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Third Quarter 2015 Groundwater Monitoring Report NuStar Andover Quail Crossing Andover, Kansas

APPROVED

Prepared for:
NuStar Pipeline Operating Partnership L.P.

February 01, 2016
1641-08

C2-008-72928

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BUREAU OF ENVIRONMENTAL REMEDIATION

February 1, 2016

Daniel Newman
Kansas Department of Health and Environment
Bureau of Environmental Remediation, Site Restoration Unit
Charles Curtis State Office Building
1000 SW Jackson Street, Suite 410
Topeka, Kansas 66612-1367

Re: Response to KDHE Comments
Third Quarter 2015 Groundwater Monitoring Report, NuStar Pipeline Release Site, Quail Crossing Neighborhood
Consent Agreement and Final Order 12-E-36 BER
Andover, Kansas
1641-08

COPY

Dear Mr. Newman:

On behalf of NuStar Pipeline Operating Partnership L.P. (NuStar), Apex Companies, LLC (Apex) prepared this letter in response to the Kansas Department of Health and Environment (KDHE) comments provided in an October 6, 2015 letter to NuStar. The comments pertained to the *Third Quarter Groundwater Monitoring Report, Quail Crossing Neighborhood* (the Report), prepared by Apex and submitted to KDHE on December 11, 2015. The Report was revised in response to KDHE comments as described herein, and is transmitted with this letter. The Report was prepared as part of a continuing response to the release of gasoline from a pipeline in the Quail Crossing Neighborhood (the Neighborhood) in Andover, Kansas. KDHE comments are presented below in *Italics*, followed by NuStar's response to each comment.

1. ***Section 2.4, Monitoring Well Analytical Program and Results, page 7:*** *Section 2.4, paragraph one discusses the apparent anomalies detected during the September 2015 sampling event. While the October follow-up sampling event resulted in no detections for petroleum constituents, no conclusions can be made until additional data from future monitoring events is evaluated. Please revise accordingly.*

   Response: Section 2.4 was modified as presented below:

   On October 22, 2015, six monitoring wells (MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15) were resampled due to apparent anomalous September laboratory results for those wells. The September 2015 data for those wells indicated constituents either not previously observed or not consistent with recent results. Specifically, the samples contained GRO, 1,2,4 trimethylbenzene, benzene, toluene, ethylbenzene, or xylenes at trace concentrations; the detected concentrations were less than the corresponding KDHE Tier 2 Risk-Based Screening Values (RBSVs). Naphthalene was detected at concentrations that exceeded corresponding KDHE Tier 2 RBSV. Prior to the September 2015 monitoring event, naphthalene had never been detected in wells MW-7, MW-12, MW-15; and the most recent naphthalene detections in wells MW-6, MW-9, and MW-10 were August 2013, November 2013, and April 2014, respectively. As such, the September data for wells MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15 appeared to be anomalous and additional groundwater samples were collected from those wells on October 22, 2015. As shown on Table 6, no constituents were detected in the October 2015 samples, which is consistent with historical results for these wells. Quarterly groundwater sampling of these wells is ongoing; and the data from future

monitoring events will continue to be evaluated to confirm the accuracy of the October 2015 results.

2. ***Section 2.4 Monitoring Well Analytical Program and Results, page 7:*** *Section 2.4, paragraph 4, discusses the results from well MW-3. The paragraph states that "GRO was present at the same concentration as the June 2015 sample." Table 6 titled Groundwater Analytical Results indicates that the June 2015 sample result for GRO was 21 mg/L, while the September 2015 sample result for GRO was 11 mg/L. Please revise accordingly.*

   Response: Section 2.4 was revised as presented below:

   The groundwater sample collected from well MW-1 contained GRO and five VOCs (1,2,4 trimethylbenzene, 1,3,5- trimethylbenzene, benzene, naphthalene, and toluene) that exceed the corresponding KDHE Tier 2 RBSVs. The constituents were within the range of concentrations observed since August 2013; and with the exception of 1,2,4 trimethylbenzene, the constituents were detected at concentrations lower than those observed in June 2015. The sample collected from well MW-3 contained GRO and five VOCs (1,2,4 trimethylbenzene, 1,3,5- trimethylbenzene, benzene, ethylbenzene, and naphthalene) that exceed the corresponding KDHE Tier 2 RBSVs. The five VOCs and GRO were present at concentrations less than those observed in June 2015.

3. ***Figure 4, Dissolved-Phase Concentrations in Groundwater:*** *While section 2.4 discussed the resampled wells in regards to their apparent anomalous results, please include results from both of the September and October sampling events for wells that required re-sampling. Future sampling events will determine if the September sampling event was anomalous, but for the current time, both data points should be presented. Please revise accordingly.*

   Response: Figure 4 was revised to present the September 2015 data for wells MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15.

Please do not hesitate to contact me at sjackson@apexcos.com or 503-924-4704 x1924 or Renee Robinson at renee.robinson@nustarenergy.com or 210-918-2975 with questions regarding these responses.

Sincerely,

Sam Jackson
Associate Engineer

ENCLOSURE
Third Quarter 2015 Groundwater Monitoring Report

cc: Renee Robinson, NuStar Energy L.P. (electronic deliverable)

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Third Quarter 2015 Groundwater Monitoring Report NuStar Andover Quail Crossing Andover, Kansas

Prepared for:
NuStar Pipeline Operating Partnership L.P.

February 1, 2016
1641-08

Sam Jackson, P.E.
Associate Engineer

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Principal

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GROUNDWATER MONITORING REPORT
Third Quarter 2015
NuStar Pipeline Operating Partnership L.P.
Quail Crossing Neighborhood
Andover, Kansas

Site Name and Location:	Quail Crossing Neighborhood Site	
	West Mountain and North Colt Court	
	Andover, Kansas	
Owner (Contact):	NuStar Pipeline Operating Partnership L.P.	
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	San Antonio, Texas 78257	
	Renee Robinson	(210) 918-2975
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	Daniel Newman	(785) 296-0225

1.0 Introduction and Site Background

This groundwater monitoring report was prepared by Apex Companies, LLC (Apex) on behalf of NuStar Pipeline Operating Partnership L.P. (NuStar) as part of the continuing response to a gasoline release from a NuStar refined-petroleum pipeline. The activities outlined herein were performed in accordance with the Consent Agreement and Final Order (CAFO) dated May 10, 2013 and in coordination with the Kansas Department of Health and Environment (KDHE) and the Quail Crossing Neighborhood Association. This report summarizes the activities conducted from July 1 through September 30, 2015, as well as an additional irrigation well resampling event on October 22, 2015 (see Section 2.5).

1.1 Background

The pipeline release was discovered in June 2012 after separate-phase hydrocarbons (SPH) were detected in an irrigation well at 2006 N Colt Court, in the Quail Crossing Neighborhood (the Neighborhood) of

Andover, Kansas (the Site; Figure 1). As shown on Figure 2, the NuStar pipeline release location was approximately 80 feet north of the affected irrigation well. Upon the discovery of SPH in the irrigation well, NuStar immediately mobilized to the Site and implemented initial response and abatement activities including: repairs to the pipeline, soil excavation, deactivation of the irrigation well at 2006 N Colt Court, and removal of SPH from the well.

1.2 Pipeline and Site History

Land use at the Site and surrounding areas is residential. As shown on Figure 2, a stormwater retention pond is located near the Site, approximately 250 feet south of the NuStar pipeline. The pipeline is constructed of 8-inch-diameter carbon steel and is used to transport liquefied petroleum products. The pipeline was installed to an approximate depth of 3 feet below ground surface (bgs) in agricultural land in 1959. The pipeline remained in agricultural and/or undeveloped land until the late 1990s when development of the Quail Crossing Neighborhood began. As part of the Neighborhood development, the pipeline depth was increased to approximately 6 feet bgs by re-excavating and backfilling with native material. An approximately 100-foot-wide pipeline easement was created along the pipeline pathway for safety purposes during Neighborhood development. The pipeline easement limits development activities near the pipeline. The pipeline location and associated easement boundaries are shown on Figure 2.

1.3 Activity Summary

Following the initial response activities, NuStar has performed interim remedial actions and investigations. These have included:

- A Comprehensive Investigation (CI);
- Implementation of a comprehensive groundwater monitoring and SPH removal program;
- A soil vapor extraction (SVE) pilot test to address petroleum hydrocarbons in the vadose zone soil;
- Additional soil characterization following the CI to better assess lateral and vertical extent of impacted soil in support of soil excavation planning;
- A groundwater treatment pilot test; and
- Soil excavation planning and detailed design.

The following paragraphs describe each of these activities.

Soil and groundwater data were collected from 24 soil borings, 16 monitoring wells, and select irrigation wells as part of the CI. Information obtained during the CI indicates that residual gasoline constituents are present in soil in a limited area in the vicinity of the pipeline release location.

To address the observed dissolved- and separate-phase hydrocarbons, weekly SPH removal and gauging events were initiated in June 2013, and a quarterly groundwater monitoring program was initiated in August 2013; this schedule was maintained through February 9, 2015. After February 2015, the SPH program was modified and three additional monitoring wells (MW-17 through MW-19) were installed. The current KDHE-approved groundwater monitoring program consists of: (1) monthly gauging of water levels in monitoring wells MW-1 through MW-19; (2) quarterly collection and analysis of groundwater samples from monitoring wells MW-1 through MW-19; and (3) quarterly collection and analysis of groundwater monitoring samples from selected irrigation wells. The groundwater monitoring programs for monitoring wells and irrigation wells are presented in Tables 1 and 2, respectively.

For the SPH removal program, initially a vacuum truck was used to extract groundwater and SPH, if present, from the irrigation well at 2006 N Colt Court during the period June 2013 through January 7, 2015. A modified SPH removal program was approved by KDHE on January 9, 2015 and implemented starting on January 14, 2015. The modified SPH program is described in Section 2.2.

To evaluate the feasibility of soil vapor extraction (SVE) technology for mitigating subsurface petroleum hydrocarbons, NuStar performed an SVE pilot test in December 2013 in accordance with the KDHE-approved *Soil Vapor Extraction Pilot Test Work Plan* (Apex, 2013). An evaluation of the SVE pilot test results indicated SVE to be a likely candidate for effective remedial technology on Site. Accordingly, NuStar: (1) presented the results of the pilot test and a conceptual SVE system design at a Neighborhood meeting on February 17, 2014; and (2) submitted the *Soil Vapor Extraction Evaluation and Proposed Soil Investigation Report* in March 2014 (Apex, 2014b). NuStar modified the conceptual design of the SVE system to reflect Neighborhood feedback. Despite proposed modifications to the conceptual SVE design, neighborhood representatives cited a number of reasons for not accepting SVE as a viable mitigation option, including concerns about noise, emissions, and aesthetics.

NuStar implemented a soil investigation in the vicinity of the pipeline release in April 2014 to further refine the extent of gasoline in soil and evaluate the potential for implementing other remedial alternatives that may be acceptable to the Neighborhood. Analytical data from that soil investigation were presented in the *Soil Investigation Report and Proposed Soil Excavation Work Plan* (Apex, 2014c), which was approved by KDHE on August 8, 2014. Additionally, the work plan portion of the report described proposed excavation methods along with a general excavation design for removing vadose-zone soil affected by petroleum constituents. KDHE approved the work plan and requested a detailed excavation construction plan to documents specific methods and materials for the planned excavation. In addition to the standard permit requirement for this type of project, the City of Andover required preparation of detailed survey documents and engineering designs as a condition of permitting the planned excavation. Once the City of Andover regulatory process was completed and the design plan approved, the *Soil Excavation Work Plan* was submitted to and approved by KDHE in August 2015. Implementation of the *Soil Excavation Work Plan* and preparation of the forthcoming soil excavation report is scheduled for the fourth quarter 2015.

To evaluate a remedial technology that may be appropriate for treating groundwater at the Site, the *Revised Groundwater Pilot Test Work Plan* (Apex, 2015a) was developed and submitted in January 2015. After evaluating several groundwater technologies, the Work Plan proposed a pilot test to evaluate enhanced aerobic bioremediation using oxygen release compounds (ORC) via injection to the subsurface. KDHE approved the Work Plan on January 26, 2015; ORC injections were performed and pilot test monitoring wells installed during the period of March 10 through 20, 2015. The methods and initial results of the groundwater pilot test were reported in the *Interim Groundwater Pilot Test Implementation Report*, which was submitted to KDHE on August 26, 2015 (Apex, 2015c). Bi-monthly groundwater monitoring of wells associated with the pilot test is ongoing and will continue through February 2016.

Since the release was discovered, NuStar has coordinated with property owners within the investigation area to deactivate irrigation wells (ten as of the date of this report), reconfigure the associated irrigation systems to receive municipal water, and reimburse affected property owners for municipal water fees. Irrigation wells were selected for deactivation based on their location within the investigation area, groundwater quality, the potential that pumping on the wells could influence groundwater conditions, and/or well owner concerns. Irrigation wells that have been deactivated are listed in Table 2 and locations are shown on Figure 2. It is noted that the irrigation wells have not been permanently decommissioned; therefore, the well owners will have the option of reactivating the wells at a later date. In addition, it is noted that: seven Neighborhood irrigation wells were not deactivated because the homeowners wished to maintain use of the well (2007 N Mountain Court and 2009 N Mountain Court) or the wells are located outside the investigation area (1009 W Mountain, 1211 W Quail Crossing Court, 1910 W Quail Crossing Court, HOA-1, and HOA-2); and one irrigation well was reactivated on October 1, 2015 (2028 N Ruger Circle).

2.0 Third Quarter 2015 Groundwater Monitoring

This section describes the following third quarter 2015 groundwater monitoring and SPH removal activities: (1) monthly groundwater gauging and measurement of stormwater pond stage; (2) monthly SPH gauging and removal of SPH, if any, from the irrigation well at 2006 N Colt Court; and (3) comprehensive groundwater monitoring and sampling of 19 monitoring wells and selected irrigation wells. Groundwater monitoring programs for monitoring and irrigation wells (i.e., schedule and chemical analyses) are shown in Tables 1 and 2, respectively.

2.1 Groundwater and Stormwater Pond Elevations

Depth to water was measured at each monitoring well location and at the irrigation well at 2006 N Colt Court on July 22, August 20, and September 14, 2015. Groundwater samples were collected during the September 14, 2015 monitoring event; in addition, select monitoring wells were resampled on October 22, 2015.

Groundwater levels were measured to the nearest 0.01 foot using an electronic water interface probe. Stormwater pond elevation was measured using a staff gauge permanently installed in the pond. Groundwater elevation and stormwater pond surface elevation data are listed in Table 3. The groundwater elevations that were measured on September 14, 2015 are shown on Figure 3. Copies of field data sheets are included in Appendix A. Historical groundwater and stormwater retention pond elevations for the period August 2013 through September 2015 are tabulated in Appendix B.

During the third quarter 2015 monitoring event, groundwater levels at the Site ranged between approximately 16 and 43 feet bgs (equivalent to 1,307 and 1,333 feet above mean sea level [MSL]). Groundwater levels during the third quarter 2015 monitoring event decreased an average of 0.44 foot relative to the second quarter groundwater monitoring event in June 2015. Groundwater levels were generally consistent with those observed since groundwater monitoring began in July 2013.

The elevation of the stormwater pond surface ranged from 1344.50 to 1344.75 feet MSL between July and September 2015. During the third quarter 2015 monitoring event (September 15), the surface elevation of the stormwater retention pond was 1344.50 feet MSL. The stormwater pond surface elevation was 0.25 foot lower compared to the second quarter 2015 monitoring event (June 2015).

As shown on Figure 3, the groundwater levels measured during the third quarter 2015 event exhibited a pattern similar to previous monitoring events at the Site. That is, groundwater levels were highest in the vicinity of the stormwater retention pond and decreased with distance from the pond. The observed pattern of elevated groundwater levels near the pond is likely the result of localized groundwater recharge from the stormwater retention pond. The localized recharge results in radial flow of groundwater away from the pond. However, with increasing distance from the pond, groundwater exhibits a more easterly flow component and flatter gradient, consistent with regional patterns (O'Connor et al., 1982).

2.2 SPH Occurrence

Consistent with the KDHE-approved *Proposed SPH Removal Modification Plan*, an SPH skimmer was installed in the irrigation well at 2006 N Colt Court on February 9, 2015, and gauging and SPH skimmer operations and maintenance (O&M) events have been performed monthly since that time to evaluate the effectiveness of the SPH skimmer in the irrigation well.

The irrigation well at 2006 N Colt Court was gauged for the presence of SPH and to measure depth to water on July 22, August 20, and September 14, 2015. SPH were not detected in the irrigation well at 2006 N Colt Court during any of these gauging events. Accordingly, SPH removal activities were not necessary during the third quarter 2015 monitoring period, and a groundwater sample was collected from the irrigation well during the monitoring event. Groundwater elevation data, SPH thicknesses, and the estimated

volume of SPH removed from the irrigation well at 2006 N Colt Court for the first three quarters of 2015 are listed in Table 4. Historical data are included in Appendix B.

SPH have not been observed in any monitoring wells at the Site, including well MW-1, which is located 30 feet from the irrigation well. With the exception of the irrigation well at 2006 N Colt Court, SPH have not been observed in any irrigation wells at the Site.

2.3 Third Quarter 2015 Groundwater Monitoring Event Scope

The third quarter 2015 groundwater monitoring event conducted during the week of September 14, 2015 included the monitoring activities presented below.

- Monitoring wells MW-1 through MW-19 were gauged.
- Groundwater samples were collected from monitoring wells MW-1 through MW-19.
- As shown on Table 2, groundwater samples were collected from irrigation wells at 17 properties.

On October 22, 2015, additional groundwater samples were collected from monitoring wells MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15; these wells were resampled due to apparent anomalous September 2015 laboratory results for those wells. The results of the September and October 2015 sampling events are discussed in Section 2.4.

Groundwater samples were collected from monitoring wells using low-flow sampling techniques. Prior to sampling, each monitoring well was purged using a peristaltic pump while water quality parameters (pH, temperature, specific conductance, dissolved oxygen, and oxidation-reduction potential [ORP]) were recorded (Table 5). Groundwater samples were collected from irrigation wells using disposable bailers. The groundwater analytical data for monitoring wells are presented in Section 2.4. Analytical data for irrigation wells are presented in Section 2.5.

2.4 Monitoring Well Analytical Program and Results

Monitoring well groundwater samples were submitted to ALS Environmental (ALS), a Kansas-accredited analytical laboratory, for the following analyses: gasoline-range organics (GRO) by Method IOWA OA-1 and volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method SW846 8260B. Table 6 presents dissolved-phase petroleum constituent data for groundwater samples collected from monitoring wells between August 2013 and October 2015. Figures 4 through 7 present analytical data for the third quarter 2015 monitoring event. Copies of the laboratory reports and a quality assurance/quality control (QA/QC) results summary are included in Appendix C. The monitoring well groundwater data are discussed below.

On October 22, 2015, six monitoring wells (MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15) were resampled due to apparent anomalous September laboratory results for those wells. The September 2015 data for those wells indicated constituents either not previously observed or not consistent with recent results. Specifically, the samples contained GRO, 1,2,4 trimethylbenzene, benzene, toluene, ethylbenzene, or xylenes at trace concentrations; the detected concentrations were less than the corresponding KDHE Tier 2 Risk-Based Screening Values (RBSVs). Naphthalene was detected at concentrations that exceeded corresponding KDHE Tier 2 RBSV. Prior to the September 2015 monitoring event, naphthalene had never been detected in wells MW-7, MW-12, MW-15; and the most recent naphthalene detections in wells MW-6, MW-9, and MW-10 were August 2013, November 2013, and April 2014, respectively. As such, the September data for wells MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15 appeared to be anomalous and additional groundwater samples were collected from those wells on October 22, 2015. As shown on Table 6, no constituents were detected in the October 2015 samples, which is consistent with historical results for these wells. Quarterly groundwater sampling of these wells is ongoing and the data from future monitoring events will continue to be evaluated to confirm the accuracy of the October 2015 results.

Groundwater monitoring conducted since 2013 supports that the extent of the dissolved phase hydrocarbon plume where concentrations exceed KDHE Tier 2 RBSVs is stable. Petroleum constituents were not detected or were detected at concentrations lower than KDHE Tier 2 RBSVs in 13 of 19 monitoring wells (MW-2, MW-4, MW-6 through MW-16). During the September – October 2015 monitoring events, benzene concentrations were detected above KDHE Tier 2 RBSVs in samples collected from monitoring wells MW-1 and MW-3. For comparison, during the 2013 sampling events, groundwater samples collected from monitoring wells MW-1 through MW-5, MW-9, and MW-10 contained benzene concentrations above KDHE Tier 2 RBSVs.

Analytical results from groundwater samples collected from new wells MW-17 through MW-19, which were installed in the vicinity of the release location in March 2015 as part of the groundwater pilot test, are generally consistent with wells MW-1 and MW-3. The samples collected from monitoring wells MW-17 through MW-19 contained GRO and three VOCs (1,2,4 trimethylbenzene, benzene, and naphthalene) that exceed the corresponding KDHE Tier 2 RBSVs.

The groundwater sample collected from well MW-1 contained GRO and five VOCs (1,2,4 trimethylbenzene, 1,3,5- trimethylbenzene, benzene, naphthalene, and toluene) that exceed the corresponding KDHE Tier 2 RBSVs. The constituents were within the range of concentrations observed since August 2013; and with the exception of 1,2,4 trimethylbenzene, the constituents were detected at concentrations lower than those observed in June 2015. The sample collected from well MW-3 contained GRO and five VOCs (1,2,4 trimethylbenzene, 1,3,5- trimethylbenzene, benzene, ethylbenzene, and naphthalene) that exceed the corresponding KDHE Tier 2 RBSVs. The five VOCs and GRO were present at concentrations less than those observed in June 2015.

2.5 Irrigation Well Analytical Program and Results

As shown in Table 2, groundwater samples were collected from irrigation wells at 17 properties. Irrigation well analytical data for the third quarter 2015 monitoring event are listed in Table 7 and shown on Figures 4 through 7. Copies of the laboratory reports are included in Appendix C. The irrigation well groundwater data are discussed below:

- During the third quarter 2015 groundwater monitoring event, dissolved-phase hydrocarbon constituents were not detected in 14 irrigation wells (2001 N Colt Court; 2002 N Colt Court; 2004 N Colt Court; 2007 N Colt Court; 2020 N Ruger Circle; 2028 N Ruger Circle; 2032 N Ruger Circle; 2021 N Ruger Court; 2025 N Ruger Court; 1009 W Mountain; 2007 N Mountain Court; 2009 N Mountain Court; 1211 W Quail Crossing Court, and HOA-1).
- The groundwater samples collected from two irrigation wells (2005 N Colt Court and 2006 N Colt Court) contained concentrations of dissolved-phase petroleum constituents that exceed the corresponding KDHE Tier 2 RBSVs.
    - The concentrations of GRO, benzene, 1,2,4-trimethylbenzene, and naphthalene (5.2, 0.20, 0.090, and 0.013 milligrams per liter (mg/L), respectively) in the irrigation well at 2005 N Colt Court exceeded the corresponding KDHE Tier 2 RBSVs; however these concentrations were lower than those detected in July 2013 (6.6, 0.47, 0.16, and 0.027 mg/L, respectively). As shown in Table 2, this irrigation well has been deactivated, and the associated irrigation system was reconfigured to receive municipal water.
    - The concentrations of GRO, benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, ethylbenzene, naphthalene, and toluene in the irrigation well at 2006 N Colt Court exceeded the corresponding KDHE Tier 2 RBSVs. Measureable SPH were generally present in this well during the period June 2012 through February 2015; however, SPH have not been observed in this well since February 2015. The September 2015 benzene concentration in the irrigation well at 2006 N Colt Court (1.1 mg/L) is on the lower end of the range observed during the period June 2012 through September 2015 (0.98 to 17 mg/L). As shown in Table 2, this irrigation well has been deactivated and the irrigation system was reconfigured to receive municipal water.
- The groundwater sample collected from the irrigation well at 2019 N Ruger contained a benzene concentration equal to the corresponding KDHE Tier 2 RBSV (0.005 mg/L). No other constituents were detected in the sample. For comparison, the benzene concentration observed in a sample collected from this well in October 2013 was 0.13 mg/L. As shown in Table 2, this irrigation well has been deactivated and the irrigation system was reconfigured to receive municipal water.

2.6 Groundwater Monitoring Program Modification – Monitoring Wells

As noted in Section 1, groundwater pilot test wells MW-17 through MW-19 were constructed in March 2015; and four SVE test wells (SVE-1 through SVE-4) were installed in December 2013. Well locations are shown on Figure 2. The wells are located in a petroleum-impacted area: MW-17 through MW-19 are located within 50 feet east and southeast of the release location; and SVE-1 through SVE-4 are approximately 140 to 200 feet southeast of the pipeline release location. Wells SVE-1, SVE-2, and SVE-4 are arranged in a linear pattern on the north side of the NuStar pipeline, with approximately 6 feet between the wells. The SVE pilot test wells are 30 feet deep with screen intervals between approximately 15 and 30 feet bgs in test well SVE-2, and between 20 and 30 feet bgs in test wells SVE-1, SVE-3, and SVE-4. The groundwater pilot test wells MW-17 through MW-19 are 43 feet deep with screen intervals between approximately 27 and 43 feet bgs. The location and screen intervals of these wells (MW-17 through MW-19, and SVE-1 through SVE 4) are designed to provide additional information regarding groundwater gradient and the nature and extent of dissolved-phase petroleum constituents on the Site. Therefore, these wells have been added to the monitoring program. As shown in Table 8, the proposed modification to the groundwater monitoring program includes: (1) monthly gauging of wells MW-17 through MW-19 and SVE-1 through SVE-4; and quarterly collection of groundwater samples from wells MW-17 through MW-19, SVE-2, and SVE-4.

3.0 Status Report

Work Completed – Third Quarter 2015:

- Activities performed at the 2006 N Colt Court irrigation well during the third quarter 2015 included: gauging and SPH skimmer O&M on July 22, August 20, and September 24, 2015.
- The *Soil Excavation Work Plan* (Apex, 2015b) was submitted on August 19, 2015; KDHE approved the Work Plan on August 26, 2015.
- Groundwater pilot test sampling was performed on August 20, 2015.
- The *Interim Groundwater Pilot Test Implementation Report* (Apex, 2015c) was submitted to KDHE on August 26, 2015. The Report detailed methods and results of the pilot test conducted in March 2015 through June 2015. On September 11, 2015, KDHE provided comments on the Report.
- The *Second Quarter 2015 Groundwater Monitoring Report* (Apex, 2015d) was submitted on September 11, 2015.
- The third quarter 2015 comprehensive groundwater monitoring event was performed during the week of September 14, 2015; followup sampling of selected monitoring wells was performed on October 22, 2015.

- On September 29, 2015, KDHE hosted an exhibit at the public library to inform Neighborhood residents about the soil excavation activities.

Work Planned – Fourth Quarter 2015:

The following activities are planned for fourth quarter 2015:

- NuStar implemented the *Soil Excavation Work Plan* in October 2015; a soil excavation report will be submitted to KDHE in the fourth quarter 2015.
- The expanded groundwater monitoring program, as presented in Section 2.6, will be implemented during the fourth quarter 2015 comprehensive groundwater monitoring event, pending KDHE approval.
- Performance of the fourth quarter 2015 comprehensive groundwater monitoring event and groundwater pilot test sampling will be conducted in December.

4.0 References

Apex Companies, LLC (Apex), 2013. *Soil Vapor Extraction Pilot Test Work Plan. Quail Crossing Neighborhood, Andover, Kansas.* November 15, 2013.

Apex, 2014a. *Comprehensive Investigation Report. Quail Crossing Neighborhood, Andover, Kansas.* April 30, 2014.

Apex, 2014b. *Soil Vapor Extraction Evaluation and Soil Investigation Report. Quail Crossing Neighborhood, Andover, Kansas.* March 28, 2014.

Apex, 2014c. *Soil Investigation Report and Proposed Soil Excavation Work Plan. Quail Crossing Neighborhood, Andover, Kansas.* July 17, 2014.

Apex, 2015a. *Revised Groundwater Pilot Test Work Plan. Quail Crossing Neighborhood, Andover, Kansas.* January 26, 2015.

Apex, 2015b. *Soil Excavation Report. Quail Crossing Neighborhood, Andover, Kansas.* August 19, 2015.

Apex, 2015c. *Interim Groundwater Pilot Test Implementation Report. Quail Crossing Neighborhood, Andover, Kansas.* August 26, 2015.

Apex, 2015d. *Second Quarter 2015 Groundwater Monitoring Report. Quail Crossing Neighborhood, Andover, Kansas.* September 11, 2015.

O'Connor, Howard G., Chaffee, Pamela, and Link, Martha, 1982. *Geohydrology of Southwestern Butler County, Kansas: A Preliminary Report.* Kansas Geological Survey Open File Report 82-2. May 1982.

Table 1
Groundwater Monitoring Program – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Gauging	GRO	VOCs
MW-1	M	Q	Q
MW-2	M	Q	Q
MW-3	M	Q	Q
MW-4	M	Q	Q
MW-5	M	Q	Q
MW-6	M	Q	Q
MW-7	M	Q	Q
MW-8	M	Q	Q
MW-9	M	Q	Q
MW-10	M	Q	Q
MW-11	M	Q	Q
MW-12	M	Q	Q
MW-13	M	Q	Q
MW-14	M	Q	Q
MW-15	M	Q	Q
MW-16	M	Q	Q

Notes:

1. GRO = Gasoline-range organics quantified by IOWA OA-1.
2. VOCs = Volatile organic compounds; benzene, toluene, ethylbenzene, xylenes [BTEX], 1,2-dicholoethane, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butylbenzene, and n-propylbenzene by U.S. Environmental Protection Agency Method 8260B.
3. M = Performed monthly.
4. Q = Performed quarterly.
5. Monitoring wells will not be sampled if SPH are present.

Table 2
Groundwater Monitoring Program – Irrigation Wells
Andover Colt Court Release Site
Andover, Kansas

Well Location	Well Status	Gauging	GRO	VOCs
2001 N Colt Ct	Currently in Use	--	Q	Q
2002 N Colt Ct	Deactivated	Q	Q	Q
2004 N Colt Ct	Deactivated	Q	Q	Q
2005 N Colt Ct	Deactivated	--	Q	Q
2006 N Colt Ct	Deactivated	Q	Q	Q
HOA-1	Currently in Use	--	Q	Q
2007 N Colt Ct	Deactivated	Q	Q	Q
2019 N Ruger Cir	Deactivated	Q	Q	Q
2020 N Ruger Cir	Deactivated	Q	Q	Q
2028 N Ruger Cir	Currently in Use	--	Q	Q
2032 N Ruger Cir	Deactivated	--	Q	Q
2021 N Ruger Ct	Deactivated	--	Q	Q
2025 N Ruger Ct	Deactivated	--	Q	Q
1009 W Mountain	Currently in Use	--	Q	Q
2007 N Mountain Ct	Currently in Use	--	Q	Q
2009 N Mountain Ct	Currently in Use	--	Q	Q
1211 W Quail Crossing Ct	Currently in Use	--	Q	Q

Notes:

1. GRO = Gasoline-Range Organics quantified by IOWA OA-1.
2. VOCs = Volatile organic compounds; benzene, toluene, ethylbenzene, xylenes [BTEX], 1,2-dicholoethane, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butylbenzene, and n-propylbenzene by U.S. Environmental Protection Agency Method 8260B.
3. Deactivation includes plumbing the irrigation system to the municipal water system. The irrigation well is not permanently decommissioned.
4. Q = Performed quarterly.
5. Well locations are shown on Figure 2.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-1	1/7/2015	4.0	1352.13	35.0	20-35	31.75	--	--	1320.38
	1/14/2015					31.44	--	--	1320.69
	1/20/2015					31.45	--	--	1320.68
	1/28/2015					31.42	--	--	1320.71
	2/4/2015					31.44	--	--	1320.69
	2/9/2015					31.62	--	--	1320.51
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/20/2015					31.38	--	--	1320.75
	3/25/2015					NM	--	--	NM
	4/20/2015					31.39	--	--	1320.74
	6/10/2015					31.23	--	--	1320.90
	6/15/2015					31.31	--	--	1320.82
	7/22/2015					31.29	--	--	1320.84
	8/20/2015					31.35	--	--	1320.78
	9/14/2015					31.35	--	--	1320.78
	10/20/2015					31.32	--	--	1320.81
MW-2	1/7/2015	2.0	1353.17	44.0	29-44	NM	--	--	NM
	1/14/2015					32.90	--	--	1320.27
	1/20/2015					32.93	--	--	1320.24
	1/28/2015					32.89	--	--	1320.28
	2/4/2015					32.92	--	--	1320.25
	2/9/2015					33.15	--	--	1320.02
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					32.87	--	--	1320.30
	3/25/2015					NM	--	--	NM
	4/20/2015					36.43	--	--	1316.74
	6/10/2015					NM	--	--	NM
	6/15/2015					34.83	--	--	1318.34
	7/22/2015					35.13	--	--	1318.04
	8/20/2015					36.21	--	--	1316.96
	9/14/2015					35.87	--	--	1317.30
	10/20/2015					36.23	--	--	1316.94
MW-3	1/7/2015	2.0	1350.47	60.0	40-60	NM	--	--	NM
	1/14/2015					41.35	--	--	1309.12
	1/20/2015					41.36	--	--	1309.11
	1/28/2015					42.22	--	--	1308.25
	2/4/2015					41.12	--	--	1309.35
	2/9/2015					40.60	--	--	1309.87
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-3 (continued)	3/18/2015	2.0	1350.47	60.0	40-60	41.02	--	--	1309.45
	3/25/2015					NM	--	--	NM
	4/20/2015					45.61	--	--	1304.86
	6/10/2015					NM	--	--	NM
	6/15/2015					38.21	--	--	1312.26
	7/22/2015					39.69	--	--	1310.78
	8/20/2015					44.40	--	--	1306.07
	9/14/2015					43.33	--	--	1307.14
	10/20/2015					45.10	--	--	1305.37
MW-4	1/7/2015	2.0	1350.73	41.0	26-41	NM	--	--	NM
	1/14/2015					31.52	--	--	1319.21
	1/20/2015					31.55	--	--	1319.18
	1/28/2015					31.66	--	--	1319.07
	2/4/2015					31.70	--	--	1319.03
	2/9/2015					31.75	--	--	1318.98
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					31.22	--	--	1319.51
	3/25/2015					NM	--	--	NM
	4/20/2015					34.10	--	--	1316.63
	6/10/2015					29.28	--	--	1321.45
	6/15/2015					29.02	--	--	1321.71
	7/22/2015					29.55	--	--	1321.18
	8/20/2015					29.65	--	--	1321.08
	9/14/2015					29.60	--	--	1321.13
	10/20/2015					30.31	--	--	1320.42
MW-5	1/7/2015	2.0	1352.77	30.0	15-30	NM	--	--	NM
	1/14/2015					20.56	--	--	1332.21
	1/20/2015					20.55	--	--	1332.22
	1/28/2015					20.58	--	--	1332.19
	2/4/2015					20.69	--	--	1332.08
	2/9/2015					20.58	--	--	1332.19
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					20.80	--	--	1331.97
	3/25/2015					NM	--	--	NM
	4/20/2015					21.01	--	--	1331.76
	6/10/2015					19.44	--	--	1333.33
	6/15/2015					19.60	--	--	1333.17
	7/22/2015					19.82	--	--	1332.95
	8/20/2015					19.97	--	--	1332.80
	9/14/2015					20.06	--	--	1332.71
	10/20/2015					20.24	--	--	1332.53

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-6	1/7/2015	2.0	1349.76	41.0	26-41	NM	--	--	NM
	1/14/2015					22.59	--	--	1327.17
	1/20/2015					22.45	--	--	1327.31
	1/28/2015					22.54	--	--	1327.22
	2/4/2015					22.59	--	--	1327.17
	2/9/2015					22.77	--	--	1326.99
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					22.62	--	--	1327.14
	3/25/2015					NM	--	--	NM
	4/20/2015					23.05	--	--	1326.71
	6/10/2015					NM	--	--	'NM
	6/15/2015					20.45	--	--	1329.31
	7/22/2015					20.66	--	--	1329.10
	8/20/2015					20.73	--	--	1329.03
	9/14/2015					20.48	--	--	1329.28
	10/20/2015					21.11	--	--	1328.65
MW-7	1/7/2015	2.0	1348.98	24.0	9-24	NM	--	--	NM
	1/14/2015					16.49	--	--	1332.49
	1/20/2015					16.55	--	--	1332.43
	1/28/2015					16.56	--	--	1332.42
	2/4/2015					16.56	--	--	1332.42
	2/9/2015					16.58	--	--	1332.40
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					16.63	--	--	1332.35
	3/25/2015					NM	--	--	NM
	4/20/2015					16.10	--	--	1332.88
	6/10/2015					NM	--	--	'NM
	6/15/2015					14.91	--	--	1334.07
	7/22/2015					15.61	--	--	1333.37
	8/20/2015					15.70	--	--	1333.28
	9/14/2015					15.55	--	--	1333.43
	10/20/2015					16.07	--	--	1332.91
MW-8	1/7/2015	2.0	1353.38	30.0	15-30	NM	--	--	NM
	1/14/2015					21.64	--	--	1331.74
	1/20/2015					21.70	--	--	1331.68
	1/28/2015					21.72	--	--	1331.66
	2/4/2015					21.92	--	--	1331.46
	2/9/2015					21.88	--	--	1331.50
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-8 (continued)	3/11/2015	2.0	1353.38	30.0	15-30	NM	--	--	NM
	3/18/2015					21.96	--	--	1331.42
	3/25/2015					NM	--	--	NM
	4/20/2015					22.25	--	--	1331.13
	6/10/2015					NM	--	--	'NM
	6/15/2015					19.93	--	--	1333.45
	7/22/2015					20.20	--	--	1333.18
	8/20/2015					20.64	--	--	1332.74
	9/14/2015					20.68	--	--	1332.70
	10/20/2015					21.08	--	--	1332.30
MW-9	1/7/2015	2.0	1349.48	34.0	19-34	NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					NM	--	--	NM
	1/28/2015					31.81	--	--	1317.67
	2/4/2015					31.90	--	--	1317.58
	2/9/2015					31.78	--	--	1317.70
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					31.59	--	--	1317.89
	3/25/2015					NM	--	--	NM
	4/20/2015					33.25	--	--	1316.23
	6/10/2015					NM	--	--	'NM
	6/15/2015					29.83	--	--	1319.65
	7/22/2015					28.87	--	--	1320.61
	8/20/2015					28.41	--	--	1321.07
	9/14/2015					30.24	--	--	1319.24
	10/20/2015					31.07	--	--	1318.41
MW-10	1/7/2015	2.0	1348.79	34.0	19-34	NM	--	--	NM
	1/14/2015					28.45	--	--	1320.34
	1/20/2015					28.42	--	--	1320.37
	1/28/2015					28.44	--	--	1320.35
	2/4/2015					28.49	--	--	1320.30
	2/9/2015					28.54	--	--	1320.25
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					28.42	--	--	1320.37
	3/25/2015					NM	--	--	NM
	4/20/2015					28.53	--	--	1320.26
	6/10/2015					NM	--	--	'NM
	6/15/2015					28.30	--	--	1320.49
	7/22/2015					29.56	--	--	1319.23
	8/20/2015					30.49	--	--	1318.30
	9/14/2015					28.40	--	--	1320.39
	10/20/2015					28.39	--	--	1320.40

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-11	1/7/2015	2.0	1351.34	42.0	22-42	NM	--	--	NM
	1/14/2015					28.88	--	--	1322.46
	1/20/2015					28.88	--	--	1322.46
	1/28/2015					28.97	--	--	1322.37
	2/4/2015					28.94	--	--	1322.40
	2/9/2015					29.26	--	--	1322.08
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/19/2015					29.84	--	--	1321.50
	3/25/2015					NM	--	--	NM
	4/20/2015					30.39	--	--	1320.95
	6/10/2015					NM	--	--	'NM
	6/15/2015					28.31	--	--	1323.03
	7/22/2015					28.66	--	--	1322.68
	8/20/2015					28.73	--	--	1322.61
	9/14/2015					28.82	--	--	1322.52
	10/20/2015					28.62	--	--	1322.72
MW-12	1/7/2015	2.0	1349.74	43.0	23-43	NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					31.04	--	--	1318.70
	1/28/2015					31.05	--	--	1318.69
	2/4/2015					31.07	--	--	1318.67
	2/9/2015					31.06	--	--	1318.68
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					30.95	--	--	1318.79
	3/25/2015					NM	--	--	NM
	4/20/2015					31.09	--	--	1318.65
	6/10/2015					NM	--	--	'NM
	6/15/2015					30.86	--	--	1318.88
	7/22/2015					30.98	--	--	1318.76
	8/20/2015					31.08	--	--	1318.66
	9/14/2015					31.09	--	--	1318.65
	10/20/2015					31.09	--	--	1318.65
MW-13	1/7/2015	2.0	1354.58	45.0	25-45	NM	--	--	NM
	1/14/2015					33.06	--	--	1321.52
	1/20/2015					32.93	--	--	1321.65
	1/28/2015					32.85	--	--	1321.73
	2/4/2015					33.07	--	--	1321.51
	2/9/2015					32.81	--	--	1321.77
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-13 (continued)	3/18/2015	2.0	1354.58	45.0	25-45	33.16	--	--	1321.42
	3/25/2015					NM	--	--	NM
	4/20/2015					33.34	--	--	1321.24
	6/10/2015					NM	--	--	'NM
	6/15/2015					31.94	--	--	1322.64
	7/22/2015					31.77	--	--	1322.81
	8/20/2015					31.56	--	--	1323.02
	9/14/2015					31.41	--	--	1323.17
	10/20/2015					31.83	--	--	1322.75
MW-14	1/7/2015	2.0	1354.99	45.0	25-45	NM	--	--	NM
	1/14/2015					33.51	--	--	1321.48
	1/20/2015					33.59	--	--	1321.40
	1/28/2015					33.65	--	--	1321.34
	2/4/2015					33.88	--	--	1321.11
	2/9/2015					34.00	--	--	1320.99
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					33.94	--	--	1321.05
	3/25/2015					NM	--	--	NM
	4/20/2015					34.93	--	--	1320.06
	6/10/2015					NM	--	--	'NM
	6/15/2015					31.70	--	--	1323.29
	7/22/2015					31.62	--	--	1323.37
	8/20/2015					31.55	--	--	1323.44
	9/14/2015					31.38	--	--	1323.61
	10/20/2015					31.92	--	--	1323.07
MW-15	1/7/2015	2.0	1351.79	45.0	25-45	NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					34.93	--	--	1316.86
	1/28/2015					34.98	--	--	1316.81
	2/4/2015					35.12	--	--	1316.67
	2/9/2015					35.02	--	--	1316.77
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					35.04	--	--	1316.75
	3/25/2015					NM	--	--	NM
	4/20/2015					36.50	--	--	1315.29
	6/10/2015					NM	--	--	'NM
	6/15/2015					32.34	--	--	1319.45
	7/22/2015					32.94	--	--	1318.85
	8/20/2015					33.48	--	--	1318.31
	9/14/2015					33.05	--	--	1318.74
	10/20/2015					33.63	--	--	1318.16

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-16	1/7/2015	2.0	1352.13	45.0	25-45	NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					30.71	--	--	1321.42
	1/28/2015					20.13	--	--	1332.00
	2/4/2015					30.76	--	--	1321.37
	2/9/2015					31.09	--	--	1321.04
	2/18/2015					NM	--	--	NM
	2/25/2015					NM	--	--	NM
	3/4/2015					NM	--	--	NM
	3/11/2015					NM	--	--	NM
	3/18/2015					31.80	--	--	1320.33
	3/25/2015					NM	--	--	NM
	4/20/2015					33.03	--	--	1319.10
	6/10/2015					NM	--	--	'NM
	6/15/2015					29.48	--	--	1322.65
	7/22/2015					29.13	--	--	1323.00
	8/20/2015					28.65	--	--	1323.48
	9/14/2015					28.49	--	--	1323.64
	10/20/2015					28.90	--	--	1323.23
MW-17	3/18/2015	2.0	1351.69	42	27-42	NM	--	--	NM
	4/20/2015					33.91	--	--	1317.78
	6/10/2015					31.15	--	--	1320.54
	6/15/2015					31.28	--	--	1320.41
	7/22/2015					31.11	--	--	1320.58
	8/20/2015					31.19	--	--	1320.50
	9/14/2015					30.99	--	--	1320.70
	10/20/2015					32.57	--	--	1319.12
MW-18	3/18/2015	2.0	1351.11	42	27-42	27.93	--	--	1323.18
	4/20/2015					33.51	--	--	1317.60
	6/10/2015					30.50	--	--	1320.61
	6/15/2015					30.64	--	--	1320.47
	7/22/2015					30.84	--	--	1320.27
	8/20/2015					30.81	--	--	1320.30
	9/14/2015					30.53	--	--	1320.58
	10/20/2015					NM	--	--	NM
MW-19	3/18/2015	2.0	1351.13	42	27-42	35.19	--	--	1315.94
	4/20/2015					33.70	--	--	1317.43
	6/10/2015					30.24	--	--	1320.89
	6/15/2015					30.60	--	--	1320.53
	7/22/2015					30.58	--	--	1320.55
	8/20/2015					30.65	--	--	1320.48
	9/14/2015					30.59	--	--	1320.54
	10/20/2015					NM	--	--	NM

Please refer to notes at end of table.

Table 3
Groundwater Gauging Data – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
Stormwater Pond (Pond Stage [feet MSL])	1/7/2015	NA	NA	NA	NA	NA	NA	NA	NM
	1/14/2015								NM
	1/20/2015								1344.00
	1/28/2015								1343.80
	2/4/2015								1344.15
	2/9/2015								1344.10
	2/18/2015								NM
	2/25/2015								NM
	3/4/2015								NM
	3/11/2015								NM
	3/18/2015								1343.60
	3/25/2015								NM
	4/20/2015								1344.75
	6/10/2015								1344.50
	6/15/2015								1344.75
	7/22/2015								1344.50
	8/20/2015								1344.75
	9/14/2015								1344.50
	10/22/2015								1344.75

Notes:

1. feet MSL = Feet above mean sea level (NAVD88).
2. -- = No SPH
3. NM = Not measured.
4. Pond elevation is measured directly from a staff gauge in the pond (in 0.25-foot increments). The top of the staff gauge is 1347.59 feet above mean sea level.
5. NA = Not applicable.

Table 4
Separate- and Dissolved-Phase Recovery Data – 2015
Andover Colt Court Release Site
Andover, Kansas

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water; gallons)	SPH Thickness After Removal Event	Fluid Removal Technology
1/7/2015	46.87	46.78	0.09	0.2	50.0	0.01	Mobile vacuum truck
1/14/2015	46.32	46.29	0.03	0.0	0.0	0.03	None
1/20/2015	46.27	--	--	0.0	0.0	0.00	None
1/28/2015	47.34	47.27	0.07	0.0	0.0	0.07	None
2/4/2015	45.92	45.84	0.08	0.0	0.0	0.08	None
2/9/2015	45.59	45.55	0.04	0.1	50.0	0.01	Mobile vacuum truck
3/18/2015	45.55	--	--	0.3	0.3	0.00	SPH Skimmer
6/10/2015	45.43	--	--	0.0	0.0	0.00	SPH Skimmer
6/15/2015	42.38	--	--	0.0	0.0	0.00	SPH Skimmer
7/22/2015	47.66	--	--	0.0	0.0	0.00	SPH Skimmer
8/20/2015	46.98	--	--	0.0	0.0	0.00	SPH Skimmer
9/14/2015	49.56	--	--	0.0	0.0	0.00	SPH Skimmer
			Total Fluids Recovered	**0.6**	**100**		

Notes:

1. SPH = Separate-phase hydrocarbons.
2. The SPH volume removed using vacuum technology was calculated by measuring the SPH thicknesses in the well before and after each event and estimating the volume of SPH in the corresponding gravel pack interval
3. NM = Not measured.
4. -- = No SPH.

Table 5
Groundwater Parameters
NuStar Pipeline Release Site
Arkansas City, Kansas

Sample Location	Sample Date	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm)	pH	ORP
MW-1	1/30/2014	15.79	0.00	1,060	7.25	-52
	4/9/2014	19.22	5.52	979	6.98	-130
	7/23/2014	19.98	5.35	1,251	7.49	-110
	10/29/2014	15.81	3.21	1,369	6.97	-60
	2/12/2015	11.33	1.43	1,250	6.77	-57
	6/16/2015	16.50	0.95	1,311	7.01	-52
	8/20/2015	17.22	0.88	1,348	6.98	-77
	9/15/2015	17.67	4.39	1,365	6.94	-51
MW-2	1/30/2014	15.50	0.00	843	6.22	99
	4/8/2014	15.29	4.05	752	6.77	7
	7/22/2014	21.74	4.79	852	4.79	55
	10/30/2014	19.07	4.87	813	7.21	130
	2/10/2015	14.90	3.16	816	5.77	129
	6/16/2015	18.89	2.75	805	7.28	40
	9/16/2015	18.92	2.66	715	6.87	129
MW-3	1/30/2014	11.91	0.00	853	4.05	18
	4/8/2014	17.25	8.41	740	6.96	-11
	7/24/2014	25.79	2.89	971	7.18	-95
	10/30/2014	18.47	0.96	901	7.07	-236
	2/10/2015	16.27	0.93	940	6.68	-85
	6/17/2015	18.87	0.46	947	7.04	-83
	9/15/2015	19.61	0.89	852	6.82	-110
MW-4	1/30/2014	14.01	2.78	1,130	5.46	158
	4/9/2014	14.99	2.54	968	6.95	132
	7/24/2014	20.53	0.57	1,135	7.24	-9
	10/30/2014	16.98	0.54	1,083	7.03	-146
	2/10/2015	16.62	1.07	1,044	6.54	-48
	6/16/2015	19.74	3.82	1,101	7.24	26
	8/20/2015	19.86	3.95	1,136	6.98	43
	9/16/2015	20.16	7.34	1,044	7.28	74
MW-5	1/30/2014	15.57	0.00	1,300	6.96	57
	4/8/2014	15.99	1.09	1,190	6.92	189
	7/23/2014	20.70	2.28	1,458	7.17	64
	10/29/2014	19.39	0.49	1,453	6.98	127
	2/10/2015	15.98	1.38	1,444	6.47	93
	6/16/2015	17.90	1.49	1,429	6.96	149
	8/20/2015	18.95	1.51	1,464	7.23	0
	9/16/2015	19.17	1.63	1,310	6.94	107

Please refer to notes at end of table.

Table 5
Groundwater Parameters
NuStar Pipeline Release Site
Arkansas City, Kansas

Sample Location	Sample Date	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm)	pH	ORP
MW- 6	1/30/2014	15.54	0.63	986	7.11	146
	4/9/2014	16.58	9.16	797	7.00	201
	7/24/2014	19.56	5.64	1,303	7.27	17
	10/29/2014	18.08	4.29	1,137	7.09	160
	2/11/2015	13.07	4.06	893	6.91	100
	6/17/2015	17.60	3.88	1,280	7.15	15
	9/15/2015	18.01	1.29	431	7.13	-34
	10/22/2015	16.60	5.71	1,171	7.22	333
MW-7	1/30/2014	16.13	0.00	667	7.21	-37
	4/9/2014	15.78	9.43	566	7.08	23
	7/24/2014	18.24	0.66	740	7.38	-11
	10/29/2014	17.47	0.22	754	7.25	-33
	2/11/2015	15.25	0.80	662	6.93	18
	6/17/2015	17.16	0.60	868	7.27	-31
	9/15/2015	18.00	0.37	671	7.12	-32
	10/22/2015	16.99	0.42	769	7.32	-12
MW-8	1/30/2014	16.94	1.56	1,120	7.00	109
	4/8/2014	16.42	9.18	976	6.80	170
	7/22/2014	19.71	4.88	1,156	7.27	70
	10/29/2014	20.01	3.92	1,051	7.19	138
	2/10/2015	16.90	2.66	1,178	6.44	100
	6/17/2015	19.26	3.16	1,209	7.18	110
	9/16/2015	19.29	3.47	1,033	6.97	131
MW-9	1/30/2014	12.13	0.00	760	4.50	8
	4/8/2014	16.65	4.05	725	7.07	192
	7/24/2014	23.24	3.59	1,080	7.11	48
	10/30/2014	16.72	5.61	977	7.08	98
	2/11/2015	15.06	3.13	884	7.05	91
	6/16/2015	19.40	0.67	1,247	7.16	61
	9/15/2015	20.43	0.98	990	6.83	43
	10/22/2015	17.86	1.40	1,043	7.11	136
MW-10	1/30/2014	14.31	0.00	1,340	4.90	-44
	4/8/2014	17.01	0.18	982	6.79	-105
	8/1/2014	21.23	9.61	1,236	7.59	77
	10/29/2014	19.71	1.80	1,302	6.90	88
	2/11/2015	13.84	1.67	984	6.88	99
	6/16/2015	19.13	0.55	1,439	7.28	47
	9/15/2015	21.36	1.48	1,348	6.84	56
	10/22/2015	17.55	0.51	1,262	7.01	154

Please refer to notes at end of table.

Table 5
Groundwater Parameters
NuStar Pipeline Release Site
Arkansas City, Kansas

Sample Location	Sample Date	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm)	pH	ORP
MW-11	1/30/2014	16.22	6.91	1,320	6.54	185
	4/8/2014	16.61	6.09	1,140	7.05	199
	7/23/2014	20.17	2.45	1,438	7.24	100
	10/30/2014	18.55	4.02	1,404	7.11	91
	2/10/2015	16.66	4.01	1,314	6.61	72
	6/17/2015	18.94	1.78	1,463	7.12	120
	9/16/2015	20.67	3.16	1,339	6.92	93
MW-12	1/30/2014	14.13	0.00	927	5.44	66
	4/9/2014	19.96	8.58	774	7.01	30
	7/22/2014	24.34	0.85	1,067	7.11	-5
	10/29/2014	18.73	0.63	967	7.13	-67
	2/12/2015	15.09	1.11	906	6.78	45
	6/16/2015	20.24	2.43	1,014	7.15	50
	9/15/2015	20.60	5.65	946	6.90	92
	10/22/2015	17.63	4.28	953	7.26	362
MW-13	1/30/2014	15.00	6.53	774	7.04	158
	4/8/2014	15.35	7.03	674	6.93	109
	7/22/2014	23.53	8.10	790	7.31	76
	10/29/2014	19.97	6.70	767	7.19	135
	2/10/2015	15.74	4.85	759	6.25	110
	6/17/2015	18.95	5.22	673	7.27	102
	9/16/2015	18.88	6.52	659	7.20	86
MW-14	1/30/2014	15.31	3.53	724	7.00	183
	4/9/2014	18.75	5.62	608	7.06	181
	7/22/2014	22.63	4.81	683	7.32	66
	10/29/2014	17.09	5.49	703	7.29	101
	2/12/2015	14.50	4.17	687	6.73	94
	6/17/2015	18.90	3.42	698	7.20	97
	9/16/2015	20.70	3.89	587	7.14	82
MW-15	1/30/2014	12.24	0.00	732	5.65	218
	4/8/2014	15.84	9.96	653	6.93	180
	7/23/2014	18.11	4.78	734	7.31	92
	10/29/2014	20.21	4.49	728	7.16	147
	2/10/2015	16.94	3.79	732	6.56	75
	6/17/2015	18.85	3.58	744	7.08	113
	9/16/2015	19.45	7.93	652	7.40	61
	10/22/2015	17.66	6.26	710	7.49	332

Please refer to notes at end of table.

Table 5
Groundwater Parameters
NuStar Pipeline Release Site
Arkansas City, Kansas

Sample Location	Sample Date	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm)	pH	ORP
MW-16	1/30/2014	12.34	2.39	929	5.79	191
	4/8/2014	15.65	8.32	713	6.91	181
	7/23/2014	21.58	4.60	981	7.28	87
	10/29/2014	20.13	4.36	972	7.09	156
	2/10/2015	16.70	3.25	924	6.73	97
	6/17/2015	20.30	3.66	889	7.16	120
	9/16/2015	18.79	5.00	771	7.11	83
MW-17	3/20/2015	18.15	0.61	1057	6.81	42
	4/20/2015	16.87	0.83	1,012	6.70	-46
	6/16/2015	17.43	0.92	1,047	7.00	-10
	8/20/2015	17.79	0.67	1,067	7.18	-98
	9/15/2015	17.65	0.38	1,121	6.93	-198
MW-18	3/20/2015	17.43	0.68	990	6.89	-13
	4/20/2015	17.38	0.79	880	6.17	62
	6/16/2015	18.90	0.93	899	7.12	-18
	8/20/2015	19.36	0.97	924	6.59	-57
	9/15/2015	20.55	6.54	912	7.46	-80
MW-19	3/20/2015	17.83	1.57	905	7.09	50
	4/20/2015	17.11	1.36	841	6.62	-61
	6/16/2015	18.83	0.49	827	7.25	-82
	8/20/2015	18.76	0.70	813	8.50	-53
	9/15/2015	24.37	3.70	859	7.30	-53

Notes:

1. °C = Degrees Celsius.
2. mg/L = Milligrams per liter.
3. ORP = Oxidation-reduction potential.
4. Specific Conductivity was documented as µS/cm (millisiemens per centimeter) on the field sampling sheets. The value is reported in this table as microsiemens/centimeter.

Table 6
Groundwater Analytical Results – Monitoring Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Sample Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
MW-1	8/9/2013	**120**	**0.86**	<0.05	**0.22**	<0.1	**9.1**	0.37	**1.9**	<0.05	6.3	0.1	**0.23**	<0.05	0.068	2.8	**26**	9.1
	10/24/2013	**39**	**0.69**	<0.010	**0.19**	0.050	**7.8**	0.26	**2.0**	0.031	4.9	0.043	**0.14**	0.011	0.084	2.2	**18**	7.1
	1/30/2014	**44**	**1.0**	<0.025	**0.30**	<0.05	**3.1**	0.45	**1.4**	0.045	3.5	0.076	**0.29**	0.030	0.14	1.6	**9.3**	5.2
	4/9/2014	**20**	**0.49**	<0.010	**0.18**	<0.020	**1.1**	<0.01	0.2	0.011	--	0.023	**0.069**	0.018	0.016	--	**3.1**	2.5
	7/23/2014	**49**	**0.39**	<0.001	**0.11**	0.023	**3.1**	0.059	0.61	0.011	2.2	<0.010	**0.044**	<0.010	0.019	1.2	**6.4**	3.4
	10/29/2014	**45**	**0.47**	<0.010	**0.19**	<0.020	**5.0**	0.051	0.50	<0.010	3.4	0.015	**0.043**	<0.010	<0.010	2.2	**12**	5.5
	2/12/2015	**5.8**	<0.010	<0.010	<0.010	<0.020	**0.26**	<0.010	0.077	<0.010	0.64	0.016	**0.022**	<0.010	<0.010	0.36	0.99	0.99
	6/16/2015	**140**	**0.32**	<0.010	**0.30**	<0.020	**5.2**	0.12	0.47	0.011	5.3	<0.010	**0.11**	<0.010	0.012	2.8	**11**	8.1
	9/15/2015	**67**	**0.61**	<0.001	**0.26**	0.032	**1.3**	0.14	0.42	0.0095	--	0.019	**0.065**	0.017	0.020	--	**2.4**	4.4
MW-2	8/8/2013	**2.3**	<0.005	<0.005	<0.005	0.13	**0.12**	0.099	<0.005	<0.005	0.017	0.02	<0.005	<0.005	<0.005	<0.005	0.027	0.021
DUP	8/8/2013	**2.2**	<0.005	<0.005	<0.005	0.13	**0.15**	0.11	<0.005	<0.005	0.021	0.021	<0.005	<0.005	<0.005	<0.005	0.031	0.026
	10/23/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/22/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	0.11	**0.0085**	<0.001	0.0030	<0.002	0.0034	0.0038	0.018	<0.001	0.010	0.0013	**0.0024**	<0.001	0.0014	0.0097	0.0095	0.020
	2/10/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	2/10/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	0.089	<0.001	<0.001	<0.001	<0.002	0.0013	<0.001	<0.001	<0.001	0.0052	<0.001	<0.001	<0.001	<0.001	0.0026	0.0089	0.0078
	9/16/2015	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Sample Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
MW-3	8/9/2013	**6**	**0.054**	<0.005	0.010	0.016	**1.2**	0.070	0.12	<0.005	0.086	0.014	**0.011**	<0.005	0.0074	0.12	0.4	0.21
	10/24/2013	**1.7**	**0.075**	<0.001	0.012	0.0057	**1.1**	0.082	0.12	0.0061	0.065	0.011	**0.017**	0.010	0.010	0.011	0.051	0.077
DUP	10/24/2013	**2.0**	**0.073**	<0.001	0.012	0.0059	**1.1**	0.077	0.11	0.0058	0.063	0.011	**0.018**	0.001	0.010	0.011	0.051	0.075
	1/28/2014	**2.8**	**0.038**	<0.001	<0.001	0.0069	**0.76**	0.072	0.07	0.0062	0.0098	0.0061	**0.0081**	<0.001	0.0079	<0.001	0.0081	0.011
	4/8/2014	**3.0**	**0.048**	<0.005	0.010	<0.01	**0.64**	<0.005	0.058	0.0061	--	0.0075	**0.014**	<0.005	0.011	--	0.1	0.053
	7/24/2014	**9.8**	**0.16**	<0.010	0.037	<0.020	**1.8**	0.081	0.51	<0.010	0.32	<0.010	**0.028**	<0.010	0.023	0.51	**1.6**	0.83
	10/30/2014	**6.1**	**0.12**	<0.010	0.025	<0.020	**1.1**	0.085	0.36	<0.010	0.17	0.019	**0.029**	<0.010	0.018	0.18	0.15	0.35
	2/10/2015	**7.9**	**0.19**	<0.010	**0.047**	<0.020	**1.4**	0.15	0.52	0.014	0.41	0.034	**0.054**	<0.010	0.032	0.32	0.93	0.73
	6/17/2015	**21**	**0.46**	<0.005	**0.11**	<0.01	**1.6**	0.016	**0.95**	0.030	0.92	0.029	**0.10**	0.031	0.078	0.57	**1.5**	1.5
	9/15/2015	**11**	**0.28 J**	<0.005	**0.054 J**	<0.01	**1.2**	0.19	0.65	0.023	--	0.020	**0.039 J**	<0.005 J	0.057	--	0.045	0.27
DUP	9/15/2015	**11**	**0.089 J**	<0.005	**0.079 J**	<0.01	**0.98**	0.23	**0.77**	0.032	--	0.031	**0.086 J**	0.012 J	0.070	--	0.048	0.37
MW-4	8/8/2013	0.48	0.0013	<0.001	0.0013	<0.002	**0.035**	0.012	0.0075	0.0013	0.027	0.0027	**0.0027**	<0.001	0.0022	0.011	0.056	0.038
	10/23/2013	**1.0**	**0.0096**	<0.001	0.016	0.0046	**0.083**	0.050	0.017	<0.0010	0.0071	0.0085	**0.0036**	<0.001	0.0013	0.034	0.034	0.041
	1/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/8/2014	**2.5**	**0.054**	<0.001	0.027	0.0043	**0.23**	0.070	0.15	0.0039	--	0.0071	**0.016**	0.0022	0.0084	--	0.2	0.14
	7/24/2014	**0.75**	**0.047**	<0.001	0.017	<0.002	**0.11**	0.022	0.049	0.0029	0.043	0.0027	**0.0092**	<0.001	0.0070	0.028	0.015	0.070
DUP	7/24/2014	**0.79**	**0.054**	<0.001	0.019	<0.002	**0.11**	0.025	0.057	0.0033	0.050	0.0031	**0.0098**	0.0017	0.0080	0.032	0.017	0.083
	10/30/2014	**4.8**	**0.20**	<0.001	**0.089**	<0.002	**0.49**	0.097	0.40	0.014	0.20	0.017	**0.062**	0.0078	0.039	0.24	0.33	0.44
	2/10/2015	**1.6**	**0.12**	<0.001	**0.058**	<0.002	**0.17**	0.052	0.12	0.0042	0.022	0.0092	**0.019**	0.0058	0.0077	0.081	0.042	0.10
	6/16/2015	0.14	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0013	<0.001	0.0046	<0.001	<0.001	<0.001	<0.001	0.003	0.0059	0.0077
	9/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Sample Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
MW-5	8/8/2013	**0.94**	**0.015**	<0.001	**0.15**	<0.002	**0.038**	0.24	0.002	0.0018	0.11	0.0046	**0.0084**	<0.001	0.0023	0.0068	0.05	0.17
	10/24/2013	**2.1**	**0.098**	<0.001	0.028	<0.002	**0.081**	0.039	0.063	0.0051	0.20	0.0075	**0.023**	0.0026	0.011	0.12	0.10	0.32
	1/30/2014	**0.61**	**0.038**	0.0012	0.011	<0.002	**0.05**	0.018	0.034	0.0022	0.041	0.0017	**0.0086**	<0.001	0.0046	0.033	0.009	0.075
	4/8/2014	0.35 J	0.0051 J	<0.001	0.0013 J	0.0021 J	**0.025 J**	<0.001	0.0018 J	0.0021 J	--	0.0015 J	**0.0085 J**	<0.001	<0.001	--	0.0024 J	0.041 J
DUP	4/8/2014	**0.52 J**	**0.012 J**	<0.001	0.0035 J	0.0033 J	**0.037 J**	<0.001	0.0058 J	0.003 J	--	0.0019 J	**0.013 J**	0.001	0.0014 J	--	0.0061 J	0.06 J
	7/23/2014	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	**0.0014**	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	7/23/2014	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	**0.0013**	<0.001	<0.001	<0.001	<0.001	<0.003
	10/29/2014	<0.050	<0.001	<0.001	<0.001	<0.002	0.0018	<0.001	<0.001	<0.001	0.0048	<0.001	<0.001	<0.001	<0.001	0.0027	0.010	0.0075
	2/10/2015	0.27	**0.0092**	<0.001	0.0024	<0.002	**0.040**	0.016	0.0071	0.0020	0.0068	0.0030	**0.0069**	0.0016	0.0021	0.011	0.0092	0.018
	6/16/2015	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/16/2015	<0.050	<0.001	<0.001	<0.001	<0.002	0.0024	<0.001	<0.001	<0.001	--	<0.001	**0.0021**	<0.001	<0.001	--	<0.001	<0.003
MW-6	8/9/2013	<0.05	<0.001	<0.001	<0.001	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.0026**	<0.001	<0.001	<0.001	<0.001	<0.003
	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/24/2014	<0.05	<0.001	<0.001	<0.001	<0.002	0.0031	<0.001	0.0032	<0.001	0.0027	<0.001	<0.001	<0.001	<0.001	0.0031	0.0083	0.0059
	10/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0028	<0.001	<0.001	<0.001	<0.001	0.0014	0.0052	0.0042
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/15/2015	0.24	0.0017	<0.001	<0.001	<0.002	0.0022	<0.001	0.0022	<0.001	--	<0.001	**0.0020**	<0.001	<0.001	--	0.0076	0.010
	10/22/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

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Table 6
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Andover, Kansas

Sample Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
MW-7	8/9/2013	<0.05	<0.001	<0.001	<0.001	<0.002	0.0012	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.003
	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/24/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0016	<0.003
	10/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0024	<0.003
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	0.089	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/15/2015	0.11	0.0027	<0.001	<0.001	<0.002	0.0029	<0.001	0.0031	<0.001	--	<0.001	**0.0024**	<0.001	<0.001	--	0.0088	0.014
	10/22/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
MW-8	8/8/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/30/2014	0.16	0.0026	<0.001	0.001	<0.002	0.0030	<0.001	0.0049	<0.001	0.013	<0.001	**0.0041**	<0.001	<0.001	0.0056	0.020	0.018
DUP	1/30/2014	0.15	0.0031	<0.001	0.001	<0.002	0.0038	<0.001	0.0056	0.0011	0.014	<0.001	**0.0040**	<0.001	<0.001	0.0064	0.025	0.021
	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/22/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	0.0014	<0.001	<0.001	<0.001	0.0041	<0.001	<0.001	<0.001	<0.001	0.0024	0.0082	0.0065
DUP	10/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	0.0013	<0.001	<0.001	<0.001	0.0041	<0.001	<0.001	<0.001	<0.001	0.0021	0.0081	0.0063
	2/10/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	<0.003
	9/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

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Sample Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
MW-9	8/9/2013	**36**	**0.82**	<0.001	**0.23**	0.23	**0.99**	0.21	0.65	0.025	2.8	0.048	**0.17**	0.014	0.068	1.3	**4.4**	4.1
	10/23/2013	0.054	<0.001	<0.001	<0.001	<0.002	0.0026	0.0011	<0.001	<0.001	<0.002	0.0025	**0.001**	<0.001	<0.001	<0.001	<0.001	<0.003
	11/25/2013	**0.57**	**0.022**	<0.010	0.013	0.004	**0.058**	0.017	0.0019	<0.001	0.019	0.0028	**0.0084**	<0.001	<0.001	0.018	0.005	0.037
	1/28/2014	0.058	<0.001	<0.001	<0.001	<0.002	0.0046	0.0015	<0.001	<0.001	<0.002	<0.001	**0.0033**	<0.001	<0.001	<0.001	<0.001	<0.003
	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
DUP	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/24/2014	<0.05	<0.001	<0.001	<0.001	<0.002	0.0017	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0034	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0026	<0.003
DUP	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0023	<0.003
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0053	<0.003
	9/15/2015	<0.05	0.0016	<0.001	<0.001	<0.002	0.0019	<0.001	0.0031	<0.001	--	<0.001	**0.0021**	<0.001	<0.001	--	0.0022	0.0043
	10/22/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
MW-10	8/9/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/23/2013	**2.6**	**0.033**	<0.001	0.029	0.014	**0.051**	0.069	0.0034	<0.001	0.27	0.021	**0.0013**	0.0014	<0.001	0.15	0.14	0.42
	11/25/2013	**3.7**	**0.22**	<0.001	**0.072**	0.019	**0.016**	0.081	0.027	0.0065	0.26	0.016	**0.023**	<0.001	0.025	0.12	0.048	0.38
	1/28/2014	**1.1**	**0.12**	<0.001	0.039	0.0023	**0.026**	0.0081	0.036	0.0049	0.073	0.0036	**0.014**	0.0064	0.015	0.05	0.048	0.12
	4/8/2014	**8.8**	**0.56**	<0.005	**0.23**	<0.01	**0.12**	<0.005	0.11	0.011	--	0.026	**0.035**	<0.005	<0.005	--	0.3	1.1
	8/1/2014	0.091	<0.001	<0.001	<0.001	0.0066	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/29/2014	0.066	<0.001	<0.001	<0.001	<0.002	0.0021	<0.001	<0.001	<0.001	0.0058	<0.001	<0.001	<0.001	<0.001	0.0034	0.013	0.0092
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	0.35	<0.001	<0.001	<0.001	0.0029	0.0024	0.0032	<0.001	<0.001	0.0040	0.0045	<0.001	<0.001	<0.001	0.0021	0.0068	0.0062
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0014	<0.001	--	<0.001	**0.0019**	<0.001	<0.001	--	0.0016	<0.003
	10/22/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Sample Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
MW-11	10/23/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	0.0024	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	0.0024	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/8/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	0.25	**0.016**	<0.001	0.0058	<0.02	**0.012**	0.0078	0.038	0.0011	0.021	0.0014	**0.0059**	<0.001	0.0024	0.023	0.023	0.044
	2/10/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	0.0010	<0.001	<0.002	<0.001	**0.0034**	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0032	<0.003
DUP	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0035	<0.003
	9/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
MW-12	10/23/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	0.0026	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/9/2014	0.081	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/22/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/29/2014	0.12	0.0011	<0.001	<0.001	<0.002	**0.0050**	<0.001	0.0017	<0.001	0.010	<0.001	<0.001	<0.001	<0.001	0.0063	0.027	0.016
	2/12/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0054	<0.001	<0.001	<0.001	<0.001	0.0029	0.0064	0.0083
	6/16/2015	0.061	<0.001	<0.001	<0.001	<0.002	0.0014	<0.001	0.0013	<0.001	0.0058	<0.001	<0.001	<0.001	<0.001	0.0028	0.011	0.0086
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	**0.0018**	<0.001	<0.001	--	0.0013	<0.003
	10/22/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
MW-13	10/23/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	0.0032	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/30/2014	0.072	0.0014	<0.001	<0.001	<0.002	0.0011	<0.001	0.0024	<0.001	0.0063	<0.001	**0.0038**	<0.001	<0.001	0.0026	0.0083	0.0089
	4/8/2014	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/22/2014	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/29/2014	0.056	<0.001	<0.001	<0.001	<0.002	0.0028	<0.001	0.0011	<0.001	0.0065	<0.001	<0.001	<0.001	<0.001	0.0040	0.015	0.011
	2/10/2015	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0019	<0.003
	9/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
HOA-1	8/20/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/12/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	2/12/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	0.076	0.0018	<0.001	<0.001	<0.002	**0.011**	0.0019	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0067	<0.001	0.0067
	7/2/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/14/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
HOA-2	10/31/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/24/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/12/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
2006 N Colt Ct	6/12/2012	--	--	<0.005	--	<0.0020	**17**	3.0	**14**	**0.64**	46	1.1	**5.2**	--	--	19	**91**	**65**
	4/10/2014	**23**	**0.75**	<0.005	**0.28**	0.026	**0.98**	0.16	0.36	0.016	--	0.038	**0.076**	<0.005	0.048	--	**2**	2.1
	6/16/2015	**140**	**1.8**	<0.025	**0.55**	<0.05	**2.1**	0.42	**2.2**	0.073	6.0	0.063	**0.19**	0.046	0.24	3.0	**9.9**	9.0
	9/15/2015	**29**	**0.82**	<0.005	**0.21**	<0.01	**1.1**	0.28	**1.2**	0.039	--	0.055	**0.12**	<0.005	0.100	--	**1.7**	2.8

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
2007 N Colt Ct	7/26/2013	**0.71**	**0.018**	<0.001	0.0061	<0.002	**0.14**	0.018	0.01	0.0014	0.025	0.002	**0.0052**	<0.001	0.002	0.024	0.045	0.048
	10/25/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/29/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/10/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/12/2015	0.40	**0.025**	<0.001	<0.001	<0.002	**0.052**	0.019	0.027	<0.001	0.023	0.0018	**0.0039**	<0.001	0.0025	0.0025	0.022	0.025
	6/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/14/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2019 N Ruger Cir	8/9/2013	0.42	<0.001	<0.001	<0.001	<0.002	**0.085**	0.026	0.0034	0.0013	0.0046	0.0035	**0.0021**	<0.001	0.0016	0.0034	0.017	0.0081
	10/25/2013	0.28	**0.015**	<0.001	<0.001	<0.002	**0.13**	0.0084	0.0062	<0.0010	<0.0020	0.0030	0.0010	<0.001	<0.001	<0.001	0.0011	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.050	<0.001	<0.001	<0.001	0.0032	0.0048	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	0.17	0.0018	<0.001	<0.001	<0.002	**0.069**	0.0051	<0.001	<0.001	--	<0.001	**0.0016**	<0.001	<0.001	0.0048	0.002	0.0055
	10/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/11/2015	0.12	<0.001	<0.001	<0.001	<0.002	**0.053**	0.0054	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/14/2015	<0.05	<0.001	<0.001	<0.001	<0.002	**0.0050**	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
2020 N Ruger Cir	7/26/2013	<0.05	<0.001	<0.001	<0.001	<0.002	0.0015	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/20/2014	0.075	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	0.38	<0.001	<0.001	<0.001	0.16	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	0.059	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/14/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2028 N Ruger Cir	8/20/2013	0.47	<0.001	<0.001	<0.001	<0.002	**0.011**	0.042	<0.001	<0.001	<0.002	0.0051	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/30/2014	<0.05	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
DUP	4/10/2014	0.066	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	7/23/2014	<0.05	<0.001	<0.001	<0.001	0.0037	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
DUP	10/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
2032 N Ruger Cir	8/20/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03
	10/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2021 N Ruger Ct	8/28/2013	<0.050	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
	10/25/2013	<0.050	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
	1/29/2014	<0.05	<0.001	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2025 N Ruger Ct	8/28/2013	<0.050	0.0028	<0.0010	0.0012	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
	10/25/2013	<0.050	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
	1/31/2014	<0.050	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0030
	4/10/2014	<0.050	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0030
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
1009 W Mountain	8/20/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/31/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2007 N Mountain Ct	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/31/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.0010	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.0010	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/11/2015	<0.05	<0.0010	<0.001	<0.001	0.014	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	<0.05	<0.0010	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0012	0.0013	<0.003
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2009 N Mountain Ct	8/20/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/28/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/11/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/16/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells – GRO and VOCs
Andover Colt Court Release Site
Andover, Kansas

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
1211 W Quail Crossing Ct	8/20/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/31/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
DUP	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/23/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/12/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	6/17/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
DUP	9/15/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
1910 N Quail Crossing	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/24/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
	7/24/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/30/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/12/2015	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
KDHE Tier 2 Values		**0.5**	**0.00844**	**0.005**	**0.044**	**4.92**	**0.005**	**7.02**	**0.7**	**0.45**	**NE**	**NE**	**0.00111**	**0.169**	**0.66**	**NE**	**1**	**10**

Notes:

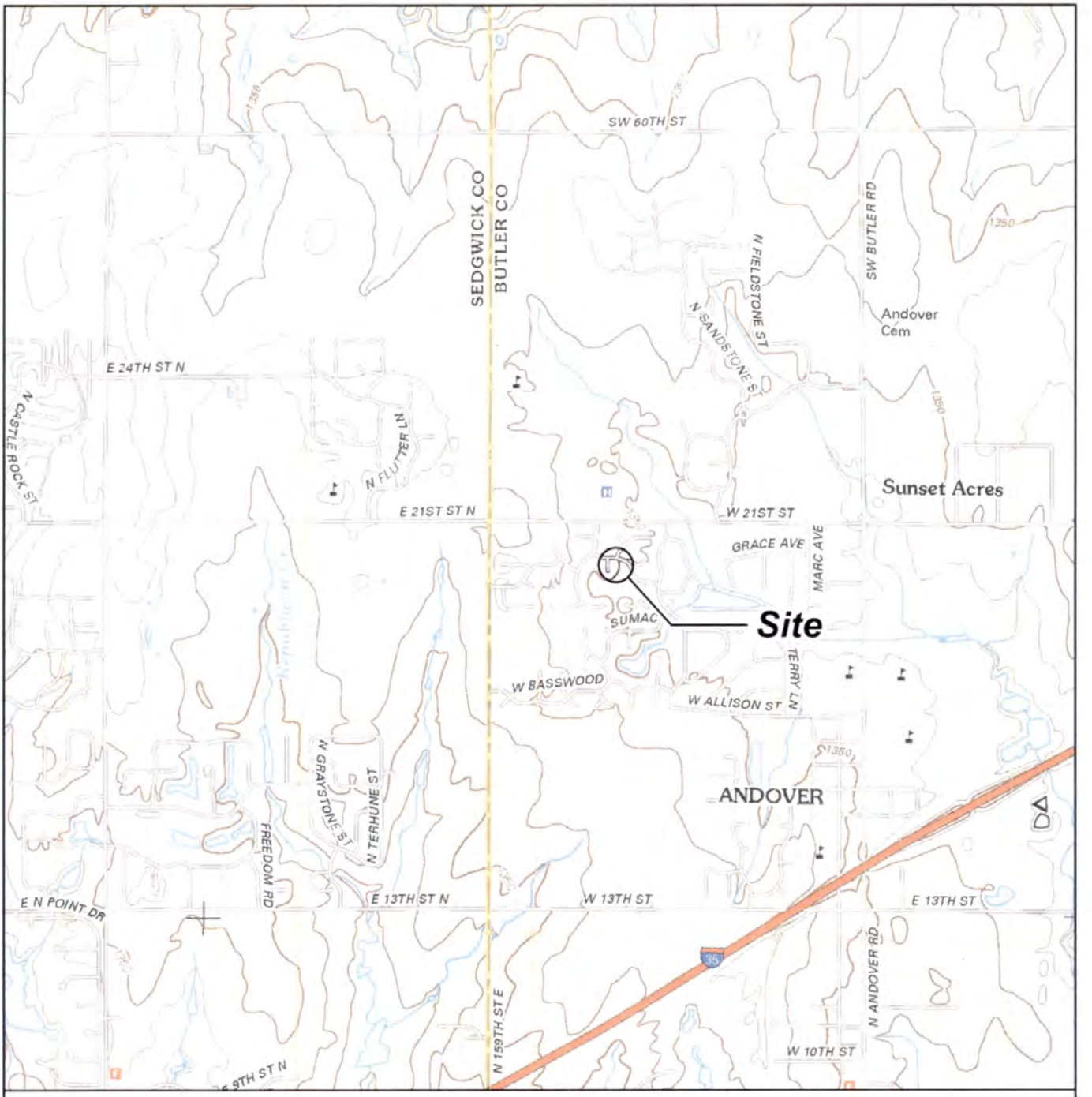
1. GRO = Gasoline-range organics quantified by IOWA OA-1.
2. Volatile organic compounds by U.S. Environmental Protection Agency (EPA) Method 8260B.
3. mg/L (ppm) = Milligrams per liter (parts per million).
4. **Bold** indicates detected concentration above the KDHE screening value.
5. < = Not detected above the method reporting limit (MRL).
6. NE = A KDHE Tier 2 Risk Based Screening Value has not been established.
7. KDHE Tier 2 Screening Values from the *Risk-Based Standards for Kansas, 5th Edition* , October 2010.
8. Well locations are shown on Figure 2.
9. NS = No sample collected.
10. -- = Not analyzed.

Table 8
Proposed Groundwater Monitoring Program – Monitoring Wells
Andover Colt Court Release Site
Andover, Kansas

Well ID	Gauging	GRO	VOCs
MW-1	M	Q	Q
MW-2	M	Q	Q
MW-3	M	Q	Q
MW-4	M	Q	Q
MW-5	M	Q	Q
MW-6	M	Q	Q
MW-7	M	Q	Q
MW-8	M	Q	Q
MW-9	M	Q	Q
MW-10	M	Q	Q
MW-11	M	Q	Q
MW-12	M	Q	Q
MW-13	M	Q	Q
MW-14	M	Q	Q
MW-15	M	Q	Q
MW-16	M	Q	Q
MW-17	M	Q	Q
MW-18	M	Q	Q
MW-19	M	Q	Q
SVE-1	M	--	--
SVE-2	M	Q	Q
SVE-3	M	--	--
SVE-4	M	Q	Q

Notes:

1. GRO = Gasoline-range organics quantified by IOWA OA-1.
2. VOCs = Volatile organic compounds; benzene, toluene, ethylbenzene, xylenes [BTEX], 1,2-dicholoethane, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butylbenzene, and n-propylbenzene by U.S. Environmental Protection Agency Method 8260B.
3. M = Performed monthly.
4. Q = Performed quarterly.
5. Monitoring wells will not be sampled if SPH are present.



Note: Base map prepared from USGS 7.5-minute quadrangles of Andover, KS, dated 2012 as provided by USGS.gov.

0 2,000 4,000

Approximate Scale in Feet

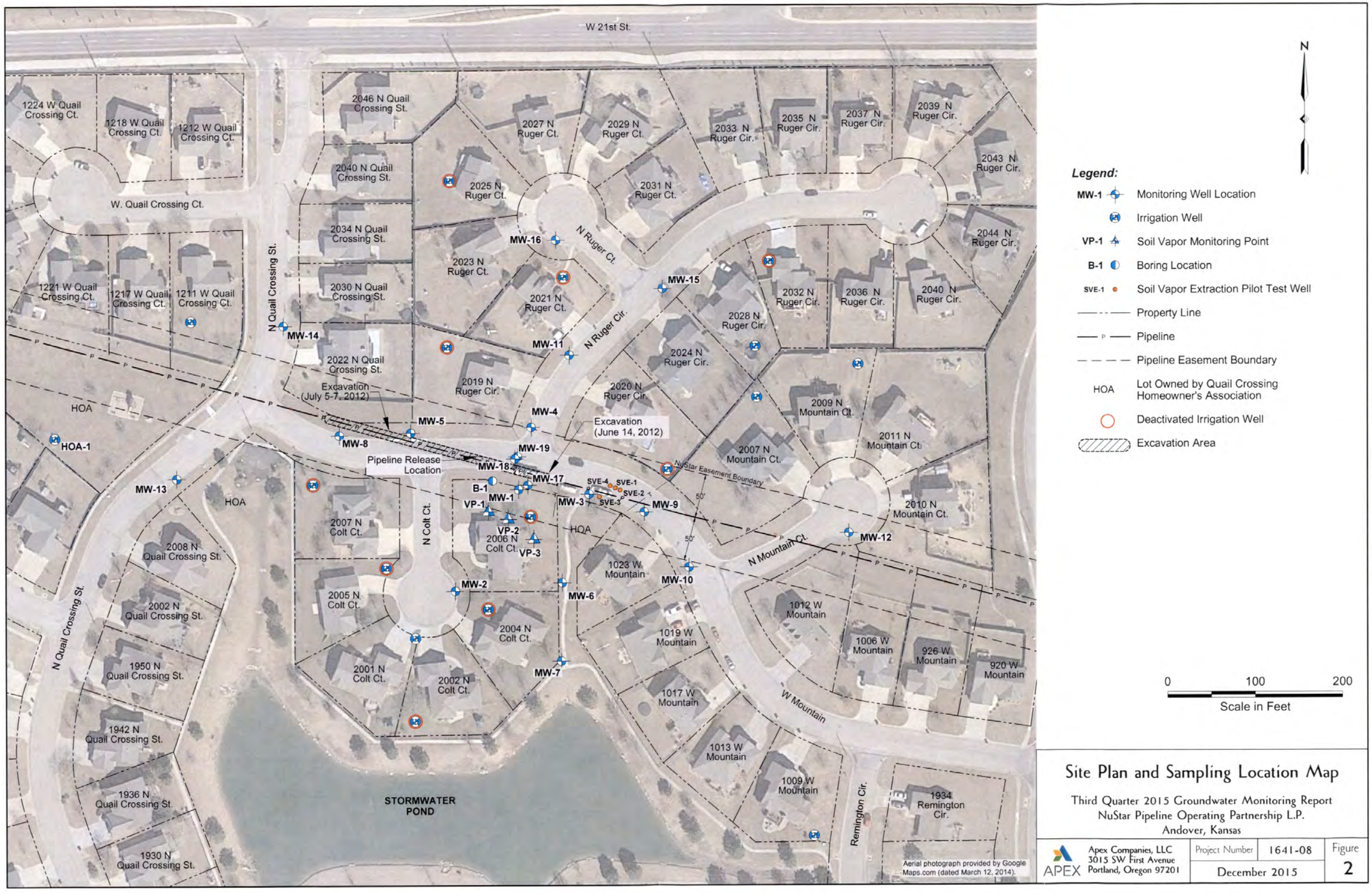
KANSAS

N

Site Location Map

Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

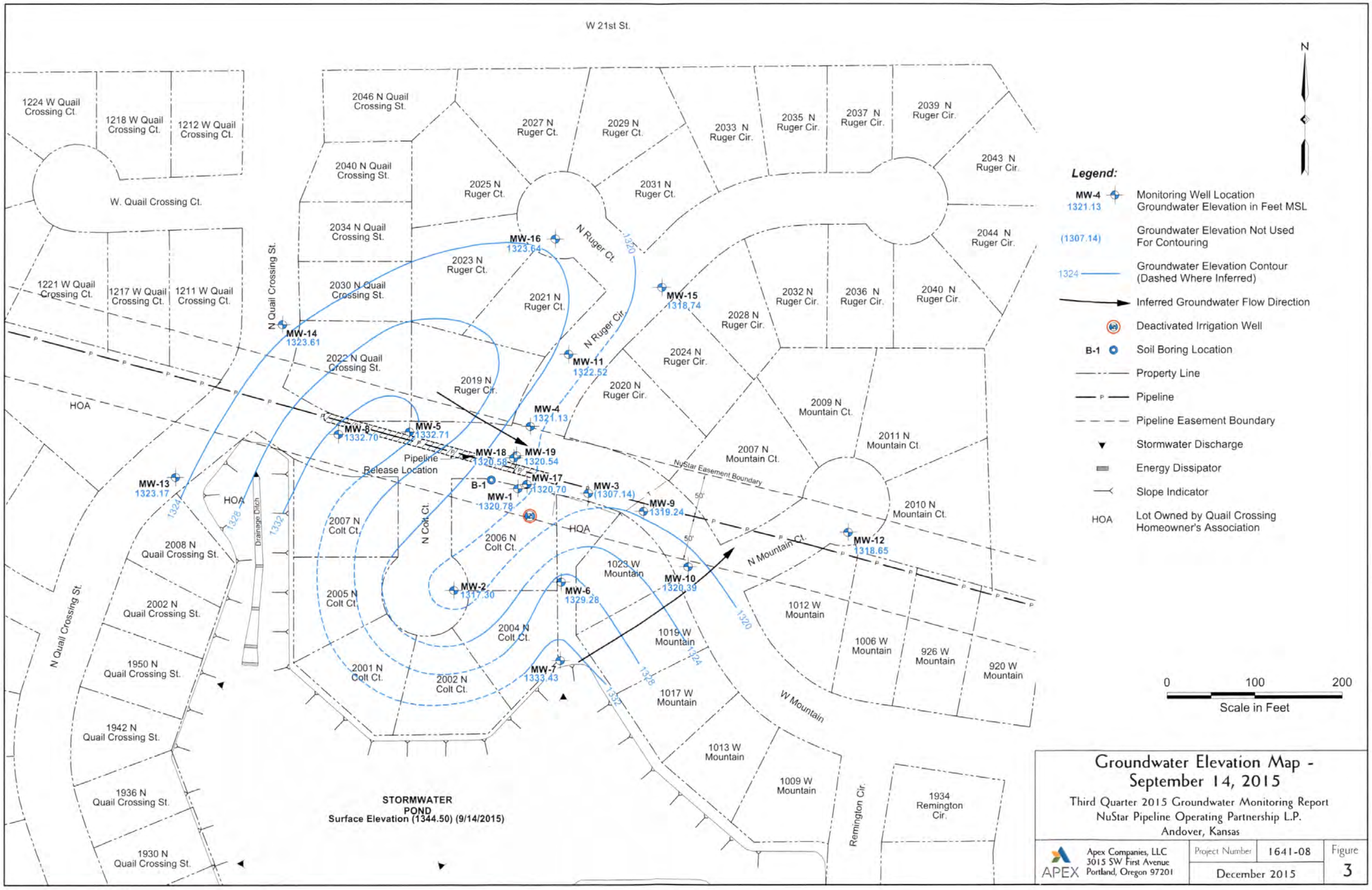
APEX	Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number 1641-08 December 2015	Figure 1



Site Plan and Sampling Location Map

Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

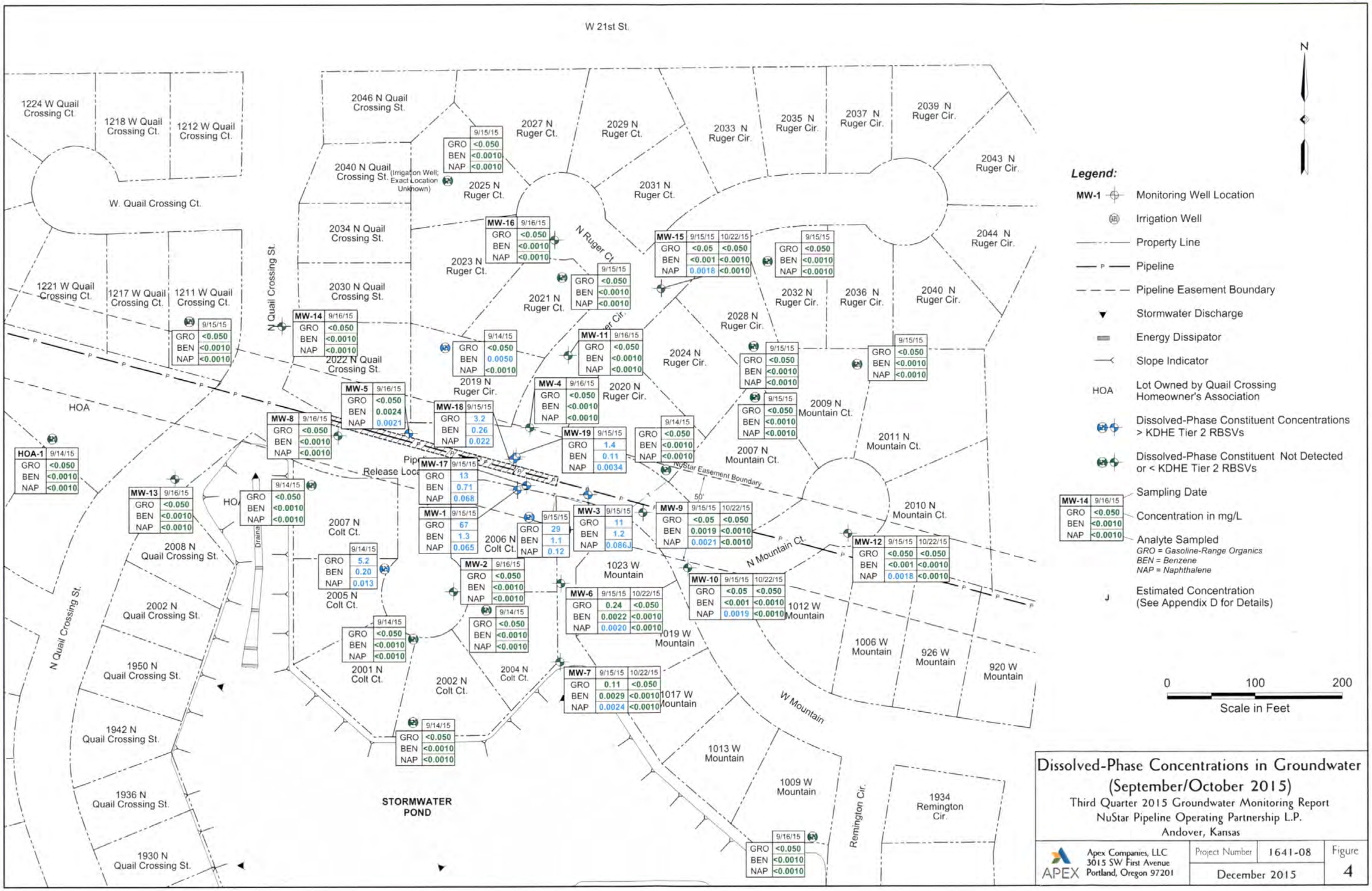
APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	1641-08	Figure
	December 2015		2



Groundwater Elevation Map - September 14, 2015

Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

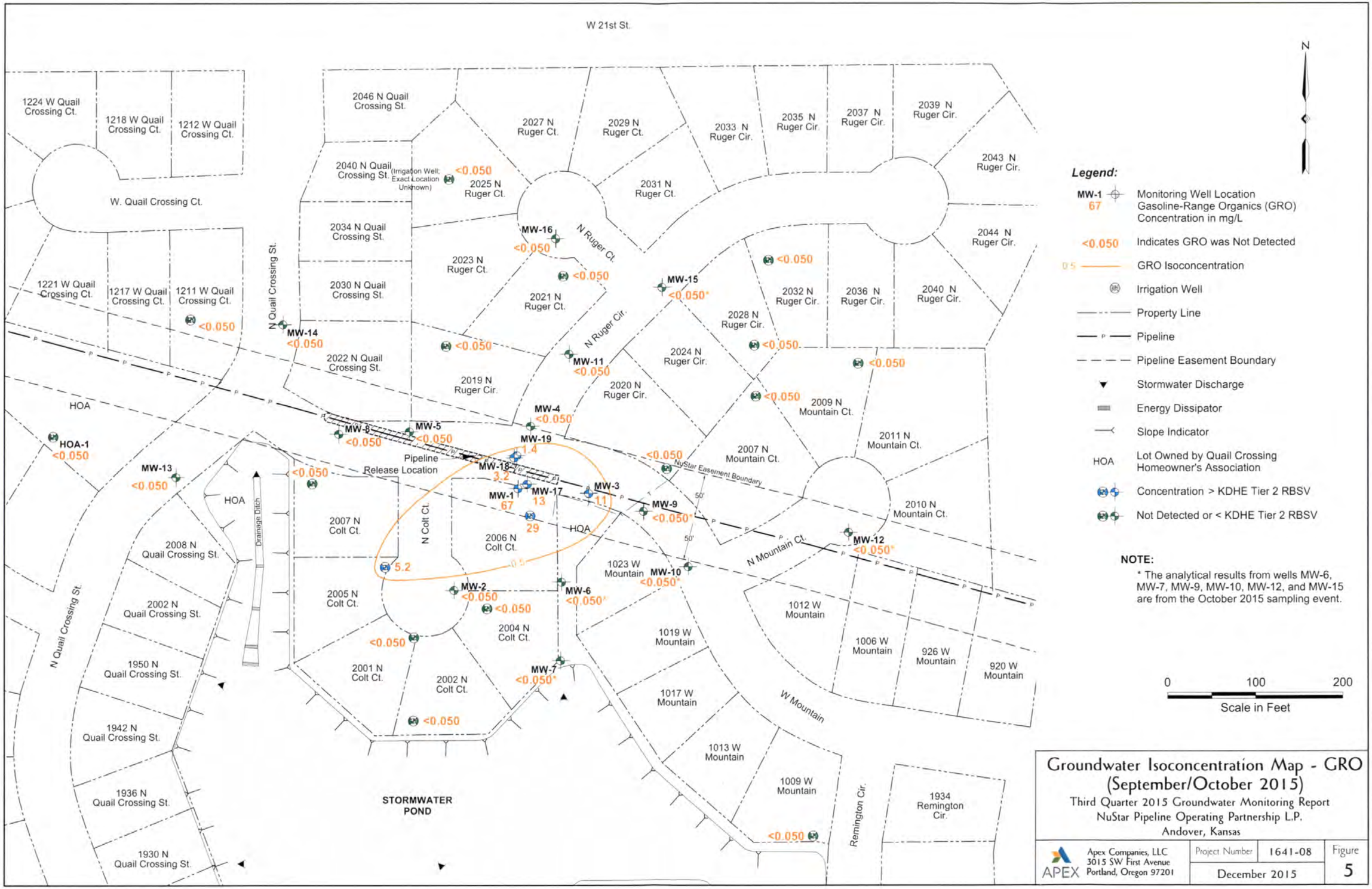
APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	1641-08	Figure
	December 2015		3



Dissolved-Phase Concentrations in Groundwater (September/October 2015)

Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

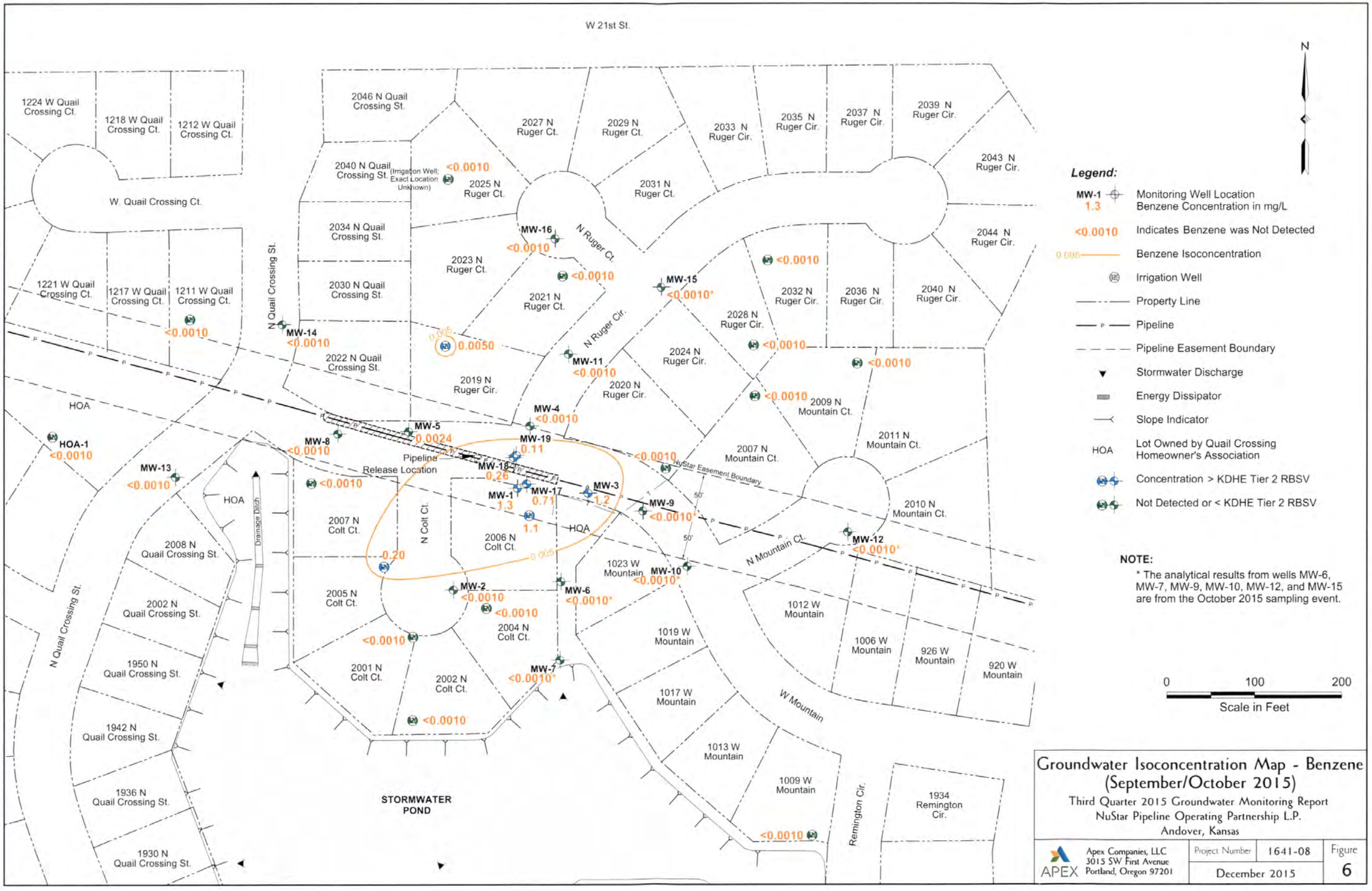
APEX	Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number 1641-08 December 2015	Figure 4



Groundwater Isoconcentration Map - GRO (September/October 2015)

Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

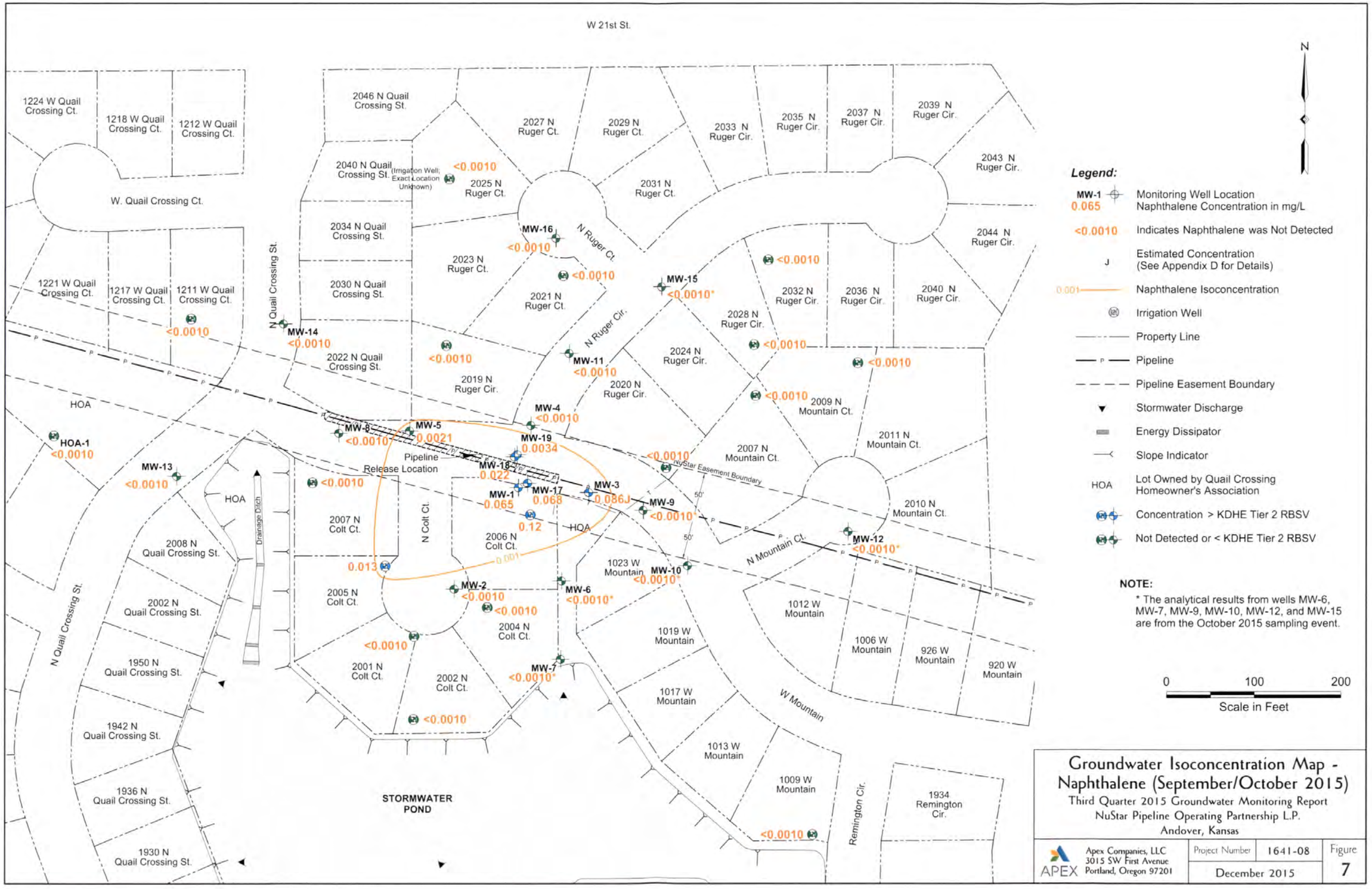
APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	1641-08	Figure
	December 2015		5



Groundwater Isoconcentration Map - Benzene (September/October 2015)

Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	1641-08	Figure
	December 2015		6


W 21st St.
N
1224 W Quail Crossing Ct.
1218 W Quail Crossing Ct.
1212 W Quail Crossing Ct.
W. Quail Crossing Ct.
1221 W Quail Crossing Ct.
1217 W Quail Crossing Ct.
1211 W Quail Crossing Ct.
N Quail Crossing St.
2046 N Quail Crossing St.
2040 N Quail Crossing St.
2034 N Quail Crossing St.
2030 N Quail Crossing St.
2022 N Quail Crossing St.
2027 N Ruger Ct.
2029 N Ruger Ct.
2025 N Ruger Ct.
2023 N Ruger Ct.
2021 N Ruger Ct.
2019 N Ruger Cir.
2031 N Ruger Ct.
N Ruger Ct.
N Ruger Cir.
2033 N Ruger Cir.
2035 N Ruger Cir.
2037 N Ruger Cir.
2039 N Ruger Cir.
2043 N Ruger Cir.
2044 N Ruger Cir.
2032 N Ruger Cir.
2036 N Ruger Cir.
2040 N Ruger Cir.
2028 N Ruger Cir.
2024 N Ruger Cir.
2020 N Ruger Cir.
2009 N Mountain Ct.
2011 N Mountain Ct.
2007 N Mountain Ct.
2010 N Mountain Ct.
N Mountain Ct.
(Irrigation Well; Exact Location Unknown)
<0.0010
MW-16
MW-15
<0.0010*
MW-14
MW-11
MW-4
MW-5
0.0021
MW-8
MW-19
0.0034
MW-18
0.022
MW-1
0.065
MW-17
0.068
MW-3
0.086J
MW-9
MW-12
MW-13
HOA-1
Pipeline
Release Location
NuStar Easement Boundary
50'
HOA
Drainage Ditch
2008 N Quail Crossing St.
2002 N Quail Crossing St.
1950 N Quail Crossing St.
1942 N Quail Crossing St.
1936 N Quail Crossing St.
1930 N Quail Crossing St.
2007 N Colt Ct.
N Colt Ct.
2006 N Colt Ct.
2005 N Colt Ct.
2004 N Colt Ct.
2001 N Colt Ct.
2002 N Colt Ct.
0.12
0.013
MW-2
MW-6
MW-7
MW-10
1023 W Mountain
1019 W Mountain
1017 W Mountain
1013 W Mountain
1009 W Mountain
1012 W Mountain
1006 W Mountain
926 W Mountain
920 W Mountain
W Mountain
Remington Cir.
1934 Remington Cir.
STORMWATER POND
Legend:
MW-1 0.065 Monitoring Well Location Naphthalene Concentration in mg/L
<0.0010 Indicates Naphthalene was Not Detected
J Estimated Concentration (See Appendix D for Details)
0.001 Naphthalene Isoconcentration
Irrigation Well
Property Line
Pipeline
Pipeline Easement Boundary
Stormwater Discharge
Energy Dissipator
Slope Indicator
HOA Lot Owned by Quail Crossing Homeowner's Association
Concentration > KDHE Tier 2 RBSV
Not Detected or < KDHE Tier 2 RBSV
NOTE:
* The analytical results from wells MW-6, MW-7, MW-9, MW-10, MW-12, and MW-15 are from the October 2015 sampling event.
0 100 200
Scale in Feet
Groundwater Isoconcentration Map - Naphthalene (September/October 2015)
Third Quarter 2015 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas
APEX
Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201
Project Number 1641-08
December 2015
Figure 7

Appendix A

Field Data Sheets

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	32001641-08
Client:	NuStar	Date:	8/20/15
Project:	Andover Q.C.	Sampler:	TA, LB
Weather:	Sunny	Time In/Out:	1100

WATER LEVEL DATA

	Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
NE	MW-19	1133	—	30.65	—	—	—	
SW	MW-18	1135	—	30.81	—	—	—	
	MW-1	1137	—	31.35	—	—	—	
	MW-17	1138	—	31.19	—	—	—	
	MW-7	1140	—	15.70	—	—	—	
	MW-6	1142	—	20.73	—	—	—	
	MW-3	1144	—	44.40	—	—	—	
	MW-4	1146	—	29.65	—	—	—	
	MW-9	1150	—	28.41	33.44	—	—	
	MW-10	1153	—	30.49	—	—	—	
	MW-12	1155	—	31.08	—	—	—	
	MW-15	1200	—	33.48	—			
	MW-16	1204	—	28.65	—			
	MW-11	1208	—	28.73	—			
	MW-14	1212	—	31.55	—			
	MW-13	1214	—	31.56	—			
	MW-2	1217	—	36.21	—			
	MW-8	1222	—	20.64	—			
	MW-5	1224	—	19.97	—			

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	32000/641-08
Client:	NuStar	Date:	9/14/15
Project:	Andover QC	Sampler:	TA/LB
Weather:	Partly Cloudy	Time In/Out:	0800/1000

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
MW-1		–	31.35				
~~MW-2~~							
MW-3	0916	–	43.33				
MW-4	0906	–	29.60				
MW-5	0925	–	20.06				
MW-6	0859	–	20.48				
MW-7	0856	–	15.55				
MW-8	0927	–	20.68				
W MW-9	0918	–	30.24				
E MW-10	0920	–	28.40				
MW-11	0908	–	28.82				
MW-12	0922	–	31.04				
MW-13	0930	–	31.41				
MW-14	0929	–	31.38				
MW-16	0913	–	28.49				
MW-17	0901	–	30.99				
MW-18	0904	–	30.53				
MW-19	0903	–	30.59				
Pond	0857	~~1.21~~	13.45				
MW-15	0900	–	33.05				
MW-2	0922	–	35.87				

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-1	Job Number:	320001641-08
Client:	NuStar	Date:	9/15/15
Project:	Andeur QC	Sampler:	TA/LB
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	4"	Water Height	
Depth to Water:	31.35	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	34'	Comments	
Sampling Method:	Bladder	Tubing Type:	poly		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0944	.400	.400	~~32.67~~ 31.67	.200	6.92	17.54	~~1175~~ 1362	4.60	-48.1	—	Cl
0947	.600	1.000	31.76	.200	6.93	17.65	1366	4.58	-49.4	—	Cl
0950	.600	1.600	31.89	.200	6.93	17.55	1364	4.40	-49.8	—	SC
0953	.600	2.200	31.97	.200	6.94	17.67	1365	4.39	-50.9	—	SC

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-1	Sampling Flow Rate	.200	Analytical Laboratory:	ALS	
Sample Time:	0956	Final Depth to Water:	32.09	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 VOAs	HCl	VPH	yes (no)			
3 VOAs	HCl	VOCs (8260)	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-2	Job Number:	320001641-08
Client:	Nustar	Date:	9/16/15
Project:	Andover, QC	Sampler:	LB/JA
Weather:	Sunny 80	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	35.87	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	39'	Comments
Sampling Method:	" "	Tubing Type:	LDPE	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1229	450	450	36.10	150	7.20	24.00	821	4.84	104.4	—	CL
1232	450	900	36.28	150	7.06	21.32	754	3.33	104.1	—	SC
1235	450	1350	36.39	150	6.96	19.99	742	2.50	107.0	—	SC
1238	450	1800	36.50	150	6.96	20.20	744	2.34	108.6	—	SC
1241	450	2250	36.62	150	6.93	19.24	725	2.50	114.7	—	SC
1244	450	2700	36.72	150	6.90	19.29	728	2.51	122.5	—	SC
1247	450	3150	36.80	150	6.87	18.92	715	2.66	129.0	—	SC

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-2	Sampling Flow Rate	150	Analytical Laboratory:	ALS
Sample Time:	1247	Final Depth to Water:	36.95	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-3	Job Number:	32000/641-08
Client:	NStar	Date:	9/15/15
Project:	Andover, QC	Sampler:	LB/JA
Weather:	Sunny 80s	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	43.33	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

				Comments
Purge Method:	Bladder	Pump Intake Depth:	46'	
Sampling Method:	" "	Tubing Type:	LDPE	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1400	450	450	42.73	150	6.99	26.02	0.985	2.22	-109.8	—	AC
1403	450	900	42.73	150	6.92	23.05	919	0.84	-122.0	—	C
1406	450	1350	42.75	150	6.89	21.01	881	0.68	-122.1	—	C
1409	720	~~1800~~ 2070	42.75	240	6.87	19.96	859	0.78	-116.3	—	C
1412	720	~~2370~~ 2790	42.75	240	6.84	19.88	855	0.77	-113.0	—	C
1415	720	3510	42.75	240	6.82	19.61	852	0.89	-110.5	-	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-3	Sampling Flow Rate	240	Analytical Laboratory:	ALS
Sample Time:	1415	Final Depth to Water:	42.75	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL VOA	HCL	VPH	yes (no)			Dup-2
3x40mL VOA	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	~~MW-1R~~ MW-4	Job Number:	320001641-08
Client:	Nustar	Date:	9/10/15
Project:	Andover QC	Sampler:	LB/TA
Weather:	Sunny 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	29.60	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	Comments
Sampling Method:	Bladder	Tubing Type:	LDPE

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1123	600	600	29.88	200	7.14	24.40	1146	6.89	75.9	—	CL
1126	600	1200	30.05	200	7.21	19.77	1022	7.58	74.8	—	CL
1129	375	1575	30.18	125	7.22	20.03	1024	7.46	73.8	—	CL
1132	375	1950	30.20	125	7.28	20.16	1044	7.34	73.8	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-4	Sampling Flow Rate	125	Analytical Laboratory:	ALS
Sample Time:	1132	Final Depth to Water:	30.25	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-5	Job Number:	32000.1641-08
Client:	Nuster	Date:	~~3~~ 9/16/15
Project:	Andover QC	Sampler:	LB/TA
Weather:	Sunny 80	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	20.06	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	23'	Comments	
Sampling Method:	Bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1155	480	480	20.28	160	6.98	20.53	1347	2.04	163.0	—	~~Cl~~ AC
1158	540	1020	20.32	180	6.92	20.03	1329	1.55	142.5	—	AC
1201	540	1200	20.37	180	6.93	19.37	1320	2.07	127.0	—	AC
1204	540	1740	20.38	180	6.94	19.74	1332	2.22	116.2	—	AC
1207	540	2280	20.40	180	6.94	19.17	1310	1.63	107.0	—	AC Clear

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-5	Sampling Flow Rate	180	Analytical Laboratory:	ALS	
Sample Time:	1207	Final Depth to Water:	20.40	Did Well Dewater?		
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-3	Job Number:	32000/641-08
Client:	NStar	Date:	9/15/15
Project:	Andover, QC	Sampler:	LB/JA
Weather:	Sunny 80s	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	43.33	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	46'	Comments
Sampling Method:	" "	Tubing Type:	LDPE	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1400	450	450	42.73	150	6.99	26.02	0.985	2.22	-109.8	—	AC
1403	450	900	42.73	180	6.92	23.05	919	0.84	-122.0	—	C
1406	450	1350	42.75	150	6.89	21.01	881	0.68	-122.1	—	C
1409	720	~~1800~~ 2070	42.75	240	6.87	19.96	859	0.78	-116.3	—	C
1412	720	~~2310~~ 2790	42.75	240	6.84	19.88	855	0.77	-113.0	—	C
1415	720	3510	42.75	240	6.82	19.61	852	0.89	-110.5	-	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-3	Sampling Flow Rate	240	Analytical Laboratory:	ALS
Sample Time:	1415	Final Depth to Water:	42.75	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL VOA	HCL	VPH	yes (no)			Dup-2
3x40mL VOA	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	~~MW-1R~~ MW-4	Job Number:	320001641-08
Client:	Nustar	Date:	9/10/15
Project:	Andover QC	Sampler:	LB/TA
Weather:	Sunny 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	29.60	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:			Comments
Sampling Method:	Bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1123	600	600	29.88	200	7.14	24.40	1146	6.89	75.9	—	CL
1126	600	1200	30.05	200	7.21	19.77	1022	7.58	74.8	—	CL
1129	375	1575	30.18	125	7.22	20.03	1024	7.46	73.8	—	CL
1132	375	1950	30.20	125	7.28	20.16	1044	7.34	73.8	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-4	Sampling Flow Rate	125	Analytical Laboratory:	ALS
Sample Time:	1132	Final Depth to Water:	30.25	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-5	Job Number:	32000.1641-08
Client:	Nustar	Date:	~~8~~ 9/16/15
Project:	Andover QC	Sampler:	LB/TA
Weather:	Sunny 80	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	20.06	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	23'	Comments	
Sampling Method:	Bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1155	480	480	20.28	160	6.98	20.53	1347	2.04	163.0	—	~~Cl~~ AC
1158	540	1020	20.32	180	6.92	20.03	1329	1.55	142.5	—	AC
1201	540	1200	20.37	180	6.93	19.37	1320	2.07	127.0	—	AC
1204	540	1740	20.38	180	6.94	19.74	1332	2.22	116.2	—	AC
1207	540	2280	20.40	180	6.94	19.19	1310	1.63	107.0	—	AC Clear

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-5	Sampling Flow Rate	180	Analytical Laboratory:	ALS
Sample Time:	1207	Final Depth to Water:	20.40	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-6	Job Number:	32000164I-08
Client:	Nustar	Date:	9/15/15
Project:	Andover QC	Sampler:	LB / JA
Weather:	Sunny 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	20.48	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

				Comments
Purge Method:	Bladder	Pump Intake Depth:	23'	
Sampling Method:	Bladder	Tubing Type:	LDPE	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1107	450	450	20.81	150	7.30	20.80	461	1.45	-31.5	—	Cl
1110	360	810	21.33	120	7.17	18.77	438	0.81	-35.4	—	Cl
1113	360	1170	21.95	120	7.10	17.95	424	1.10	-34.9	—	Cl
1116	360	1530	22.40	120	7.12	17.70	425	1.24	-34.9	—	Cl
1119	360	1890	22.49	120	7.13	18.01	431	1.29	-33.9	—	Cl

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-6	Sampling Flow Rate	~~229.0~~ 120	Analytical Laboratory:	ALS
Sample Time:	1119	Final Depth to Water:	22.90	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL voa	HCL	VPH	yes (no)			
3x40mL voa	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-7	Job Number:	320001641-08
Client:	NuStar	Date:	9/15/15
Project:	Andover QC	Sampler:	TA/LB
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	15.55	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	bladder	Pump Intake Depth:	18'	Comments	
Sampling Method:	bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (mL/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1039	300	300	15.83	100	7.23	20.28	711	1.04	-41.2	—	Cloudy
1042	300	600	15.88	100	7.13	18.15	672	0.45	-36.2	—	Cloudy
1045	600	1200	15.92	200	7.08	17.75	666	0.52	-27.4	—	Cloudy
1048	600	1800	15.94	200	7.12	18.00	671	0.37	-32.1	—	Cloudy

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-37	Sampling Flow Rate	200	Analytical Laboratory:	ALS	
Sample Time:	1048	Final Depth to Water:	15.90	Did Well Dewater?		
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL voa	HCl	VPH	yes (no)			
3x40mL voa	HCl	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-8	Job Number:	320001641-08
Client:	Nustar	Date:	9/16/15
Project:	Andover QC	Sampler:	TA/GS
Weather:	80's Sunny	Time In/Out:	

WELL DATA

Well Depth:	~~20.68~~	Well Diameter:	2"	Water Height	
Depth to Water:	20.68	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	24'	Comments
Sampling Method:	" "	Tubing Type:	LDPE	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1309	600	600	21.18	200	7.01	20.00	983	4.69	163.7	—	~~SC~~ CL
1312	450	1050	21.08	150	6.95	20.86	1009	3.98	161.0	—	CL
1315	450	1500	21.08	150	6.95	20.29	1010	3.91	155.4	—	SC
1318	450	1950	21.00	150	6.96	~~20.8~~ 21.12	1042	3.60	148.7	—	SC
1321	525	2475	21.05	175	6.97	19.79	1052	3.65	143.8	—	SC
1324	600	~~3000~~ 3075	21.06	200	6.96	19.75	1034	3.47	137.6	—	SC
1327	600	3675	21.07	200	6.97	19.29	1033	3.47	131.3	—	SC

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-8	Sampling Flow Rate	200	Analytical Laboratory:	ALS
Sample Time:	1327	Final Depth to Water:	21.03	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
			yes no			
3x40mL			yes no			
3x40mL			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-9	Job Number:	32000 1641-08
Client:	Nustar	Date:	9/15/15
Project:	Andover QC	Sampler:	TA / LB
Weather:	80's sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	30.24	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	33"		Comments
Sampling Method:	Bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1437	600	600	30.40	200	6.95	25.63	1.119	2.41	26.1	—	SC
1440	600	1200	30.58	200	6.88	21.55	1020	0.98	29.9	—	SC
1443	600	1800	30.73	200	6.83	20.76	1000	0.95	34.5	—	SC
1446	600	2400	30.83	200	6.83	20.54	993	0.96	38.8	—	SC
1449	600	3000	30.93	200	6.84	19.46	983	0.99	39.7	—	SC
1452	600	3600	31.02	200	6.83	20.43	990	0.98	42.6	-	SC
~~1455~~	~~600~~			~~200~~							

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-9	Sampling Flow Rate	200	Analytical Laboratory:	ALS
Sample Time:	~~1449~~ 1452	Final Depth to Water:	30.94	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL Voa	HCL	VPH	yes (no)			
3x40mL Voa	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

Variance in temp due to tubing exposure to sunlight.

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-10	Job Number:	32[illegible]01641-08
Client:	Nustar	Date:	9/15/15
Project:	Andover QC	Sampler:	TA/LB
Weather:	80's Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	28.40	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	31'
Sampling Method:	Bladder	Tubing Type:	LDPE

Comments

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1509	.375	.375	28.76	.125	6.81	22.25	1371	0.93	70.0	—	SC
1512	.375	.750	28.97	.125	6.79	21.48	1365	0.94	63.5	—	SC
1515	.375	1.125	28.97	.125	6.78	21.35	1360	1.27	60.2	—	~~SC~~ AC
1518	.375	1.500	29.06	.125	6.80	21.30	1359	1.39	58.1	—	AC
1521	.375	1.875	29.18	.125	6.84	21.36	1348	1.48	56.0	—	AC

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-10	Sampling Flow Rate	.200	Analytical Laboratory:	ALS
Sample Time:	1523	Final Depth to Water:	29.23	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered		Filter Size	MS/MSD	Duplicate ID
3 VOAs	HCl	VPH	yes	no			
3 VOAs	HCl	~~EPH~~ VOCs	yes	no			
			yes	no			
			yes	no			
			yes	no			
			yes	no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-11	Job Number:	320001641-08
Client:	Nustar	Date:	9/16/15
Project:	Andover QL	Sampler:	TA/LB
Weather:	Sunny 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2'	Water Height	
Depth to Water:	28.82	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	31'		Comments
Sampling Method:	Bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1053	525	525	29.11	175	7.01	21.05	1355	3.91	100.2	—	CL
1056	525	1050	29.40	175	6.95	20.50	1333	3.30	94.2	—	CL
1059	300	1350	29.54	100	6.93	20.67	1339	3.24	91.6	—	CL
1102	300	1650	29.63	100	6.92	20.67	1339	3.16	92.7		

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-11	Sampling Flow Rate	100	Analytical Laboratory:	
Sample Time:	1102	Final Depth to Water:	29.92	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-12	Job Number:	32001641-08
Client:	Nustar	Date:	9/15/15
Project:	Andover QC	Sampler:	TA/LB
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	31.09	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	bladder	Pump Intake Depth:	33'	Comments
Sampling Method:	bladder	Tubing Type:	poly	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1548	375	375	31.13	125	6.99	26.70	1090	6.04	81.7	—	CL
1551	375	750	31.13	125	6.94	24.78	1042	5.60	87.9	—	CL
1554	600	1350	31.18	200	6.85	20.85	955	5.91	97.1	—	CL
1557	600	1950	31.20	200	6.88	20.98	955	5.56	96.1	—	CL
1600	600	2550	31.22	200	6.90	20.60	946	5.65	92.4	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-12	Sampling Flow Rate	.200	Analytical Laboratory:	ALS
Sample Time:	1600	Final Depth to Water:	31.23	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 VOAs	HCl	VPH	yes (no)			
3 VOAs	HCl	VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-13	Job Number:	32000141-08
Client:	NuStar	Date:	9/16/15
Project:	Andover QC	Sampler:	TA / LB
Weather:	Sunny 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2'	Water Height	
Depth to Water:	31.41	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	34'	Comments	
Sampling Method:	" "	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
~~13~~ 1436	525	525	31.70	175	7.27	24.81	776	7.94	102.2	—	CL
1439	375	900	31.92	125	7.18	20.32	690	6.73	99.6	—	CL
1442	375	1275	32.08	125	7.18	20.36	687	6.98	95.3	—	CL
1445	450	1725	32.19	150	7.18	18.89	662	6.65	91.4	—	CL
1448	525	2250	32.45	~~180~~ 175	7.20	18.93	659	6.68	87.4	—	CL
1451	450	2700	32.55	150	7.20	18.88	659	6.52	85.8	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-13	Sampling Flow Rate	200	Analytical Laboratory:	ALS
Sample Time:	1451	Final Depth to Water:	32.86	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40 mL	HCL	VPH	yes (no)			
3x40 mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-14	Job Number:	32000641-08
Client:	NuStar	Date:	9/10/15
Project:	Andover QC	Sampler:	LB/TA
Weather:	Sunny 80	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	31.38	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	34		Comments
Sampling Method:	"	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1511	375	375	31.60	125	7.30	26.00	630	5.38	104.7	—	SC
1514	375	750	31.92	125	7.15	21.35	580	4.21	97.1	—	AC
1517	375	1125	32.13	125	7.09	20.~~62~~ 67	577	4.06	93.2	—	AC
1520	375	1500	32.29	125	7.11	21.06	588	3.85	88.1	—	AC
1523	375	1875	32.50	125	7.14	20.~~80~~ 70	587	3.89	81.6	—	AC

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-14	Sampling Flow Rate	200	Analytical Laboratory:	ALS
Sample Time:	1523	Final Depth to Water:	32.62	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-15	Job Number:	32000 1641-08
Client:	Nustar	Date:	9/16/15
Project:	Andover QC	Sampler:	TA / LB
Weather:	Sunny, 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	33.05	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	36.0'	Comments	
Sampling Method:	Bladder	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0955	450	450	33.42	150	7.12	22.96	715	5.80	49.1	—	CL
0958	450	900	33.47	150	7.15	20.27	663	6.78	57.1	—	CL
~~0~~1001	450	1350	33.54	150	7.29	19.65	653	7.67	58.7	—	CL
1004	450	1800	33.59	150	7.36	19.92	658	7.75	59.6	—	CL
1007	450	2250	33.65	150	7.40	19.45	652	7.93	60.6	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-15	Sampling Flow Rate	150	Analytical Laboratory:	ALS
Sample Time:	1007	Final Depth to Water:	33.65	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40 mL	HCL	VPH	yes (no)			
3x40 mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-16	Job Number:	320001641-08
Client:	NuStar	Date:	9/16/15
Project:	Andover QC	Sampler:	LB / JA
Weather:	Sunny 80's	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	28.49	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:		Comments	
Sampling Method:	" "	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1025	450	450	29.41	150	7.38	22.33	812	7.06	107.2	—	CL
1028	450	900	29.59	150	7.11	19.58	776	5.17	95.3	—	CL
1031	450	1350	30.11	150	7.11	19.17	780	5.14	87.5	—	CL
1034	450	1800	30.43	150	7.11	18.79	771	5.00	82.5	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-16	Sampling Flow Rate	150	Analytical Laboratory:	ALS
Sample Time:	1034	Final Depth to Water:	30.60	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL	HCL	VPH	yes (no)			
3x40mL	HCL	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-17	Job Number:	32000/641-08
Client:	Nustar	Date:	9/15/15
Project:	Anchor QC	Sampler:	TA/LB
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	30.99	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	bladder	Pump Intake Depth:	33'	Comments	
Sampling Method:	bladder	Tubing Type:	poly		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
10:09	.360	.360	31.27	.120	6.98	18.10	1126	0.90	-149.9	—	Cl
1012	.360	.720	31.32	.120	6.94	17.83	1123	0.27	-173.8	—	Cl
1015	.360	1.080	31.31	.120	6.93	17.81	1121	0.21	-193.3	—	SC
1018	.600 ~~.360~~	1.680 ~~1.440~~	31.47	.200 ~~.120~~	6.94	17.67	1119	0.30	-197.1	—	SC
1021	.600	2.280	31.65	.200	6.93	17.65	1121	0.38	-198.1	—	SC

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-17	Sampling Flow Rate	.200	Analytical Laboratory:	ACS
Sample Time:	10:24	Final Depth to Water:	31.60	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 VOAs	HCl	VPH	yes no			
3 VOAs	HCl	VOCs	yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-18	Job Number:	320001641-08
Client:	Nustar	Date:	9/15/15
Project:	Andover - QC	Sampler:	TA / LB
Weather:	Sunny 80's windy	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	30.53	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	33'	Comments	
Sampling Method:	Grab	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1158	525	525	31.22	1.75	7.35	22.76	886	6.23	-85.7	—	cl
1201	525	1050	31.52	175	7.37	21.00	852	6.15	-84.4	—	cl
1204	525	1575	31.73	175	7.40	20.35	837	6.44	-83.6	—	cl
1207	525	2100	31.90	175	7.46	20.55	912	6.54	-79.9	—	cl

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-18	Sampling Flow Rate	175	Analytical Laboratory:	ALS	
Sample Time:	1207	Final Depth to Water:	33.18	Did Well Dewater?		
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL voa	HCl	VPH	yes (no)			DUP-1
3x40mL voa	HCl	VOC	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-19	Job Number:	32000641-08
Client:	NuStar	Date:	4/15/15
Project:	Andover QC	Sampler:	JA/CB
Weather:	Sunny-80's windy	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	30.59	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:			Comments
Sampling Method:	Bladder	Tubing Type:	LDPE		

Volume	Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
						+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
525	1229	525	525	30.80	175	7.33	28.05	0850	~~2.3~~ 1.70	-59.9	—	CL
975	1232	~~525~~ 450	~~1050~~	31.04	~~175~~ 150	7.18	22.36	823	1.53	-60.6	—	CL
425	1235	~~525~~ 450	~~1575~~	31.25	150	7.17	22.33	824	2.29	-54.0	—	CL
1875	1238	~~525~~ 450	~~2100~~	31.42	150	7.20	22.12	821	2.83	-52.4	—	CL
2325	1241	450	/	31.65	150	7.25	22.79	836	3.63	-54.1	—	CL
3775	1244	450	/	31.73	150	7.29	23.22	838	3.~~56~~ 65	-52.1	—	CL
4225	1247	450	/	31.84	150	7.30	24.37	859	3.70	-53.0	—	CL

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-19	Sampling Flow Rate	150	Analytical Laboratory:	ALS
Sample Time:	1247	Final Depth to Water:	32.00	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL VOA	HCL	VPH	yes (no)	/		
3x40mL VOA	HCL	VOC	yes (no)	/		
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	32000641-08
Client:	NuStar	Date:	9/15/15
Project:	Andover QC	Sampler:	TA, LB
Weather:	Sunny	Time In/Out:	0710

WATER LEVEL DATA

	Well I.D.	Sample Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
9-14	2001 N colt	1645						
9-14	2002 N colt	1640						
9-14	2004 N colt	1635						
9-14	2005 N colt	1630						DUP-1
9-15	2006 N colt	0745						
9-14	2007 N colt	1615						
9-14	2019 N ruger	1710						
9-14	2020 N ruger	1720						
9-14	140A-1	1730						
9-15	1211 W. QC. Ct	0800						DUP-2
9-15	2032 N Ruger	0820						
9-15	2028 N ruger	0830						
9-15	2027 N Ruger							

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Chain of Custody Form

Page 1 of 1

COC ID: 130618

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) 14 compound Select List
Work Order		Project Number	E3CE-0065	B	GRO - VPH OA-1
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LAND FARM 1	10/21/15	1459	S	NA	2	X	X									
2	LAND FARM 2		1508	S		2	X	X									
3	LAND Farm 3		1517	S		2	X	X									
4	Land Farm 4		1534	S		2	X	X									
5	Land Farm 5		1541	S		2	X	X									
6	Land Farm 6		1550	S		2	X	X									
7	LAND Farm 7		1601	S		2	X	X									
8	IBW DRUM		1447	W	HCL	6	X	X									
9																	
10																	

Sampler(s) Please Print & Sign: MARK Edwards

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) [X] Std 10 WK days [ ] 5 WK Days [ ] 2 WK Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	10/22/15	0900	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: [E3CE-0065 Andover Release Site]

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level 2 Std QC
[ ] Level 3 Std QC/Raw da
[ ] Level 4 SW846/CLP
[ ] Other/EDD
[ ] TRRP ChkList
[ ] TRRP Level 4

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Chain of Custody Form

Page ____ of ____

COC ID: 130763

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) 14 compound Select List
Work Order		Project Number	E3CE-0065	B	GRO - VPH OA-1
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-15		1001	Water	HCL	6	X	X									
2	MW-12		1039	Water		6	X	X									
3	MW-6		1155	Water		6	X	X									
4	MW-7		1224	Water		6	X	X									
5	MW-9		1340	Water		6	X	X									
6	MW-10		1415	Water		3	X	X									
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Mark Edwards

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) [X] Std 10 WK days [ ] 5 WK Days [ ] 2 WK Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by:	Date: 10/22/15	Time: 1700	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: [E3CE-0065 Andover Release Site]

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level 2 Std QC
[ ] Level 3 Std QC/Row ds
[ ] Level 4 SW846/CLP
[ ] Other/EDD
[ ] TRRP ChkList
[ ] TRRP Level 4

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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WELL GAGING DATA SHEET

APEX

		Job Number:	32000164 1-08
Client:	NuStar	Date:	10-20-2015
Project:	Hedaver QC	Sampler:	M Edwards
Weather:	Sunny clear	Time In/Out:	0800/

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
MW-1	1044	⊖	31.32		⊖		
MW-2	1037	⊖	36.23		⊖		
MW-3	1052	⊖	45.10		⊖		
MW-4	1020	⊖	30.31		⊖		missing lid bolts
MW-5	1025	⊖	20.24		⊖		
MW-6	1129	⊖	21.11		⊖		
MW-7	1131	⊖	16.07		⊖		
MW-8	1029	⊖	21.08		⊖		Needs New Lid
MW-9	1118	⊖	31.07		⊖		Needs New Lid
MW-10	1135	⊖	28.39		⊖		1 Bolt Lug Broke off
MW-11	1015	⊖	28.62		⊖		
MW-12	1140	⊖	31.09		⊖		
MW-13	0953	⊖	31.83		⊖		slight HC odor
MW-14	0948	⊖	31.92		⊖		
MW-15	1007	⊖	33.63		⊖		
MW-16	1001	⊖	28.90		⊖		
MW-17	1047	⊖	32.57		⊖		
MW-18							
MW-19							
SVE-1	1107	⊖	27.59		⊖		
SVE-2	1102	⊖	28.12		⊖		
SVE-3	1057	⊖	29.33		⊖		
SVE-4	1115	⊖	28.84		⊖		

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-6	Job Number:	
Client:	Nustar	Date:	10/21/15
Project:		Sampler:	WE
Weather:	Sunny 62° F	Time In/Out:	

WELL DATA

Well Depth:	MW-6	Well Diameter:		Water Height	
Depth to Water:	21.11'	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Lo flo Bladder	Pump Intake Depth:	22.0	Comments
Sampling Method:	YSI flo cell	Tubing Type:		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1142	.75	.75			7.55	15.25	1.117	7.46	261.1		C
1145	.75	1.50			7.26	16.86	1.086	6.45	313.7		C
1148	.75	2.25			7.27	16.81	1.088	6.43	320.0		C
1151	.75	3.0			7.24	16.73	1.142	5.99	326.4		C
1154	.75	3.75			7.22	16.60	1.17	5.71	332.7		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-6	Sampling Flow Rate	.75 l/min	Analytical Laboratory:	ALS
Sample Time:	1155	Final Depth to Water:	21.72	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCL	8260 / GRO	yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D:	MW-7	Job Number:	
Client:	Nustar	Date:	10/21/15
Project:		Sampler:	WE
Weather:	Sunny 62	Time In/Out:	

WELL DATA

Well Depth:	~~MW-7~~	Well Diameter:		Water Height	
Depth to Water:	16.07'	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	17.0'		Comments
Sampling Method:	YSI flo cell	Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1211	.75	.75			7.77	20.59	.855	5.58	111.1		
1214	.75	1.5			7.39	16.86	.770	.45	-52.6		
1217	.75	2.25			7.36	16.85	.776	.36	-31.2		
1220	.75	3.0			7.35	16.94	.776	.40	-20.9		
1223	.75	3.75			7.32	16.99	.769	.42	-12.0		

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-7	Sampling Flow Rate	.75/min	Analytical Laboratory:		ALS	
Sample Time:	1224	Final Depth to Water:	16.31	Did Well Dewater?		NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered		Filter Size	MS/MSD	Duplicate ID
6	HCL	8260/6RO	yes	no			
			yes	no			
			yes	no			
			yes	no			
			yes	no			
			yes	no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-9	Job Number:	
Client:	Nustar	Date:	10/21/15
Project:		Sampler:	WE
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:	~~31.07~~	Well Diameter:		Water Height	
Depth to Water:	31.07	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	32.0
Sampling Method:	YSI Flo cell	Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1327	.75	.75			7.12	18.21	1.035	1.69	100.1		
1330	.75	1.50			7.10	18.01	1.031	1.49	105.8		
1333	.75	2.25			7.11	17.96	1.031	1.41	122.7		
1336	.75	3.0			7.11	17.90	[illegible]	1.29	136.8		
							1.032				
1339	.75	3.75			7.11	17.86	1.043	1.40	136.2		

Comments

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-9	Sampling Flow Rate	.75/min	Analytical Laboratory:	ACS
Sample Time:	1340	Final Depth to Water:	31.89	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCL	8260/6010	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-10	Job Number:	
Client:	Nustar	Date:	05/26/05
Project:		Sampler:	WLE
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	28.39	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:	29.0		Comments
Sampling Method:	YSI	Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1359	.75	.75			7.11	17.54	1.226	2.97	170.6		
1402	.75	1.50			7.08	17.48	1.220	2.90	169.3		
1405	.75	2.25			7.04	17.39	1.254	1.02	161.7		
1408	.75	3.0			7.04	17.48	1.257	.75	158.3		
1411	.75	3.75			7.03	17.54	1.266	.56	156.2		
1413	.75	4.25			7.01	17.55	1.262	.51	154.2		

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-10	Sampling Flow Rate	.75/min	Analytical Laboratory:	ALS
Sample Time:	1415	Final Depth to Water:		Did Well Dewater?	Yes

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3	HCL	8260/6010	yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-12	Job Number:	
Client:	Nustar	Date:	10/21/18
Project:		Sampler:	WLE
Weather:	Sunny	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	31.09	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Bladder	Pump Intake Depth:			Comments
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1025	.75	.75			7.36	18.77	.941	4.75	325.9		C
1028	.75	1.50			7.27	18.30	.952	3.91	348.4		C
1031	.75	2.25			7.26	17.62	.952	4.29	359.4		C
1034	.75	3.0			7.27	17.59	.952	4.25	361.6		C
1037	.75	3.75			7.26	17.63	.953	4.28	361.7		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-12	Sampling Flow Rate	.75/min	Analytical Laboratory:	VES
Sample Time:	1039	Final Depth to Water:	31.75	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCL	8260/GRO	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-15	Job Number:	
Client:	Nustar	Date:	10/21/15
Project:		Sampler:	ME
Weather:	Sunny 62°F	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	33.63'	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Lo flo Bladder	Pump Intake Depth:	35'		Comments
Sampling Method:	Flow cell YSI	Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0946	.75	.75		.25	7.52	18.75	.716	6.98	300.1		C
0949	.75	1.5		"	7.50	18.18	.712	6.78	310.9		C
0952	.75	2.25		"	7.49	17.97	.709	6.66	317.9		C
0955	.75	3.0		"	7.50	17.79	.709	6.44	327.1		C
0958	.75	3.75		"	7.49	17.66	.710	6.26	332.1		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-15	Sampling Flow Rate	.75 L/min	Analytical Laboratory:	ALS
Sample Time:	1001	Final Depth to Water:	32.97	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCL	8260/GRO	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

Appendix B

Historical Groundwater Elevations and SPH Removal Data

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					24.64	--	--	1327.49
	8/13/2013					24.36	--	--	1327.77
	8/21/2013					23.79	--	--	1328.34
	8/28/2013					25.21	--	--	1326.92
	9/5/2013					27.19	--	--	1324.94
	9/11/2013					25.93	--	--	1326.20
	9/17/2013					25.92	--	--	1326.21
	9/23/2013					28.49	--	--	1323.64
	9/30/2013					23.00	--	--	1329.13
	10/10/2013					25.28	--	--	1326.85
	10/17/2013					26.21	--	--	1325.92
	10/23/2013					23.55	--	--	1328.58
	10/31/2013					24.28	--	--	1327.85
	11/6/2013					NM	--	--	NM
	11/13/2013					23.04	--	--	1329.09
	11/20/2013					22.84	--	--	1329.29
	11/26/2013					24.88	--	--	1327.25
	12/3/2013					30.19	--	--	1321.94
	12/11/2013					31.12	--	--	1321.01
	12/19/2013					31.38	--	--	1320.75
	12/27/2013					31.50	--	--	1320.63
	1/3/2014					NM	--	--	NM
	1/10/2014					31.41	--	--	1320.72
MW-1	1/16/2014	4.0	1352.13	35.0	20-35	31.01	--	--	1321.12
	1/21/2014					31.31	--	--	1320.82
	1/27/2014					30.78	--	--	1321.35
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.75	--	--	1320.38
	2/26/2014					31.70	--	--	1320.43
	3/4/2014					31.62	--	--	1320.51
	3/13/2014					31.44	--	--	1320.69
	3/18/2014					31.41	--	--	1320.72
	3/27/2014					31.55	--	--	1320.58
	4/3/2014					31.69	--	--	1320.44
	4/7/2014					31.44	--	--	1320.69
	4/17/2014					31.44	--	--	1320.69
	4/22/2014					31.45	--	--	1320.68
	4/29/2014					31.80	--	--	1320.33
	5/8/2014					31.75	--	--	1320.38
	5/13/2014					31.49	--	--	1320.64
	5/20/2014					31.50	--	--	1320.63
	5/29/2014					30.49	--	--	1321.64
	6/3/2014					31.64	--	--	1320.49
	6/10/2014					31.65	--	--	1320.48
	6/18/2014					31.50	--	--	1320.63
	6/24/2014					31.15	--	--	1320.98

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-1 (cont.)	7/1/2014	4.0	1352.13	35.0	20-35	31.66	--	--	1320.47
	7/10/2014					31.79	--	--	1320.34
	7/15/2014					31.82	--	--	1320.31
	7/22/2014					31.31	--	--	1320.82
	7/31/2014					31.65	--	--	1320.48
	8/5/2014					31.78	--	--	1320.35
	8/14/2014					31.73	--	--	1320.40
	8/20/2014					31.68	--	--	1320.45
	8/26/2014					31.79	--	--	1320.34
	9/3/2014					31.79	--	--	1320.34
	9/10/2014					31.71	--	--	1320.42
	9/17/2014					31.72	--	--	1320.41
	9/24/2014					31.75	--	--	1320.38
	10/1/2014					31.65	--	--	1320.48
	10/8/2014					31.89	--	--	1320.24
	10/16/2014					29.99	--	--	1322.14
	10/21/2014					31.35	--	--	1320.78
	10/28/2014					31.39	--	--	1320.74
	11/4/2014					31.72	--	--	1320.41
	11/11/2014					31.71	--	--	1320.42
	11/18/2014					31.71	--	--	1320.42
	11/25/2014					31.44	--	--	1320.69
	12/3/2014					31.67	--	--	1320.46
	12/9/2014					31.48	--	--	1320.65
	12/17/2014					31.77	--	--	1320.36
	12/23/2014					31.81	--	--	1320.32
	12/31/2014					31.44	--	--	1320.69
	1/7/2015					31.75	--	--	1320.38
	1/14/2015					31.44	--	--	1320.69
	1/20/2015					31.45	--	--	1320.68
	1/28/2015					31.42	--	--	1320.71
	2/4/2015					31.44	--	--	1320.69
	2/9/2015					31.62	--	--	1320.51
	3/20/2015					31.38	--	--	1320.75
	4/20/2015					31.39	--	--	1320.74
	5/22/2015					31.20	--	--	1320.93
	6/10/2015					31.23	--	--	1320.90
	6/15/2015					31.31	--	--	1320.82
MW-2	8/8/2013	2.0	1353.17	44	29-44	31.93	--	--	1321.24
	8/13/2013					31.27	--	--	1321.90
	8/21/2013					30.85	--	--	1322.32
	8/28/2013					31.45	--	--	1321.72
	9/5/2013					31.45	--	--	1321.72
	9/11/2013					32.18	--	--	1320.99
	9/17/2013					32.10	--	--	1321.07
	9/23/2013					31.66	--	--	1321.51
	9/30/2013					32.55	--	--	1320.62

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	10/10/2013					29.11	--	--	1324.06
	10/17/2013					31.91	--	--	1321.26
	10/23/2013					32.47	--	--	1320.70
	10/31/2013					32.19	--	--	1320.98
	11/6/2013					31.46	--	--	1321.71
	11/13/2013					31.96	--	--	1321.21
	11/20/2013					31.19	--	--	1321.98
	11/26/2013					31.38	--	--	1321.79
	12/3/2013					30.94	--	--	1322.23
	12/11/2013					NM	--	--	NM
	12/19/2013					31.45	--	--	1321.72
	12/27/2013					NM	--	--	NM
	1/3/2014					NM	--	--	NM
	1/10/2014					NM	--	--	NM
	1/16/2014					31.21	--	--	1321.96
	1/21/2014					31.49	--	--	1321.68
	1/27/2014					31.90	--	--	1321.27
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					32.06	--	--	1321.11
	2/26/2014					31.96	--	--	1321.21
	3/4/2014					32.41	--	--	1320.76
	3/13/2014					32.09	--	--	1321.08
MW-2 (cont.)	3/18/2014	2.0	1353.17	44	29-44	31.86	--	--	1321.31
	3/27/2014					32.09	--	--	1321.08
	4/3/2014					32.16	--	--	1321.01
	4/7/2014					32.53	--	--	1320.64
	4/17/2014					32.73	--	--	1320.44
	4/22/2014					32.99	--	--	1320.18
	4/29/2014					33.08	--	--	1320.09
	5/8/2014					33.06	--	--	1320.11
	5/13/2014					33.90	--	--	1319.27
	5/20/2014					33.77	--	--	1319.40
	5/29/2014					33.15	--	--	1320.02
	6/3/2014					33.64	--	--	1319.53
	6/10/2014					33.00	--	--	1320.17
	6/18/2014					32.56	--	--	1320.61
	6/24/2014					31.89	--	--	1321.28
	7/1/2014					32.31	--	--	1320.86
	7/10/2014					31.60	--	--	1321.57
	7/15/2014					31.86	--	--	1321.31
	7/22/2014					32.41	--	--	1320.76
	7/31/2014					31.91	--	--	1321.26
	8/5/2014					32.25	--	--	1320.92
	8/14/2014					32.88	--	--	1320.29
	8/20/2014					32.54	--	--	1320.63
	8/26/2014					33.00	--	--	1320.17

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/3/2014					32.96	--	--	1320.21
	9/10/2014					32.70	--	--	1320.47
	9/17/2014					32.58	--	--	1320.59
	9/24/2014					33.38	--	--	1319.79
	10/1/2014					32.78	--	--	1320.39
	10/8/2014					32.81	--	--	1320.36
	10/16/2014					33.04	--	--	1320.13
	10/21/2014					33.07	--	--	1320.10
	10/28/2014					33.06	--	--	1320.11
	11/4/2014					33.48	--	--	1319.69
	11/11/2014					33.07	--	--	1320.10
	11/25/2014					32.88	--	--	1320.29
	12/3/2014					33.39	--	--	1319.78
MW-2 (cont.)	12/9/2014	2.0	1353.17	44	29-44	33.25	--	--	1319.92
	12/17/2014					33.24	--	--	1319.93
	12/23/2014					33.10	--	--	1320.07
	12/31/2014					32.87	--	--	1320.30
	1/7/2015					NM	--	--	NM
	1/14/2015					32.90	--	--	1320.27
	1/20/2015					32.93	--	--	1320.24
	1/28/2015					32.89	--	--	1320.28
	2/4/2015					32.92	--	--	1320.25
	2/9/2015					33.15	--	--	1320.02
	3/18/2015					32.87	--	--	1320.30
	4/20/2015					36.43	--	--	1316.74
	5/22/2015					35.23	--	--	1317.94
	6/15/2015					34.83	--	--	1318.34
	8/8/2013					36.94	--	--	1313.53
	8/13/2013					34.71	--	--	1315.76
	8/21/2013					33.30	--	--	1317.17
	8/28/2013					39.26	--	--	1311.21
	9/5/2013					42.54	--	--	1307.93
	9/11/2013					45.19	--	--	1305.28
	9/17/2013					43.52	--	--	1306.95
	9/23/2013					43.34	--	--	1307.13
	9/30/2013					43.40	--	--	1307.07
	10/10/2013					43.18	--	--	1307.29
MW-3	10/17/2013	2.0	1350.47	60	40-60	41.23	--	--	1309.24
	10/23/2013					41.43	--	--	1309.04
	10/31/2013					41.58	--	--	1308.89
	11/6/2013					41.19	--	--	1309.28
	11/13/2013					35.98	--	--	1314.49
	11/20/2013					35.27	--	--	1315.20
	11/26/2013					34.56	--	--	1315.91
	12/3/2013					33.77	--	--	1316.70
	12/11/2013					34.04	--	--	1316.43
	12/19/2013					33.72	--	--	1316.75
	12/27/2013					33.89	--	--	1316.58

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	1/3/2014					NM	--	--	NM
	1/10/2014					33.47	--	--	1317.00
	1/16/2014					33.68	--	--	1316.79
	1/21/2014					33.84	--	--	1316.63
	1/27/2014					34.04	--	--	1316.43
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					34.00	--	--	1316.47
	2/26/2014					34.24	--	--	1316.23
	3/4/2014					34.36	--	--	1316.11
	3/13/2014					34.42	--	--	1316.05
	3/18/2014					34.35	--	--	1316.12
	3/27/2014					34.68	--	--	1315.79
	4/3/2014					35.39	--	--	1315.08
	4/7/2014					36.20	--	--	1314.27
	4/17/2014					37.95	--	--	1312.52
	4/22/2014					39.94	--	--	1310.53
	4/29/2014					41.00	--	--	1309.47
	5/8/2014					45.96	--	--	1304.51
	5/13/2014					47.00	--	--	1303.47
	5/20/2014					49.95	--	--	1300.52
	5/29/2014					47.07	--	--	1303.40
	6/3/2014					47.89	--	--	1302.58
MW-3 (cont.)	6/10/2014	2.0	1350.47	60	40-60	44.14	--	--	1306.33
	6/18/2014					42.60	--	--	1307.87
	6/24/2014					41.62	--	--	1308.85
	7/1/2014					39.58	--	--	1310.89
	7/10/2014					40.35	--	--	1310.12
	7/15/2014					42.02	--	--	1308.45
	7/22/2014					42.80	--	--	1307.67
	7/31/2014					43.14	--	--	1307.33
	8/5/2014					47.55	--	--	1302.92
	8/14/2014					45.85	--	--	1304.62
	8/20/2014					49.15	--	--	1301.32
	8/26/2014					51.32	--	--	1299.15
	9/3/2014					51.10	--	--	1299.37
	9/10/2014					51.71	--	--	1298.76
	9/17/2014					51.84	--	--	1298.63
	9/24/2014					52.93	--	--	1297.54
	10/1/2014					53.93	--	--	1296.54
	10/8/2014					53.91	--	--	1296.56
	10/16/2014					50.41	--	--	1300.06
	10/21/2014					51.06	--	--	1299.41
	10/28/2014					50.29	--	--	1300.18
	11/4/2014					51.00	--	--	1299.47
	11/11/2014					49.17	--	--	1301.30
	11/25/2014					45.30	--	--	1305.17

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-3 (cont.)	12/3/2014	2.0	1350.47	60	40-60	44.10	--	--	1306.37
	12/9/2014					43.67	--	--	1306.80
	12/17/2014					42.83	--	--	1307.64
	12/23/2014					47.12	--	--	1303.35
	12/31/2014					29.37	--	--	1321.10
	1/7/2015					NM	--	--	NM
	1/14/2015					41.35	--	--	1309.12
	1/20/2015					41.36	--	--	1309.11
	1/28/2015					42.22	--	--	1308.25
	2/4/2015					41.12	--	--	1309.35
	2/9/2015					40.60	--	--	1309.87
	3/18/2015					41.02	--	--	1309.45
	4/20/2015					45.61	--	--	1304.86
	5/22/2015					40.21	--	--	1310.26
	6/15/2015					38.21	--	--	1312.26
MW-4	8/8/2013	2.0	1350.73	41	26-41	28.89	--	--	1321.84
	8/13/2013					28.85	--	--	1321.88
	8/21/2013					28.18	--	--	1322.55
	8/28/2013					28.56	--	--	1322.17
	9/5/2013					29.16	--	--	1321.57
	9/11/2013					29.55	--	--	1321.18
	9/17/2013					30.06	--	--	1320.67
	9/23/2013					30.32	--	--	1320.41
	9/30/2013					30.11	--	--	1320.62
	10/10/2013					30.45	--	--	1320.28
	10/17/2013					30.43	--	--	1320.30
	10/23/2013					30.36	--	--	1320.37
	10/31/2013					30.14	--	--	1320.59
	11/6/2013					29.78	--	--	1320.95
	11/13/2013					30.21	--	--	1320.52
	11/20/2013					29.81	--	--	1320.92
	11/26/2013					30.34	--	--	1320.39
	12/3/2013					30.64	--	--	1320.09
	12/11/2013					30.19	--	--	1320.54
	12/19/2013					30.47	--	--	1320.26
	12/27/2013					30.43	--	--	1320.30
	1/3/2014					NM	--	--	NM
	1/10/2014					29.44	--	--	1321.29
	1/16/2014					29.38	--	--	1321.35
	1/21/2014					29.53	--	--	1321.20
	1/27/2014					30.36	--	--	1320.37
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					30.61	--	--	1320.12
	2/26/2014					31.56	--	--	1319.17
	3/4/2014					30.54	--	--	1320.19
	3/13/2014					30.56	--	--	1320.17
	3/18/2014					30.80	--	--	1319.93
	3/27/2014					30.72	--	--	1320.01

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-4 (cont.)	4/3/2014	2.0	1350.73	41	26-41	30.49	--	--	1320.24
	4/7/2014					30.53	--	--	1320.20
	4/17/2014					30.54	--	--	1320.19
	4/22/2014					31.02	--	--	1319.71
	4/29/2014					31.25	--	--	1319.48
	5/8/2014					31.59	--	--	1319.14
	5/13/2014					31.30	--	--	1319.43
	5/20/2014					31.73	--	--	1319.00
	5/29/2014					31.63	--	--	1319.10
	6/3/2014					32.68	--	--	1318.05
	6/10/2014					32.52	--	--	1318.21
	6/18/2014					31.71	--	--	1319.02
	6/24/2014					30.73	--	--	1320.00
	7/1/2014					30.60	--	--	1320.13
	7/10/2014					30.39	--	--	1320.34
	7/15/2014					30.56	--	--	1320.17
	7/22/2014					30.34	--	--	1320.39
	7/31/2014					30.52	--	--	1320.21
	8/5/2014					30.69	--	--	1320.04
	8/14/2014					30.61	--	--	1320.12
	8/20/2014					30.81	--	--	1319.92
	8/26/2014					30.73	--	--	1320.00
	9/3/2014					30.91	--	--	1319.82
	9/10/2014					30.82	--	--	1319.91
	9/17/2014					30.91	--	--	1319.82
	9/24/2014					29.98	--	--	1320.75
	10/1/2014					31.26	--	--	1319.47
	10/8/2014					31.29	--	--	1319.44
	10/16/2014					31.20	--	--	1319.53
	10/21/2014					31.11	--	--	1319.62
	10/28/2014					30.94	--	--	1319.79
	11/4/2014					31.13	--	--	1319.60
	11/11/2014					31.03	--	--	1319.70
	11/25/2014					31.35	--	--	1319.38
	12/3/2014					31.41	--	--	1319.32
	12/9/2014					31.43	--	--	1319.30
	12/17/2014					31.44	--	--	1319.29
	12/23/2014					31.52	--	--	1319.21
	12/31/2014					31.71	--	--	1319.02
	1/7/2015					NM	--	--	NM
	1/14/2015					31.52	--	--	1319.21
	1/20/2015					31.55	--	--	1319.18
	1/28/2015					31.66	--	--	1319.07
	2/4/2015					31.70	--	--	1319.03
	2/9/2015					31.75	--	--	1318.98
	3/18/2015					31.22	--	--	1319.51
	4/20/2015					34.10	--	--	1316.63
	5/22/2015					31.25	--	--	1319.48
	6/10/2015					29.28	--	--	1321.45
	6/15/2015					29.02	--	--	1321.71

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					19.61	--	--	1333.16
	8/13/2013					19.39	--	--	1333.38
	8/21/2013					19.66	--	--	1333.11
	8/28/2013					20.02	--	--	1332.75
	9/5/2013					20.54	--	--	1332.23
	9/11/2013					20.81	--	--	1331.96
	9/17/2013					21.03	--	--	1331.74
	9/23/2013					21.00	--	--	1331.77
	9/30/2013					21.17	--	--	1331.60
	10/10/2013					21.45	--	--	1331.32
	10/17/2013					21.18	--	--	1331.59
	10/23/2013					21.20	--	--	1331.57
	10/31/2013					21.19	--	--	1331.58
	11/6/2013					20.91	--	--	1331.86
	11/13/2013					20.79	--	--	1331.98
	11/20/2013					20.18	--	--	1332.59
	11/26/2013					21.29	--	--	1331.48
	12/3/2013					20.84	--	--	1331.93
	12/11/2013					20.96	--	--	1331.81
	12/19/2013					20.54	--	--	1332.23
	12/27/2013					20.82	--	--	1331.95
	1/3/2014					NM	--	--	NM
	1/10/2014					20.19	--	--	1332.58
	1/16/2014					20.90	--	--	1331.87
MW-5	1/21/2014	2.0	1352.77	30	15-30	21.04	--	--	1331.73
	1/27/2014					20.84	--	--	1331.93
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					21.23	--	--	1331.54
	2/26/2014					21.02	--	--	1331.75
	3/4/2014					21.05	--	--	1331.72
	3/13/2014					20.98	--	--	1331.79
	3/18/2014					20.86	--	--	1331.91
	3/27/2014					20.97	--	--	1331.80
	4/3/2014					21.70	--	--	1331.07
	4/7/2014					21.05	--	--	1331.72
	4/17/2014					21.10	--	--	1331.67
	4/22/2014					21.30	--	--	1331.47
	4/29/2014					21.15	--	--	1331.62
	5/8/2014					21.33	--	--	1331.44
	5/13/2014					21.17	--	--	1331.60
	5/20/2014					21.48	--	--	1331.29
	5/29/2014					21.41	--	--	1331.36
	6/3/2014					21.16	--	--	1331.61
	6/10/2014					20.65	--	--	1332.12
	6/18/2014					20.30	--	--	1332.47
	6/24/2014					19.96	--	--	1332.81
	7/1/2014					19.74	--	--	1333.03
	7/10/2014					19.91	--	--	1332.86

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	7/15/2014					20.10	--	--	1332.67
	7/22/2014					20.04	--	--	1332.73
	7/31/2014					20.26	--	--	1332.51
	8/5/2014					20.29	--	--	1332.48
	8/14/2014					20.23	--	--	1332.54
	8/20/2014					20.24	--	--	1332.53
	8/26/2014					20.37	--	--	1332.40
	9/3/2014					20.44	--	--	1332.33
	9/10/2014					20.43	--	--	1332.34
	9/17/2014					20.54	--	--	1332.23
	9/24/2014					20.66	--	--	1332.11
	10/1/2014					20.59	--	--	1332.18
	10/8/2014					20.58	--	--	1332.19
	10/16/2014					20.39	--	--	1332.38
	10/21/2014					22.90	--	--	1329.87
	10/28/2014					20.14	--	--	1332.63
	11/4/2014					20.33	--	--	1332.44
MW- 5 (cont.)	11/11/2014	2.0	1352.77	30	15-30	20.39	--	--	1332.38
	11/25/2014					20.44	--	--	1332.33
	12/3/2014					20.59	--	--	1332.18
	12/9/2014					20.78	--	--	1331.99
	12/17/2014					20.68	--	--	1332.09
	12/23/2014					20.60	--	--	1332.17
	12/31/2014					20.61	--	--	1332.16
	1/7/2015					NM	--	--	NM
	1/14/2015					20.56	--	--	1332.21
	1/20/2015					20.55	--	--	1332.22
	1/28/2015					20.58	--	--	1332.19
	2/4/2015					20.69	--	--	1332.08
	2/9/2015					20.58	--	--	1332.19
	3/18/2015					20.80	--	--	1331.97
	4/20/2015					21.01	--	--	1331.76
	5/22/2015					20.25	--	--	1332.52
	6/10/2015					19.44	--	--	1333.33
	6/15/2015					19.60	--	--	1333.17
	8/8/2013					15.67	--	--	1334.09
	8/13/2013					18.34	--	--	1331.42
	8/21/2013					17.40	--	--	1332.36
	8/28/2013					17.95	--	--	1331.81
	9/5/2013					18.32	--	--	1331.44
	9/11/2013					18.21	--	--	1331.55
	9/17/2013					18.44	--	--	1331.32
MW-6	9/23/2013	2.0	1349.76	41	26-41	18.30	--	--	1331.46
	9/30/2013					18.69	--	--	1331.07
	10/10/2013					18.84	--	--	1330.92
	10/17/2013					18.76	--	--	1331.00
	10/23/2013					18.69	--	--	1331.07
	10/31/2013					18.57	--	--	1331.19
	11/6/2013					18.01	--	--	1331.75
	11/13/2013					19.42	--	--	1330.34

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	11/20/2013					19.02	--	--	1330.74
	11/26/2013					19.84	--	--	1329.92
	12/3/2013					19.63	--	--	1330.13
	12/11/2013					20.45	--	--	1329.31
	12/19/2013					21.21	--	--	1328.55
	12/27/2013					21.67	--	--	1328.09
	1/3/2014					NM	--	--	NM
	1/10/2014					21.51	--	--	1328.25
	1/16/2014					21.48	--	--	1328.28
	1/21/2014					21.84	--	--	1327.92
	1/27/2014					22.26	--	--	1327.50
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					22.00	--	--	1327.76
	2/26/2014					22.32	--	--	1327.44
	3/4/2014					22.06	--	--	1327.70
	3/13/2014					22.30	--	--	1327.46
	3/18/2014					22.14	--	--	1327.62
	3/27/2014					21.89	--	--	1327.87
	4/3/2014					21.92	--	--	1327.84
	4/7/2014					22.37	--	--	1327.39
	4/17/2014					22.33	--	--	1327.43
	4/22/2014					22.41	--	--	1327.35
	4/29/2014					22.16	--	--	1327.60
	5/8/2014					22.02	--	--	1327.74
MW-6 (cont.	5/13/2014	2.0	1349.76	41	26-41	21.95	--	--	1327.81
	5/20/2014					22.46	--	--	1327.30
	5/29/2014					22.32	--	--	1327.44
	6/3/2014					22.09	--	--	1327.67
	6/10/2014					21.00	--	--	1328.76
	6/18/2014					20.54	--	--	1329.22
	6/24/2014					19.89	--	--	1329.87
	7/1/2014					19.46	--	--	1330.30
	7/10/2014					19.82	--	--	1329.94
	7/15/2014					19.86	--	--	1329.90
	7/22/2014					19.88	--	--	1329.88
	7/31/2014					20.00	--	--	1329.76
	8/5/2014					20.28	--	--	1329.48
	8/14/2014					20.42	--	--	1329.34
	8/20/2014					20.56	--	--	1329.20
	8/26/2014					20.72	--	--	1329.04
	9/3/2014					20.98	--	--	1328.78
	9/10/2014					21.02	--	--	1328.74
	9/17/2014					21.49	--	--	1328.27
	9/24/2014					21.50	--	--	1328.26
	10/1/2014					21.57	--	--	1328.19
	10/8/2014					21.59	--	--	1328.17
	10/16/2014					20.74	--	--	1329.02
	10/21/2014					20.66	--	--	1329.10
	10/28/2014					20.79	--	--	1328.97
	11/4/2014					21.21	--	--	1328.55

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-6 (cont.	11/11/2014	2.0	1349.76	41	26-41	21.68	--	--	1328.08
	11/25/2014					21.93	--	--	1327.83
	12/3/2014					22.06	--	--	1327.70
	12/9/2014					22.32	--	--	1327.44
	12/17/2014					22.20	--	--	1327.56
	12/23/2014					21.96	--	--	1327.80
	12/31/2014					20.61	--	--	1329.15
	1/7/2015					NM	--	--	NM
	1/14/2015					22.59	--	--	1327.17
	1/20/2015					22.45	--	--	1327.31
	1/28/2015					22.54	--	--	1327.22
	2/4/2015					22.59	--	--	1327.17
	2/9/2015					22.77	--	--	1326.99
	3/18/2015					22.62	--	--	1327.14
	4/20/2015					23.05	--	--	1326.71
	5/22/2015					22.25	--	--	1327.51
	6/15/2015					20.45	--	--	1329.31
MW-7	8/8/2013	2.0	1348.98	24	9-24	13.32	--	--	1335.66
	8/13/2013					13.68	--	--	1335.30
	8/21/2013					14.03	--	--	1334.95
	8/28/2013					14.76	--	--	1334.22
	9/5/2013					15.44	--	--	1333.54
	9/11/2013					15.66	--	--	1333.32
	9/17/2013					15.78	--	--	1333.20
	9/23/2013					15.54	--	--	1333.44
	9/30/2013					15.39	--	--	1333.59
	10/10/2013					15.65	--	--	1333.33
	10/17/2013					15.68	--	--	1333.30
	10/23/2013					15.64	--	--	1333.34
	10/31/2013					15.66	--	--	1333.32
	11/6/2013					15.11	--	--	1333.87
	11/13/2013					15.21	--	--	1333.77
	11/20/2013					15.62	--	--	1333.36
	11/26/2013					15.89	--	--	1333.09
	12/3/2013					16.03	--	--	1332.95
	12/11/2013					16.45	--	--	1332.53
	12/19/2013					16.41	--	--	1332.57
	12/27/2013					16.59	--	--	1332.39
	1/3/2014					NM	--	--	NM
	1/10/2014					16.47	--	--	1332.51
	1/16/2014					16.45	--	--	1332.53
	1/21/2014					16.66	--	--	1332.32
	1/27/2014					16.68	--	--	1332.30
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					16.61	--	--	1332.37
	2/26/2014					16.64	--	--	1332.34
	3/4/2014					16.65	--	--	1332.33
	3/13/2014					16.73	--	--	1332.25

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	3/18/2014					16.68	--	--	1332.30
	3/27/2014					16.56	--	--	1332.42
	4/3/2014					16.64	--	--	1332.34
	4/7/2014					16.60	--	--	1332.38
	4/17/2014					16.66	--	--	1332.32
	4/22/2014					16.70	--	--	1332.28
	4/29/2014					16.70	--	--	1332.28
	5/8/2014					16.95	--	--	1332.03
	5/13/2014					16.80	--	--	1332.18
	5/20/2014					15.69	--	--	1333.29
	5/29/2014					17.44	--	--	1331.54
	6/3/2014					16.13	--	--	1332.85
	6/10/2014					14.85	--	--	1334.13
	6/18/2014					15.52	--	--	1333.46
	6/24/2014					14.78	--	--	1334.20
	7/1/2014					14.74	--	--	1334.24
	7/10/2014					15.10	--	--	1333.88
	7/15/2014					15.31	--	--	1333.67
	7/22/2014					15.39	--	--	1333.59
	7/31/2014					15.72	--	--	1333.26
	8/5/2014					15.82	--	--	1333.16
	8/14/2014					15.59	--	--	1333.39
	8/20/2014					15.73	--	--	1333.25
	8/26/2014					15.90	--	--	1333.08
	9/3/2014					15.99	--	--	1332.99
MW-7 (cont.)	9/10/2014	2.0	1348.98	24	9-24	16.03	--	--	1332.95
	9/17/2014					16.14	--	--	1332.84
	9/24/2014					16.24	--	--	1332.74
	10/1/2014					16.16	--	--	1332.82
	10/8/2014					16.17	--	--	1332.81
	10/16/2014					15.50	--	--	1333.48
	10/21/2014					15.65	--	--	1333.33
	10/28/2014					15.64	--	--	1333.34
	11/4/2014					16.02	--	--	1332.96
	11/11/2014					16.04	--	--	1332.94
	11/25/2014					16.37	--	--	1332.61
	12/3/2014					16.46	--	--	1332.52
	12/9/2014					16.54	--	--	1332.44
	12/17/2014					16.52	--	--	1332.46
	12/23/2014					16.41	--	--	1332.57
	12/31/2014					16.48	--	--	1332.50
	1/7/2015					NM	--	--	NM
	1/14/2015					16.49	--	--	1332.49
	1/20/2015					16.55	--	--	1332.43
	1/28/2015					16.56	--	--	1332.42
	2/4/2015					16.56	--	--	1332.42
	2/9/2015					16.58	--	--	1332.40
	3/18/2015					16.63	--	--	1332.35
	4/20/2015					16.10	--	--	1332.88
	5/22/2015					15.23	--	--	1333.75
	6/15/2015					14.91	--	--	1334.07

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					18.62	--	--	1334.76
	8/13/2013					18.13	--	--	1335.25
	8/21/2013					18.32	--	--	1335.06
	8/28/2013					19.21	--	--	1334.17
	9/5/2013					20.00	--	--	1333.38
	9/11/2013					20.35	--	--	1333.03
	9/17/2013					20.54	--	--	1332.84
	9/23/2013					20.59	--	--	1332.79
	9/30/2013					20.70	--	--	1332.68
	10/10/2013					20.82	--	--	1332.56
	10/17/2013					20.92	--	--	1332.46
	10/23/2013					20.85	--	--	1332.53
	10/31/2013					20.89	--	--	1332.49
	11/6/2013					19.21	--	--	1334.17
	11/13/2013					19.38	--	--	1334.00
	11/20/2013					18.86	--	--	1334.52
	11/26/2013					20.30	--	--	1333.08
	12/3/2013					20.54	--	--	1332.84
	12/11/2013					21.09	--	--	1332.29
	12/19/2013					21.11	--	--	1332.27
	12/27/2013					21.54	--	--	1331.84
	1/3/2014					NM	--	--	NM
	1/10/2014					21.24	--	--	1332.14
MW-8	1/16/2014	2.0	1353.38	30	15-30	21.70	--	--	1331.68
	1/21/2014					21.80	--	--	1331.58
	1/27/2014					21.88	--	--	1331.50
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					22.15	--	--	1331.23
	2/26/2014					21.46	--	--	1331.92
	3/4/2014					21.84	--	--	1331.54
	3/13/2014					21.90	--	--	1331.48
	3/18/2014					21.70	--	--	1331.68
	3/27/2014					21.79	--	--	1331.59
	4/3/2014					21.95	--	--	1331.43
	4/7/2014					22.06	--	--	1331.32
	4/17/2014					22.29	--	--	1331.09
	4/22/2014					22.26	--	--	1331.12
	4/29/2014					22.20	--	--	1331.18
	5/8/2014					22.23	--	--	1331.15
	5/13/2014					22.42	--	--	1330.96
	5/20/2014					22.27	--	--	1331.11
	5/29/2014					22.43	--	--	1330.95
	6/3/2014					22.32	--	--	1331.06
	6/10/2014					21.73	--	--	1331.65
	6/18/2014					20.64	--	--	1332.74
	6/24/2014					20.00	--	--	1333.38

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-8 (cont.)	7/1/2014	2.0	1353.38	30	15-30	20.22	--	--	1333.16
	7/10/2014					20.24	--	--	1333.14
	7/15/2014					20.47	--	--	1332.91
	7/22/2014					20.64	--	--	1332.74
	7/31/2014					20.89	--	--	1332.49
	8/5/2014					20.96	--	--	1332.42
	8/14/2014					21.09	--	--	1332.29
	8/20/2014					21.06	--	--	1332.32
	8/26/2014					21.24	--	--	1332.14
	9/3/2014					21.36	--	--	1332.02
	9/10/2014					21.44	--	--	1331.94
	9/17/2014					21.56	--	--	1331.82
	9/24/2014					21.69	--	--	1331.69
	10/1/2014					21.65	--	--	1331.73
	10/8/2014					21.70	--	--	1331.68
	10/16/2014					21.53	--	--	1331.85
	10/21/2014					21.32	--	--	1332.06
	10/28/2014					20.98	--	--	1332.40
	11/4/2014					21.09	--	--	1332.29
	11/11/2014					21.09	--	--	1332.29
	11/25/2014					21.21	--	--	1332.17
	12/3/2014					21.48	--	--	1331.90
	12/9/2014					21.69	--	--	1331.69
	12/17/2014					21.74	--	--	1331.64
	12/23/2014					21.61	--	--	1331.77
	12/31/2014					21.73	--	--	1331.65
	1/7/2015					NM	--	--	NM
	1/14/2015					21.64	--	--	1331.74
	1/20/2015					21.70	--	--	1331.68
	1/28/2015					21.72	--	--	1331.66
	2/4/2015					21.92	--	--	1331.46
	2/9/2015					21.88	--	--	1331.50
	3/18/2015					21.96	--	--	1331.42
	4/20/2015					22.25	--	--	1331.13
	5/22/2015					20.93	--	--	1332.45
	6/15/2015					19.93	--	--	1333.45
MW-9	8/8/2013	2.0	1349.48	34	19-34	28.61	--	--	1320.87
	8/13/2013					27.58	--	--	1321.90
	8/21/2013					27.52	--	--	1321.96
	8/28/2013					27.60	--	--	1321.88
	9/5/2013					28.28	--	--	1321.20
	9/11/2013					30.57	--	--	1318.91
	9/17/2013					30.05	--	--	1319.43
	9/23/2013					30.25	--	--	1319.23
	9/30/2013					30.45	--	--	1319.03
	10/10/2013					30.76	--	--	1318.72
	10/17/2013					30.69	--	--	1318.79
	10/23/2013					30.73	--	--	1318.75
	10/31/2013					30.11	--	--	1319.37
	11/6/2013					30.03	--	--	1319.45
	11/13/2013					29.54	--	--	1319.94

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	11/20/2013					28.66	--	--	1320.82
	11/26/2013					28.67	--	--	1320.81
	12/3/2013					28.40	--	--	1321.08
	12/11/2013					28.55	--	--	1320.93
	12/19/2013					28.55	--	--	1320.93
	12/27/2013					NM	--	--	NM
	1/3/2014					NM	--	--	NM
	1/10/2014					28.65	--	--	1320.83
	1/16/2014					28.75	--	--	1320.73
	1/21/2014					28.91	--	--	1320.57
	1/27/2014					28.93	--	--	1320.55
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					29.09	--	--	1320.39
	2/26/2014					29.16	--	--	1320.32
	3/4/2014					NM	--	--	NM
	3/13/2014					29.31	--	--	1320.17
	3/18/2014					29.17	--	--	1320.31
	3/27/2014					28.59	--	--	1320.89
	4/3/2014					30.00	--	--	1319.48
	4/7/2014					30.25	--	--	1319.23
	4/17/2014					30.81	--	--	1318.67
	4/22/2014					31.06	--	--	1318.42
	4/29/2014					31.50	--	--	1317.98
MW-9 (cont.)	5/8/2014	2.0	1349.48	34	19-34	31.81	--	--	1317.67
	5/13/2014					32.96	--	--	1316.52
	5/20/2014					33.39	--	--	1316.09
	5/29/2014					33.56	--	--	1315.92
	6/3/2014					33.61	--	--	1315.87
	6/10/2014					32.83	--	--	1316.65
	6/18/2014					31.25	--	--	1318.23
	6/24/2014					30.60	--	--	1318.88
	7/1/2014					30.14	--	--	1319.34
	7/10/2014					30.21	--	--	1319.27
	7/15/2014					30.46	--	--	1319.02
	7/22/2014					30.56	--	--	1318.92
	7/31/2014					NM	--	--	NM
	8/5/2014					NM	--	--	NM
	8/14/2014					31.44	--	--	1318.04
	8/20/2014					NM	--	--	NM
	8/26/2014					NM	--	--	NM
	9/3/2014					NM	--	--	NM
	9/10/2014					32.21	--	--	NM
	9/17/2014					NM	--	--	NM
	9/24/2014					32.98	--	--	1316.50
	10/1/2014					32.50	--	--	1316.98
	10/8/2014					32.52	--	--	1316.96
	10/16/2014					32.24	--	--	1317.24
	10/21/2014					NM	--	--	#VALUE!
	10/28/2014					31.87	--	--	1317.61

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-9 (cont.)	11/4/2014	2.0	1349.48	34	19-34	32.09	--	--	1317.39
	11/11/2014					31.84	--	--	1317.64
	11/25/2014					32.01	--	--	1317.47
	12/3/2014					32.18	--	--	1317.30
	12/9/2014					31.97	--	--	1317.51
	12/17/2014					32.04	--	--	1317.44
	12/23/2014					31.96	--	--	1317.52
	12/31/2014					31.11	--	--	1318.37
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					NM	--	--	NM
	1/28/2015					31.81	--	--	1317.67
	2/4/2015					31.90	--	--	1317.58
	2/9/2015					31.78	--	--	1317.70
	3/18/2015					31.59	--	--	1317.89
	4/20/2015					33.25	--	--	1316.23
	5/22/2015					31.55	--	--	1317.93
	6/15/2015					29.83	--	--	1319.65
MW-10	8/8/2013	2.0	1348.79	34	19-34	26.72	--	--	1322.07
	8/13/2013					25.39	--	--	1323.40
	8/21/2013					24.94	--	--	1323.85
	8/28/2013					25.94	--	--	1322.85
	9/5/2013					28.21	--	--	1320.58
	9/11/2013					28.42	--	--	1320.37
	9/17/2013					28.49	--	--	1320.30
	9/23/2013					28.46	--	--	1320.33
	9/30/2013					28.32	--	--	1320.47
	10/10/2013					28.30	--	--	1320.49
	10/17/2013					28.45	--	--	1320.34
	10/23/2013					28.33	--	--	1320.46
	10/31/2013					28.40	--	--	1320.39
	11/6/2013					27.87	--	--	1320.92
	11/13/2013					28.25	--	--	1320.54
	11/20/2013					27.53	--	--	1321.26
	11/26/2013					27.30	--	--	1321.49
	12/3/2013					26.81	--	--	1321.98
	12/11/2013					27.14	--	--	1321.65
	12/19/2013					27.10	--	--	1321.69
	12/27/2013					27.42	--	--	1321.37
	1/3/2014					NM	--	--	NM
	1/10/2014					27.35	--	--	1321.44
	1/16/2014					27.51	--	--	1321.28
	1/21/2014					27.77	--	--	1321.02
	1/27/2014					27.47	--	--	1321.32
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					27.53	--	--	1321.26
	2/26/2014					27.58	--	--	1321.21
	3/4/2014					27.66	--	--	1321.13
	3/13/2014					27.78	--	--	1321.01
	3/18/2014					27.65	--	--	1321.14

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-10 (cont.)	3/27/2014	2.0	1348.79	34	19-34	28.12	--	--	1320.67
	4/3/2014					28.36	--	--	1320.43
	4/7/2014					28.43	--	--	1320.36
	4/17/2014					28.41	--	--	1320.38
	4/22/2014					28.48	--	--	1320.31
	4/29/2014					28.50	--	--	1320.29
	5/8/2014					29.01	--	--	1319.78
	5/13/2014					29.08	--	--	1319.71
	5/20/2014					29.21	--	--	1319.58
	5/29/2014					28.95	--	--	1319.84
	6/3/2014					28.46	--	--	1320.33
	6/10/2014					28.25	--	--	1320.54
	6/18/2014					27.25	--	--	1321.54
	6/24/2014					NM	--	--	NM
	7/1/2014					28.44	--	--	1320.35
	7/10/2014					28.28	--	--	1320.51
	7/15/2014					28.32	--	--	1320.47
	7/22/2014					28.28	--	--	1320.51
	7/31/2014					28.50	--	--	1320.29
	8/5/2014					28.47	--	--	1320.32
	8/14/2014					28.41	--	--	1320.38
	8/20/2014					28.40	--	--	1320.39
	8/26/2014					28.44	--	--	1320.35
	9/3/2014					29.46	--	--	1319.33
	9/10/2014					28.44	--	--	1320.35
	9/17/2014					28.46	--	--	1320.33
	9/24/2014					28.47	--	--	1320.32
	10/1/2014					28.45	--	--	1320.34
	10/8/2014					28.44	--	--	1320.35
	10/16/2014					28.39	--	--	1320.40
	10/21/2014					28.45	--	--	1320.34
	10/28/2014					28.42	--	--	1320.37
	11/4/2014					28.46	--	--	1320.33
	11/11/2014					28.52	--	--	1320.27
	11/25/2014					28.65	--	--	1320.14
	12/3/2014					28.69	--	--	1320.10
	12/9/2014					28.65	--	--	1320.14
	12/17/2014					28.61	--	--	1320.18
	12/23/2014					NM	--	--	NM
	12/31/2014					29.36	--	--	1319.43
	1/7/2015					NM	--	--	NM
	1/14/2015					28.45	--	--	1320.34
	1/20/2015					28.42	--	--	1320.37
	1/28/2015					28.44	--	--	1320.35
	2/4/2015					28.49	--	--	1320.30
	2/9/2015					28.54	--	--	1320.25
	3/18/2015					28.42	--	--	1320.37
	4/20/2015					28.53	--	--	1320.26
	5/22/2015					28.27	--	--	1320.52
	6/15/2015					28.30	--	--	1320.49

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-11	9/30/2013	2.0	1351.34	42	22-42	29.03	--	--	1322.31
	10/10/2013					28.08	--	--	1323.26
	10/17/2013					28.26	--	--	1323.08
	10/23/2013					29.36	--	--	1321.98
	10/31/2013					28.92	--	--	1322.42
	11/6/2013					28.14	--	--	1323.20
	11/13/2013					28.16	--	--	1323.18
	11/20/2013					27.70	--	--	1323.64
	11/26/2013					28.03	--	--	1323.31
	12/3/2013					28.03	--	--	1323.31
	12/11/2013					28.54	--	--	1322.80
	12/19/2013					28.53	--	--	1322.81
	12/27/2013					28.80	--	--	1322.54
	1/3/2014					NM	--	--	NM
	1/10/2014					29.60	--	--	1321.74
	1/16/2014					28.89	--	--	1322.45
	1/21/2014					28.99	--	--	1322.35
	1/27/2014					28.91	--	--	1322.43
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					28.52	--	--	1322.82
	2/26/2014					28.71	--	--	1322.63
	3/4/2014					28.61	--	--	1322.73
	3/13/2014					28.77	--	--	1322.57
	3/18/2014					28.51	--	--	1322.83
	3/27/2014					28.68	--	--	1322.66
	4/3/2014					28.77	--	--	1322.57
	4/7/2014					28.75	--	--	1322.59
	4/17/2014					28.79	--	--	1322.55
	4/22/2014					28.92	--	--	1322.42
	4/29/2014					28.90	--	--	1322.44
	5/8/2014					29.84	--	--	1321.50
	5/13/2014					29.91	--	--	1321.43
	5/20/2014					28.52	--	--	1322.82
	5/29/2014					30.09	--	--	1321.25
	6/3/2014					29.34	--	--	1322.00
	6/10/2014					28.71	--	--	1322.63
	6/18/2014					28.44	--	--	1322.90
	6/24/2014					28.09	--	--	1323.25
	7/1/2014					27.76	--	--	1323.58
	7/10/2014					27.85	--	--	1323.49
	7/15/2014					29.83	--	--	1321.51
	7/22/2014					28.13	--	--	1323.21
	7/31/2014					28.49	--	--	1322.85
	8/5/2014					28.49	--	--	1322.85
	8/14/2014					28.46	--	--	1322.88
	8/20/2014					28.54	--	--	1322.80
	8/26/2014					28.53	--	--	1322.81
	9/3/2014					28.60	--	--	1322.74
	9/10/2014					28.65	--	--	1322.69

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/17/2014					28.69	--	--	1322.65
	9/24/2014					23.69	--	--	1327.65
	10/1/2014					28.58	--	--	1322.76
	10/8/2014					28.62	--	--	1322.72
	10/16/2014					28.59	--	--	1322.75
	10/21/2014					28.65	--	--	1322.69
	10/28/2014					29.75	--	--	1321.59
	11/4/2014					28.57	--	--	1322.77
	11/11/2014					28.70	--	--	1322.64
	11/25/2014					28.93	--	--	1322.41
	12/3/2014					29.00	--	--	1322.34
	12/9/2014					28.94	--	--	1322.40
MW-11 (cont.)	12/17/2014	2.0	1351.34	42	22-42	28.93	--	--	1322.41
	12/23/2014					28.96	--	--	1322.38
	12/31/2014					29.03	--	--	1322.31
	1/7/2015					NM	--	--	NM
	1/14/2015					28.88	--	--	1322.46
	1/20/2015					28.88	--	--	1322.46
	1/28/2015					28.97	--	--	1322.37
	2/4/2015					28.94	--	--	1322.40
	2/9/2015					29.26	--	--	1322.08
	3/19/2015					29.84	--	--	1321.50
	4/20/2015					30.39	--	--	1320.95
	5/22/2015					29.88	--	--	1320.59
	6/15/2015					28.31	--	--	1323.03
	9/30/2013					30.15	--	--	1319.59
	10/10/2013					30.55	--	--	1319.19
	10/17/2013					30.49	--	--	1319.25
	10/23/2013					30.40	--	--	1319.34
	10/31/2013					30.45	--	--	1319.29
	11/6/2013					29.91	--	--	1319.83
	11/13/2013					29.32	--	--	1320.42
	11/20/2013					28.16	--	--	1321.58
	11/26/2013					27.91	--	--	1321.83
	12/3/2013					27.41	--	--	1322.33
	12/11/2013					27.83	--	--	1321.91
	12/19/2013					27.74	--	--	1322.00
MW-12	12/27/2013	2.0	1349.74	43	23-43	NM	--	--	NM
	1/3/2014					NM	--	--	NM
	1/10/2014					28.25	--	--	1321.49
	1/16/2014					28.28	--	--	1321.46
	1/21/2014					28.61	--	--	1321.13
	1/27/2014					28.40	--	--	1321.34
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					28.46	--	--	1321.28
	2/26/2014					28.49	--	--	1321.25
	3/4/2014					NM	--	--	NM
	3/13/2014					28.77	--	--	1320.97
	3/18/2014					28.70	--	--	1321.04
	3/27/2014					29.25	--	--	1320.49

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	4/3/2014					29.70	--	--	1320.04
	4/7/2014					29.83	--	--	1319.91
	4/17/2014					30.45	--	--	1319.29
	4/22/2014					30.85	--	--	1318.89
	4/29/2014					31.10	--	--	1318.64
	5/8/2014					31.29	--	--	1318.45
	5/13/2014					31.21	--	--	1318.53
	5/20/2014					31.13	--	--	1318.61
	5/29/2014					31.16	--	--	1318.58
	6/3/2014					31.14	--	--	1318.60
	6/10/2014					31.15	--	--	1318.59
	6/18/2014					31.01	--	--	1318.73
	6/24/2014					30.79	--	--	1318.95
	7/1/2014					30.42	--	--	1319.32
	7/10/2014					30.48	--	--	1319.26
	7/15/2014					30.75	--	--	1318.99
	7/22/2014					30.72	--	--	1319.02
	7/31/2014					31.07	--	--	1318.67
	8/5/2014					31.15	--	--	1318.59
	8/14/2014					31.07	--	--	1318.67
	8/20/2014					31.01	--	--	1318.73
	8/26/2014					31.12	--	--	1318.62
	9/3/2014					31.12	--	--	1318.62
	9/10/2014					31.12	--	--	1318.62
MW-12 (cont.)	9/17/2014	2.0	1349.74	43	23-43	31.12	--	--	1318.62
	9/24/2014					31.11	--	--	1318.63
	10/1/2014					31.05	--	--	1318.69
	10/8/2014					31.08	--	--	1318.66
	10/16/2014					31.05	--	--	1318.69
	10/21/2014					31.09	--	--	1318.65
	10/28/2014					31.09	--	--	1318.65
	11/4/2014					31.06	--	--	1318.68
	11/11/2014					31.12	--	--	1318.62
	11/25/2014					31.10	--	--	1318.64
	12/3/2014					31.05	--	--	1318.69
	12/9/2014					31.12	--	--	1318.62
	12/17/2014					31.11	--	--	1318.63
	12/23/2014					31.06	--	--	1318.68
	12/31/2014					31.11	--	--	1318.63
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					31.04	--	--	1318.70
	1/28/2015					31.05	--	--	1318.69
	2/4/2015					31.07	--	--	1318.67
	2/9/2015					31.06	--	--	1318.68
	3/18/2015					30.95	--	--	1318.79
	4/20/2015					31.09	--	--	1318.65
	5/22/2015					30.33	--	--	1319.41
	6/15/2015					30.86	--	--	1318.88

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-13	9/30/2013	2.0	1354.58	45	25-45	31.25	--	--	1323.33
	10/10/2013					31.59	--	--	1322.99
	10/17/2013					31.74	--	--	1322.84
	10/23/2013					31.70	--	--	1322.88
	10/31/2013					31.72	--	--	1322.86
	11/6/2013					31.61	--	--	1322.97
	11/13/2013					31.70	--	--	1322.88
	11/20/2013					30.84	--	--	1323.74
	11/26/2013					31.30	--	--	1323.28
	12/3/2013					31.02	--	--	1323.56
	12/11/2013					31.26	--	--	1323.32
	12/19/2013					31.16	--	--	1323.42
	12/27/2013					31.48	--	--	1323.10
	1/3/2014					NM	--	--	NM
	1/10/2014					31.22	--	--	1323.36
	1/16/2014					32.70	--	--	1321.88
	1/21/2014					31.94	--	--	1322.64
	1/27/2014					31.98	--	--	1322.60
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.92	--	--	1322.66
	2/26/2014					32.10	--	--	1322.48
	3/4/2014					32.05	--	--	1322.53
	3/13/2014					32.25	--	--	1322.33
	3/18/2014					32.05	--	--	1322.53
	3/27/2014					32.16	--	--	1322.42
	4/3/2014					32.41	--	--	1322.17
	4/7/2014					32.35	--	--	1322.23
	4/17/2014					32.38	--	--	1322.20
	4/22/2014					32.70	--	--	1321.88
	4/29/2014					32.91	--	--	1321.67
	5/8/2014					33.03	--	--	1321.55
	5/13/2014					32.95	--	--	1321.63
	5/20/2014					33.39	--	--	1321.19
	5/29/2014					33.34	--	--	1321.24
	6/3/2014					33.45	--	--	1321.13
	6/10/2014					33.50	--	--	1321.08
	6/18/2014					33.44	--	--	1321.14
	6/24/2014					33.16	--	--	1321.42
	7/1/2014					32.90	--	--	1321.68
	7/10/2014					32.75	--	--	1321.83
	7/15/2014					32.99	--	--	1321.59
	7/22/2014					32.46	--	--	1322.12
	7/31/2014					32.47	--	--	1322.11
	8/5/2014					32.40	--	--	1322.18
	8/14/2014					32.33	--	--	1322.25
	8/20/2014					32.35	--	--	1322.23
	8/26/2014					31.26	--	--	1323.32
	9/3/2014					32.39	--	--	1322.19
	9/10/2014					32.46	--	--	1322.12

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-13 (cont.)	9/17/2014	2.0	1354.58	45	25-45	32.42	--	--	1322.16
	9/24/2014					32.51	--	--	1322.07
	10/1/2014					32.79	--	--	1321.79
	10/8/2014					32.77	--	--	1321.81
	10/16/2014					33.00	--	--	1321.58
	10/21/2014					32.70	--	--	1321.88
	10/28/2014					32.83	--	--	1321.75
	11/4/2014					32.71	--	--	1321.87
	11/11/2014					32.60	--	--	1321.98
	11/25/2014					32.65	--	--	1321.93
	12/3/2014					32.88	--	--	1321.70
	12/9/2014					32.76	--	--	1321.82
	12/17/2014					32.95	--	--	1321.63
	12/23/2014					32.94	--	--	1321.64
	12/31/2014					32.97	--	--	1321.61
	1/7/2015					NM	--	--	NM
	1/14/2015					33.06	--	--	1321.52
	1/20/2015					32.93	--	--	1321.65
	1/28/2015					32.85	--	--	1321.73
	2/4/2015					33.07	--	--	1321.51
	2/9/2015					32.81	--	--	1321.77
	3/18/2015					33.16	--	--	1321.42
	4/20/2015					33.34	--	--	1321.24
	5/22/2015					32.56	--	--	1322.02
	6/15/2015					31.94	--	--	1322.64
MW-14	9/30/2013	2.0	1354.99	45	25-45	31.59	--	--	1323.40
	10/10/2013					31.53	--	--	1323.46
	10/17/2013					31.71	--	--	1323.28
	10/23/2013					31.74	--	--	1323.25
	10/31/2013					31.76	--	--	1323.23
	11/6/2013					NM	--	--	NM
	11/13/2013					31.48	--	--	1323.51
	11/20/2013					30.51	--	--	1324.48
	11/26/2013					31.47	--	--	1323.52
	12/3/2013					31.42	--	--	1323.57
	12/11/2013					31.73	--	--	1323.26
	12/19/2013					31.74	--	--	1323.25
	12/27/2013					31.95	--	--	1323.04
	1/3/2014					NM	--	--	NM
	1/10/2014					31.47	--	--	1323.52
	1/16/2014					32.23	--	--	1322.76
	1/21/2014					32.35	--	--	1322.64
	1/27/2014					32.40	--	--	1322.59
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					32.58	--	--	1322.41
	2/26/2014					32.71	--	--	1322.28
	3/4/2014					32.75	--	--	1322.24
	3/13/2014					32.83	--	--	1322.16
	3/18/2014					32.70	--	--	1322.29
	3/27/2014					32.79	--	--	1322.20

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	4/3/2014					32.95	--	--	1322.04
	4/7/2014					33.11	--	--	1321.88
	4/17/2014					33.56	--	--	1321.43
	4/22/2014					33.82	--	--	1321.17
	4/29/2014					NM	--	--	NM
	5/8/2014					34.85	--	--	1320.14
	5/13/2014					35.20	--	--	1319.79
	5/20/2014					34.95	--	--	1320.04
	5/29/2014					34.50	--	--	1320.49
	6/3/2014					34.55	--	--	1320.44
	6/10/2014					33.69	--	--	1321.30
	6/18/2014					33.20	--	--	1321.79
	6/24/2014					32.07	--	--	1322.92
	7/1/2014					31.96	--	--	1323.03
	7/10/2014					31.84	--	--	1323.15
	7/15/2014					31.85	--	--	1323.14
	7/22/2014					31.88	--	--	1323.11
	7/31/2014					31.94	--	--	1323.05
	8/5/2014					32.01	--	--	1322.98
	8/14/2014					32.04	--	--	1322.95
	8/20/2014					32.01	--	--	1322.98
	8/26/2014					32.15	--	--	1322.84
	9/3/2014					32.19	--	--	1322.80
	9/10/2014					32.30	--	--	1322.69
MW-14 (cont.)	9/17/2014	2.0	1354.99	45	25-45	32.38	--	--	1322.61
	9/24/2014					32.52	--	--	1322.47
	10/1/2014					32.49	--	--	1322.50
	10/8/2014					32.51	--	--	1322.48
	10/16/2014					32.40	--	--	1322.59
	10/21/2014					NM	--	--	--
	10/29/2014					32.28	--	--	1322.71
	11/4/2014					32.29	--	--	1322.70
	11/11/2014					32.36	--	--	1322.63
	11/25/2014					32.53	--	--	1322.46
	12/3/2014					32.84	--	--	1322.15
	12/9/2014					33.08	--	--	1321.91
	12/17/2014					33.33	--	--	1321.66
	12/23/2014					33.33	--	--	1321.66
	12/31/2014					33.51	--	--	1321.48
	1/7/2015					NM	--	--	NM
	1/14/2015					33.51	--	--	1321.48
	1/20/2015					33.59	--	--	1321.40
	1/28/2015					33.65	--	--	1321.34
	2/4/2015					33.88	--	--	1321.11
	2/9/2015					34.00	--	--	1320.99
	3/18/2015					33.94	--	--	1321.05
	4/20/2015					34.93	--	--	1320.06
	5/22/2015					33.53	--	--	1321.46
	6/15/2015					31.70	--	--	1323.29

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-15	9/30/2013	2.0	1351.79	45	25-45	32.64	--	--	1319.15
	10/10/2013					32.75	--	--	1319.04
	10/17/2013					32.93	--	--	1318.86
	10/23/2013					32.84	--	--	1318.95
	10/31/2013					32.77	--	--	1319.02
	11/6/2013					32.23	--	--	1319.56
	11/13/2013					31.72	--	--	1320.07
	11/20/2013					30.80	--	--	1320.99
	11/26/2013					30.96	--	--	1320.83
	12/3/2013					30.63	--	--	1321.16
	12/11/2013					30.93	--	--	1320.86
	12/19/2013					31.75	--	--	1320.04
	12/27/2013					31.05	--	--	1320.74
	1/3/2014					NM	--	--	NM
	1/10/2014					31.10	--	--	1320.69
	1/16/2014					31.30	--	--	1320.49
	1/21/2014					31.61	--	--	1320.18
	1/27/2014					31.61	--	--	1320.18
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.82	--	--	1319.97
	2/26/2014					32.03	--	--	1319.76
	3/4/2014					32.10	--	--	1319.69
	3/13/2014					37.20	--	--	1314.59
	3/18/2014					37.00	--	--	1314.79
	3/27/2014					32.29	--	--	1319.50
	4/3/2014					32.60	--	--	1319.19
	4/7/2014					32.89	--	--	1318.90
	4/17/2014					33.69	--	--	1318.10
	4/22/2014					34.24	--	--	1317.55
	4/29/2014					34.95	--	--	1316.84
	5/8/2014					35.85	--	--	1315.94
	5/13/2014					35.89	--	--	1315.90
	5/20/2014					38.63	--	--	1313.16
	5/29/2014					36.85	--	--	1314.94
	6/3/2014					NM	--	--	NM
	6/10/2014					NM	--	--	NM
	6/18/2014					35.10	--	--	1316.69
	6/24/2014					34.65	--	--	1317.14
	7/1/2014					33.78	--	--	1318.01
	7/10/2014					33.35	--	--	1318.44
	7/15/2014					33.40	--	--	1318.39
	7/22/2014					33.29	--	--	1318.50
	7/31/2014					33.89	--	--	1317.90
	8/5/2014					34.04	--	--	1317.75
	8/14/2014					34.19	--	--	1317.60
	8/20/2014					34.28	--	--	1317.51
	8/26/2014					34.44	--	--	1317.35
	9/3/2014					34.65	--	--	1317.14
	9/10/2014					34.79	--	--	1317.00

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/17/2014					34.98	--	--	1316.81
	9/24/2014					35.29	--	--	1316.50
	10/1/2014					35.51	--	--	1316.28
	10/8/2014					35.53	--	--	1316.26
	10/16/2014					35.61	--	--	1316.18
	10/21/2014					35.41	--	--	1316.38
	10/28/2014					35.16	--	--	1316.63
	11/4/2014					35.07	--	--	1316.72
	11/11/2014					35.02	--	--	1316.77
	11/25/2014					30.11	--	--	1321.68
	12/3/2014					35.37	--	--	1316.42
	12/9/2014					35.42	--	--	1316.37
MW-15 (cont.)	12/17/2014	2.0	1351.79	45	25-45	NM	--	--	NM
	12/23/2014					35.13	--	--	1316.66
	12/31/2014					30.59	--	--	1321.20
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					34.93	--	--	1316.86
	1/28/2015					34.98	--	--	1316.81
	2/4/2015					35.12	--	--	1316.67
	2/9/2015					35.02	--	--	1316.77
	3/18/2015					35.04	--	--	1316.75
	4/20/2015					36.50	--	--	1315.29
	5/22/2015					34.53	--	--	1317.26
	6/15/2015					32.34	--	--	1319.45
	9/30/2013					31.60	--	--	1320.53
	10/10/2013					30.76	--	--	1321.37
	10/17/2013					30.79	--	--	1321.34
	10/23/2013					30.78	--	--	1321.35
	10/31/2013					30.80	--	--	1321.33
	11/6/2013					30.33	--	--	1321.80
	11/13/2013					30.01	--	--	1322.12
	11/20/2013					29.63	--	--	1322.50
	11/26/2013					29.71	--	--	1322.42
	12/3/2013					29.52	--	--	1322.61
	12/11/2013					29.71	--	--	1322.42
	12/19/2013					28.51	--	--	1323.62
	12/27/2013					29.97	--	--	1322.16
MW-16	1/3/2014	2.0	1352.13	45	25-45	NM	--	--	NM
	1/10/2014					29.91	--	--	1322.22
	1/16/2014					29.70	--	--	1322.43
	1/21/2014					29.89	--	--	1322.24
	1/27/2014					29.60	--	--	1322.53
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					29.41	--	--	1322.72
	2/26/2014					29.68	--	--	1322.45
	3/4/2014					NM	--	--	NM
	3/13/2014					28.71	--	--	1323.42
	3/18/2014					29.50	--	--	1322.63
	3/27/2014					29.62	--	--	1322.51

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	4/3/2014					29.86	--	--	1322.27
	4/7/2014					30.05	--	--	1322.08
	4/17/2014					30.84	--	--	1321.29
	4/22/2014					30.95	--	--	1321.18
	4/29/2014					31.30	--	--	1320.83
	5/8/2014					31.81	--	--	1320.32
	5/13/2014					31.84	--	--	1320.29
	5/20/2014					32.91	--	--	1319.22
	5/29/2014					32.81	--	--	1319.32
	6/3/2014					32.44	--	--	1319.69
	6/10/2014					NM	--	--	NM
	6/18/2014					31.31	--	--	1320.82
	6/24/2014					29.93	--	--	1322.20
	7/1/2014					29.65	--	--	1322.48
	7/10/2014					28.95	--	--	1323.18
	7/15/2014					28.82	--	--	1323.31
	7/22/2014					28.78	--	--	1323.35
	7/31/2014					29.19	--	--	1322.94
	8/5/2014					29.20	--	--	1322.93
	8/14/2014					29.09	--	--	1323.04
	8/20/2014					29.21	--	--	1322.92
	8/26/2014					29.23	--	--	1322.90
	9/3/2014					29.38	--	--	1322.75
	9/10/2014					29.58	--	--	1322.55
MW-16 (cont.)	9/17/2014	2.0	1352.13	45	25-45	29.71	--	--	1322.42
	9/24/2014					29.95	--	--	1322.18
	10/1/2014					30.04	--	--	1322.09
	10/8/2014					30.08	--	--	1322.05
	10/16/2014					30.04	--	--	1322.09
	10/21/2014					29.69	--	--	1322.44
	10/28/2014					29.69	--	--	1322.44
	11/4/2014					30.06	--	--	1322.07
	11/11/2014					30.21	--	--	1321.92
	11/25/2014					NM	--	--	--
	12/3/2014					30.18	--	--	1321.95
	12/9/2014					30.30	--	--	1321.83
	12/17/2014					30.47	--	--	1321.66
	12/23/2014					30.38	--	--	1321.75
	12/31/2014					30.56	--	--	1321.57
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					30.71	--	--	1321.42
	1/28/2015					20.13	--	--	1332.00
	2/4/2015					30.76	--	--	1321.37
	2/9/2015					31.09	--	--	1321.04
	3/18/2015					31.80	--	--	1320.33
	4/20/2015					33.03	--	--	1319.10
	5/22/2015					31.56	--	--	1320.57
	6/15/2015					29.48	--	--	1322.65

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-17	3/18/2015		1351.69			NM	--	--	NM
	4/20/2015					33.91	--	--	1317.78
	5/22/2015					32.55	--	--	1319.14
	6/10/2015					31.15	--	--	1320.54
	6/15/2015					31.28	--	--	1320.41
MW-18	3/18/2015		1351.11			27.93	--	--	1323.18
	4/20/2015					33.51	--	--	1317.60
	5/22/2015					31.54	--	--	1319.57
	6/10/2015					30.50	--	--	1320.61
	6/15/2015					30.64	--	--	1320.47
MW-19	3/18/2015		1351.13			35.19	--	--	1315.94
	4/20/2015					33.70	--	--	1317.43
	5/22/2015					31.67	--	--	1319.46
	6/10/2015					30.24	--	--	1320.89
	6/15/2015					30.60	--	--	1320.53
									Pond Stage (feet MSL)
Stormwater Pond	8/8/2013	NA	NA	NA	NA	NA	--	--	1344.75
	8/13/2013						--	--	1344.75
	8/21/2013						--	--	1344.50
	8/28/2013						--	--	1344.25
	9/5/2013						--	--	1344.25
	9/11/2013						--	--	1344.00
	9/17/2013						--	--	1344.00
	9/23/2013						--	--	1344.50
	10/3/2013						--	--	1344.50
	10/10/2013						--	--	1344.50
	10/17/2013						--	--	1344.00
	10/23/2013						--	--	1344.50
	10/31/2013						--	--	1345.00
	11/6/2013						--	--	1344.75
	11/13/2013						--	--	1344.50
	11/20/2013						--	--	1344.50
	11/26/2013						--	--	1344.25
	12/3/2013						--	--	1344.25
	12/11/2013						--	--	1344.75
	12/19/2013						--	--	1344.25
	12/27/2013						--	--	1344.25
	1/3/2014						--	--	NM
	1/10/2014						--	--	1344.00
	1/16/2014						--	--	1344.00
	1/21/2014						--	--	1344.00
	1/27/2014						--	--	NM
	2/5/2014						--	--	NM
	2/12/2014						--	--	NM
	2/19/2014						--	--	NM
	2/26/2014						--	--	1344.00
	3/4/2014						--	--	NM
	3/13/2014						--	--	1344.00
	3/18/2014						--	--	1344.00
	3/27/2014						--	--	1343.75

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
									Pond Stage (feet MSL)
Stormwater Pond (cont.)	4/3/2014	NA	NA	NA	NA	NA	--	--	1344.00
	4/7/2014						--	--	1343.75
	4/17/2014						--	--	1343.50
	4/22/2014						--	--	1343.50
	4/29/2014						--	--	1345.00
	5/8/2014						--	--	Below gauge
	5/13/2014						--	--	Below gauge
	5/20/2014						--	--	Below gauge
	5/29/2014						--	--	1343.75
	6/3/2014						--	--	1344.50
	6/10/2014						--	--	1344.75
	6/18/2014						--	--	1344.50
	6/24/2014						--	--	1344.50
	7/1/2014						--	--	1344.60
	7/10/2014						--	--	1344.75
	7/15/2014						--	--	1344.50
	7/22/2014						--	--	1344.50
	7/31/2014						--	--	1344.50
	8/5/2014						--	--	1344.25
	8/14/2014						--	--	1344.50
	8/20/2014						--	--	1344.50
	8/26/2014						--	--	1344.25
	9/3/2014						--	--	1344.50
	9/10/2014						--	--	1344.25
	9/17/2014						--	--	1344.00
	9/24/2014						--	--	1344.00
	10/1/2014						--	--	1344.00
	10/8/2014						--	--	1344.25
	10/16/2014						--	--	1344.50
	10/21/2014						--	--	1344.50
	10/28/2014						--	--	1344.50
	11/4/2014						--	--	1344.50
	11/11/2014						--	--	1344.25
	11/25/2014						--	--	1344.00
	12/3/2014						--	--	1344.00
	12/9/2014						--	--	1344.25
	12/17/2014						--	--	1344.25
	12/23/2014						--	--	1344.25
	12/23/2014						--	--	1344.25
	12/31/2014						--	--	1344.25
	1/7/2015						--	--	NM
	1/14/2015						--	--	NM
	1/20/2015						--	--	1344.00
	1/28/2015						--	--	1343.80
	2/4/2015						--	--	1344.15
	2/9/2015						--	--	1344.10
	3/18/2015						--	--	1343.60

Please refer to notes at end of table.

Table B-1
Groundwater Gauging Data
Andover Colt Court Release Site
Andover, Kansas

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
Stormwater Pond (cont.)	4/20/2015	NA	NA	NA	NA	NA	--	--	1344.75
	5/22/2015						--	--	1344.50
	6/10/2015						--	--	1344.50
	6/15/2015						--	--	1344.75

Notes:

1. feet MSL = Feet above mean sea level (NAVD88)
2. bgs = below ground surface
3. -- = No SPH
4. DRY = Well was dry
5. Pond elevation is measured directly from a staff gauge in the pond (in 0.25-foot increments). The top of the staff gauge is 1347.59 feet above mean sea level.
6. NA = Not applicable
7. NM = Not measured

Table B-2
Separate- and Dissolved-Phase Recovery Data – 2006 N Colt Court
June 2012 through June 2013
Andover Colt Court Release Site
Andover, Kansas

Well	Date	Approximate SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	Fluid Removal Technology
Irrigation Well - 2006 N Colt Court	6/14/2012	20	220	Mobile vacuum truck/hand bailer
	6/15/2012	20	220	Mobile vacuum truck/hand bailer
	6/28/2012	10	10	Hand bailer
	7/2/2012	10	10	Hand bailer
	7/3/2012	5	5	Hand bailer
	7/5/2012	8	8	Hand bailer
	7/5/2012	5	80	Mobile vacuum truck
	8/15/2012	15	15	Hand bailer
	8/20/2012	5	5	Hand bailer
	11/8/2012	15	15	Hand bailer
	11/15/2012	15	15	Hand bailer
	11/21/2012	15	15	Hand bailer
	11/30/2012	7	7	Hand bailer
	12/7/2012	4	8	Hand bailer
	12/14/2012	2	4	Hand bailer
	12/21/2012	2	4	Hand bailer
	12/28/2012	1.5	4	Hand bailer
	1/4/2013	1	2	Hand bailer
	1/17/2013	1.5	4	Hand bailer
	2/1/2013	2	4	Hand bailer
	2/13/2013	3	5	Hand bailer
	3/15/2013	10	11	Hand bailer
	3/20/2013	5	5	Hand bailer
	4/5/2013	8	9	Hand bailer
	4/12/2013	1	5	Hand bailer
	4/25/2013	4	6	Hand bailer
	5/10/2013	9	11	Hand bailer
	5/17/2013	4	5	Hand bailer
	5/21/2013	1	3	Hand bailer
	6/5/2013	1	3	Hand bailer
Total Fluids Recovered	--	**210**	**716**	--

Notes:

1. SPH = Separate-phase hydrocarbons.
2. The SPH volume removed using vacuum technology was calculated by measuring the SPH thicknesses in the well before and after each event and estimating the volume of SPH in the corresponding gravel pack interval
3. The volume of SPH removed by hand bailing was measured.
4. NM = Not measured.

Table B-3
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
June 2013 through December 2014
Andover Colt Court Release Site
Andover, Kansas

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
6/12/2013	42.19	41.38	0.81	8.0	NM	0.00	Mobile vacuum truck and hand bailing
6/21/2013	43.73	43.40	0.33	0.8	NM	0.00	Mobile vacuum truck
6/26/2013	43.59	43.16	0.43	1.1	NM	0.00	Mobile vacuum truck
7/2/2013	49.31	49.01	0.30	0.8	NM	0.00	Mobile vacuum truck
7/12/2013	55.11	54.82	0.29	0.7	NM	0.00	Mobile vacuum truck
7/17/2013	55.10	54.88	0.22	0.5	NM	0.01	Mobile vacuum truck
8/1/2013	46.35	46.15	0.20	0.5	NM	0.01	Mobile vacuum truck
8/8/2013	41.49	–	0.00	0.0	NM	0.00	Mobile vacuum truck
8/13/2013	39.10	–	0.00	0.0	NM	0.00	Mobile vacuum truck
8/20/2013	37.40	–	0.00	0.0	NM	0.00	Mobile vacuum truck
8/28/2013	43.81	–	0.00	0.0	NM	0.0	Mobile vacuum truck
9/5/2013	47.86	–	0.00	0.0	NM	0.0	Mobile vacuum truck
9/11/2013	50.61	–	0.00	0.0	NM	0.0	Mobile vacuum truck
9/17/2013	49.06	–	0.00	0.0	NM	0.0	Mobile vacuum truck
9/23/2013	48.97	–	0.00	0.0	NM	0.0	Mobile vacuum truck
9/30/2013	48.63	–	0.00	0.0	NM	0.0	Mobile vacuum truck
10/10/2013	49.16	49.01	0.15	0.3	NM	0.0	Mobile vacuum truck
10/17/2013	48.40	–	0.00	0.0	NM	0.0	Mobile vacuum truck
10/24/2013	48.71	–	0.00	0.0	NM	0.0	Mobile vacuum truck
10/31/2013	44.86	–	0.00	0.0	NM	0.0	Mobile vacuum truck
11/6/2013	43.66	–	0.00	0.0	NM	0.0	Mobile vacuum truck
11/13/2013	41.82	–	0.00	0.0	NM	0.0	Mobile vacuum truck
11/20/2013	40.60	–	0.00	0.0	NM	0.0	Mobile vacuum truck
11/26/2013	40.30	40.19	0.11	0.3	NM	0.0	Mobile vacuum truck
12/3/2013	39.44	sheen	0.00	0.0	NM	0.0	Mobile vacuum truck
12/11/2013	39.63	sheen	0.00	0.0	NM	0.0	Mobile vacuum truck
12/19/2013	39.23	–	0.00	0.0	NM	0.0	Mobile vacuum truck
12/27/2013	39.38	39.34	0.04	0.1	NM	0.0	Mobile vacuum truck

Please refer to notes at end of table.

Table B-3
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
June 2013 through December 2014
Andover Colt Court Release Site
Andover, Kansas

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
1/3/2014	NM	NM	NM	–	50.0	NM	Mobile vacuum truck
1/10/2014	39.89	–	0.00	0.0	50.0	0.0	Mobile vacuum truck
1/16/2014	39.83	–	0.00	0.0	50.0	0.0	Mobile vacuum truck
1/21/2014	39.34	–	0.00	0.0	75.0	0.0	Mobile vacuum truck
1/30/2014	38.85	–	0.00	0.0	50.0	0.0	Mobile vacuum truck
2/12/2014	39.44	39.43	0.01	0.0	100.0	0.0	Mobile vacuum truck
2/19/2014	39.37	39.36	0.01	0.0	75.0	0.0	Mobile vacuum truck
2/26/2014	39.64	39.60	0.04	0.1	100.0	0.0	Mobile vacuum truck
3/4/2014	39.76	39.73	0.03	0.1	75.0	0.0	Mobile vacuum truck
3/13/2014	39.89	39.86	0.03	0.1	100.0	0.0	Mobile vacuum truck
3/18/2014	39.65	39.61	0.04	0.1	50.0	0.0	Mobile vacuum truck
3/27/2014	39.73	39.69	0.04	0.1	100.0	0.0	Mobile vacuum truck
4/3/2014	40.46	40.42	0.04	0.1	50.0	0.0	Mobile vacuum truck
4/8/2014	41.14	41.11	0.03	0.1	50.0	0.0	Mobile vacuum truck
4/9/2014	41.47	41.43	0.04	0.1	50.0	0.0	Mobile vacuum truck
4/10/2014	41.82	41.76	0.06	0.2	50.0	0.0	Mobile vacuum truck
4/11/2014	43.25	43.21	0.04	0.1	50.0	0.0	Mobile vacuum truck
4/17/2014	43.17	43.13	0.04	0.1	25.0	0.0	Mobile vacuum truck
4/22/2014	44.95	44.90	0.05	0.1	25.0	0.0	Mobile vacuum truck
4/29/2014	46.43	46.36	0.07	0.2	25.0	0.0	Mobile vacuum truck
5/8/2014	51.28	51.15	0.13	0.3	25.0	0.0	Mobile vacuum truck
5/13/2014	51.83	51.66	0.17	0.4	50.0	0.0	Mobile vacuum truck
5/20/2014	54.12	53.94	0.18	0.4	25.0	0.0	Mobile vacuum truck
5/21/2014	55.28	55.11	0.17	0.4	25.0	0.0	Mobile vacuum truck
5/29/2014	52.24	52.06	0.18	0.4	0.0	0.0	Mobile vacuum truck
5/30/2014	53.32	53.13	0.19	0.5	0.0	0.0	Mobile vacuum truck
6/2/2014	52.65	52.50	0.15	0.4	75.0	0.0	Mobile vacuum truck
6/3/2014	52.63	52.49	0.14	0.4	25.0	0.0	Mobile vacuum truck
6/10/2014	48.48	48.31	0.17	0.4	50.0	0.0	Mobile vacuum truck

Please refer to notes at end of table.

Table B-3
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
June 2013 through December 2014
Andover Colt Court Release Site
Andover, Kansas

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
6/11/2014	49.10	48.95	0.15	0.4	25.0	0.0	Mobile vacuum truck
6/18/2014	46.34	46.20	0.14	0.4	25.0	0.0	Mobile vacuum truck
6/19/2014	47.60	47.43	0.17	0.4	0.0	0.0	Mobile vacuum truck
6/24/2014	47.80	47.67	0.13	0.3	25.0	0.0	Mobile vacuum truck
6/25/2014	46.94	46.81	0.13	0.3	25.0	0.0	Mobile vacuum truck
7/1/2014	44.64	44.50	0.14	0.3	0.0	0.0	Mobile vacuum truck
7/2/2014	44.78	44.64	0.14	0.4	0.0	0.0	Mobile vacuum truck
7/10/2014	46.12	46.03	0.09	0.2	10.0	0.0	Mobile vacuum truck
7/11/2014	47.02	46.91	0.11	0.3	0.0	0.0	Mobile vacuum truck
7/15/2014	46.41	46.33	0.08	0.1	50.0	0.0	Mobile vacuum truck
7/16/2014	47.55	47.41	0.14	0.3	50.0	0.0	Mobile vacuum truck
7/22/2014	48.32	48.21	0.11	0.3	25.0	0.0	Mobile vacuum truck
7/23/2014	49.38	49.27	0.11	0.3	25.0	0.0	Mobile vacuum truck
7/31/2014	49.18	49.06	0.12	0.3	25.0	0.0	Mobile vacuum truck
8/1/2014	51.04	-	0.00	0.0	25.0	0.0	Mobile vacuum truck
8/5/2014	52.05	51.92	0.13	0.1	25.0	0.1	Mobile vacuum truck
8/6/2014	52.92	52.79	0.13	0.3	25.0	sheen	Mobile vacuum truck
8/14/2015	52.94	52.79	0.15	0.2	25.0	0.1	Mobile vacuum truck
8/15/2014	51.40	51.31	0.09	0.2	25.0	0.0	Mobile vacuum truck
8/20/2014	54.23	54.09	0.14	0.3	25.0	0.0	Mobile vacuum truck
8/21/2014	55.02	54.98	0.04	0.1	0.0	0.0	Mobile vacuum truck
8/26/2014	58.27	58.20	0.07	0.1	25.0	0.0	Mobile vacuum truck
8/27/2014	58.57	58.39	0.18	0.4	25.0	0.0	Mobile vacuum truck
9/3/2014	57.48	57.29	0.19	0.4	25.0	0.0	Mobile vacuum truck
9/4/2014	58.28	58.22	0.06	0.2	25.0	0.0	Mobile vacuum truck
9/10/2014	58.12	57.94	0.18	0.4	0.0	0.0	Mobile vacuum truck
9/11/2014	59.15	58.96	0.19	0.4	0.0	0.0	Mobile vacuum truck

Please refer to notes at end of table.

Table B-3
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
June 2013 through December 2014
Andover Colt Court Release Site
Andover, Kansas

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
9/16/2014	58.14	57.98	0.16	0.4	0.0	0.0	Mobile vacuum truck
9/17/2014	58.95	58.75	0.20	0.5	25.0	0.0	Mobile vacuum truck
9/24/2014	59.17	58.95	0.22	0.5	0.0	sheen	Mobile vacuum truck
9/25/2014	60.58	60.35	0.23	0.6	0.0	0.0	Mobile vacuum truck
10/1/2014	60.51	60.30	0.21	0.4	25.0	0.1	Mobile vacuum truck
10/2/2014	60.53	60.47	0.06	0.2	25.0	0.0	Mobile vacuum truck
10/8/2014 (a.m.)	60.39	60.18	0.21	0.3	25.0	0.1	Mobile vacuum truck
10/8/2014 (p.m.)	60.24	60.12	0.12	0.2	25.0	0.1	Mobile vacuum truck
10/17/2014	--	--	--	--	25.0	--	Mobile vacuum truck
10/18/2014	56.69	56.56	0.13	0.3	25.0	0.0	Mobile vacuum truck
10/21/2014	56.52	56.35	0.17	0.2	25.0	0.1	Mobile vacuum truck
10/22/2014	56.62	56.43	0.19	0.3	25.0	0.1	Mobile vacuum truck
10/30/2014	56.75	56.43	0.32	0.5	25.0	0.1	Mobile vacuum truck
11/4/2014	56.21	56.09	0.12	0.1	25.0	0.1	Mobile vacuum truck
11/11/2014	54.45	54.35	0.10	0.2	25.0	0.0	Mobile vacuum truck
11/18/2014	53.11	53.00	0.11	0.3	25.0	0.0	Mobile vacuum truck
11/25/2014	50.35	50.23	0.12	0.3	25.0	0.0	Mobile vacuum truck
12/3/2014	49.23	49.12	0.11	0.2	50.0	0.0	Mobile vacuum truck
12/3/2014	49.23	49.12	0.11	0.2	50.0	0.01	Mobile vacuum truck
12/9/2014	48.71	48.61	0.10	0.2	50.0	0.03	Mobile vacuum truck
12/17/2014	47.93	47.88	0.05	0.1	25.0	0.01	Mobile vacuum truck
12/23/2014	47.13	47.06	0.07	0.2	25.0	0.00	Mobile vacuum truck
12/31/2014	47.03	46.98	0.05	0.1	50.0	0.00	Mobile vacuum truck
1/7/2015	46.87	46.78	0.09	0.2	50.0	0.01	Mobile vacuum truck
1/14/2015	46.32	46.29	0.03	0.0	0.0	0.03	None
1/20/2015	46.27	--	0.00	0.0	0.0	0.00	None
1/28/2015	47.34	47.27	0.07	0.0	0.0	0.07	None

Please refer to notes at end of table.

Table B-3
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
June 2013 through December 2014
Andover Colt Court Release Site
Andover, Kansas

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
2/4/2015	45.92	45.84	0.08	0.0	0.0	0.08	None
2/9/2015	45.59	45.55	0.04	0.1	50.0	0.01	Mobile vacuum truck
3/18/2015	45.55	–	0.00	0.3	0.3	0.00	SPH Skimmer
4/20/2015	44.49	–	0.00	0.0	0.0	0.00	SPH Skimmer
5/22/2015	45.13	–	–	0.0	0.0	0.00	SPH Skimmer
6/10/2015	45.43	–	0.00	0.0	0.0	0.00	SPH Skimmer
6/16/2015	42.38	–	0.00	0.0	0.0	0.00	SPH Skimmer
			Total Fluids Recovered	32	2710		

Notes:

1. SPH = Separate-phase hydrocarbons.
2. The SPH volume removed using vacuum technology was calculated by measuring the SPH thicknesses in the well before and after each event and estimating the volume of SPH in the corresponding gravel pack interval.
3. NM = Not measured.
4. – = No SPH.

Appendix C

Laboratory Analytical Report and QA/QC Report

Appendix C – Laboratory Analytical Reports and Quality Assurance/Quality Control Results Summary

1.0 Introduction

This appendix documents the results of a quality assurance (QA) review of the analytical data for groundwater samples that were collected during groundwater monitoring activities that were performed in September and October 2015 at the Quail Crossing neighborhood (the Neighborhood) in Andover, Kansas (Site).

The data reviewed herein include are representative of: (1) groundwater samples collected from monitoring wells; and (2) groundwater samples collected from Neighborhood irrigation wells. The groundwater samples collected were analyzed by ALS Environmental (ALS) of Houston, Texas.

The QA review outlines the applicable quality control criteria utilized during the data review process, as well as any deviations from those criteria. Examination and validation of the laboratory summary reports include:

- Analytical methods;
- Reporting limits;
- Detection limits and estimated concentrations;
- Sample holding times;
- Custody records and sample receipt;
- Spikes, blanks, and surrogates; and
- Duplicates.

The QA review did not include a review of calibration or raw data. Section 2.0 lists the analytical methods used in sample analysis. Section 3.0 defines the QA terms used in this report. Section 4.0 provides the QA results for each sampling event.

2.0 Analytical Methods

2.1 Groundwater Analyses

Chemical analyses performed on groundwater samples consisted of the following:

- Volatile petroleum hydrocarbons as gasoline (GRO) by IA OA-1; and
- 1,2,4-Trimethylbenzene, 1,2-dichloroethane, 1,3,5-trimethylbenzene, 2-butanone, cyclohexane, isopropylbenzene methylcyclohexane BTEX (benzene, toluene, ethylbenzene, total xylenes), naphthalene, n-butylbenzene, n-propylbenzene by U.S. Environmental Protection Agency (EPA) Method SW846 8260.

Appendix C – Laboratory Analytical Reports and Quality Assurance/Quality Control Results Summary

3.0 Quality Assurance Objectives and Review Procedures

The general QA objectives for this project were to develop and implement procedures for obtaining, evaluating, and confirming the usability of environmental data of a specified quality. To collect such information, analytical data must have an appropriate degree of accuracy and reproducibility, samples collected must be representative of actual field conditions, and samples must be collected and analyzed using unbroken chain-of-custody (COC) procedures.

Reporting limits and analytical results were compared to action levels for each parameter. Precision, accuracy, representativeness, completeness, and comparability parameters used to indicate data quality are defined below.

Reporting Limits. Method reporting limits (MRLs) are set by the laboratory and are based on instrumentation abilities, sample matrix, and suggested MRLs by the EPA or KDHE. In some cases, the MRLs are raised due to high concentrations of analytes in the samples or matrix interferences. MRLs are generally consistent with industry standards and below promulgated regulatory standards when possible.

Detection Limits and Estimated Concentrations. The method detection limit (MDL) is the lowest quantity of a substance that can be distinguished from the absence of that substance within a stated confidence limit. The MDL is estimated from the mean of the blank, the standard deviation of the blank and some confidence factor.

Holding Times. Holding times are the length of time a sample can be stored after collection and prior to analysis without significantly affecting the analytical results. Holding times vary by analyte, sample matrix, and analytical methodology.

Custody Records and Sample Receipt. COC refers to the document or paper trail showing the collection, custody, control, transfer, analysis, and disposition of physical materials. The sample receipt identifies the condition of samples upon arrival at the analytical laboratory.

Method Blanks. A method, or laboratory, blank is a sample prepared in the laboratory along with the field samples and analyzed for the same parameters at the same time. It is used to assess for laboratory introduced contamination.

Laboratory Control Sample. A laboratory control sample (LCS) is analyzed by the laboratory to assess the accuracy of the analytical equipment. The sample is prepared from an analyte-free matrix that is then spiked with known levels of the constituents of interest (i.e., a standard). The concentrations are measured and the results compared to the known spiked levels. This comparison is expressed as percent recovery.

Laboratory Control Sample Duplicate. A laboratory control sample duplicate [LCSD]) is prepared and analyzed along with the LCS. The LCS and LCSD data are compared to assess the precision of the analytical method (i.e., the relative percent difference [RPD]).

Matrix Spike Analyses. Matrix spike (MS) analyses are performed on samples submitted to the laboratory that are of the same matrix as the field sample. The MS sample is spiked with known levels of the constituents of interest and analyzed to assess the potential for matrix interference with recovery or detection of the constituents of interest and the accuracy of the determination. The spiked sample results are compared to the expected result (i.e., sample concentration plus spike amount) and reported as percent recovery.

Lab Duplicate. A laboratory duplicate is a second analysis of a QA/QC sample, which serves as an internal check on laboratory quality as well as potential variability of the sample matrix. The laboratory duplicate is analyzed and compared to the primary sample results to assess the precision of the analytical method. This comparison can be expressed by the RPD between the primary and duplicate samples.

Surrogate Recovery. Surrogates are organic compounds that are similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis. Surrogate recoveries for environmental samples are used to evaluate matrix interference on a sample-specific basis.

Field Duplicate. A field duplicate is a second field sample collected from a sampling location (e.g.., a well or soil core). Field duplicate samples serve as a check on laboratory quality as well as potential variability of the sample matrix. The field duplicate is analyzed and compared to the primary sample to assess the precision of the analytical method. This comparison can be expressed by the RPD between the original and duplicate samples.

Trip Blanks. A trip blank is a sample prepared in the laboratory that is shipped along with the sample bottles to the field, kept with the soil and groundwater samples during collection, and shipped back to the laboratory with the field samples. The trip blank is analyzed for constituents of interest, along with the primary samples, to assess if detected contaminants may have been the result of contamination of the samples during transport or storage.

Equipment Blank. An equipment blank is a sample collected in the field along with the primary samples and analyzed for the same parameters. Equipment blanks are collected by pouring deionized water over or through decontaminated equipment used to collect the samples, into laboratory supplied containers. The equipment blank is used to assess if field samples may have been affected by inadequate decontamination of field equipment.

Appendix C – Laboratory Analytical Reports and Quality Assurance/Quality Control Results Summary

4.0 QA/QC Review Results

4.1 Groundwater Lab Report HS15090731

The data reviewed includes groundwater samples collected from monitoring wells on September 15 and 16, 2015. Samples were analyzed for GRO and volatile organic compounds (VOCs) using the methods listed in Section 2.1.

Reporting Limits. MRLs were not elevated for samples. No data are flagged.

Detection Limits and Estimated Concentrations. MDLs and concentrations were not reported as estimates.

Holding Times. The samples were analyzed within applicable holding times.

Custody Records and Sample Receipt. The samples were received below the required temperature of 4°C and consistent with the accompanying COC.

Method Blanks. No compounds were detected in the method blanks. No data are flagged.

Laboratory Control Sample. Percent recoveries of the LCS were within control limits.

Laboratory Control Sample Duplicate. Percent recoveries of the LCSD were within control limits. LCS/LCSD RPDs were within control limits for reported constituents.

Matrix Spike Analyses. With the exception of the MSD for the MW-1 sample, the RPD for the MS and MS duplicate (MSD) were within control limits. The MS recovery was outside laboratory control limits for toluene; and the MSD recovery was outside laboratory control limits for toluene and xylenes. The primary sample for MW-1 contained a sample concentration that was greater than four times the amount spiked and was above the quantitation range for benzene and toluene. The associated LCS recovery was within control limits, providing quality control for the batch. Accordingly, the data are not flagged.

Lab Duplicate. No lab duplicate was analyzed.

Surrogate Recovery. Surrogate recoveries were within control limits for samples.

Field Duplicate. Field duplicate samples were collected from monitoring wells MW-3 and MW-18. Analytes detected were within RPD limits with the following exceptions: (1) 1,2,4 trimethylbenzene, naphthalene, and n-Butylbenzene in sample MW-3; and (2) 1,2,4 trimethylbenzene and n-Butylbenzene in sample MW-18.

Accordingly, those data are flagged to indicate that the constituent concentrations are estimated. Where applicable, report figures present the higher estimated concentration.

Trip Blank. Two trip blanks were analyzed; no compounds were detected in those samples. No data are flagged.

Equipment Blank. No reusable equipment was utilized during this sampling event; therefore, an equipment blank was not collected.

Conclusion. In conclusion, the overall QA objectives have been met and the data are of adequate quality for use in this project.

4.2 Groundwater Lab Report HS15090740

The data reviewed includes groundwater samples collected from irrigation wells on September 14, 15, and 16, 2015. Samples were analyzed for GRO and VOCs using the methods listed in Section 2.1.

Reporting Limits. MRLs were not elevated for samples. No data are flagged.

Detection Limits and Estimated Concentrations. MDLs and concentrations were not reported as estimates.

Holding Times. The samples were analyzed within applicable holding times.

Custody Records and Sample Receipt. The samples were received below the required temperature of 4°C and consistent with the accompanying COC.

Method Blanks. No compounds were detected in the method blanks. No data are flagged.

Laboratory Control Sample. Percent recoveries of the LCS were within control limits.

Laboratory Control Sample Duplicate. Percent recoveries of the LCSD were within control limits. LCS/LCSD RPDs were within control limits for reported constituents.

Matrix Spike Analyses. For the sample collected at 2006 Colt Court, the MS recoveries were outside of control limits for 1,3,5-Trimethylbenzene and n-Propylbenzene, and the MSD recoveries were outside control limits for cyclohexane and methlycyclohexane. For the sample collected at and 1009 W Mountain, the MSD recoveries were outside of control limits for cyclohexane. Other MS/MSD recoveries were within

lab control limits. The associated LCS recovery was within control limits, providing quality control for the batch. Accordingly, the data are not flagged.

Lab Duplicate. No lab duplicate was analyzed.

Surrogate Recovery. Surrogate recoveries were within control limits for samples.

Field Duplicates. A field duplicate was collected from the irrigation well at 2005 N Colt Court. Detected constituents were within RPD limits.

Trip Blank. One trip blank was analyzed; no compounds were detected in the trip blank. No data are flagged.

Equipment Blank. No reusable equipment was utilized during this sampling event; therefore, an equipment blank was not collected.

Conclusion. In conclusion, the overall QA objectives have been met and the data are of adequate quality for use in this project.

4.3 Groundwater Lab Report HS15060869

The data reviewed includes groundwater samples collected on October 22. Samples were analyzed for GRO and VOCs using the methods listed in Section 2.1.

Reporting Limits. MRLs were not elevated for samples. No data are flagged.

Detection Limits and Estimated Concentrations. MDLs and concentrations were not reported as estimates.

Holding Times. The samples were analyzed within all applicable holding times.

Custody Records and Sample Receipt. The samples were received within the required temperature limit of 4°C. The samples were consistent with the accompanying COC.

Method Blanks. No compounds were detected in the method blanks. No data are flagged.

Laboratory Control Sample. Percent recoveries of the LCS were within control limits.

Laboratory Control Sample Duplicate. Percent recoveries of the LCSD were within control limits. LCS/LCSD RPDs were within control limits for reported constituents.

Matrix Spike Analyses. The MS/MSD recoveries were within laboratory control limits.

Lab Duplicate. No lab duplicate was analyzed.

Surrogate Recovery. Surrogate recoveries were within control limits for samples.

Field Duplicate. A field duplicates was not collected.

Trip Blank. No compounds were detected in the trip blanks. No data are flagged.

Equipment Blank. No reusable equipment was utilized during this sampling event; therefore, an equipment blank was not collected.

Conclusion. In conclusion, the overall QA objectives have been met for the GRO and VOC analyses and the data are of adequate quality for use in this project.

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September 25, 2015

Samuel Jackson
Apex Companies
3015 SW First Avenue
Portland, OR 97201

Work Order: **HS15090731**

Laboratory Results for: **E3CE-0065 Andover Release Site GWM**

Dear Samuel,

ALS Environmental received 23 sample(s) on Sep 17, 2015 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Erica H Padilla

Generated By: Jumoke.Lawal
Erica Padilla
PM

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
Work Order: HS15090731

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15090731-01	MW-1	Water		15-Sep-2015 09:56	17-Sep-2015 08:34	☐
HS15090731-02	MW-17	Water		15-Sep-2015 10:24	17-Sep-2015 08:34	☐
HS15090731-03	MW-7	Water		15-Sep-2015 10:48	17-Sep-2015 08:34	☐
HS15090731-04	MW-6	Water		15-Sep-2015 11:19	17-Sep-2015 08:34	☐
HS15090731-05	MW-18	Water		15-Sep-2015 12:07	17-Sep-2015 08:34	☐
HS15090731-06	MW-19	Water		15-Sep-2015 12:47	17-Sep-2015 08:34	☐
HS15090731-07	MW-3	Water		15-Sep-2015 14:15	17-Sep-2015 08:34	☐
HS15090731-08	MW-9	Water		15-Sep-2015 14:52	17-Sep-2015 08:34	☐
HS15090731-09	MW-10	Water		15-Sep-2015 15:23	17-Sep-2015 08:34	☐
HS15090731-10	MW-12	Water		15-Sep-2015 16:00	17-Sep-2015 08:34	☐
HS15090731-11	MW-15	Water		16-Sep-2015 10:07	17-Sep-2015 08:34	☐
HS15090731-12	MW-16	Water		16-Sep-2015 10:34	17-Sep-2015 08:34	☐
HS15090731-13	MW-11	Water		16-Sep-2015 11:02	17-Sep-2015 08:34	☐
HS15090731-14	MW-4	Water		16-Sep-2015 11:32	17-Sep-2015 08:34	☐
HS15090731-15	MW-5	Water		16-Sep-2015 12:07	17-Sep-2015 08:34	☐
HS15090731-16	MW-2	Water		16-Sep-2015 12:47	17-Sep-2015 08:34	☐
HS15090731-17	MW-8	Water		16-Sep-2015 13:27	17-Sep-2015 08:34	☐
HS15090731-18	MW-13	Water		16-Sep-2015 14:51	17-Sep-2015 08:34	☐
HS15090731-19	MW-14	Water		16-Sep-2015 15:23	17-Sep-2015 08:34	☐
HS15090731-20	DUP-1	Water		15-Sep-2015 00:00	17-Sep-2015 08:34	☐
HS15090731-21	DUP-2	Water		15-Sep-2015 00:00	17-Sep-2015 08:34	☐
HS15090731-22	Trip Blank 090915-25	Water		15-Sep-2015 00:00	17-Sep-2015 08:34	☐
HS15090731-23	Trip Blank 090915-11	Water		15-Sep-2015 00:00	17-Sep-2015 08:34	☐

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
Work Order: HS15090731

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R261732,R261782

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R261499

Sample ID: **MW-1 (HS15090731-01MS)**
- The MS and/or MSD recovery was below the lower control limit.

Batch ID: R261401,R261598,R261700

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R261693

Sample ID: **DUP-2 (HS15090731-21)**
- Lowest practical dilution due to matrix.

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-1	Lab ID:HS15090731-01
Collection Date:	15-Sep-2015 09:56	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.61**		**0.010**	**mg/L**	10	19-Sep-2015 03:23
1,2-Dichloroethane	ND		0.0010	mg/L	1	19-Sep-2015 02:07
1,3,5-Trimethylbenzene	**0.26**		**0.010**	**mg/L**	10	19-Sep-2015 03:23
2-Butanone	**0.032**		**0.0020**	**mg/L**	1	19-Sep-2015 02:07
Benzene	**1.3**		**0.050**	**mg/L**	50	22-Sep-2015 00:09
Cyclohexane	**0.14**		**0.0010**	**mg/L**	1	19-Sep-2015 02:07
Ethylbenzene	**0.42**		**0.010**	**mg/L**	10	19-Sep-2015 03:23
Isopropylbenzene	**0.0095**		**0.0010**	**mg/L**	1	19-Sep-2015 02:07
Methylcyclohexane	**0.019**		**0.0010**	**mg/L**	1	19-Sep-2015 02:07
Naphthalene	**0.065**		**0.0010**	**mg/L**	1	19-Sep-2015 02:07
n-Butylbenzene	**0.017**		**0.0010**	**mg/L**	1	19-Sep-2015 02:07
n-Propylbenzene	**0.020**		**0.0010**	**mg/L**	1	19-Sep-2015 02:07
Toluene	**2.4**		**0.050**	**mg/L**	50	22-Sep-2015 00:09
Xylenes, Total	**4.4**		**0.030**	**mg/L**	10	19-Sep-2015 03:23
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*19-Sep-2015 02:07*
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*10*	*19-Sep-2015 03:23*
Surr: 1,2-Dichloroethane-d4	*98.5*		*71-125*	*%REC*	*50*	*22-Sep-2015 00:09*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*19-Sep-2015 02:07*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*10*	*19-Sep-2015 03:23*
Surr: 4-Bromofluorobenzene	*98.6*		*70-125*	*%REC*	*50*	*22-Sep-2015 00:09*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*19-Sep-2015 02:07*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*10*	*19-Sep-2015 03:23*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*50*	*22-Sep-2015 00:09*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*19-Sep-2015 02:07*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*10*	*19-Sep-2015 03:23*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*50*	*22-Sep-2015 00:09*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**67**		**2.5**	**mg/L**	50	23-Sep-2015 13:12
Surr: 4-Bromofluorobenzene	*118*		*70-130*	*%REC*	*50*	*23-Sep-2015 13:12*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-17	Lab ID:HS15090731-02
Collection Date:	15-Sep-2015 10:24	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.45**		**0.010**	**mg/L**	10	19-Sep-2015 08:51
1,2-Dichloroethane	ND		0.0010	mg/L	1	19-Sep-2015 08:26
1,3,5-Trimethylbenzene	**0.11**		**0.0010**	**mg/L**	1	19-Sep-2015 08:26
2-Butanone	**0.0061**		**0.0020**	**mg/L**	1	19-Sep-2015 08:26
Benzene	**0.71**		**0.010**	**mg/L**	10	19-Sep-2015 08:51
Cyclohexane	**0.23**		**0.010**	**mg/L**	10	19-Sep-2015 08:51
Ethylbenzene	**0.59**		**0.010**	**mg/L**	10	19-Sep-2015 08:51
Isopropylbenzene	**0.026**		**0.0010**	**mg/L**	1	19-Sep-2015 08:26
Methylcyclohexane	**0.031**		**0.0010**	**mg/L**	1	19-Sep-2015 08:26
Naphthalene	**0.068**		**0.0010**	**mg/L**	1	19-Sep-2015 08:26
n-Butylbenzene	ND		0.0010	mg/L	1	19-Sep-2015 08:26
n-Propylbenzene	**0.061**		**0.0010**	**mg/L**	1	19-Sep-2015 08:26
Toluene	**0.46**		**0.010**	**mg/L**	10	19-Sep-2015 08:51
Xylenes, Total	**1.0**		**0.030**	**mg/L**	10	19-Sep-2015 08:51
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*19-Sep-2015 08:26*
Surr: 1,2-Dichloroethane-d4	*111*		*71-125*	*%REC*	*10*	*19-Sep-2015 08:51*
Surr: 4-Bromofluorobenzene	*98.9*		*70-125*	*%REC*	*1*	*19-Sep-2015 08:26*
Surr: 4-Bromofluorobenzene	*97.7*		*70-125*	*%REC*	*10*	*19-Sep-2015 08:51*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*19-Sep-2015 08:26*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*10*	*19-Sep-2015 08:51*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*19-Sep-2015 08:26*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*10*	*19-Sep-2015 08:51*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**13**		**0.50**	**mg/L**	10	23-Sep-2015 18:36
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*10*	*23-Sep-2015 18:36*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:	HS15090731
Sample ID:	MW-7	Lab ID:	HS15090731-03
Collection Date:	15-Sep-2015 10:48	Matrix:	Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.0027**		**0.0010**	**mg/L**	1	18-Sep-2015 03:29
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 03:29
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:29
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 03:29
Benzene	**0.0029**		**0.0010**	**mg/L**	1	18-Sep-2015 03:29
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:29
Ethylbenzene	**0.0031**		**0.0010**	**mg/L**	1	18-Sep-2015 03:29
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:29
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:29
Naphthalene	**0.0024**		**0.0010**	**mg/L**	1	18-Sep-2015 03:29
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:29
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:29
Toluene	**0.0088**		**0.0010**	**mg/L**	1	18-Sep-2015 03:29
Xylenes, Total	**0.014**		**0.0030**	**mg/L**	1	18-Sep-2015 03:29
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 03:29*
Surr: 4-Bromofluorobenzene	*95.4*		*70-125*	*%REC*	*1*	*18-Sep-2015 03:29*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 03:29*
Surr: Toluene-d8	*104*		*75-125*	*%REC*	*1*	*18-Sep-2015 03:29*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.11**		**0.050**	**mg/L**	1	23-Sep-2015 19:11
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*23-Sep-2015 19:11*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-6	Lab ID:HS15090731-04
Collection Date:	15-Sep-2015 11:19	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.0017**		**0.0010**	**mg/L**	1	18-Sep-2015 03:54
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 03:54
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:54
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 03:54
Benzene	**0.0022**		**0.0010**	**mg/L**	1	18-Sep-2015 03:54
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:54
Ethylbenzene	**0.0022**		**0.0010**	**mg/L**	1	18-Sep-2015 03:54
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:54
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:54
Naphthalene	**0.0020**		**0.0010**	**mg/L**	1	18-Sep-2015 03:54
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:54
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:54
Toluene	**0.0076**		**0.0010**	**mg/L**	1	18-Sep-2015 03:54
Xylenes, Total	**0.010**		**0.0030**	**mg/L**	1	18-Sep-2015 03:54
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*18-Sep-2015 03:54*
Surr: 4-Bromofluorobenzene	*97.6*		*70-125*	*%REC*	*1*	*18-Sep-2015 03:54*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 03:54*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*18-Sep-2015 03:54*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.24**		**0.050**	**mg/L**	1	23-Sep-2015 19:26
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*23-Sep-2015 19:26*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-18	Lab ID:HS15090731-05
Collection Date:	15-Sep-2015 12:07	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.069**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
1,2-Dichloroethane	ND		0.0010	mg/L	1	19-Sep-2015 09:16
1,3,5-Trimethylbenzene	**0.019**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
2-Butanone	ND		0.0020	mg/L	1	19-Sep-2015 09:16
Benzene	**0.26**		**0.010**	**mg/L**	10	19-Sep-2015 09:41
Cyclohexane	**0.036**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
Ethylbenzene	**0.12**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
Isopropylbenzene	**0.0040**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
Methylcyclohexane	**0.0036**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
Naphthalene	**0.019**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
n-Butylbenzene	ND		0.0010	mg/L	1	19-Sep-2015 09:16
n-Propylbenzene	**0.0089**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
Toluene	**0.090**		**0.0010**	**mg/L**	1	19-Sep-2015 09:16
Xylenes, Total	**0.29**		**0.0030**	**mg/L**	1	19-Sep-2015 09:16
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*10*	*19-Sep-2015 09:41*
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*19-Sep-2015 09:16*
Surr: 4-Bromofluorobenzene	*98.0*		*70-125*	*%REC*	*1*	*19-Sep-2015 09:16*
Surr: 4-Bromofluorobenzene	*97.2*		*70-125*	*%REC*	*10*	*19-Sep-2015 09:41*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*10*	*19-Sep-2015 09:41*
Surr: Dibromofluoromethane	*99.3*		*74-125*	*%REC*	*1*	*19-Sep-2015 09:16*
Surr: Toluene-d8	*104*		*75-125*	*%REC*	*10*	*19-Sep-2015 09:41*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*19-Sep-2015 09:16*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**3.0**		**0.050**	**mg/L**	1	23-Sep-2015 19:42
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*23-Sep-2015 19:42*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-19	Lab ID:HS15090731-06
Collection Date:	15-Sep-2015 12:47	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.020**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 04:20
1,3,5-Trimethylbenzene	**0.0051**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
2-Butanone	**0.0044**		**0.0020**	**mg/L**	1	18-Sep-2015 04:20
Benzene	**0.11**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Cyclohexane	**0.016**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Ethylbenzene	**0.037**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Isopropylbenzene	**0.0015**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Methylcyclohexane	**0.0016**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Naphthalene	**0.0034**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:20
n-Propylbenzene	**0.0030**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Toluene	**0.15**		**0.0010**	**mg/L**	1	18-Sep-2015 04:20
Xylenes, Total	**0.16**		**0.0030**	**mg/L**	1	18-Sep-2015 04:20
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 04:20*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*18-Sep-2015 04:20*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*18-Sep-2015 04:20*
Surr: Toluene-d8	*110*		*75-125*	*%REC*	*1*	*18-Sep-2015 04:20*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**1.4**		**0.050**	**mg/L**	1	23-Sep-2015 19:58
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*23-Sep-2015 19:58*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-3	Lab ID:HS15090731-07
Collection Date:	15-Sep-2015 14:15	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.28**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
1,2-Dichloroethane	ND		0.0050	mg/L	5	18-Sep-2015 01:47
1,3,5-Trimethylbenzene	**0.054**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
2-Butanone	ND		0.010	mg/L	5	18-Sep-2015 01:47
Benzene	**1.2**		**0.025**	**mg/L**	25	18-Sep-2015 03:03
Cyclohexane	**0.19**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
Ethylbenzene	**0.65**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
Isopropylbenzene	**0.023**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
Methylcyclohexane	**0.020**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
Naphthalene	**0.039**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
n-Butylbenzene	ND		0.0050	mg/L	5	18-Sep-2015 01:47
n-Propylbenzene	**0.057**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
Toluene	**0.045**		**0.0050**	**mg/L**	5	18-Sep-2015 01:47
Xylenes, Total	**0.27**		**0.015**	**mg/L**	5	18-Sep-2015 01:47
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*25*	*18-Sep-2015 03:03*
Surr: 1,2-Dichloroethane-d4	*110*		*71-125*	*%REC*	*5*	*18-Sep-2015 01:47*
Surr: 4-Bromofluorobenzene	*96.1*		*70-125*	*%REC*	*25*	*18-Sep-2015 03:03*
Surr: 4-Bromofluorobenzene	*99.7*		*70-125*	*%REC*	*5*	*18-Sep-2015 01:47*
Surr: Dibromofluoromethane	*107*		*74-125*	*%REC*	*5*	*18-Sep-2015 01:47*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*25*	*18-Sep-2015 03:03*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*25*	*18-Sep-2015 03:03*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*5*	*18-Sep-2015 01:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**11**		**0.25**	**mg/L**	5	23-Sep-2015 18:55
Surr: 4-Bromofluorobenzene	*114*		*70-130*	*%REC*	*5*	*23-Sep-2015 18:55*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-9	Lab ID:HS15090731-08
Collection Date:	15-Sep-2015 14:52	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.0016**		**0.0010**	**mg/L**	1	18-Sep-2015 04:45
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 04:45
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:45
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 04:45
Benzene	**0.0019**		**0.0010**	**mg/L**	1	18-Sep-2015 04:45
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 04:45
Ethylbenzene	**0.0031**		**0.0010**	**mg/L**	1	18-Sep-2015 04:45
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:45
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 04:45
Naphthalene	**0.0021**		**0.0010**	**mg/L**	1	18-Sep-2015 04:45
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:45
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:45
Toluene	**0.0022**		**0.0010**	**mg/L**	1	18-Sep-2015 04:45
Xylenes, Total	**0.0043**		**0.0030**	**mg/L**	1	18-Sep-2015 04:45
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*1*	*18-Sep-2015 04:45*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*1*	*18-Sep-2015 04:45*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*18-Sep-2015 04:45*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*18-Sep-2015 04:45*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 22:19
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*23-Sep-2015 22:19*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-10	Lab ID:HS15090731-09
Collection Date:	15-Sep-2015 15:23	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:10
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 05:10
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:10
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 05:10
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 05:10
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 05:10
Ethylbenzene	**0.0014**		**0.0010**	**mg/L**	1	18-Sep-2015 05:10
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:10
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 05:10
Naphthalene	**0.0019**		**0.0010**	**mg/L**	1	18-Sep-2015 05:10
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:10
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:10
Toluene	**0.0016**		**0.0010**	**mg/L**	1	18-Sep-2015 05:10
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 05:10
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*1*	*18-Sep-2015 05:10*
Surr: 4-Bromofluorobenzene	*94.9*		*70-125*	*%REC*	*1*	*18-Sep-2015 05:10*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*18-Sep-2015 05:10*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*18-Sep-2015 05:10*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 22:35
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*23-Sep-2015 22:35*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-12	Lab ID:HS15090731-10
Collection Date:	15-Sep-2015 16:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 05:36
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 05:36
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 05:36
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 05:36
Naphthalene	**0.0018**		**0.0010**	**mg/L**	1	18-Sep-2015 05:36
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:36
Toluene	**0.0013**		**0.0010**	**mg/L**	1	18-Sep-2015 05:36
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 05:36
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 05:36*
Surr: 4-Bromofluorobenzene	*93.9*		*70-125*	*%REC*	*1*	*18-Sep-2015 05:36*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*18-Sep-2015 05:36*
Surr: Toluene-d8	*104*		*75-125*	*%REC*	*1*	*18-Sep-2015 05:36*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 22:50
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*23-Sep-2015 22:50*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM		WorkOrder:HS15090731
Sample ID:	MW-15		Lab ID:HS15090731-11
Collection Date:	16-Sep-2015 10:07		Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 06:01
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 06:01
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:01
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:01
Naphthalene	**0.0018**		**0.0010**	**mg/L**	1	18-Sep-2015 06:01
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:01
Toluene	**0.0018**		**0.0010**	**mg/L**	1	18-Sep-2015 06:01
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 06:01
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*18-Sep-2015 06:01*
Surr: 4-Bromofluorobenzene	*96.9*		*70-125*	*%REC*	*1*	*18-Sep-2015 06:01*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*18-Sep-2015 06:01*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*18-Sep-2015 06:01*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 17:21
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*23-Sep-2015 17:21*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-16	Lab ID:HS15090731-12
Collection Date:	16-Sep-2015 10:34	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 06:26
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 06:26
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 06:26
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 06:26
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 06:26*
Surr: 4-Bromofluorobenzene	*95.3*		*70-125*	*%REC*	*1*	*18-Sep-2015 06:26*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*18-Sep-2015 06:26*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*18-Sep-2015 06:26*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 23:06
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*23-Sep-2015 23:06*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-11	Lab ID:HS15090731-13
Collection Date:	16-Sep-2015 11:02	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 06:51
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 06:51
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 06:51
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 06:51
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*18-Sep-2015 06:51*
Surr: 4-Bromofluorobenzene	*94.3*		*70-125*	*%REC*	*1*	*18-Sep-2015 06:51*
Surr: Dibromofluoromethane	*107*		*74-125*	*%REC*	*1*	*18-Sep-2015 06:51*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*18-Sep-2015 06:51*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 00:24
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*24-Sep-2015 00:24*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-4	Lab ID:HS15090731-14
Collection Date:	16-Sep-2015 11:32	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 07:17
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 07:17
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 07:17
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 07:17
Surr: 1,2-Dichloroethane-d4	*110*		*71-125*	*%REC*	*1*	*18-Sep-2015 07:17*
Surr: 4-Bromofluorobenzene	*96.8*		*70-125*	*%REC*	*1*	*18-Sep-2015 07:17*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*1*	*18-Sep-2015 07:17*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*18-Sep-2015 07:17*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 00:40
Surr: 4-Bromofluorobenzene	*113*		*70-130*	*%REC*	*1*	*24-Sep-2015 00:40*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-5	Lab ID:HS15090731-15
Collection Date:	16-Sep-2015 12:07	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 07:42
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 07:42
Benzene	**0.0024**		**0.0010**	**mg/L**	1	18-Sep-2015 07:42
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:42
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:42
Naphthalene	**0.0021**		**0.0010**	**mg/L**	1	18-Sep-2015 07:42
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 07:42
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 07:42
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*1*	*18-Sep-2015 07:42*
Surr: 4-Bromofluorobenzene	*93.7*		*70-125*	*%REC*	*1*	*18-Sep-2015 07:42*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*18-Sep-2015 07:42*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*18-Sep-2015 07:42*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 00:56
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*24-Sep-2015 00:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-2	Lab ID:HS15090731-16
Collection Date:	16-Sep-2015 12:47	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 08:07
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 08:07
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 08:07
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 08:07
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 08:07*
Surr: 4-Bromofluorobenzene	*98.8*		*70-125*	*%REC*	*1*	*18-Sep-2015 08:07*
Surr: Dibromofluoromethane	*98.3*		*74-125*	*%REC*	*1*	*18-Sep-2015 08:07*
Surr: Toluene-d8	*109*		*75-125*	*%REC*	*1*	*18-Sep-2015 08:07*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 01:11
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*24-Sep-2015 01:11*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-8	Lab ID:HS15090731-17
Collection Date:	16-Sep-2015 13:27	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 08:33
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 08:33
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 08:33
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 08:33
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*18-Sep-2015 08:33*
Surr: 4-Bromofluorobenzene	*94.3*		*70-125*	*%REC*	*1*	*18-Sep-2015 08:33*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*18-Sep-2015 08:33*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*18-Sep-2015 08:33*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 12:22
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*23-Sep-2015 12:22*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	MW-13	Lab ID:HS15090731-18
Collection Date:	16-Sep-2015 14:51	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 08:58
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 08:58
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 08:58
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 08:58
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*18-Sep-2015 08:58*
Surr: 4-Bromofluorobenzene	*92.0*		*70-125*	*%REC*	*1*	*18-Sep-2015 08:58*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*18-Sep-2015 08:58*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*18-Sep-2015 08:58*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 01:27
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*24-Sep-2015 01:27*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:	HS15090731
Sample ID:	MW-14	Lab ID:	HS15090731-19
Collection Date:	16-Sep-2015 15:23	Matrix:	Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 09:24
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 09:24
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 09:24
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 09:24
Surr: 1,2-Dichloroethane-d4	*110*		*71-125*	*%REC*	*1*	*18-Sep-2015 09:24*
Surr: 4-Bromofluorobenzene	*98.2*		*70-125*	*%REC*	*1*	*18-Sep-2015 09:24*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 09:24*
Surr: Toluene-d8	*109*		*75-125*	*%REC*	*1*	*18-Sep-2015 09:24*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Sep-2015 21:32
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Sep-2015 21:32*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	DUP-1	Lab ID:HS15090731-20
Collection Date:	15-Sep-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.023**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
1,2-Dichloroethane	ND		0.0010	mg/L	1	22-Sep-2015 18:03
1,3,5-Trimethylbenzene	**0.017**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
2-Butanone	ND		0.0020	mg/L	1	22-Sep-2015 18:03
Benzene	**0.25**		**0.0050**	**mg/L**	5	23-Sep-2015 10:05
Cyclohexane	**0.037**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
Ethylbenzene	**0.11**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
Isopropylbenzene	**0.0043**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
Methylcyclohexane	**0.0041**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
Naphthalene	**0.022**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
n-Butylbenzene	**0.0018**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
n-Propylbenzene	**0.0090**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
Toluene	**0.097**		**0.0010**	**mg/L**	1	22-Sep-2015 18:03
Xylenes, Total	**0.28**		**0.0030**	**mg/L**	1	22-Sep-2015 18:03
Surr: 1,2-Dichloroethane-d4	*99.1*		*71-125*	*%REC*	*1*	*22-Sep-2015 18:03*
Surr: 1,2-Dichloroethane-d4	*97.2*		*71-125*	*%REC*	*5*	*23-Sep-2015 10:05*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*22-Sep-2015 18:03*
Surr: 4-Bromofluorobenzene	*98.4*		*70-125*	*%REC*	*5*	*23-Sep-2015 10:05*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*22-Sep-2015 18:03*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*5*	*23-Sep-2015 10:05*
Surr: Toluene-d8	*99.0*		*75-125*	*%REC*	*1*	*22-Sep-2015 18:03*
Surr: Toluene-d8	*102*		*75-125*	*%REC*	*5*	*23-Sep-2015 10:05*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**3.2**		**0.050**	**mg/L**	1	23-Sep-2015 13:46
Surr: 4-Bromofluorobenzene	*113*		*70-130*	*%REC*	*1*	*23-Sep-2015 13:46*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	DUP-2	Lab ID:HS15090731-21
Collection Date:	15-Sep-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.089**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
1,2-Dichloroethane	ND		0.0050	mg/L	5	22-Sep-2015 18:31
1,3,5-Trimethylbenzene	**0.079**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
2-Butanone	ND		0.010	mg/L	5	22-Sep-2015 18:31
Benzene	**0.98**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Cyclohexane	**0.23**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Ethylbenzene	**0.77**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Isopropylbenzene	**0.032**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Methylcyclohexane	**0.031**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Naphthalene	**0.086**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
n-Butylbenzene	**0.012**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
n-Propylbenzene	**0.070**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Toluene	**0.048**		**0.0050**	**mg/L**	5	22-Sep-2015 18:31
Xylenes, Total	**0.37**		**0.015**	**mg/L**	5	22-Sep-2015 18:31
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*5*	*22-Sep-2015 18:31*
Surr: 4-Bromofluorobenzene	*110*		*70-125*	*%REC*	*5*	*22-Sep-2015 18:31*
Surr: Dibromofluoromethane	*92.5*		*74-125*	*%REC*	*5*	*22-Sep-2015 18:31*
Surr: Toluene-d8	*93.0*		*75-125*	*%REC*	*5*	*22-Sep-2015 18:31*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**11**		**0.050**	**mg/L**	1	23-Sep-2015 14:02
Surr: 4-Bromofluorobenzene	*115*		*70-130*	*%REC*	*1*	*23-Sep-2015 14:02*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site GWM	WorkOrder:HS15090731
Sample ID:	Trip Blank 090915-25	Lab ID:HS15090731-22
Collection Date:	15-Sep-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 01:21
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 01:21
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 01:21
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 01:21
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*18-Sep-2015 01:21*
Surr: 4-Bromofluorobenzene	*97.8*		*70-125*	*%REC*	*1*	*18-Sep-2015 01:21*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*18-Sep-2015 01:21*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*18-Sep-2015 01:21*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT COMPANY

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R261401	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090731-03	MW-7	15 Sep 2015 10:48			18 Sep 2015 03:29	1
HS15090731-04	MW-6	15 Sep 2015 11:19			18 Sep 2015 03:54	1
HS15090731-06	MW-19	15 Sep 2015 12:47			18 Sep 2015 04:20	1
HS15090731-07	MW-3	15 Sep 2015 14:15			18 Sep 2015 03:03	25
HS15090731-07	MW-3	15 Sep 2015 14:15			18 Sep 2015 01:47	5
HS15090731-08	MW-9	15 Sep 2015 14:52			18 Sep 2015 04:45	1
HS15090731-09	MW-10	15 Sep 2015 15:23			18 Sep 2015 05:10	1
HS15090731-10	MW-12	15 Sep 2015 16:00			18 Sep 2015 05:36	1
HS15090731-11	MW-15	16 Sep 2015 10:07			18 Sep 2015 06:01	1
HS15090731-12	MW-16	16 Sep 2015 10:34			18 Sep 2015 06:26	1
HS15090731-13	MW-11	16 Sep 2015 11:02			18 Sep 2015 06:51	1
HS15090731-14	MW-4	16 Sep 2015 11:32			18 Sep 2015 07:17	1
HS15090731-15	MW-5	16 Sep 2015 12:07			18 Sep 2015 07:42	1
HS15090731-16	MW-2	16 Sep 2015 12:47			18 Sep 2015 08:07	1
HS15090731-17	MW-8	16 Sep 2015 13:27			18 Sep 2015 08:33	1
HS15090731-18	MW-13	16 Sep 2015 14:51			18 Sep 2015 08:58	1
HS15090731-19	MW-14	16 Sep 2015 15:23			18 Sep 2015 09:24	1
HS15090731-22	Trip Blank 090915-25	15 Sep 2015 00:00			18 Sep 2015 01:21	1
Batch ID R261499	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090731-01	MW-1	15 Sep 2015 09:56			19 Sep 2015 03:23	10
HS15090731-01	MW-1	15 Sep 2015 09:56			19 Sep 2015 02:07	1
HS15090731-02	MW-17	15 Sep 2015 10:24			19 Sep 2015 08:51	10
HS15090731-02	MW-17	15 Sep 2015 10:24			19 Sep 2015 08:26	1
HS15090731-05	MW-18	15 Sep 2015 12:07			19 Sep 2015 09:41	10
HS15090731-05	MW-18	15 Sep 2015 12:07			19 Sep 2015 09:16	1
Batch ID R261598	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090731-01	MW-1	15 Sep 2015 09:56			22 Sep 2015 00:09	50
Batch ID R261693	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090731-20	DUP-1	15 Sep 2015 00:00			22 Sep 2015 18:03	1
HS15090731-21	DUP-2	15 Sep 2015 00:00			22 Sep 2015 18:31	5
Batch ID R261700	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090731-20	DUP-1	15 Sep 2015 00:00			23 Sep 2015 10:05	5

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R261732	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15090731-01	MW-1	15 Sep 2015 09:56			23 Sep 2015 13:12	50
HS15090731-02	MW-17	15 Sep 2015 10:24			23 Sep 2015 18:36	10
HS15090731-03	MW-7	15 Sep 2015 10:48			23 Sep 2015 19:11	1
HS15090731-04	MW-6	15 Sep 2015 11:19			23 Sep 2015 19:26	1
HS15090731-05	MW-18	15 Sep 2015 12:07			23 Sep 2015 19:42	1
HS15090731-06	MW-19	15 Sep 2015 12:47			23 Sep 2015 19:58	1
HS15090731-07	MW-3	15 Sep 2015 14:15			23 Sep 2015 18:55	5
HS15090731-11	MW-15	16 Sep 2015 10:07			23 Sep 2015 17:21	1
HS15090731-17	MW-8	16 Sep 2015 13:27			23 Sep 2015 12:22	1
HS15090731-20	DUP-1	15 Sep 2015 00:00			23 Sep 2015 13:46	1
HS15090731-21	DUP-2	15 Sep 2015 00:00			23 Sep 2015 14:02	1
Batch ID R261782	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15090731-08	MW-9	15 Sep 2015 14:52			23 Sep 2015 22:19	1
HS15090731-09	MW-10	15 Sep 2015 15:23			23 Sep 2015 22:35	1
HS15090731-10	MW-12	15 Sep 2015 16:00			23 Sep 2015 22:50	1
HS15090731-12	MW-16	16 Sep 2015 10:34			23 Sep 2015 23:06	1
HS15090731-13	MW-11	16 Sep 2015 11:02			24 Sep 2015 00:24	1
HS15090731-14	MW-4	16 Sep 2015 11:32			24 Sep 2015 00:40	1
HS15090731-15	MW-5	16 Sep 2015 12:07			24 Sep 2015 00:56	1
HS15090731-16	MW-2	16 Sep 2015 12:47			24 Sep 2015 01:11	1
HS15090731-18	MW-13	16 Sep 2015 14:51			24 Sep 2015 01:27	1
HS15090731-19	MW-14	16 Sep 2015 15:23			23 Sep 2015 21:32	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261732 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150923** Units: **mg/L** Analysis Date: **23-Sep-2015 11:38**
Client ID: Run ID: **FID-14_261732** SeqNo: **3432997** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1186*	*0.0050*	*0.1*	*0*	*119*	*70 - 130*				

MBLK Sample ID: **GBLKW-150923** Units: **mg/L** Analysis Date: **23-Sep-2015 11:22**
Client ID: Run ID: **FID-14_261732** SeqNo: **3432996** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1121*	*0.0050*	*0.1*	*0*	*112*	*70 - 130*				

LCS Sample ID: **GLCS-092315** Units: **mg/L** Analysis Date: **23-Sep-2015 14:18**
Client ID: Run ID: **FID-14_261732** SeqNo: **3433728** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.256	0.050	1	0	126	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1138*	*0.0050*	*0.1*	*0*	*114*	*70 - 130*				

MS Sample ID: **HS15090731-17MS** Units: **mg/L** Analysis Date: **23-Sep-2015 12:38**
Client ID: **MW-8** Run ID: **FID-14_261732** SeqNo: **3432999** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.204	0.050	1	0	120	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1202*	*0.0050*	*0.1*	*0*	*120*	*70 - 130*				

MSD Sample ID: **HS15090731-17MSD** Units: **mg/L** Analysis Date: **23-Sep-2015 12:53**
Client ID: **MW-8** Run ID: **FID-14_261732** SeqNo: **3433000** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.23	0.050	1	0	123	70 - 130	1.204	2.19	30	
Surr: 4-Bromofluorobenzene	*0.1129*	*0.0050*	*0.1*	*0*	*113*	*70 - 130*	*0.1202*	*6.27*	*30*	

The following samples were anayzed in this batch:

HS15090731-01	HS15090731-02	HS15090731-03	HS15090731-04
HS15090731-05	HS15090731-06	HS15090731-07	HS15090731-11
HS15090731-17	HS15090731-20	HS15090731-21	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261782 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150923** Units: **mg/L** Analysis Date: **23-Sep-2015 21:16**
Client ID: Run ID: **FID-14_261782** SeqNo: **3434146** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1044*	*0.0050*	*0.1*	*0*	*104*	*70 - 130*				

LCS Sample ID: **GLCS-150923** Units: **mg/L** Analysis Date: **23-Sep-2015 20:45**
Client ID: Run ID: **FID-14_261782** SeqNo: **3434144** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.159	0.050	1	0	116	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1118*	*0.0050*	*0.1*	*0*	*112*	*70 - 130*				

MS Sample ID: **HS15090731-19MS** Units: **mg/L** Analysis Date: **23-Sep-2015 21:47**
Client ID: **MW-14** Run ID: **FID-14_261782** SeqNo: **3434148** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.19	0.050	1	0	119	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1162*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*				

MSD Sample ID: **HS15090731-19MSD** Units: **mg/L** Analysis Date: **23-Sep-2015 22:03**
Client ID: **MW-14** Run ID: **FID-14_261782** SeqNo: **3434149** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.163	0.050	1	0	116	70 - 130	1.19	2.27	30	
Surr: 4-Bromofluorobenzene	*0.1109*	*0.0050*	*0.1*	*0*	*111*	*70 - 130*	*0.1162*	*4.69*	*30*	

The following samples were anayzed in this batch:

HS15090731-08	HS15090731-09	HS15090731-10	HS15090731-12
HS15090731-13	HS15090731-14	HS15090731-15	HS15090731-16
HS15090731-18	HS15090731-19		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261401 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150916** Units: **ug/L** Analysis Date: **18-Sep-2015 00:55**
Client ID: Run ID: **VOA4_261401** SeqNo: **3426906** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*51.23*	*1.0*	*50*	*0*	*102*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.63*	*1.0*	*50*	*0*	*95.3*	*70 - 125*				
Surr: Dibromofluoromethane	*50.72*	*1.0*	*50*	*0*	*101*	*74 - 125*				
Surr: Toluene-d8	*52.83*	*1.0*	*50*	*0*	*106*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261401 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140916** Units: **ug/L** Analysis Date: **17-Sep-2015 23:38**
Client ID: Run ID: **VOA4_261401** SeqNo: **3426905** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.59	1.0	50	0	103	70 - 125				
1,2-Dichloroethane	54.79	1.0	50	0	110	76 - 120				
1,3,5-Trimethylbenzene	50.85	1.0	50	0	102	80 - 123				
2-Butanone	112.2	2.0	100	0	112	60 - 140				
Benzene	52.53	1.0	50	0	105	80 - 120				
Cyclohexane	57.58	1.0	50	0	115	70 - 130				
Ethylbenzene	51.49	1.0	50	0	103	80 - 120				
Isopropylbenzene	52.72	1.0	50	0	105	75 - 130				
Methylcyclohexane	50.98	1.0	50	0	102	70 - 126				
Naphthalene	53.84	1.0	50	0	108	65 - 135				
n-Butylbenzene	56.62	1.0	50	0	113	75 - 128				
n-Propylbenzene	52.05	1.0	50	0	104	75 - 130				
Toluene	49.83	1.0	50	0	99.7	75 - 121				
Xylenes, Total	155.3	3.0	150	0	104	79 - 124				
Surr: 1,2-Dichloroethane-d4	*51.39*	*1.0*	*50*	*0*	*103*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.36*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*52.72*	*1.0*	*50*	*0*	*105*	*74 - 125*				
Surr: Toluene-d8	*52.49*	*1.0*	*50*	*0*	*105*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261401 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15090731-07MS** Units: **ug/L** Analysis Date: **18-Sep-2015 02:12**
Client ID: **MW-3** Run ID: **VOA4_261401** SeqNo: **3426909** PrepDate: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1511	25	1250	337.6	93.9	70 - 125				
1,2-Dichloroethane	1222	25	1250	0	97.7	76 - 120				
1,3,5-Trimethylbenzene	1212	25	1250	78.41	90.7	80 - 123				
2-Butanone	2436	50	2500	0	97.4	60 - 140				
Benzene	2274	25	1250	1157	89.3	80 - 120				
Cyclohexane	1460	25	1250	222.7	99.0	70 - 130				
Ethylbenzene	1828	25	1250	684.9	91.5	80 - 120				
Isopropylbenzene	1234	25	1250	27.81	96.5	75 - 130				
Methylcyclohexane	1190	25	1250	31.7	92.7	70 - 126				
Naphthalene	1072	25	1250	142.9	74.4	65 - 135				
n-Butylbenzene	1255	25	1250	0	100	75 - 128				
n-Propylbenzene	1228	25	1250	68.25	92.8	75 - 130				
Toluene	1186	25	1250	51.28	90.7	75 - 121				
Xylenes, Total	3814	75	3750	292	93.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	*1296*	*25*	*1250*	*0*	*104*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*1248*	*25*	*1250*	*0*	*99.9*	*70 - 125*				
Surr: Dibromofluoromethane	*1296*	*25*	*1250*	*0*	*104*	*74 - 125*				
Surr: Toluene-d8	*1333*	*25*	*1250*	*0*	*107*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261401 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15090731-07MSD** Units: **ug/L** Analysis Date: **18-Sep-2015 02:38**
Client ID: **MW-3** Run ID: **VOA4_261401** SeqNo: **3426910** PrepDate: DF: **25**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1557	25	1250	337.6	97.6	70 - 125	1511	2.98	20	
1,2-Dichloroethane	1261	25	1250	0	101	76 - 120	1222	3.15	20	
1,3,5-Trimethylbenzene	1252	25	1250	78.41	93.9	80 - 123	1212	3.2	20	
2-Butanone	2455	50	2500	0	98.2	60 - 140	2436	0.75	20	
Benzene	2389	25	1250	1157	98.5	80 - 120	2274	4.94	20	
Cyclohexane	1488	25	1250	222.7	101	70 - 130	1460	1.87	20	
Ethylbenzene	1864	25	1250	684.9	94.3	80 - 120	1828	1.9	20	
Isopropylbenzene	1241	25	1250	27.81	97.1	75 - 130	1234	0.61	20	
Methylcyclohexane	1247	25	1250	31.7	97.2	70 - 126	1190	4.72	20	
Naphthalene	1189	25	1250	142.9	83.7	65 - 135	1072	10.3	20	
n-Butylbenzene	1315	25	1250	0	105	75 - 128	1255	4.64	20	
n-Propylbenzene	1257	25	1250	68.25	95.1	75 - 130	1228	2.28	20	
Toluene	1196	25	1250	51.28	91.6	75 - 121	1186	0.844	20	
Xylenes, Total	3808	75	3750	292	93.8	80 - 124	3814	0.151	20	
Surr: 1,2-Dichloroethane-d4	*1267*	*25*	*1250*	*0*	*101*	*71 - 125*	*1296*	*2.25*	*20*	
Surr: 4-Bromofluorobenzene	*1215*	*25*	*1250*	*0*	*97.2*	*70 - 125*	*1248*	*2.75*	*20*	
Surr: Dibromofluoromethane	*1250*	*25*	*1250*	*0*	*100.0*	*74 - 125*	*1296*	*3.65*	*20*	
Surr: Toluene-d8	*1272*	*25*	*1250*	*0*	*102*	*75 - 125*	*1333*	*4.7*	*20*	

The following samples were anayzed in this batch:

HS15090731-03	HS15090731-04	HS15090731-06	HS15090731-07
HS15090731-08	HS15090731-09	HS15090731-10	HS15090731-11
HS15090731-12	HS15090731-13	HS15090731-14	HS15090731-15
HS15090731-16	HS15090731-17	HS15090731-18	HS15090731-19
HS15090731-22			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261499 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150918** Units: **ug/L** Analysis Date: **19-Sep-2015 00:26**
Client ID: Run ID: **VOA4_261499** SeqNo: **3428789** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*53.35*	*1.0*	*50*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.77*	*1.0*	*50*	*0*	*95.5*	*70 - 125*				
Surr: Dibromofluoromethane	*51.29*	*1.0*	*50*	*0*	*103*	*74 - 125*				
Surr: Toluene-d8	*53.11*	*1.0*	*50*	*0*	*106*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261499 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140918** Units: **ug/L** Analysis Date: **18-Sep-2015 23:34**
Client ID: Run ID: **VOA4_261499** SeqNo: **3428788** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.71	1.0	50	0	103	70 - 125				
1,2-Dichloroethane	53.4	1.0	50	0	107	76 - 120				
1,3,5-Trimethylbenzene	50.8	1.0	50	0	102	80 - 123				
2-Butanone	110.2	2.0	100	0	110	60 - 140				
Benzene	50.11	1.0	50	0	100	80 - 120				
Cyclohexane	55.73	1.0	50	0	111	70 - 130				
Ethylbenzene	49.75	1.0	50	0	99.5	80 - 120				
Isopropylbenzene	52.12	1.0	50	0	104	75 - 130				
Methylcyclohexane	51.2	1.0	50	0	102	70 - 126				
Naphthalene	51.28	1.0	50	0	103	65 - 135				
n-Butylbenzene	55.03	1.0	50	0	110	75 - 128				
n-Propylbenzene	51.4	1.0	50	0	103	75 - 130				
Toluene	48.86	1.0	50	0	97.7	75 - 121				
Xylenes, Total	149.4	3.0	150	0	99.6	79 - 124				
Surr: 1,2-Dichloroethane-d4	*53.98*	*1.0*	*50*	*0*	*108*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.9*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*53.81*	*1.0*	*50*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*52.7*	*1.0*	*50*	*0*	*105*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261499 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15090731-01MS** Units: **ug/L** Analysis Date: **19-Sep-2015 02:33**
Client ID: **MW-1** Run ID: **VOA4_261499** SeqNo: **3428794** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1097	10	500	614.6	96.5	70 - 125				
1,2-Dichloroethane	578	10	500	0	116	76 - 120				
1,3,5-Trimethylbenzene	726.9	10	500	257	94.0	80 - 123				
2-Butanone	968.4	20	1000	0	96.8	60 - 140				
Benzene	3242	10	500	2804	87.6	80 - 120				EO
Cyclohexane	686.5	10	500	130.1	111	70 - 130				
Ethylbenzene	892.7	10	500	422.6	94.0	80 - 120				
Isopropylbenzene	503.7	10	500	11.41	98.5	75 - 130				
Methylcyclohexane	517.8	10	500	18.61	99.8	70 - 126				
Naphthalene	517.6	10	500	106.4	82.2	65 - 135				
n-Butylbenzene	525.4	10	500	14.39	102	75 - 128				
n-Propylbenzene	498.3	10	500	22.02	95.2	75 - 130				
Toluene	4237	10	500	3952	57.1	75 - 121				SEO
Xylenes, Total	5769	30	1500	4390	92.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*534.6*	*10*	*500*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*500.6*	*10*	*500*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*523.1*	*10*	*500*	*0*	*105*	*74 - 125*				
Surr: Toluene-d8	*519.4*	*10*	*500*	*0*	*104*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261499 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15090731-01MSD** Units: **ug/L** Analysis Date: **19-Sep-2015 02:58**
Client ID: **MW-1** Run ID: **VOA4_261499** SeqNo: **3428795** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1107	10	500	614.6	98.4	70 - 125	1097	0.872	20	
1,2-Dichloroethane	579.2	10	500	0	116	76 - 120	578	0.213	20	
1,3,5-Trimethylbenzene	730.3	10	500	257	94.6	80 - 123	726.9	0.462	20	
2-Butanone	1022	20	1000	0	102	60 - 140	968.4	5.43	20	
Benzene	3268	10	500	2804	92.8	80 - 120	3242	0.798	20	EO
Cyclohexane	651.4	10	500	130.1	104	70 - 130	686.5	5.24	20	
Ethylbenzene	882.2	10	500	422.6	91.9	80 - 120	892.7	1.18	20	
Isopropylbenzene	497.3	10	500	11.41	97.2	75 - 130	503.7	1.28	20	
Methylcyclohexane	498.5	10	500	18.61	96.0	70 - 126	517.8	3.81	20	
Naphthalene	526.4	10	500	106.4	84.0	65 - 135	517.6	1.69	20	
n-Butylbenzene	536.3	10	500	14.39	104	75 - 128	525.4	2.05	20	
n-Propylbenzene	505.4	10	500	22.02	96.7	75 - 130	498.3	1.43	20	
Toluene	4112	10	500	3952	32.1	75 - 121	4237	2.98	20	SEO
Xylenes, Total	5570	30	1500	4390	78.7	80 - 124	5769	3.51	20	S
Surr: 1,2-Dichloroethane-d4	*524.7*	*10*	*500*	*0*	*105*	*71 - 125*	*534.6*	*1.87*	*20*	
Surr: 4-Bromofluorobenzene	*504.6*	*10*	*500*	*0*	*101*	*70 - 125*	*500.6*	*0.796*	*20*	
Surr: Dibromofluoromethane	*528.6*	*10*	*500*	*0*	*106*	*74 - 125*	*523.1*	*1.04*	*20*	
Surr: Toluene-d8	*527.5*	*10*	*500*	*0*	*105*	*75 - 125*	*519.4*	*1.55*	*20*	

The following samples were anayzed in this batch: HS15090731-01 HS15090731-02 HS15090731-05

Note See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261598 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150921** Units: **ug/L** Analysis Date: **21-Sep-2015 14:23**
Client ID: Run ID: **VOA2_261598** SeqNo: **3430478** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	*46.69*	*1.0*	*50*	*0*	*93.4*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.55*	*1.0*	*50*	*0*	*97.1*	*70 - 125*				
Surr: Dibromofluoromethane	*49.07*	*1.0*	*50*	*0*	*98.1*	*74 - 125*				
Surr: Toluene-d8	*49.9*	*1.0*	*50*	*0*	*99.8*	*75 - 125*				

LCS Sample ID: **VLCSW-150921** Units: **ug/L** Analysis Date: **21-Sep-2015 13:32**
Client ID: Run ID: **VOA2_261598** SeqNo: **3430477** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.67	1.0	50	0	95.3	80 - 120				
Toluene	54.3	1.0	50	0	109	75 - 121				
Surr: 1,2-Dichloroethane-d4	*48.08*	*1.0*	*50*	*0*	*96.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.72*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*47.38*	*1.0*	*50*	*0*	*94.8*	*74 - 125*				
Surr: Toluene-d8	*49.35*	*1.0*	*50*	*0*	*98.7*	*75 - 125*				

MS Sample ID: **HS15090734-01MS** Units: **ug/L** Analysis Date: **21-Sep-2015 16:04**
Client ID: Run ID: **VOA2_261598** SeqNo: **3430482** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.55	1.0	50	0	93.1	80 - 120				
Toluene	52.94	1.0	50	0	106	75 - 121				
Surr: 1,2-Dichloroethane-d4	*49.05*	*1.0*	*50*	*0*	*98.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.95*	*1.0*	*50*	*0*	*99.9*	*70 - 125*				
Surr: Dibromofluoromethane	*46.9*	*1.0*	*50*	*0*	*93.8*	*74 - 125*				
Surr: Toluene-d8	*48.63*	*1.0*	*50*	*0*	*97.3*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261598 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15090734-01MSD** Units: **ug/L** Analysis Date: **21-Sep-2015 16:29**
Client ID: Run ID: **VOA2_261598** SeqNo: **3430483** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.94	1.0	50	0	93.9	80 - 120	46.55	0.825	20	
Toluene	53.12	1.0	50	0	106	75 - 121	52.94	0.333	20	
Surr: 1,2-Dichloroethane-d4	*48.97*	*1.0*	*50*	*0*	*97.9*	*71 - 125*	*49.05*	*0.154*	*20*	
Surr: 4-Bromofluorobenzene	*50.16*	*1.0*	*50*	*0*	*100*	*70 - 125*	*49.95*	*0.42*	*20*	
Surr: Dibromofluoromethane	*47.3*	*1.0*	*50*	*0*	*94.6*	*74 - 125*	*46.9*	*0.85*	*20*	
Surr: Toluene-d8	*48.74*	*1.0*	*50*	*0*	*97.5*	*75 - 125*	*48.63*	*0.233*	*20*	

The following samples were anayzed in this batch: HS15090731-01

Note See Qualifiers Page for a list of qualifiers and their explanation

RIGHT SOLUTIONS RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261693 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150922** Units: **ug/L** Analysis Date: **22-Sep-2015 14:41**
Client ID: Run ID: **VOA2_261693** SeqNo: **3432268** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*49.95*	*1.0*	*50*	*0*	*99.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.99*	*1.0*	*50*	*0*	*100.0*	*70 - 125*				
Surr: Dibromofluoromethane	*51.39*	*1.0*	*50*	*0*	*103*	*74 - 125*				
Surr: Toluene-d8	*49.16*	*1.0*	*50*	*0*	*98.3*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261693 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-150922** Units: **ug/L** Analysis Date: **22-Sep-2015 13:51**
Client ID: Run ID: **VOA2_261693** SeqNo: **3432267** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	50.82	1.0	50	0	102	70 - 125				
1,2-Dichloroethane	46.77	1.0	50	0	93.5	76 - 120				
1,3,5-Trimethylbenzene	51.06	1.0	50	0	102	80 - 123				
2-Butanone	111.7	2.0	100	0	112	60 - 140				
Benzene	47.98	1.0	50	0	96.0	80 - 120				
Cyclohexane	58.51	1.0	50	0	117	70 - 130				
Ethylbenzene	50.28	1.0	50	0	101	80 - 120				
Isopropylbenzene	53.54	1.0	50	0	107	75 - 130				
Methylcyclohexane	58.4	1.0	50	0	117	70 - 126				
Naphthalene	54.27	1.0	50	0	109	65 - 135				
n-Butylbenzene	56.26	1.0	50	0	113	75 - 128				
n-Propylbenzene	53.65	1.0	50	0	107	75 - 130				
Toluene	55.2	1.0	50	0	110	75 - 121				
Xylenes, Total	160.8	3.0	150	0	107	79 - 124				
Surr: 1,2-Dichloroethane-d4	*50.31*	*1.0*	*50*	*0*	*101*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.11*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*49.63*	*1.0*	*50*	*0*	*99.3*	*74 - 125*				
Surr: Toluene-d8	*48.82*	*1.0*	*50*	*0*	*97.6*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation

RIGHT SOLUTIONS RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261693 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS15090933-05MS** Units: **ug/L** Analysis Date: **22-Sep-2015 15:57**
Client ID: Run ID: **VOA2_261693** SeqNo: **3432271** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	47.96	1.0	50	0	95.9	70 - 125				
1,2-Dichloroethane	44.43	1.0	50	0	88.9	76 - 120				
1,3,5-Trimethylbenzene	48.57	1.0	50	0	97.1	80 - 123				
2-Butanone	103.9	2.0	100	0	104	60 - 140				
Benzene	45.92	1.0	50	0	91.8	80 - 120				
Cyclohexane	57.4	1.0	50	0	115	70 - 130				
Ethylbenzene	47.86	1.0	50	0	95.7	80 - 120				
Isopropylbenzene	51.95	1.0	50	0	104	75 - 130				
Methylcyclohexane	57.08	1.0	50	0	114	70 - 126				
Naphthalene	48.4	1.0	50	0	96.8	65 - 135				
n-Butylbenzene	52.62	1.0	50	0	105	75 - 128				
n-Propylbenzene	51.34	1.0	50	0	103	75 - 130				
Toluene	52.29	1.0	50	0	105	75 - 121				
Xylenes, Total	153	3.0	150	0	102	80 - 124				
Surr: 1,2-Dichloroethane-d4	*50.63*	*1.0*	*50*	*0*	*101*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.99*	*1.0*	*50*	*0*	*100.0*	*70 - 125*				
Surr: Dibromofluoromethane	*48.47*	*1.0*	*50*	*0*	*96.9*	*74 - 125*				
Surr: Toluene-d8	*49.2*	*1.0*	*50*	*0*	*98.4*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261693 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15090933-05MSD** Units: **ug/L** Analysis Date: **22-Sep-2015 16:23**
Client ID: Run ID: **VOA2_261693** SeqNo: **3432272** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	49.68	1.0	50	0	99.4	70 - 125	47.96	3.52	20	
1,2-Dichloroethane	45.42	1.0	50	0	90.8	76 - 120	44.43	2.19	20	
1,3,5-Trimethylbenzene	49.58	1.0	50	0	99.2	80 - 123	48.57	2.07	20	
2-Butanone	109.5	2.0	100	0	110	60 - 140	103.9	5.32	20	
Benzene	45.05	1.0	50	0	90.1	80 - 120	45.92	1.91	20	
Cyclohexane	57.7	1.0	50	0	115	70 - 130	57.4	0.532	20	
Ethylbenzene	48.48	1.0	50	0	97.0	80 - 120	47.86	1.3	20	
Isopropylbenzene	52.81	1.0	50	0	106	75 - 130	51.95	1.63	20	
Methylcyclohexane	56.31	1.0	50	0	113	70 - 126	57.08	1.36	20	
Naphthalene	51.62	1.0	50	0	103	65 - 135	48.4	6.45	20	
n-Butylbenzene	54.76	1.0	50	0	110	75 - 128	52.62	3.99	20	
n-Propylbenzene	52.36	1.0	50	0	105	75 - 130	51.34	1.96	20	
Toluene	53.5	1.0	50	0	107	75 - 121	52.29	2.29	20	
Xylenes, Total	155.8	3.0	150	0	104	80 - 124	153	1.8	20	
Surr: 1,2-Dichloroethane-d4	*50.6*	*1.0*	*50*	*0*	*101*	*71 - 125*	*50.63*	*0.0601*	*20*	
Surr: 4-Bromofluorobenzene	*50.51*	*1.0*	*50*	*0*	*101*	*70 - 125*	*49.99*	*1.03*	*20*	
Surr: Dibromofluoromethane	*49.24*	*1.0*	*50*	*0*	*98.5*	*74 - 125*	*48.47*	*1.58*	*20*	
Surr: Toluene-d8	*48.99*	*1.0*	*50*	*0*	*98.0*	*75 - 125*	*49.2*	*0.417*	*20*	

The following samples were anayzed in this batch: HS15090731-20 HS15090731-21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS . RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261700 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150922** Units: **ug/L** Analysis Date: **23-Sep-2015 01:24**
Client ID: Run ID: **VOA2_261700** SeqNo: **3432400** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	*50.61*	*1.0*	*50*	*0*	*101*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.2*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*51.92*	*1.0*	*50*	*0*	*104*	*74 - 125*				
Surr: Toluene-d8	*50.06*	*1.0*	*50*	*0*	*100*	*75 - 125*				

LCS Sample ID: **VLCSW-150922** Units: **ug/L** Analysis Date: **23-Sep-2015 00:34**
Client ID: Run ID: **VOA2_261700** SeqNo: **3432399** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.36	1.0	50	0	90.7	80 - 120				
Surr: 1,2-Dichloroethane-d4	*50.68*	*1.0*	*50*	*0*	*101*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.15*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*49.62*	*1.0*	*50*	*0*	*99.2*	*74 - 125*				
Surr: Toluene-d8	*48.28*	*1.0*	*50*	*0*	*96.6*	*75 - 125*				

MS Sample ID: **HS15090929-01MS** Units: **ug/L** Analysis Date: **23-Sep-2015 03:30**
Client ID: Run ID: **VOA2_261700** SeqNo: **3432405** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.07	1.0	50	0.5189	87.1	80 - 120				
Surr: 1,2-Dichloroethane-d4	*49.6*	*1.0*	*50*	*0*	*99.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.04*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*50.86*	*1.0*	*50*	*0*	*102*	*74 - 125*				
Surr: Toluene-d8	*49.68*	*1.0*	*50*	*0*	*99.4*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QC BATCH REPORT

Batch ID: R261700 **Instrument:** VOA2 **Method:** SW8260

MSD Sample ID: **HS15090929-01MSD** Units: **ug/L** Analysis Date: **23-Sep-2015 03:55**
Client ID: Run ID: **VOA2_261700** SeqNo: **3432406** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43	1.0	50	0.5189	85.0	80 - 120	44.07	2.46	20	
Surr: 1,2-Dichloroethane-d4	*50.08*	*1.0*	*50*	*0*	*100*	*71 - 125*	*49.6*	*0.976*	*20*	
Surr: 4-Bromofluorobenzene	*49.94*	*1.0*	*50*	*0*	*99.9*	*70 - 125*	*51.04*	*2.18*	*20*	
Surr: Dibromofluoromethane	*50.21*	*1.0*	*50*	*0*	*100*	*74 - 125*	*50.86*	*1.28*	*20*	
Surr: Toluene-d8	*48.26*	*1.0*	*50*	*0*	*96.5*	*75 - 125*	*49.68*	*2.91*	*20*	

The following samples were anayzed in this batch: HS15090731-20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
WorkOrder: HS15090731

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	30-Sep-2015
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2015-047	31-Aug-2016
Texas	T104704231-15-15	30-Apr-2016

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
Work Order: HS15090731

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15090731-01	MW-1	Login	9/17/2015 12:17:28 PM	NDR	VW-3
HS15090731-01	MW-1	Login	9/17/2015 12:17:28 PM	NDR	BTEX A1
HS15090731-02	MW-17	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-02	MW-17	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-03	MW-7	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-03	MW-7	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-04	MW-6	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-04	MW-6	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-05	MW-18	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-05	MW-18	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-06	MW-19	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-06	MW-19	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-07	MW-3	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-07	MW-3	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-08	MW-9	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-08	MW-9	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-09	MW-10	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-09	MW-10	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-10	MW-12	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-10	MW-12	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-11	MW-15	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-11	MW-15	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-12	MW-16	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-12	MW-16	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-13	MW-11	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-13	MW-11	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-14	MW-4	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-14	MW-4	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-15	MW-5	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-15	MW-5	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-16	MW-2	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-16	MW-2	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-17	MW-8	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-17	MW-8	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-18	MW-13	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-18	MW-13	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-19	MW-14	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-19	MW-14	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-20	DUP-1	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-20	DUP-1	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1

Client: Apex Companies
Project: E3CE-0065 Andover Release Site GWM
Work Order: HS15090731

SAMPLE TRACKING

HS15090731-21	DUP-2	Login	9/17/2015 12:25:58 PM	NDR	VW-3
HS15090731-21	DUP-2	Login	9/17/2015 12:25:58 PM	NDR	BTEX A1
HS15090731-22	Trip Blank 090915-25	Login	9/17/2015 12:27:14 PM	NDR	VW-3
HS15090731-23	Trip Blank 090915-11	Login	9/17/2015 12:29:47 PM	NDR	VW-3

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Client Name: APEX-PORTLAND
Work Order: HS15090731

Date/Time Received: **17-Sep-2015 08:34**
Received by: **RPG**

Checklist completed by: *Nilesh D. Ranchod* (eSignature) 17-Sep-2015 (Date)
Reviewed by: *Kristin M Brown* (eSignature) 23-Sep-2015 (Date)

Matrices: **Water**
Carrier name: **FedEx**

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shipping container/cooler?	☑	☐	☐
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☐	☑	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
TX1005 solids received in hermetically sealed vials?	☐	☐	N/A ☑
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	
Temperature(s)/Thermometer(s):	2.0c / 1.7 u/c, 0.7c/0.4c u/c		6
Cooler(s)/Kit(s):	Red 48Qt, 24486		
Date/Time sample(s) sent to storage:	09/17/2015 1:00PM		
Water - VOA vials have zero headspace?	☑	☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	☐	☐	N/A ☑
pH adjusted?	☐	☐	N/A ☑
pH adjusted by:			

Login Notes: COC 3 OF 3 COD ID # 131847 Not signed and Reliquished.1 x Extra Trip Blank recieved logged in without analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

ALS Environmental

Cincinnati, OH +1 513 733 5336 | Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody Form

Page 1 of 3

COC ID: 131849

HS15090731

Apex Companies
E3CE-0065 Andover Release Site GWM

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	E3CE-0065 Andover Release Site	A	8260_LL_W (14 compound Select List)
Work Order		Project Number	GW Monitoring Wells	B	VPH OA-1_W (HYD-5)
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	9/15/15	0956	Water	HCL	6	3	3									
2	MW-17		1024														
3	MW-7		1048														
4	MW-6		1119														
5	MW-18		1207														
6	MW-19		1247														
7	MW-3		1415														
8	MW-9		1752														
9	MW-10		1523														
10	MW-12		1600														

Sampler(s) Please Print & Sign: Lori Birdner for Brother

Shipment Method: FedEx

Required Turnaround Time: (Check Box) TAT 10 days Other:

Results Due Date:

Relinquished by: for Brother	Date: 9/18/15	Time: 1900	Received by:	Notes:
Relinquished by:	Date: 9/17/15	Time: 08:34	Received by (Laboratory): Nilak	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

(E3CE-0065 Andover Release Site)

Cooler ID	Cooler Temp.
	4/c
Red 4820	2.0
24486.	0.7

QC Package: (Check One Box Below)

QC Level STD

Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

Page 2 of 3

COC ID: 131846

HS15090731

Apex Companies
E3CE-0065 Andover Release Site GWM

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	E3CE-0065 Andover Release Site	A	8260_LL_W (14 compound Select List)
Work Order		Project Number	GW Monitoring Wells	B	VPH OA-1_W (HYD-5)
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-15	9/16/15	1007	water	HCL	6	3	3									
2	MW-16		1034														
3	MW-11		1102														
4	MW-4		1132														
5	MW-5		1207														
6	MW-2		1247														
7	MW-8		1327														
8	MW-13		1451														
9	MW-14		1523														
10	Dup-1	9/15/15	—														

Sampler(s) Please Print & Sign: Lori Birdner / [signature]

Shipment Method: Fed Ex

Required Turnaround Time: (Check Box) TAT: 10 days Other:

Results Due Date:

Relinquished by: [signature]	Date: 9/16/15	Time: 1900	Received by:	Notes:
Relinquished by:	Date: 9/17/15	Time: 08:34	Received by (Laboratory): Nilsh	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

(E3CE-0065 Andover Release Site)

Cooler ID	Cooler Temp.
	4/c
Red 4875	2.0
04486	0.7

QC Package: (Check One Box Below)

QC Level: STD

Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ALS Environmental

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Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070

Chain of Custody Form

Page 3 of 3

COC ID: 131847

HS15090731

Apex Companies
E3CE-0065 Andover Release Site GWM

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	E3CE-0065 Andover Release Site	A	8260_LL_W (14 compound Select List)
Work Order		Project Number	GW Monitoring Wells	B	VPH OA-1_W (HYD-5)
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Dup-2	9/15/15	—	water	HCL	6	3	3									
2	Trip Blank	—	—	⊥	⊥	2	2										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

Shipment Method

Required Turnaround Time: (Check Box) TAT 10 days Other

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes: One Trip Blank Per Cooler
Relinquished by:	Date: 9/17/15	Time: 08:34	Received by (Laboratory): Nick	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.
	4/c
Red 45or	2.0
24486	0.7

QC Package: (Check One Box Below)

QC Level STD

Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
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ORIGIN ID:RSLA

UNITED STATES US

SHIP DATE: 16SEP15
ACTWGT: 10.6 LB
CAD: /OFFC1601
DIMS: 24x14x14 IN

BILL RECIPIENT

TO CLIENT SERVICES
ALS ENVIRONMENTAL HOUSTON LAB
10450 STANCLIFF RD
STE 210
HOUSTON TX 77099
(281) 530-5656
INV:
PO:
REF:
DEPT:

FedEx Express

2 of 4
MPS# 0691 7813 4594 5820
Mstr# 8079 4509 5897 0215

THU - 17 SEP 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

Part # 156207-[illegible] 97/60 0429/2[illegible]

Date: 9/16/15
Name:
Company:

CUSTODY SEAL

Seal Broken By:
Date:

Date:
Name:
Company:

CUSTODY SEAL

Seal Broken By:
Date:

RIGHT SOLUTIONS | RIGHT PARTNER

24486

ALS Environmental
10450 Stancliff
Houston, TX
Tel: +1 281

CUSTODY SEAL
Date: 9/16/15 Time:
Name: L. Brubaker
Company:
Seal Br
Da

ORIGIN ID:RSLA

SHIP DATE: 16SEP15
ACTWGT: 48.6 LB
CAD: /OFFC1601
DIMS: 24x14x14 IN

BILL RECIPIENT

UNITED STATES US

TO CLIENT SERVICES
ALS ENVIRONMENTAL HOUSTON LAB
10450 STANCLIFF RD
STE 210
HOUSTON TX 77099
(281) 530-5656 REF:
INV:
PO: DEPT:

FedEx Express

1 of 4
8079 4509 5897
MASTER ##

THU - 17 SEP 10:30A
PRIORITY OVERNIGHT

AB SGRA

7709
TX-US IA

RIGHT SOLUTIONS | RIGHT PARTNER

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www.alsglobal.com

September 28, 2015

Samuel Jackson
Apex Companies
3015 SW First Avenue
Portland, OR 97201

Work Order: **HS15090740**

Laboratory Results for: **E3CE-0065 Andover Release Site**

Dear Samuel,

ALS Environmental received 20 sample(s) on Sep 17, 2015 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Erica H Padilla

Generated By: Jumoke.Lawal
Erica Padilla
PM

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15090740

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15090740-01	2001 Colt Ct	Water		14-Sep-2015 16:45	17-Sep-2015 08:34	☐
HS15090740-02	2002 Colt Ct	Water		14-Sep-2015 16:40	17-Sep-2015 08:34	☐
HS15090740-03	2007 Colt Ct	Water		14-Sep-2015 16:15	17-Sep-2015 08:34	☐
HS15090740-04	2004 Colt Ct	Water		14-Sep-2015 16:35	17-Sep-2015 08:34	☐
HS15090740-05	2005 Colt Ct	Water		14-Sep-2015 16:30	17-Sep-2015 08:34	☐
HS15090740-06	2019 N. Ruger Circle	Water		14-Sep-2015 17:10	17-Sep-2015 08:34	☐
HS15090740-07	2020 N. Ruger Circle	Water		14-Sep-2015 17:20	17-Sep-2015 08:34	☐
HS15090740-08	HOA-1	Water		14-Sep-2015 17:30	17-Sep-2015 08:34	☐
HS15090740-09	DUP-1	Water		14-Sep-2015 00:00	17-Sep-2015 08:34	☐
HS15090740-10	2006 Colt Ct	Water		15-Sep-2015 07:45	17-Sep-2015 08:34	☐
HS15090740-11	1211 W. Quail Crossing Ct	Water		15-Sep-2015 08:00	17-Sep-2015 08:34	☐
HS15090740-12	2032 N. Ruger	Water		15-Sep-2015 08:20	17-Sep-2015 08:34	☐
HS15090740-13	2028 N. Ruger	Water		15-Sep-2015 08:30	17-Sep-2015 08:34	☐
HS15090740-14	2007 Mountain Ct	Water		15-Sep-2015 16:10	17-Sep-2015 08:34	☐
HS15090740-15	2009 Mountain Ct	Water		15-Sep-2015 16:00	17-Sep-2015 08:34	☐
HS15090740-16	2025 N. Ruger Ct	Water		15-Sep-2015 16:40	17-Sep-2015 08:34	☐
HS15090740-17	2021 N. Ruger Ct	Water		15-Sep-2015 16:55	17-Sep-2015 08:34	☐
HS15090740-18	1009 W. Mountain	Water		16-Sep-2015 08:25	17-Sep-2015 08:34	☐
HS15090740-19	DUP-2	Water		15-Sep-2015 00:00	17-Sep-2015 08:34	☐
HS15090740-20	Trip Blank 090915-23	Water	090915-23	16-Sep-2015 00:00	17-Sep-2015 08:34	☐

Client: Apex Companies

Project: E3CE-0065 Andover Release Site

Work Order: HS15090740

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R261782,R261889

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R261400

Sample ID: **2006 Colt Ct (HS15090740-10MS)**
- The MS and/or MSD recovery was below the lower control limit.

Sample ID: **2006 Colt Ct (HS15090740-10MSD)**
- The RPD between the MS and MSD was outside of the control limit.

Batch ID: R261453

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R261497

Sample ID: **1009 W. Mountain (HS15090740-18MSD)**
- The RPD between the MS and MSD was outside of the control limit.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2001 Colt Ct	Lab ID:HS15090740-01
Collection Date:	14-Sep-2015 16:45	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 20:10
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 20:10
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 20:10
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 20:10
Surr: 1,2-Dichloroethane-d4	*112*		*71-125*	*%REC*	*1*	*18-Sep-2015 20:10*
Surr: 4-Bromofluorobenzene	*95.8*		*70-125*	*%REC*	*1*	*18-Sep-2015 20:10*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*18-Sep-2015 20:10*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*18-Sep-2015 20:10*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 01:43
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*24-Sep-2015 01:43*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2002 Colt Ct	Lab ID:HS15090740-02
Collection Date:	14-Sep-2015 16:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 02:12
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 02:12
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 02:12
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 02:12
Surr: 1,2-Dichloroethane-d4	*96.3*		*71-125*	*%REC*	*1*	*18-Sep-2015 02:12*
Surr: 4-Bromofluorobenzene	*84.6*		*70-125*	*%REC*	*1*	*18-Sep-2015 02:12*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*1*	*18-Sep-2015 02:12*
Surr: Toluene-d8	*87.0*		*75-125*	*%REC*	*1*	*18-Sep-2015 02:12*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 01:59
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*24-Sep-2015 01:59*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

HIGH SOLUTIONS / RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2007 Colt Ct	Lab ID:HS15090740-03
Collection Date:	14-Sep-2015 16:15	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 03:01
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 03:01
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 03:01
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 03:01
Surr: 1,2-Dichloroethane-d4	*99.0*		*71-125*	*%REC*	*1*	*18-Sep-2015 03:01*
Surr: 4-Bromofluorobenzene	*85.5*		*70-125*	*%REC*	*1*	*18-Sep-2015 03:01*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 03:01*
Surr: Toluene-d8	*87.2*		*75-125*	*%REC*	*1*	*18-Sep-2015 03:01*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 02:14
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*24-Sep-2015 02:14*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2004 Colt Ct	Lab ID:HS15090740-04
Collection Date:	14-Sep-2015 16:35	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 03:25
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 03:25
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 03:25
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 03:25
Surr: 1,2-Dichloroethane-d4	*95.2*		*71-125*	*%REC*	*1*	*18-Sep-2015 03:25*
Surr: 4-Bromofluorobenzene	*81.6*		*70-125*	*%REC*	*1*	*18-Sep-2015 03:25*
Surr: Dibromofluoromethane	*98.4*		*74-125*	*%REC*	*1*	*18-Sep-2015 03:25*
Surr: Toluene-d8	*88.5*		*75-125*	*%REC*	*1*	*18-Sep-2015 03:25*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 02:30
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*24-Sep-2015 02:30*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

(SOUR SOLUTIONS | RIGHT PARTNER)

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2005 Colt Ct	Lab ID:HS15090740-05
Collection Date:	14-Sep-2015 16:30	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	**0.082**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 03:49
1,3,5-Trimethylbenzene	**0.020**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 03:49
Benzene	**0.18**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
Cyclohexane	**0.053**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
Ethylbenzene	**0.15**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
Isopropylbenzene	**0.0038**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
Methylcyclohexane	**0.010**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
Naphthalene	**0.013**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 03:49
n-Propylbenzene	**0.012**		**0.0010**	**mg/L**	1	18-Sep-2015 03:49
Toluene	**0.68**		**0.0050**	**mg/L**	5	18-Sep-2015 16:22
Xylenes, Total	**0.34**		**0.0030**	**mg/L**	1	18-Sep-2015 03:49
Surr: 1,2-Dichloroethane-d4	*99.4*		*71-125*	*%REC*	*1*	*18-Sep-2015 03:49*
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*5*	*18-Sep-2015 16:22*
Surr: 4-Bromofluorobenzene	*89.5*		*70-125*	*%REC*	*1*	*18-Sep-2015 03:49*
Surr: 4-Bromofluorobenzene	*91.0*		*70-125*	*%REC*	*5*	*18-Sep-2015 16:22*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 03:49*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*5*	*18-Sep-2015 16:22*
Surr: Toluene-d8	*91.9*		*75-125*	*%REC*	*1*	*18-Sep-2015 03:49*
Surr: Toluene-d8	*89.0*		*75-125*	*%REC*	*5*	*18-Sep-2015 16:22*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**4.9**		**0.050**	**mg/L**	1	24-Sep-2015 02:46
Surr: 4-Bromofluorobenzene	*113*		*70-130*	*%REC*	*1*	*24-Sep-2015 02:46*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2019 N. Ruger Circle	Lab ID:HS15090740-06
Collection Date:	14-Sep-2015 17:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 17:35
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 17:35
Benzene	**0.0050**		**0.0010**	**mg/L**	1	18-Sep-2015 17:35
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 17:35
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 17:35
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 17:35
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 17:35
Surr: 1,2-Dichloroethane-d4	*99.9*		*71-125*	*%REC*	*1*	*18-Sep-2015 17:35*
Surr: 4-Bromofluorobenzene	*84.3*		*70-125*	*%REC*	*1*	*18-Sep-2015 17:35*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*18-Sep-2015 17:35*
Surr: Toluene-d8	*89.4*		*75-125*	*%REC*	*1*	*18-Sep-2015 17:35*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 03:48
Surr: 4-Bromofluorobenzene	*111*		*70-130*	*%REC*	*1*	*24-Sep-2015 03:48*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2020 N. Ruger Circle	Lab ID:HS15090740-07
Collection Date:	14-Sep-2015 17:20	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 04:37
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 04:37
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 04:37
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 04:37
Surr: 1,2-Dichloroethane-d4	*94.0*		*71-125*	*%REC*	*1*	*18-Sep-2015 04:37*
Surr: 4-Bromofluorobenzene	*84.1*		*70-125*	*%REC*	*1*	*18-Sep-2015 04:37*
Surr: Dibromofluoromethane	*98.3*		*74-125*	*%REC*	*1*	*18-Sep-2015 04:37*
Surr: Toluene-d8	*95.1*		*75-125*	*%REC*	*1*	*18-Sep-2015 04:37*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 04:04
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*24-Sep-2015 04:04*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	HOA-1	Lab ID:HS15090740-08
Collection Date:	14-Sep-2015 17:30	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 05:01
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 05:01
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 05:01
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 05:01
Surr: 1,2-Dichloroethane-d4	*95.5*		*71-125*	*%REC*	*1*	*18-Sep-2015 05:01*
Surr: 4-Bromofluorobenzene	*84.6*		*70-125*	*%REC*	*1*	*18-Sep-2015 05:01*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*18-Sep-2015 05:01*
Surr: Toluene-d8	*87.1*		*75-125*	*%REC*	*1*	*18-Sep-2015 05:01*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 04:20
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*24-Sep-2015 04:20*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	DUP-1	Lab ID:HS15090740-09
Collection Date:	14-Sep-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	**0.090**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 05:26
1,3,5-Trimethylbenzene	**0.022**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 05:26
Benzene	**0.20**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
Cyclohexane	**0.051**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
Ethylbenzene	**0.17**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
Isopropylbenzene	**0.0044**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
Methylcyclohexane	**0.0090**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
Naphthalene	**0.013**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 05:26
n-Propylbenzene	**0.013**		**0.0010**	**mg/L**	1	18-Sep-2015 05:26
Toluene	**0.70**		**0.010**	**mg/L**	10	18-Sep-2015 16:46
Xylenes, Total	**0.38**		**0.0030**	**mg/L**	1	18-Sep-2015 05:26
Surr: 1,2-Dichloroethane-d4	*97.2*		*71-125*	*%REC*	*1*	*18-Sep-2015 05:26*
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*10*	*18-Sep-2015 16:46*
Surr: 4-Bromofluorobenzene	*91.5*		*70-125*	*%REC*	*1*	*18-Sep-2015 05:26*
Surr: 4-Bromofluorobenzene	*89.4*		*70-125*	*%REC*	*10*	*18-Sep-2015 16:46*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*1*	*18-Sep-2015 05:26*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*10*	*18-Sep-2015 16:46*
Surr: Toluene-d8	*92.8*		*75-125*	*%REC*	*1*	*18-Sep-2015 05:26*
Surr: Toluene-d8	*90.0*		*75-125*	*%REC*	*10*	*18-Sep-2015 16:46*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**5.2**		**0.050**	**mg/L**	1	24-Sep-2015 04:35
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*24-Sep-2015 04:35*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2006 Colt Ct	Lab ID:HS15090740-10
Collection Date:	15-Sep-2015 07:45	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	**0.82**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
1,2-Dichloroethane	ND		0.0050	mg/L	5	18-Sep-2015 15:09
1,3,5-Trimethylbenzene	**0.21**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
2-Butanone	ND		0.010	mg/L	5	18-Sep-2015 15:09
Benzene	**1.1**		**0.025**	**mg/L**	25	18-Sep-2015 00:11
Cyclohexane	**0.28**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
Ethylbenzene	**1.2**		**0.025**	**mg/L**	25	18-Sep-2015 00:11
Isopropylbenzene	**0.039**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
Methylcyclohexane	**0.055**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
Naphthalene	**0.12**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
n-Butylbenzene	ND		0.0050	mg/L	5	18-Sep-2015 15:09
n-Propylbenzene	**0.100**		**0.0050**	**mg/L**	5	18-Sep-2015 15:09
Toluene	**1.7**		**0.025**	**mg/L**	25	18-Sep-2015 00:11
Xylenes, Total	**2.8**		**0.075**	**mg/L**	25	18-Sep-2015 00:11
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*25*	*18-Sep-2015 00:11*
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*5*	*18-Sep-2015 15:09*
Surr: 4-Bromofluorobenzene	*89.7*		*70-125*	*%REC*	*25*	*18-Sep-2015 00:11*
Surr: 4-Bromofluorobenzene	*95.9*		*70-125*	*%REC*	*5*	*18-Sep-2015 15:09*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*25*	*18-Sep-2015 00:11*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*5*	*18-Sep-2015 15:09*
Surr: Toluene-d8	*87.2*		*75-125*	*%REC*	*25*	*18-Sep-2015 00:11*
Surr: Toluene-d8	*92.0*		*75-125*	*%REC*	*5*	*18-Sep-2015 15:09*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**29**		**0.050**	**mg/L**	1	24-Sep-2015 04:51
Surr: 4-Bromofluorobenzene	*115*		*70-130*	*%REC*	*1*	*24-Sep-2015 04:51*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	1211 W. Quail Crossing Ct	Lab ID:HS15090740-11
Collection Date:	15-Sep-2015 08:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 17:59
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 17:59
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 17:59
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 17:59
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*18-Sep-2015 17:59*
Surr: 4-Bromofluorobenzene	*87.1*		*70-125*	*%REC*	*1*	*18-Sep-2015 17:59*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 17:59*
Surr: Toluene-d8	*90.0*		*75-125*	*%REC*	*1*	*18-Sep-2015 17:59*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 12:13
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*24-Sep-2015 12:13*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2032 N. Ruger	Lab ID:HS15090740-12
Collection Date:	15-Sep-2015 08:20	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 18:23
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 18:23
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 18:23
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 18:23
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*18-Sep-2015 18:23*
Surr: 4-Bromofluorobenzene	*86.4*		*70-125*	*%REC*	*1*	*18-Sep-2015 18:23*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*18-Sep-2015 18:23*
Surr: Toluene-d8	*90.3*		*75-125*	*%REC*	*1*	*18-Sep-2015 18:23*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 12:29
Surr: 4-Bromofluorobenzene	*111*		*70-130*	*%REC*	*1*	*24-Sep-2015 12:29*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2028 N. Ruger	Lab ID:HS15090740-13
Collection Date:	15-Sep-2015 08:30	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 06:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 06:38
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 06:38
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 06:38
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*18-Sep-2015 06:38*
Surr: 4-Bromofluorobenzene	*85.7*		*70-125*	*%REC*	*1*	*18-Sep-2015 06:38*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*18-Sep-2015 06:38*
Surr: Toluene-d8	*90.1*		*75-125*	*%REC*	*1*	*18-Sep-2015 06:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 12:44
Surr: 4-Bromofluorobenzene	*110*		*70-130*	*%REC*	*1*	*24-Sep-2015 12:44*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2007 Mountain Ct	Lab ID:HS15090740-14
Collection Date:	15-Sep-2015 16:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 07:03
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 07:03
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 07:03
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 07:03
Surr: 1,2-Dichloroethane-d4	*96.9*		*71-125*	*%REC*	*1*	*18-Sep-2015 07:03*
Surr: 4-Bromofluorobenzene	*86.0*		*70-125*	*%REC*	*1*	*18-Sep-2015 07:03*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*18-Sep-2015 07:03*
Surr: Toluene-d8	*93.2*		*75-125*	*%REC*	*1*	*18-Sep-2015 07:03*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 13:00
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*24-Sep-2015 13:00*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2009 Mountain Ct	Lab ID:HS15090740-15
Collection Date:	15-Sep-2015 16:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 07:27
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 07:27
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 07:27
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 07:27
Surr: 1,2-Dichloroethane-d4	*99.2*		*71-125*	*%REC*	*1*	*18-Sep-2015 07:27*
Surr: 4-Bromofluorobenzene	*84.2*		*70-125*	*%REC*	*1*	*18-Sep-2015 07:27*
Surr: Dibromofluoromethane	*98.8*		*74-125*	*%REC*	*1*	*18-Sep-2015 07:27*
Surr: Toluene-d8	*91.1*		*75-125*	*%REC*	*1*	*18-Sep-2015 07:27*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 13:16
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*24-Sep-2015 13:16*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2025 N. Ruger Ct	Lab ID:HS15090740-16
Collection Date:	15-Sep-2015 16:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 07:51
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 07:51
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 07:51
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 07:51
Surr: 1,2-Dichloroethane-d4	*95.6*		*71-125*	*%REC*	*1*	*18-Sep-2015 07:51*
Surr: 4-Bromofluorobenzene	*82.8*		*70-125*	*%REC*	*1*	*18-Sep-2015 07:51*
Surr: Dibromofluoromethane	*99.0*		*74-125*	*%REC*	*1*	*18-Sep-2015 07:51*
Surr: Toluene-d8	*89.6*		*75-125*	*%REC*	*1*	*18-Sep-2015 07:51*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 13:32
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*24-Sep-2015 13:32*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	2021 N. Ruger Ct	Lab ID:HS15090740-17
Collection Date:	15-Sep-2015 16:55	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 08:15
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 08:15
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 08:15
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 08:15
Surr: 1,2-Dichloroethane-d4	*98.0*		*71-125*	*%REC*	*1*	*18-Sep-2015 08:15*
Surr: 4-Bromofluorobenzene	*79.6*		*70-125*	*%REC*	*1*	*18-Sep-2015 08:15*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*18-Sep-2015 08:15*
Surr: Toluene-d8	*85.8*		*75-125*	*%REC*	*1*	*18-Sep-2015 08:15*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 13:47
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*24-Sep-2015 13:47*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	1009 W. Mountain	Lab ID:HS15090740-18
Collection Date:	16-Sep-2015 08:25	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 14:20
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 14:20
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 14:20
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 14:20
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*18-Sep-2015 14:20*
Surr: 4-Bromofluorobenzene	*86.9*		*70-125*	*%REC*	*1*	*18-Sep-2015 14:20*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*18-Sep-2015 14:20*
Surr: Toluene-d8	*94.9*		*75-125*	*%REC*	*1*	*18-Sep-2015 14:20*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 16:38
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*24-Sep-2015 16:38*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	DUP-2	Lab ID:HS15090740-19
Collection Date:	15-Sep-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 14:44
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 14:44
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 14:44
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 14:44
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 14:44*
Surr: 4-Bromofluorobenzene	*86.0*		*70-125*	*%REC*	*1*	*18-Sep-2015 14:44*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*18-Sep-2015 14:44*
Surr: Toluene-d8	*90.3*		*75-125*	*%REC*	*1*	*18-Sep-2015 14:44*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Sep-2015 15:34
Surr: 4-Bromofluorobenzene	*99.3*		*70-130*	*%REC*	*1*	*24-Sep-2015 15:34*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15090740
Sample ID:	Trip Blank 090915-23	Lab ID:HS15090740-20
Collection Date:	16-Sep-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Sep-2015 13:56
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
2-Butanone	ND		0.0020	mg/L	1	18-Sep-2015 13:56
Benzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Cyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Ethylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Isopropylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Methylcyclohexane	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Naphthalene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
n-Butylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
n-Propylbenzene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Toluene	ND		0.0010	mg/L	1	18-Sep-2015 13:56
Xylenes, Total	ND		0.0030	mg/L	1	18-Sep-2015 13:56
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*18-Sep-2015 13:56*
Surr: 4-Bromofluorobenzene	*87.9*		*70-125*	*%REC*	*1*	*18-Sep-2015 13:56*
Surr: Dibromofluoromethane	*107*		*74-125*	*%REC*	*1*	*18-Sep-2015 13:56*
Surr: Toluene-d8	*90.7*		*75-125*	*%REC*	*1*	*18-Sep-2015 13:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R261400	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090740-02	2002 Colt Ct	14 Sep 2015 16:40			18 Sep 2015 02:12	1
HS15090740-03	2007 Colt Ct	14 Sep 2015 16:15			18 Sep 2015 03:01	1
HS15090740-04	2004 Colt Ct	14 Sep 2015 16:35			18 Sep 2015 03:25	1
HS15090740-05	2005 Colt Ct	14 Sep 2015 16:30			18 Sep 2015 03:49	1
HS15090740-07	2020 N. Ruger Circle	14 Sep 2015 17:20			18 Sep 2015 04:37	1
HS15090740-08	HOA-1	14 Sep 2015 17:30			18 Sep 2015 05:01	1
HS15090740-09	DUP-1	14 Sep 2015 00:00			18 Sep 2015 05:26	1
HS15090740-10	2006 Colt Ct	15 Sep 2015 07:45			18 Sep 2015 00:11	25
HS15090740-13	2028 N. Ruger	15 Sep 2015 08:30			18 Sep 2015 06:38	1
HS15090740-14	2007 Mountain Ct	15 Sep 2015 16:10			18 Sep 2015 07:03	1
HS15090740-15	2009 Mountain Ct	15 Sep 2015 16:00			18 Sep 2015 07:27	1
HS15090740-16	2025 N. Ruger Ct	15 Sep 2015 16:40			18 Sep 2015 07:51	1
HS15090740-17	2021 N. Ruger Ct	15 Sep 2015 16:55			18 Sep 2015 08:15	1
Batch ID R261453	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090740-01	2001 Colt Ct	14 Sep 2015 16:45			18 Sep 2015 20:10	1
Batch ID R261497	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15090740-05	2005 Colt Ct	14 Sep 2015 16:30			18 Sep 2015 16:22	5
HS15090740-06	2019 N. Ruger Circle	14 Sep 2015 17:10			18 Sep 2015 17:35	1
HS15090740-09	DUP-1	14 Sep 2015 00:00			18 Sep 2015 16:46	10
HS15090740-10	2006 Colt Ct	15 Sep 2015 07:45			18 Sep 2015 15:09	5
HS15090740-11	1211 W. Quail Crossing Ct	15 Sep 2015 08:00			18 Sep 2015 17:59	1
HS15090740-12	2032 N. Ruger	15 Sep 2015 08:20			18 Sep 2015 18:23	1
HS15090740-18	1009 W. Mountain	16 Sep 2015 08:25			18 Sep 2015 14:20	1
HS15090740-19	DUP-2	15 Sep 2015 00:00			18 Sep 2015 14:44	1
HS15090740-20	Trip Blank 090915-23	16 Sep 2015 00:00			18 Sep 2015 13:56	1
Batch ID R261782	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15090740-01	2001 Colt Ct	14 Sep 2015 16:45			24 Sep 2015 01:43	1
HS15090740-02	2002 Colt Ct	14 Sep 2015 16:40			24 Sep 2015 01:59	1
HS15090740-03	2007 Colt Ct	14 Sep 2015 16:15			24 Sep 2015 02:14	1
HS15090740-04	2004 Colt Ct	14 Sep 2015 16:35			24 Sep 2015 02:30	1
HS15090740-05	2005 Colt Ct	14 Sep 2015 16:30			24 Sep 2015 02:46	1
HS15090740-06	2019 N. Ruger Circle	14 Sep 2015 17:10			24 Sep 2015 03:48	1
HS15090740-07	2020 N. Ruger Circle	14 Sep 2015 17:20			24 Sep 2015 04:04	1
HS15090740-08	HOA-1	14 Sep 2015 17:30			24 Sep 2015 04:20	1
HS15090740-09	DUP-1	14 Sep 2015 00:00			24 Sep 2015 04:35	1
HS15090740-10	2006 Colt Ct	15 Sep 2015 07:45			24 Sep 2015 04:51	1

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R261889	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15090740-11	1211 W. Quail Crossing Ct	15 Sep 2015 08:00			24 Sep 2015 12:13	1
HS15090740-12	2032 N. Ruger	15 Sep 2015 08:20			24 Sep 2015 12:29	1
HS15090740-13	2028 N. Ruger	15 Sep 2015 08:30			24 Sep 2015 12:44	1
HS15090740-14	2007 Mountain Ct	15 Sep 2015 16:10			24 Sep 2015 13:00	1
HS15090740-15	2009 Mountain Ct	15 Sep 2015 16:00			24 Sep 2015 13:16	1
HS15090740-16	2025 N. Ruger Ct	15 Sep 2015 16:40			24 Sep 2015 13:32	1
HS15090740-17	2021 N. Ruger Ct	15 Sep 2015 16:55			24 Sep 2015 13:47	1
HS15090740-18	1009 W. Mountain	16 Sep 2015 08:25			24 Sep 2015 16:38	1
HS15090740-19	DUP-2	15 Sep 2015 00:00			24 Sep 2015 15:34	1

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261782 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150923** Units: **mg/L** Analysis Date: **23-Sep-2015 21:16**
Client ID: Run ID: **FID-14_261782** SeqNo: **3434146** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1044*	*0.0050*	*0.1*	*0*	*104*	*70 - 130*				

LCS Sample ID: **GLCS-150923** Units: **mg/L** Analysis Date: **23-Sep-2015 20:45**
Client ID: Run ID: **FID-14_261782** SeqNo: **3434144** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.159	0.050	1	0	116	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1118*	*0.0050*	*0.1*	*0*	*112*	*70 - 130*				

MS Sample ID: **HS15090731-19MS** Units: **mg/L** Analysis Date: **23-Sep-2015 21:47**
Client ID: Run ID: **FID-14_261782** SeqNo: **3434148** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.19	0.050	1	0	119	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1162*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*				

MSD Sample ID: **HS15090731-19MSD** Units: **mg/L** Analysis Date: **23-Sep-2015 22:03**
Client ID: Run ID: **FID-14_261782** SeqNo: **3434149** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.163	0.050	1	0	116	70 - 130	1.19	2.27	30	
Surr: 4-Bromofluorobenzene	*0.1109*	*0.0050*	*0.1*	*0*	*111*	*70 - 130*	*0.1162*	*4.69*	*30*	

The following samples were anayzed in this batch: HS15090740-01, HS15090740-02, HS15090740-03, HS15090740-04, HS15090740-05, HS15090740-06, HS15090740-07, HS15090740-08, HS15090740-09, HS15090740-10

Note: See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261889 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150924** Units: **mg/L** Analysis Date: **24-Sep-2015 11:22**
Client ID: Run ID: **FID-14_261889** SeqNo: **3436466** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1036*	*0.0050*	*0.1*	*0*	*104*	*70 - 130*				

LCS Sample ID: **GLCS-150924** Units: **mg/L** Analysis Date: **24-Sep-2015 10:51**
Client ID: Run ID: **FID-14_261889** SeqNo: **3436464** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.141	0.050	1	0	114	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1084*	*0.0050*	*0.1*	*0*	*108*	*70 - 130*				

MS Sample ID: **HS15090740-11MS** Units: **mg/L** Analysis Date: **24-Sep-2015 15:02**
Client ID: **1211 W. Quail Crossing Ct** Run ID: **FID-14_261889** SeqNo: **3436476** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.227	0.050	1	0	123	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1183*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MSD Sample ID: **HS15090740-11MSD** Units: **mg/L** Analysis Date: **24-Sep-2015 15:18**
Client ID: **1211 W. Quail Crossing Ct** Run ID: **FID-14_261889** SeqNo: **3436477** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.192	0.050	1	0	119	70 - 130	1.227	2.9	30	
Surr: 4-Bromofluorobenzene	*0.1132*	*0.0050*	*0.1*	*0*	*113*	*70 - 130*	*0.1183*	*4.44*	*30*	

The following samples were anayzed in this batch: HS15090740-11, HS15090740-12, HS15090740-13, HS15090740-14, HS15090740-15, HS15090740-16, HS15090740-17, HS15090740-18, HS15090740-19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261400 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-150917** Units: **ug/L** Analysis Date: **17-Sep-2015 23:22**
Client ID: Run ID: **VOA6_261400** SeqNo: **3427009** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*50.16*	*1.0*	*50*	*0*	*100*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*42.79*	*1.0*	*50*	*0*	*85.6*	*70 - 125*				
Surr: Dibromofluoromethane	*53.45*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*46.73*	*1.0*	*50*	*0*	*93.5*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261400 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-150917** Units: **ug/L** Analysis Date: **17-Sep-2015 22:09**
Client ID: Run ID: **VOA6_261400** SeqNo: **3427008** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.26	1.0	50	0	90.5	70 - 125				
1,2-Dichloroethane	53.24	1.0	50	0	106	76 - 120				
1,3,5-Trimethylbenzene	42.48	1.0	50	0	85.0	80 - 123				
2-Butanone	102.2	2.0	100	0	102	60 - 140				
Benzene	51.36	1.0	50	0	103	80 - 120				
Cyclohexane	48.71	1.0	50	0	97.4	70 - 130				
Ethylbenzene	45.94	1.0	50	0	91.9	80 - 120				
Isopropylbenzene	43.77	1.0	50	0	87.5	75 - 130				
Methylcyclohexane	48.73	1.0	50	0	97.5	70 - 126				
Naphthalene	49.93	1.0	50	0	99.9	65 - 135				
n-Butylbenzene	48.95	1.0	50	0	97.9	75 - 128				
n-Propylbenzene	43.02	1.0	50	0	86.0	75 - 130				
Toluene	42.57	1.0	50	0	85.1	75 - 121				
Xylenes, Total	135.7	3.0	150	0	90.5	79 - 124				
Surr: 1,2-Dichloroethane-d4	*49.47*	*1.0*	*50*	*0*	*98.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*44.18*	*1.0*	*50*	*0*	*88.4*	*70 - 125*				
Surr: Dibromofluoromethane	*49.75*	*1.0*	*50*	*0*	*99.5*	*74 - 125*				
Surr: Toluene-d8	*41.92*	*1.0*	*50*	*0*	*83.8*	*75 - 125*				

Note See Qualifiers Page for a list of qualifiers and their explanation

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261400 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS15090740-10MS** Units: **ug/L** Analysis Date: **18-Sep-2015 00:35**
Client ID: **2006 Colt Ct** Run ID: **VOA6_261400** SeqNo: **3427012** PrepDate: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	10810	250	12500	1013	78.4	70 - 125				
1,2-Dichloroethane	12250	250	12500	0	98.0	76 - 120				
1,3,5-Trimethylbenzene	9566	250	12500	312.5	74.0	80 - 123				S
2-Butanone	21510	500	25000	0	86.0	60 - 140				
Benzene	12640	250	12500	1150	91.9	80 - 120				
Cyclohexane	11200	250	12500	361.4	86.7	70 - 130				
Ethylbenzene	12310	250	12500	1201	88.9	80 - 120				
Isopropylbenzene	11070	250	12500	0	88.5	75 - 130				
Methylcyclohexane	11610	250	12500	647.3	87.7	70 - 126				
Naphthalene	9491	250	12500	746.6	70.0	65 - 135				
n-Butylbenzene	9596	250	12500	0	76.8	75 - 128				
n-Propylbenzene	9371	250	12500	162.4	73.7	75 - 130				S
Toluene	12360	250	12500	1815	84.4	75 - 121				
Xylenes, Total	36170	750	37500	2775	89.1	80 - 124				
Surr: 1,2-Dichloroethane-d4	*13140*	*250*	*12500*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*12240*	*250*	*12500*	*0*	*97.9*	*70 - 125*				
Surr: Dibromofluoromethane	*12070*	*250*	*12500*	*0*	*96.5*	*74 - 125*				
Surr: Toluene-d8	*11480*	*250*	*12500*	*0*	*91.8*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261400 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS15090740-10MSD** Units: **ug/L** Analysis Date: **18-Sep-2015 00:59**
Client ID: **2006 Colt Ct** Run ID: **VOA6_261400** SeqNo: **3427013** PrepDate: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	11750	250	12500	1013	85.9	70 - 125	10810	8.29	20	
1,2-Dichloroethane	12610	250	12500	0	101	76 - 120	12250	2.92	20	
1,3,5-Trimethylbenzene	10810	250	12500	312.5	84.0	80 - 123	9566	12.2	20	
2-Butanone	23500	500	25000	0	94.0	60 - 140	21510	8.84	20	
Benzene	13250	250	12500	1150	96.8	80 - 120	12640	4.73	20	
Cyclohexane	13910	250	12500	361.4	108	70 - 130	11200	21.6	20	R
Ethylbenzene	12980	250	12500	1201	94.2	80 - 120	12310	5.25	20	
Isopropylbenzene	11780	250	12500	0	94.2	75 - 130	11070	6.23	20	
Methylcyclohexane	8302	250	12500	647.3	61.2	70 - 126	11610	33.2	20	SR
Naphthalene	11300	250	12500	746.6	84.4	65 - 135	9491	17.4	20	
n-Butylbenzene	10720	250	12500	0	85.7	75 - 128	9596	11	20	
n-Propylbenzene	10660	250	12500	162.4	84.0	75 - 130	9371	12.9	20	
Toluene	13440	250	12500	1815	93.0	75 - 121	12360	8.32	20	
Xylenes, Total	37950	750	37500	2775	93.8	80 - 124	36170	4.78	20	
Surr: 1,2-Dichloroethane-d4	*12750*	*250*	*12500*	*0*	*102*	*71 - 125*	*13140*	*3.01*	*20*	
Surr: 4-Bromofluorobenzene	*12370*	*250*	*12500*	*0*	*99.0*	*70 - 125*	*12240*	*1.07*	*20*	
Surr: Dibromofluoromethane	*12780*	*250*	*12500*	*0*	*102*	*74 - 125*	*12070*	*5.75*	*20*	
Surr: Toluene-d8	*11890*	*250*	*12500*	*0*	*95.2*	*75 - 125*	*11480*	*3.54*	*20*	

The following samples were anayzed in this batch: HS15090740-02 HS15090740-03 HS15090740-04 HS15090740-05 HS15090740-07 HS15090740-08 HS15090740-09 HS15090740-10 HS15090740-13 HS15090740-14 HS15090740-15 HS15090740-16 HS15090740-17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261453 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150918** Units: **ug/L** Analysis Date: **18-Sep-2015 11:54**
Client ID: Run ID: **VOA4_261453** SeqNo: **3427842** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*56.14*	*1.0*	*50*	*0*	*112*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.86*	*1.0*	*50*	*0*	*95.7*	*70 - 125*				
Surr: Dibromofluoromethane	*53.27*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*52.8*	*1.0*	*50*	*0*	*106*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261453 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140918** Units: **ug/L** Analysis Date: **18-Sep-2015 11:03**
Client ID: Run ID: **VOA4_261453** SeqNo: **3427841** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.05	1.0	50	0	102	70 - 125				
1,2-Dichloroethane	52.57	1.0	50	0	105	76 - 120				
1,3,5-Trimethylbenzene	51.36	1.0	50	0	103	80 - 123				
2-Butanone	107.9	2.0	100	0	108	60 - 140				
Benzene	51.27	1.0	50	0	103	80 - 120				
Cyclohexane	55.99	1.0	50	0	112	70 - 130				
Ethylbenzene	49.55	1.0	50	0	99.1	80 - 120				
Isopropylbenzene	53.01	1.0	50	0	106	75 - 130				
Methylcyclohexane	51.58	1.0	50	0	103	70 - 126				
Naphthalene	52.29	1.0	50	0	105	65 - 135				
n-Butylbenzene	57.13	1.0	50	0	114	75 - 128				
n-Propylbenzene	51.78	1.0	50	0	104	75 - 130				
Toluene	49.66	1.0	50	0	99.3	75 - 121				
Xylenes, Total	152	3.0	150	0	101	79 - 124				
Surr: 1,2-Dichloroethane-d4	*51.23*	*1.0*	*50*	*0*	*102*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.44*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*52.93*	*1.0*	*50*	*0*	*106*	*74 - 125*				
Surr: Toluene-d8	*52.63*	*1.0*	*50*	*0*	*105*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261453 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15090524-05MS** Units: **ug/L** Analysis Date: **18-Sep-2015 13:11**
Client ID: Run ID: **VOA4_261453** SeqNo: **3427845** PrepDate: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	24060	500	25000	369	94.8	70 - 125				
1,2-Dichloroethane	26150	500	25000	0	105	76 - 120				
1,3,5-Trimethylbenzene	23960	500	25000	370.9	94.4	80 - 123				
2-Butanone	51430	1000	50000	0	103	60 - 140				
Benzene	27030	500	25000	1907	100	80 - 120				
Cyclohexane	27340	500	25000	583.7	107	70 - 130				
Ethylbenzene	26060	500	25000	1724	97.3	80 - 120				
Isopropylbenzene	25050	500	25000	178.3	99.5	75 - 130				
Methylcyclohexane	26030	500	25000	255.3	103	70 - 126				
Naphthalene	21850	500	25000	1930	79.7	65 - 135				
n-Butylbenzene	26550	500	25000	0	106	75 - 128				
n-Propylbenzene	25090	500	25000	288.8	99.2	75 - 130				
Toluene	26820	500	25000	3028	95.1	75 - 121				
Xylenes, Total	75720	1500	75000	1633	98.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*26390*	*500*	*25000*	*0*	*106*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*25180*	*500*	*25000*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*26690*	*500*	*25000*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*26090*	*500*	*25000*	*0*	*104*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261453 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15090524-05MSD** Units: **ug/L** Analysis Date: **18-Sep-2015 13:36**
Client ID: Run ID: **VOA4_261453** SeqNo: **3427846** PrepDate: DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	24660	500	25000	369	97.2	70 - 125	24060	2.44	20	
1,2-Dichloroethane	24980	500	25000	0	99.9	76 - 120	26150	4.58	20	
1,3,5-Trimethylbenzene	24310	500	25000	370.9	95.8	80 - 123	23960	1.44	20	
2-Butanone	54940	1000	50000	0	110	60 - 140	51430	6.6	20	
Benzene	25350	500	25000	1907	93.8	80 - 120	27030	6.39	20	
Cyclohexane	26680	500	25000	583.7	104	70 - 130	27340	2.45	20	
Ethylbenzene	24980	500	25000	1724	93.0	80 - 120	26060	4.21	20	
Isopropylbenzene	24630	500	25000	178.3	97.8	75 - 130	25050	1.67	20	
Methylcyclohexane	24040	500	25000	255.3	95.1	70 - 126	26030	7.94	20	
Naphthalene	24390	500	25000	1930	89.8	65 - 135	21850	11	20	
n-Butylbenzene	25820	500	25000	0	103	75 - 128	26550	2.8	20	
n-Propylbenzene	24670	500	25000	288.8	97.5	75 - 130	25090	1.69	20	
Toluene	25520	500	25000	3028	90.0	75 - 121	26820	4.96	20	
Xylenes, Total	71760	1500	75000	1633	93.5	80 - 124	75720	5.37	20	
Surr: 1,2-Dichloroethane-d4	*26940*	*500*	*25000*	*0*	*108*	*71 - 125*	*26390*	*2.05*	*20*	
Surr: 4-Bromofluorobenzene	*24600*	*500*	*25000*	*0*	*98.4*	*70 - 125*	*25180*	*2.31*	*20*	
Surr: Dibromofluoromethane	*26410*	*500*	*25000*	*0*	*106*	*74 - 125*	*26690*	*1.04*	*20*	
Surr: Toluene-d8	*26240*	*500*	*25000*	*0*	*105*	*75 - 125*	*26090*	*0.581*	*20*	

The following samples were analyzed in this batch: HS15090740-01

Note: See Qualifiers Page for a list of qualifiers and their explanation

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261497 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-150918** Units: **ug/L** Analysis Date: **18-Sep-2015 11:55**
Client ID: Run ID: **VOA6_261497** SeqNo: **3428746** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*50.62*	*1.0*	*50*	*0*	*101*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*45.83*	*1.0*	*50*	*0*	*91.7*	*70 - 125*				
Surr: Dibromofluoromethane	*51.7*	*1.0*	*50*	*0*	*103*	*74 - 125*				
Surr: Toluene-d8	*44.28*	*1.0*	*50*	*0*	*88.6*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261497 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-150918** Units: **ug/L** Analysis Date: **18-Sep-2015 10:42**
Client ID: Run ID: **VOA6_261497** SeqNo: **3428745** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	44.62	1.0	50	0	89.2	70 - 125				
1,2-Dichloroethane	53.19	1.0	50	0	106	76 - 120				
1,3,5-Trimethylbenzene	42.88	1.0	50	0	85.8	80 - 123				
2-Butanone	103.5	2.0	100	0	103	60 - 140				
Benzene	52.26	1.0	50	0	105	80 - 120				
Cyclohexane	53.88	1.0	50	0	108	70 - 130				
Ethylbenzene	48.58	1.0	50	0	97.2	80 - 120				
Isopropylbenzene	48.56	1.0	50	0	97.1	75 - 130				
Methylcyclohexane	45.75	1.0	50	0	91.5	70 - 126				
Naphthalene	47.81	1.0	50	0	95.6	65 - 135				
n-Butylbenzene	48.2	1.0	50	0	96.4	75 - 128				
n-Propylbenzene	43.29	1.0	50	0	86.6	75 - 130				
Toluene	47.08	1.0	50	0	94.2	75 - 121				
Xylenes, Total	145.3	3.0	150	0	96.9	79 - 124				
Surr: 1,2-Dichloroethane-d4	*51.35*	*1.0*	*50*	*0*	*103*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.2*	*1.0*	*50*	*0*	*94.4*	*70 - 125*				
Surr: Dibromofluoromethane	*50.91*	*1.0*	*50*	*0*	*102*	*74 - 125*				
Surr: Toluene-d8	*46.14*	*1.0*	*50*	*0*	*92.3*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261497 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS15090740-18MS** Units: **ug/L** Analysis Date: **18-Sep-2015 15:33**
Client ID: **1009 W. Mountain** Run ID: **VOA6_261497** SeqNo: **3428753** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.19	1.0	50	0	90.4	70 - 125				
1,2-Dichloroethane	54.52	1.0	50	0	109	76 - 120				
1,3,5-Trimethylbenzene	40.15	1.0	50	0	80.3	80 - 123				
2-Butanone	95.62	2.0	100	0	95.6	60 - 140				
Benzene	51.98	1.0	50	0	104	80 - 120				
Cyclohexane	44.47	1.0	50	0	88.9	70 - 130				
Ethylbenzene	47.54	1.0	50	0	95.1	80 - 120				
Isopropylbenzene	44.27	1.0	50	0	88.5	75 - 130				
Methylcyclohexane	49.86	1.0	50	0	99.7	70 - 126				
Naphthalene	47.35	1.0	50	0	94.7	65 - 135				
n-Butylbenzene	40.3	1.0	50	0	80.6	75 - 128				
n-Propylbenzene	38.83	1.0	50	0	77.7	75 - 130				
Toluene	47.4	1.0	50	0	94.8	75 - 121				
Xylenes, Total	143.2	3.0	150	0	95.5	80 - 124				
Surr: 1,2-Dichloroethane-d4	*53.52*	*1.0*	*50*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.34*	*1.0*	*50*	*0*	*96.7*	*70 - 125*				
Surr: Dibromofluoromethane	*52*	*1.0*	*50*	*0*	*104*	*74 - 125*				
Surr: Toluene-d8	*46.16*	*1.0*	*50*	*0*	*92.3*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QC BATCH REPORT

Batch ID: R261497 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS15090740-18MSD** Units: **ug/L** Analysis Date: **18-Sep-2015 15:57**
Client ID: **1009 W. Mountain** Run ID: **VOA6_261497** SeqNo: **3428754** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.05	1.0	50	0	90.1	70 - 125	45.19	0.312	20	
1,2-Dichloroethane	53.16	1.0	50	0	106	76 - 120	54.52	2.53	20	
1,3,5-Trimethylbenzene	42.74	1.0	50	0	85.5	80 - 123	40.15	6.26	20	
2-Butanone	110	2.0	100	0	110	60 - 140	95.62	14	20	
Benzene	52.18	1.0	50	0	104	80 - 120	51.98	0.397	20	
Cyclohexane	56.56	1.0	50	0	113	70 - 130	44.47	23.9	20	R
Ethylbenzene	48.42	1.0	50	0	96.8	80 - 120	47.54	1.83	20	
Isopropylbenzene	48.42	1.0	50	0	96.8	75 - 130	44.27	8.96	20	
Methylcyclohexane	47.36	1.0	50	0	94.7	70 - 126	49.86	5.15	20	
Naphthalene	52.36	1.0	50	0	105	65 - 135	47.35	10.1	20	
n-Butylbenzene	47.2	1.0	50	0	94.4	75 - 128	40.3	15.8	20	
n-Propylbenzene	43.2	1.0	50	0	86.4	75 - 130	38.83	10.7	20	
Toluene	47.56	1.0	50	0	95.1	75 - 121	47.4	0.342	20	
Xylenes, Total	145.2	3.0	150	0	96.8	80 - 124	143.2	1.43	20	
Surr: 1,2-Dichloroethane-d4	*51.81*	*1.0*	*50*	*0*	*104*	*71 - 125*	*53.52*	*3.26*	*20*	
Surr: 4-Bromofluorobenzene	*47.15*	*1.0*	*50*	*0*	*94.3*	*70 - 125*	*48.34*	*2.49*	*20*	
Surr: Dibromofluoromethane	*51.15*	*1.0*	*50*	*0*	*102*	*74 - 125*	*52*	*1.65*	*20*	
Surr: Toluene-d8	*44.94*	*1.0*	*50*	*0*	*89.9*	*75 - 125*	*46.16*	*2.69*	*20*	

The following samples were anayzed in this batch: HS15090740-05 HS15090740-06 HS15090740-09 HS15090740-10 HS15090740-11 HS15090740-12 HS15090740-18 HS15090740-19 HS15090740-20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15090740

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	30-Sep-2015
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2015-047	31-Aug-2016
Texas	T104704231-15-15	30-Apr-2016

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15090740

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15090740-01	2001 Colt Ct	Login	9/17/2015 1:46:44 PM	CTC	VW-3
HS15090740-01	2001 Colt Ct	Login	9/17/2015 1:46:44 PM	CTC	BTEX A1
HS15090740-02	2002 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-02	2002 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-03	2007 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-03	2007 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-04	2004 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-04	2004 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-05	2005 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-05	2005 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-06	2019 N. Ruger Circle	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-06	2019 N. Ruger Circle	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-07	2020 N. Ruger Circle	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-07	2020 N. Ruger Circle	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-08	HOA-1	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-08	HOA-1	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-09	DUP-1	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-09	DUP-1	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-10	2006 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-10	2006 Colt Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-11	1211 W. Quail Crossing Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-11	1211 W. Quail Crossing Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-12	2032 N. Ruger	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-12	2032 N. Ruger	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-13	2028 N. Ruger	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-13	2028 N. Ruger	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-14	2007 Mountain Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-14	2007 Mountain Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-15	2009 Mountain Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-15	2009 Mountain Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-16	2025 N. Ruger Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-16	2025 N. Ruger Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-17	2021 N. Ruger Ct	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-17	2021 N. Ruger Ct	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-18	1009 W. Mountain	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-18	1009 W. Mountain	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-19	DUP-2	Login	9/17/2015 2:03:54 PM	CTC	VW-3
HS15090740-19	DUP-2	Login	9/17/2015 2:03:54 PM	CTC	BTEX A1
HS15090740-20	Trip Blank 090915-23	Login	9/17/2015 2:05:32 PM	CTC	VW-3

Sample Receipt Checklist

Client Name: APEX-PORTLAND

Work Order: HS15090740

Date/Time Received: 17-Sep-2015 08:34

Received by: RPG

Checklist completed by: *Charity Carter* (eSignature) 17-Sep-2015 (Date)

Reviewed by: (eSignature) (Date)

Matrices: Waters

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☑
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	5.0c/4.7c u/c		6
Cooler(s)/Kit(s):	5015		
Date/Time sample(s) sent to storage:	09/17/2015 13:42		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes: COC 3 of 3 COC ID 131844 not signed

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By: 0

Regarding:

Comments:

Corrective Action:

SOLUTIONS | RIGHT FAR

ALS Environmental

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Chain of Custody Form

Page 1 of 3

COC ID: 131842

HS15090740

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	E3CE-0065 Andover Release Site	A	8260_LL_W (14 compound Select List)
Work Order		Project Number	Irrigation Wells	B	VPH OA-1_W (HYD-5)
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	2001 Colt Ct	9/14/15	1645	water	HCL	6	3	3									
2	2002 Colt Ct		1640														
3	2007 Colt Ct		1615														
4	2004 Colt Ct		1635														
5	2005 Colt Ct		1630														
6	2019 N Ruger Circle		1710														
7	2020 N Ruger Circle		1720														
8	HOA-1		1730														
9	Dup-1		—														
10	2006 Colt Ct	9/15/15	0745	water	HCL	6	3	3									

Sampler(s) Please Print & Sign: Lori Bindner / Lori Bindner

Shipment Method: FedEx

Required Turnaround Time: (Check Box) TAT: 10 days Other:

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Lori Bindner / Lori Bindner	9/16/15			E3CE-0065 Andover Release Site
Relinquished by:	Date: 9/17/15	Time: 08:34	Received by (Laboratory): Nilah	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
5015	4/c 5.0	QC Level STD
		Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

Page 1 of 3

COC ID: 131843

HS15090740

WV

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	E3CE-0065 Andover Release Site	A	8260_LL_W (14 compound Select List)
Work Order		Project Number	Irrigation Wells	B	VPH OA-1_W (HYD-5)
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	1211 W. Quail Crossing Ct	9/15/15	0800	Water	HCL	6	3	3									
2	2032 N. Ruger		0820														
3	2028 N. Ruger		0830														
4	2007 Mountain Ct		1600														
5	2009 Mountain ct		1600														
6	2025 N Ruger Ct		1640														
7	2021 N Ruger Ct		1655														
8	1009 W Mountain	9/16/15	0825														
9	~~DUP~~ LB 9/16/15	~~9/16/15~~															
10	DUP-2	9/15/15	—														

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time: (Check Box)	Results Due Date:
Lori Birdner for Brian	Fed Ex	TAT 10 days Other:	

Relinquished by:	Date:	Time:	Received by:	Notes:
for Brian	9/16/15	1900		
Relinquished by:	Date: 9/17/15	Time: 08:34	Received by (Laboratory): N. Lab	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)
5015	4/c 5.0	QC Level STD
		Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Chain of Custody Form

Page 3 of 3

COC ID: 131844

HS15090740

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	E3CE-0065 Andover Release Site	A	8260_LL_W (14 compound Select List)
Work Order		Project Number	Irrigation Wells	B	VPH OA-1_W (HYD-5)
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Trip Blank	—	—	water	HCL	2	2										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign | Shipment Method | Required Turnaround Time: (Check Box) TAT 10 days Other: | Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes: ~~One Trip Blank per cooler~~ LB 9/16/15	
Relinquished by:	Date: 9/17/15	Time: 08.34	Received by (Laboratory): Nikah	Cooler ID: 5015	Cooler Temp.: 4/c 5.0
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	QC Package: (Check One Box Below) QC Level STD Other:	

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ORIGIN ID:RSLA

UNITED STATES US

SHIP DATE: 16SEP15
ACTWGT: 40.3 LB
CAD: /OFFC1601
DIMS: 24x14x14 IN

BILL RECIPIENT

TO CLIENT SERVICES
ALS ENVIRONMENTAL HOUSTON LAB
10450 STANCLIFF RD
STE 210
HOUSTON TX 77099
(281) 530-5656
INV:
PO:
REF:
DEPT:

FedEx Express

3 of 4

MPS# (0691) 7813 4594 5831
Mstr# 8079 4509 5897

THU - 17 SEP 10:30A
PRIORITY OVERNIGHT

(0215)

AB SGRA

77099
TX-US IAH

Part # 156297-428 Rev 09/12 STAMPS 91/40 0429422

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 9/16/15
Time:
Name:
Company:

Seal Broken By:
Date:

1
10:30
5831
09.17

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Houston, TX 77099
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www.alsglobal.com

October 29, 2015

Samuel Jackson
Apex Companies
3015 SW First Avenue
Portland, OR 97201

Work Order: **HS15100917**

Laboratory Results for: **E3CE-0065 Andover Release Site**

Dear Samuel,

ALS Environmental received 7 sample(s) on Oct 23, 2015 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Erica H Padilla

Generated By: Jumoke.Lawal
Erica Padilla
PM

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15100917

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15100917-01	MW-15	Water		22-Oct-2015 10:01	23-Oct-2015 08:55	☐
HS15100917-02	MW-12	Water		22-Oct-2015 10:39	23-Oct-2015 08:55	☐
HS15100917-03	MW-6	Water		22-Oct-2015 11:55	23-Oct-2015 08:55	☐
HS15100917-04	MW-7	Water		22-Oct-2015 12:24	23-Oct-2015 08:55	☐
HS15100917-05	MW-9	Water		22-Oct-2015 13:40	23-Oct-2015 08:55	☐
HS15100917-06	MW-10	Water		22-Oct-2015 14:15	23-Oct-2015 08:55	☐
HS15100917-07	TB-10/16/2015-09	Water		22-Oct-2015 00:00	23-Oct-2015 08:55	☐

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15100917

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R263664

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GCMS Volatiles by Method SW8260

Batch ID: R263832

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15100917
Sample ID:	MW-15	Lab ID:HS15100917-01
Collection Date:	22-Oct-2015 10:01	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 14:49
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 14:49
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 14:49
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 14:49
Surr: 1,2-Dichloroethane-d4	*81.4*		*71-125*	*%REC*	*1*	*28-Oct-2015 14:49*
Surr: 4-Bromofluorobenzene	*96.9*		*70-125*	*%REC*	*1*	*28-Oct-2015 14:49*
Surr: Dibromofluoromethane	*97.4*		*74-125*	*%REC*	*1*	*28-Oct-2015 14:49*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*28-Oct-2015 14:49*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	26-Oct-2015 12:50
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*26-Oct-2015 12:50*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15100917
Sample ID:	MW-12	Lab ID:HS15100917-02
Collection Date:	22-Oct-2015 10:39	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 15:14
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 15:14
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 15:14
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 15:14
Surr: 1,2-Dichloroethane-d4	*85.1*		*71-125*	*%REC*	*1*	*28-Oct-2015 15:14*
Surr: 4-Bromofluorobenzene	*95.5*		*70-125*	*%REC*	*1*	*28-Oct-2015 15:14*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*28-Oct-2015 15:14*
Surr: Toluene-d8	*99.7*		*75-125*	*%REC*	*1*	*28-Oct-2015 15:14*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	26-Oct-2015 13:37
Surr: 4-Bromofluorobenzene	*96.5*		*70-130*	*%REC*	*1*	*26-Oct-2015 13:37*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15100917
Sample ID:	MW-6	Lab ID:HS15100917-03
Collection Date:	22-Oct-2015 11:55	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 15:39
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 15:39
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 15:39
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 15:39
Surr: 1,2-Dichloroethane-d4	*82.2*		*71-125*	*%REC*	*1*	*28-Oct-2015 15:39*
Surr: 4-Bromofluorobenzene	*97.6*		*70-125*	*%REC*	*1*	*28-Oct-2015 15:39*
Surr: Dibromofluoromethane	*100.0*		*74-125*	*%REC*	*1*	*28-Oct-2015 15:39*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*28-Oct-2015 15:39*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	26-Oct-2015 13:53
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*26-Oct-2015 13:53*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	E3CE-0065 Andover Release Site	WorkOrder:	HS15100917
Sample ID:	MW-7	Lab ID:	HS15100917-04
Collection Date:	22-Oct-2015 12:24	Matrix:	Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 16:05
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 16:05
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 16:05
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 16:05
Surr: 1,2-Dichloroethane-d4	*81.4*		*71-125*	*%REC*	*1*	*28-Oct-2015 16:05*
Surr: 4-Bromofluorobenzene	*97.2*		*70-125*	*%REC*	*1*	*28-Oct-2015 16:05*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*28-Oct-2015 16:05*
Surr: Toluene-d8	*99.6*		*75-125*	*%REC*	*1*	*28-Oct-2015 16:05*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	26-Oct-2015 14:09
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*26-Oct-2015 14:09*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15100917
Sample ID:	MW-9	Lab ID:HS15100917-05
Collection Date:	22-Oct-2015 13:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 16:30
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 16:30
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 16:30
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 16:30
Surr: 1,2-Dichloroethane-d4	*82.6*		*71-125*	*%REC*	*1*	*28-Oct-2015 16:30*
Surr: 4-Bromofluorobenzene	*97.6*		*70-125*	*%REC*	*1*	*28-Oct-2015 16:30*
Surr: Dibromofluoromethane	*96.8*		*74-125*	*%REC*	*1*	*28-Oct-2015 16:30*
Surr: Toluene-d8	*99.3*		*75-125*	*%REC*	*1*	*28-Oct-2015 16:30*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	26-Oct-2015 14:25
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*26-Oct-2015 14:25*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site		WorkOrder:HS15100917
Sample ID:	MW-10		Lab ID:HS15100917-06
Collection Date:	22-Oct-2015 14:15		Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 16:55
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 16:55
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 16:55
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 16:55
Surr: 1,2-Dichloroethane-d4	*83.2*		*71-125*	*%REC*	*1*	*28-Oct-2015 16:55*
Surr: 4-Bromofluorobenzene	*98.2*		*70-125*	*%REC*	*1*	*28-Oct-2015 16:55*
Surr: Dibromofluoromethane	*99.9*		*74-125*	*%REC*	*1*	*28-Oct-2015 16:55*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*28-Oct-2015 16:55*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	26-Oct-2015 15:27
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*26-Oct-2015 15:27*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15100917
Sample ID:	TB-10/16/2015-09	Lab ID:HS15100917-07
Collection Date:	22-Oct-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
1,2-Dichloroethane	ND		0.0010	mg/L	1	28-Oct-2015 17:20
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
2-Butanone	ND		0.0020	mg/L	1	28-Oct-2015 17:20
Benzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Cyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Ethylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Isopropylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Methylcyclohexane	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Naphthalene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
n-Butylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
n-Propylbenzene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Toluene	ND		0.0010	mg/L	1	28-Oct-2015 17:20
Xylenes, Total	ND		0.0030	mg/L	1	28-Oct-2015 17:20
Surr: 1,2-Dichloroethane-d4	*80.8*		*71-125*	*%REC*	*1*	*28-Oct-2015 17:20*
Surr: 4-Bromofluorobenzene	*98.1*		*70-125*	*%REC*	*1*	*28-Oct-2015 17:20*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*28-Oct-2015 17:20*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*28-Oct-2015 17:20*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R263664	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15100917-01	MW-15	22 Oct 2015 10:01			26 Oct 2015 12:50	1
HS15100917-02	MW-12	22 Oct 2015 10:39			26 Oct 2015 13:37	1
HS15100917-03	MW-6	22 Oct 2015 11:55			26 Oct 2015 13:53	1
HS15100917-04	MW-7	22 Oct 2015 12:24			26 Oct 2015 14:09	1
HS15100917-05	MW-9	22 Oct 2015 13:40			26 Oct 2015 14:25	1
HS15100917-06	MW-10	22 Oct 2015 14:15			26 Oct 2015 15:27	1
Batch ID R263832	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15100917-01	MW-15	22 Oct 2015 10:01			28 Oct 2015 14:49	1
HS15100917-02	MW-12	22 Oct 2015 10:39			28 Oct 2015 15:14	1
HS15100917-03	MW-6	22 Oct 2015 11:55			28 Oct 2015 15:39	1
HS15100917-04	MW-7	22 Oct 2015 12:24			28 Oct 2015 16:05	1
HS15100917-05	MW-9	22 Oct 2015 13:40			28 Oct 2015 16:30	1
HS15100917-06	MW-10	22 Oct 2015 14:15			28 Oct 2015 16:55	1
HS15100917-07	TB-10/16/2015-09	22 Oct 2015 00:00			28 Oct 2015 17:20	1

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

QC BATCH REPORT

Batch ID: R263664 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-151026** Units: **mg/L** Analysis Date: **26-Oct-2015 12:22**
Client ID: Run ID: **FID-14_263664** SeqNo: **3472628** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	ND	0.050								
Surr: 4-Bromofluorobenzene	*0.1272*	*0.0050*	*0.1*	*0*	*127*	*70 - 130*				

LCS Sample ID: **GLCS-151026** Units: **mg/L** Analysis Date: **26-Oct-2015 11:50**
Client ID: Run ID: **FID-14_263664** SeqNo: **3472626** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.139	0.050	1	0	114	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1101*	*0.0050*	*0.1*	*0*	*110*	*70 - 130*				

MS Sample ID: **HS15100917-01MS** Units: **mg/L** Analysis Date: **26-Oct-2015 13:06**
Client ID: **MW-15** Run ID: **FID-14_263664** SeqNo: **3472630** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.101	0.050	1	0	110	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1084*	*0.0050*	*0.1*	*0*	*108*	*70 - 130*				

MSD Sample ID: **HS15100917-01MSD** Units: **mg/L** Analysis Date: **26-Oct-2015 13:22**
Client ID: **MW-15** Run ID: **FID-14_263664** SeqNo: **3472631** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.193	0.050	1	0	119	70 - 130	1.101	8.03	30	
Surr: 4-Bromofluorobenzene	*0.1133*	*0.0050*	*0.1*	*0*	*113*	*70 - 130*	*0.1084*	*4.37*	*30*	

The following samples were anayzed in this batch: HS15100917-01 HS15100917-02 HS15100917-03 HS15100917-04 HS15100917-05 HS15100917-06

Note: See Qualifiers Page for a list of qualifiers and their explanation

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

QC BATCH REPORT

Batch ID: R263832 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-151028** Units: **ug/L** Analysis Date: **28-Oct-2015 13:09**
Client ID: Run ID: **VOA2_263832** SeqNo: **3476077** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*41.55*	*1.0*	*50*	*0*	*83.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.31*	*1.0*	*50*	*0*	*98.6*	*70 - 125*				
Surr: Dibromofluoromethane	*49.93*	*1.0*	*50*	*0*	*99.9*	*74 - 125*				
Surr: Toluene-d8	*50.36*	*1.0*	*50*	*0*	*101*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

QC BATCH REPORT

Batch ID: R263832 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-151028** Units: **ug/L** Analysis Date: **28-Oct-2015 12:19**
Client ID: Run ID: **VOA2_263832** SeqNo: **3476076** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.79	1.0	50	0	87.6	70 - 125				
1,2-Dichloroethane	47.66	1.0	50	0	95.3	76 - 120				
1,3,5-Trimethylbenzene	47.75	1.0	50	0	95.5	80 - 123				
2-Butanone	88.35	2.0	100	0	88.4	60 - 140				
Benzene	45.53	1.0	50	0	91.1	80 - 120				
Cyclohexane	43.74	1.0	50	0	87.5	70 - 130				
Ethylbenzene	47.25	1.0	50	0	94.5	80 - 120				
Isopropylbenzene	47.99	1.0	50	0	96.0	75 - 130				
Methylcyclohexane	45.19	1.0	50	0	90.4	70 - 126				
Naphthalene	45.92	1.0	50	0	91.8	65 - 135				
n-Butylbenzene	50.81	1.0	50	0	102	75 - 128				
n-Propylbenzene	47.6	1.0	50	0	95.2	75 - 130				
Toluene	45.68	1.0	50	0	91.4	75 - 121				
Xylenes, Total	138.1	3.0	150	0	92.1	79 - 124				
Surr: 1,2-Dichloroethane-d4	*41.46*	*1.0*	*50*	*0*	*82.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.41*	*1.0*	*50*	*0*	*98.8*	*70 - 125*				
Surr: Dibromofluoromethane	*47.13*	*1.0*	*50*	*0*	*94.3*	*74 - 125*				
Surr: Toluene-d8	*49.31*	*1.0*	*50*	*0*	*98.6*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

QC BATCH REPORT

Batch ID: R263832 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS15100917-01MS** Units: **ug/L** Analysis Date: **28-Oct-2015 17:45**
Client ID: **MW-15** Run ID: **VOA2_263832** SeqNo: **3476088** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.25	1.0	50	0	86.5	70 - 125				
1,2-Dichloroethane	46.79	1.0	50	0	93.6	76 - 120				
1,3,5-Trimethylbenzene	45.55	1.0	50	0	91.1	80 - 123				
2-Butanone	79.79	2.0	100	0	79.8	60 - 140				
Benzene	44.45	1.0	50	0	88.9	80 - 120				
Cyclohexane	46.85	1.0	50	0	93.7	70 - 130				
Ethylbenzene	45.8	1.0	50	0	91.6	80 - 120				
Isopropylbenzene	47.36	1.0	50	0	94.7	75 - 130				
Methylcyclohexane	50.48	1.0	50	0	101	70 - 126				
Naphthalene	39.81	1.0	50	0	79.6	65 - 135				
n-Butylbenzene	50.09	1.0	50	0	100	75 - 128				
n-Propylbenzene	47.33	1.0	50	0	94.7	75 - 130				
Toluene	45.09	1.0	50	0	90.2	75 - 121				
Xylenes, Total	132.5	3.0	150	0	88.3	80 - 124				
Surr: 1,2-Dichloroethane-d4	*41.93*	*1.0*	*50*	*0*	*83.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.79*	*1.0*	*50*	*0*	*97.6*	*70 - 125*				
Surr: Dibromofluoromethane	*46.89*	*1.0*	*50*	*0*	*93.8*	*74 - 125*				
Surr: Toluene-d8	*48.21*	*1.0*	*50*	*0*	*96.4*	*75 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation

TOP RESOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

QC BATCH REPORT

Batch ID: R263832 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15100917-01MSD** Units: **ug/L** Analysis Date: **28-Oct-2015 18:10**
Client ID: **MW-15** Run ID: **VOA2_263832** SeqNo: **3476089** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	42.31	1.0	50	0	84.6	70 - 125	43.25	2.2	20	
1,2-Dichloroethane	43.66	1.0	50	0	87.3	76 - 120	46.79	6.93	20	
1,3,5-Trimethylbenzene	44.81	1.0	50	0	89.6	80 - 123	45.55	1.63	20	
2-Butanone	80.83	2.0	100	0	80.8	60 - 140	79.79	1.29	20	
Benzene	43.59	1.0	50	0	87.2	80 - 120	44.45	1.97	20	
Cyclohexane	46.2	1.0	50	0	92.4	70 - 130	46.85	1.41	20	
Ethylbenzene	44.83	1.0	50	0	89.7	80 - 120	45.8	2.15	20	
Isopropylbenzene	46.79	1.0	50	0	93.6	75 - 130	47.36	1.22	20	
Methylcyclohexane	47.41	1.0	50	0	94.8	70 - 126	50.48	6.27	20	
Naphthalene	39.98	1.0	50	0	80.0	65 - 135	39.81	0.422	20	
n-Butylbenzene	49.25	1.0	50	0	98.5	75 - 128	50.09	1.69	20	
n-Propylbenzene	46.55	1.0	50	0	93.1	75 - 130	47.33	1.66	20	
Toluene	43.56	1.0	50	0	87.1	75 - 121	45.09	3.46	20	
Xylenes, Total	132.6	3.0	150	0	88.4	80 - 124	132.5	0.104	20	
Surr: 1,2-Dichloroethane-d4	*42.75*	*1.0*	*50*	*0*	*85.5*	*71 - 125*	*41.93*	*1.93*	*20*	
Surr: 4-Bromofluorobenzene	*49.53*	*1.0*	*50*	*0*	*99.1*	*70 - 125*	*48.79*	*1.52*	*20*	
Surr: Dibromofluoromethane	*48.62*	*1.0*	*50*	*0*	*97.2*	*74 - 125*	*46.89*	*3.63*	*20*	
Surr: Toluene-d8	*49.85*	*1.0*	*50*	*0*	*99.7*	*75 - 125*	*48.21*	*3.35*	*20*	

The following samples were anayzed in this batch: HS15100917-01 HS15100917-02 HS15100917-03 HS15100917-04 HS15100917-05 HS15100917-06 HS15100917-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15100917

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	30-Nov-2015
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
North Dakota	R-193 2015-2016	30-Apr-2016
Oklahoma	2015-047	31-Aug-2016
Texas	T104704231-15-15	30-Apr-2016

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15100917

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15100917-01	MW-15	Login	10/24/2015 10:17:19 AM	PMG	VW-3
HS15100917-01	MW-15	Login	10/24/2015 10:17:19 AM	PMG	BTEX A1
HS15100917-02	MW-12	Login	10/24/2015 10:23:53 AM	PMG	VW-3
HS15100917-02	MW-12	Login	10/24/2015 10:23:53 AM	PMG	BTEX A1
HS15100917-03	MW-6	Login	10/24/2015 10:23:53 AM	PMG	VW-3
HS15100917-03	MW-6	Login	10/24/2015 10:23:53 AM	PMG	BTEX A1
HS15100917-04	MW-7	Login	10/24/2015 10:23:53 AM	PMG	VW-3
HS15100917-04	MW-7	Login	10/24/2015 10:23:53 AM	PMG	BTEX A1
HS15100917-05	MW-9	Login	10/24/2015 10:23:53 AM	PMG	VW-3
HS15100917-05	MW-9	Login	10/24/2015 10:23:53 AM	PMG	BTEX A1
HS15100917-06	MW-10	Login	10/24/2015 10:23:53 AM	PMG	VW-3
HS15100917-06	MW-10	Login	10/24/2015 10:23:53 AM	PMG	BTEX A1
HS15100917-07	TB-10/16/2015-09	Login	10/24/2015 10:24:29 AM	PMG	VW-3

Sample Receipt Checklist

Client Name: APEX-PORTLAND
Work Order: HS15100917

Date/Time Received: **23-Oct-2015 08:55**
Received by: **RPG**

Checklist completed by: *Paresh M. Giga* (eSignature) 24-Oct-2015 (Date)

Reviewed by: *Erica Padilla* (eSignature) 26-Oct-2015 (Date)

Matrices: **Water**

Carrier name: **FedEx**

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shipping container/cooler?	☑	☐	☐
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☐	☑	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
TX1005 solids received in hermetically sealed vials?	☐	☐	N/A ☑
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	

Temperature(s)/Thermometer(s):	3.5c/3.8c U/C	IR4
Cooler(s)/Kit(s):	24449	
Date/Time sample(s) sent to storage:	10/24/15 10:40	

	Yes	No	
Water - VOA vials have zero headspace?	☑	☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	☑	☐	N/A ☐
pH adjusted?	☐	☑	N/A ☐

pH adjusted by:

Login Notes: No sampling date on COC. Logged in date 10/22/15 from vial labels.
MW-10: Received 3 vials only. Logged in 2 vials for VOA and 1 vial for OA-1

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

ALS Environmental

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Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody Fo

Page ____ of ____

COC ID: 13076

HS15100917

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) 14 compound Select List
Work Order		Project Number	E3CE-0065	B	GRO - VPH OA-1
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-15		1001	Water	HCL	6	X	X									
2	MW-12		1039	Water		6	X	X									
3	MW-6		1155	Water		6	X	X									
4	MW-7		1224	Water		6	X	X									
5	MW-9		1340	Water		6	X	X									
6	MW-10		1415	Water		3	X	X									
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Mark Edwards

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☒ Std 10 WK days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Notes: [E3CE-0065 Andover Release Site]

Relinquished by:	Date: 10/22/15	Time: 1700	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory): KC 10.23.15 08:35
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Cooler ID	Cooler Temp.
24449	3.5

QC Package: (Check One Box Below)
☒ Level 2 Std QC
☐ Level 3 Std QC/Row da
☐ Level 4 SW846/CLP
☐ Other/EDD
☐ TRRP ChkList
☐ TRRP Level 4

IR#4 C/F 0.3

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

24449

CUSTODY SEAL
Date: 10/22/15 Time:
Name:
Company:

Seal Broken By: SM
Date: 10/23/15

24449 10/23/15

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Tex. 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

24449

CUSTODY SEAL
Date: 10/22/15 Time:
Name:
Company:

Seal Broken By: SM
Date: 10/23/15

TRK# 0215 8079 4509 0510

FRI – 23 OCT 10:30A
PRIORITY OVERNIGHT
DSR
77099
TX-US IAH

AB SGRA 24449

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