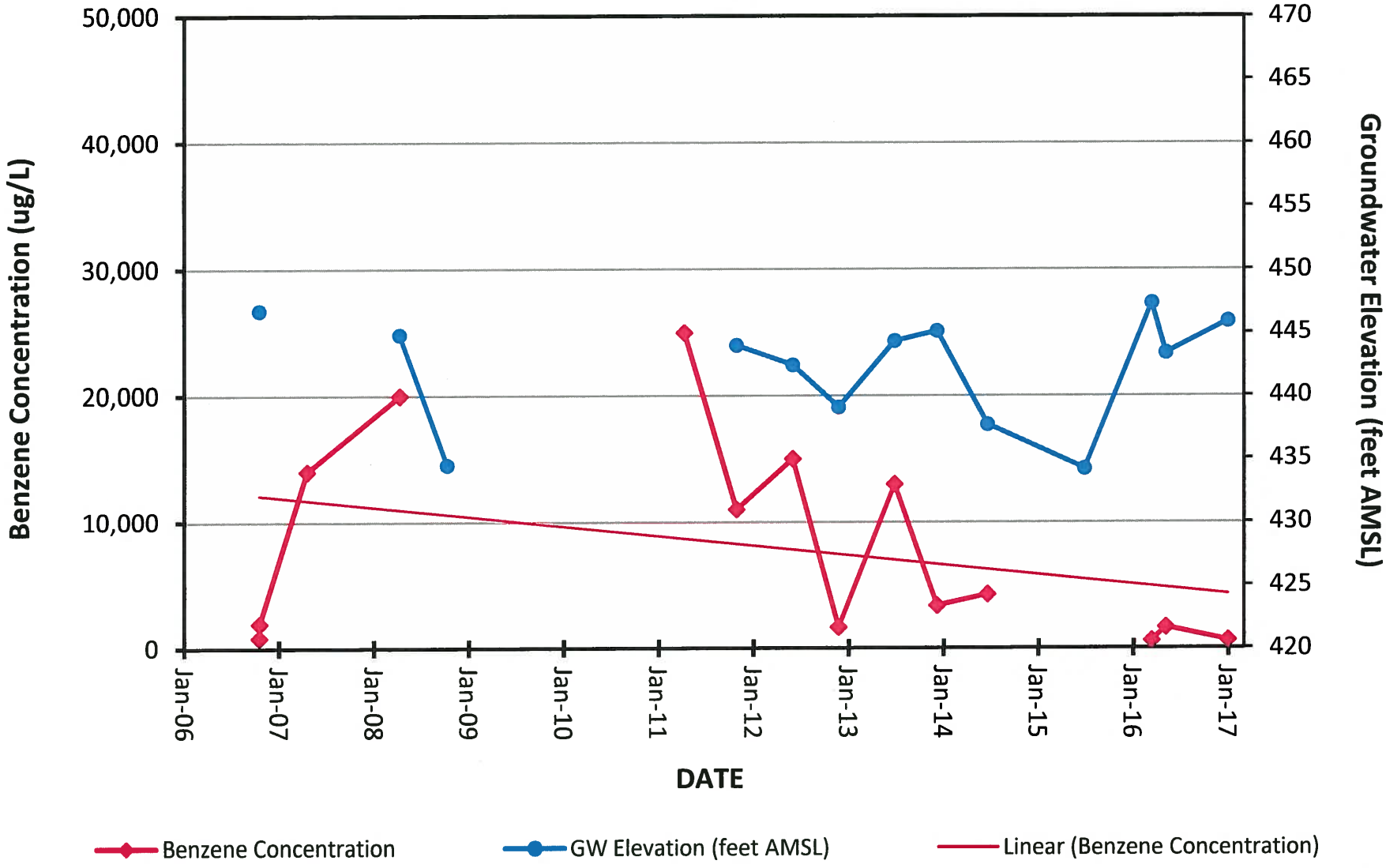


CHART 11
W-1 Benzene Groundwater Elevation vs. Time
Sullins (Arrow Rentals)
187 North L Street
Livermore, California

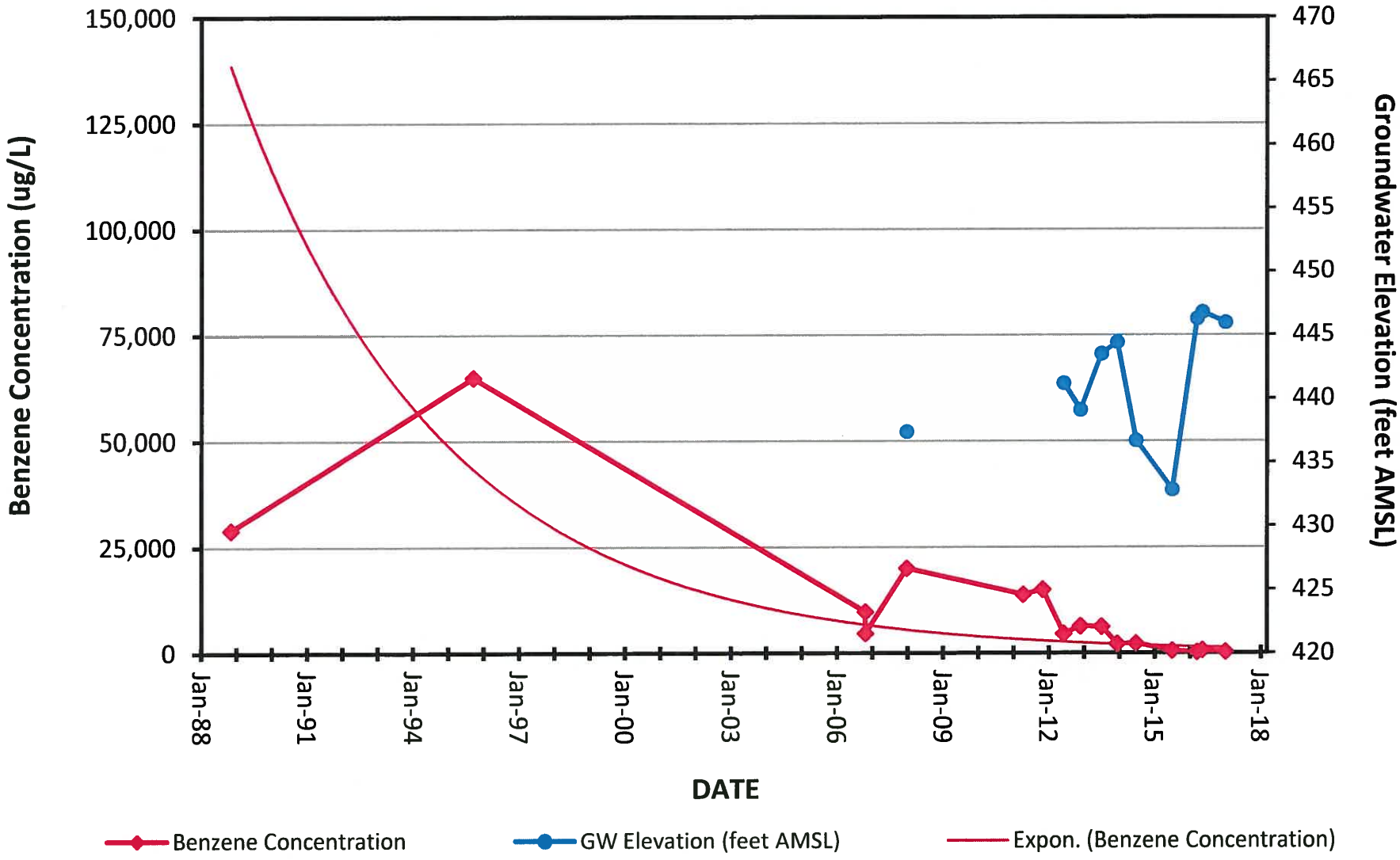


CHART 12

W-A Benzene Groundwater Elevation vs. Time

Sullins (Arrow Rentals)

187 North L Street

Livermore, California

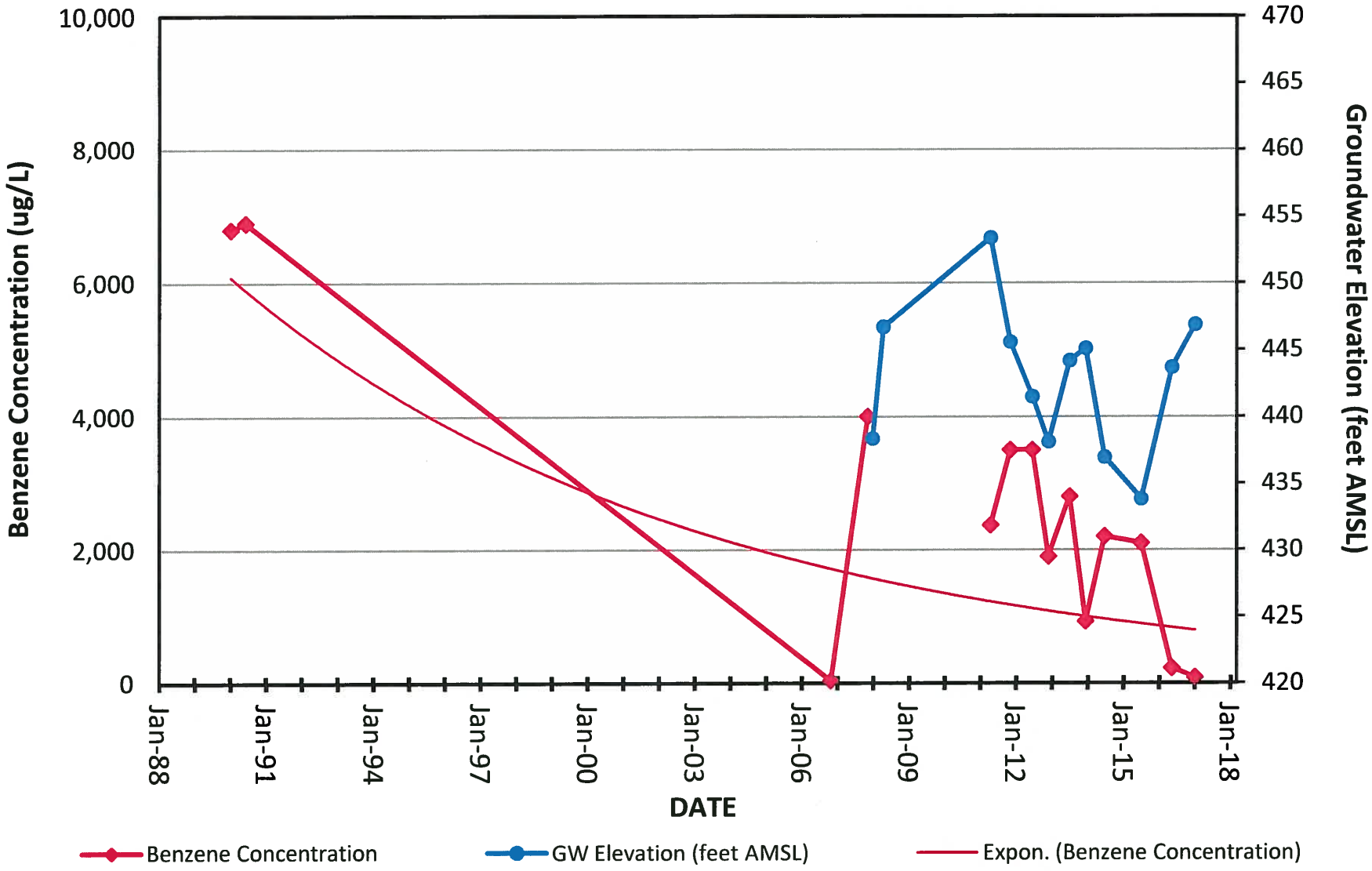


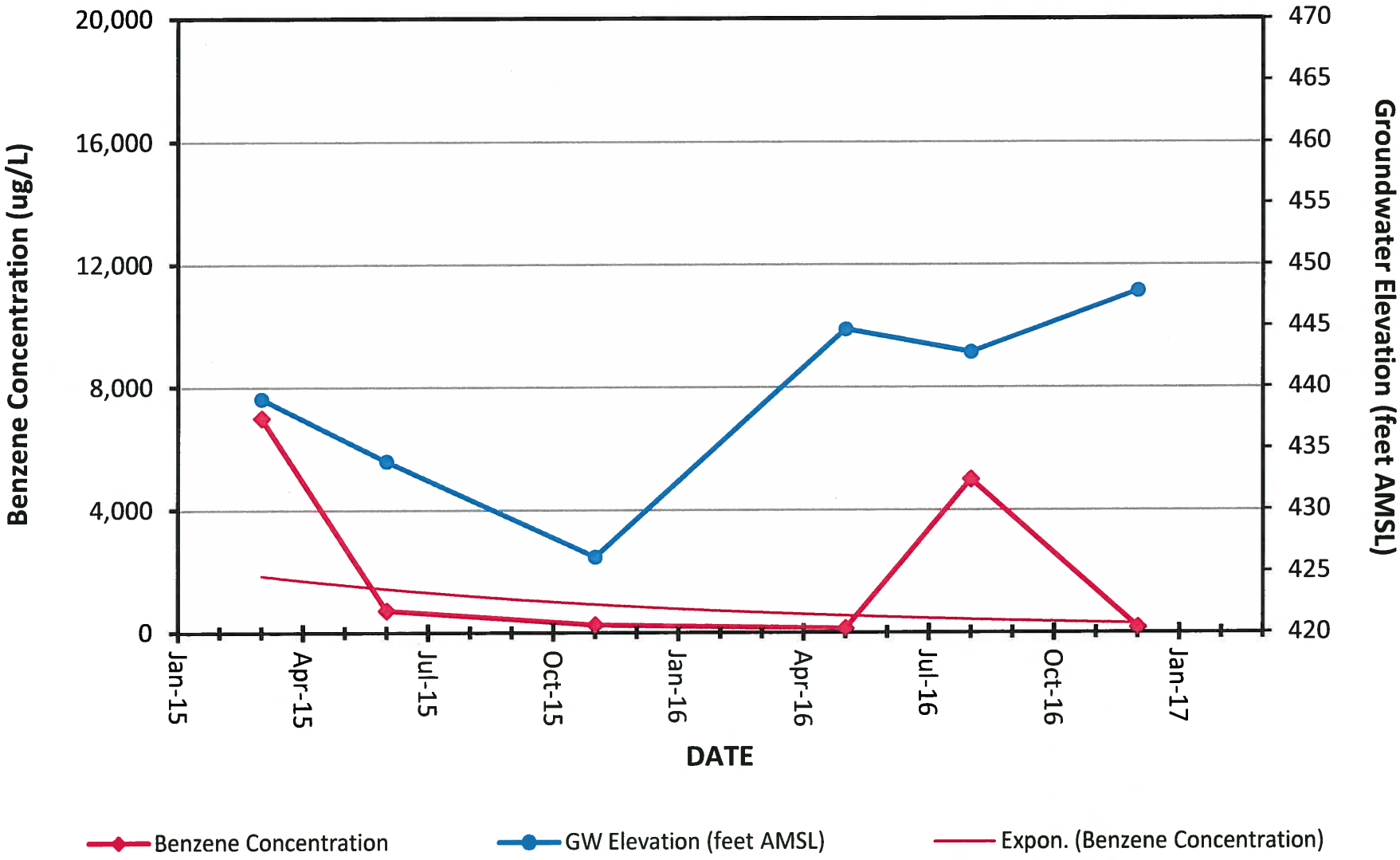
CHART 13

EW-2 Benzene Groundwater Elevation vs. Time

Sullins (Arrow Rentals)

187 North L Street

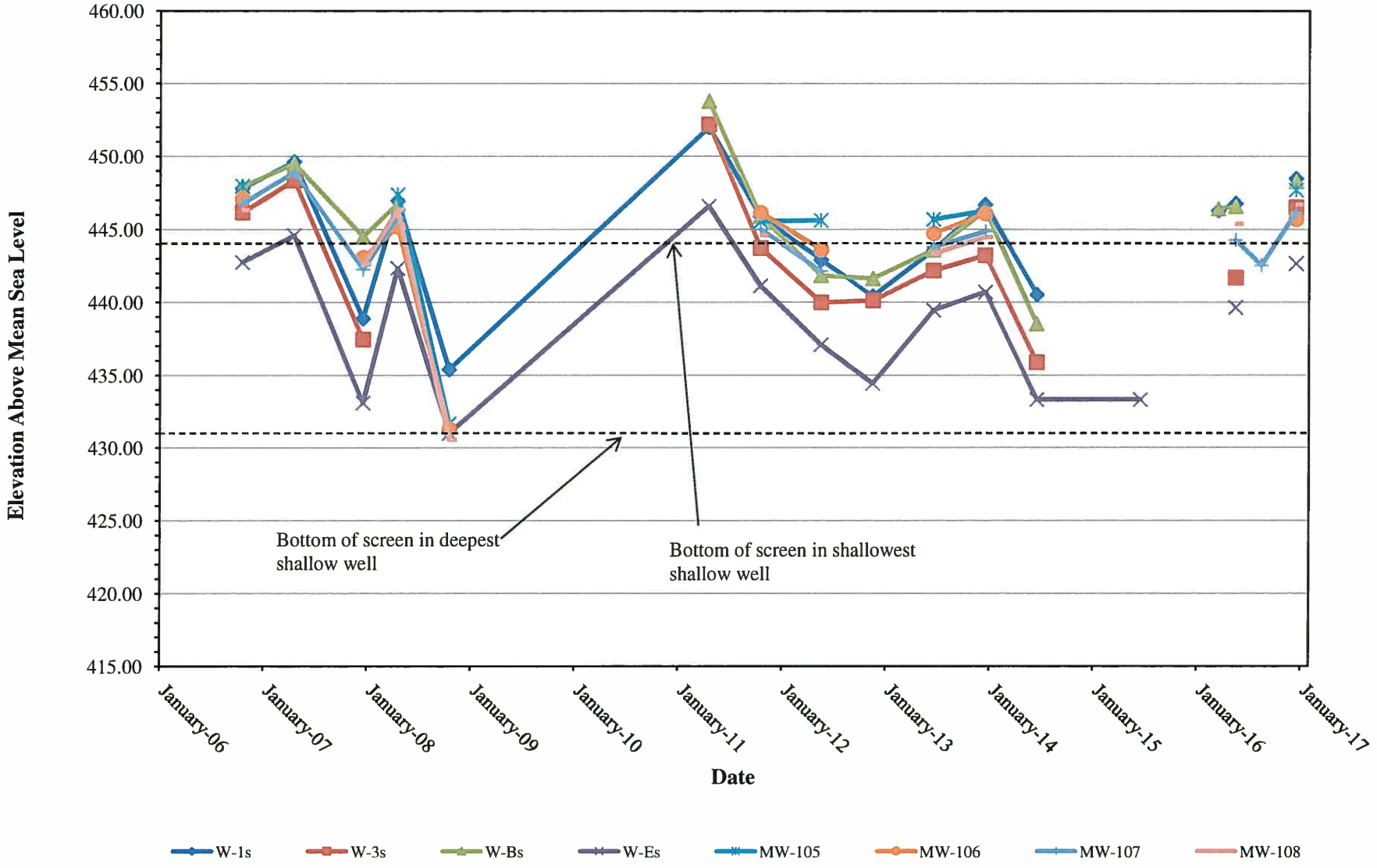
Livermore, California



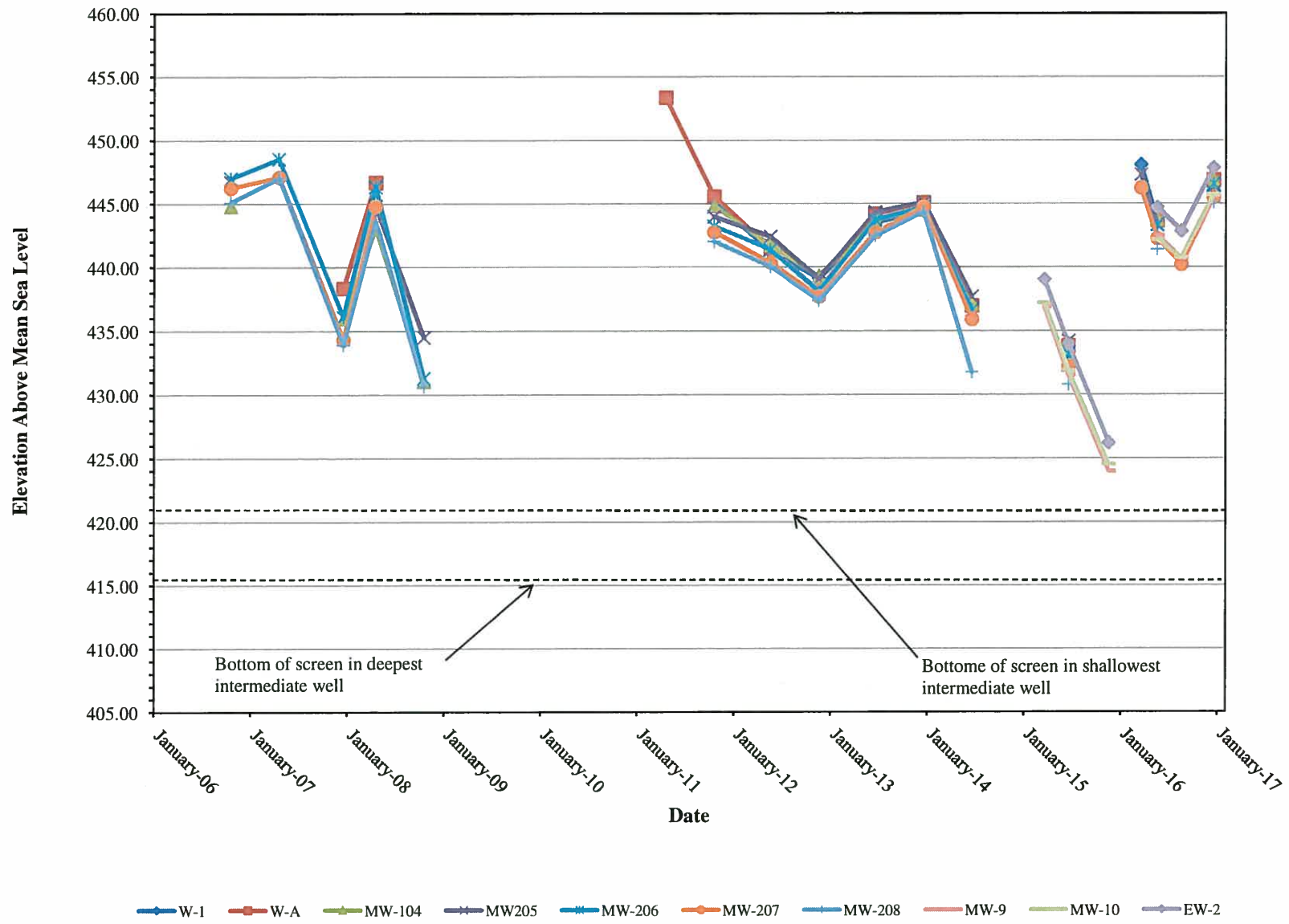
ATTACHMENT A

Hydrographs

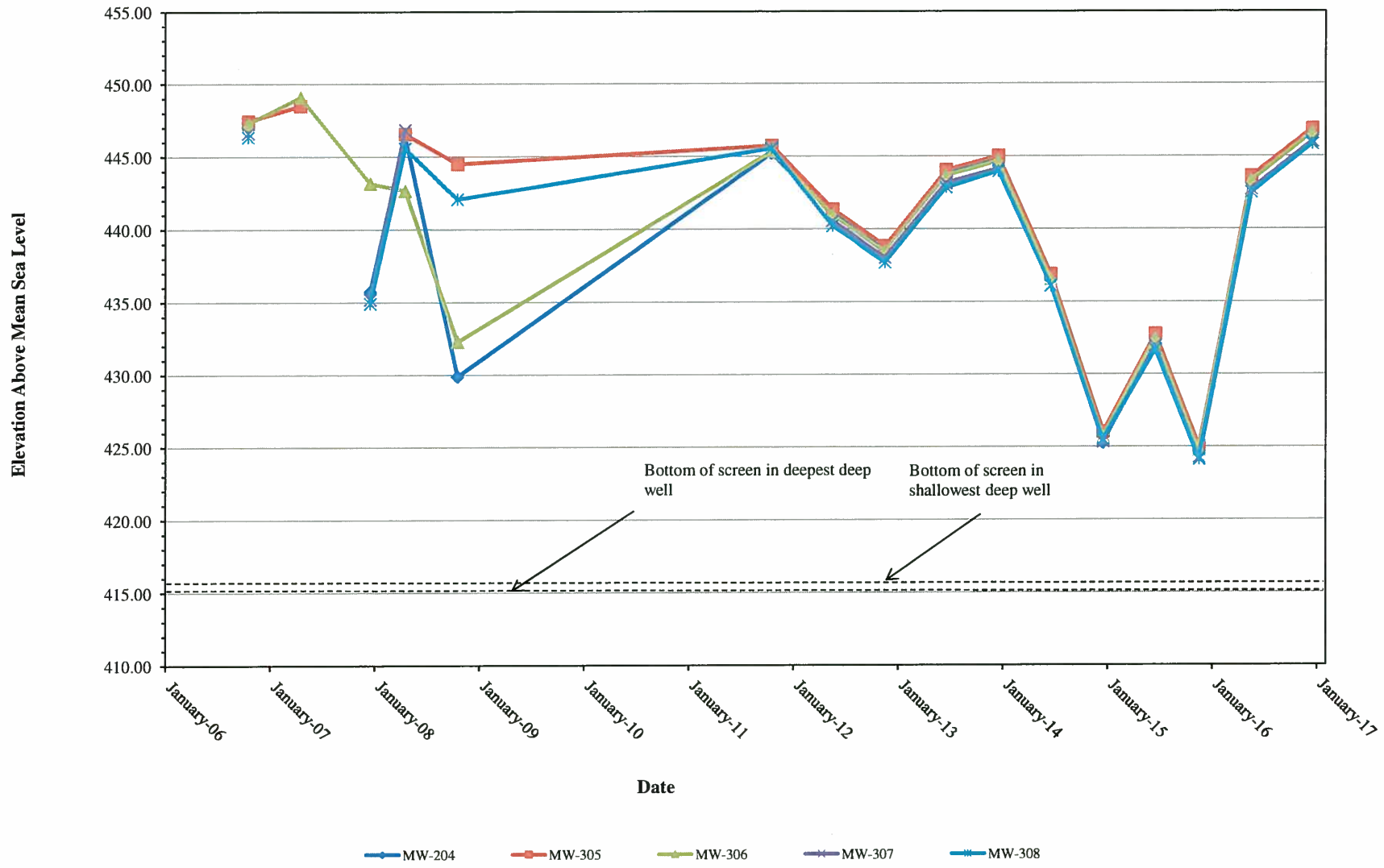
Hydrograph: Shallow Groundwater Monitoring Wells



Hydrograph: Intermediate Groundwater Monitoring Wells



Hydrograph: Deep Groundwater Monitoring Wells



ATTACHMENT B

Groundwater Monitoring Field Notes

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: EW-2

Project No.: 1262.2

Date: 8-26-2016

Project Location: 187 N. L Street
Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1152	0		12				BEGAN PURGING
	3.75	20.31	1280	7.01	-63.2	0.72	GREENISH BLACK, STRONG ODOR, NO SEDS
	7.50						AA
1225	11.25	20.20	1297	7.04	-60.2	0.70	AA
1230							COLLECTED SAMPLE

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	60.00'
* Well TD (ft):	59.63'
Silt Thickness (ft):	
Initial DTW (ft):	38.41'
Water column height (ft):	21.22'
One casing volume (gal):	3.61
** Final DTW (ft):	38.43'
Casing diameter (in):	2"

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

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: ANDREW DORN

Sample Method: Waterra ☐ Bailer ☒ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DPE SYSTEM

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 (L St)

Well I.D.: MW-207

Project No.: 1262.2

Date: 8-26-2016

Project Location: 187 N. L Street
Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1235	0						
1245	0.5						FOAMY, CLEARISH GREEN, MILD ODOR, NO SEDS
1250							COLLECTED SAMPLE

Purge Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other DEDICATED TUBING (HAND PURGE

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	50.00'
* Well TD (ft):	50.00'
Silt Thickness (ft):	
Initial DTW (ft):	40.69'
Water column height (ft):	9.31'
One casing volume (gal):	0.1
** Final DTW (ft):	40.69'
Casing diameter (in):	CMT

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

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: ANDREW DORN

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-107

Project No.: 1262.2

Date: 8-26-2016

Project Location: 187 N. L Street
Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1235	0						
1300	0.2						FOAMY GREEN, STRONG ODOR, NO SEDS
1305							COLLECTED SAMPLE

Purge Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☒ Other DEDICATED LINE HAND PURGING

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	40.00'
* Well TD (ft):	39.83'
Silt Thickness (ft):	
Initial DTW (ft):	38.38'
Water column height (ft):	1.45'
One casing volume (gal):	0.02
** Final DTW (ft):	38.38'
Casing diameter (in):	CMT

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

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: PURGED 0.2 GALLONS BY HAND PURGING & EMPTYING LINE INTO BUCKET.
AFTER RECHARGE, LINE WAS FILLED BY HAND PURGING & REMOVED

Sampled By: LINE TO FILL VOAS ANDREW DORN Andrew Dorn

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 Sullins (L St) **Project No.** 1262.2

Date 8-26-2016 **Technician** ANDREW DORN

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-10		1135	2"	39.08'	–			G	G	G	G	G	G	N	
MW-9		1141	2"	39.14'	–			G	G	G	G	G	G	N	
EW-2	1	1145	2"	38.41'	59.63'			G	G	G	G	G	G	N	
MW-207	2	1149	CMT	40.69'	50.00'			G	G	P	P	N/A	N/A	N	
MW-107	3	1152	CMT	38.38'	39.83'			G	G	P	P	N/A	N/A	N	

Notes:

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

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project Sullins
Project # 1262.2
Location 187 North L Street, Livermore, CA
Weather Sunny

Date 8-26-2016
Time on job 0830 **to** 1450
Record Keeper Andrew Dorn
Wind < 5 MPH
Temp 90°

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Andrew Dorn	Ground Zero	1100	1325

Time	Field Activities
1100	Arrived on-site & began opening all wells - removed extraction line from EW-2
1135	Began DTW/TD measurements
1152	Finished & began purging EW-2 w/ bailer
1230	Collected EW-2 sample
1235	Began purging MW-107 & MW-207
1250	Collected MW-207 sample
1305	Collected MW-107 sample & closed wells
	Began start up of DPE system per Eric's request - 85% propane
	Reinstalled GW extraction line to EW-2
	Started up system on EW-2 only
	Flow = 72 CFM Vacuum = 20" Hg
1325	Left site w/ system operating

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: W-Es

Date: 12-28-2016

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1057	0						
1101	1.75						
1106	3.50						
1112	5.25	19.22	970	7.11	117.9	1.36	CLEAR, NO ODOR, V. FEW SEDS
1115							COLLECTED SAMPLE

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	45.00
* Well TD (ft):	44.20'
Silt Thickness (ft):	
Initial DTW (ft):	34.09'
Water column height (ft):	10.11'
One casing volume (gal):	1.72
** Final DTW (ft):	34.17'
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:

Sampled By: ANDREW DORN

Sample Method: Waterra ☐ Bailer ☒ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DRE

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 (L St)

Well I.D.: MW-9

Project No.: 1262.2

Date: 12/28/16

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1059	1.0	19.					water clear
1111	5.25						no odor
1127	10.50						Brown silt
1139	15.75	19.41	1101	7.42	27.0	5.86	
1155							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	65.00'
* Well TD (ft):	65.17'
Silt Thickness (ft):	
Initial DTW (ft):	34.33'
Water column height (ft):	30.84'
One casing volume (gal):	5.24
** Final DTW (ft):	34.30'
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: _____

Sampled By: Anthony Stowers

Sample Method: Waterra ☐ Bailer ☒ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DPE

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

BLACK 34.06'
RED 34.06'

Project Name: Sullins (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: MW-10

Date: 12-28-16

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
~~—~~	~~—~~	~~17.08~~	~~734~~	~~7.15~~	~~284.9~~	~~6.16~~	
1220	1.0						water clear
1229	5.25						W open.
1239	10.50						@ Bucket size
1250	15.75	15.81	1116	7.66	26.8	6.00	↓
1305							Sampled

Purge Method: ☐ Dedicated Waterra ☐ Centrifugal pump with dedicated tubing ☑ Other Disposable Bailer

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	65.00'
* Well TD (ft):	64.95'
Silt Thickness (ft):	
Initial DTW (ft):	34.12'
Water column height (ft):	30.83'
One casing volume (gal):	5.24
** Final DTW (ft):	34.06'
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:

Sampled By: Anthony Sloan

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: W-Bs

Project No.: 1262.2

Date: 12-28-16

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1045	0	17.08	734	7.15	-284.9	6.16	CLEAR, V. MILD ODOR, NO SEDS
1125	17.5	20.33	458	6.94	-41.6	2.13	AA, DTW @ 17.5 GAL = 35.1' BTOC
1203	35	20.50	488	6.95	-57.3	2.89	AA
1241	52.5	20.49	497	6.96	-57.7	3.03	AA, DTW @ 52.5 GAL = 37.2' BTOC
1410							COLLECTED SAMPLE

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	45.00
* Well TD (ft):	44.40'
Silt Thickness (ft):	
Initial DTW (ft):	32.63'
Water column height (ft):	11.77'
One casing volume (gal):	~~2.00~~ 17.42
** Final DTW (ft):	33.50'
Casing diameter (in):	6"

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

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: DRAWDOWN TO 37.2' BTOC - ALLOWED RECHARGE PRIOR TO SAMPLING

Sampled By: ANDREW DORN

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DPE

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 (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: W-1

Date: 12/28/16

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1330	1.0						Gas odor
1340	3.25						water.
1355	6.50						Ground still
1412	9.75	16.30	1470	6.79	-62.4	1.73	↓
1420							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	56.50'
* Well TD (ft):	53.98'
Silt Thickness (ft):	
Initial DTW (ft):	34.80'
Water column height (ft):	19.18'
One casing volume (gal):	3.25
** Final DTW (ft):	34.78'
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: _____

Sampled By: Anthony Thomas

Sample Method: Waterra ☐ Bailer ☒ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DTE

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 (L St)

Well I.D.: EW-2

Project No.: 1262.2

Date: 12-28-2016

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1450	0	18.74	875	6.82	-255.7	2.29	CLEARISH D.BROWN, MILD ODOR, V. FEW SEDS
1505	4.5	19.96	1076	6.96	-215.8	2.02	AA
1520	9.0	19.91	1216	6.92	-216.6	1.30	AA CLEARER
1536	13.5	19.95	1225	6.92	-217.1	1.21	AA
1540							

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	60.00'
* Well TD (ft):	59.53'
Silt Thickness (ft):	
Initial DTW (ft):	33.40'
Water column height (ft):	26.13'
One casing volume (gal):	4.44
** Final DTW (ft):	33.39'
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: _____

Sampled By: ANDREW DORN

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DPE

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 (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: W-1s

Date: 12-28-2016

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1246	0	20.59	1125	7.18	-218.9	1.28	CLEAR, MILD ODOR, NO SEDS
1317	17.5	20.72	1130	7.15	-192.4	1.12	AA
1355	35.0	20.52	1111	7.03	-169.2	1.26	AA
1430	52.5	20.50	1108	6.99	-160.3	1.35	AA, DTW @ 52.5 GAL = 38.6' BTOC
1550							

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	45.00
* Well TD (ft):	44.50'
Silt Thickness (ft):	
Initial DTW (ft):	32.70'
Water column height (ft):	11.80'
One casing volume (gal):	17.46
** Final DTW (ft):	34.91'
Casing diameter (in):	6"

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

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: MAX. DRAWDOWN TO 38.6' BTOC - ALLOWED RECHARGE PRIOR TO SAMPLING

Sampled By: ANDREW DORN Andrew Dorn

Sample Method: Waterra ☒ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DPE

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 Task 3

Project Location: 187 North L Street
Livermore, Ca

Well I.D.: MW-306

Date: 12/29/16

Samples Sent To: BC LABS

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0752	0						water clear
0801	1.0						no odor
0915		16.65	1105	7.44	-1.0	6.98	Sampled
09							

Pumping Rate: _____ gal / min

Purge Method: CMT

Well Constructed TD (ft):	
Casing Diameter (in):	CMT
* Well TD (ft):	65.83
Silt Thickness (ft):	
Initial DTW (ft):	34.20'
Water Column Height (ft):	~~31.83~~ 31.63'
One Casing Volume (gal):	0.3
** Final DTW (ft):	34.16'
** % Recharge:	
Sample Method:	CMT

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 Sloss (Sign) Anthony Sloss

* = 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 Task 3

Project Location: 187 North L Street

.011 Livermore, Ca

Well I.D.: MW-206

Date: 12/29/16

Samples Sent To: BC LABS

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0821	0						water clear
0830	.8						no odor
0925	>0.8	17.94	1099	7.27	73.4	3.07	
0925							Sampled

Pumping Rate: _____ gal / min

Purge Method: Cnt

Well Constructed TD (ft):	
Casing Diameter (in):	Cnt
* Well TD (ft):	49.93
Silt Thickness (ft):	
Initial DTW (ft):	33.00
Water Column Height (ft):	16.93
One Casing Volume (gal):	.2
** Final DTW (ft):	32.99
** % Recharge:	

Sample Method: Cnt

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 Sioma (Sign) Anthony Sioma

* = 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 Task 3

Project Location: 187 North L Street
Livermore, Ca

Well I.D.: MW-106

Date: 12/29/16

Samples Sent To: BC LABS

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0840	0						clear,
0853	.35						well dry
"							
0935							Sampled

Pumping Rate: _____ gal / min

Purge Method: CNT

Well Constructed TD (ft):	
Casing Diameter (in):	CNT
* Well TD (ft):	37.63
Silt Thickness (ft):	
Initial DTW (ft):	33.00
Water Column Height (ft):	4.63
One Casing Volume (gal):	.1
** Final DTW (ft):	33.10'
** % Recharge:	

Sample Method: CNT

Sample Containers used: 2 # VOAs HCl preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: COLLECTED SAMPLE BY REMOVING TUBING & EMPTYING INTO VOAs
ONLY TWO were collected. (VOAs)

Sampled By:

(Print) Anthony Scuma (Sign) Anthony Scuma

* = 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 (L St)

Well I.D.: MW-308

Project No.: 1262.2

Date: 12/29/16

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1013	0						water clear
1024	.9	19.15	1113	7.30	-182.7	2.15	no odor
1050							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	66.00'
* Well TD (ft):	66.10
Silt Thickness (ft):	
Initial DTW (ft):	34.81
Water column height (ft):	31.29
One casing volume (gal):	.3
** Final DTW (ft):	34.81'
Casing diameter (in):	CMT

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 Simon

Sample Method: Waterra ☐ Bailer ☐ Other ☒

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. CMT = 0.011, 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 (L St)

Well I.D.: MW-208

Project No.: 1262.2

Date: 12/29/16

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1028	0						Slight Blackish color
1100	.6						Slight Gas odor Well dry.
1110							Sample

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	52.00'
* Well TD (ft):	51.97
Silt Thickness (ft):	
Initial DTW (ft):	35.52
Water column height (ft):	16.45
One casing volume (gal):	.2
** Final DTW (ft):	
Casing diameter (in):	CMT

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 Sam

Sample Method: Waterra ☐ Bailer ☐ Other ☒

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☒ No

No. of Drums: DPE

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 (L St)

Well I.D.: MW-108

Project No.: 1262.2

Date: 12/29/16

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1140	0.3	16.43	1151	6.75	-153.0	1.17	MILKY GRAY/GREEN, BUBBLES, MILD ODOR, NO SEDS
1140							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	40.00'
* Well TD (ft):	40.00
Silt Thickness (ft):	
Initial DTW (ft):	33.91
Water column height (ft):	6.09
One casing volume (gal):	.1
** Final DTW (ft):	33.96'
Casing diameter (in):	CMT

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

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: _____

Sampled By: Anthony Tamm

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-307

Project No.: 1262.2

Date: 12-29-2016

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1150	0						CLEAR, NO ODOR, NO SEDS
1225	1.1	14.25	1118	7.43	-78.0	4.50	AA
1230							COLLECTED SAMPLE

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	66.00'
* Well TD (ft):	66.10'
Silt Thickness (ft):	
Initial DTW (ft):	34.90'
Water column height (ft):	31.20'
One casing volume (gal):	0.35
** Final DTW (ft):	34.90'
Casing diameter (in):	CMT

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: ANDREW DORN Andrew Dorn

Sample Method: Waterra ☐ Bailer ☐ Other ☒

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. CMT = 0.011, 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 (L St)

Well I.D.: MW-207

Project No.: 1262.2

Date: 12-29-2016

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1150	0						MILKY BLACK, STRONG ODOR, NO SEDS
1217	0.6	17.55	1384	7.18	-134.2	1.27	CLEARISH BLACK, AA
1240							COLLECTED SAMPLE

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	50.00'
* Well TD (ft):	50.00'
Silt Thickness (ft):	
Initial DTW (ft):	35.39'
Water column height (ft):	14.61'
One casing volume (gal):	0.17
** Final DTW (ft):	35.39'
Casing diameter (in):	CMT

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: ANDREW DORN

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: MW-304 2

Date: 12/29/16

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1158	Ø						LT Grounds set
1214	1.5	15.25	1103	7.18	-97.9	3.69	Strong Gas odor
1250							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	75.50'
* Well TD (ft):	75.50
Silt Thickness (ft):	
Initial DTW (ft):	34.31
Water column height (ft):	41.19
One casing volume (gal):	.45
** Final DTW (ft):	34.30'
Casing diameter (in):	CMT

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: Anthony Sumner

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: MW-204

Date: 12/29/16

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1219	0						wtr clear
1230	1.1						slight Gas odor
1300		16.52	1079	7.64	-174.6	1.57	Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	66.50'
* Well TD (ft):	66.53
Silt Thickness (ft):	
Initial DTW (ft):	34.21
Water column height (ft):	32.32
One casing volume (gal):	.35
** Final DTW (ft):	
Casing diameter (in):	CMT

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 Scorse

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-104 4

Project No.: 1262.2

Date: 12/29/16

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1233	0						Water Clear
1241	.6						Strong Gas odor
1310		16.47	1384	7.07	-138.0	1.55	Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	50.50'
* Well TD (ft):	50.41
Silt Thickness (ft):	
Initial DTW (ft):	34.02
Water column height (ft):	16.39
One casing volume (gal):	.18
** Final DTW (ft):	34.02'
Casing diameter (in):	CMT

Sample Containers used: NA # VOAs NA preserved ____ non-preserved

_____ # amber liters _____ preserved _____ non-preserved

_____ # polys _____ _____ preserved _____ non-preserved

_____ # polys _____ _____ preserved _____ non-preserved

Notes: _____

Sampled By: Anthony Sam

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: MW-305

Date: 12/29/16

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1352	0						Bromine odor
1408	1.1						no odor
1415		14.87	1129	7.61	-27.8	4.95	Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	66.00'
* Well TD (ft):	65.93
Silt Thickness (ft):	
Initial DTW (ft):	34.24
Water column height (ft):	31.69
One casing volume (gal):	.348
** Final DTW (ft):	34.21'
Casing diameter (in):	CMT

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: Anthony Tromm

Sample Method: Waterra ☐ Bailer ☐ Other ☐

* = measured ** = @ sampling

Purged Water Drummed: ☐ Yes ☐ No

No. of Drums:

Gallons per foot of casing. CMT = 0.011, 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 (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: MW-205

Date: 12/29/16

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1425	0						@ Ground surface
1435	.41						dry. Slight Gas Odor
1500		12.45	994	6.97	-130.3	1.58	Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	48.00'
* Well TD (ft):	48.07
Silt Thickness (ft):	
Initial DTW (ft):	35.21
Water column height (ft):	12.8
One casing volume (gal):	.14
** Final DTW (ft):	35.33'
Casing diameter (in):	CMT

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 Scoma

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-107

Project No.: 1262.2

Date: 12-29-2016

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1150	0.0						MILKY GRAY, STRONG ODOR, NO SEDS
1212	0.3	15.2					AA, CLEARER

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	40.00'
* Well TD (ft):	39.40'
Silt Thickness (ft):	
Initial DTW (ft):	34.75'
Water column height (ft):	4.65'
One casing volume (gal):	0.06
** Final DTW (ft):	34.73'
Casing diameter (in):	CMT

Sample Containers used: _____ # VOAs _____ preserved ____ non-preserved

_____ # amber liters _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

_____ # polys _____ _____ preserved ____ non-preserved

Notes: MAX DRAWDOWN TO 36.3' BTOC - ALLOWED RECHARGE BEFORE SAMPLING

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

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Project No.: 1262.2

Project Location: 187 N. L Street

Livermore, CA

Well I.D.: W-A

Date: 12-29-2016

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (µS/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
0909	0	18.36	1220	7.09	-197.8	5.76	BLACK, STRONG ODOR, NO SEDS
	12.25	20.03	1216	7.10	-235.5	1.51	CLEARISH BLACK, MILD ODOR, NO SEDS
	24.50	20.18	1185	7.13	-216.5	1.49	AA
1246	36.75	20.14	1179	7.11	-213.1	1.57	AA
12							

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	63.00
* Well TD (ft):	53.00'
Silt Thickness (ft):	
Initial DTW (ft):	34.15'
Water column height (ft):	18.85'
One casing volume (gal):	12.25
** Final DTW (ft):	34.50'
Casing diameter (in):	4"

Sample Containers used: _____ # VOAs _____ preserved _____ non-preserved

_____ # amber liters _____ preserved _____ non-preserved

_____ # polys _____ _____ preserved _____ non-preserved

_____ # polys _____ _____ preserved _____ non-preserved

Notes: MAX DRAWDOWN TO 37.3' BTOC - ALLOWED RECHARGE PRIOR TO SAMPLING

Sampled By: ANDREW DORN Andrew Dorn

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 Sullins (L St)
Date 12-28-2016

Project No. 1262.2
Technician A. DORN & A. SLOMA

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
Δ	W-Es		0920	2"	~~33~~ 34.09'	44.20'	-	-	G	G	G	G	G	G	Y	
	W-3s	-	-	-	-	44.45'	-	-	-	-	-	-	-	-	-	DISABLE EQUIPMENT OVER WELL COULD NOT ACCESS
	MW-9		0929	2"	34.33'	65.17'	-	-	G	→					Y	
	MW-10		0935	2"	34.12'	64.95'	-	-	G	→					Y	
	W-Bs		0940	6"	32.63'	44.40'	-	-	G	G	P	G	G	G	N	
*	W-1s		0946	6"	32.70'	49.50'	-	-	G	G	P	G	G	G	N	
*	W-A		0952	4"	34.15'	53.00'	-	-	G	G	G	G	G	G	N	
*	W-1		0956	2"	34.80'	53.98'										
	EW-2		1000	2"	33.40'	59.53'										

Notes: Δ CMT WATER LEVEL METER, * WELL TOP MODIFIED

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

Water Level Monitoring Record

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

Date 12-28-2016 **Technician** A.DORN & A.SCOMA

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
1	MW-306		0933	CMT	34.20'	65.83'	-	-	G	G	P	G	N/A	N/A	Y	
3	MW-206		0937	CMT	34.22'	49.93'	-	-								
4	MW-106		0940	CMT	35.09'	37.63'	-	-								
5	MW-6	-	-	-	DRY	-	-	-								
1	MW-308		0952	CMT	34.81'	66.10'	-	-								
2	MW-208		0955	CMT	35.52'	51.97'	-	-								
3	MW-108		0959	CMT	33.91'	40.00'	-	-								
1	MW-307		1022	CMT	34.90'	66.10'	-	-								
1	MW-305		1017	CMT	34.24'	65.93'	-	-	G	G	P	G	N/A	N/A	Y	
2	MW-205		1019	CMT	35.21'	48.01'	-	-								
3	MW-105		1022	CMT	33.40'	36.55'	-	-								
1	MW-404	-	-	-	-	30'	-	-								OBSTRUCTION IN CASING AT 30'BGS
2	MW-304		1007	CMT	34.31'	75.50'	-	-								

Notes:

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

Water Level Monitoring Record

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

Date 12-28-2016 **Technician** A. DORN & A. SCOMA

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
3	MW-204		1010	CMT	34.21'	66.53'	-	-								
4	MW-104		1013	CMT	34.02'	50.41'	-	-								
2	MW-207		1025	CMT	35.39'	50.00'										
3	MW-107		1028	CMT	34.75'	39.40'										
4	MW-8				DRY	-										
5	MW-4				DRY	-										
4	MW-5				DRY	-										
4	MW-7				DRY	-										

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 187 North L Street, Livermore
Weather Sunny

Date 12/28/16
Time on job 0600 to
Record Keeper A. Sloma
Wind
Temp 59°

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Anthony Sloma	GZA		
Andrew Doan	GZA		

Time	Field Activities
0600	Leave Escalon
0724	arrival on site
	Began by removing Lid & Plugs
	Removal Cnt ~~Hose~~ Tubing from Cnt 4, 104, 204, 304
	cnt - 5 305, 205, 105, cnt - 6 106, 206, 306, cnt - 7 107, 207, 307
	cnt - 8 108, 208, 308
	Monitored All Water Wells with Andrew.
	Hand Bailed & Sampled Wells 9, 10, W-1
	Stored all Purge water in Baker Tank on site.
1606	Leave Site
1718	Escalon Off

GROUND ZERO ANALYSIS, INC.

Daily Field Record

Project Sullins
Project # 5262 Task 3
Location 187 North C Street, Livermore
Weather

Date 12/29/16
Time on job 0542 to 1730
Record Keeper A. Sioms.
Wind Temp

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Anthony Sioms	GZA	0712	1524

Time	Field Activities
0548	Leave Erosion
0706	arrived on site
	began Purging CMT wells 6 306, 206, 106,
	CMT-8 308, 208, 108 CMT-4 304, 204, 104
	CMT-5 305, 205
	Sampled Wells for TPH-G, BTEX, MTBE (4 VOAs)
	Recorded field parameters at the end of each purge.
	Dump purge water into DPE Storage tank.
	Secure all wells.
1524	Leave Site
1620	Met up with Ross from BC Lab. at Tracy
1639	Leave Tracy
1730	Erosion off.

Daily field record logs

Ground Zero Analysis, Inc. _____

W O R K O R D E R
R E V I S E D

Prepared By: Andrew Dorn
Date: December 19, 2016

Completed: _____ [G/E/Tech]

Performed By: **Andrew & Anthony**
CC: Jenny

Site:	**Sullins** (Arrow Rentals) 187 North L Street, Livermore, CA		
Task:	**2nd Semi-Annual Groundwater Monitoring Event – 4th Quarter 2016**		
DTW Order:	W-Es, W-3s, MW-9, MW-10, W-Bs, W-1s, W-1, W-A, CMT-6, CMT-8, CMT-7, CMT-4, CMT-5, EW-2, EW-1 (Plus: any shallow wells with water)		
Sampling Order	W-Es, W-3s, MW-9, MW-10, W-Bs, W-1s , W-A, W-1, EW-2, ~~EW-1~~ MW-306/206/106; MW-308/208/108; MW-307/207/107; MW-404/304/204/104 MW-305/205/105 (Plus: any shallow wells with water)		
Equipment:	GWM Equipment, Decon supplies, pencil bailer, micro depth meter, extra CMT tubing and check valves, measuring tape wheel, ice chest, well head protection supplies, field file, sample containers and labels, dedicated waterra tubing, tubing extensions		
Project #:	5262	**Lab & PO No.: BC**	1262-703276
Site Elevation:	~480 ft	**Task Code:**	3
Global ID:	T0600100116	**Schedule for:**	December 27-28, 2016
# of Persons	1	**EDF** (circle one):	**Y**
Expected Days to Perform Work:		2 full days	

DAY 1

1. **Turn system off. It should be off.**

   - **Remove groundwater extraction lines from wells W-1, W-A, EW-1 and EW-2**
   - The line and PVC in each well will need to be removed and stored in the remediation compound

2. **Remove tubing from the CMT wells that DTW measurements will be collected from**
   - CMT-4 – 104, 204, 304, 404
   - CMT-5 – 105, 205, 305
   - CMT-6 – 106, 206, 306
   - CMT-7 – 107, 207, 307
   - CMT-8 – 108, 208, 308
   - Remove and de-clog the check valve at the end of each line

- Remove the GW from each line
- Label and store each line in the remediation compound

3. **Collect DTW and TD measurements**
   - Open all remaining wells
   - Allow 15-20 minutes for wells to equalize
   - Collect DTW and TD measurements following the clean order listed above. Do not collect TD measurements from the CMT wells.

4. **Reinstall tubing to CMT wells**

DAY 2

- Calibrate YSI meter for pH, ORP and DO
- Purge and sample **all** wells individually in the sampling order listed above
- While purging each well:
  - Record the following field parameters using standard operating procedures - *prior to the first purge and during each purge volume*:
  - temp, pH, EC, DO, & ORP
  - NOTE: eliminate bubbles in chamber of YSI to obtain representative DO readings; fill chamber w/ pumped water to eliminate back flow air entrainment
  - After field parameter readings are recorded measure and record depth to water (Decon sounder before collecting samples in each well)
  - Collect Samples
- Dump purge water into DPE storage tank
- Secure all wells
- Leave Site

Lab Analyses:

- **Monitoring wells (16):** Use **4** VOAs preserved with HCL per well for a total of **64** VOAs
- **CMT Wells (16):** Use **4** VOAs preserved with HCL per well interval for a total of **64** VOAs

TPH-G, BTEX and MTBE (8015/8021) - All wells

• TPH-G	RL = 50 µg/l
• BTEX	RL = 0.5 µg/l
• MTBE	RL = 0.5 µg/l

CMT Interval	CMT Casing Number	Tubing Length/ Depth
CMT-4		
MW-4	5	30'
MW-104	4	50.5'
MW-204	3	66.5'
MW-304	2	75.5'
MW-404	1	81.5'
CMT-5		
MW-5	4	27'
MW-105	3	37'
MW-205	2	48'
MW-305	1	66'
CMT-6		
MW-6	5	30'
MW-106	4	38'
MW-206	3	50'
MW-306	1	66'
CMT-7		
MW-7	4	30'
MW-107	3	40'
MW-207	2	50'
MW-307	1	66'
CMT-8		
MW-8	4	30'
MW-108	3	40'
MW-208	2	52'
MW-308	1	66'

* Multiply CMT water column by 0.011

ATTACHMENT C

Laboratory Analytical Data Sheets

Date of Report: 03/01/2017

Project Manager

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

Client Project:	1262.2
BCL Project:	Sullins
BCL Work Order:	1623933
Invoice ID:	B245346

Enclosed are the results of analyses for samples received by the laboratory on 8/29/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Table of Contents

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com

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

Billing To: Ground Zero Analysis, Inc.

Project #: 1262.2	Project Name: SULLINS
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 Anaysis, 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): AD, GZA

Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	Analysis Requested: TPHg, BTEX, MTBE 8260B
1	1230		EW-2	1	W	HCL	X
2	1250		MW-207	1	W	↓	X
3	1305		MW-107	1	W	↓	X

Laboratory: BC LABS

Purchase Order # 16-23933

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

CHK BY DISTRIBUTION SUB-OUT

	Signature	Print Name	Company	Date:	Time:
Received / Relinquished by:		Jenny Wells	GZA	8.29.16	1320
Received / Relinquished by:		Ross Dickey	BC LABS	8.29.16	1320
Received / Relinquished by:		Ross Dickey	BC LABS	8.29.16	1830

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

REC 8/29/16 1835 RGL 8/29/16 21:35

Rev. 3/2014

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Chain of Custody and Cooler Receipt Form for 623933 Page 1 of 2

Chain of Custody and Cooler Receipt Form for 1623933 Page 2 of 2

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 1

Submission #: 16-23933

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)_____	(W) / S

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: 6.29.16 1145

Temperature: (A) 0.7 °C / (C) 1.0 °C Analyst Init: M

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										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL (DW)	A-D	A-D	A-C							
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 EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
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: JDL Date/Time: 6.30.16 0809 Rev 21 05/23/2016

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1623933-01	**COC Number:**	---	**Receive Date:**	08/29/2016 21:35
	Project Number:	Sullins	**Sampling Date:**	08/26/2016 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	EW-2	**Lab Matrix:**	Water
	Sampled By:	AD 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:	
1623933-02	**COC Number:**	---	**Receive Date:**	08/29/2016 21:35
	Project Number:	Sullins	**Sampling Date:**	08/26/2016 12:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-207	**Lab Matrix:**	Water
	Sampled By:	AD of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-207	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1623933-03	**COC Number:**	---	**Receive Date:**	08/29/2016 21:35
	Project Number:	Sullins	**Sampling Date:**	08/26/2016 13:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-107	**Lab Matrix:**	Water
	Sampled By:	AD of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-107	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623933-01 | **Client Sample Name:** Sullins, EW-2, 8/26/2016 12:30:00PM, AD

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**5000**	**ug/L**	**50**	**8.3**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**120**	**ug/L**	**5.0**	**0.98**	**EPA-8260B**	ND		2
Methyl t-butyl ether	**28**	**ug/L**	**5.0**	**1.1**	**EPA-8260B**	ND		2
Toluene	**64**	**ug/L**	**5.0**	**0.93**	**EPA-8260B**	ND		2
Total Xylenes	**100**	**ug/L**	**10**	**3.6**	**EPA-8260B**	ND		2
p- & m-Xylenes	**78**	**ug/L**	**5.0**	**2.8**	**EPA-8260B**	ND		2
o-Xylene	**22**	**ug/L**	**5.0**	**0.82**	**EPA-8260B**	ND		2
Total Purgeable Petroleum Hydrocarbons	**3900**	**ug/L**	**500**	**72**	**Luft-GC/MS**	ND		2
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	81.2	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	94.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	88.7	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	98.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/02/16	09/02/16 14:11	IO1	MS-V12	100	BZH2943
2	EPA-8260B	09/01/16	09/01/16 20:26	IO1	MS-V12	10	BZH2943

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623933-02 | **Client Sample Name:** Sullins, MW-207, 8/26/2016 12:50:00PM, AD

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**2200**	**ug/L**	**25**	**4.2**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**130**	**ug/L**	**5.0**	**0.98**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**52**	**ug/L**	**5.0**	**1.1**	**EPA-8260B**	ND	**A01**	2
Toluene	**13**	**ug/L**	**5.0**	**0.93**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**73**	**ug/L**	**10**	**3.6**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**59**	**ug/L**	**5.0**	**2.8**	**EPA-8260B**	ND	**A01**	2
o-Xylene	**14**	**ug/L**	**5.0**	**0.82**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**2100**	**ug/L**	**500**	**72**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	92.7	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	90.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	89.3	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	93.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/01/16	09/01/16 20:44	IO1	MS-V12	50	BZH2942
2	EPA-8260B	09/02/16	09/02/16 14:29	IO1	MS-V12	10	BZH2942

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
Project: Sullins
Project Number: 1262.2
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1623933-03 | **Client Sample Name:** Sullins, MW-107, 8/26/2016 1:05:00PM, AD

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**4000**	**ug/L**	**25**	**4.2**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**120**	**ug/L**	**5.0**	**0.98**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**21**	**ug/L**	**5.0**	**1.1**	**EPA-8260B**	ND	**A01**	2
Toluene	**31**	**ug/L**	**5.0**	**0.93**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**50**	**ug/L**	**10**	**3.6**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**39**	**ug/L**	**5.0**	**2.8**	**EPA-8260B**	ND	**A01**	2
o-Xylene	**12**	**ug/L**	**5.0**	**0.82**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**2600**	**ug/L**	**500**	**72**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	78.3	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	86.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	88.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	97.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	09/01/16	09/01/16 21:02	IO1	MS-V12	50	BZH2942
2	EPA-8260B	09/02/16	09/02/16 14:47	IO1	MS-V12	10	BZH2942

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
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: BZH2942						
Benzene	BZH2942-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BZH2942-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BZH2942-BLK1	ND	ug/L	0.50	0.11	
Toluene	BZH2942-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BZH2942-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BZH2942-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BZH2942-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BZH2942-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**BZH2942-BLK1**	**95.4**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BZH2942-BLK1**	**108**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BZH2942-BLK1**	**102**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BZH2943						
Benzene	BZH2943-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BZH2943-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BZH2943-BLK1	ND	ug/L	0.50	0.11	
Toluene	BZH2943-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BZH2943-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BZH2943-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BZH2943-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BZH2943-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**BZH2943-BLK1**	**95.4**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BZH2943-BLK1**	**111**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BZH2943-BLK1**	**98.4**	%	**80 - 120 (LCL - UCL)**		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
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: BZH2942										
Benzene	BZH2942-BS1	LCS	28.680	25.000	ug/L	115		70 - 130		
Toluene	BZH2942-BS1	LCS	31.480	25.000	ug/L	126		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZH2942-BS1	LCS	11.550	10.000	ug/L	116		75 - 125		
Toluene-d8 (Surrogate)	BZH2942-BS1	LCS	10.340	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZH2942-BS1	LCS	10.040	10.000	ug/L	100		80 - 120		
QC Batch ID: BZH2943										
Benzene	BZH2943-BS1	LCS	27.710	25.000	ug/L	111		70 - 130		
Toluene	BZH2943-BS1	LCS	27.350	25.000	ug/L	109		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZH2943-BS1	LCS	10.260	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	BZH2943-BS1	LCS	10.040	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZH2943-BS1	LCS	8.7900	10.000	ug/L	87.9		80 - 120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
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: BZH2942	Used client sample: N										
Benzene	MS	1621392-82	ND	25.970	25.000	ug/L		104		70 - 130	
	MSD	1621392-82	ND	28.210	25.000	ug/L	8.3	113	20	70 - 130	
Toluene	MS	1621392-82	ND	24.950	25.000	ug/L		99.8		70 - 130	
	MSD	1621392-82	ND	24.920	25.000	ug/L	0.1	99.7	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1621392-82	ND	10.940	10.000	ug/L		109		75 - 125	
	MSD	1621392-82	ND	11.410	10.000	ug/L	4.2	114		75 - 125	
Toluene-d8 (Surrogate)	MS	1621392-82	ND	9.4400	10.000	ug/L		94.4		80 - 120	
	MSD	1621392-82	ND	9.5100	10.000	ug/L	0.7	95.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1621392-82	ND	9.9400	10.000	ug/L		99.4		80 - 120	
	MSD	1621392-82	ND	10.830	10.000	ug/L	8.6	108		80 - 120	
QC Batch ID: BZH2943	Used client sample: N										
Benzene	MS	1621392-83	ND	27.640	25.000	ug/L		111		70 - 130	
	MSD	1621392-83	ND	27.070	25.000	ug/L	2.1	108	20	70 - 130	
Toluene	MS	1621392-83	ND	25.260	25.000	ug/L		101		70 - 130	
	MSD	1621392-83	ND	27.000	25.000	ug/L	6.7	108	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1621392-83	ND	10.800	10.000	ug/L		108		75 - 125	
	MSD	1621392-83	ND	11.360	10.000	ug/L	5.1	114		75 - 125	
Toluene-d8 (Surrogate)	MS	1621392-83	ND	9.0100	10.000	ug/L		90.1		80 - 120	
	MSD	1621392-83	ND	10.400	10.000	ug/L	14.3	104		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1621392-83	ND	10.290	10.000	ug/L		103		80 - 120	
	MSD	1621392-83	ND	10.120	10.000	ug/L	1.7	101		80 - 120	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 03/01/2017 16:58
Project: Sullins
Project Number: 1262.2
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.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Date of Report: 02/24/2017

Andrew Dorn

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

Client Project:	[none]
BCL Project:	Sullins
BCL Work Order:	1635917
Invoice ID:	B256649

Enclosed are the results of analyses for samples received by the laboratory on 12/29/2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Table of Contents

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Table of Contents

Chain of Custody and Cooler Receipt Form for 1635917 Page 1 of 5

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

Chain of Custo

Page 1 of 1

16-35917

Project #: 1262.2 | Project Name: SULLINS
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 Anaysis, 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): _____, GZA

Billing To: Ground Zero Analysis, Inc.

Laboratory: BC LABS
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

Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	TPH6,BTEX,MTBE (8260B)	Special Instructions / Remarks
12-28-16	1115	-1	W-ES	4	W	HCl	X	
	1155	-2	MW-9	4			X	
	1305	-3	MW-10	4			X	
	1410	-4	W-BS	4			X	
	1550	-5	W-1S	4			X	
	1420	-6	W-1	4			X	
	1540	-7	EW-2	4			X	
12-29-16	0915	-8	MW-306	4			X	
	0925	-9	MW-206	4			X	
	0935	-10	MW-1W	2			X	
	1050	-11	MW-308	4			X	
	1110	-12	MW-208	4			X	
	1190	-13	MW-108	4			X	
	1230	-14	MW-307	4			X	
	1240	-15	MW-207	4	V	V	X	

CHRIS DISTRIBUTION
SUB-OUT

Signature	Print Name	Company	Date:	Time:
Received / Relinquished by:	Matthew Sims	GZA	12/29/16	1620
Received / Relinquished by:	Jess Dickey	BCLAB	12.29.16	1620
Received / Relinquished by:	Jess Dickey	BCLAB	12/29/16	1750

Please return cooler / ice chest to Ground Zero Analysis, Inc. 1755 12/29/16

Rev. 3/2014

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

Chain of Custody

Page_____ of _____

16-35917

Billing To: Ground Zero Analysis, Inc.

Project #: 1262.2	Project Name: SULLINS
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 Anaysis, 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): _____, GZA

Date	Time	EDF Field ID	Sample I.D./Description / Location	No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type	TPH6, BTEX, MTBE (8260B)
12/29/16	1250	-16	MW-304	4	W	HCl	X
	1300	-17	MW-204	4			X
	1310	-18	MW-104	4			X
	1330	-19	MW-107	4			X
	1315	-20	W-A	4			X
	1415	-21	MW-305	4			X
	1500	-22	MW-205	4			X

Analysis Requested

Laboratory: BC LABS

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

12/29 2045

Signature	Print Name	Company	Date:	Time:
Received / Relinquished by:	Anthony Sroma	GZA	12/29/16	1620
Received / Relinquished by:	Ross Dickey	BC LAB	12.29.16	1620
Received / Relinquished by:	Ross Dickey	BC LAB	12.29.16	1750

Please return cooler / ice chest to Ground Zero Analysis, Inc. TGZ 12/29/16 2045 Rec 12/29/16 1755 Rev. 3/2014

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Chain of Custody and Cooler Receipt Form for 1635917 Page 3 of 5

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 5

Submission #: 16-35917

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 ☐ W / S

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: 207 Date/Time: 12/29/2015

Temperature: (A) 0.5 °C / (C) 0.5 °C Analyst Init: JM

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	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D	AB
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 EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: JM Date/Time: 12-30-16 949

Rev 21 05/23/2016

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Chain of Custody and Cooler Receipt Form for 1635917 Page 4 of 5

...TORIES INC. COOLER RECEIPT FORM Page 2 Of 3

...sion #: 16-35917

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)_____	W / S

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: Jars Thermometer ID: 207 Date/Time: 12/29/2016

Temperature: (A) 0.5 °C / (C) 0.5 °C Analyst Init: M

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20
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	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D	A-D
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 EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
oz / 16oz / 32oz JAR										
OIL SLEEVE										
CB VIAL										
LASTIC BAG										
EDLAR BAG										
ERROUS IRON										
NCORE										
ART KIT										
MMA CANISTER										

nments: JK 12-30-16 944

Date/Time:

Rev 21 05/23/2016

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

Chain of Custody and Cooler Receipt Form for 1635917 Page 5 of 5

LABORATORIES INC. COOLER RECEIPT FORM Page 3 Of 3

Submission #: 16-35917

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)_____	W / S

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: Voas Thermometer ID: 207 Date/Time: 12/29/16 2015

Temperature: (A) 0.5 °C / (C) 0.5 °C Analyst Init: JW

SAMPLE CONTAINERS	SAMPLE NUMBERS 21	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	A-D									
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										
2oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
TCLP VIAL										
PLASTIC BAG										
KEDLAR BAG										
FERROUS IRON										
ENCORE										
PART KIT										
SUMMA CANISTER										

Comments: JW Date/Time: 12-30-16 944

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1635917-01	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 11:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	W-Es	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): W-Es	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-02	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 11:55
	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:	
1635917-03	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 13:05
	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:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1635917-04	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 14:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	W-Bs	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): W-Bs	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-05	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 15:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	W-1s	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): W-1s	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-06	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 14:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	W-1	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): W-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1635917-07	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/28/2016 15:40
	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:	
1635917-08	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 09:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-306	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-306	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-09	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 09:25
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-206	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-206	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1635917-10	**COC Number:**	---	**Receive Date:** 12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:** 12/29/2016 09:35
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-106	**Lab Matrix:** Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:** Groundwater
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-106
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1635917-11	**COC Number:**	---	**Receive Date:** 12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:** 12/29/2016 10:50
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-308	**Lab Matrix:** Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:** Groundwater
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-308
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1635917-12	**COC Number:**	---	**Receive Date:** 12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:** 12/29/2016 11:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-208	**Lab Matrix:** Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:** Groundwater
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-208
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1635917-13	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 11:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-108	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-108	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-14	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 12:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-307	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-307	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-15	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 12:40
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-207	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-207	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1635917-16	**COC Number:**	---	**Receive Date:** 12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:** 12/29/2016 12:50
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-304	**Lab Matrix:** Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:** Groundwater
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-304
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1635917-17	**COC Number:**	---	**Receive Date:** 12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:** 12/29/2016 13:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-204	**Lab Matrix:** Water
	Sampled By:	Andrew Dorn 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:
1635917-18	**COC Number:**	---	**Receive Date:** 12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:** 12/29/2016 13:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-104	**Lab Matrix:** Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:** Groundwater
			Delivery Work Order:
			Global ID: T0600100116
			Location ID (FieldPoint): MW-104
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1635917-19	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 13:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-107	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-107	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-20	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 13:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	W-A	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): W-A	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1635917-21	**COC Number:**	---	**Receive Date:**	12/29/2016 20:45
	Project Number:	Sullins	**Sampling Date:**	12/29/2016 14:15
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-305	**Lab Matrix:**	Water
	Sampled By:	Andrew Dorn of GTIM	**Sample Type:**	Groundwater
			Delivery Work Order:	
			Global ID: T0600100116	
			Location ID (FieldPoint): MW-305	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1635917-22

COC Number: ---
Project Number: Sullins
Sampling Location: ---
Sampling Point: MW-205
Sampled By: Andrew Dorn of GTIM

Receive Date: 12/29/2016 20:45
Sampling Date: 12/29/2016 15:00
Sample Depth: ---
Lab Matrix: Water
Sample Type: Groundwater
Delivery Work Order:
Global ID: T0600100116
Location ID (FieldPoint): MW-205
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-01 | **Client Sample Name:** Sullins, W-Es, 12/28/2016 11:15:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.5	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/30/16 23:16	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-02 | **Client Sample Name:** Sullins, MW-9, 12/28/2016 11:55:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**21**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND		1
Ethylbenzene	**4.4**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	**0.13**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND	**J**	1
Total Xylenes	**0.40**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND	**J**	1
p- & m-Xylenes	**0.40**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND	**J**	1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**63**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	93.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 00:01	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-03 | **Client Sample Name:** Sullins, MW-10, 12/28/2016 1:05:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	**27**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND	**J**	1
1,2-Dichloroethane-d4 (Surrogate)	92.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/30/16 23:38	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-04 | **Client Sample Name:** Sullins, W-Bs, 12/28/2016 2:10:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**5.8**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND		1
Ethylbenzene	**2.4**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	**0.24**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND	**J**	1
Total Xylenes	**4.0**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		1
p- & m-Xylenes	**3.5**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		1
o-Xylene	**0.57**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		1
Total Purgeable Petroleum Hydrocarbons	**87**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 00:24	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-05 | **Client Sample Name:** Sullins, W-1s, 12/28/2016 3:50:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**7.5**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND		1
Ethylbenzene	**0.50**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		1
Methyl t-butyl ether	**0.15**	**ug/L**	**0.50**	**0.11**	**EPA-8260B**	ND	**J**	1
Toluene	**0.21**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND	**J**	1
Total Xylenes	**0.76**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND	**J**	1
p- & m-Xylenes	**0.65**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		1
o-Xylene	**0.11**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND	**J**	1
Total Purgeable Petroleum Hydrocarbons	**120**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 00:47	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-06 | **Client Sample Name:** Sullins, W-1, 12/28/2016 2:20:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**210**	**ug/L**	**12**	**2.1**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**110**	**ug/L**	**1.0**	**0.20**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**14**	**ug/L**	**1.0**	**0.22**	**EPA-8260B**	ND	**A01**	2
Toluene	**18**	**ug/L**	**1.0**	**0.19**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**430**	**ug/L**	**2.0**	**0.72**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**340**	**ug/L**	**1.0**	**0.56**	**EPA-8260B**	ND	**A01**	2
o-Xylene	**93**	**ug/L**	**1.0**	**0.16**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**2800**	**ug/L**	**500**	**72**	**Luft-GC/MS**	ND	**A01**	3
1,2-Dichloroethane-d4 (Surrogate)	92.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	84.8	%	75 - 125 (LCL - UCL)		EPA-8260B			2
1,2-Dichloroethane-d4 (Surrogate)	84.4	%	75 - 125 (LCL - UCL)		EPA-8260B			3
Toluene-d8 (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			3
4-Bromofluorobenzene (Surrogate)	89.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	95.0	%	80 - 120 (LCL - UCL)		EPA-8260B			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/03/17 17:54	JMS	MS-V14	25	BZL2323
2	EPA-8260B	12/30/16	12/31/16 05:43	JMS	MS-V14	2	BZL2323
3	EPA-8260B	12/30/16	12/31/16 06:06	JMS	MS-V14	10	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-07 | **Client Sample Name:** Sullins, EW-2, 12/28/2016 3:40:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**180**	**ug/L**	**2.5**	**0.42**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**68**	**ug/L**	**2.5**	**0.49**	**EPA-8260B**	ND	**A01**	1
Methyl t-butyl ether	**0.89**	**ug/L**	**2.5**	**0.55**	**EPA-8260B**	ND	**J,A01**	1
Toluene	**2.3**	**ug/L**	**2.5**	**0.46**	**EPA-8260B**	ND	**J,A01**	1
Total Xylenes	**150**	**ug/L**	**5.0**	**1.8**	**EPA-8260B**	ND	**A01**	1
p- & m-Xylenes	**120**	**ug/L**	**2.5**	**1.4**	**EPA-8260B**	ND	**A01**	1
o-Xylene	**36**	**ug/L**	**2.5**	**0.41**	**EPA-8260B**	ND	**A01**	1
Total Purgeable Petroleum Hydrocarbons	**5000**	**ug/L**	**250**	**36**	**Luft-GC/MS**	ND	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	92.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 04:57	JMS	MS-V14	5	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-08 | **Client Sample Name:** Sullins, MW-306, 12/29/2016 9:15:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	88.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 01:09	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-09 | **Client Sample Name:** Sullins, MW-206, 12/29/2016 9:25:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**0.29**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND	**J**	1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Methyl t-butyl ether	**0.12**	**ug/L**	**0.50**	**0.11**	**EPA-8260B**	ND	**J**	1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	92.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 01:32	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-10 | **Client Sample Name:** Sullins, MW-106, 12/29/2016 9:35:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	0.083	EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50	0.098	EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	ND	ug/L	0.50	0.093	EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0	0.36	EPA-8260B	ND		1
p- & m-Xylenes	ND	ug/L	0.50	0.28	EPA-8260B	ND		1
o-Xylene	ND	ug/L	0.50	0.082	EPA-8260B	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	87.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 01:55	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-11 | **Client Sample Name:** Sullins, MW-308, 12/29/2016 10:50:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**85**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND		1
Ethylbenzene	**18**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	**3.5**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		1
Total Xylenes	**14**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		1
p- & m-Xylenes	**9.9**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		1
o-Xylene	**4.1**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		1
Total Purgeable Petroleum Hydrocarbons	**860**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	91.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 02:18	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-12 | **Client Sample Name:** Sullins, MW-208, 12/29/2016 11:10:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**320**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**160**	**ug/L**	**2.5**	**0.49**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**27**	**ug/L**	**2.5**	**0.55**	**EPA-8260B**	ND	**A01**	2
Toluene	**9.8**	**ug/L**	**2.5**	**0.46**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**52**	**ug/L**	**5.0**	**1.8**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**39**	**ug/L**	**2.5**	**1.4**	**EPA-8260B**	ND	**A01**	2
o-Xylene	**13**	**ug/L**	**2.5**	**0.41**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**2100**	**ug/L**	**250**	**36**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	86.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	86.6	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	93.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 06:29	JMS	MS-V14	10	BZL2323
2	EPA-8260B	12/30/16	12/31/16 04:35	JMS	MS-V14	5	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-13 | **Client Sample Name:** Sullins, MW-108, 12/29/2016 11:40:00AM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**200**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**49**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		2
Methyl t-butyl ether	**24**	**ug/L**	**0.50**	**0.11**	**EPA-8260B**	ND		2
Toluene	**12**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		2
Total Xylenes	**28**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		2
p- & m-Xylenes	**22**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		2
o-Xylene	**5.8**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		2
Total Purgeable Petroleum Hydrocarbons	**2300**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		2
1,2-Dichloroethane-d4 (Surrogate)	86.6	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	82.2	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	99.4	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	105	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	93.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 04:12	JMS	MS-V14	10	BZL2323
2	EPA-8260B	12/30/16	12/31/16 03:49	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-14 | **Client Sample Name:** Sullins, MW-307, 12/29/2016 12:30:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**120**	**ug/L**	**25**	**4.2**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**27**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
Toluene	**1.6**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		2
Total Xylenes	**22**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		2
p- & m-Xylenes	**18**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		2
o-Xylene	**4.0**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		2
Total Purgeable Petroleum Hydrocarbons	**420**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		2
1,2-Dichloroethane-d4 (Surrogate)	92.7	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	83.9	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	91.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.5	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/06/17 01:00	JMS	MS-V14	50	BZL2323
2	EPA-8260B	12/30/16	12/31/16 03:26	JMS	MS-V14	1	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-15 | **Client Sample Name:** Sullins, MW-207, 12/29/2016 12:40:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**2400**	**ug/L**	**12**	**2.1**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**330**	**ug/L**	**2.5**	**0.49**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**48**	**ug/L**	**2.5**	**0.55**	**EPA-8260B**	ND	**A01**	2
Toluene	**27**	**ug/L**	**2.5**	**0.46**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**200**	**ug/L**	**5.0**	**1.8**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**160**	**ug/L**	**2.5**	**1.4**	**EPA-8260B**	ND	**A01**	2
o-Xylene	**36**	**ug/L**	**2.5**	**0.41**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**3000**	**ug/L**	**250**	**36**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	84.3	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	82.3	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.8	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	93.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	93.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	12/31/16 06:51	JMS	MS-V14	25	BZL2323
2	EPA-8260B	12/30/16	12/31/16 05:20	JMS	MS-V14	5	BZL2323

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-16 | **Client Sample Name:** Sullins, MW-304, 12/29/2016 12:50:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**20**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**19**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		2
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		2
Toluene	**2.1**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		2
Total Xylenes	**26**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		2
p- & m-Xylenes	**20**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		2
o-Xylene	**6.0**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		2
Total Purgeable Petroleum Hydrocarbons	**370**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		2
1,2-Dichloroethane-d4 (Surrogate)	95.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	84.2	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	92.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/03/17 17:08	JMS	MS-V14	10	B[A0085
2	EPA-8260B	12/30/16	12/31/16 02:41	JMS	MS-V14	1	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-17 | **Client Sample Name:** Sullins, MW-204, 12/29/2016 1:00:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**170**	**ug/L**	**2.5**	**0.42**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**25**	**ug/L**	**2.5**	**0.49**	**EPA-8260B**	ND	**A01**	1
Methyl t-butyl ether	ND	ug/L	2.5	0.55	EPA-8260B	ND	A01	1
Toluene	**5.9**	**ug/L**	**2.5**	**0.46**	**EPA-8260B**	ND	**A01**	1
Total Xylenes	**35**	**ug/L**	**5.0**	**1.8**	**EPA-8260B**	ND	**A01**	1
p- & m-Xylenes	**27**	**ug/L**	**2.5**	**1.4**	**EPA-8260B**	ND	**A01**	1
o-Xylene	**8.0**	**ug/L**	**2.5**	**0.41**	**EPA-8260B**	ND	**A01**	1
Total Purgeable Petroleum Hydrocarbons	**1500**	**ug/L**	**250**	**36**	**Luft-GC/MS**	ND	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	88.4	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/03/17 18:40	JMS	MS-V14	5	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-18 | **Client Sample Name:** Sullins, MW-104, 12/29/2016 1:10:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**390**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**170**	**ug/L**	**1.0**	**0.20**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**20**	**ug/L**	**1.0**	**0.22**	**EPA-8260B**	ND	**A01**	2
Toluene	**14**	**ug/L**	**1.0**	**0.19**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**420**	**ug/L**	**2.0**	**0.72**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**320**	**ug/L**	**5.0**	**2.8**	**EPA-8260B**	ND	**A01**	1
o-Xylene	**110**	**ug/L**	**1.0**	**0.16**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**4300**	**ug/L**	**100**	**14**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	88.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	85.8	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	99.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	90.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.8	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/03/17 19:25	JMS	MS-V14	10	B[A0085
2	EPA-8260B	12/30/16	01/03/17 19:02	JMS	MS-V14	2	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-19 | **Client Sample Name:** Sullins, MW-107, 12/29/2016 1:30:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**4600**	**ug/L**	**50**	**8.3**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**72**	**ug/L**	**2.5**	**0.49**	**EPA-8260B**	ND	**A01**	2
Methyl t-butyl ether	**11**	**ug/L**	**2.5**	**0.55**	**EPA-8260B**	ND	**A01**	2
Toluene	**31**	**ug/L**	**2.5**	**0.46**	**EPA-8260B**	ND	**A01**	2
Total Xylenes	**31**	**ug/L**	**5.0**	**1.8**	**EPA-8260B**	ND	**A01**	2
p- & m-Xylenes	**22**	**ug/L**	**2.5**	**1.4**	**EPA-8260B**	ND	**A01**	2
o-Xylene	**8.6**	**ug/L**	**2.5**	**0.41**	**EPA-8260B**	ND	**A01**	2
Total Purgeable Petroleum Hydrocarbons	**5600**	**ug/L**	**250**	**36**	**Luft-GC/MS**	ND	**A01**	2
1,2-Dichloroethane-d4 (Surrogate)	87.0	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	82.8	%	75 - 125 (LCL - UCL)		EPA-8260B			2
1,2-Dichloroethane-d4 (Surrogate)	84.7	%	75 - 125 (LCL - UCL)		EPA-8260B			3
Toluene-d8 (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	97.8	%	80 - 120 (LCL - UCL)		EPA-8260B			3
4-Bromofluorobenzene (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	93.3	%	80 - 120 (LCL - UCL)		EPA-8260B			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/06/17 08:59	JMS	MS-V14	100	B[A0085
2	EPA-8260B	12/30/16	01/06/17 01:23	JMS	MS-V14	5	B[A0085
3	EPA-8260B	12/30/16	01/06/17 02:31	JMS	MS-V14	1	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-20 | **Client Sample Name:** Sullins, W-A, 12/29/2016 1:15:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**89**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**5.2**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		2
Methyl t-butyl ether	**3.2**	**ug/L**	**0.50**	**0.11**	**EPA-8260B**	ND		2
Toluene	**1.1**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		2
Total Xylenes	**4.8**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		2
p- & m-Xylenes	**4.0**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		2
o-Xylene	**0.77**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		2
Total Purgeable Petroleum Hydrocarbons	**610**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		2
1,2-Dichloroethane-d4 (Surrogate)	88.4	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	86.2	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.2	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	93.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/06/17 02:54	JMS	MS-V14	10	B[A0085
2	EPA-8260B	12/30/16	01/06/17 01:46	JMS	MS-V14	1	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-21 | **Client Sample Name:** Sullins, MW-305, 12/29/2016 2:15:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**57**	**ug/L**	**0.50**	**0.083**	**EPA-8260B**	ND		1
Ethylbenzene	**25**	**ug/L**	**0.50**	**0.098**	**EPA-8260B**	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	0.11	EPA-8260B	ND		1
Toluene	**0.94**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		1
Total Xylenes	**21**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		1
p- & m-Xylenes	**15**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		1
o-Xylene	**5.1**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		1
Total Purgeable Petroleum Hydrocarbons	**290**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		1
1,2-Dichloroethane-d4 (Surrogate)	86.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	92.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/06/17 02:09	JMS	MS-V14	1	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1635917-22 | **Client Sample Name:** Sullins, MW-205, 12/29/2016 3:00:00PM, Andrew Dorn

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**670**	**ug/L**	**5.0**	**0.83**	**EPA-8260B**	ND	**A01**	1
Ethylbenzene	**150**	**ug/L**	**5.0**	**0.98**	**EPA-8260B**	ND	**A01**	1
Methyl t-butyl ether	**3.1**	**ug/L**	**0.50**	**0.11**	**EPA-8260B**	ND		2
Toluene	**2.7**	**ug/L**	**0.50**	**0.093**	**EPA-8260B**	ND		2
Total Xylenes	**66**	**ug/L**	**1.0**	**0.36**	**EPA-8260B**	ND		2
p- & m-Xylenes	**52**	**ug/L**	**0.50**	**0.28**	**EPA-8260B**	ND		2
o-Xylene	**14**	**ug/L**	**0.50**	**0.082**	**EPA-8260B**	ND		2
Total Purgeable Petroleum Hydrocarbons	**1200**	**ug/L**	**50**	**7.2**	**Luft-GC/MS**	ND		2
1,2-Dichloroethane-d4 (Surrogate)	83.2	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	76.3	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.0	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	94.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.1	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	12/30/16	01/03/17 16:46	JMS	MS-V14	10	B[A0085
2	EPA-8260B	12/30/16	12/31/16 03:03	JMS	MS-V14	1	B[A0085

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

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: B[A0085						
Benzene	B[A0085-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	B[A0085-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	B[A0085-BLK1	ND	ug/L	0.50	0.11	
Toluene	B[A0085-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	B[A0085-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	B[A0085-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	B[A0085-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	B[A0085-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**B[A0085-BLK1**	**93.4**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**B[A0085-BLK1**	**97.5**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**B[A0085-BLK1**	**92.4**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BZL2323						
Benzene	BZL2323-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BZL2323-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BZL2323-BLK1	ND	ug/L	0.50	0.11	
Toluene	BZL2323-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BZL2323-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BZL2323-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BZL2323-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BZL2323-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	**BZL2323-BLK1**	**92.9**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BZL2323-BLK1**	**98.5**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BZL2323-BLK1**	**96.6**	%	**80 - 120 (LCL - UCL)**		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

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: B[A0085										
Benzene	B[A0085-BS1	LCS	19.687	25.000	ug/L	78.7		70 - 130		
Toluene	B[A0085-BS1	LCS	19.827	25.000	ug/L	79.3		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	B[A0085-BS1	LCS	8.8800	10.000	ug/L	88.8		75 - 125		
Toluene-d8 (Surrogate)	B[A0085-BS1	LCS	9.8000	10.000	ug/L	98.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	B[A0085-BS1	LCS	9.5300	10.000	ug/L	95.3		80 - 120		
QC Batch ID: BZL2323										
Benzene	BZL2323-BS1	LCS	22.077	25.000	ug/L	88.3		70 - 130		
Toluene	BZL2323-BS1	LCS	22.251	25.000	ug/L	89.0		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BZL2323-BS1	LCS	9.3100	10.000	ug/L	93.1		75 - 125		
Toluene-d8 (Surrogate)	BZL2323-BS1	LCS	9.6000	10.000	ug/L	96.0		80 - 120		
4-Bromofluorobenzene (Surrogate)	BZL2323-BS1	LCS	9.4900	10.000	ug/L	94.9		80 - 120		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

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: B[A0085	Used client sample: N										
Benzene	MS	1634543-52	ND	23.444	25.000	ug/L		93.8		70 - 130	
	MSD	1634543-52	ND	21.014	25.000	ug/L	10.9	84.1	20	70 - 130	
Toluene	MS	1634543-52	ND	23.114	25.000	ug/L		92.5		70 - 130	
	MSD	1634543-52	ND	21.361	25.000	ug/L	7.9	85.4	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1634543-52	ND	8.8000	10.000	ug/L		88.0		75 - 125	
	MSD	1634543-52	ND	8.8900	10.000	ug/L	1.0	88.9		75 - 125	
Toluene-d8 (Surrogate)	MS	1634543-52	ND	9.9600	10.000	ug/L		99.6		80 - 120	
	MSD	1634543-52	ND	9.9100	10.000	ug/L	0.5	99.1		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1634543-52	ND	9.2000	10.000	ug/L		92.0		80 - 120	
	MSD	1634543-52	ND	9.4800	10.000	ug/L	3.0	94.8		80 - 120	
QC Batch ID: BZL2323	Used client sample: N										
Benzene	MS	1634543-55	ND	25.703	25.000	ug/L		103		70 - 130	
	MSD	1634543-55	ND	22.738	25.000	ug/L	12.2	91.0	20	70 - 130	
Toluene	MS	1634543-55	ND	26.673	25.000	ug/L		107		70 - 130	
	MSD	1634543-55	ND	24.029	25.000	ug/L	10.4	96.1	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1634543-55	ND	9.4500	10.000	ug/L		94.5		75 - 125	
	MSD	1634543-55	ND	9.5200	10.000	ug/L	0.7	95.2		75 - 125	
Toluene-d8 (Surrogate)	MS	1634543-55	ND	9.8600	10.000	ug/L		98.6		80 - 120	
	MSD	1634543-55	ND	10.140	10.000	ug/L	2.8	101		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1634543-55	ND	9.5400	10.000	ug/L		95.4		80 - 120	
	MSD	1634543-55	ND	9.6600	10.000	ug/L	1.3	96.6		80 - 120	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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

Reported: 02/24/2017 11:39
Project: Sullins
Project Number: [none]
Project Manager: Andrew Dorn

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.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

ATTACHMENT D

MW-9 Bore Log

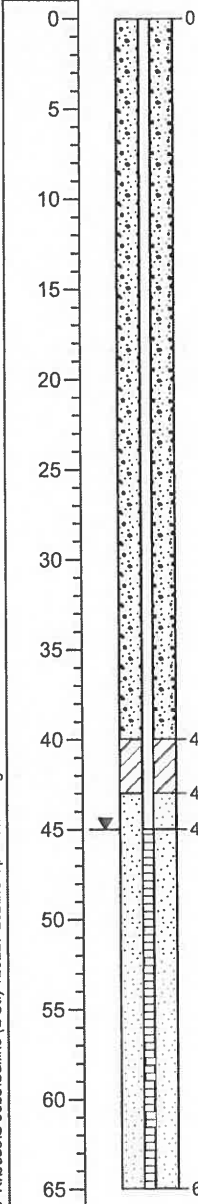
GROUND ZERO ANALYSIS, INC.

Log of Boring MW-9

Sullins (Arrow Rentals)
187 N. L Street
Livermore, CA
Project No.:1262.2

Date : 01/27/15
Drilling Method : Hollow Stem Auger
Driller : V&W Drilling
Logged By : Andrew Dorn

USCS	GRAPHIC	DESCRIPTION	PID (ppm)	LAB SAMPLE	Blow Count
		Free Drill 0-20'			
SC		CLAYEY GRAVELLY SAND - Brown/red, mostly F-C sand w/ silt/clay and gravel up to 2cm, angular to sub-angular, slightly moist, no odor	0		50/6"
SC		CLAYEY GRAVELLY SAND - same as above at 20-21.5' w/ increased grain size and angularity	0		50/6"
SC		CLAYEY GRAVELLY SAND - same as above at 20-21.5' w/ increased grain size and angularity	0		50/6"
CL		SANDY CLAY - Reddish brown, mostly clay w/ VF sand, v. low plasticity, slightly moist, slight odor	45	MW-9 @ 35' TPHg 0.42 mg/kg Benzene 0.056 mg/kg	5/8/8
CL		SANDY CLAY - Brown/gray, mostly clay w/ VF sand, v. low plasticity, moist, moderate odor	980	MW-9 @ 40' TPHg 32 mg/kg Benzene 0.32 mg/kg	4/6/9
CL		SANDY CLAY - same as above at 40-41.5' w/ increased grain size	130		
SC		CLAYEY GRAVELLY SAND - Gray, F-C sand, mostly C sand, sub-angular to angular gravel up to 2cm, wet, slight odor	84		50/6"
CL		SANDY CLAY - Brown, mostly clay w/ VF sand and no gravel, moderate toughness, v. low plasticity, dry, strong cementation, slight odor	0		50/6"
SC		CLAYEY SAND - Reddish brown, sand matrix w/ clay, F-c sand, mostly F sand, well graded, some gravel to 1/2cm, slight odor, wet	19	MW-9 @ 65' TPHg 26 mg/kg Benzene 0.17 mg/kg	10/10/11
SC		CLAYEY GRAVELLY SAND - Gray, F-C sand, mostly C sand, sub-angular to angular gravel up to 4cm, wet, no odor	37		50/6"



03-04-2015 K:\Jobs\S Jobs\Sullins (L St.) 12622\12622\Graphics\borelogs\MW-9.bor