

January 6, 2016

RECEIVED

By Alameda County Environmental Health 10:51 am, Jan 08, 2016

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

Re: Transmittal Letter

Site Location: Arrow Rentals

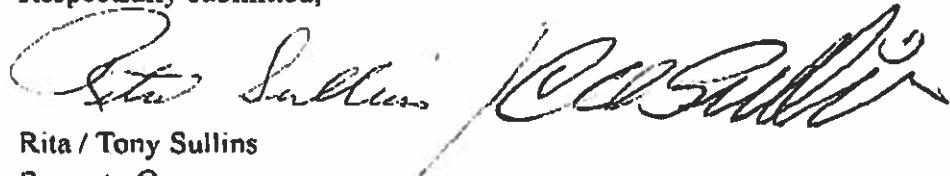
187 North L Street, Livermore, CA 94550

Dear Mr. Wickham:

On behalf of Rita and Tony Sullins, Don Sul Inc., Ground Zero Analysis, Inc. (GZA) prepared the Second 2015 Semi-Annual Groundwater Monitoring, Remediation Effectiveness and Low Threat Closure Report, dated January 6, 2016 that was sent to your office via electronic delivery per Alameda County's guidelines.

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

Respectfully submitted,



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



ANALYSIS, INC.

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

REPORT

Second Semi-Annual Groundwater Monitoring, Remediation Effectiveness and Low Threat Closure Request

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

**Project No. 1262.2
January 6, 2016**

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



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

January 6, 2016

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 Groundwater Monitoring, Remediation Effectiveness and Low Threat Closure Request
Location: 187 North L Street, Livermore, CA 94550.
(ACEH Fuel Leak Case No. RO0000394)

Dear Mr. & Ms. Sullins:

Ground Zero Analysis, Inc. (Ground Zero) has prepared the following report for the groundwater monitoring event performed between November 16, 2015 and November 18, 2015 as well as the remediation activities performed during the second half of 2015. Additional groundwater sampling of the new wells (MW-9 and MW-10) was completed on September 15, 2015. The core of gasoline contamination persists in the location of and down-gradient (northwest) of the former underground storage tanks (USTs) and associated piping. Dual Phase Extraction (DPE) and air sparging (AS) systems which were started on November 15, 2011 and March 21, 2012, respectively, continue to operate.

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Eric L. Price, PG".

Eric L. Price, PG

cc: Jerry Wickham – ACEH (Via FTP site)

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- Attachment A: Hydrographs
Attachment B: Groundwater Monitoring Field Logs
Attachment C: Laboratory Analytical Data Sheets
Attachment D: Remedial Operation and Maintenance Field Logs



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

REPORT

Second Semi-Annual Groundwater Monitoring, Remediation Effectiveness and Low Threat Closure Request

Arrow Rentals Services
187 North L St.
Livermore, CA

Project No. 1262.2
January 6, 2016

1.0 EXECUTIVE SUMMARY

Details of the groundwater monitoring and sampling events that took place on September 15, 2015, November 16, 2015 and November 17, 2015 as well as remediation activities performed during the second half of 2015 are included in this report.

Newly installed groundwater monitoring wells MW-9 and MW-10 were purged and sampled on September 15, 2015. The routine semi-annual groundwater monitoring event was performed on November 16, 2015 and November 17, 2015 in which thirty groundwater wells were monitored, of which twenty wells were dry or had insufficient volume of water and were not purged or sampled. An additional well (MW-404) could not be monitored due to an obstruction within the well casing. A total of nine wells were monitored and sampled.

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

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

2.0 GROUNDWATER MONITORING

2.1 Groundwater Elevation and Flow

September 15, 2015

Newly installed groundwater monitoring wells MW-9 and MW-10 were purged and sampled on September 15, 2015. The average groundwater elevation recorded during the event was 426.63 feet above mean sea level (amsl) and the average depth to water (DTW) was 53.24 feet below ground surface (bgs). The intermediate groundwater flow could not be calculated since only two wells were monitored.

November 16, 2015 and November 17, 2015

All of the Sites shallow depth groundwater monitoring wells were reported to be dry during the November 2015 monitoring event. All of the Sites intermediate depth groundwater monitoring wells were reported to be dry during the November 2015 monitoring event, with the exception of MW-9, MW-10 and EW-2. The average groundwater elevation recorded in the intermediate monitoring wells was 424.91 feet amsl and the average DTW was 55.42 feet bgs. Groundwater elevation has decreased 7.90 feet since the June 2015 monitoring event.

Between 1989 and 2015, DTW has ranged from approximately 20 to 56 feet bgs. The November 2015 event represents the lowest groundwater elevation recorded at the Site. Groundwater elevation has decreased by over 34 feet between April 1996 and November 2015. Well locations on- and off-site are shown on Figure 2 and on-site well locations are shown on Figure 3.

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

Shallow Wells (screened 20 – 45 feet bgs):

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

Intermediate Wells (screened 40 – 60 feet bgs):

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

- Well W-1 is considered intermediate and is monitored; however the well is not utilized for groundwater gradient measurements due to modifications to the well top for remediation purposes.

- 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 well W-2 cannot be located following the construction of the housing complex to the south and southeast of the site.
- 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

Horizontal Groundwater Gradients

During the September 2015 groundwater monitoring event, the intermediate groundwater flow could not be calculated since data was only collected from two wells.

During the November 2015 groundwater monitoring event, all of the shallow wells were reported to be dry. During the November 2015 groundwater monitoring event, all of the intermediate wells were reported to be dry with the exception of MW-9, MW-10 and EW-2. The groundwater flow in the intermediate aquifer was calculated to be to the northwest at a gradient of approximately 0.025 ft/ft. Elevation data from MW-9, MW-10 and EW-2 was used to calculate the intermediate groundwater flow.

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

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

Vertical Groundwater Gradients

Ground Zero calculated vertical gradients for well pair MW-204/304 using data collected during the November 2015 monitoring event, which was calculated to be negative (or downward) at -0.006 ft/ft.

The remaining well pairs could not be calculated since monitoring wells MW-205, MW-206 and MW-207 were dry during the November 2015 event.

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

2.2 Groundwater Sampling Procedure

On September 15, 2015, November 16, 2015 and November 17, 2015, Ground Zero staff recorded DTW measurements as well as purged and sampled the selected groundwater monitoring wells. The wells were purged of at least three well volumes of stagnant water prior to sample collection unless the well was dewatered during purging. During the November 2015 event, EW-2 was sampled with a disposable bailer.

When pH, temperature, and electrical conductivity (EC) measurements had stabilized to within 10%, the groundwater monitoring wells are sampled. Care is taken to minimize sample agitation. The Continuous Multichannel Tubing (CMT®) wells are purged using a peristaltic pump. Field parameters were collected from the CMT wells for the first time and are included in Attachment B.

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

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

Groundwater monitoring field logs are included in Attachment B.

2.3 Laboratory Analyses

The groundwater samples were analyzed for:

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

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

3.0 FINDINGS AND DISCUSSION

3.1 Field Parameters

September 15, 2015

- Dissolved Oxygen (DO) readings were 3.19 mg/L (MW-9) and 4.51 mg/L (MW-10).
- EC readings were 967 µmhos/cm (MW-10) and 970 µmhos/cm (MW-9).

- Oxygen Reduction Potential (ORP) readings were 90.3 mV (MW-9) and 94.8 mV (MW-10)
- pH readings were 6.66 (MW-9) and 7.08 (MW-10).
- Temperature readings were 19.8 °C (MW-10) and 20.1 °C (MW-9).

November 16, 2015 and November 17, 2015

- DO readings ranged from 0.58 mg/L (EW-2) to 4.21 mg/L (MW-10).
- EC ranged from 1,053 µmhos/cm (EW-2) to 1,089 µmhos/cm (MW-9)
- ORP ranged from -118.2 mV (EW-2) to 142.8 mV (MW-10)
- pH ranged from 6.64 (EW-2) to 6.97 (MW-9)
- Temperature ranged from 19.6 °C (MW-10) to 20.2 °C (MW-9)

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

3.2 Laboratory Analytical Data

Due to low groundwater levels, the shallow CMT® wells have not been sampled since the DPE system was started in November 2011. It is anticipated that as groundwater levels rise in the shallow wells, decreased concentrations will likely be reported due to extensive vadose zone remediation between 25 and 55 feet bgs.

September 15, 2015

Intermediate Aquifer

- Down gradient wells MW-9 and MW-10 reported TPHg concentrations of 96 µg/L and 12 µg/L, respectively.
- Down gradient wells MW-9 and MW-10 reported benzene concentrations of 2.2 µg/L and non-detect above the laboratory reporting limit of 0.5 µg/L, respectively.

November 16, 2015 and November 17, 2015

Shallow Aquifer

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

Intermediate Aquifer

- The highest concentration of TPHg was reported as 3,700 micrograms per liter (µg/L) in EW-2, while down gradient wells MW-9 and MW-10 reported concentrations of 260 µg/L and 71 µg/L, respectively.

- The highest concentration of benzene was reported as 270 µg/L in EW-2, while down gradient wells MW-9 and MW-10 reported concentrations of 2.6 µg/L and not detectable above the laboratory reporting limit of 0.3 µg/L, respectively.
- CMT® wells MW-104 and MW-205 thru MW-208 were dry and therefore were not purged and sampled during the November 2015 groundwater monitoring event.
- An intermediate well TPHg groundwater plume map is included as Figure 7.
- An intermediate well benzene groundwater plume map is included as Figure 8.

Deep Aquifer

- The highest concentration of TPHg was reported as 1,800 µg/L in MW-204.
- The highest concentration of benzene was reported as 780 µg/L in MW-305.
- A deep well TPHg groundwater plume map is included as Figure 9.
- A deep well benzene groundwater plume map is included as Figure 10.

Deepest Aquifer

- TPHg and benzene concentrations increased in MW-304.
- MW-404 was not sampled during the November 2015 event due to an obstruction in the well casing.

4.0 REMEDIATION SYSTEM STATUS & EFFECTIVENESS

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

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

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

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

4.1 System Operation

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

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

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

The DPE system operated for a total of approximately 1,424 hours or approximately 59 days during the second half of 2015 (as of December 10, 2015). Ground Zero believes that the hour meter was not operating properly throughout the first half of 2015 due to discrepancies in the actual time that the system ran versus the time period recorded by the hour meter. The hour meter was replaced on July 23, 2015.

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

- August 1, 2015 thru August 18, 2015 – the DPE system shut down due to an empty propane tank.
- August 22, 2015 thru September 15, 2015 – the DPE system shut down due to a high temperature alarm caused by heavily contaminated vapors being removed from EW-2.
- September 24, 2015 thru October 7, 2015 – the DPE system shut down due to an empty propane tank.
- October 7, 2015 thru October 13, 2015 – the DPE system shut down due to an empty propane tank. The existing propane tank was removed and a new tank was installed by Kamps Propane.
- October 19, 2015 thru November 18, 2015 – the DPE system shut down due to an oxidizer high temperature alarm. The system remained shut down in anticipation of the November 16, 2015 groundwater monitoring event. The DPE system was restarted on November 18, 2015.

- November 26, 2015 thru December 10, 2015 – the DPE system shut down due to an oxidizer high temperature alarm.

4.2 Treatment System Data

During the second half of 2015, the DPE system operated for 1,424 hours and removed a total of approximately 6,009 pounds or approximately 924 gallons of gasoline hydrocarbons as TPHg in vapor and aqueous phases. As of the end of the fourth quarter 2015, the DPE system has removed a total of approximately 12,014 pounds, or approximately 1,848 gallons of gasoline hydrocarbons as TPHg in both vapor and groundwater phases.

Soil Vapor Extraction Mass Removal

During the second half of 2015, the DPE system removed approximately 5,998 pounds, or approximately 923 gallons of soil vapor gasoline hydrocarbons as TPHg. As of the end of the second quarter 2015, the DPE system has removed approximately 11,870 pounds, or approximately 1,826 gallons of vapor phase TPHg.

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

Groundwater Extraction Mass Removal

The influent groundwater stream is sampled periodically and the analytical results are used to calculate the mass removed. During the second half of 2015, the DPE system removed approximately 10.6 pounds, or approximately 1.6 gallons, of gasoline hydrocarbons as TPHg. As of the end of the second half 2015, the DPE system had removed approximately 144 pounds, or approximately 22 gallons of TPHg from groundwater extraction.

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

Assumptions

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

- This air/water mixture is transported through 90 feet of piping to the DPE unit where the two phases are separated in the knockout drum. So in essence, the piping system acts as a linear air stripper causing the VOCs in the water to transfer into the vapor phase.

5.0 CONCLUSIONS

1. The intermediate groundwater plume appears to attenuate to the northeast at CMT® Cluster 6, to the west at MW-9 and to the southwest at MW-10.
2. Concentrations reported in intermediate well EW-2 appear to be decreasing and Ground Zero believes this is a result of a concentrated effort to remediate the core of the contamination.
3. Down-gradient intermediate depth groundwater monitoring wells MW-9 and MW-10 represent the down gradient edge of the intermediate groundwater plume.
4. Concentrations in deep groundwater monitoring wells MW-204 and MW-307 appear to be fluctuating, but on an overall decreasing trend. Concentrations in deep wells MW-305, MW-306 and MW-308 appear to be fluctuating and stable, neither decreasing nor increasing.
5. Concentrations reported in the deep wells suggest that remediation is occurring in the core of the plume based on decreasing concentrations in core well MW-204. However, unstable trends in wells MW-305, MW-307 and MW-308 make it difficult to understand what is occurring in the deep aquifer up-gradient and down-gradient of the contaminant core. However, extraction from EW-2 (near MW-305) will likely drive the concentrations down.
6. Remediation by DPE and air sparging in wells W-A, W-1 and EW-2 appears to have decreased the contaminant mass in the core of the plume, as observed in monitoring wells EW-2 and MW-204. Despite being dry during the November 2015 monitoring event, core monitoring wells W-1, W-A, W-1s and MW-104 appear to be decreasing.

6.0 GENERAL CRITERIA

- A. The unauthorized release is located within the service area of a public water system operated by the Zone 7 Water Agency (Zone 7). Zone 7 has been addressing the drought conditions and met and exceeded the 2014 goals in water conservation (Zone 7, 2014). The total demand for Zone 7 water supplies was reduced by 63% between 2013 and 2014 (Zone 7, 2014). The fiscal year 15/16 suggests that demand will not surpass supply.

- B. The unauthorized release consists only of petroleum as described in the State Water Resources Control Board's Low-Threat Underground Storage Tank Case Closure Policy.
- C. The unauthorized release has been stopped. The removal of the UST's and the associated infrastructure as well as the limited soil excavation was conducted between 1972 and 1986.
- D. Free product has been removed to the maximum extent practicable.
- E. GTI submitted the *Site Conceptual Model and Semi-Annual Groundwater Monitoring Report* dated December 18, 2006 (GTI, 2006).
- F. Minimal soil excavation was conducted during the removal of the USTs, advancement of soil borings, and the construction of monitoring wells. Groundwater and soil vapor have been extracted from the Site since November 29, 2011. An air sparging system was added to the treatment system in March 2012.

Since the installation of EW-2 in January 2015, TPHg and benzene have reached a maximum concentration removal level of 20,000 mg/m³ and 66 mg/m³, respectively with a flow rate of approximately 90 cfm (see attached tables).

- G. Groundwater has been tested for MTBE and the results are reported in the Semi-Annual Groundwater Monitoring Reports. Samples analyzed on November 16, 2015 indicate MTBE was present above water quality objectives (WQOs) of 5.0 µg/L in EW2 (91 µg/L) and MW204 (6.9) µg/L.

Table 7 shows historical laboratory analytical results. Monitoring well locations are shown on Figure 2. Many monitoring points have gone dry as the Livermore area has experienced extreme drought conditions. Below is a summary of the most recent MTBE results, not previously discussed, per well over the last two years:

- W-1 (June 2004) 23 µg/L
- W-A (June 2004) 21 µg/L
- MW-104 (June 2004) 30 µg/L
- MW-205 (June 2004) 41 µg/L
- MW-207 (June 2004) 84 µg/L
- MW-208 (June 2004) 31 µg/L
- MTBE is currently below laboratory detection limits in W-1s, W-Bs, MW-304, MW-308, and MW-404. However these monitoring wells have contained concentrations above the WQO's in the past.
- MW-108 has been dry since 2011 but MTBE was detected between 1.9 µg/L and 89.6 µg/L.

- MTBE has historically not been detected above laboratory reporting limits or was below WQOs in monitoring wells: W-3s, W-Es, MW-4, MW-6, MW-8, MW-9, MW-10, MW-105, MW-106, MW-107, MW-206, MW-305, MW-306, and MW-307.

H. Nuisance as defined by Water Code section 13050 does not exist at the site.

7.0 MEDIA-SPECIFIC CRITERIA

Groundwater

- A. The groundwater plume that exceeds water quality objectives is less than 250 feet in length.
- B. There is no free product.
- C. There are no municipal or domestic water supply wells within 2,200 feet of the Site. There are no irrigation water supply wells within 1,800 feet of the Site. The area is supplied water by the Zone 7 Water Agency (GTI, 2006).
- D. In the past two years benzene concentrations have been less than 3,000 µg/L in all sampled monitoring wells with two exceptions. Data from the June 2014 groundwater monitoring event show MW-205 and MW-207 having concentrations of 4,300 and 5,900 µg/L, respectively (see attached tables).

Historically, MTBE has not been reported above 380 µg/L (Table 7). Details are discussed under General Criteria, Section G.

Petroleum Vapor Intrusion to Indoor Air

The maximum concentration of TPHg detected in soil samples collected between 5 and 10 feet bgs was 570 mg/Kg. MTBE was not reported above laboratory detection limits.

The highest recorded level of MTBE in groundwater was 380 µg/L. Published groundwater screening levels for evaluation of potential vapor intrusion concerns for residential land use indicate that MTBE is not a vapor intrusion risk if groundwater concentrations are below 24,000 µg/L [SFB-RWQCB, 2008 (Table E-1)].

The SWRCB's Low Threat Closure Policy (LTCP) Checklist as of June 15, 2015 indicates the Site meets the petroleum vapor intrusion to indoor air criteria (GeoTracker). Ground Zero concurs with the SWRCB and does not believe that the release characteristics can be reasonably believed to pose an unacceptable health risk and therefore, satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required for this active commercial petroleum fueling facility.

Direct Contact and Outdoor Air Exposure

The SWRCB's LTCP Checklist as of June 15, 2015 indicates the Site meets the direct contact and outdoor air exposure criteria (GeoTracker). TPHg was only detected in two soil borings above 10 feet deep. Soil borings B-2 and B-G contained concentrations of TPHg at 8.2 mg/Kg and 570 mg/Kg, respectively.

8.0 REFERENCES

Geological Technics Inc. (GTI, 2006). *Site Conceptual Model and Semiannual Groundwater Monitoring Report October 2006* dated December 18, 2006.

Ground Zero Analysis, Inc. (GZA, 2011); *Semi-Annual Groundwater Monitoring Report – 1st Half 2011 and Low-Risk Closure Assessment* dated March 11, 2011.

Ground Zero Analysis, Inc. (GZA, 2015); *Semi-Annual Groundwater Monitoring and Remediation Effectiveness Report – 1st Half 2015* dated August 18, 2015.

San Francisco Bay Regional Water Quality Control Board (SFB-RWQCB, 2008), *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater: Interim Final November 2007, revised May 2008.*

State Water Resources Control Board (SWRCB, 2012). Resolution No. 2012-0016: Water Quality Control Policy for Low-Threat Underground Storage Tank Cases and Associated Checklist: May 1, 2012.

State Water Resources Control Board Database. (GeoTracker). State Water Resources Control Board GeoTrack Database. Website: Geotracker.waterboards.ca.gov/.

Zone 7 Water Agency (Zone 7, 2014); 2014 Annual Report. Website: zone7water.com.

9.0 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.

10.0 SIGNATURES & CERTIFICATION

This report was prepared by:



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

This report was prepared under the direction of:

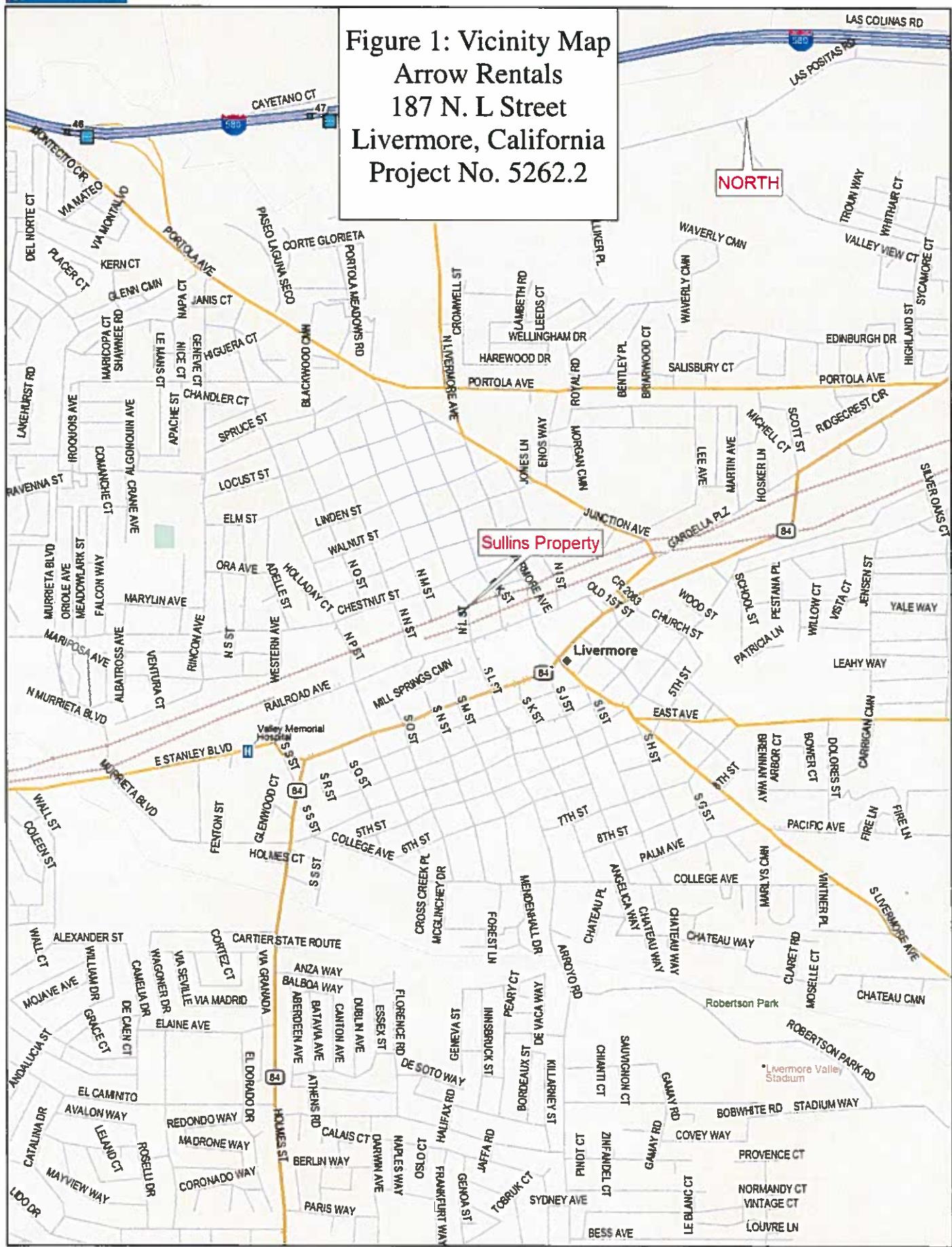


Eric L. Price, PG #8414



Figures

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



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Scale 1 : 19,200

1° = 1,600.0 ft Data Zoom 13-4

NOTE:
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STREET RIGHT OF WAY IS APPROXIMATE, BASED ON
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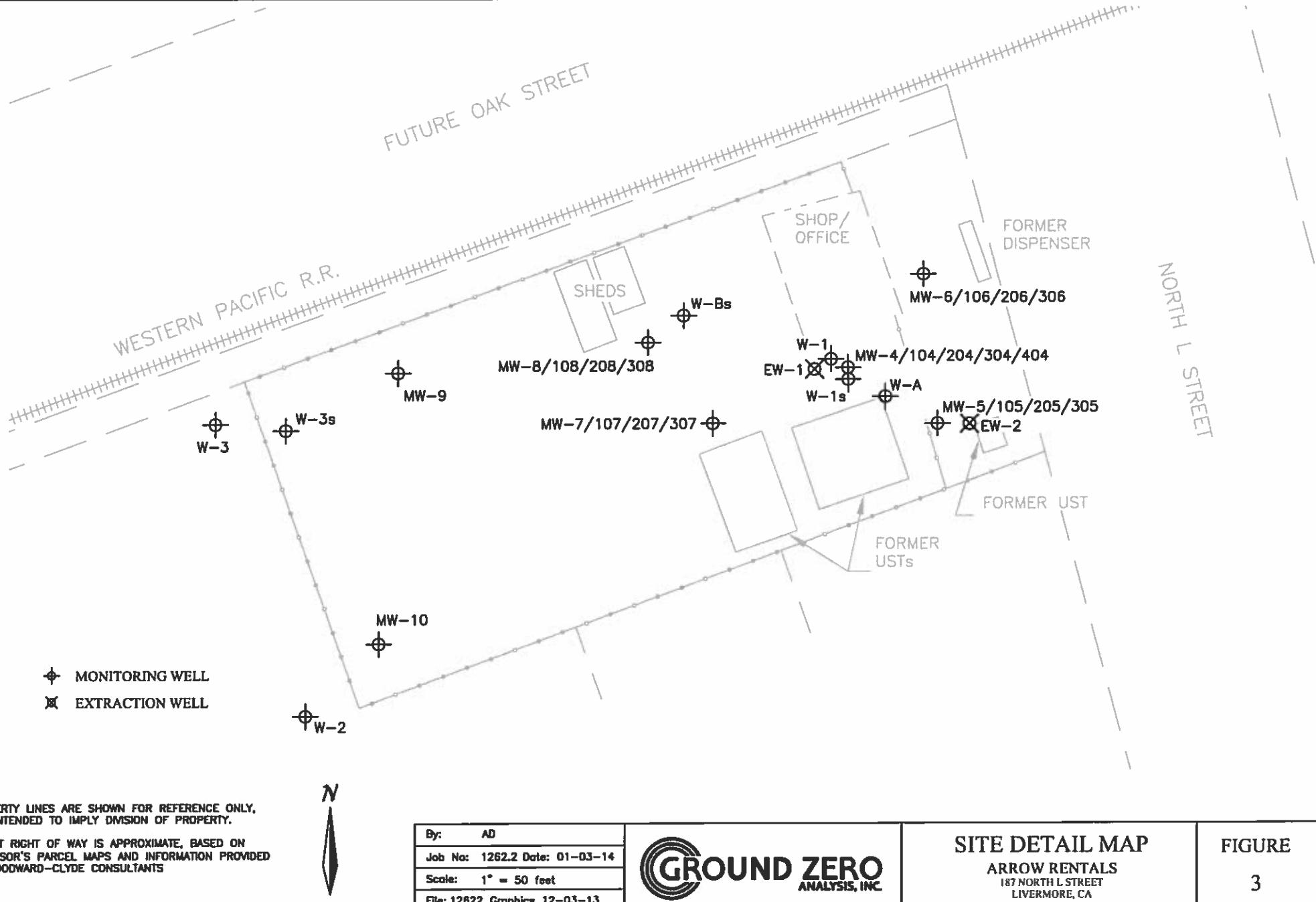


FIGURE 2

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

GROUND ZERO
ANALYSIS, INC.

SITE MAP



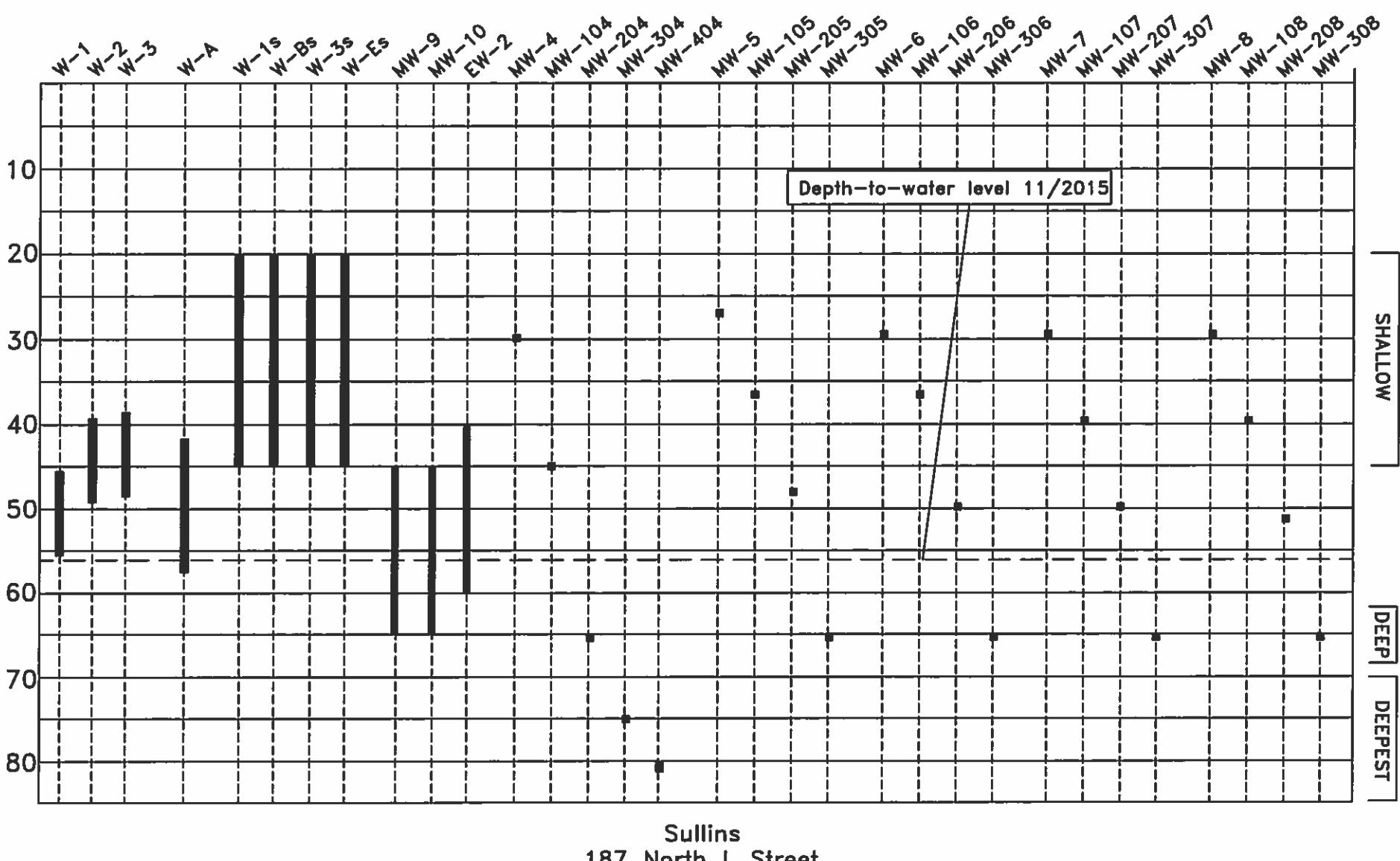
By:	AD
Job No:	1262.2 Date: 01-03-14
Scale:	1° = 50 feet
File:	12622 Graphics 12-03-13



SITE DETAIL MAP
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

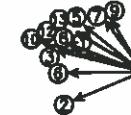
FIGURE
3

Figure 4:
Well Screened Interval Diagram

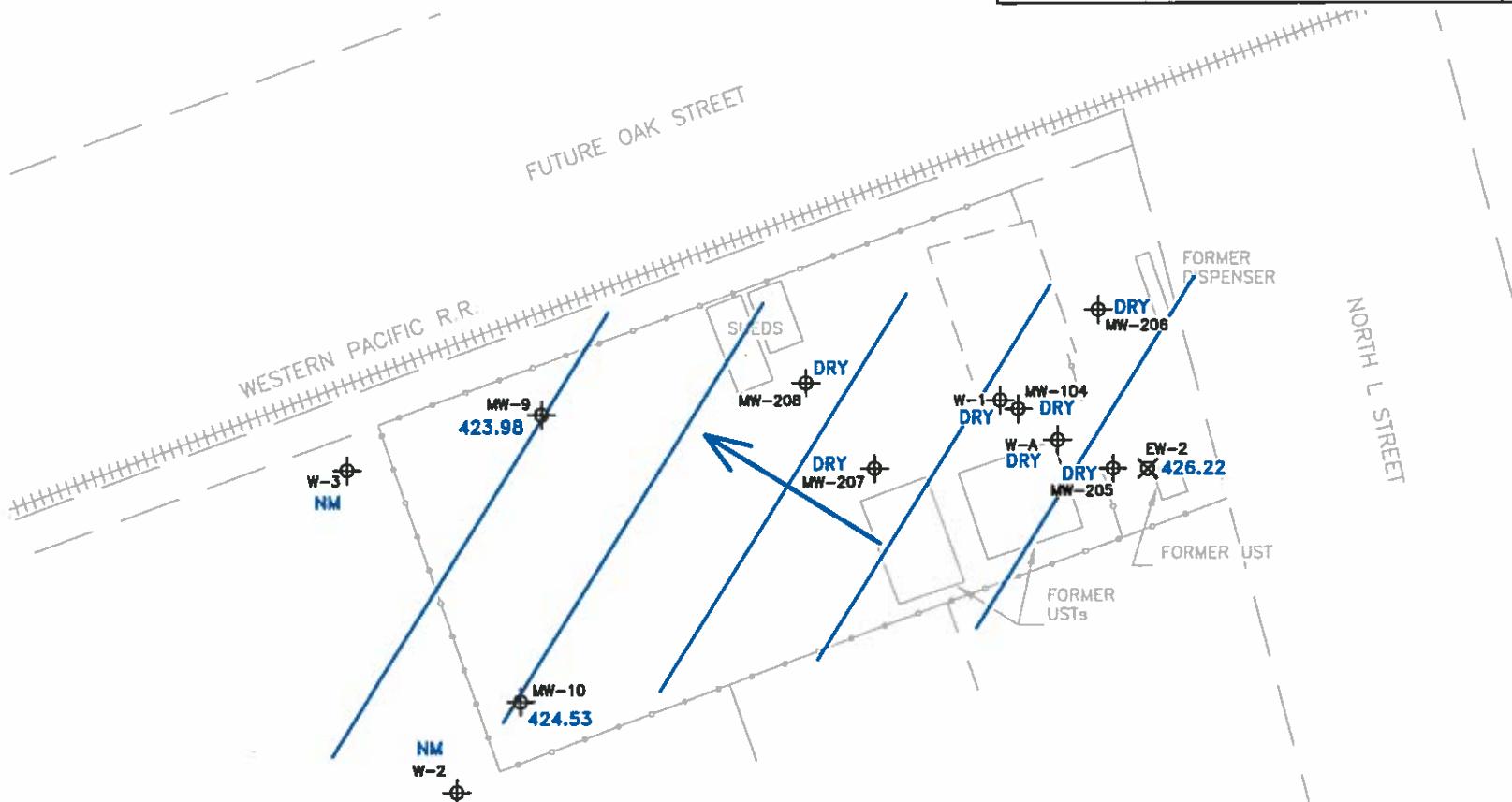


DATE	BEARING	GRADIENT
1 10/16/06	N63°W	0.012
2 04/17/07	S68°W	0.022
3 12/19/07	N76°W	0.04
4 04/07/08	NORTHWEST VARIABLE	
5 10/25/11	N53°W	0.025
6 05/30/12	S89°W	0.020
7 11/19/12	N36°W	0.015
8 08/24/13	N73°W	0.014
9 12/03/13	N32°W	0.013
10 08/17/14	N74°W	0.076
11 12/02/14	DRY	
12 03/09/15	N69°W	0.032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

ROSE DIAGRAM



0.001 0.01 0.1 1
GROUNDWATER GRADIENT FT/FT



By:	AD
Job No:	1262.2 Date: 01-04-16
Scale:	1" = 50 feet
File:	12622 Graphics 11-16-15



FIGURE 5: GROUNDWATER GRADIENT MAP
INTERMEDIATE WELLS - NOVEMBER 16, 2015
ARROW RENTALS
117 NORTH L STREET
LIVERMORE, CA

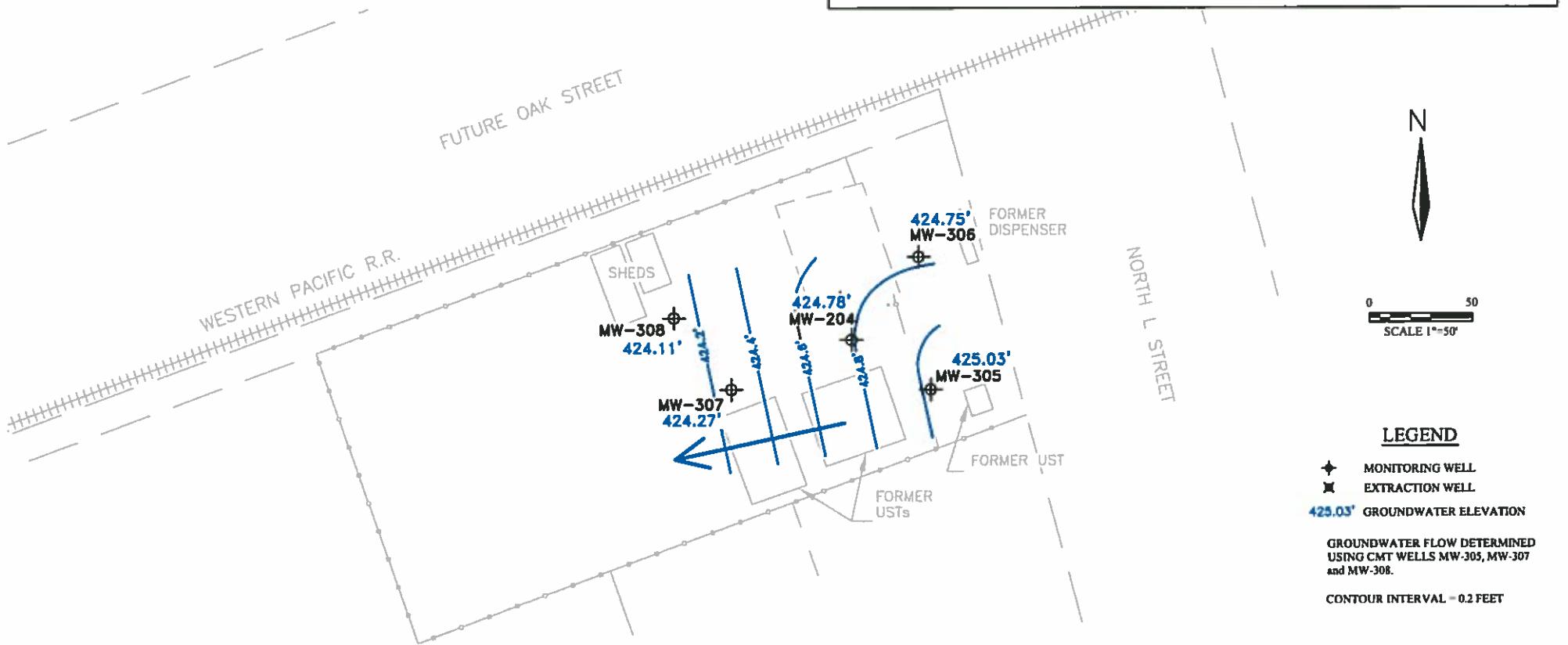
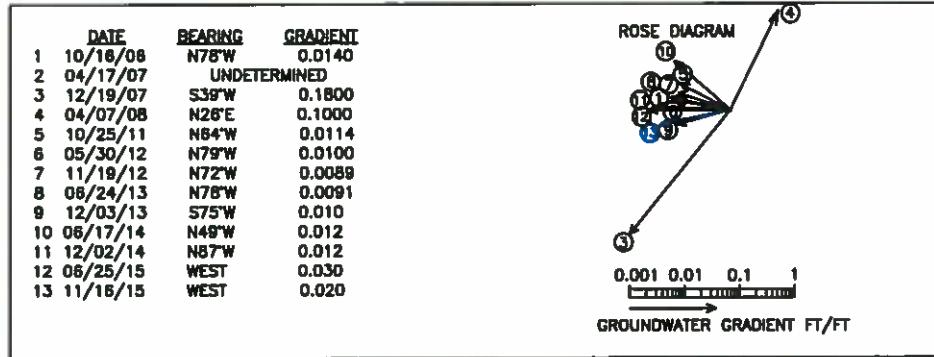
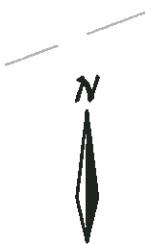


FIGURE 6

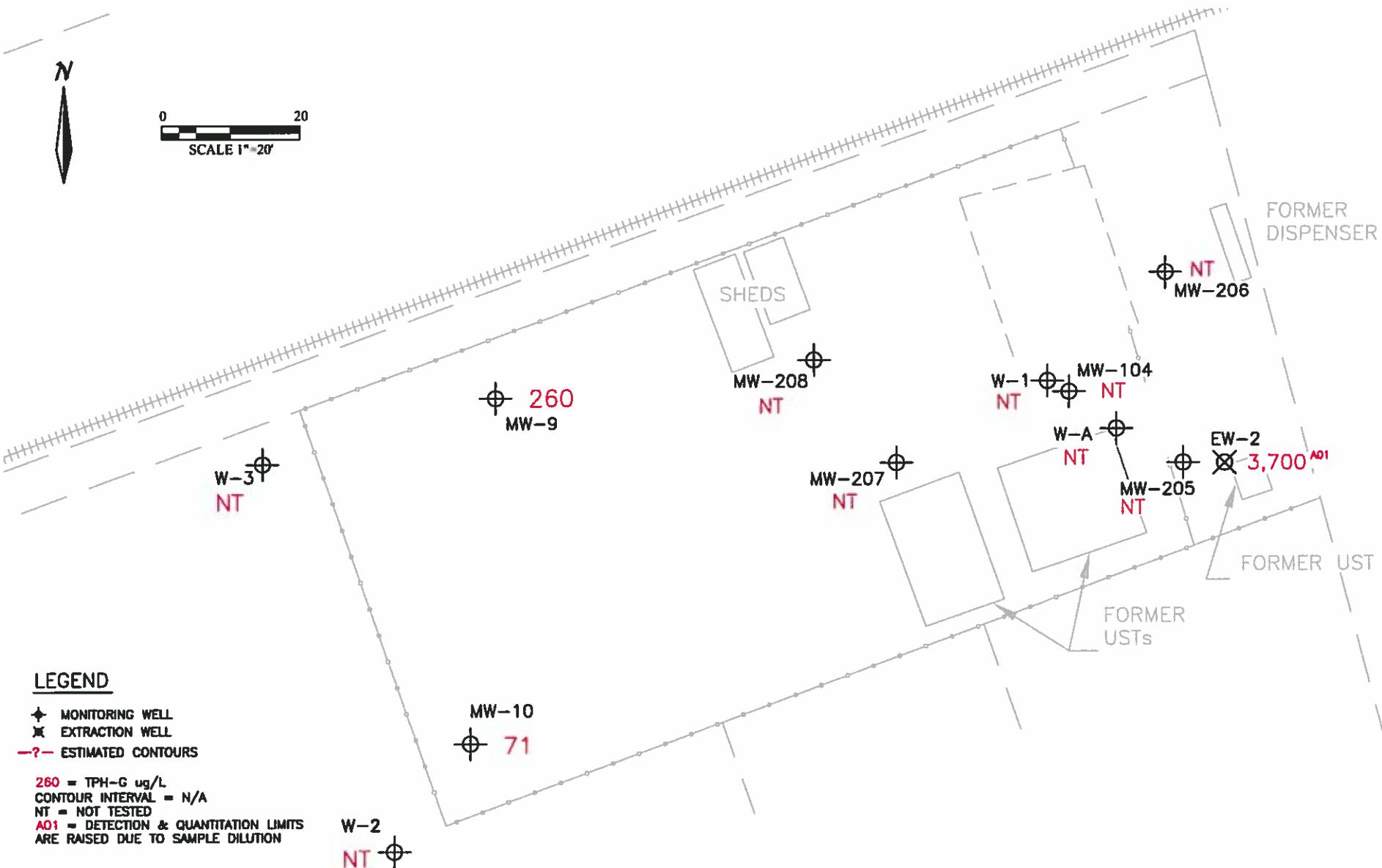
Sullins (Arrow Rentals)
187 North L Street
Livermore, California



DEEP AQUIFER GROUNDWATER
GRADIENT MAP - NOVEMBER 16, 2015



0
SCALE 1"=20'



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By:	AD
Job No:	1262.2 Date: 01-04-16
Scale:	1" = 50 feet
File:	12622 Graphics 11-16-15



FIGURE 7: INTERMEDIATE WELL TPH-G CONCENTRATIONS
NOVEMBER 16, 2015

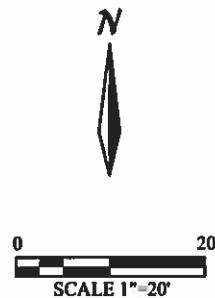
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA



By:	AD
Job No:	1262.2 Date: 01-04-16
Scale:	1" = 50 feet
File:	12622 Graphics 11-16-15



FIGURE 8: INTERMEDIATE WELL BENZENE CONCENTRATIONS
NOVEMBER 16, 2015
ARROW RENTALS
187 NORTH L STREET
LIVERMORE, CA

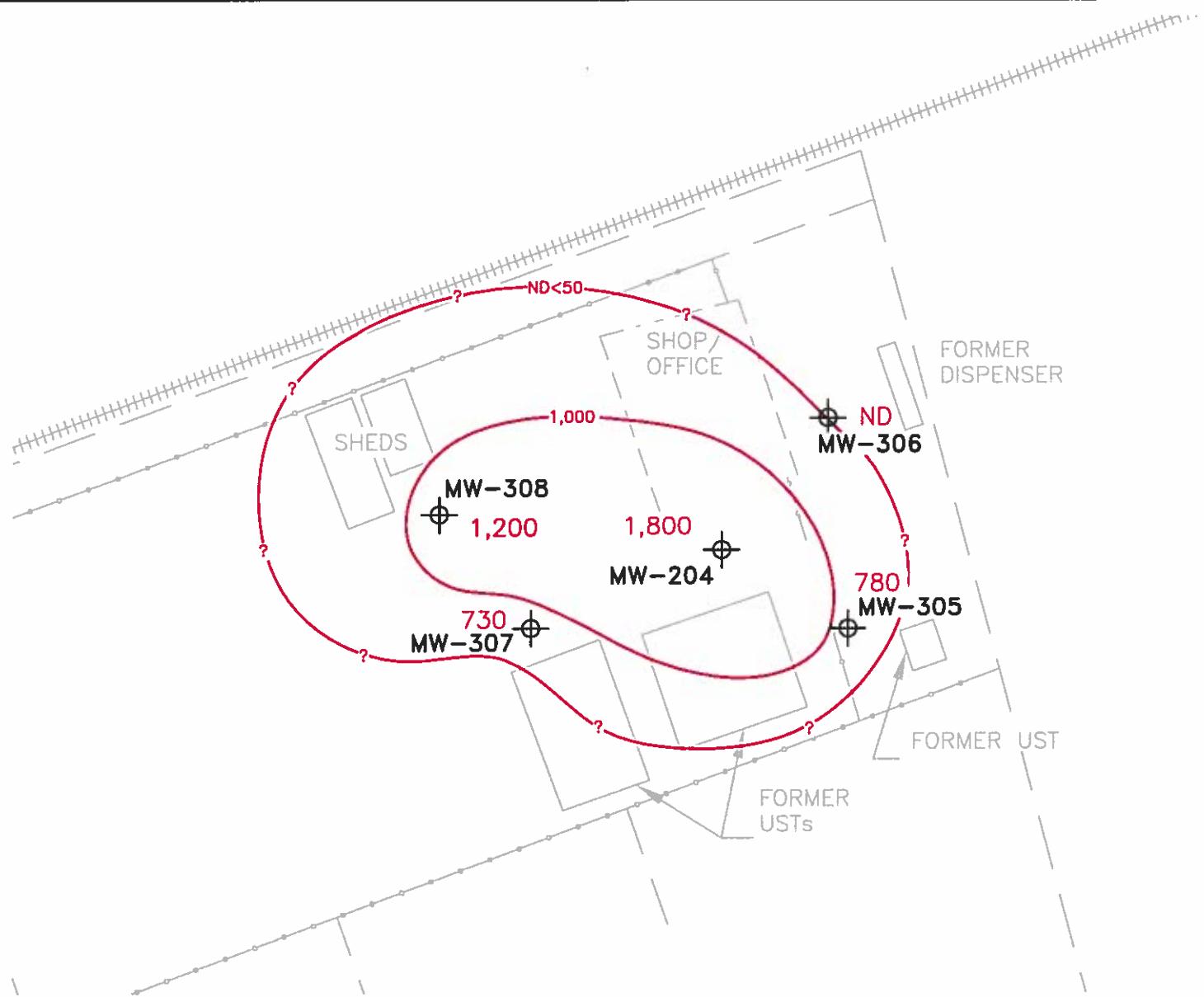


LEGEND

- ◆ MONITORING WELL
- ✖ EXTRACTION WELL
- ▬ ESTIMATED CONTOURS

1,800 = TPH-G CONCENTRATION ($\mu\text{g/L}$)

CONTOUR INTERVAL = 1,000 $\mu\text{g/L}$



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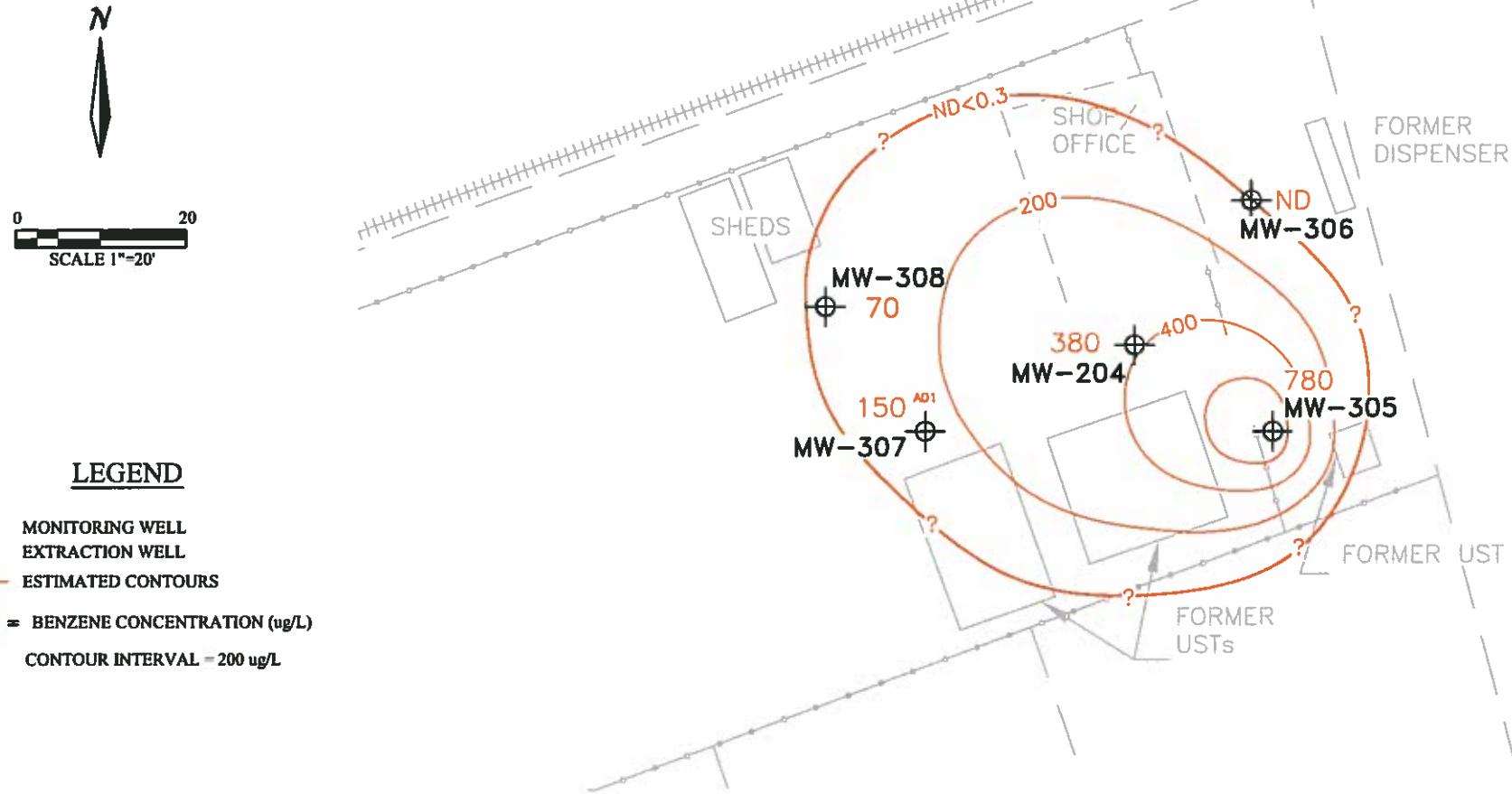
FIGURE 9

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



DEEP AQUIFER TPH-G GROUNDWATER
PLUME MAP

NOVEMBER 2015



DEEP AQUIFER BENZENE GROUNDWATER
PLUME MAP
NOVEMBER 2015

Summary Tables

TABLE I
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	Shot 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	03/10/96	45	?	6	PVC	0.010	#2/12	45	20	45	17	17	15	15	15	\$
Monitoring	W-1s	Active	03/12/96	45	?	6	PVC	0.010	#2/12	45	20	45	18	18	16	16	16	\$
Monitoring	W-3s	Active	03/12/96	45	?	4	PVC	0.010	#2/12	45	20	45	18	18	16	16	16	\$
Monitoring	W-1s	Active	03/13/96	45	?	2	PVC	0.010	#2/12	45	20	45	18	18	16	16	16	\$
Monitoring	MW-4	Active	10/20/06	82	8	-	MCT	-	#2/12	30	29	30	20	16	16	14	14	\$
Monitoring	MW-5	Active	10/09/06	68	8	-	MCT	-	#2/12	27	26	29	24	24	21.5	21.5	21.5	\$
Monitoring	MW-6	Active	10/10/06	68	8	-	MCT	-	#2/12	30	29	31	27	27	24	24	24	\$
Monitoring	MW-7	Active	10/04/06	69.5	8	-	MCT	-	#2/12	30	29	30	20	20	-	-	6	\$
Monitoring	MW-8	Active	10/05/06	66.5	8	-	MCT	-	#2/12	30	29	30	20	20	18	18	18	\$
Monitoring	MW-10s	Active	10/09/06	37	8	-	MCT	-	#2/12	37	36	39	34	35	29	-	-	-
Monitoring	MW-10s	Active	10/10/06	37	8	-	MCT	-	#2/12	37	36	39	35	35	31	-	-	-
Monitoring	MW-10t	Active	10/04/06	40	8	-	MCT	-	#2/12	40	39	42	37	37	30	-	-	-
Monitoring	MW-10x	Active	10/15/06	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	7.5	\$
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	39	\$
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	22.5	\$
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	32.5	\$
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	36.5	\$
Monitoring	W-H *	Destroyed	07/13/90	55	12	4	PVC	0.010	#2/12	55	40	55	32	32	30	30	30	\$
Monitoring	W-C *	Destroyed	07/11/90	55	8	2	PVC	0.010	#2/12	55	45	55	37.5	37.5	35	35	35	\$
Monitoring	W-D *	Destroyed	07/12/90	57.5	8	2	PVC	0.010	#2/12	57.5	42	57.5	39.5	39.5	34	34	32	\$
Monitoring	W-E *	Destroyed	07/11/90	61	8	2	PVC	0.010	#2/12	60.5	61	61	37	37	30	29	29	\$
Monitoring	MW-10t	Active	10/02/06	51	8	-	MCT	-	#2/12	50.5	49.5	52	48	48	45	45	45	\$
Monitoring	MW-20s	Active	10/09/06	48	8	-	MCT	-	#2/12	48	47	50	45	45	39	-	-	-
Monitoring	MW-20t	Active	10/10/06	50	8	-	MCT	-	#2/12	50	49	52	47	47	39	-	-	-
Monitoring	MW-20t	Active	10/04/06	50	8	-	MCT	-	#2/12	50	49	52	47	47	42	-	-	-
Monitoring	MW-20s	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	40	\$
Monitoring	MW-10t	Active	01/27/15	65	8	2	PVC	0.010	#2/12	65	45	65	43	43	40	40	40	\$
Vapor Extraction	EW-2	Active	01/27/15	60	8	2	PVC	0.010	#2/12	60	40	60	38	38	35	35	35	\$
Monitoring	MW-20t	Active	10/12/06	66.5	8	-	MCT	-	#2/12	66.5	65.5	68	64	64	52	-	-	-
Monitoring	MW-30s	Active	10/09/06	68	8	-	MCT	-	#2/12	66	65	68	63	63	50	-	-	-
Monitoring	MW-30t	Active	10/10/06	68	8	-	MCT	-	#2/12	66	65	68	63	63	52	-	-	-
Monitoring	MW-30t	Active	10/04/06	69.5	8	-	MCT	-	#2/12	66	65	68	63	63	52	-	-	-
Deep	MW-30s	Active	10/12/06	75.5	8	-	MCT	-	#2/12	75.5	74.5	76	73	73	68	-	-	-
Deep	MW-30t	Active	10/13/06	82	8	-	MCT	-	#2/12	81.5	80	81.5	79.5	80	76	-	-	-
Deep	MW-40s	Monitoring	10/13/06	82	8	-	MCT	-	#2/12	81.5	80	81.5	79.5	80	76	-	-	-

* = well was destroyed in 2008

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

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

Date		Elevation of Groundwater*																		Avg. Elv. (feet)	Avg. DTW (feet)	Gradient (ft/ft)	Bearing
		W-1s	DTW	W-3s	DTW	W-Bs	DTW	W-Es	DTW														
		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

"-" = 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-8s, W-5s and W-3s. - The well top of W-1s was modified for the DPF system.

Starting 10/20/11 - Gradient calculated using a 3-point problem with monitoring wells WV-BS, WV-L3, and WV-SS. The well top of WV-13 was modified for the D/L system.

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 October 16, 2006 in accordance with SWRCB Geotracker Requirements																								
		W-1**	DTW	W-A**	DTW	MW-9	DTW	MW-10	DTW	EW-2	DTW	MW-104	DTW	MW-205	DTW	MW-206	DTW	MW-207	DTW	MW-208	DTW	Avg. Elv.	Avg. DTW	Gradient	Bearing
<i>top of casing</i>	480.77			481.04		479.87		479.86		481.27		480.84		481.12		480.79		480.91		480.64		(feet)	(feet)	(ft/ft)	
<i>top of screen</i>	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				
<i>bottom of screen</i>	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11/16/2015	-	-	-	-	-	423.98	55.89	424.53	55.33	426.22	55.05	-	-	-	-	-	-	-	-	-	-	424.91	55.42	0.025	N58°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 irrelevant and was not used for groundwater contour or avg. groundwater elevation calculation

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
10/8/2008	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	-	-

"-" = 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	-			
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				

TABLE 6
Summary of Groundwater Analytical Data - Second Half 2015

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

Wells	Date	TPHg	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
W-1	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
EW-2	11/17/2015	3700 ^{A01}	270 ^{A01}	83 ^{A01}	150 ^{A01}	510 ^{A01}	91 ^{A01}
W-A	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-1s	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-3s	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-Bs	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
W-Es	11/16/2015	NS	NS	NS	NS	NS	NS
MW-4	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-5	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-6	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-7	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-8	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-9	9/15/2015	96	2.2	<0.5	<0.5	<1.0	<0.5
MW-9	11/17/2015	260	2.6	2.7	<0.3	9.2	<1
MW-10	9/15/2015	12 ^J	<0.5	<0.5	<0.5	<1.0	<0.5
MW-10	11/17/2015	71	<0.3	0.99	<0.3	<0.6	<1
MW-104	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-105	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-106	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-107	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-108	11/16/2015	Dry	Dry	Dry	Dry	Dry	Dry
MW-204	11/17/2015	1,800	380	9.6	54	110	6.9
MW-205	11/16/2015	NS	NS	NS	NS	NS	NS
MW-206	11/16/2015	NS	NS	NS	NS	NS	NS
MW-207	11/16/2015	NS	NS	NS	NS	NS	NS
MW-208	11/16/2015	NS	NS	NS	NS	NS	NS
MW-304	11/17/2015	1200	110 ^{A01}	5.6	51	86	-
MW-305	11/16/2015	780	130 ^{A01}	1.7	27	26	-
MW-306	11/16/2015	<50	<0.3	<0.3	<0.3	<0.6	-
MW-307	11/16/2015	730	150 ^{A01}	2.5	26	26	-
MW-308	11/16/2015	1,200	70	3.2	24	23	-
MW-404	11/16/2015	NS	NS	NS	NS	NS	NS

NS - not sampled

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

TABLE 7
Summary of Historical Groundwater Analytical Data

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

Wells	Date	TPHg	TPHd	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
		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			
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	3700 ^{A01}	-	270 ^{A01}	83 ^{A01}	150 ^{A01}	510 ^{A01}	91 ^{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			
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			

1/5/2016

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-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			

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			

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			

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			
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			

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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		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							
MW-7		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							

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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		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							
MW-9		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	
MW-10		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	

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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			
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				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			

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			
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			

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			
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

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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			
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			

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Summary of Historical Groundwater Analytical Data

Sullins (Arrow Rentals)
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 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			
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			

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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	-
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	-

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	-
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	-

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	-
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	-	-	-	-	-	-	-

pre- 2006 data adapted from *Environmental Sampling Services 5/27/04 Groundwater Monitoring Report*

"-" = not analyzed

' = estimated Value (CLP Flag)

^{AOT} = 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-8s					W-Es				
	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO	pH	E.C.	Temp °C	ORP	DO
7/7/2006	-	-	-	-128.5	0.13	-	-	-	-	0.07	-	-	-	-107.3	0.09	7.05	339	20.9	32.9	0.06
12/29/2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/8/2008	6.76	514	24.8	-95.5	-	-	-	-	-	-	-	-	-	-	0.28	7.07	503	25.1	121.4	6.85
10/8-9/2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/7-8/2011	6.17	967	19.1	-221.5	0.37	6.63	964	18.1	40.7	0.72	6.61	780	18.5	-198.2	0.02	7.03	790	19.5	141.3	1.06
10/26/2011	6.65	1012	18.1	-121.5	0.16	6.65	914	17.9	-57.6	0.52	6.51	722	17.6	-115.8	0.38	-	-	-	-	-
5/30/2012	6.60	1574	21.4	-351.9	0.00	6.89	761	20.3	-66.9	0.11	6.88	676	20.9	-87.3	0.79	-	-	-	-	-
11/19/2012	6.16	1301	18.6	-119.7	0.06	6.75	834	17.2	-65.1	0.19	7.04	825	17.2	-39.2	0.18	-	-	-	-	-
6/24/2013	6.71	1333	21.9	-159.8	0.07	6.43	1243	20.3	-60.2	1.03	6.75	919	21.2	-92.1	0.84	7.09	951	21.8	160.6	0.61
12/3-5/2013	6.73	1086	20.4	-50.0	0.35	6.57	1003	18.4	72.8	1.27	6.86	810	19.4	-53.1	1.19	-	-	-	-	-
6/16-17/2014	6.47	1309	21.3	-79.0	0.31	-	-	-	-	-	7.05	803	21.0	-50.1	1.64	-	-	-	-	-
12/2-3/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/9-10/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/25-26/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/15/2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11/16-17/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

" - " = insufficient data no result reported

TABLE 9
Estimation of Mass Removal Via Soil Vapor Extraction

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

Sample Date	Flow	TPH-G	Meter	Days	Operation Duration			Volume Removed		Pounds Removed
					CFM	mg/m3	total days	days in period	hours	
11/15/11				10,382	0					
12/08/11	90	2,380	10,437	2	2		55	3,300	297,000	8,410
01/05/12	136	3,360	10,961	24	22		524	31,440	4,275,840	121,078
03/08/12	152	3,490	11,841	61	37		880	52,800	8,025,600	227,259
05/16/12	99	251	13,496	130	69		1,655	99,300	9,830,700	278,374
04/11/13	56	37	16,119	239	109		2,623	157,380	8,813,280	249,564
08/22/13	133	130	17,925	314	75		1,806	108,360	14,411,880	408,098
09/03/13	65	710	18,211	326	12		286	17,160	1,115,400	31,585
09/20/13	127	330	18,619	343	17		408	24,480	3,108,960	88,036
10/11/13	102.5	99	18,957	357	14		338	20,280	2,078,700	58,862
10/22/13	95	210	19,221	368	11		264	15,840	1,504,800	42,611
11/06/13	80	120	19,584	383	15		363	21,780	1,742,400	49,339
01/15/14	155	600	20,281	412	29		697	41,820	6,482,100	183,552
01/30/14	87.5	180	20,640	427	15		359	21,540	1,884,750	53,370
02/11/14	125	250	20,928	439	12		288	17,280	2,160,000	61,164
03/18/14	28	0.9	21,266	454	14		338	20,280	567,840	16,079
04/01/14	102.5	85	21,601	467	14		335	20,100	2,060,250	58,340
04/15/14	28	1,100	21,604	468	0		3.0	180	5,040	143
04/28/14	125	560	21,914	481	13		310	18,600	2,325,000	65,837
05/09/14	95	1,000	21,916	481	0		2.0	120	11,400	323
06/26/14	60	1,200	21,968	483	2		52	3,120	187,200	5,301
07/10/14	72.5	170	21,975	483	0		7.0	420	30,450	862
07/25/14	87.5	1,100	21,979	483	0		4.0	240	21,000	595
08/12/14	76	190	22,410	501	18		431	25,860	1,965,360	55,653
09/23/14	110	2,000	22,688	513	12		278	16,680	1,834,800	51,956
10/02/14	103	12,000	22,735	515	2		47	2,820	290,460	8,225
11/06/14	110	10,000	23,041	527	13		306	18,360	2,019,600	57,189
12/02/14	105	13,000	23,059	528	1		18	1,080	113,400	3,211
03/11/15	36	3,800	24,009	568	40		950	57,000	2,052,000	58,106
08/18/15	91	20,000	24,776	600	32		767	46,020	4,187,820	118,586
09/15/15	105	19,000	24,881	604	4		105	6,300	661,500	18,732
									TOTAL	11,870

TABLE 10
Summary of DPE System Soil Vapor Extraction Data

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

Well	Date	TPH-Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes	PID
		mg/m³	mg/m³	mg/m³	mg/m³	mg/m³	ppm
SVE-INF	12/8/2011	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
SVE-INF UPPER (EW-1 & W-1s)	8/22/2013*	13	0.064	0.076	0.0096	0.078	12.5
	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 (W-1 & W-A)	8/22/2013	410	59	13	4.9	22	73.6
	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
							Total	144	

* = 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-I & 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
W-I GW-INF	5/16/2013	96	30	32	110	1,600	5.5
W-A GW-INF	5/16/2013	67	15	16	54	1,000	2.6

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

Charts

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

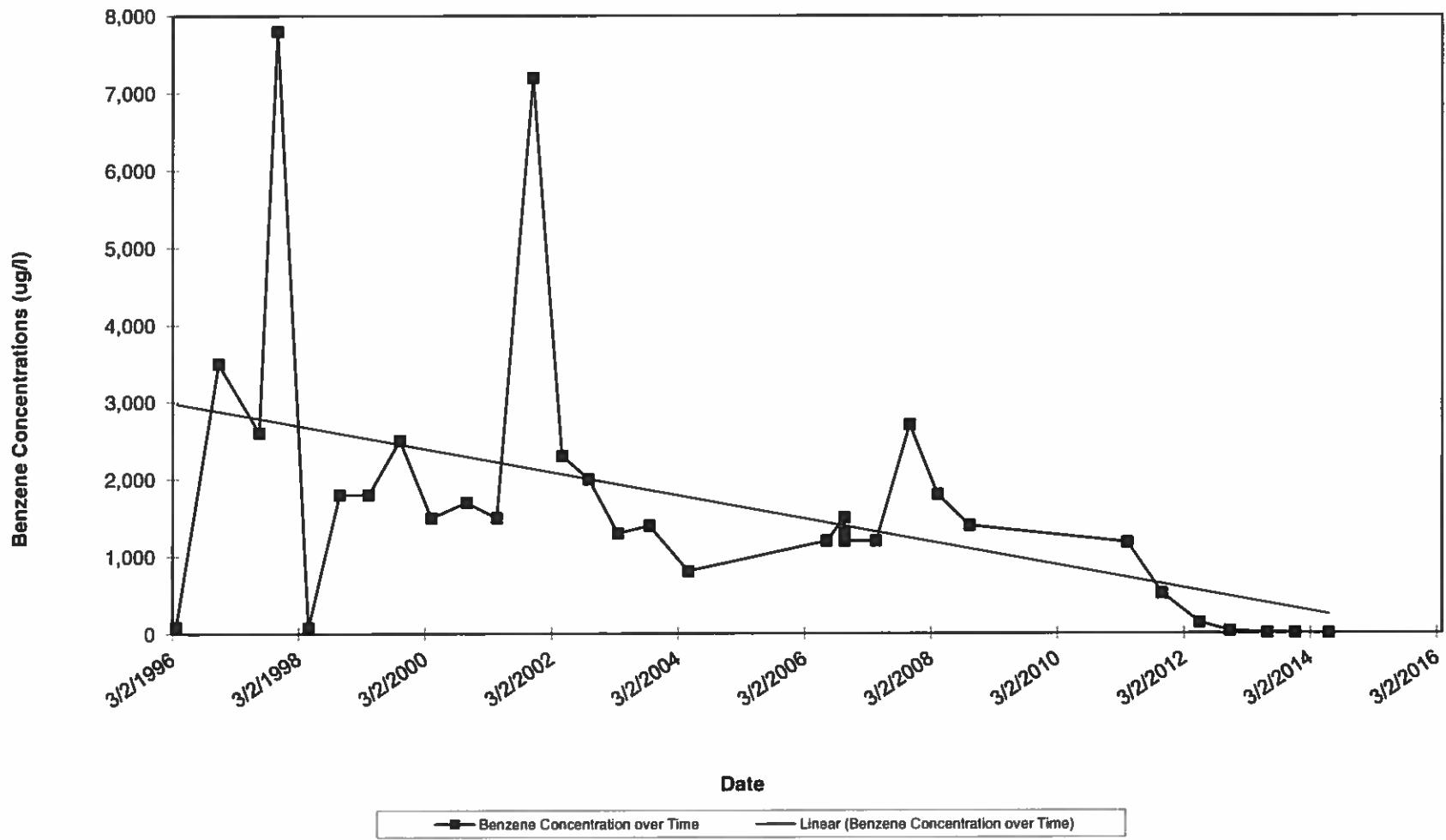


CHART 2: MW-104 - Benzene vs. Time

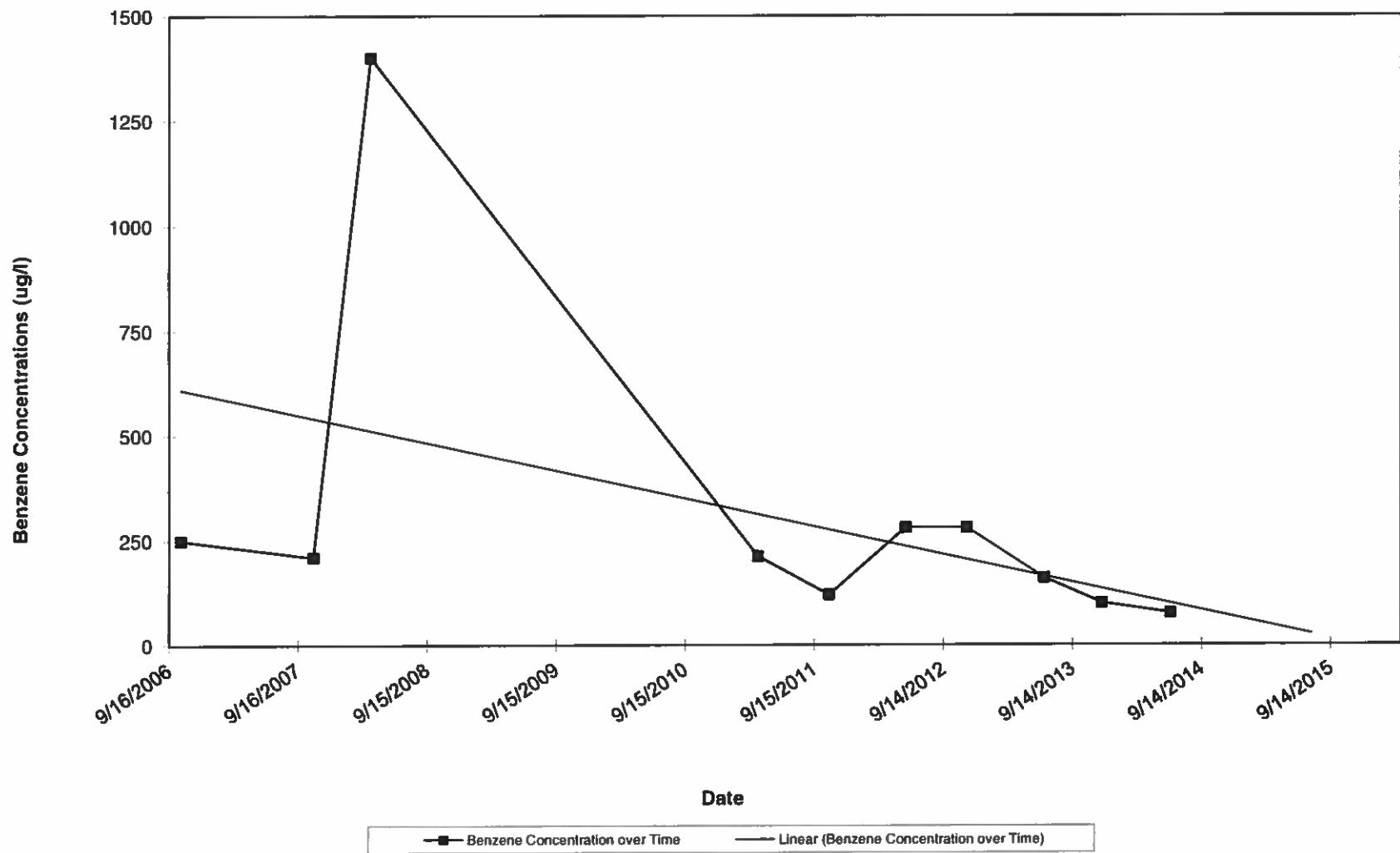


CHART 3: MW-204 - Benzene vs. Time

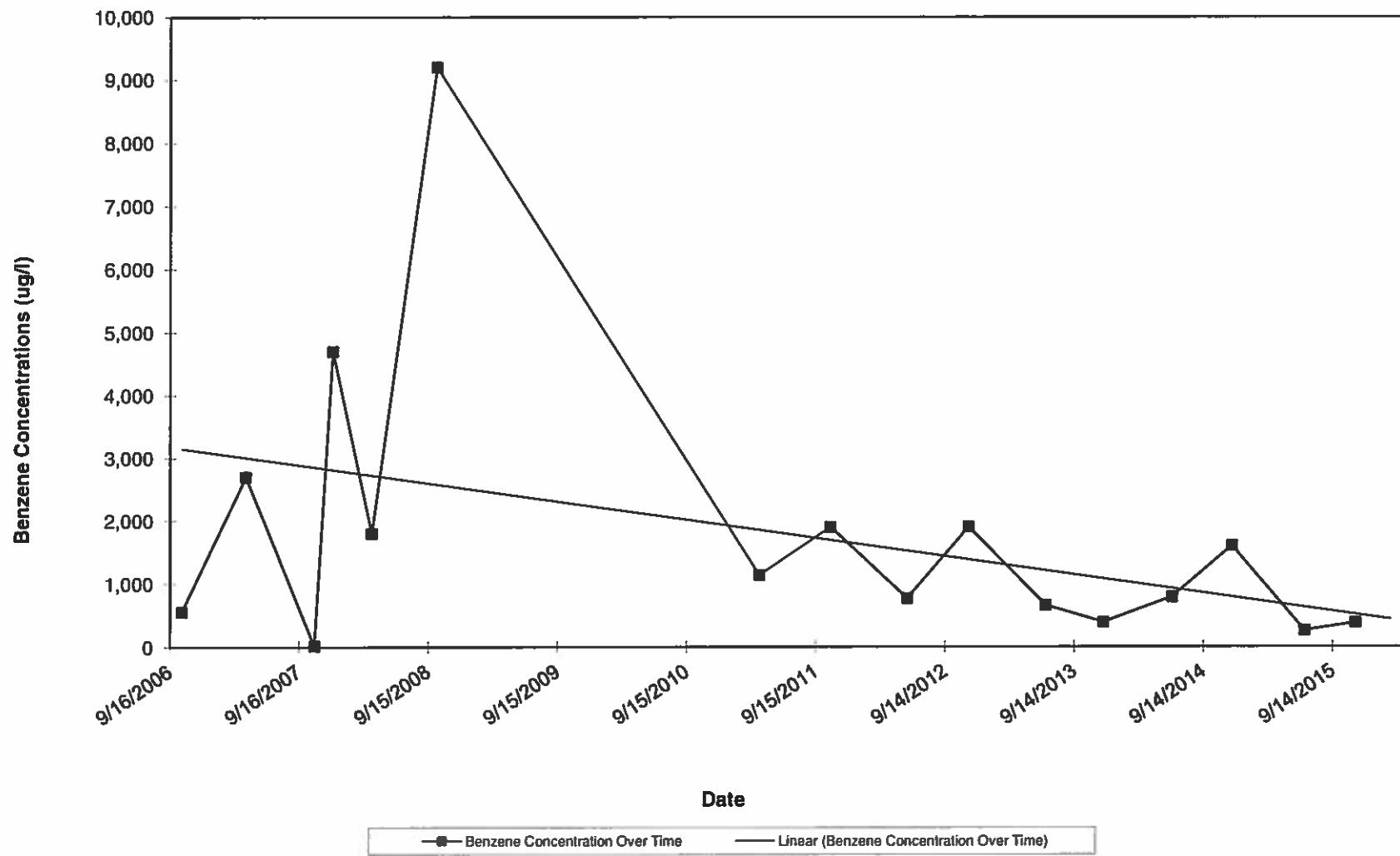


CHART 4: MW-304 - Benzene vs. Time

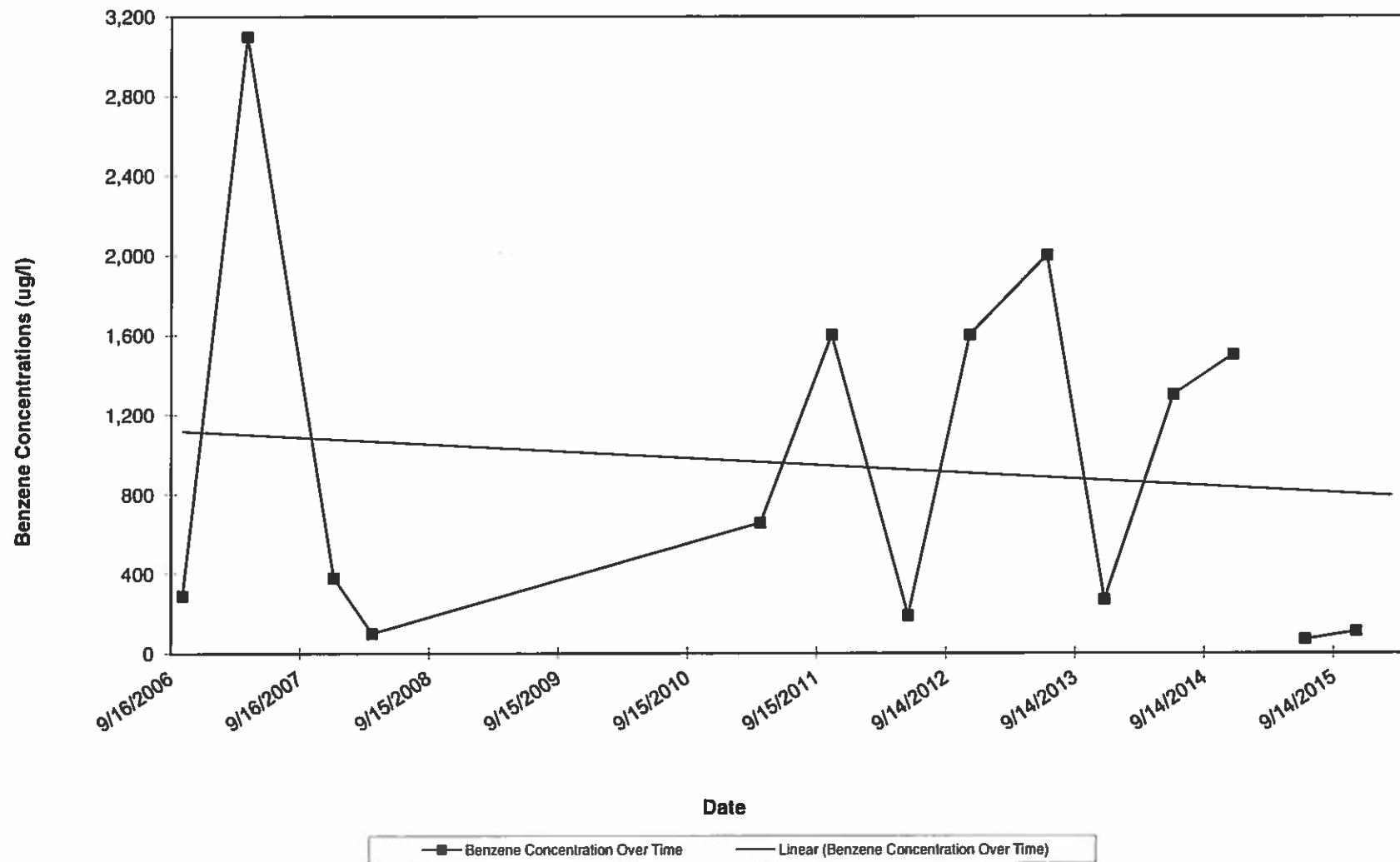


CHART 5: MW-404 - Benzene vs. Time

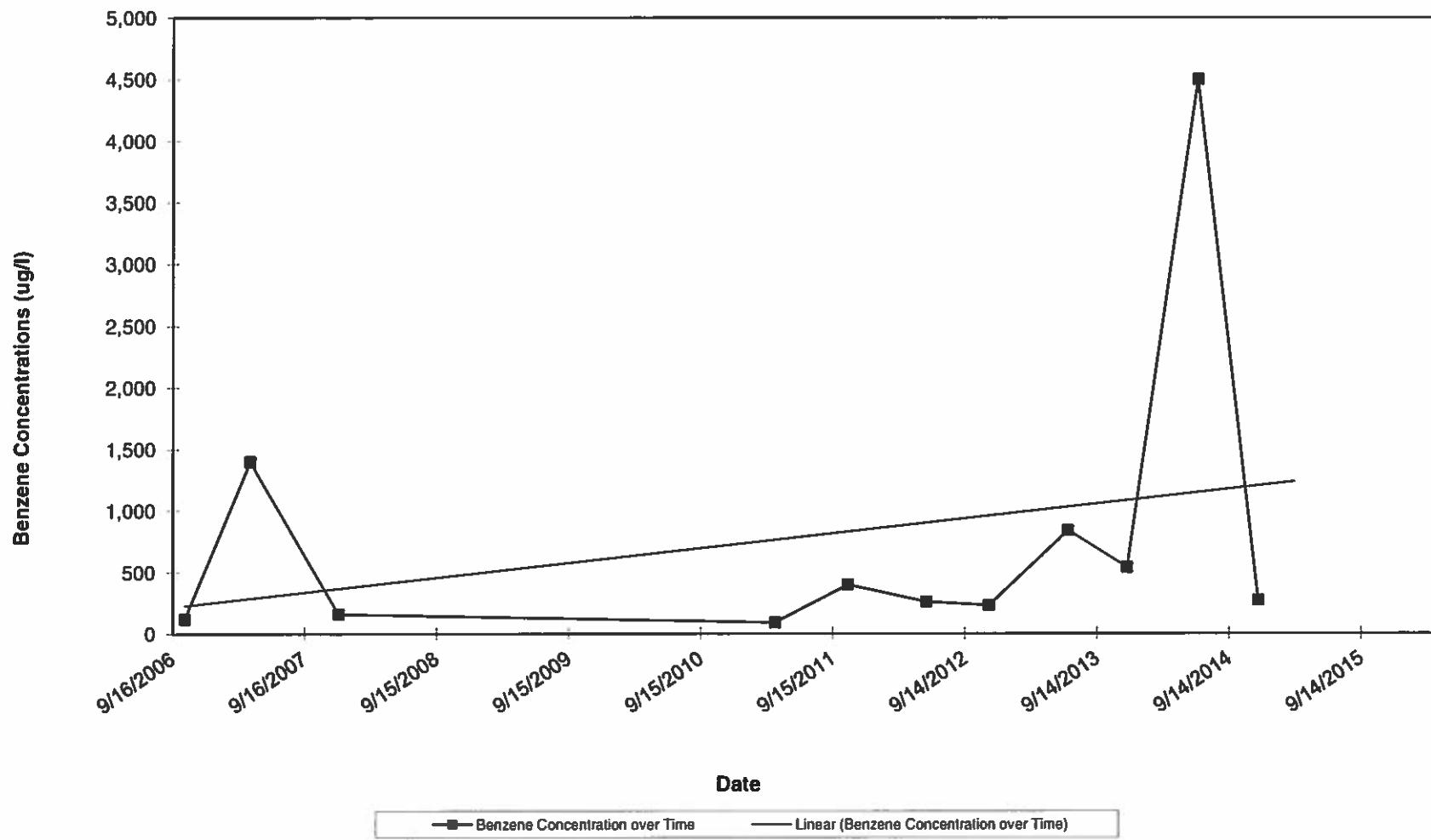
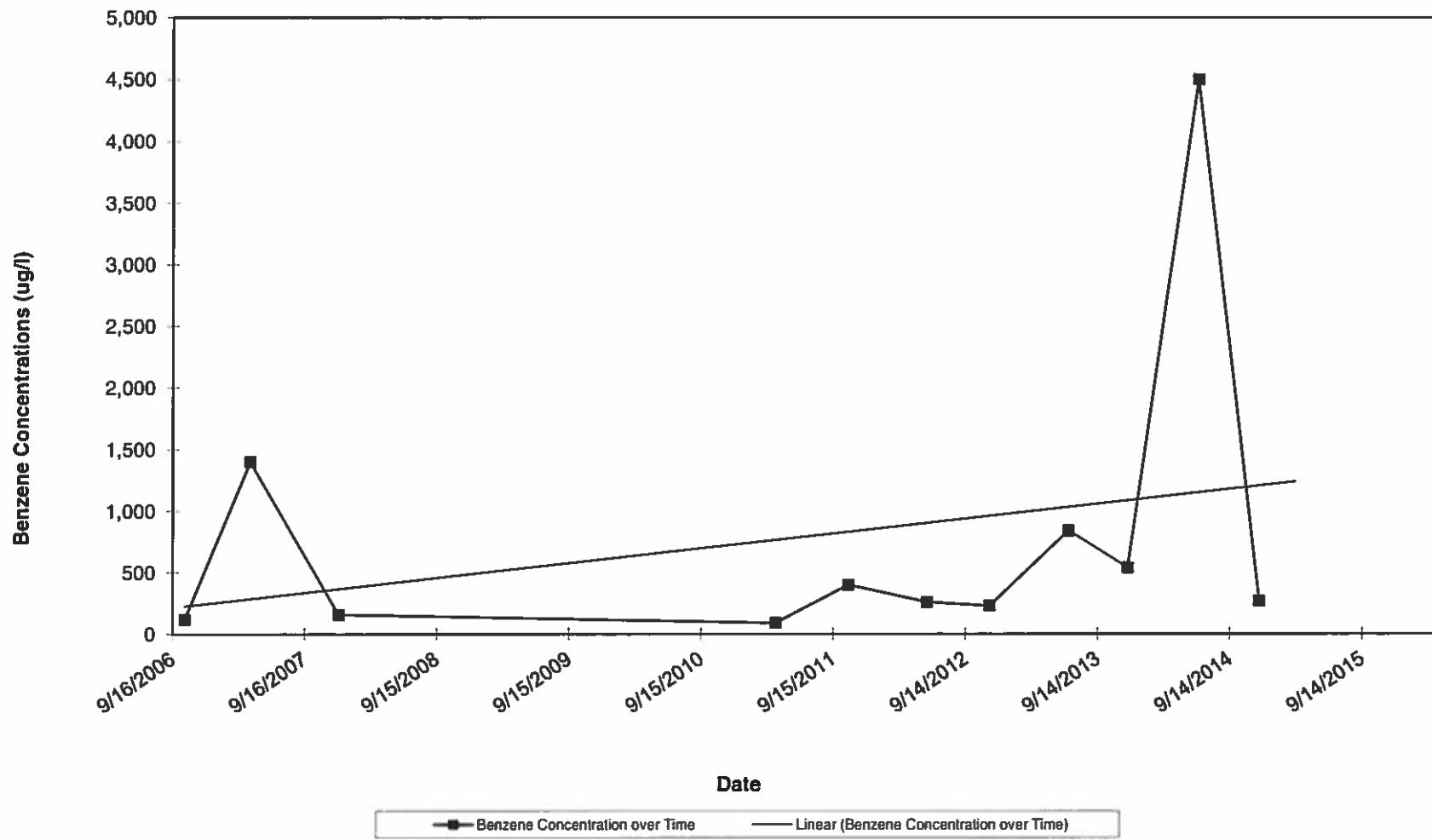


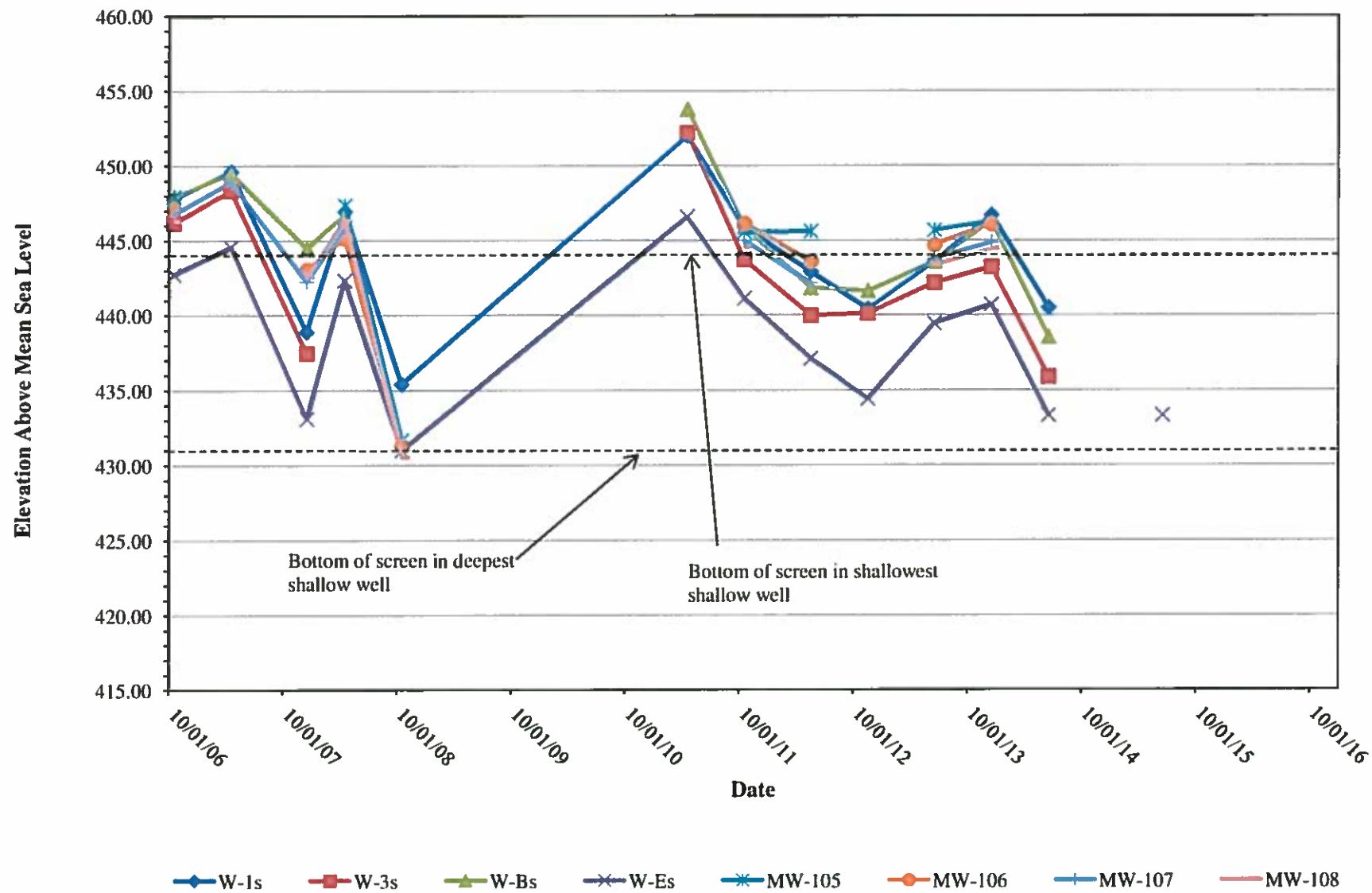
CHART 6: MW-404 - Benzene vs. Time (Less Outlier)



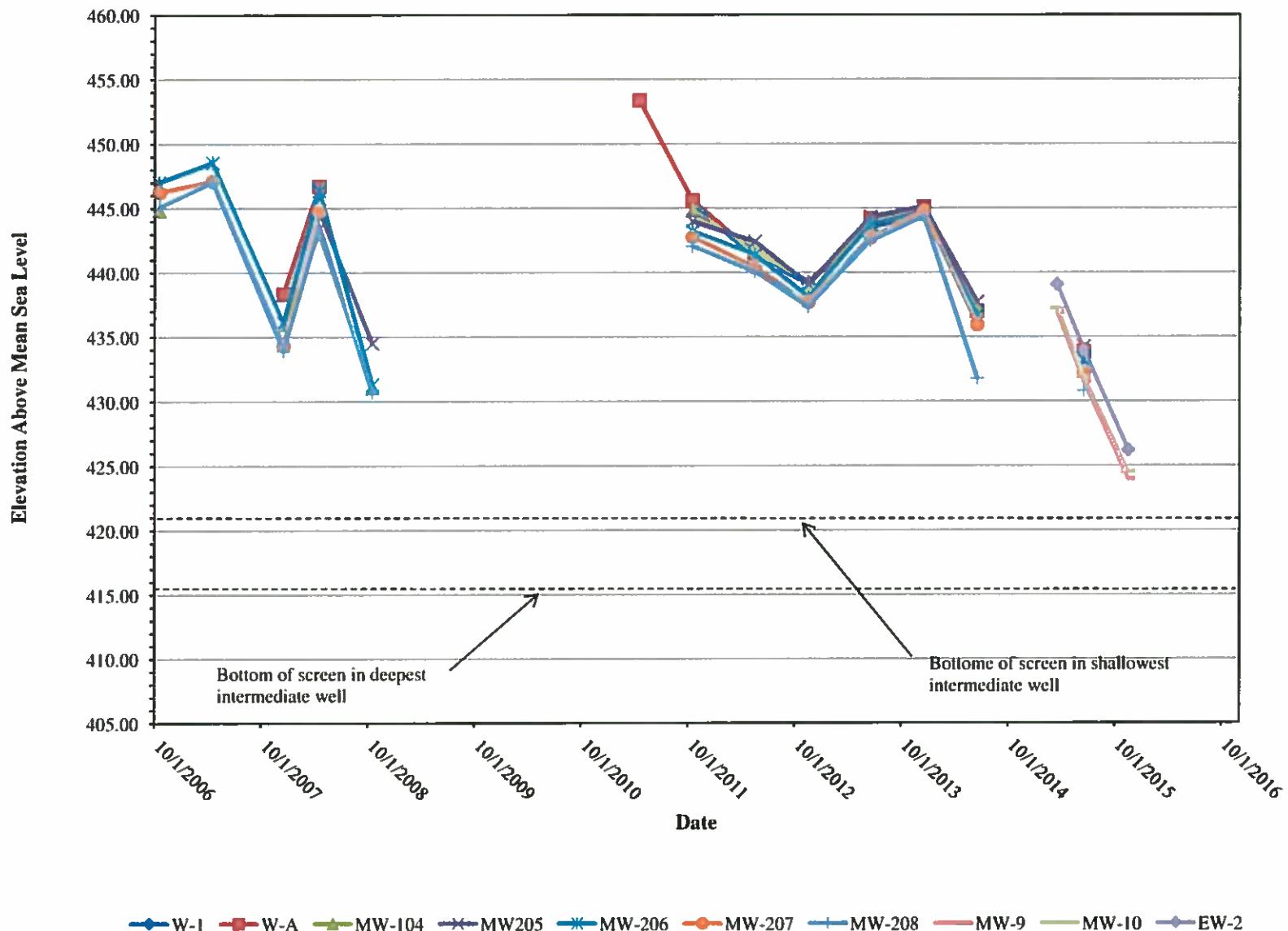
Attachment A

Hydrographs

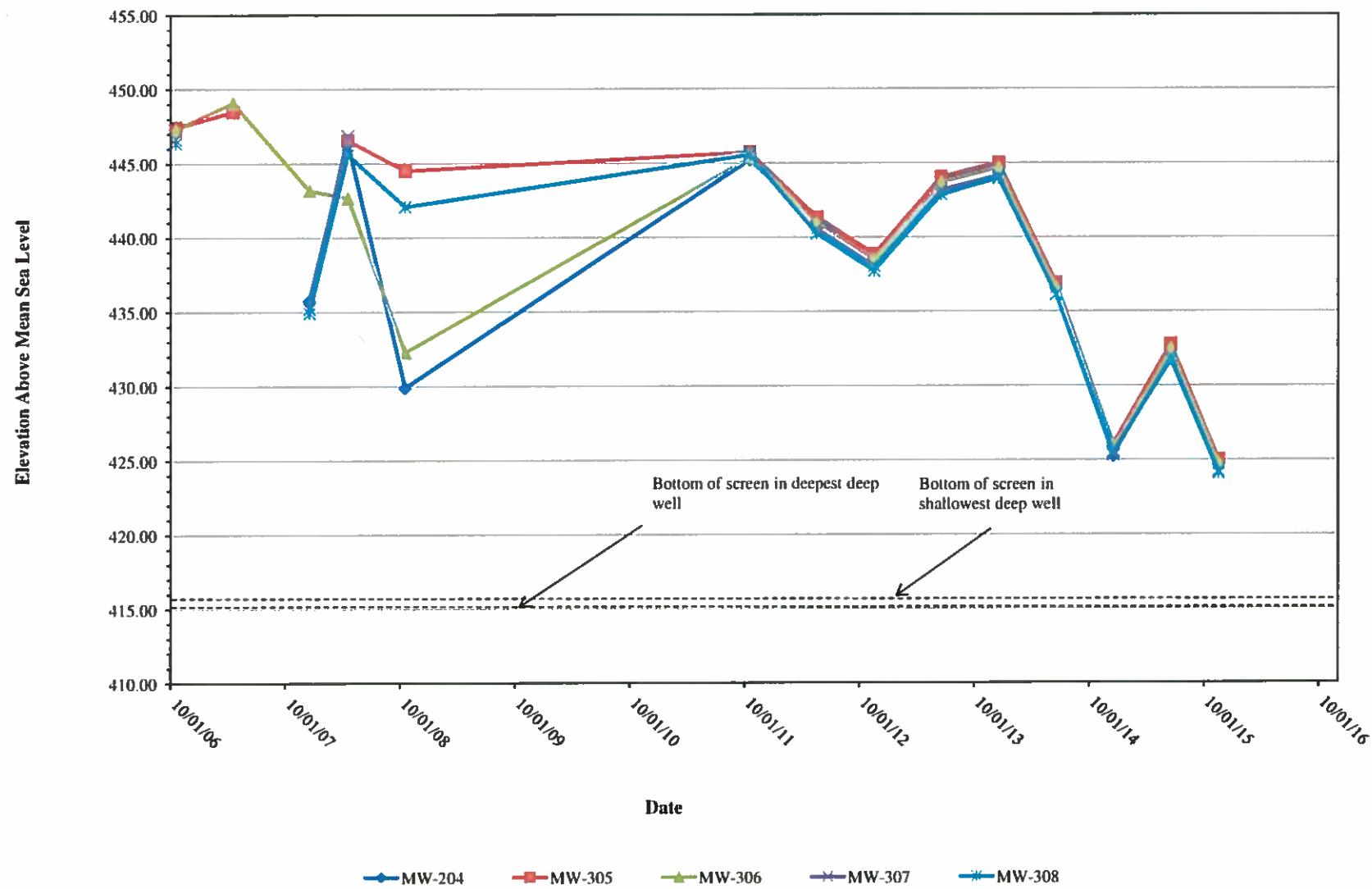
Hydrograph: Shallow Groundwater Monitoring Wells



Hydrograph: Intermediate Groundwater Monitoring Wells



Hydrograph: Deep Groundwater Monitoring Wells



Attachment B

Groundwater Monitoring Field Logs

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullivan

Well I.D.: MW-9

Project No.: 5262

Date: 9/15/15

Project Location: _____

Samples Sent To: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC ($\mu\text{S}/\text{cm}$)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1205	0	20.87	937	5.64	116.9	1.31	brown
1216	2	20.15	967	6.31	117.1	3.21	H. brown
1218	4	20.10	967	6.48	96.3	2.94	A.A.
1220	6	20.11	970	6.66	90.3	3.19	A.A.
1226							collected sample

Pumping Rate: _____ gal / min

Purge Method: water bleep

Well Constructed TD (ft): —

Sample Containers used: 4 # VOAs preserved non-preserved

Casing Diameter (in): 2

amber liters preserved non-preserved

* Well TD (ft): 64.95

polys preserved non-preserved

Sill Thickness (ft): —

polys preserved non-preserved

Initial DTW (ft): 53.90

Notes:

Water Column Height (ft): 11.55

Sampled By: Mark Person

One Casing Volume (gal): 1196

(Print) Mark Person (Sign) Mark Person

** Final DTW (ft): 53.47

** % Recharge:

* = measured ** = @ sampling

Sample Method: water bleep

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: Sellens

Well I.D.: 111W-10

Project No.: 5262

Date: 9/15/15

Project Location: _____

Samples Sent To: BCLabs

Pumping Rate: gal / min

Purge Method: 1 LM Curing pump

Well Constructed TD (ft):	_____	Sample Containers used:	11 # VOAs	preserved	non-preserved
Casing Diameter (in):	2		_____ # amber liters	preserved	non-preserved
* Well TD (ft):	65.32		_____ # polys	preserved	non-preserved
Silt Thickness (ft):	_____		_____ # polys	preserved	non-preserved
Initial DTW (ft):	53.68	Notes:	_____		
Water Column Height (ft):	12.24	Sampled By:	Mark Pearson 1661 Rain		
One Casing Volume (gal):	2108	(Print)	(Sign)		
** Final DTW (ft):	53.11				
** % Recharge:	_____				

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-A

Project No.: 1262.2

Date: 11-16-15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

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

Pumping Rate: _____ gal/min

Well Constructed TD (II): 63.00

* Well TD (ft): 53.00'

Silt Thickness (ft): ~10'

Initial DTW (ft): **DRY**

Water column height (ft): -

One casing volume (gal):

** Final DTW (II): -

Casing diameter (in): 4"

Sample Containers used: # VOAs x preserved non-preserved

# amber liters	preserved	non-preserved
----------------	-----------	---------------

polys preserved non-preserved

Notes: WELL NEEDS DEVELOPMENT

Sampled By: ANDREW DORN Andrew Dorn

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-305

Project No.: 1262.2

Date: 11-16-15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Purge Method: Dedicated Waterra Centrifugal pump with dedicated tubing Other

PERISTALTIC PUMP

Pumping Rate: gal/min

Well Constructed TD (ft):	66.00'
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	56.09'
Water column height (ft):	9.91'
One casing volume (gal):	0.11
** Final DTW (ft):	56.11'
Casing diameter (in):	CMT

Sample Containers used: 4 # VOA's 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: DPE SYSTEM

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-307

Project No.: 1262.2

Date: 11-16-15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Purge Method: Dedicated Waterra Centrifugal pump with dedicated tubing Other **PERISTALTIC PUMP**

Pumping Rate: _____ gal/min

Well Constructed TD (ft): 66.00'

* Well TD (ft): -

Silt Thickness (ft):

Initial DTW (ft): 56.64

Column height (ft): 4.96

One casing volume (gal): 6.11

Final DTW (B): 56.64

Casing diameter (in): 6 1/2

Sample Containers used: 4 # VOA's 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 Baller Other

* = measured ** = @ sampling

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

Purged Water Drummed: Yes No

No. of Drums: DPE SYSTEM

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-308

Project No.: 1262.2

Date: 11-16-15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Purge Method: Dedicated Waterra Centrifugal pump with dedicated tubing Other

PERISTALTIC PUMP

Pumping Rate: gal/min

Well Constructed TD (ft):	66.00'
* Well TD (ft):	-
Silt Thickness (ft):	-
Initial DTW (ft):	56.53'
Water column height (ft):	9.47'
One casing volume (gal):	0.11
** Final DTW (ft):	56.60'
Casing diameter (in):	CMT

Sample Containers used: 4 # VOAs

HCL

4

VOAs

amber liters

preserved non-preserved

polys

Preserved non-preserved

$$H_0 = -\frac{2}{3} \pi G$$

processed **non-processed**

Notes:

Sampled By: ANDREW DORN

Sample Method: Waterra Baile Other

* = measured ** = @ sampling

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

Purged Water Drummed: Yes No

No. of Drums: DPF SYSTEM

Water Level Monitoring Record

Project Name SULLINS
 Date 11-16-2015

Project No. 1262.2
 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 (100ft/foot)	Total Depth (100ft/foot)	Depth to Floating Product (100ft/foot)	Floating Product Thickness (100ft/foot)	Surficial Seal* (Grout)	Concrete Seal*	Lid Secure*	Gasket*	Lock*	Expanding Cap*	Water in Well Box (Y or N)	Remarks
MW-10		1142	2"	55.33'	—	—	—	G					—	Y	ADDED NEW LOCK
MW-9		1150	2"	55.89'	—	—	—	G					—		ADDED NEW LOCK
MW-6 MW-106 MW-206			CMT	DRY											
MW-306		1201	CMT	56.04'	—	—	—								
MW-308		1210	CMT	56.53'	—	—	—								
MW-8 MW-108 MW-208			CMT	DRY											
MW-307		1214	CMT	56.64'	—	—	—								
MW-7 MW-107 MW-207			CMT	DRY											
MW-304		1217	CMT	56.11'	—	—	—								
Notes: _____															

Ground Zero Analysis, Inc.

1172 Kansas Avenue, Modesto, CA 95351

Water Level Monitoring Record

Project Name SULLINS
 Date 11-16-15

Project No. 1262.2
 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 (100ft/foot)	Total Depth (100ft/foot)	Depth to Floating Product (100ft/foot)	Floating Product Thickness (100ft/foot)	Surficial Seal* (Grout)	Concrete Seal*	Lid Secure*	Gasket*	Lock*	Expanding Cap*	Water in Well Box (Y or N)	Remarks
MW-404			CMT	-											OBSTRUCTION IN WELL CASING AT A DEPTH OF ~30'
MW-204		1222	CMT	56.06'	/	/	/								
MW-4 MW-104			CMT	DRY											
W-1		1228	2"	54.19'	/	/	/								
W-A		1232	4"	DRY	53.00'	/	/								
MW-305		1241	CMT	56.09'	/	/	/								
EW-2		1246	2"	55.05'	/	/	/								
MW-5 MW-105 MW-205			CMT	DRY											
Notes: _____															

Daily Field Record

Project SULLINS
 Project # 1262.2
 Location 187 NORTH L STREET, LIVERMORE, CA
 Weather SUNNY/WINDY

Date 11-16-15
 Time on job 0830 to 1800
 Record Keeper ANDREW DORN
 Wind 5 - 15 MPH Temp 50°

Page 1 of _____

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
ANDREW DORN	GROUND ZERO	1012	1600
ANTHONY SCOMA	GROUND ZERO	1012	1600

Time	Location of Work / Work Performed / Field Equipment Used / etc.		
1012	ARRIVED ON-SITE & BEGAN OPENING ALL WELLS		
	REMOVED TUBING FROM CMT- WELLS		
	REMOVED EXTRACTION LINE FROM EW-2, W-1 & W-A		
1136	BEGAN BTW MEASUREMENTS		
1142	MW-10 55.33'		ADD LOCK - RUSTED
1150	MW-9 55.89'		ADD LOCK - RUSTED
1201	MW-306 56.04'		
	MW-6, 106 & 206 WERE DRY		
	W-35 - DRY		
	W-B5 - DRY		
1210	MW-308 56.53'		
	MW-8, 108 & 208 WERE DRY		
1214	MW-307 56.64'		
	MW-7, 107 & 207 WERE DRY		
1217	MW-304 56.11'	TD = 75.5	"SLOT 2"

Continued On Next Page

Daily Field Record Continued

 Page 2 of 2

 Project Name SULLIVANS

 Project # 1262.2

 Date 11-16-15

 Technician ANDREW DORN

Time	Location of Work / Work Performed / Field Equipment Used / etc.		
	MW-404	HAD AN OBSTRUCTION @ ~30' BGS	"SLOT 1"
1222	MW-204	56.06'	TD = 66'
	MW-4	1/2 MW-104	WERE DRY
1225	MW-15	- DRY	
*	W-1	54.19'	
*	W-A	51.39'	DRY @ A TOTAL DEPTH OF 53'
1241	MW-305	56.09'	
1246	EW-2	55.05'	
	MW-5, 105 & 205	WERE DRY	CALIBRATED YSI, REINSTALLED TUBING
1325	BEGAN PURGING	MW-306 w/ PARASTATIC PUMP	
	66.0' - 56.04'	= 9.96' x 0.011	= 0.11 GALLON PURGE VOLUME
	PURGED	~0.75 GALLONS	PRIOR TO SAMPLING
1400	COLLECTED	MW-306 SAMPLE	
	TEMP = 19.19°C	, EC = 1084	, pH = 6.21 ORP = 147.7 DO = 3.67
1412	BEGAN PURGING	MW-308	
	66.0' - 56.53'	= 9.47' x 0.011	= 0.11 GALLON PURGE VOLUME
	PURGED	~0.75 GALLONS	PRIOR TO SAMPLING
1450	COLLECTED	MW-308 SAMPLE	
	TEMP = 17.68	, EC = 1094	, pH = 6.35 ORP = 104.4 DO = 2.40
1452	BEGAN PURGING	MW-307	
	66.0' - 56.11'	= 9.89' x 0.011	= 0.11 GALLON PURGE VOLUME
	PURGED	~0.75 GALLONS	PRIOR TO SAMPLING
1510	COLLECTED	MW-307 SAMPLE	
	TEMP = 18.13	, EC = 1098	, pH = 6.41 ORP = 109.3 DO = 2.83
1513	BEGAN PURGING	MW-305	
	66.0' - 56.09'	= 9.91' x 0.011	= 0.11 GALLON PURGE VOLUME
	PURGED	~0.75 GALLONS	PRIOR TO SAMPLING
1540	COLLECTED	MW-305	
	TEMP = 17.63	, EC = 1102	, pH = 6.39, ORP = 66.3 DO = 3.12

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: W-1

Project No.: 1262.2

Date: 11/17/15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC (μ S/cm)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1503							DTW - 54.16 OTO. 54.20 Avail w/p My,
1448							53.98 DRY Reg w/p

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	56.50'
* Well TD (ft):	53.98
Silt Thickness (ft):	
Initial DTW (ft):	54.19'
Water column height (ft):	2.31'
One casing volume (gal):	0.39
** Final DTW (ft):	
Casing diameter (in):	2"

Sample Containers used: _____ # VOAs _____ x preserved _____ non-preserved
 _____ # amber liters _____ preserved _____ non-preserved
 _____ # polys _____ preserved _____ non-preserved
 _____ # polys _____ preserved _____ non-preserved

Notes:

Sampled By:

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: EW-2

Project No.: 1262.2

Date: 11/17/15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC ($\mu\text{S}/\text{cm}$)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1525	1.0	19.92	1064	6.95	-100.7	1.1	Unmixed Silt
1533	2.0	19.84	1056	6.66	-110.6	.94	On the
1543	2.7	19.80	1053	6.64	-118.2	.58	W shear.
1455							DTW: 55.05
1600							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	<u>60.00'</u>
* Well TD (ft):	
Silt Thickness (ft):	
Initial DTW (ft):	<u>55.05'</u>
Water column height (ft):	<u>4.95'</u>
One casing volume (gal):	<u>0.84</u>
** Final DTW (ft):	<u>57.78</u>
Casing diameter (in):	<u>2"</u>

Sample Containers used: 4 # VOAs preserved non-preserved
 # amber liters preserved non-preserved
 # polys preserved non-preserved
 # polys preserved non-preserved

Notes:
Sampled By: <u>Dorothy Brown</u>

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

11/16/2015

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-9

Project No.: 1262.2

Date: 11/17/15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC ($\mu\text{S}/\text{cm}$)	pH	ORP (millivolts)	DO (mg/L)	Remarks
13:03	0	20.12	1069	7.12	127.3	6.19	Brown oil
13:16	1.6	20.21	1085	7.03	109.4	4.4	no odor
13:24	3.2	20.10	1089	6.99	104.5	4.0	2.7 Brown oil
13:28	7.0	20.14	1088	6.93	102.5	3.71	↓
13:33	5.0	20.15	1089	6.97	101.4	3.72	off
13:45							Sampled
13:49							55.98 DTW

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	65.00'
* Well TD (ft):	
Silt Thickness (ft):	
Initial DTW (ft):	55.89'
Water column height (ft):	9.11'
One casing volume (gal):	1.55
** Final DTW (ft):	55.98
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs preserved non-preserved
 # amber liters preserved non-preserved
 # polys preserved non-preserved
 # polys preserved non-preserved

Notes:	
Sampled By:	<u>Anthony Scam</u>

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-10

Project No.: 1262.2

Date: 11/17/15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC ($\mu\text{S}/\text{cm}$)	pH	ORP (millivolts)	DO (mg/L)	Remarks
1359	0	19.65	1059	7.08	182.6	4.49	water clear
1401	2.0	19.63	1077	7.02	165.3	4.51	water
1404	4.0	19.62	1083	6.98	152.2	4.20	↓
1407	6.0	19.63	1084	6.96	142.6	4.21	st.
1415							Sampled
1426							DTW 55.73

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	65.00'
* Well TD (ft):	
Silt Thickness (ft):	
Initial DTW (ft):	55.33'
Water column height (ft):	9.67'
One casing volume (gal):	1.65
** Final DTW (ft):	55.73
Casing diameter (in):	2"

Sample Containers used: 4 # VOAs preserved non-preserved
 # amber liters preserved non-preserved
 # polys preserved non-preserved
 # polys preserved non-preserved

Notes:
Sampled By: <u>Anthony Forman</u>

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-204 SLOT #3

Project No.: 1262.2

Date: 11/17/15

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
1205	0						with clean.
							slight odor.
							clean
1219	1.0	21.08	1042	7.08	1.76	-29.4	off
1330							Sampled.

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	<u>66.50'</u>
* Well TD (ft):	_____
Silt Thickness (ft):	_____
Initial DTW (ft):	<u>56.06'</u>
Water column height (ft):	<u>10.44'</u>
One casing volume (gal):	<u>0.12</u>
** Final DTW (ft):	_____
Casing diameter (in):	<u>CMT</u>

Sample Containers used: 4 # VOAs preserved non-preserved
 # amber liters preserved non-preserved
 # polys preserved non-preserved
 # polys preserved non-preserved

Notes: _____

Sampled By: Anthony Scamman

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

Ground Zero Analysis, Inc.

Groundwater Monitoring Field Log

Project Name: Sullins (L St)

Well I.D.: MW-304 SLOT #2

Project No.: 1262.2

Date: 11/17/15

Project Location: 187 N. L Street

Livermore, CA

Samples sent to: BC Labs

Time	Cumulative Volume Purged (gal)	Temp C°	EC ($\mu\text{S}/\text{cm}$)	pH	ORP (millivolts)	DO (mg/L)	Remarks
113:0	0						Clear,
							Slight Gr. Od.
							Brown silt
115:0	.8	26.31	1090	7.16	152.4	4.45	off
115:8							Sampled

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

Pumping Rate: _____ gal/min

Well Constructed TD (ft):	<u>75.50'</u>
* Well TD (ft):	_____
Silt Thickness (ft):	_____
Initial DTW (ft):	<u>56.11'</u>
Water column height (ft):	<u>19.39'</u>
One casing volume (gal):	<u>0.22</u>
** Final DTW (ft):	_____
Casing diameter (in):	<u>CMT</u>

Sample Containers used: 4 # VOAs preserved non-preserved
 # amber liters preserved non-preserved
 # polys preserved non-preserved
 # polys preserved non-preserved

Notes: _____

Sampled By: Darby Soren

Sample Method: Waterra Bailer Other

* = measured ** = @ sampling

Purged Water Drummed: Yes No

No. of Drums:

Daily Field Record

Project <u>Sullins</u>	Date <u>11/17/15</u>	Page 1 of _____
Project # <u>5262</u>	Time on job <u>0642</u>	to <u>1730</u>
Location <u>187 North L Street Livermore</u>	Record Keeper _____	
Weather <u>SUNNY</u>	Wind <u>7 mph</u>	Temp <u>75°f</u>

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
<u>Anthony Strom</u>	<u>GZA</u>	<u>1042</u>	<u>1606</u>

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0642	Leaving Escalator
	Heavy Traffic on (580) BIG RIG fire.
1042	Arrived on site
	Calibrated Meter.
	With dedicated hose. Parged Cnt + wells.
	MW - 304 & MW - 204
	and Sampled.
	Waterless Pump used on wells. 9 9 10
	Note: W-1 not enough water to purge or sample
	Digested Barite used to bar FW - 2
	TDHT / BHT / M+BT. 4 los's
	Placed hose back down well - W-1

Secure Site Leaving Site

Continued On Next Page

Attachment C

Laboratory Analytical Data Sheets



Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Date of Report: 08/24/2015

Project Manager

Ground Zero Analysis, Inc.

1172 Kansas Avenue
Modesto, CA 95351

Client Project: 5262

BCL Project: Sullins

BCL Work Order: 1520881

Invoice ID: B211579

Enclosed are the results of analyses for samples received by the laboratory on 8/19/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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

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1172 Kansas Avenue
Modesto, CA
(209) 522-4119 Fax 522-4227
E-mail: gza@groundzeronanalysis.com

Chain of Custody

Page 1 of 1

Project #: 15 - 20881		Billing To: Ground Zero Analysis, Inc.		Laboratory: BC Lab	
Project #: 5262	Project Name: Sullins			Purchase Order #	
Site Address: 187 N. L. street, Livermore, CA				Turnaround Time: <input checked="" type="checkbox"/> Standard 1 day 2 day 3 day 5 day	
Global ID No.:	EDF Report: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			Email Lab Report (.pdf): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Client: Ground Zero Analysis, Inc.	Pat Attn: Ground Zero Analysis, Inc.			Email EDF Lab Report (.zip): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Client Address: 1172 Kansas Avenue	Type of Event: OWM <input checked="" type="checkbox"/> Spy Monitoring <input type="checkbox"/> Testing <input type="checkbox"/> Other			Mail Lab Report: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
City, State, Zip: Modesto, CA 95351	Client Email: gza@groundzeronanalysis.com			Special Instructions / Remarks	
Client Phone: (209) 522-4119	Client Fax: (209) 522-4227				
Sampling Info: Sampled By (Initials): MP, GZA	Date: 8/18/15 Time: 1345 EDF Field ID: SUE-INF	Sample ID/Description / Location: 1 G — K	No. of Containers: 1	Material (Sed, Water, Gases, Others):	Preservation Type: TP-H-ENTRGE-BTRX (TDS)
<div style="text-align: center; margin-top: 10px;"> CHK BY REBUTTION Ross Dickey Mark Pearson Ross Dickey Ross Dickey Ross Dickey Ross Dickey </div>					
Received & Initialled by: <i>Mark Pearson</i>	Print Name: <i>Mark Pearson</i>	Company: CZA	Date: 8/18/15	Time: 16:00	
Received & Initialled by: <i>Ross Dickey</i>	Print Name: <i>Ross Dickey</i>	Company: BC LAB	Date: 8-19-15	Time: 1325	
Received & Initialled by: <i>Ross Dickey</i>	Print Name: <i>Ross Dickey</i>	Company: BC LAB	Date: 8-19-15	Time: 1940	
REC- REC'D 8/19/15 1940 8/19/15 2230 REL- REL'D 8/19/15 2230 8/19/15 2230					

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

Rev. 3/2014



BC LABORATORIES INC.		COOLER RECEIPT FORM										Page _____ Of _____		
Submission #: 15-20881														
SHIPPING INFORMATION														
<input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other (Specify) _____		<input type="checkbox"/> Ice Chest <input type="checkbox"/> None <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other (Specify) _____										<input type="checkbox"/> FREE LIQUID YES <input type="checkbox"/> NO		
Refrigerant: <input type="checkbox"/> Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other Comments: _____														
Custody Seals <input type="checkbox"/> Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None Comments: _____ Intact? Yes <input type="checkbox"/> No Intact? Yes <input type="checkbox"/> No														
All samples received? Yes <input type="checkbox"/> No All samples containers intact? Yes <input type="checkbox"/> No Description(s) match COC? Yes <input type="checkbox"/> No														
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: _____ Container: <u>Tedlar</u> Thermometer ID: _____ Temperature: (A) Room °C / (C) temp °C										Date/Time <u>8/19/15</u> <u>2046</u> Analyst Init <u>KIB</u>		
SAMPLE CONTAINERS			SAMPLE NUMBERS											
			1	2	3	4	5	6	7	8	9	10		
QT PE UNPRES														
4oz / 8oz / 16oz PE UNPRES														
2oz Cr ²⁺														
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														
QT EPA 1644														
PT ODOR														
RADIOLOGICAL														
BACTERIOLOGICAL														
40 ml VOA VIAL- 504														
QT EPA 508/608/8080														
QT EPA 515.1/6150														
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			A											
FERROUS IRON														
ENCORE														
SMART KIT														
SUMMA CANISTER														
Comments: <u>KIB</u> Sample Numbering Completed By: <u>KIB</u> A = Actual / C = Corrected														
Date/Time: <u>8/19/15</u> <u>2345</u> Rev 20 07/24/2015 [E:\WPD\edWordPerfectLAB\DOCS\FORMS\COOLRECRev 20]														

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

Reported: 08/24/2015 14:32
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1520881-01	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: SUE-INF Sampled By: GSA of GTIM	Receive Date: 08/19/2015 22:30 Sampling Date: 08/18/2015 13:45 Sample Depth: --- Lab Matrix: Air Sample Type: Vapor or Air Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): SUE-INF Matrix: GS Sample QC Type (SACode): CS Cooler ID:



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

Reported: 08/24/2015 14:32
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

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

BCL Sample ID:	1520881-01	Client Sample Name: Sullins, SUE-INF, 8/18/2015 1:45:00PM, GSA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	66000	ug/m3	2000	220	EPA-TO-15	ND	A01	1
Ethylbenzene	36000	ug/m3	5000	230	EPA-TO-15	ND	A01	1
Methyl t-butyl ether	ND	ug/m3	2000	420	EPA-TO-15	ND	A01	1
Toluene	22000	ug/m3	2000	200	EPA-TO-15	ND	A01	1
p- & m-Xylenes	100000	ug/m3	5000	490	EPA-TO-15	ND	A01	1
o-Xylene	18000	ug/m3	5000	310	EPA-TO-15	ND	A01	1
Total Xylenes	120000	ug/m3	10000	800	EPA-TO-15	ND	A01	1
Total Petroleum Hydrocarbons	20000000	ug/m3	1000000	200000	EPA-TO-15	ND	A01	2
4-Bromofluorobenzene (Surrogate)	89500	%	70 - 130 (LCL - UCL)		EPA-TO-15			1
4-Bromofluorobenzene (Surrogate)	105000	%	70 - 130 (LCL - UCL)		EPA-TO-15			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-TO-15	08/20/15	08/20/15 16:10	MJB	MS-A1	1000	BYH1780
2	EPA-TO-15	08/20/15	08/21/15 13:13	MJB	MS-A1	5000	BYH1780

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

Reported: 08/24/2015 14:32
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

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

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH1780						
Benzene	BYH1780-BLK1	ND	ug/m3	2.0	0.22	
Ethylbenzene	BYH1780-BLK1	ND	ug/m3	5.0	0.23	
Methyl t-butyl ether	BYH1780-BLK1	ND	ug/m3	2.0	0.42	
Toluene	BYH1780-BLK1	ND	ug/m3	2.0	0.20	
p- & m-Xylenes	BYH1780-BLK1	ND	ug/m3	5.0	0.49	
o-Xylene	BYH1780-BLK1	ND	ug/m3	5.0	0.31	
Total Xylenes	BYH1780-BLK1	ND	ug/m3	10	0.80	
Total Petroleum Hydrocarbons	BYH1780-BLK1	ND	ug/m3	200	39	
4-Bromofluorobenzene (Surrogate)	BYH1780-BLK1	105	%	70 - 130 (LCL - UCL)		



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

Reported: 08/24/2015 14:32
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

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

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		
							Percent Recovery	RPD	Lab Quals
QC Batch ID: BYH1780									
Benzene	BYH1780-BS1	LCS	18.475	15.974	ug/m3	116	70 - 130		
	BYH1780-BSD1	LCSD	18.830	15.974	ug/m3	118	1.9	70 - 130	30
Ethylbenzene	BYH1780-BS1	LCS	21.637	21.711	ug/m3	99.7	70 - 130		
	BYH1780-BSD1	LCSD	21.745	21.711	ug/m3	100	0.5	70 - 130	30
Toluene	BYH1780-BS1	LCS	19.871	18.842	ug/m3	105	70 - 130		
	BYH1780-BSD1	LCSD	20.127	18.842	ug/m3	107	1.3	70 - 130	30
p- & m-Xylenes	BYH1780-BS1	LCS	42.318	43.421	ug/m3	97.5	70 - 130		
	BYH1780-BSD1	LCSD	42.761	43.421	ug/m3	98.5	1.0	70 - 130	30
o-Xylene	BYH1780-BS1	LCS	21.420	21.711	ug/m3	98.7	70 - 130		
	BYH1780-BSD1	LCSD	21.611	21.711	ug/m3	99.5	0.9	70 - 130	30
Total Xylenes	BYH1780-BS1	LCS	63.738	65.132	ug/m3	97.9	70 - 130		
	BYH1780-BSD1	LCSD	64.372	65.132	ug/m3	98.8	1.0	70 - 130	30
4-Bromofluorobenzene (Surrogate)	BYH1780-BS1	LCS	81.4	71.6	ug/m3	114	70 - 130		
	BYH1780-BSD1	LCSD	82.0	71.6	ug/m3	115	0.8	70 - 130	

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Ground Zero Analysis, Inc.

1172 Kansas Avenue
Modesto, CA 95351

Reported: 08/24/2015 14:32

Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Notes And Definitions

MDL Method Detection Limit

ND Analyte Not Detected

PQL Practical Quantitation Limit

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



Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Date of Report: 08/26/2015

Project Manager

Ground Zero Analysis, Inc.

1172 Kansas Avenue
Modesto, CA 95351

Client Project: 5262

BCL Project: Sullins

BCL Work Order: 1520894

Invoice ID: B211818

Enclosed are the results of analyses for samples received by the laboratory on 8/19/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Chain of Custody and Cooler Receipt Form for 1520894 Page 1 of 2

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Page 1 of 1

IS-20894

Project #:		Project Name:		Billing To:		Analysis Requested		Laboratory:													
5262	Sullivans			Ground Zero Analysis, Inc.				BC Labs													
Site Address:		187 N. L. Street, Livermore, CA						Purchase Order #													
Global ID No.:		EDF Report: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Turnaround Time: <input checked="" type="checkbox"/> Standard 1 day 2 day 3 day 5 day													
Client: Ground Zero Analysis, Inc.		Rep Name: Ground Zero Analysis, Inc.						Email Lab Report (.pdf): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No													
Client Address: 1172 Kansas Avenue		Type of Event: OWL <input checked="" type="checkbox"/> Monitoring <input type="checkbox"/> Drilling <input type="checkbox"/> Other						Email EDF Lab Report (.zip): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No													
City, State, Zip: Modesto, CA 95351		Client Email: gza@groundzeronanalysis.com						Mail Lab Report: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No													
Client Phone: (209) 522-4119		Client Fax: (209) 522-4227						Special Instructions / Remarks													
Sampling Index:	Sampled By (Initials): <i>MP</i> , GZA																				
Date	Time	EDF Field ID	Sample ID/Description / Location		No. of Containers	Matrix (Soil, Water, Gas, Other)	Preservation Type														
8/18/15	1355	-1	GW-INF		4	W	HCL														
<table border="1"> <tr> <td colspan="2">CHK BY</td> <td colspan="2">DISTRIBUTION</td> </tr> <tr> <td><i>MW</i></td> <td><i>JPC</i></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="4">SUB-OUT <input type="checkbox"/></td> </tr> </table>										CHK BY		DISTRIBUTION		<i>MW</i>	<i>JPC</i>	<input type="checkbox"/>	<input type="checkbox"/>	SUB-OUT <input type="checkbox"/>			
CHK BY		DISTRIBUTION																			
<i>MW</i>	<i>JPC</i>	<input type="checkbox"/>	<input type="checkbox"/>																		
SUB-OUT <input type="checkbox"/>																					
Signature:		Print Name		Company		Date:	Time:														
<i>Mark Piereson</i>		<i>Mark Piereson</i>		GZA		8/18/15	16:00														
<i>Ross Dickey</i>		<i>Ross Dickey</i>		BCLABS		8/18/15	15:05														
<i>Ross Dickey</i>		<i>Ross Dickey</i>		BClabs		8/18/15	19:00														
Received / Reinquished by: <i>Mark Piereson</i>		REC- X 8/19/15 19:40		R.F.I. <i>MSO</i>		8/19/15 22:30															
Received / Reinquished by: <i>Ross Dickey</i>						<i>Mark Piereson</i> 8/19/15 22:30															
Please return cooler / ice chest to Ground Zero Analysis, Inc.																					

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

Rev. 3/2014



Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Chain of Custody and Cooler Receipt Form for 1520894 Page 2 of 2

BC LABORATORIES INC.		COOLER RECEIPT FORM			Page _____ Of _____						
Submission #: <u>15-20894</u>											
SHIPPING INFORMATION			SHIPPING CONTAINER		FREE LIQUID						
Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Ontrac <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____	Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		YES <input type="checkbox"/> NO <input type="checkbox"/>								
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/> Comments:											
Custody Seals	Ice Chest <input checked="" type="checkbox"/> Container <input type="checkbox"/> None <input checked="" type="checkbox"/>	Comments:									
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Emissivity: <u>0.97</u>	Container: <u>PE</u>	Thermometer ID: <u>808</u>	Date/Time <u>8/19/15 2240</u> Analyst Init <u>KIB</u>							
Temperature: (A) <u>1.4</u> °C / (C) <u>1.3</u> °C											
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		ABCD									
QT EPA 1664											
PT ODOR											
RADIOLOGICAL											
BACTERIOLOGICAL											
40 ml VOA VIAL- 504											
QT EPA 502/608/8080											
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: <u>MJA</u> Date/Time: <u>8/20/15 09:10</u> Rev 20 07/24/2015											
A = Actual / C = Corrected											

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BC**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

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

Reported: 08/26/2015 10:33
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1520894-01	COC Number: — Project Number: Sullins Sampling Location: — Sampling Point: GW-INF Sampled By: Mark Pierson of GTIM	Receive Date: 08/19/2015 22:30 Sampling Date: 08/18/2015 13:55 Sample Depth: — Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): GW-INF Matrix: W Sample QC Type (SACode): CS Cooler ID:

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

Reported: 08/26/2015 10:33
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1520894-01	Client Sample Name: Sullins, GW-INF, 8/18/2015 1:55:00PM, Mark Pierson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	210	ug/L	5.0	0.83	EPA-8260B	ND	A01	1
Ethylbenzene	8.3	ug/L	5.0	0.98	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	5.0	1.1	EPA-8260B	ND	A01	1
Toluene	72	ug/L	5.0	0.93	EPA-8260B	ND	A01	1
Total Xylenes	890	ug/L	10	3.6	EPA-8260B	ND	A01	1
p- & m-Xylenes	650	ug/L	5.0	2.8	EPA-8260B	ND	A01	1
o-Xylene	240	ug/L	5.0	0.82	EPA-8260B	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	6700	ug/L	500	72	Luft-GC/MS	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	92.9	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	107	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/20/15	08/20/15 17:40	SE1	MS-V10	10	BYH1723



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

Reported: 08/26/2015 10:33
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH1723						
Benzene	BYH1723-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYH1723-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BYH1723-BLK1	ND	ug/L	0.50	0.11	
Toluene	BYH1723-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYH1723-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYH1723-BLK1	ND	ug/L	0.50	0.28	
c-Xylene	BYH1723-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BYH1723-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	BYH1723-BLK1	94.5	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BYH1723-BLK1	99.2	%	80 - 120 (LCL - UCL)		
4-Bromoanisole (Surrogate)	BYH1723-BLK1	105	%	80 - 120 (LCL - UCL)		



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

Reported: 08/26/2015 10:33
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		
								Percent Recovery	RPD	Lab Quals
QC Batch ID: BYH1723										
Benzene	BYH1723-BS1	LCS	27.390	25.000	ug/L	110		70 - 130		
Toluene	BYH1723-BS1	LCS	30.440	25.000	ug/L	122		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYH1723-BS1	LCS	9.5600	10.000	ug/L	95.6		75 - 125		
Toluene-d8 (Surrogate)	BYH1723-BS1	LCS	9.9900	10.000	ug/L	99.9		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYH1723-BS1	LCS	11.190	10.000	ug/L	112		80 - 120		



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

Reported: 08/26/2015 10:33
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
								Percent Recovery	RPD	Percent Recovery
QC Batch ID: BYH1723 Used client sample: N										
Benzene	MS	1520739-05	ND	21.240	25.000	ug/L		85.0		70 - 130
	MSD	1520739-05	ND	23.140	25.000	ug/L	8.6	92.6	20	70 - 130
Toluene	MS	1520739-05	ND	24.690	25.000	ug/L		98.8		70 - 130
	MSD	1520739-05	ND	26.420	25.000	ug/L	6.8	106	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1520739-05	ND	9.0400	10.000	ug/L		90.4		75 - 125
	MSD	1520739-05	ND	9.2600	10.000	ug/L	2.4	92.6		75 - 125
Toluene-d8 (Surrogate)	MS	1520739-05	ND	9.8400	10.000	ug/L		98.4		80 - 120
	MSD	1520739-05	ND	10.020	10.000	ug/L	1.8	100		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1520739-05	ND	10.670	10.000	ug/L		107		80 - 120
	MSD	1520739-05	ND	10.880	10.000	ug/L	1.9	109		80 - 120

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

Reported: 08/26/2015 10:33
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.



Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Date of Report: 09/22/2015

Project Manager

Ground Zero Analysis, Inc.

1172 Kansas Avenue
Modesto, CA 95351

Client Project: 5262

BCL Project: Sullins

BCL Work Order: 1523650

Invoice ID: B214312

Enclosed are the results of analyses for samples received by the laboratory on 9/16/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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Report ID: 1000399152

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

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BC

Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Chain of Custody and Cooler Receipt Form for 1523650 Page 1 of 3

Page 1 of 1

Chain of Custody



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

Billing To: Ground Zero Analysis, Inc.				Analysis Requested										Laboratory:				
Project #:	Project Name:	15-23650												BC Labs				
5262	Sullens																	
Site Address: 187 North "L" Street, Livermore, CA														Purchase Order #				
Global ID No.:		EDF Report: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																
Client: Ground Zero Analysis, Inc.		Ppt Attn: Ground Zero Analysis, Inc.																
Client Address: 1172 Kansas Avenue		Type of Event: GWM <input checked="" type="checkbox"/> By Monitoring <input type="checkbox"/> Drilling <input type="checkbox"/> 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): 11P GZA												Turnaround Time: <input checked="" type="checkbox"/> Standard 1 day 2 day 3 day 5 day				
Date	Time	EDF Field ID	Sample I.D./Description / Location		No. of Containers	Preparation Type											Email Lab Report (.pdf): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
19/15/15	1226		MW - 9		4 W	HCL	X											Email EDF Lab Report (.zip): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	1319		MW - 10		4 W	HCL	X											Mail Lab Report: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	1346		SVE - INF		1 G	-	X											
	1358		GW - INF		4 W	HCL	X											
														Special Instructions / Remarks				
														<input checked="" type="checkbox"/> INK BY THIS LOCATION <input checked="" type="checkbox"/> SUB OUT				
✓ Signature Received / Requested by: <u>Mark Person</u> Received / Requested by: <u>Anthony Serna</u> Received / Requested by: <u>Ross Dickey</u>				Print Name Mark Person Anthony Serna Ross Dickey				Company		Date:		Time:						
								GZA		9/16/15		06:47						
								GZA		9/16/15		06:47						
								BC LAB		9/16/15		161Z						
Rel. by Ross Dickey / Ross Dickey BC LAB 9-16-15 1925 REC. <u>ROSS DICKY</u> Please return cooler / ice chest to Ground Zero Analysis, Inc. REL. <u>ROSS DICKY</u> 9/16/15 2830														Rev. 3/2014				



Chain of Custody and Cooler Receipt Form for 1523650 Page 2 of 3

BC LABORATORIES INC.		COOLER RECEIPT FORM				Page <u>1</u> of <u>2</u>			
Submission #:	<u>1523650</u>								
SHIPPING INFORMATION		SHIPPING CONTAINER			FREE LIQUID				
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	Ice Chest <input checked="" type="checkbox"/>	None <input type="checkbox"/>	Box <input type="checkbox"/>	YES <input type="checkbox"/> NO <input type="checkbox"/>		
BC Lab Field Service <input checked="" type="checkbox"/>		Other <input type="checkbox"/> (Specify) _____			Other <input type="checkbox"/> (Specify) _____				
Refrigerant:	Ice <input checked="" type="checkbox"/>	Blue Ice <input type="checkbox"/>	None <input type="checkbox"/>	Other <input type="checkbox"/>	Comments: _____				
Custody Seals	Ice Chest <input type="checkbox"/>	Containers <input type="checkbox"/>	None <input checked="" type="checkbox"/>			Comments: _____			
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Emissivity: <u>0.97</u>	Container: <u>PE</u>	Thermometer ID: <u>208</u>	Date/Time: <u>9/16/15</u>					
	Temperature: (A) <u>0.7</u> °C / (C) <u>0.6</u> °C			Analyst Init: <u>KIB 2341</u>					
SAMPLE CONTAINERS	SAMPLE NUMBERS								
	1	2	3	4	5	6	7	8	9
QT PE UNPRES									
4oz / 8oz / 16oz PE UNPRES									
2oz Cr ⁴⁺									
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	<u>AKW</u>	<u>AKD</u>	<u>W150</u>						
QT EPA 1664									
PT ODOR									
RADIOLOGICAL									
BACTERIOLOGICAL									
40 ml VOA VIAL- 504									
QT EPA 504/600/8000									
QT EPA 515.1/6150									
QT EPA 525									
QT EPA 525 TRAVEL BLANK									
40ml EPA 547									
40ml EPA 531.1									
Box EPA 548									
QT EPA 549									
QT EPA 8015M									
QT EPA 8170									
8oz / 16oz / 32oz AMBER									
8oz / 16oz / 32oz JAR									
SOIL SLEEVES									
PCB VIAL									
PLASTIC BAG									
TELDAR BAG									
FERROUS IRON									
ENCORE									
SMART KIT									
SUMMA CANISTER									
Comments: _____					Date/Time: <u>9/16/15 0352</u>	Rev 20 07/24/2015			
Sample Numbering Completed By: _____									ESW\Wood\PerfectLAB_DOCS\ORASISAMRECv20
A = Actual / C = Corrected									



Chain of Custody and Cooler Receipt Form for 1523650 Page 3 of 3

BC LABORATORIES INC.		COOLER RECEIPT FORM					Page 2 of 2				
Submission #: 15-23650											
SHIPPING INFORMATION						SHIPPING CONTAINER			FREE LIQUID		
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	Ice Chest <input type="checkbox"/>	None <input type="checkbox"/>	Box <input checked="" type="checkbox"/>	YES <input type="checkbox"/>	NO <input type="checkbox"/>			
BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____						Other <input type="checkbox"/> (Specify) _____					
Refrigerant: Ice <input type="checkbox"/> Blue Ice <input type="checkbox"/> None <input checked="" type="checkbox"/> Other <input type="checkbox"/> Comments: _____											
Custody Seals <input type="checkbox"/> Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____											
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>											
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: _____ Container: Teflar Thermometer ID: _____			Date/Time 9/16/15 2332						
		Temperature: (A) Room °C / (C) temp °C			Analyst int KIR						
SAMPLE CONTAINERS		SAMPLE NUMBERS									
		1	2	3	4	5	6	7	8	9	10
QT PE UNPRES											
4oz / 8oz / 16oz PE UNPRES											
2oz Cr ²											
QT INORGANIC CHEMICAL METALS											
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz											
PT CYANIDE											
PT NITROGEN FORMS											
PT TOTAL SULFIDE											
1oz NITRATE / NITRITE											
PT TOTAL ORGANIC CARBON											
PT CHEMICAL OXYGEN DEMAND											
PTA PHENOLICS											
40ml VOA VIAL TRAVEL BLANK											
40ml VOA VIAL											
QT EPA 1664											
PT ODOR											
RADIOLOGICAL											
BACTERIOLOGICAL											
40 ml VOA VIAL- 504											
QT EPA 503/608/609											
QT EPA 515.1/6150											
QT EPA 525											
QT EPA 525 TRAVEL BLANK											
40ml EPA 547											
40ml EPA 531.1											
8oz EPA 548											
QT EPA 549											
QT EPA 881SM											
QT EPA 8270											
8oz / 16oz / 32oz AMBER											
8oz / 16oz / 32oz JAR											
SOIL SLEEVE											
PCB VIAL											
PLASTIC BAG											
TEFLON BAG											
FERROUS IRON											
ENCORE											
SMART KIT											
SUMMA CANISTER											
Comments: _____											
Sample Numbering Completed By: _____ Date/Time: 9/16/15 2332 Rev 20 07/24/2015											
A = Actual / C = Corrected											

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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1523650-01	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-9 Sampled By: Mark Pierson of GTIM	Receive Date: 09/16/2015 23:30 Sampling Date: 09/15/2015 12:26 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1523650-02	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-10 Sampled By: Mark Pierson of GTIM	Receive Date: 09/16/2015 23:30 Sampling Date: 09/15/2015 13:19 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-10 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1523650-03	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: SVE-INF Sampled By: Mark Pierson of GTIM	Receive Date: 09/16/2015 23:30 Sampling Date: 09/15/2015 13:46 Sample Depth: --- Lab Matrix: Air Sample Type: Vapor or Air Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): SVE-INF Matrix: GS Sample QC Type (SACode): CS Cooler ID:



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1523650-04	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: GW-INF Sampled By: Mark Pierson of GTIM	Receive Date: 09/16/2015 23:30 Sampling Date: 09/15/2015 13:58 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): GW-INF Matrix: W Sample QC Type (SACode): CS Cooler ID:



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1523650-01	Client Sample Name: Sullins, MW-9, 9/15/2015 12:26 00PM, Mark Pierson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2.2	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	96	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.1	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time			Analyst	Instrument	Dilution	QC Batch ID
			Date	Time	Duration				
1	EPA-8260B	09/16/15	09/17/15	16:55		SE1	MS-V10	1	BY11728



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1523650-02	Client Sample Name: Sullins, MW-10, 9/15/2015 1:19:00PM, Mark Pierson						
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	12	ug/L	50	7.2	Luft-GC/MS	ND	J	1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	96.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Run				Dilution	QC Batch ID
		Prep Date	Date/Time	Analyst	Instrument		
1	EPA-8260B	09/16/15	09/17/15 16:36	SE1	MS-V10	1	BYI1728



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

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

BCL Sample ID:	1523650-03	Client Sample Name: Sullins, SVE-INF, 9/15/2015 1:46:00PM, Mark Pierson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	62000	ug/m3	4000	440	EPA-TO-15	ND	A01	1
Ethylbenzene	41000	ug/m3	2500	120	EPA-TO-15	ND	A01	2
Methyl t-butyl ether	ND	ug/m3	1000	210	EPA-TO-15	ND	A01	2
Toluene	14000	ug/m3	1000	100	EPA-TO-15	ND	A01	2
p- & m-Xylenes	110000	ug/m3	2500	240	EPA-TO-15	ND	A01	2
o-Xylene	22000	ug/m3	2500	160	EPA-TO-15	ND	A01	2
Total Xylenes	140000	ug/m3	5000	400	EPA-TO-15	ND	A01	2
Total Petroleum Hydrocarbons	19000000	ug/m3	1000000	200000	EPA-TO-15	ND	A01	3
4-Bromofluorobenzene (Surrogate)	99.4	%	70 - 130 (LCL - UCL)		EPA-TO-15			1
4-Bromofluorobenzene (Surrogate)	112	%	70 - 130 (LCL - UCL)		EPA-TO-15			2
4-Bromofluorobenzene (Surrogate)	106	%	70 - 130 (LCL - UCL)		EPA-TO-15			3

Run #	Method	Prep Date	Run Date/Time		Analyst	Instrument	Dilution	QC Batch ID
			Date	Time				
1	EPA-TO-15	09/17/15	09/17/15	20:26	MJB	MS-A1	2000	BYI1620
2	EPA-TO-15	09/17/15	09/17/15	16:10	MJB	MS-A1	500	BYI1620
3	EPA-TO-15	09/17/15	09/18/15	11:18	MJB	MS-A1	5000	BYI1620



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID:	1523650-04	Client Sample Name: Sullins, GW-INF, 9/15/2015 1:58:00PM, Mark Pierson						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	430	ug/L	5.0	0.83	EPA-8260B	ND	A01	1
Ethylbenzene	190	ug/L	5.0	0.98	EPA-8260B	ND	A01	1
Methyl t-butyl ether	3.2	ug/L	0.50	0.11	EPA-8260B	ND		2
Toluene	84	ug/L	0.50	0.093	EPA-8260B	ND		2
Total Xylenes	2000	ug/L	10	3.6	EPA-8260B	ND	A01	1
p- & m-Xylenes	1600	ug/L	5.0	2.8	EPA-8260B	ND	A01	1
o-Xylene	350	ug/L	5.0	0.82	EPA-8260B	ND	A01	1
Total Purgeable Petroleum Hydrocarbons	9000	ug/L	500	72	Luft-GC/MS	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	104	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	92.5	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	82.6	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Run				Dilution	QC Batch ID
		Prep Date	Date/Time	Analyst	Instrument		
1	EPA-8260B	09/18/15	09/18/15 17:03	SE1	MS-V10	10	BYI1728
2	EPA-8260B	09/16/15	09/17/15 17:13	SE1	MS-V10	1	BYI1728



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYI1728						
Benzene	BYI1728-BLK1	ND	ug/L	0.50	0.083	
Ethylbenzene	BYI1728-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BYI1728-BLK1	ND	ug/L	0.50	0.11	
Toluene	BYI1728-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BYI1728-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYI1728-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYI1728-BLK1	ND	ug/L	0.50	0.082	
Total Purgeable Petroleum Hydrocarbons	BYI1728-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	BYI1728-BLK1	104	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BYI1728-BLK1	102	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BYI1728-BLK1	97.1	%	80 - 120 (LCL - UCL)		



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		
							Percent Recovery	RPD	Lab Quals
QC Batch ID: BYI1728									
Benzene	BYI1728-BS1	LCS	31.650	25.000	ug/L	127	70 - 130		
Toluene	BYI1728-BS1	LCS	30.520	25.000	ug/L	122	70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYI1728-BS1	LCS	9.9700	10.000	ug/L	99.7	75 - 125		
Toluene-d8 (Surrogate)	BYI1728-BS1	LCS	9.8400	10.000	ug/L	98.4	80 - 120		
4-Bromofluorobenzene (Surrogate)	BYI1728-BS1	LCS	9.6800	10.000	ug/L	96.8	80 - 120		

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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
								Percent Recovery	RPD	Percent Recovery
QC Batch ID: BYI1728		Used client sample: N								
Benzene	MS	1521506-60	ND	31.150	25.000	ug/L		125		70 - 130
	MSD	1521506-60	ND	31.970	25.000	ug/L	2.6	128	20	70 - 130
Toluene	MS	1521506-60	ND	30.200	25.000	ug/L		121		70 - 130
	MSD	1521506-60	ND	31.950	25.000	ug/L	5.6	128	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1521506-60	ND	10.120	10.000	ug/L		101		75 - 125
	MSD	1521506-60	ND	10.020	10.000	ug/L	1.0	100		75 - 125
Toluene-d8 (Surrogate)	MS	1521506-60	ND	10.070	10.000	ug/L		101		80 - 120
	MSD	1521506-60	ND	10.140	10.000	ug/L	0.7	101		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1521506-60	ND	9.6600	10.000	ug/L		96.6		80 - 120
	MSD	1521506-60	ND	9.9500	10.000	ug/L	3.0	99.5		80 - 120



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

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

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYI1620						
Benzene	BYI1620-BLK1	ND	ug/m3	2.0	0.22	
Ethylbenzene	BYI1620-BLK1	ND	ug/m3	5.0	0.23	
Methyl t-butyl ether	BYI1620-BLK1	ND	ug/m3	2.0	0.42	
Toluene	BYI1620-BLK1	ND	ug/m3	2.0	0.20	
p- & m-Xylenes	BYI1620-BLK1	ND	ug/m3	5.0	0.49	
o-Xylene	BYI1620-BLK1	ND	ug/m3	5.0	0.31	
Total Xylenes	BYI1620-BLK1	ND	ug/m3	10	0.80	
Total Petroleum Hydrocarbons	BYI1620-BLK1	ND	ug/m3	200	39	
4-Bromofluorobenzene (Surrogate)	BYI1620-BLK1	79.5	%	70 - 130 (LCL - UCL)		



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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

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

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		
							Percent Recovery	RPD	Lab Quals
QC Batch ID: BYI1620									
Benzene	BYI1620-BS1	LCS	19.338	15.974	ug/m3	121	70 - 130		
	BYI1620-BSD1	LCSD	19.191	15.974	ug/m3	120	0.8	70 - 130	30
Ethylbenzene	BYI1620-BS1	LCS	27.533	21.711	ug/m3	127	70 - 130		
	BYI1620-BSD1	LCSD	25.692	21.711	ug/m3	118	6.9	70 - 130	30
Toluene	BYI1620-BS1	LCS	18.921	18.842	ug/m3	100	70 - 130		
	BYI1620-BSD1	LCSD	18.906	18.842	ug/m3	100	0.1	70 - 130	30
p- & m-Xylenes	BYI1620-BS1	LCS	50.581	43.421	ug/m3	116	70 - 130		
	BYI1620-BSD1	LCSD	47.069	43.421	ug/m3	108	7.2	70 - 130	30
o-Xylene	BYI1620-BS1	LCS	24.859	21.711	ug/m3	114	70 - 130		
	BYI1620-BSD1	LCSD	23.100	21.711	ug/m3	106	7.3	70 - 130	30
Total Xylenes	BYI1620-BS1	LCS	75.440	65.132	ug/m3	116	70 - 130		
	BYI1620-BSD1	LCSD	70.169	65.132	ug/m3	108	7.2	70 - 130	30
4-Bromofluorobenzene (Surrogate)	BYI1620-BS1	LCS	56.9	71.6	ug/m3	79.5	70 - 130		
	BYI1620-BSD1	LCSD	66.4	71.6	ug/m3	92.7	15.4	70 - 130	



Laboratories, Inc.

Environmental Testing Laboratory Since 1949

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

Reported: 09/22/2015 12:53
Project: Sullins
Project Number: 5262
Project Manager: Project Manager

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.

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Laboratories, Inc.

Environmental Testing Laboratory Since 1949

Date of Report: 11/25/2015

Project Manager

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

Client Project: 5262
BCL Project: Sullins
BCL Work Order: 1529717
Invoice ID: B219859

Enclosed are the results of analyses for samples received by the laboratory on 11/18/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Contact Person: Christina Herndon
Client Service Rep



Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

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BC**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Chain of Custody and Cooler Receipt Form for 1529717 Page 1 of 2

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

Chain of Custody

(5-29717)

Page 1 of 1

Project #: 5262		Project Name: Sullins		Billing To: Ground Zero Analysis, Inc.		Analysis Requested		Laboratory: BC Lab	
Site Address: 187 North L Street, Livermore, Ca									
Global ID No.: T0600100116		EDF Report: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Client: Ground Zero Analysis, Inc.		Rep: Alvin		Ground Zero Analysis, Inc.					
Client Address: 1172 Kansas Avenue		Type of Event: <input checked="" type="checkbox"/> GZNA		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): A.S. GZA							
Date	Time	EDF Field ID	Sample ID/Description / Location		Preparation Date	No. of Containers	Method (Soil, Water, Gases, Others)	Chk EV	Rept. Distribution
11/17/15	1230	-1	MW - 204		4 W H4	X X X			
11/17/15	1158	-2	MW - 304		4	X X			
11/16/15	1540	-3	MW - 305		4	X X			
11/16/15	1400	-4	MW - 306		4	X X			
11/16/15	1510	-5	MW - 307		4	X X			
11/16/15	1450	-6	MW - 308		4	X X			
11/17/15	1345	-7	MW - 9		4	X X X			
11/17/15	1415	-8	MW - 10		4	X X X			
11/17/15	1600	-9	EW - 2		4 V V	X X X			
<input checked="" type="checkbox"/> HOLD <input type="checkbox"/> SHIP <input type="checkbox"/> HOLD & SHIP <input type="checkbox"/> HOLD & SHIP OUT									
Note: Field Sample Id names should not have any spaces.									
Signature		Print Name		Company		Date:		Time:	
Received / Prepared by: Anthony Scorna		Anthony Scorna		GZA		11-18-15		1500	
Received / Prepared by: Ross Dickey		Ross Dickey		BC LAB		11-18-15		1500	
Received / Prepared by: Ross Dickey		Ross Dickey		BC LAB		11-18-15		1930	

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

REC. 11/18/15 19:30REL. 11/18/15 2330

Rev. 3/2014



BC LABORATORIES INC.		COOLER RECEIPT FORM						Page <u>1</u> Of <u>1</u>		
Submission #: <u>15-29717</u>										
SHIPPING INFORMATION				SHIPPING CONTAINER			FREE LIQUID			
Fed Ex <input type="checkbox"/>	UPS <input type="checkbox"/>	Ontrac <input type="checkbox"/>	Hand Delivery <input type="checkbox"/>	Ice Chest <input checked="" type="checkbox"/>	None <input type="checkbox"/>	Box <input type="checkbox"/>	YES <input type="checkbox"/>	NO <input type="checkbox"/>		
BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____				Other <input type="checkbox"/> (Specify) _____						
Refrigerant: Ice <input checked="" type="checkbox"/> Blue Ice <input type="checkbox"/> None <input type="checkbox"/> Other <input type="checkbox"/>		Comments: _____								
Custody Seals Ice Chest <input type="checkbox"/> Containers <input type="checkbox"/> None <input checked="" type="checkbox"/> Comments: _____										
All samples received? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		All samples containers intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Description(s) match COC? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						
COC Received <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Emissivity: <u>0.95</u> Container: <u>VOA</u> Thermometer ID: <u>208</u> Temperature: (A) <u>0.6</u> °C / (C) <u>0.5</u> °C		Date/Time <u>11/16/15 2317</u>		Analyst Init <u>KB</u>				
SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr ⁴⁺										
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	<u>ABC1</u>	<u>A1CD</u>	<u>ABC1D</u>	<u>ABC1D</u>	<u>ABC1D</u>	<u>ABC1D</u>	<u>ABC1D</u>	<u>ABC1D</u>	<u>ABC1D</u>	
40ml VOA VIAL										
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508608/50880										
QT EPA 515.1/5150										
QT EPA 515										
QT EPA 515 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA K270										
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: _____

A = Actual / C = Corrected

Date/Time: 11/16/15 1750

Rev 20 07/24/2015
J:\DW\Doc\Word\Forms\LAB_DOC\FORMS\MEASREC\Rev 20

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

Reported: 11/25/2015 11:36

Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1529717-01	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-204 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/17/2015 12:30 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-204 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1529717-02	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-304 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/17/2015 11:58 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-304 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1529717-03	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-305 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/16/2015 15:40 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-305 Matrix: W Sample QC Type (SACode): CS Cooler ID:



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

Reported: 11/25/2015 11:36

Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1529717-04	COC Number: — Project Number: Sullins Sampling Location: — Sampling Point: MW-306 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/16/2015 14:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-306 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1529717-05	COC Number: — Project Number: Sullins Sampling Location: --- Sampling Point: MW-307 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/16/2015 15:10 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-307 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1529717-06	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-308 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/16/2015 14:50 Sample Depth: — Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-308 Matrix: W Sample QC Type (SACode): CS Cooler ID:



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Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information	
1529717-07	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-9 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/17/2015 13:45 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1529717-08	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: MW-10 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/17/2015 14:15 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): MW-10 Matrix: W Sample QC Type (SACode): CS Cooler ID:
1529717-09	COC Number: --- Project Number: Sullins Sampling Location: --- Sampling Point: EW-2 Sampled By: GZA of GTIM	Receive Date: 11/18/2015 23:30 Sampling Date: 11/17/2015 16:00 Sample Depth: --- Lab Matrix: Water Sample Type: Groundwater Delivery Work Order: Global ID: T0600100116 Location ID (FieldPoint): EW-2 Matrix: W Sample QC Type (SACode): CS Cooler ID:

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-01	Client Sample Name: Sullins, MW-204, 11/17/2015 12:30:00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	380	ug/L	3.0	0.97	EPA-8021B	ND		1
Toluene	9.6	ug/L	0.30	0.13	EPA-8021B	ND		2
Ethylbenzene	54	ug/L	0.30	0.12	EPA-8021B	ND		2
Methyl t-butyl ether	6.9	ug/L	1.0	0.12	EPA-8021B	ND		2
Total Xylenes	110	ug/L	0.60	0.41	EPA-8021B	ND		2
Gasoline Range Organics (C4 - C12)	1800	ug/L	50	8.8	Luft	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	98.4	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	111	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (FID Surrogate)	119	%	70 - 130 (LCL - UCL)		Luft			3

Run #	Method	Prep Date	Run Date/Time			Dilution	QC Batch ID
			Date	Time	Analyst		
1	EPA-8021B	11/23/15	11/23/15	13:14	AKM	GC-V9	10
2	EPA-8021B	11/20/15	11/20/15	20:10	AKM	GC-V9	1
3	Luft	11/20/15	11/20/15	20:10	AKM	GC-V9	1



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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-02	Client Sample Name: Sullins, MW-304, 11/17/2015 11:58:00AM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	110	ug/L	3.0	0.97	EPA-8021B	ND	A01	1
Toluene	5.6	ug/L	0.30	0.13	EPA-8021B	ND		2
Ethylbenzene	51	ug/L	0.30	0.12	EPA-8021B	ND		2
Total Xylenes	86	ug/L	0.60	0.41	EPA-8021B	ND		2
Gasoline Range Organics (C4 - C12)	1200	ug/L	50	8.8	Luft	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	87.4	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	122	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (FID Surrogate)	130	%	70 - 130 (LCL - UCL)		Luft			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	11/23/15	11/23/15 12:13	AKM	GC-V9	10	BYK1765
2	EPA-8021B	11/20/15	11/20/15 20:31	AKM	GC-V9	1	BYK1765
3	Luft	11/20/15	11/20/15 20:31	AKM	GC-V9	1	BYK1765



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Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-03	Client Sample Name: Sullins, MW-305, 11/16/2015 3:40:00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	130	ug/L	3.0	0.97	EPA-8021B	ND	A01	1
Toluene	1.7	ug/L	0.30	0.13	EPA-8021B	ND		2
Ethylbenzene	27	ug/L	0.30	0.12	EPA-8021B	ND		2
Total Xylenes	26	ug/L	0.60	0.41	EPA-8021B	ND		2
Gasoline Range Organics (C4 - C12)	780	ug/L	50	8.8	Luft	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	121	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (PID Surrogate)	119	%	70 - 130 (LCL - UCL)		EPA-8021B			2
a,a,a-Trifluorotoluene (FID Surrogate)	123	%	70 - 130 (LCL - UCL)		Luft			3

Run #	Method	Prep Date	Run Date/Time		Analyst	Instrument	Dilution	QC Batch ID
			Date	Time				
1	EPA-8021B	11/23/15	11/23/15	12:33	AKM	GC-V9	10	BYK1765
2	EPA-8021B	11/20/15	11/20/15	23:13	AKM	GC-V9	1	BYK1765
3	Luft	11/20/15	11/20/15	23:13	AKM	GC-V9	1	BYK1765

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Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-04	Client Sample Name: Sullins, MW-306, 11/16/2015 2:00:00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	0.097	EPA-8021B	ND		1
Toluene	ND	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	0.12	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	8.8	Luft	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	121	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a.a.a-Trifluorotoluene (FID Surrogate)	112	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	11/20/15	11/23/15 11:52	AKM	GC-V9	1	BYK1765
2	Luft	11/20/15	11/23/15 11:52	AKM	GC-V9	1	BYK1765

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-05	Client Sample Name: Sullins, MW-307, 11/16/2015 3:10 00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	150	ug/L	3.0	0.97	EPA-8021B	ND	A01	1
Toluene	2.5	ug/L	0.30	0.13	EPA-8021B	ND		2
Ethylbenzene	26	ug/L	0.30	0.12	EPA-8021B	ND		2
Total Xylenes	26	ug/L	0.60	0.41	EPA-8021B	ND		2
Gasoline Range Organics (C4 - C12)	730	ug/L	50	8.8	Luft	ND		3
a,a,a-Trifluorotoluene (PID Surrogate)	74.7	%	70 - 130 (LCL - UCL)	EPA-8021B				1
a,a,a-Trifluorotoluene (PID Surrogate)	81.6	%	70 - 130 (LCL - UCL)	EPA-8021B				2
a,a,a-Trifluorotoluene (FID Surrogate)	76.9	%	70 - 130 (LCL - UCL)	Luft				3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	11/23/15	11/23/15 12:54	AKM	GC-V9	10	BYK1765
2	EPA-8021B	11/20/15	11/20/15 22:32	AKM	GC-V9	1	BYK1765
3	Luft	11/20/15	11/20/15 22:32	AKM	GC-V9	1	BYK1765

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Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-06	Client Sample Name: Sullins, MW-308, 11/16/2015 2:50:00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	70	ug/L	0.30	0.097	EPA-8021B	ND		1
Toluene	3.2	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	24	ug/L	0.30	0.12	EPA-8021B	ND		1
Total Xylenes	23	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	1200	ug/L	50	8.8	Luft	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	86.1	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	94.9	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	11/20/15	11/20/15 22:53	AKM	GC-V9	1	BYK1765
2	Luft	11/20/15	11/20/15 22:53	AKM	GC-V9	1	BYK1765

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Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-07	Client Sample Name: Sullins, MW-9, 11/17/2015 1:45 00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	2.6	ug/L	0.30	0.097	EPA-8021B	ND		1
Toluene	2.7	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	0.12	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	0.12	EPA-8021B	ND		1
Total Xylenes	9.2	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	260	ug/L	50	8.8	Luft	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	94.9	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	85.2	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time				Dilution	QC Batch ID
			Analyst	Instrument				
1	EPA-8021B	11/20/15	11/20/15 19:30	AKM	GC-V9	1	BYK1765	
2	Luft	11/20/15	11/20/15 19:30	AKM	GC-V9	1	BYK1765	

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Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-08	Client Sample Name: Sullins, MW-10, 11/17/2015 2:15:00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.30	0.097	EPA-8021B	ND		1
Toluene	0.99	ug/L	0.30	0.13	EPA-8021B	ND		1
Ethylbenzene	ND	ug/L	0.30	0.12	EPA-8021B	ND		1
Methyl t-butyl ether	ND	ug/L	1.0	0.12	EPA-8021B	ND		1
Total Xylenes	ND	ug/L	0.60	0.41	EPA-8021B	ND		1
Gasoline Range Organics (C4 - C12)	71	ug/L	50	8.8	Luft	ND		2
a,a,a-Trifluorotoluene (PID Surrogate)	106	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	103	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	11/20/15	11/20/15 19:50	AKM	GC-V9	1	BYK1765
2	Luft	11/20/15	11/20/15 19:50	AKM	GC-V9	1	BYK1765

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID:	1529717-09	Client Sample Name: Sullins, EW-2, 11/17/2015 4:00:00PM, GZA						
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	270	ug/L	3.0	0.97	EPA-8021B	ND	A01	1
Toluene	83	ug/L	3.0	1.3	EPA-8021B	ND	A01	1
Ethylbenzene	150	ug/L	3.0	1.2	EPA-8021B	ND	A01	1
Methyl t-butyl ether	91	ug/L	10	1.2	EPA-8021B	ND	A01	1
Total Xylenes	510	ug/L	6.0	4.1	EPA-8021B	ND	A01	1
Gasoline Range Organics (C4 - C12)	3700	ug/L	500	88	Luft	ND	A01	2
a,a,a-Trifluorotoluene (PID Surrogate)	107	%	70 - 130 (LCL - UCL)		EPA-8021B			1
a,a,a-Trifluorotoluene (FID Surrogate)	93.4	%	70 - 130 (LCL - UCL)		Luft			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8021B	11/20/15	11/20/15 23:33	AKM	GC-V9	10	BYK1765
2	Luft	11/24/15	11/24/15 12:26	AKM	GC-V9	10	BYK1765



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Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons**Quality Control Report - Method Blank Analysis**

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYK1765						
Benzene	BYK1765-BLK1	ND	ug/L	0.30	0.097	
Toluene	BYK1765-BLK1	ND	ug/L	0.30	0.13	
Ethylbenzene	BYK1765-BLK1	ND	ug/L	0.30	0.12	
Methyl t-butyl ether	BYK1765-BLK1	ND	ug/L	1.0	0.12	
Total Xylenes	BYK1765-BLK1	ND	ug/L	0.60	0.41	
Gasoline Range Organics (C4 - C12)	BYK1765-BLK1	ND	ug/L	50	8.8	
a,a,a-Trifluorotoluene (PID Surrogate)	BYK1765-BLK1	80.9	%	70 - 130 (LCL - UCL)		
a,a,a-Trifluorotoluene (FID Surrogate)	BYK1765-BLK1	105	%	70 - 130 (LCL - UCL)		



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Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		
							Percent Recovery	RPD	Lab Quals
QC Batch ID: BYK1765									
Benzene	BYK1765-BS1	LCS	41.914	40.000	ug/L	105	85 - 115		
Toluene	BYK1765-BS1	LCS	42.241	40.000	ug/L	106	85 - 115		
Ethylbenzene	BYK1765-BS1	LCS	41.703	40.000	ug/L	104	85 - 115		
Methyl t-butyl ether	BYK1765-BS1	LCS	41.297	40.000	ug/L	103	85 - 115		
Total Xylenes	BYK1765-BS1	LCS	124.80	120.00	ug/L	104	85 - 115		
Gasoline Range Organics (C4 - C12)	BYK1765-BS1	LCS	1078.1	1000.0	ug/L	108	85 - 115		
a,a,a-Trifluorotoluene (PID Surrogate)	BYK1765-BS1	LCS	29.822	40.000	ug/L	74.6	70 - 130		
a,a,a-Trifluorotoluene (FID Surrogate)	BYK1765-BS1	LCS	30.126	40.000	ug/L	75.3	70 - 130		

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Project: Sullins

Project Number: 5262

Project Manager: Project Manager

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits			
								Percent Recovery	RPD	Percent Recovery	Lab Quals
QC Batch ID: BYK1765			Used client sample: N								
Benzene	MS	1528561-26	ND	41.618	40.000	ug/L		104		70 - 130	
	MSD	1528561-26	ND	39.221	40.000	ug/L	5.9	98.1	20	70 - 130	
Toluene	MS	1528561-26	ND	41.407	40.000	ug/L		104		70 - 130	
	MSD	1528561-26	ND	39.684	40.000	ug/L	4.2	99.2	20	70 - 130	
Ethylbenzene	MS	1528561-26	ND	41.235	40.000	ug/L		103		70 - 130	
	MSD	1528561-26	ND	39.340	40.000	ug/L	4.7	98.4	20	70 - 130	
Methyl t-butyl ether	MS	1528561-26	ND	42.142	40.000	ug/L		105		70 - 130	
	MSD	1528561-26	ND	39.425	40.000	ug/L	6.7	98.6	20	70 - 130	
Total Xylenes	MS	1528561-26	ND	123.46	120.00	ug/L		103		70 - 130	
	MSD	1528561-26	ND	117.68	120.00	ug/L	4.8	98.1	20	70 - 130	
Gasoline Range Organics (C4 - C12)	MS	1528561-26	ND	997.77	1000.0	ug/L		99.8		70 - 130	
	MSD	1528561-26	ND	1016.3	1000.0	ug/L	1.8	102	20	70 - 130	
a,a,a-Trifluorotoluene (PID Surrogate)	MS	1528561-26	ND	42.015	40.000	ug/L		105		70 - 130	
	MSD	1528561-26	ND	49.943	40.000	ug/L	17.2	125		70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1528561-26	ND	39.167	40.000	ug/L		97.9		70 - 130	
	MSD	1528561-26	ND	49.591	40.000	ug/L	23.5	124		70 - 130	



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Project Number: 5262

Project Manager: Project Manager

Notes And Definitions

MDL Method Detection Limit

ND Analyte Not Detected

PQL Practical Quantitation Limit

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

Attachment D

Remedial Operation and Maintenance Field Logs

Daily Field Record

Project Sullins
 Project # 5262
 Location _____
 Weather Hot

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

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
<u>M. Person</u>	<u>GZA</u>	<u>1015</u>	<u>1629</u>

Time	Field Activities
	Replaced faulty Process air inlet control valve on the APE.
	Replaced faulty air isolation valve on APE.
1155	Started APE The hour meter on the APE is growing & not advancing. Need new meter
	→ CHAMFER 53374-2 115V 60Hz CW 1/20 Rpm K06
	→ 635G Hrs-Tens RD BEZ 10071
	Extraction stinger has fallen in to EW-2. I could not remove stinger from EW-2.



GROUND ZERO ANALYSIS, INC.

Daily Field Record Continued

Project Name Sullivans
Technician M. A. Perga

Project # 5262

Page 2 of 2
Date 7/1/15

Daily Field Record

Project Sullivan's
 Project # 5262
 Location _____
 Weather _____

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

Page 1 of 1

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
<u>M. Pierson</u>		<u>0938</u>	<u>1517</u>

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

A.P. was running when I left the site.

Daily Field Record

Page 1 of 1

Project Sullins
 Project # 5262
 Location _____
 Weather _____

Date <u>8/18/15</u>	Time on job <u>0806</u> to _____
Record Keeper <u>M. Person</u>	Wind _____
Wind _____	Temp _____

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
<u>M Person</u>	<u>GZA</u>	<u>0957</u>	<u>14:36</u>

Time	Field Activities
	When onsite AP unit was down. No Alarms - but propane tank was empty.
	Greased 1/2" zinc fittings on the liquid-vap compression
	Calibrated PID prior to using.
1300	Propane delivered.
1345	SVE-INF - collected sample using Trifilar ISAG
	EFF PIN = 8.4
	INF PID = 1001
1355	Collected GW-INF sample - 410As
	DPE & Air stripper functioned normally

Daily Field Record

Project Sullins
 Project # 526Z
 Location _____
 Weather _____

Date 9/15/15
 Time on job 0800 to _____
 Record Keeper LLJ, Jr. scn
 Wind _____ Temp _____

Page 1 of _____

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
<u>M. Person</u>	<u>GZA</u>	<u>1007</u>	<u>1437</u>

Time	Field Activities
	DPE was down when onsite - there were no alarm lights on the DPE panel and no alarm lights on the Air Stripper panel - the Chart recorder had the correct date & time, so there had been no electric interruption - propane tank was at 80% full level. Do not know why DPE was down-
1010	Restarted DPE without trouble. Hours meter 316.0
	LEL meter on Air Stripper not functioning
	DPE shutdown 3 times in the first 60 minutes of operation. Observed the "Auto gas valve" was operating to keep Temp @ 11500 - I adjusted process temp set point to 1425°F - then unit stayed running

When temp would spike & shutdown



ZERO
ANALYSIS, INC.

Daily Field Record con't

Project Name Sullivans
Technician 5262 M. Piersen

Project # 5267

Page 2 of _____
Date 9/15/15

Daily Field Record

Project	Sullins	Date	9/18/15	Page 1 of 1
Project #	5262	Time on job	12:18	
Location		Record Keeper	M. Piereson	
Weather		Wind		Temp

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
M. Piereson	GZA	1342	1430

Time	Field Activities
	Dual Phase units running when on site
13:58	Collected sample GW-NIS while Air Stripping water pumps were running - put sample in carter w/ ICE. - 6VOLs / 2 Amber liters, 1500ml poly

Daily Field Record

Project <u>Sullins</u>	Date <u>11/18/15</u>	Page <u>1</u> of <u>1</u>
Project # <u>S262 Task 7</u>	Time on job <u>0800</u>	to <u>1342</u>
Location <u>187 North L Street Livonia</u>	Record Keeper <u>AS</u>	
Weather <u>Sunny</u>	Wind <u>2 mph</u>	Temp <u>65°</u>

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
Anthony Scoma	GZA	0924	1230

Time	Location of Work / Work Performed / Field Equipment Used / etc.
0800	Prep
0830	Leaving Mcdonals
0924	on site
1024	installing Hare's down well. DW-A + EW-2
11/17/15 1455	DW 55.05 EW-2 55.05
	Propane Tank outside # 802
	Total HR' 00683.6
1036	Gallow Meter Read 074146.8
	Stripper High water, Storage High with, Low Air Pressure Alarm,
	High LEL Level Alarm, High Pressure Alarm Let's are on,
1040	Electric meter read KWH 19140

Continued On Next Page

Daily Field Record Continued

Project Name Sullins
Technician AS

Project # 5262
Page _____ of _____
Date 11/18/15

Time	Location of Work / Work Performed / Field Equipment Used / etc.		
	checked w/ Dovel Knock out 50%		
1048	System Start up		
1118	Heating stopped System Shut Down		
1123	Re-set		
1124	Start up		
	Influ 2260 Efflu		
1140	Heating Down System off 1145		
	Oxidizer High Temp L1 on Heating off		
	Closing off EW-2		
1145	Start up wells on Line		
	Influ PID Efflu		
1206	1505 7.0		
	Sampled Influent Sample T.i. 1210		
	System continues to operate. Knock-out still at 50% no wells Sample Taken.		
	Was told by Eric not to submit Air Sample to Lab.		
	Leave Site 1230 Moderate 1330		
	Unload 1342 off		

Daily Field Record

Page 1 of 1

Project SULLINS
 Project # 1262.2
 Location 187 N. L STREET, LIVERMORE, CA
 Weather PARTLY CLOUDY / RAIN

Date <u>12-10-2015</u>	Time on job <u>1100</u> to <u>1715</u>
Record Keeper <u>ANDREW D.</u>	
Wind <u>5-15 MPH</u>	Temp <u>60°</u>

PERSONNEL ONSITE		TIME ONSITE	
Name	Company	In	Out
ANDREW DORN	GROUND ZERO	1200	1530

Time	Field Activities
1200	ARRIVED ON-SITE - DPE SYSTEM DOWN DUE TO A LOW AIR PRESSURE ALARM
1210	RESTARTED SYSTEM AND PERFORMED MAINTENANCE
	ADJUSTED WELL CONFIGURATIONS TO KEEP TEMP ~ 1450°
	EW-1 CLOSED
	EW-2 OPEN 100%.
	W-A OPEN 50%.
	W-1 CLOSED
	GW IS BEING EXTRACTED SLOWLY FROM EW-2 & W-A
1355	BEGAN MONITORING DPE SYSTEM
	SYSTEM RAN FOR 188.9 HOURS FROM 11/18/15 TO 12/10/15
	↳ 7.9 DAYS - SHUT DOWN 11/25/15
	COLLECTED 4 th QTR GW-DISCHARGE SAMPLE
	6 VOAS, 2 1-LITER AMBERS, 1-LITER POLY