APPROVED

February 10, 2015

Ms. Pamela Green
Kansas Department of Health and Environment
Bureau of Environmental Remediation
1000 SW Jackson Street, Suite 410
Topeka, Kansas 66612

Re: Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Andover Quail Crossing
Andover, Kansas
1641-06

Dear Ms. Green:

Enclosed, please find the Fourth Quarter 2014 Groundwater Monitoring Report (Report). This 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 in the Andover Quail Crossing Neighborhood.

If you have any questions or would like to discuss this further, please contact me at (503) 924-4704 ext. 111.

Sincerely,

Sam Jackson
Associate Engineer

ATTACHMENT

Fourth Quarter 2014 Groundwater Monitoring Report

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

Fourth Quarter 2014
Groundwater Monitoring Report
Quail Crossing Neighborhood
Andover, Kansas

Prepared for:
NuStar Pipeline Operating Partnership L.P.

February 10, 2015
1641-06

APEX

Fourth Quarter 2014 Groundwater Monitoring Report Quail Crossing Neighborhood Andover, Kansas

Prepared for:
NuStar Pipeline Operating Partnership L.P.

February 10, 2015
1641-06

Sam Jackson
Associate Engineer

CHRIS BREEMER
LICENSED
817
KANSAS
GEOLOGIST

Chris Breemer, P.G.
Principal Geologist

Table of Contents

1.0 INTRODUCTION AND SITE BACKGROUND 1
1.1 Background 1
1.2 Site Description 3
2.0 FOURTH QUARTER 2014 GROUNDWATER MONITORING AND SPH REMOVAL 3
2.1 Groundwater and Stormwater Pond Elevations 3
2.2 SPH Occurrence 4
2.3 Fourth Quarter 2014 Groundwater Monitoring Event Scope 6
2.4 Monitoring Well Analytical Program and Results 6
2.5 Irrigation Well Analytical Program and Results 7
3.0 STATUS REPORT 8
4.0 REFERENCES 9

Tables

1 Groundwater Monitoring Program – Monitoring Wells
2 Groundwater Monitoring Program – Irrigation Wells
3 Groundwater Gauging Data
4 Separate- and Dissolved-Phase Recovery Program
5 Groundwater Field Parameters
6 Groundwater Analytical Data – Monitoring Wells – GRO and VOCs
7 Groundwater Analytical Data – Irrigation Wells – GRO and VOCs

Figures

1 Site Location Map
2 Site Plan and Sampling Location Map
3 Groundwater Elevation Map – October 21, 2014
4 Dissolved-phase Concentrations in Groundwater – October 2014
5 Groundwater Isoconcentration Map – GRO – October 2014
6 Groundwater Isoconcentration Map – Naphthalene – October 2014
7 Groundwater Isoconcentration Map – Benzene – October 2014

Appendices

A Field Data Sheets
B Historical Groundwater Elevations and SPH Removal Data
C Laboratory Analytical Report and QA/QC Report

GROUNDWATER MONITORING REPORT

Fourth Quarter 2014

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.	
	19003 IH-10 West	
	San Antonio, Texas 78257	
	Renee Robinson	(210) 918-2975
Consultant (Contact):	Apex Companies, LLC	
	3015 SW 1st Avenue	
	Portland, Oregon 97201	
	Sam Jackson	(503) 924-4704 x111
Lead Agency:	Kansas Department of Health and Environment	
	1000 SW Jackson Street, Suite 410	
	Topeka, Kansas 66612-1367	
	Pamela Green	(785) 296-1935

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.

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). The NuStar pipeline release location was approximately 80 feet north of the affected irrigation well. Upon notification of the discovery of SPH in the irrigation well, NuStar

immediately mobilized to the Site and implemented several initial response and abatement activities, including repairs to the pipeline, deactivation of the irrigation well at 2006 N Colt Court, and removal of SPH from the well. Following the initial response activities, NuStar: (1) performed a number of interim remedial measures (IRMs); and (2) planned and implemented a Comprehensive Investigation (CI). The initial response, IRMs, and CI activities are described in detail in the CI Report (Apex, 2014b) submitted in April 2014 and approved by KDHE on May 7, 2014.

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 evaluate the feasibility of soil vapor extraction (SVE) technology for remediating petroleum hydrocarbons in the subsurface, NuStar performed an SVE pilot test during the week of December 9, 2013. The pilot test was performed in accordance with the KDHE-approved SVE Pilot Test Work Plan (Apex, 2013). An evaluation of the SVE pilot test results indicated that SVE may be an effective remedial technology for the 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 SVE Evaluation and Soil Investigation Report in March 2014 (Apex, 2014a). NuStar modified the conceptual design of the SVE system based on Neighborhood feedback; however, despite proposed modifications to the conceptual SVE design, Neighborhood representatives cited a number of reasons for not accepting an SVE system, including concerns about noise, emissions, and aesthetics.

To refine the understanding of the extent of gasoline in soil and to evaluate the potential for implementing other remedial alternatives that may be acceptable to the Neighborhood, in April 2014, NuStar implemented a soil investigation in the vicinity of the pipeline release. Analytical data from the April 2014 soil investigation were presented in the *Soil Investigation Report and Proposed Soil Excavation Work Plan* (Apex, 2014e); this report was approved by KDHE on August 8, 2014. NuStar is currently preparing a detailed soil excavation work plan. The City of Andover has required preparation of detailed survey documents and engineering designs as a condition of permitting the planned excavation. The municipal requirements have resulted in delayed submittal of the plan. We anticipate submittal of the detailed excavation plan during the first quarter 2015.

In August 2013, a quarterly groundwater monitoring and weekly SPH removal program were initiated. The current approved groundwater monitoring program consists of: (1) weekly gauging of water levels in monitoring wells MW-1 through MW-16; (2) quarterly collection and analysis of groundwater samples from monitoring wells MW-1 through MW-16; 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, a vacuum truck is used to extract groundwater and SPH, if present, from the irrigation well at 2006 N Colt Court.

Since the release was discovered, NuStar has coordinated with property owners within the investigation area to deactivate irrigation wells (nine 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 when the investigation and remediation in the Neighborhood is complete. In addition, it is noted that eight Neighborhood irrigation wells were not deactivated because the homeowners wished to maintain use of the well (2025 N Ruger Court, 2007 N Mountain Court, 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).

1.2 Site Description

The Site is located in the northern portion of the City of Andover, in southwest Butler County, Kansas (Figure 1). 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 50-foot-wide pipeline right of way (ROW) was created along the pipeline pathway for safety purposes during Neighborhood development. The ROW limits development activities near the pipeline. The pipeline location and associated ROW are shown on Figure 2.

2.0 Fourth Quarter 2014 Groundwater Monitoring and SPH Removal

This section describes the following fourth quarter 2014 comprehensive monitoring and SPH removal activities: (1) groundwater gauging and measurement of stormwater pond stage; (2) weekly SPH gauging and removal of SPH from the irrigation well at 2006 N Colt Court; and (3) comprehensive groundwater monitoring and sampling of 16 monitoring wells and selected irrigation wells. The groundwater monitoring programs for monitoring wells 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 a weekly schedule. Gauging was performed to the nearest 0.01 foot using an electronic water interface

probe. The stormwater pond stage was measured weekly using a staff gauge permanently installed in the pond. Groundwater elevation and stormwater pond surface elevation data measured during the period October through December 2014 are listed in Table 3. The groundwater elevations that were measured during the fourth quarter 2014 monitoring event (October 28 and 29) 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 December 2014 are tabulated in Appendix B.

During the fourth quarter 2014 monitoring event, groundwater levels at the Site ranged between approximately 15 and 54 feet bgs (equivalent to 1,296 and 1,334 feet above mean sea level [msl]). Groundwater levels during the fourth quarter 2014 monitoring event decreased an average of 1.09 feet relative to the third quarter groundwater monitoring event, in July 2014. Groundwater levels were generally consistent with those observed since groundwater monitoring began in July 2013.

The elevation of the stormwater pond surface ranged from 1344.00 to 1344.50 feet msl between October and December 2014. During the fourth quarter 2014 monitoring event (October 28), the surface elevation of the stormwater retention pond was 1344.50 feet msl. The stormwater pond surface elevation was unchanged compared to the third quarter 2014 monitoring event (July 22).

As shown on Figure 3, the groundwater levels measured during the fourth quarter 2014 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 some 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

Since installation, monitoring wells have been gauged weekly for the presence of SPH and to measure depth to water. 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 other irrigation wells at the Site. Additionally, SPH were not encountered during installation of 13 soil borings in the vicinity of the release (Apex, 2014). Based on data collected from monitoring wells, irrigation wells, and 13 temporary borings (installed during the vadose zone soil evaluation), SPH are limited to the vicinity of the Irrigation Well at 2006 Colt Court.

During the fourth quarter 2014, SPH thicknesses ranged from 0.05 to 0.32 foot in the Irrigation Well. The greatest thickness of SPH in the irrigation well approximately corresponded to the period when groundwater levels were lowest in the well. For example, the SPH thicknesses observed during the fourth quarter 2014 were greatest in October, when groundwater levels were lowest (60.53 to 56.35 feet bgs). Groundwater

elevation data, SPH thicknesses, and the estimated volume of SPH removed from the irrigation well at 2006 N Colt Court for the fourth quarter 2014 are listed in Table 4. Historical data are included in Appendix B.

2.2.1 SPH Removal Program

On a weekly interval since June 2013 (and twice weekly between May and October 2014), a vacuum truck was used to extract SPH from that well. During each vacuum event:

- The irrigation well was gauged and the thickness of SPH, if present, was measured using an electronic water interface probe. Gauging occurred at the start and completion of each removal event.
- A vacuum truck, capable of generating vacuum equivalent to 100 inches of water, was used to extract groundwater and SPH, if present, from the well and to induce a vacuum in the surrounding formation. Vacuum was induced for approximately two hours, through flexible hosing that was secured to the well head. Extracted SPH, if present, and water were contained in a tank located on the truck. Extracted vapor was discharged through a temporary stack (comprised of a vertically installed 15-foot-length 4-inch-diameter PVC pipe).
- Extracted water and SPH, if any, were treated and disposed of at the Custom Wastewater Facility in Wichita, Kansas.

In an effort to maximize SPH extraction volumes and further stimulate attenuation in the vadose zone, vacuum extraction events were increased to twice per week starting in late May 2014; that schedule was maintained through October 2014. Despite the twice weekly SPH vacuum extraction events, SPH thicknesses in the irrigation well remained consistent during the period May through October 2014. In November and December, SPH vacuum events were performed once per week. During that time period groundwater levels steadily increased from 56.21 feet bgs (November 4) to 47.03 feet bgs (December 31) and SPH thicknesses decreased from 0.12 to 0.05 foot.

2.2.2 Modified SPH Removal Program

NuStar submitted a Modified SPH Removal Plan to KDHE on January 6, 2015. The Plan was approved by KDHE on January 9, and implemented on January 14, 2015. The modifications to the SPH recovery program are intended to improve the efficiency of SPH recovery at the irrigation well at 2006 N Colt Court. The SPH recovery plan includes the following elements:

- Weekly gauging of the irrigation well for four consecutive weeks. Vacuum extraction events will not be performed during this period.
- At the end of the four-week evaluation period, a vacuum extraction event will be performed to remove SPH from the irrigation well.

- Immediately following the vacuum event, an appropriately sized passive SPH skimmer will be installed in the irrigation well.
- Following installation, the passive skimmer will be emptied and adjusted approximately every four to six weeks. Concurrent with the passive skimmer operations and maintenance events, liquid- and vapor-phase constituents, and residual SPH, if any, will be removed using mobile vacuum equipment. The vacuum events will be performed consistent with the ongoing vacuum recovery methods.
- The results of the modified SPH Recovery Program will be included in future groundwater monitoring reports.

2.3 Fourth Quarter 2014 Groundwater Monitoring Event Scope

The fourth quarter 2014 groundwater monitoring event was conducted during the week of October 27, 2014 and included the monitoring activities presented below.

- Monitoring wells MW-1 through MW-16 were gauged.
- Groundwater samples were collected from monitoring wells MW-1 through MW-16.
- Water samples were collected from the irrigation wells at 2002 N Colt Court; HOA-1; HOA-2; 2019 N Ruger Circle; 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 1910 N Quail Crossing.

Apex was not able to contact the property owners at 2001 N Colt Court; therefore, a groundwater sample was not collected from the irrigation well at that property.

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. Samples from selected groundwater monitoring wells were additionally analyzed for parameters useful for assessing natural attenuation processes. The analytical results for natural attenuation parameters are presented in Section 2.6.

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. Tables 6 and 7 present dissolved-phase petroleum constituent data for samples collected between July/August 2013 and October 2014. Figures 4 through 7 present analytical data for the fourth quarter 2014 monitoring event. Copies of the laboratory reports are included in Appendix C. The monitoring well groundwater data are discussed below.

- In general, the dissolved-phase hydrocarbon concentrations in samples collected from wells within 150 feet of the release location have been stable or decreased since the summer of 2013. For example, in summer 2013, the benzene concentrations in samples collected from monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-5 were 9.1, 0.12, 1.2, 0.0035, and 0.038 mg/L, respectively; in October 2014, the benzene concentrations in those wells were 5.0, 0.0034, 1.1, 0.49, and 0.0018 mg/L respectively.
- The samples collected from wells MW-11, MW-12, and MW-14 contained low concentrations of dissolved-phase petroleum constituents, which exceed KDHE Tier 2 RBSVs. Low concentrations of petroleum constituents have previously been detected in wells MW-12 and MW-14. The recently detected concentrations of constituents in wells MW-11, MW-12, and MW-14 may be the result of seasonal variability. NuStar will continue to monitor constituent concentrations in these wells.

2.5 Irrigation Well Analytical Program and Results

Groundwater samples were collected from the irrigation wells at 16 properties (2002 N Colt Court; 2005 N Colt Court; 2007 N Colt Court; HOA-1; HOA-2; 2019 N Ruger Circle; 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 1910 N Quail Crossing). Apex staff were not able to collect a water sample from the irrigation well at 2001 N Colt Court because the property owner did not provide access. NuStar will continue attempts to contact this property owner to obtain permission to collect water samples during future sampling events.

Irrigation well analytical data for the fourth quarter 2014 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 further discussed below:

- During the fourth quarter 2014 groundwater monitoring event, dissolved-phase hydrocarbon constituents were not detected or were detected at concentrations less than KDHE Tier 2 RBSVs in 15 irrigation wells (2002 N Colt Court; 2007 N Colt Court; HOA-1; HOA-2; 2019 N Ruger Circle; 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 1910 N Quail Crossing).
- The water sample collected from the irrigation well at 2005 N Colt Court contained concentrations of dissolved-phase petroleum constituents (GRO, benzene, 1,2,4-trimethylbenzene, and

naphthalene) that exceed the corresponding KDHE Tier 2 RBSVs. The October 2014 benzene concentration in the irrigation well at 2005 N Colt Court was approximately one-half the concentration (0.23 mg/L) detected in that well in 2013 (0.47 mg/L). As shown in Table 1, this irrigation well has been deactivated, and the irrigation system was reconfigured to receive municipal water.

- Constituent concentrations in irrigation wells show an overall downward trend, consistent with monitoring well data. For example, in 2013, water samples collected from the irrigation wells at 2007 N Colt Court, 2002 N Colt Court, and 2028 N Ruger Circle exhibited detections of dissolved-phase hydrocarbons. During the fourth quarter 2014 sampling event, dissolved-phase hydrocarbons were not detected in any of these wells.

3.0 Status Report

Work Completed – Fourth Quarter 2014:

- The Third Quarter Groundwater Monitoring Report (Apex, 2014e) was submitted on October 20 and approved by KDHE on October 27.
- One gauging event and two SPH removal events per week were performed in October 2014. In November and December 2014, one gauging event and one SPH removal event per week were performed.
- The fourth quarter 2014 comprehensive groundwater monitoring event was performed during the week of October 27.
- On November 12, NuStar submitted the *Groundwater Pilot Test Work Plan* to evaluate the feasibility of enhanced aerobic remediation using oxygen releasing compound. KDHE provided comments to the pilot test work plan on December 18, 2014.

Work Planned – First Quarter 2015:

The following activities are planned for first quarter 2015:

- Submittal of NuStar response to KDHE comments on the *Groundwater Pilot Test Work Plan*.
- Submittal of the fourth quarter 2014 groundwater monitoring report.
- Performance of the first quarter 2015 comprehensive groundwater monitoring event.
- Implementation of the *Groundwater Pilot Test Work Plan.*
- Submittal of the *Detailed Soil Excavation Work Plan.*

4.0 References

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

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

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

Apex, 2014c. *First Quarter 2014 Groundwater Monitoring Report*. *Quail Crossing Neighborhood, Andover, Kansas.* May 2, 2014.

Apex, 2014d. *Second Quarter 2014 Groundwater Monitoring Report*. *Quail Crossing Neighborhood, Andover, Kansas.* July 9, 2014.

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

Geosyntec, 2014. *Vapor Intrusion Assessment Work Plan. 1023 West Mountain, Andover, Kansas*. February 21, 2014.

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.

U.S. EPA, 2012. *Framework for Site Characterization for Monitored Natural Attenuation of Volatile Organic Compounds in Ground Water*. EPA 600/R-12/712.

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. Q = Performed quarterly.
4. M = Performed monthly.
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	GRO	VOCs
2001 N Colt Ct	Currently in Use	Q	Q
2002 N Colt Ct	Deactivated	Q	Q
2005 N Colt Ct	Deactivated	Q	Q
2006 N Colt Ct	Deactivated	Q	Q
HOA-1	Currently in Use	Q	Q
HOA-2	Currently in Use	Q	Q
2007 N Colt Ct	Deactivated	Q	Q
2019 N Ruger Cir	Deactivated	Q	Q
2020 N Ruger Cir	Deactivated	Q	Q
2028 N Ruger Cir	Deactivated	Q	Q
2032 N Ruger Cir	Deactivated	Q	Q
2021 N Ruger Ct	Deactivated	Q	Q
2025 N Ruger Ct	Currently in Use	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
1910 N Quail Crossing	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
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	10/1/2014	4.0	1352.13	35.0	20-35	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
MW-2	10/1/2014	2.0	1353.17	44.0	29-44	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
	12/9/2014					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
MW-3	10/1/2014	2.0	1350.47	60.0	40-60	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
	12/3/2014					44.10	--	--	1306.37
	12/9/2014					42.67	--	--	1307.80
	12/17/2014					42.83	--	--	1307.64
	12/23/2014					47.12	--	--	1303.35
	12/31/2014					49.37	--	--	1301.10

Please refer to notes at end of table.

Table 3
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	10/1/2014	2.0	1350.73	41.0	26-41	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
MW-5	10/1/2014	2.0	1352.77	30.0	15-30	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
	11/11/2014					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
MW-6	10/1/2014	2.0	1349.76	41.0	26-41	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
	11/11/2014					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					22.45	--	--	1327.31

Please refer to notes at end of table.

Table 3
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-7	10/1/2014	2.0	1348.98	24.0	9-24	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
MW-8	10/1/2014	2.0	1353.38	30.0	15-30	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
MW-9	10/1/2014	2.0	1349.48	34.0	19-34	32.50	--	--	1316.98
	10/8/2014					32.52	--	--	1316.96
	10/16/2014					32.24	--	--	1317.24
	10/21/2014					NM	--	--	NM
	10/28/2014					31.87	--	--	1317.61
	11/4/2014					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					31.93	--	--	1317.55

Please refer to notes at end of table.

Table 3
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	10/1/2014	2.0	1348.79	34.0	19-34	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
MW-11	10/1/2014	2.0	1351.34	42.0	22-42	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
	12/17/2014					28.93	--	--	1322.41
	12/23/2014					28.96	--	--	1322.38
	12/31/2014					29.03	--	--	1322.31
MW-12	10/1/2014	2.0	1349.74	43.0	23-43	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					32.76	--	--	1316.98
	12/17/2014					31.11	--	--	1318.63
	12/23/2014					31.06	--	--	1318.68
	12/31/2014					31.11	--	--	1318.63

Please refer to notes at end of table.

Table 3
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	10/1/2014	2.0	1354.58	45.0	25-45	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
MW-14	10/1/2014	2.0	1354.99	45.0	25-45	32.49	--	--	1322.50
	10/8/2014					32.51	--	--	1322.48
	10/16/2014					32.40	--	--	1322.59
	10/21/2014					NM	--	--	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
MW-15	10/1/2014	2.0	1351.79	45.0	25-45	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
	12/17/2014					NM	--	--	NM
	12/23/2014					35.13	--	--	1316.66
	12/31/2014					35.59	--	--	1316.20

Please refer to notes at end of table.

Table 3
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-16	10/1/2014	2.0	1352.13	45.0	25-45	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
Stormwater Pond (Pond Stage (feet MSL))	10/1/2014	NA	NA	NA	NA	NA	NA	NA	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
	12/31/2014								1344.25

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 gaige om 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
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
10/1/2014	60.51	60.30	0.21	0.4	25.0	0.06	Mobile vacuum truck
10/2/2014	60.53	60.47	0.06	0.2	25.0	0.00	Mobile vacuum truck
10/8/2014 (a.m.)	60.39	60.18	0.21	0.3	25.0	0.11	Mobile vacuum truck
10/8/2014 (p.m.)	60.24	60.12	0.12	0.2	25.0	0.06	Mobile vacuum truck
10/17/2014	NM	NM	NM	NM	25.0	NM	Mobile vacuum truck
10/18/2014	56.69	56.56	0.13	0.3	25.0	0.00	Mobile vacuum truck
10/21/2014	56.52	56.35	0.17	0.2	25.0	0.11	Mobile vacuum truck
10/22/2014	56.62	56.43	0.19	0.3	25.0	0.06	Mobile vacuum truck
10/30/2014	56.75	56.43	0.32	0.5	25.0	0.12	Mobile vacuum truck
11/4/2014	56.21	56.09	0.12	0.1	25.0	0.07	Mobile vacuum truck
11/11/2014	54.45	54.35	0.10	0.2	25.0	0.02	Mobile vacuum truck
11/18/2014	53.11	53.00	0.11	0.3	25.0	0.00	Mobile vacuum truck
11/25/2014	50.35	50.23	0.12	0.3	25.0	0.01	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
			Total Fluids Recovered	3.6	525		

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 Quality 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	1060	7.25	-52
	4/9/2014	19.22	5.52	979	6.98	-130
	7/23/2014	19.98	5.35	1251	7.49	-110
	10/29/2014	15.81	3.21	1369	6.97	-60
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
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
MW-4	1/30/2014	14.01	2.78	1130	5.46	158
	4/9/2014	14.99	2.54	968	6.95	132
	7/24/2014	20.53	0.57	1135	7.24	-9
	10/30/2014	16.98	0.54	1083	7.03	-146
MW-5	1/30/2014	15.57	0.00	1300	6.96	57
	4/8/2014	15.99	1.09	1190	6.92	189
	7/23/2014	20.70	2.28	1458	7.17	64
	10/29/2014	19.39	0.49	1453	6.98	127
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	1303	7.27	17
	10/29/2014	18.08	4.29	1137	7.09	160
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
MW-8	1/30/2014	16.94	1.56	1120	7.00	109
	4/8/2014	16.42	9.18	976	6.80	170
	7/22/2014	19.71	4.88	1156	7.27	70
	10/29/2014	20.01	3.92	1051	7.19	138
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	1080	7.11	48
	10/30/2014	16.72	5.61	977	7.08	98
MW-10	1/30/2014	14.31	0.00	1340	4.90	-44
	4/8/2014	17.01	0.18	982	6.79	-105
	8/1/2014	21.23	9.61	1236	7.59	77
	10/29/2014	19.71	1.80	1302	6.90	88
MW-11	1/30/2014	16.22	6.91	1320	6.54	185
	4/8/2014	16.61	6.09	1140	7.05	199
	7/23/2014	20.17	2.45	1438	7.24	100
	10/30/2014	18.55	4.02	1404	7.11	91

Please refer to notes at end of table.

Table 5
Groundwater Quality 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-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	1067	7.11	-5
	10/29/2014	18.73	0.63	967	7.13	-67
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
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
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
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

Notes:

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

Table 6
Groundwater Analytical Results – Monitoring Wells
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
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
MW-3	8/9/2013	6	0.054	<0.005	0.01	0.016	1.2	0.07	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	0.01	<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

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells
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-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
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
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

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells
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-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
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	0.02	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
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

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells
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-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
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
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
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

Please refer to notes at end of table.

Table 6
Groundwater Analytical Results – Monitoring Wells
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-14	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
	1/30/2014	<0.05	0.0011	<0.001	<0.001	<0.002	<0.001	<0.001	0.0016	<0.001	0.0043	<0.001	<0.001	<0.001	<0.001	0.0017	0.0059	0.0061
	4/9/2014	<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	**0.54**	0.0029	<0.001	0.0013	<0.002	**0.021**	<0.001	0.0049	<0.001	0.036	<0.001	<0.001	<0.001	<0.001	0.022	0.10	0.058
MW-15	10/24/2013	<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	0.0026	<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
	10/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	0.0012	<0.001	<0.001	<0.001	0.0030	<0.001	<0.001	<0.001	<0.001	0.0018	0.0072	0.0048
MW-16	10/23/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	0.0027	<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
DUP	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	<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
	10/29/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.0026	<0.001	<0.001	<0.001	<0.001	0.0014	0.0050	0.0040
KDHE Tier 2 Values		0.5	0.00844	0.005	0.044	4.92	0.005	7.02	0.7	0.45	--	--	0.00111	0.169	0.66	--	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. -- = Not analyzed or not established.
7. KDHE Tier 2 Screening Values from the *Risk-Based Standards for Kansas, 5th Edition* , October 2010.
8. J = Estimated concentration. See Appendix C for more information.

Table 7
Groundwater Analytical Results – Irrigation Wells
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)																
2005 N Colt Ct	7/26/2013	6.6	0.16	<0.005	0.045	0.019	0.47	0.09	0.13	<0.005	0.27	0.014	0.027	<0.005	0.013	0.17	0.34	0.44
	10/24/2013	4.2	0.14	<0.001	0.022	<0.002	0.31	0.073	0.19	0.0055	0.27	0.012	0.023	0.0039	0.017	0.15	0.35	0.42
	1/31/2014	3.7	0.13	0.0041	0.029	<0.002	0.15	0.07	0.17	0.0057	0.26	0.01	0.017	0.0034	0.018	0.14	0.33	0.40
	4/10/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/23/2014	0.39	0.018	<0.001	0.0039	<0.002	0.027	0.011	0.023	<0.001	0.025	0.0019	0.0025	<0.001	0.0022	0.019	0.043	0.044
	10/30/2014	2.2	0.077	<0.001	0.0094	<0.002	0.23	0.055	0.19	0.0043	0.078	0.0091	0.017	0.0013	0.014	0.043	0.21	0.12
2002 N Colt Ct	7/26/2013	<0.05	<0.001	<0.001	<0.001	<0.002	0.0047	<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	<0.0010	<0.001	<0.001	<0.001	<0.002	<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	<0.002	<0.0010	<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	<0.0010		<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
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
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

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells
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)																
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
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
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
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

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells
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)																
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
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
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

Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells
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)																
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
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
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
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

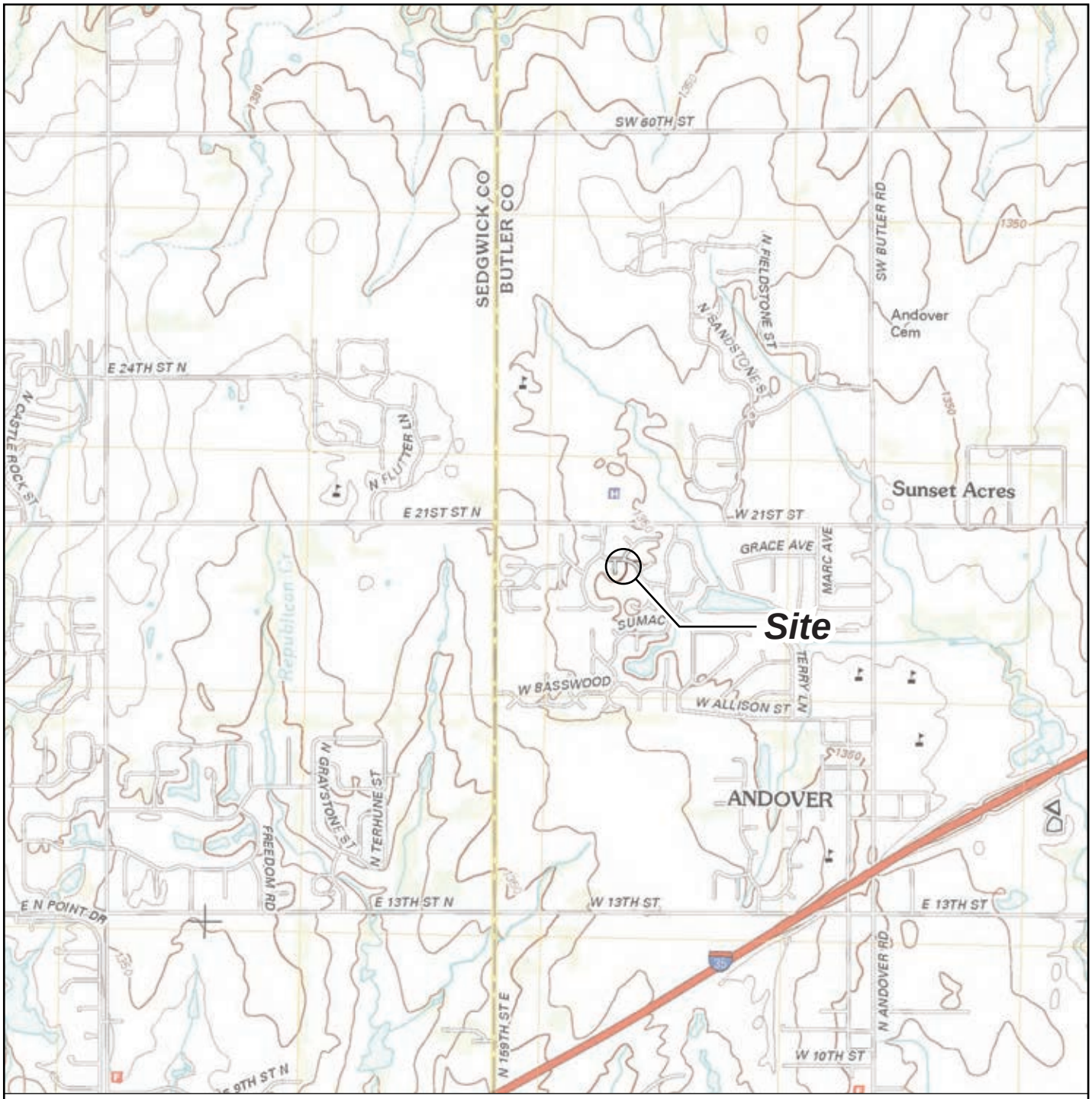
Please refer to notes at end of table.

Table 7
Groundwater Analytical Results – Irrigation Wells
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
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
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.



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

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	1641-06	Figure
	January 2015		1

N

Legend:

MW-1	Monitoring Well Location
	Irrigation Well
VP-1	Soil Vapor Monitoring Point
B-1	Boring Location
	Property Line
	Pipeline
	Pipeline Easement Boundary
HOA	Lot Owned by Quail Crossing Homeowner's Association
	Deactivated Irrigation Well
	Excavation Area

0 100 200

Scale in Feet

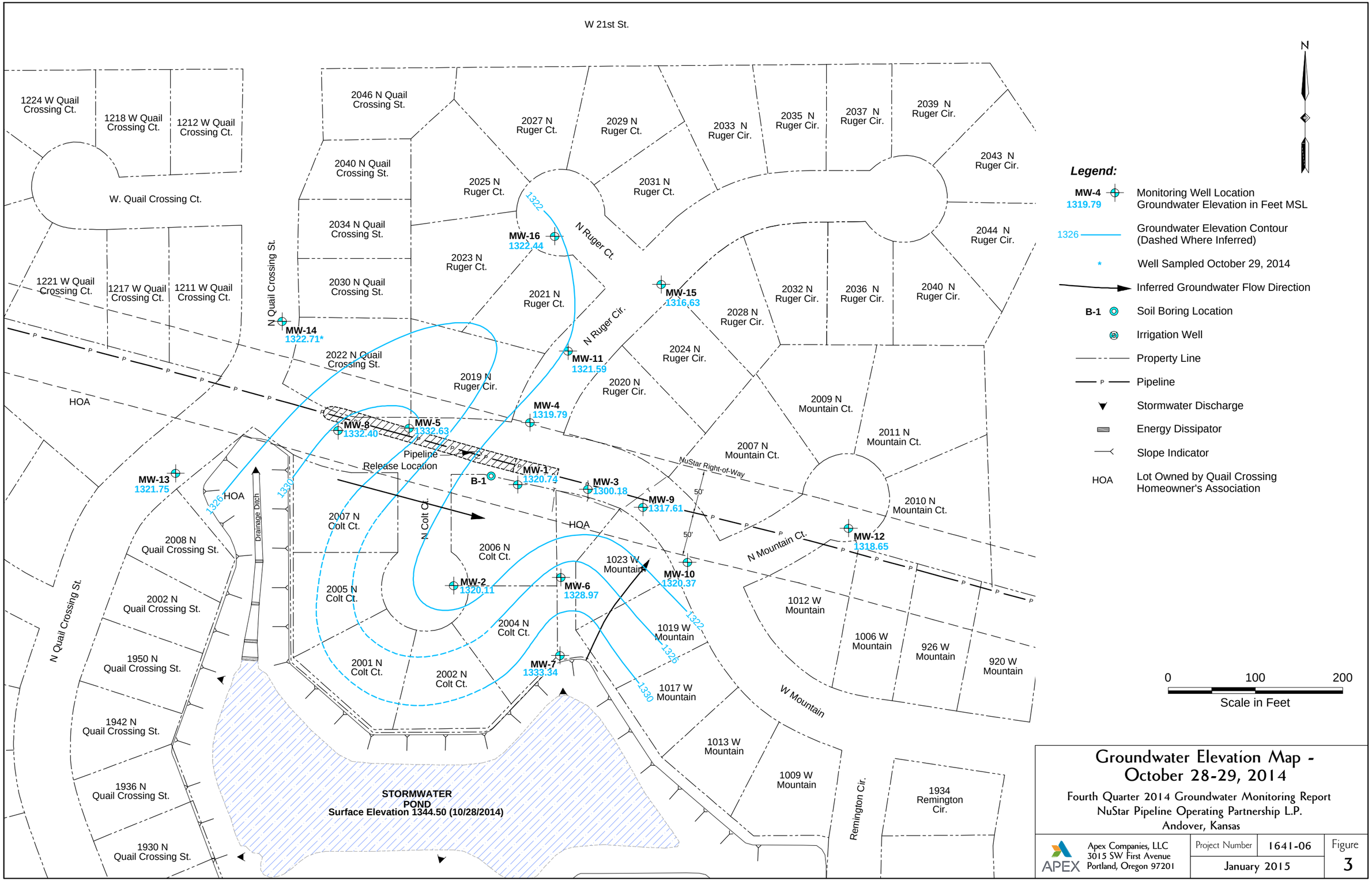
Site Plan and Sampling Location Map

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

APEX

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1641-06	Figure
January 2015		2

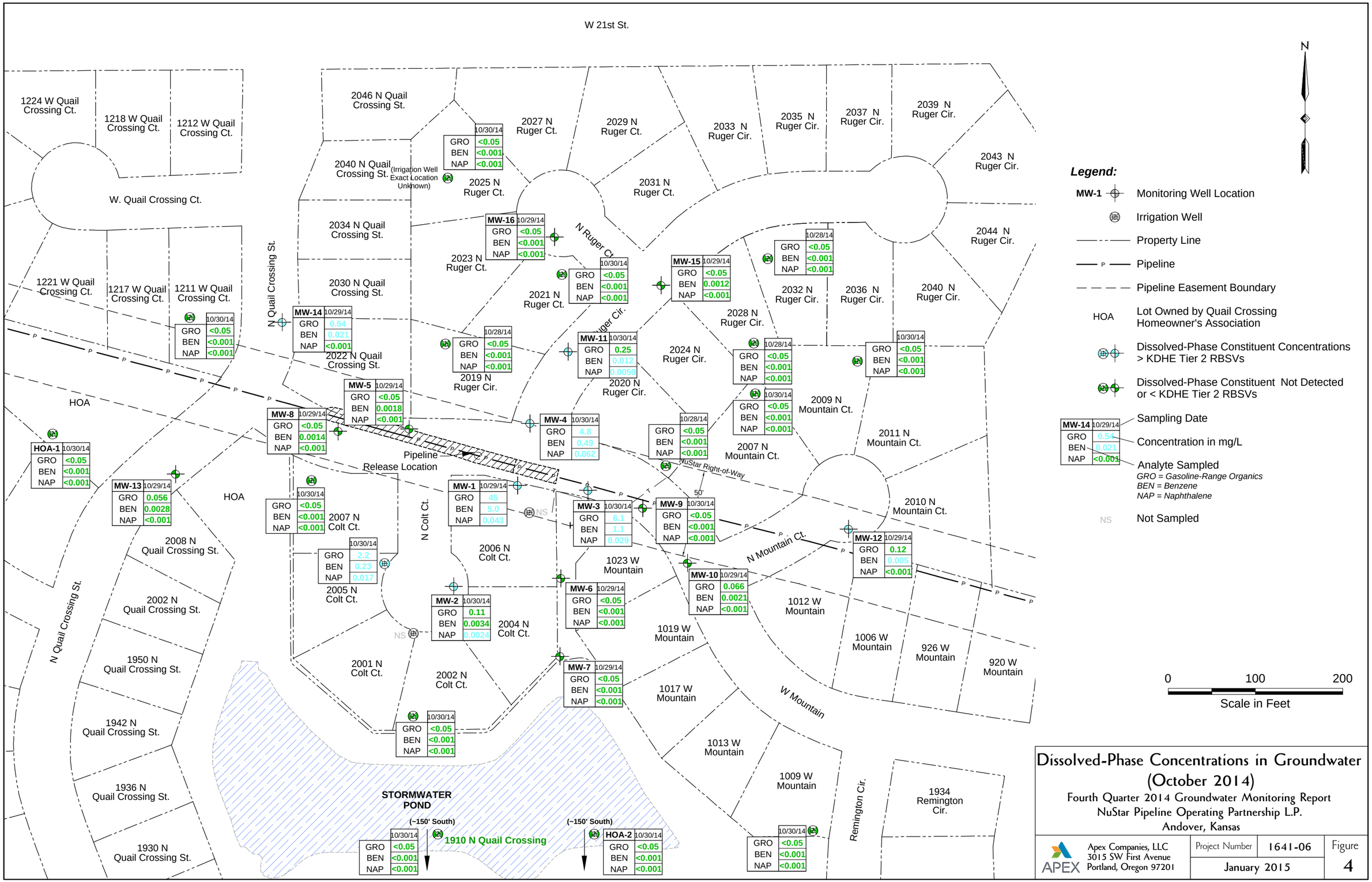


Groundwater Elevation Map - October 28-29, 2014

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

APEX
Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1641-06	Figure
January 2015		3

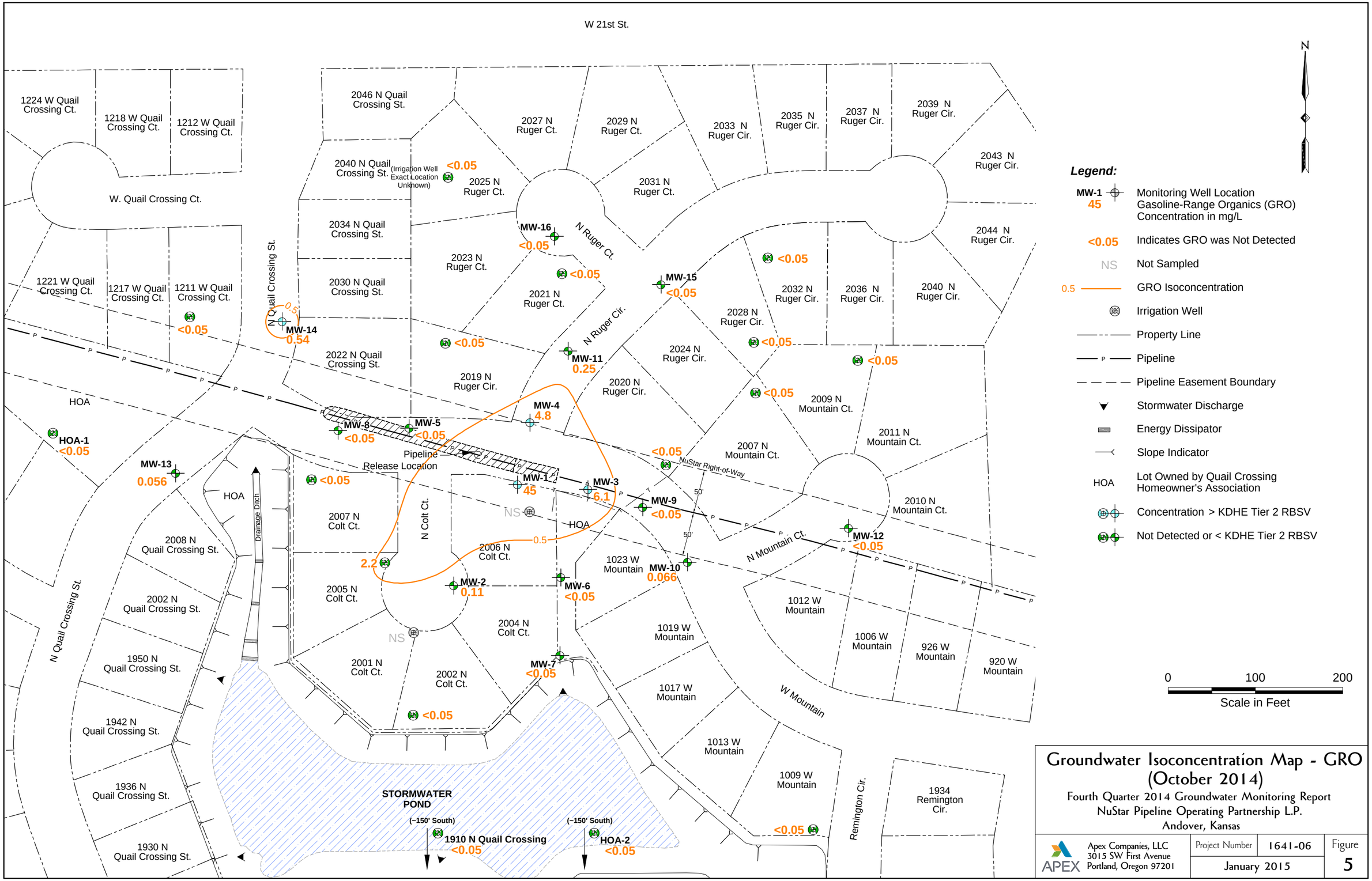


Dissolved-Phase Concentrations in Groundwater (October 2014)

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1641-06	Figure
January 2015		4

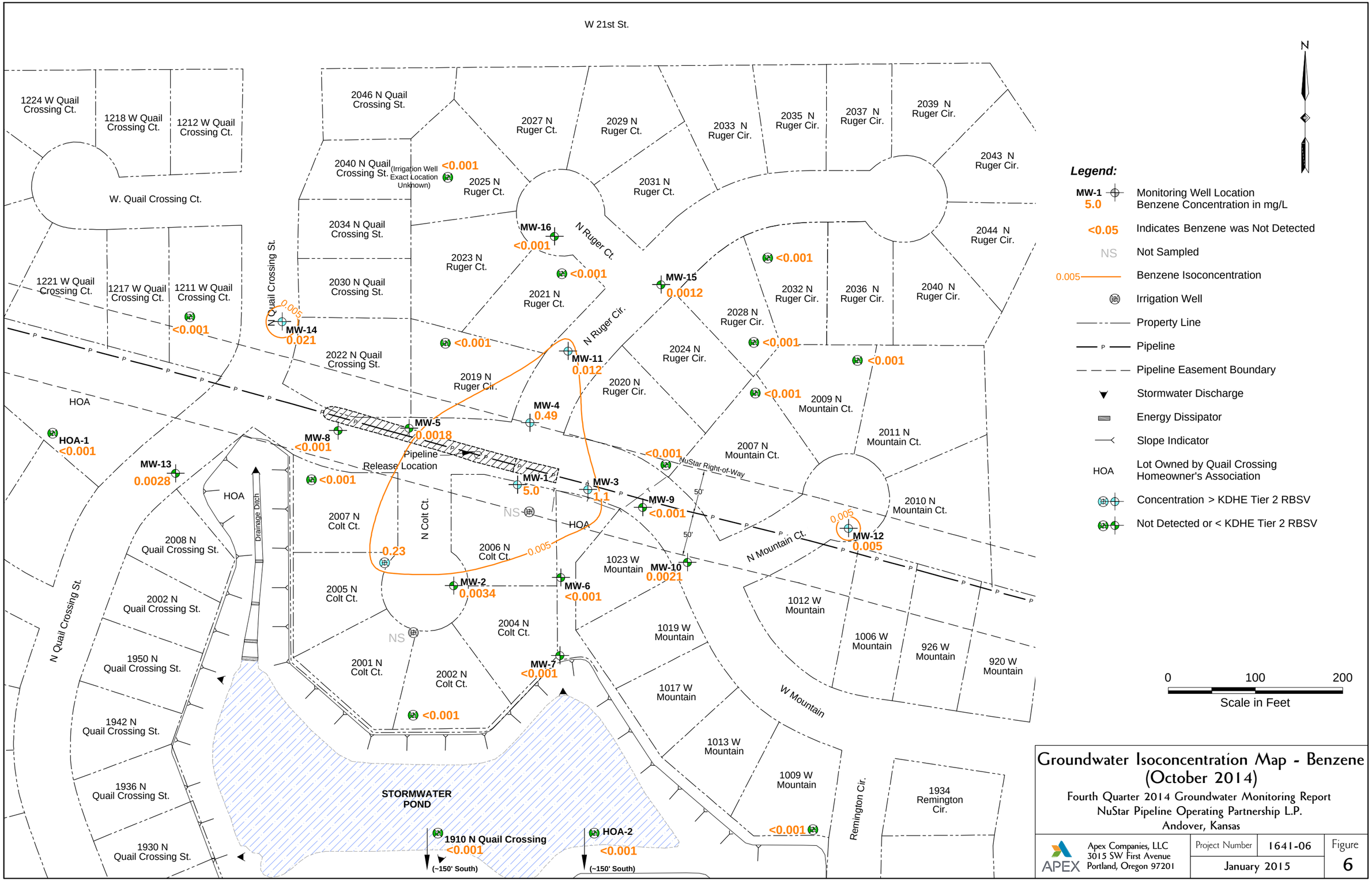


Groundwater Isoconcentration Map - GRO (October 2014)

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1641-06	Figure
January 2015		5

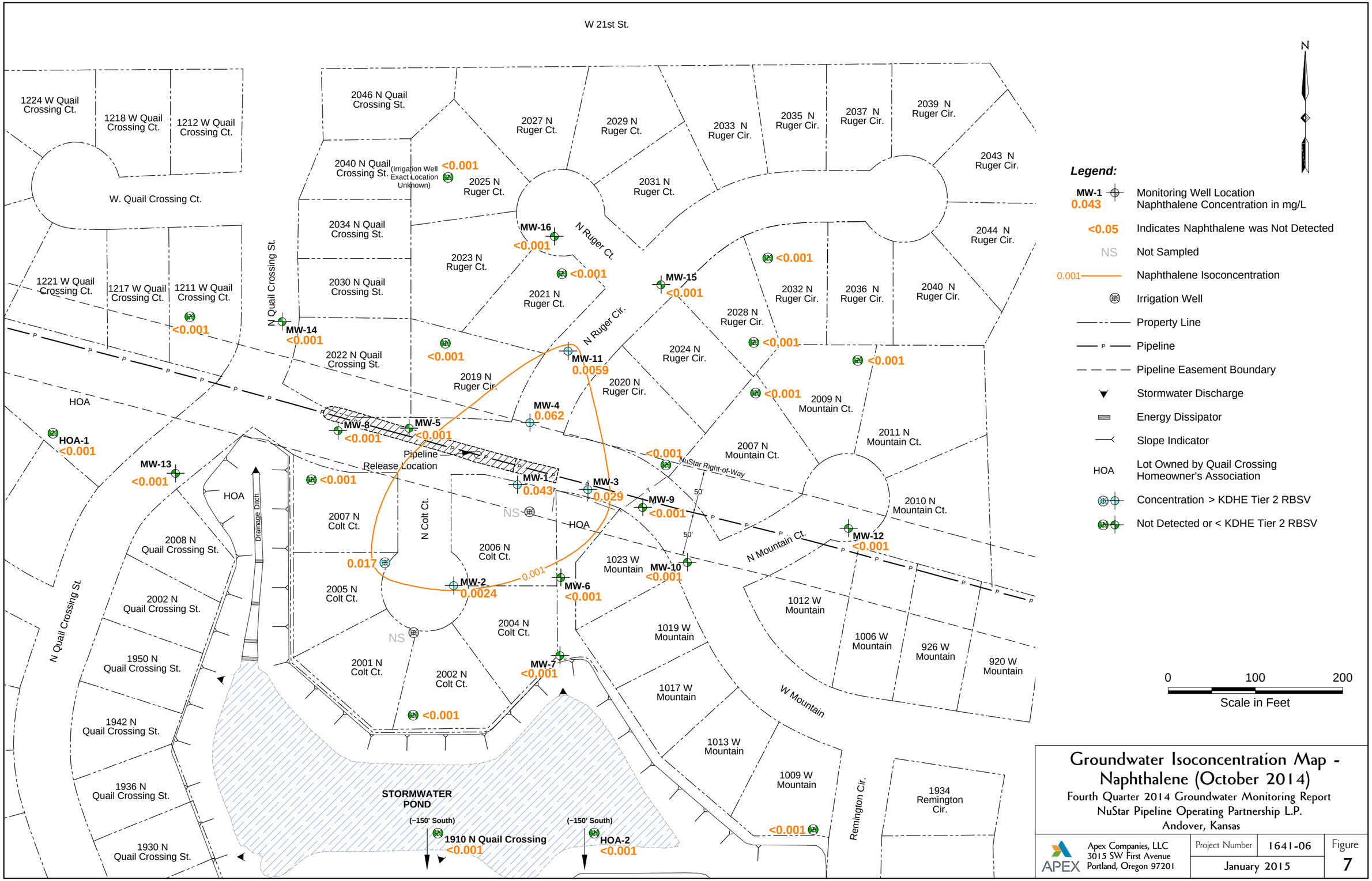


Groundwater Isoconcentration Map - Benzene (October 2014)

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

APEX
Apex Companies, LLC
3015 SW First Avenue
Portland, Oregon 97201

Project Number	1641-06	Figure
January 2015		6



Groundwater Isoconcentration Map - Naphthalene (October 2014)

Fourth Quarter 2014 Groundwater Monitoring Report
NuStar Pipeline Operating Partnership L.P.
Andover, Kansas

APEX Apex Companies, LLC 3015 SW First Avenue Portland, Oregon 97201	Project Number	1641-06	Figure
	January 2015		7

Appendix A

Field Data Sheets

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	10/1/14
Project:	Andover Colt Court	Sampler:	
Weather:	Sunny 75°F	Time In/Out:	12:30

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
								10/2/14 Start: 8:15
10/2/14	2006	—	60.47	60.53				Stop: 10:15 DTW:
	2006	—	60.30	60.51	—	.21	—	Begin Vac @ 12:30 (time)
	MW-1	—	—	31.65				Begin Vac @ 14:30 (time)
	MW-2	—	—	32.78				
	MW-3	—	—	53.93				
	MW-4	—	—	31.26				
	MW-5	—	—	20.59				
	MW-6	—	—	~~30.04~~	16.16			
	MW-7	—	—	21.57	~~16.16~~			
	MW-8	—	—	21.65				
	MW-9			32.50				
	MW-10	—	—	28.45				
	MW-11	—	—	28.58				
	MW-12	—	—	31.05				
	MW-13	—	—	32.79				
	MW-14	—	—	32.49				
	MW-15	—	—	35.51				
	MW-16	—	—	30.04				
	Pond	—	—	1344.00				
Post	2006	—	—	60.30				Post Vac ~~60~~ 14:30 25 gal
	MW-1	—	—	30.91				Post Vac 16:35 25 gal
								There's no hole to PID the exhaust. New metal exhaust pipe doesn't have a hole to PID.

			N	S	E	W	PID
13:00			0.0	0.0	0.0	0.0	
13:30			0.0	0.0	0.0	0.0	
14:00			0.0	0.0	0.0	0.0	
14:30			0.0	0.0	0.0	0.0	
15:00			0.0	0.0	0.0	0.0	
15:30			0.0	0.0	0.0	0.0	
16:00			0.0	0.0	0.0	0.0	
16:30			0.0	0.0	0.0	0.0	Sam Jackson 503-278-9815

10/2/14	N	S	E	W
8:05	0.0	0.0	0.0	0.0
8:30	0.0	0.0	0.0	0.0

	N	S	E	W
9:00	0.0	0.0	0.0	0.0
9:30	0.0	0.0	0.0	0.0
10:00	0.0	0.0	0.0	0.0

APEX	NuStar Colt Court Air Monitoring					Date	10-8-14
						Employee	[illegible]
						Wind Direction	CALM
						Weather	OVERCAST 58°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	08:30	Ø	Ø	Ø	0.7	—	
	09:00	Ø	Ø	Ø	0.3	—	EAST WIND
	09:30	Ø	Ø	Ø	1.1	—	
MW-1	10:30	Ø	Ø	Ø	0.3	—	
	11:00	Ø	Ø	Ø	Ø	—	
	11:30	Ø	Ø	Ø	Ø	—	
2006	12:00	Ø	Ø	Ø	Ø	—	
	12:30	Ø	Ø	Ø	0.3	—	
	13:00	Ø	Ø	Ø	Ø	—	
	13:30	Ø	Ø	Ø	Ø	—	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

Client:	Nustar	Job Number:	32000641-06.004
Project:	Colt Court	Date:	2/14/2008
Weather:	OVERCAST 58°	Sampler:	P. Ward
		Time In/Out:	07:45

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
2006	07:55	60.18	60.39	—	—	—	START Vac @ 08:00
2006	10:35	60.40	60.51	—	—	—	Post Vac ~ 25gal
MW-1	09:55	—	31.89	—	—	—	START Vac @ 10:00
MW-1	12:50	—	31.75	—	—	—	Post Vac ~ 50 gal
2006	11:55	60.12	60.24	—	—	—	START Vac @ 12:00
2006	14:05	59.55	59.61	—	—	—	Post Vac ~ 25gal
MW-2	08:41	—	32.81	—	—	—	
MW-3	09:12	—	53.91	—	—	—	
MW-4	08:46	—	31.29	—	—	—	
MW-5	08:27	—	20.58	—	—	—	
MW-6	09:16	—	21.59	—	—	—	
MW-7	09:20	—	16.17	—	—	—	
MW-8	08:24	—	21.70	—	—	—	
MW-9	10:07	—	32.52	—	—	—	
MW-10	10:11	—	28.44	—	—	—	
MW-11	08:54	—	28.62	—	—	—	
MW-12	10:16	—	31.08	—	—	—	
MW-13	08:15	—	32.77	—	—	—	
MW-14	08:19	—	32.51	—	—	—	
MW-15	09:14	—	35.53	—	—	—	
MW 16	09:07	—	30.08	—	—	—	
POND	—	—	—	—	—	—	1344.25

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	10/16/14
Project:	Andover Colt Court	Sampler:	JH / JP
Weather:	Sunny 70°F	Time In/Out:	

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
	2006	13:00	–	–	–	–	–	Begin Vac @ 13:00 (time)
	MW-1	15:00	–	–	–	–	–	Begin Vac @ 15:00 (time)
	MW-2	15:48	–	33.04	–	–	–	
	MW-3	16:14	–	50.41	–	–	–	
	MW-4	16:05	–	31.20	–	–	–	
	MW-5	15:43	–	20.39	–	–	–	
	MW-6	16:19	–	15.50	–	–	–	
	MW-7	16:17	–	20.74	–	–	–	
	MW-8	15:40	–	21.53	–	–	–	
	MW-9	16:12	–	32.24	–	–	–	
	MW-10	16:10	–	28.39	–	–	–	
	MW-11	16:02	–	28.59	–	–	–	
	MW-12	16:07	–	31.05	–	–	–	
	MW-13	15:35	–	33.00	–	–	–	
	MW-14	15:37	–	32.40	–	–	–	
	MW-15	15:59	–	35.61	–	–	–	
10/17/14	MW-16	8:30 ~~15:51~~	–	30.09 ~~35.61~~	–	–	–	~~Could not get man hole open~~
	Pond	16:21	–	1344.5				Pond had algae growth.
	2006	15:30	–	56.15				Post Vac 15:00
	MW-1	17:00	–	29.99				Post Vac 17:00
10/17/14	2006	0800	56.56	56.64	–	0.13	–	Start vac : 8:00
	2006	10:00	–	54.25	–	–	–	~~Post~~ Stop vac: 10:00
								Sam Jackson 503-278-9815

APEX

NuStar Colt Court Air Monitoring

Date	10/16/14
Employee	JH + JP
Wind Direction	North
Weather	Sunny 75°F

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
MW-1	15:30	0.0	0.0	0.0	0.0	New metal exhaust pipe	
↓	16:00	0.0	0.0	0.0	0.0	does not have a sample	
	16:30	0.0	0.0	0.0	0.0	hole drilled in pipe yet.	
	17:00	0.0	0.0	0.0	0.0	–	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

APEX

NuStar Colt Court Air Monitoring

Date	10/17/14
Employee	JH & JP
Wind Direction	North
Weather	Sunny 51°F

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2000e	08:00	0.0	0.0	0.0	0.0	New exhaust pipe (metal) doesn't have	
	0830	0.0	0.0	0.0	0.0	a hole drilled yet.	
	0900	0.0	0.0	0.0	0.0	–	
	0930	0.0	0.0	0.0	0.0	100.9	Taken from small leak in pipe.
	1000	0.0	0.0	0.0	0.0	58.7	" "

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

		Job Number:	32000164J-06.004
Client:	Nustar	Date:	10/21/14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	0745

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
2006	11:50	56.35	56.52	—	0.17	—	Start Vac @ 12:00
2006	14:20	56.20	56.31	—	0.11	—	Post Vac 25gal
MW-1	11:54	—	31.35	—	—	—	Start vac @ 14:00
MW-1	16:05	—	27.49	—	—	—	Post Vac 50gal
10/22/14- 2006	07:55	56.43	56.62	—	0.19	—	Start Vac @ 0800
2006	10:05	56.36	56.42	—	0.06	—	Post Vac @ 25gal
MW-2	08:50	—	53.07	—	—	—	
MW-3	09:12	—	51.06	—	—	—	
MW-4	08:29	—	31.11	—	—	—	
MW 5	08:43	—	22.90	—	—	—	
MW-6	09:17	—	20.66	—	—	—	
MW-7	09:18	—	15.65	—	—	—	
MW 8	08:45	—	21.32	—	—	—	
MW9	CAR PARKED		OVER	WELL	—	—	
MW 10	09:21	—	28.45	—	—	—	
MW 11	08:34	—	28.65	—	—	—	
MW12	09:25	—	31.09	—	—	—	
MW-13	08:48	—	32.70	—	—	—	
MW-14	TRUCK	PARKED	OVER	WELL	—		
MW15	08:41	—	35.41	—	—	—	
MW16	08:37	—	29.79	—	—	—	
POND	—	—	—	—	—	—	1346

APEX

NuStar Colt Court Air Monitoring

Date	10-21-14
Employee	RJ/TA
Wind Direction	Calm/South
Weather	Sunny

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:30	0	0	0	0	242	
	13:00	0	0	0	0	1267	
	13:30	0	0	0	1.2	1166	
MW-1	14:30	0	0	0	0	5025	High Moisture Content
	15:00	2.2	0	0	0	6255	"
	15:30	0	0	0	0	1184	" Reduced F.V.
2006	0830	2.0	0	0	0	1614	
	09:00	1.6	0	0	0	1430	
	09:30	1.2	0	0	1.4	1580	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-2	Job Number:	32000/641-06.005
Client:	NuStar	Date:	10-30-14
Project:	Colt Court GWM	Sampler:	RW, JA
Weather:	Sunny	Time In/Out:	1035

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	33.06	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:	pneumatic	Pump Intake Depth:	35
Sampling Method:	same	Tubing Type:	poly

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
10:43	.6	.6	33.55	.2	7.21	18.48	770	5.30	144.7		C
10:46	.6	1.2	33.62	.2	7.21	18.61	807	4.80	136.1		C
10:49	.6	1.8	33.68	.2	7.21	18.83	810	4.81	132.8		C
10:52	.6	2.4	33.70	.2	7.21	19.07	813	4.87	130.4		C

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

SAMPLING DATA

Sample ID:	MW-2	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	1055	Final Depth to Water:	33.70	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes (no)			
			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:	32000169-06-003
Client:	NuStar	Date:	10-30-14
Project:	Galt Craft GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	0959

WELL DATA

Well Depth:	—	Well Diameter:	2 1/2"	Water Height	—
Depth to Water:	29.75	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:	pneumatic	Pump Intake Depth:	31
Sampling Method:	same	Tubing Type:	poly

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
1004	.8	.8	28.38	.2	7.21	18.35	0634	8.99	55.2		SC
1007	.6	1.4	28.63	.2	7.01	18.32	1367	3.21	73.8		Cl
1010	.6	2.0	28.81	.2	7.06	18.43	1399	3.76	84.8		SC
1013	.6	2.6	28.91	.2	7.09	18.48	1401	3.92	90.6		Cl
1016	.6	3.2	28.99	.2	7.11	18.55	1404	4.02	91.2		Cl

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

SAMPLING DATA

Sample ID:	MW-11	Sampling Flow Rate	.2	Analytical Laboratory:	ALS
Sample Time:	1018	Final Depth to Water:	29.18	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAS	HCl	VOCs / GRO-VPH	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-4	Job Number:	32000164/1-06-003
Client:	Nustar	Date:	10-30-14
Project:	Left Coast GWM	Sampler:	PW, TA
Weather:		Time In/Out:	0927

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	30.94	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:	Pneumatic	Pump Intake Depth:	34	Comments	
Sampling Method:	same	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
09:35	.9	.9	31.20	.3	7.19	16.73	1003	2.51	-136.3		AC
9:38	.6	1.5	31.37	.2	7.06	16.65	1080	0.76	-150.2		C
9:41	.6	2.1	31.48	.2	7.05	16.88	1083	0.58	-156.7		C
9:44	.6	2.7	31.60	.2	7.03	16.98	1083	0.54	-145.7		C

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

SAMPLING DATA

Sample ID:	MW-4	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	9 47	Final Depth to Water:	31.78	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA's	HCl	VOCs/GRO/PH	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-9	Job Number:	32000164
Client:	Nustar	Date:	10-30-14
Project:	Colt Court GWM	Sampler:	PWTA
Weather:	Sunny	Time In/Out:	0840

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	31.87	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:	pneumatic	Pump Intake Depth:	34
Sampling Method:	Same	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
08:47	.9	.9	31.94	.3	6.75	16.52	979	5.21	130.2		Cl
8:50	.6	1.5	32.08	.2	6.98	16.68	977	5.37	84.9		Cl
8:53	.6	2.1	32.18	.2	7.05	16.62	978	5.52	96.1		Cl
8:56	.6	2.7	32.25	.2	7.08	16.72	977	5.61	98.3		Cl

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

SAMPLING DATA

Sample ID:	MW-9	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	8:59	Final Depth to Water:	32.45	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes no			Dup-2
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.

		Job Number:	320000161-06-004
Client:	NUSTAR	Date:	10-28
Project:	Colt Creek	Sampler:	RW / TH
Weather:	Overcast 70°	Time In/Out:	1550

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-2	15:11	—	33.06	—	—	—	
MW-5	15:15	—	20.14	—	—	—	
MW-8	15:17	—	20.48	—	—	—	
MW-13	15:21	—	32.83	—	—	—	
MW-15	15:24	—	35.16	—	—	—	
MW-16	15:29	—	29.69	—	—	—	
MW-11	15:31	—	29.75	—	—	—	
MW-4	15:33	—	30.94	—	—	—	
MW-3	15:35	—	50.29	—	—	—	
MW-6	15:37	—	20.74	—	—	—	
MW-7	15:39	—	15.64	—	—	—	
Pond	15:40	—	1344.5	—	—	—	
MW-9	15:42	—	31.87	—	—	—	
MW-10	15:44	—	28.42	—	—	—	
MW-12	15:46	—	31.09	—	—	—	
MW-1	15:50	—	31.39	—	—	—	
10/29→ MW-14	09:58	—	32.28	—	—	—	
10-30 – 2006	07:50	56.75	56.43	—	—	—	START Vac @ 0800
2006	12:50	~~56.25~~ 56.48	56.60	—	—	—	Post-Vac 25gal
MW-1	09:50	~~31.74~~	31.74	—	—	—	Start Vac @ 1000
MW-1	12:46	~~31.40~~	31.40	—	—	—	Post-Vac 50gal

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-7	Job Number:	32000164 1-08:003
Client:	NuStar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	PW/TA
Weather:	Sunny	Time In/Out:	1415

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	15.64	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:	pneumatic	Pump Intake Depth:	18
Sampling Method:	same	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
16:18	.6	.6	15.79	.3	7.40	17.60	0762	0.47	-19.3		C
16:21	.6	1.2	15.86	.2	7.23	17.27	755	0.24	-27.1		C
16:24	.6	1.8	15.89	.2	7.24	17.45	755	0.24	-30.0		C
16:27	.6	2.4	15.93	.2	7.25	17.47	754	0.22	-32.7		C

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

SAMPLING DATA

Sample ID:	MW-7	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	16:30	Final Depth to Water:	15.95	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered		Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes	no			
			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:	32001641-06.003
Client:	NuStar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	1541

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	~~15.64~~ 20.79	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:	pneumatic	Pump Intake Depth:	~~18-20~~ 23
Sampling Method:	same	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
15:48	.6	.6	20.48	.2	7.21	20.81	1.017	~~6.42~~ 6.43	153.8	—	AC
15:51	.6	1.2	20.62	.2	7.16	19.79	1.061	5.39	159.7		AC
15:54	.3	1.5	20.82	.1	7.10	18.54	1.129	4.68	162.0		AC
15:57	.3	1.8	21.00	.1	7.09	18.11	1.133	4.26	161.1		AC
16:00	.3	2.1	21.15	.1	7.09	18.08	1137	4.29	160.4		C

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

SAMPLING DATA

Sample ID:	MW-6	Sampling Flow Rate	.1	Analytical Laboratory:	ALS
Sample Time:	16:03	Final Depth to Water:		Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes (no)			
			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:	520001641-06.003
Client:	NuStar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	1513

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	29.69	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:	pneumatic	Pump Intake Depth:	33
Sampling Method:	same	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
15:17	.9	.9	29.93	.3	7.25	19.60	959	5.15	151.8		Cl
15:20	.6	1.5	30.20	.2	7.05	19.79	976	4.35	159.3		SC
15:23	.45	1.95	30.38	.15	7.08	19.87	977	4.33	158.7		SC
15:26	.45	2.40	30.50	.15	7.09	20.13	972	4.36	156.1		SC

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

SAMPLING DATA

Sample ID:	MW-16	Sampling Flow Rate	.15	Analytical Laboratory:	ALS
Sample Time:	15:29	Final Depth to Water:	30.59	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes (no)			
			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:	32000164.1-06.003
Client:	Nustar	Date:	10-29-14
Project:	Colt Canyon GWM	Sampler:	JA, PW
Weather:	Sunny	Time In/Out:	1441

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	35.16	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:	pneumatic	Pump Intake Depth:	37.5
Sampling Method:	same	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
14:50	.9	.9	35.29	.3	7.20	~~18~~ 19.54	724	5.11	140.9		Cl
14:53	.6	1.5	35.31	.2	7.10	19.89	719	4.46	151.8		SC
14:56	.6	2.1	35.32	.2	7.10	20.13	723	4.34	150.4		SC
14:59	.6	2.7	35.34	.2	7.16	20.21	728	4.49	147.4		SC

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

SAMPLING DATA

Sample ID:	MW-15	Sampling Flow Rate	.2	Analytical Laboratory:	ALS
Sample Time:	15:02	Final Depth to Water:	31.35	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes (no)			
			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:	32000164106.103
Client:	Nustar	Date:	10-29-14
Project:	Cole Court GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	14:05

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	20.14	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:	pneumatic	Pump Intake Depth:	23
Sampling Method:	same	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
14:13	.8	.8	20.25	.2	7.08	20.30	1431	2.40	137.2		AC
14:16	.6	1.4	20.28	.2	7.00	19.68	1449	0.91	135.0		AC
14:19	.6	2.0	20.30	.2	6.97	19.40	1451	0.49	130.5		C
14:22	.6	2.6	20.31	.2	6.98	19.39	1453	0.49	127.2		C

Comments

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

SAMPLING DATA

Sample ID:	MW-5	Sampling Flow Rate	.2	Analytical Laboratory:	ALS
Sample Time:	14:25	Final Depth to Water:	20.33	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-TPH	yes (no)			
			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:	32000/641-06003
Client:	Nustar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	13:05

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	20.98	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:	pneumatic	Pump Intake Depth:	23.5
Sampling Method:	same	Tubing Type:	poly

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
13:10	.6	.6	21.25	.2	7.25	18.98	1045	4.96	134.9		C
13:13	.6	1.2	21.19	.2	7.19	19.55	1043	4.15	139.2		C
13:16	.6	1.8	21.19	.2	7.16	19.98	1043	4.12	140.3		C
13:19	.6	2.4	21.19	.2	7.19	20.01	1051	3.92	138.1		C

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

SAMPLING DATA

Sample ID:	MW-8	Sampling Flow Rate	.2	Analytical Laboratory:	ALS
Sample Time:	13:22	Final Depth to Water:	21.19	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes no			DUP-1
			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:	32000/641.06.083
Client:	Nu Star	Date:	10-29-14
Project:	Colt Creek GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	12:37

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	32.83	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:	pneumatic	Pump Intake Depth:	35
Sampling Method:	Same	Tubing Type:	poly

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
12:43	.9	.9	32.54	.3	7.32	21.31	777	7.51	114.9		C
12:46	.6	1.5	32.65	.2	7.25	20.72	768	7.25	125.4		SC
12:49	.6	2.1	32.70	.2	7.22	20.30	766	6.82	130.4		SC
12:52	.6	2.7	32.78	.2	7.19	20.01	766	6.67	133.1		SC
12:55	.6	3.3	32.84	.2	7.19	19.97	767	6.70	135.3		AC

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

SAMPLING DATA

Sample ID:	MW-13	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	12:58	Final Depth to Water:	32.89	Did Well Dewater?	No

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

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-10	Job Number:	32000641-06-003
Client:	NuStar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	1157

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	28.42	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:	pneumatic	Pump Intake Depth:	30
Sampling Method:	same	Tubing Type:	poly

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
12:08	1.0	1.0	28.53	.2	7.00	21.28	1215	2.40	44.5		AC
12:11	.6	1.6	28.62	.2	6.94	20.18	1284	2.08	75.1		AC
12:14	.6	2.2	28.68	.2	6.91	19.73	1297	1.90	79.8		AC
12:17	.6	2.8	28.80	.2	6.90	19.71	1302	1.80	88.0		C
~~12:20~~	~~.6~~	~~3.4~~	~~28.~~	~~.2~~							

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

SAMPLING DATA

Sample ID:	MW-10	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	12:20	Final Depth to Water:	28.88	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs/GRO-VPH	yes (no)			
			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:	32000164/-06-003
Client:	NuStar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	11:10

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:	pneumatic	Pump Intake Depth:	33
Sampling Method:	same	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
11:19	.6	.6	31.06	.2	7.22	18.19	964	1.11	-80.4		Cl
11:22	.6	1.2	31.05	.2	7.16	18.50	965	0.81	-80.4		Cl
11:25	.6	1.8	31.06	.2	7.15	18.65	967	0.86	-78.2		Cl
11:28	.6	2.4	31.06	.2	7.13	18.73	967	0.63	-67.1		Cl

Comments

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

SAMPLING DATA

Sample ID:	MW-12	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	11:35	Final Depth to Water:	31.06	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	8260 VOCs / GRO-VPH	yes (no)			
1 250 /Plastic	Neat	300-NO3-SO4	yes (no)			
"	Neat	6020-Diss Fe	yes (no)			
"	NO3	6020-Kmly	yes (no)			
"	SO4	NH3	yes (no)			
5 VOAs	HCl/H2SO4	Methane/TOC	yes (no)			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-14	Job Number:	32000164I-06-003
Client:	NuStar	Date:	10-29-14
Project:	Colt Court GWM	Sampler:	PW/TA
Weather:	Sunny	Time In/Out:	10:01

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	32.28	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:	pneumatic	Pump intake Depth:	34.5
Sampling Method:	same	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
10:07	.9	.9	32.23	.3	7.35	17.14	685	5.72	59.3		AC
10:10	.6	1.5	32.35	.2	7.34	17.10	691	5.66	84.5		AC
10:13	.6	2.1	32.47	.2	7.31	17.10	696	5.58	93.9		C
10:16	.6	2.7	32.57	.2	7.29	17.09	703	5.49	101.2		C

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

SAMPLING DATA

Sample ID:	MW-14	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	10:20	Final Depth to Water:	32.71	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	8260 VOCs /GRO-VPH	yes (no)			
1 250/Plastic	Neat	300-NO3-SO4	yes (no)			
"	Neat	6020-Diss Fe	yes (no)			
"	NO3	6020-K only	yes (no)			
"	SO4	NH3	yes (no)			
5 VOAs	HCl /H_2SO_4	Methane /TOC	yes (no)			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-1	Job Number:	32000164/-06-003
Client:	NuStar	Date:	10/29/14
Project:	Andover-Colt Ct GWM	Sampler:	PW, TA
Weather:	Sunny	Time In/Out:	0830

WELL DATA

Well Depth:	—	Well Diameter:	4"	Water Height	—
Depth to Water:	31.39	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:	pneumatic	Pump Intake Depth:	34
Sampling Method:	same	Tubing Type:	poly

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
09:17	.9	.9	31.49	.3	6.69	15.10	1359	3.15	-38.3		C
09:20	.6	1.5	31.53	.2	6.85	15.42	1371	3.38	-38.6		C
09:23	.6	2.1	31.55	.2	6.92	15.64	1369	3.39	-53.8		C
09:26	.6	2.7	31.56	.2	6.95	15.73	1369	3.22	-57.3		C
09:29	.6	3.3	31.60	.2	6.97	15.81	1369	3.21	-59.7		C

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

SAMPLING DATA

Sample ID:	MW-1	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ALS
Sample Time:	09:34	Final Depth to Water:	31.68	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOAs	HCl	VOCs / GRO-VPH	yes (no)			
(1) 250/Plastic	Neat	300-NO3-SO4	yes (no)			
(1) 250/Plastic	Neat	6020-Diss Fe	yes (no)			
(1) 250/Plastic	HNO_3	6020-K only	yes (no)			
(1) 250/Plastic	H_2SO_4	NH_3	yes (no)			
5 VOAs	HCl / H_2SO_4	Methane / TOC	yes (no)			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-3	Job Number:	32000/641-06-068
Client:	NuStar	Date:	10-30-14
Project:	Colt Court GWM	Sampler:	RW, TA
Weather:	Sunny	Time In/Out:	12:34

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	50.29	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:	pneumatic	Pump Intake Depth:	54.5
Sampling Method:	same	Tubing Type:	poly

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
12:40	1.0	1.0	51.78	.2	7.24	18.03	901	1.73	-228.1		C
12:43	.6	1.6	51.77	.2	7.10	18.29	903	1.07	-230.9		C
12:46	.6	2.2	51.77	.2	7.08	18.40	904	0.99	-234.6		C
12:49	.6	2.8	51.77	.2	7.07	18.47	901	0.96	-236.2		C

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

SAMPLING DATA

Sample ID:	MW-3	Sampling Flow Rate	.2 L/min	Analytical Laboratory:	ACS
Sample Time:	12:52	Final Depth to Water:	51.78	Did Well Dewater?	

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

COMMENTS

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 2

COC ID: 111764

Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Andover Release Site	A	300-Sulfate, ortho-phos, and Nitrate (short hold)
Work Order		Project Number	E3CE-0065	B	RSK175-methane
Company Name	Apex Companies	Bill To Company	Apex Companies	C	6020-Potassium only
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	Ammonia-4500
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	6020-Dissolved Iron-Lab filtered
				F	TOC
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	VOCs (8260) Cole Court GW List
Phone	(503) 924-4704	Phone	(503) 924-4704	H	GRO-VPH 0.A-1
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-1	10-29-14	0934	Water	H_2SO_4	5	X	X	X	X	X	X	X	X			
2	MW-14		0820			5	X	X	X	X	X	X	X	X			
3	MW-12		1135			15	X	X	X	X	X	X	X	X			
4	MW-10		1220		HCl	6							X	X			
5	MW-13		1258														
6	MW-8		1322														
7	MW-5		1425														
8	MW-15		1512														
9	MW-16		1529														
10	MW-6		1603														

Sampler(s) Please Print & Sign: Paul Ward

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: 10-29-14	Time: 17:45	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Andover 3Q GWM-MNA

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.
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.

Copyright 2011 by ALS Environmental.

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 | Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

Chain of Custody Form

Page 2 of 2

COC ID: 111759

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) Colt Court GW 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-7	10-29-14	1630	Water	HCl	6	X	X									
2	DUP-1	10-29-14		Water	HCl	6	X	X									
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Wyal

Shipment Method: FED EX

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:
	10-29-14	17:45	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

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.
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.

Copyright 2011 by ALS Environmental.

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 | Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

Chain of Custody Form

Page 2 of 2

COC ID: 111776

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) Coll Court GW List
Work Order		Project Number	E3CE-0065	B	GRO - VPH DA-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	1910 N Quail Cross Ct	10-28-14	1253	Water	HCl	6	X	X									
2	HOA -1	10-28-14	1310														
3	1211 W Quail Cross CT		1333														
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Ward

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: 10-28-14	Time: 17:00	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Coll Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- [X] Level 2 Std QC
- [ ] Level 3 Std QC/Row dz
- [ ] 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.
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.

Copyright 2011 by ALS Environmental.

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 | Houston, TX +1 281 530 5656 | Middletown, PA +1 717 944 5541 | Spring City, PA +1 610 948 4903 | Salt Lake City, UT +1 801 266 7700 | South Charleston, WV +1 304 356 3168 | York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 111763

ALS Project Manager:

ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Andover Release Site	A	300-Sulfate, ortho-phos, and Nitrate (short hold)
Work Order		Project Number	E3CE-0065	B	RSK175-methane
Company Name	Apex Companies	Bill To Company	Apex Companies	C	6020-Potassium only
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	Ammonia-4500
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	6020-Dissolved Iron-Lab filtered
				F	TOC
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	VOCs (8260) Colt Court GW List
Phone	(503) 924-4704	Phone	(503) 924-4704	H	GRO-VPH OA-1
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-9	10-30-14	0859	Water	HCl	6							X	X			
2	MW-4	↓	0947	↓	↓	↓							X	X			
3	MW-11		1018										X	X			
4	MW-2		1055										X	X			
5	2005 N Colt Court		1106										X	X			
6	2002 N Colt Court		1117										X	X			
7	2007 N Colt Court		1131										X	X			
8	MW-3		1252										X	X			
9	DUP-2												X	X			
10																	

Sampler(s) Please Print & Sign: Paul Ward

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:
Paul Ward	10-30-14		
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Andover 3Q GWM-MNA

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 CnkList
- [ ] 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.
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.

Copyright 2011 by ALS Environmental.

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 2

COC ID: 111774

Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

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) Colt Court GW List
Work Order		Project Number	E3CE-0065	B	GRO - VPH DA-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	2020 N Ruger Circle	10-28-14	09:54	Water	HCL	6	X	X									
2	2019 N. Ruger Circle	↓	10:20	↓	↓	↓	↓	↓									
3	2025 N. Ruger CT.		10:30														
4	2021 N. Ruger CT.		10:45														
5	2028 N. Ruger Circle		11:25														
6	2032 N. Ruger Circle		11:38														
7	2009 N. Mountain CT		11:58														
8	2007 N. Mountain CT.		12:09														
9	1009 W. Mountain		12:23														
10	HUA-2	↓	12:42	↓	↓	↓	↓	↓									

Sampler(s) Please Print & Sign: Paul Ward

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:
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

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.
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.

Copyright 2011 by ALS Environmental.

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.

		Job Number:	32000164-06.004
Client:	MNSTAR	Date:	7/14/04
Project:	Oak Court	Sampler:	P. Wm
Weather:	Cloudy 45°	Time In/Out:	0750 / 1115

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
2006	07:55	56.09	56.21	—	—	—	START Vac @ 0900
2006	10:25	56.15	56.22	—	—	—	POST VAC 21 gal
mw 1	09:37	—	31.12	—	—	—	START Vac @ 10:00
MW-1	12:07	—	29.61	—	—	—	POST Vac 51 gal
mw-2	10:50	—	33.49	—	—	—	
mw-3	09:51	—	51.00	—	—	—	
mw-4	09:18	—	31.13	—	—	—	
mw-5	11:07	—	20.83	—	—	—	
mw-6	09:40	—	21.21	—	—	—	
mw 7	09:46	—	16.02	—	—	—	
mw-8	11:11	—	21.09	—	—	—	
mw 9	10:36	—	32.09	—	—	—	
mw-10	10:40	—	28.46	—	—	—	
mw-11	09:22	—	28.57	—	—	—	
mw-12	10:44	—	31.06	—	—	—	
mw13	11:17	—	32.71	—	—	—	
mw14	11:21	—	32.29	—	—	—	
mw-15	09:29	—	35.07	—	—	—	
mw-16	09:25	—	30.06	—	—	—	
Pond	—	—	—	—	—	—	1744.35

APEX	NuStar Colt Court Air Monitoring					Date	2014 11 04
						Employee	P. Ward
						Wind Direction	North
						Weather	Cloudy 45°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
~~MW-6~~	08:36	0	1.1	0	0	1461	
	09:00	0	2.4	0	0	1682	
	09:30	0	0.1	0	0	989	
MW-1	10:30	0	0	0	0	857	
	11:00	0	0.3	0	0	886	
	11:30	0	0.4	0	0	826	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

Ash Creek Environmental Services		Job Number:	32000164/-06-204
	Client:	Nustar	Date: 2014/1/1
	Project:	Colt Creek	Sampler: P. Ward
	Weather:	Sunny 36°	Time In/Out: 14:30

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
2006	15:15	54.35	54.45	—	—	—	START Vac @ 15:15
2006	17:20	54.14	54.16	—	—	—	POST Vac ~ 25 gal
MW-1	16:55	—	31.71	—	—	—	
MW-2	15:30	—	33.07	—	—	—	
MW-3	15:51	—	49.17	—	—	—	
MW-4	15:00	—	31.03	—	—	—	
MW-5	16:51	—	20.39	—	—	—	
MW-6	15:56	—	21.68	—	—	—	
MW-7	15:59	—	16.04	—	—	—	
MW-8	16:48	—	21.09	—	—	—	
MW-9	16:10	—	31.84	—	—	—	
MW-10	16:13	—	28.52	—	—	—	
MW-11	15:06	—	28.70	—	—	—	
MW-12	16:21	—	31.12	—	—	—	
MW-13	15:34	—	32.60	—	—	—	
MW-14	15:42	—	32.36	—	—	—	
MW-15	15:12	—	35.02	—	—	—	
MW-16	15:09	—	30.21	—	—	—	
POND	—	—	—	—	—	—	1344.30

APEX

NuStar Colt Court Air Monitoring

Date	20141111
Employee	P.Uho
Wind Direction	North
Weather	Sunny, 36°F

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	15:45	0	0	0	0	796	
2006	16:15	0	0	0	0	811	
2006	16:45	0	0	0	0	784	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

APEX	NuStar Colt Court Air Monitoring					Date	11/18/14
						Employee	D. Edwards
						Wind Direction	N @ 15 mph
						Weather	Sunny, 20°F
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
Irrigation well	10:05	0.6	0.4	0.4	0.5	785 ppm	
	10:35	0.2	0.1	0.0	0.0	1472 ppm	
	11:05	0.5	0.4	0.3	0.3	736 ppm	
	11:35	5.4	0.3	0.1	0.1	1263 ppm	
	12:05	0.4	0.4	0.3	0.0	813 ppm	
MW-1	12:09	0.4	0.4	0.3	0.4	935 ppm	
	12:40	0.6	0.5	0.5	0.3	836 ppm	
	13:09	0.3	0.1	0.1	0.1	942 ppm	
	13:41	1.7	0.7	0.3	0.3	1.7 ppm	
	14:11	1.2	1.1	0.4	0.4	1.2 ppm	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

APEX

		Job Number:	320001641-06.004
Client:	MUSTANG	Date:	11-25-14
Project:	Colt Court	Sampler:	P. Wand
Weather:	Sunny 45°F	Time In/Out:	12:30

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
2006	12:50	50.23	50.35	—	—	—	START VAC @ 13:00
2006	~~13:55~~ 14:40	50.25	~~31.44~~ 50.26	—	—	—	POST VAC ~25 gal
MW-1	12:55	—	31.44	—	—	—	START VAC @ 15:00
MW-1	17:05	—	30.46	—	—	—	POST VAC ~ 50 gal
MW-2	13:35	—	32.99	—	—	—	
MW-3	14:15	—	45.30	—	—	—	
MW-4	14:05	—	31.35	—	—	—	
MW5	13:38	—	20.44	—	—	—	
MW-6	14:18	—	21.93	—	—	—	
MW-7	14:21	—	16.37	—	—	—	
MW-8	13:41	—	21.21	—	—	—	
MW9	14:37	—	32.01	—	—	—	
MW-10	14:41		28.65	—	—	—	
MW-11	14:07	—	28.93	—	—	—	
MW-12	14:45	—	31.10	—	—	—	
MW-13	13:44	—	32.65	—	—	—	
MW-14	13:48	—	32.53	—	—	—	
MW-15	14:11	—	30.11	—	—	—	
MW-16	CAR	PARKED	OVER	WELL	—	—	
Pond	—	—	—	—	—	—	1344.10

APEX	NuStar Colt Court Air Monitoring					Date	11-25-14
						Employee	P. Ward
						Wind Direction	Southwest
						Weather	Sunny 45°F
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	13:30	1.6	0	0	0	1915	
2006	14:00	0.8	0	0	0	1364	
2006	14:30	0	0	0	0	1241	
MW-1	15:30	0	0	0	0	1107	
MW-1	16:00	0	0	0	0	1470	
MW-1	16:30	0	0	0	0	915	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

APEX

		Job Number:	32006164/06.009
Client:	[illegible]	Date:	20 Apr 03
Project:	Lake Comet	Sampler:	A. Ward
Weather:	Cloudy 43°F	Time In/Out:	12:40

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
2006	12:50	49.12	49.23	—	—	—	START Vac @ 13:50
2006	15:35	49.14	49.15	—	—	—	POST Vac ~ 80 gal
MW-1	14:54	—	31.67	—	—	—	START Vac @
MW-1	17:03	—	29.49	—	—	—	POST Vac ~ 50
MW-2	15:40	—	33.39	—	—	—	
MW-3	16:10	—	44.13	—	—	—	
MW-4	14:46	—	31.41	—	—	—	
MW-5	15:43	—	20.59	—	—	—	
MW-6	16:13	—	22.06	—	—	—	
MW-7	16:18	—	16.46	—	—	—	
MW-8	15:47	—	21.48	—	—	—	
MW-9	16:21	—	32.18	—	—	—	
MW-10	16:24		28.69	—	—	—	
MW-11	14:44	—	29.00	—	—	—	
MW-12	16:28	—	31.05	—	—	—	
MW-13	15:50	—	32.88	—	—	—	
MW-14	15:55	—	32.84	—	—	—	
MW-15	14:51	—	35.37	—	—	—	
MW-16	14:47	—	30.18	—	—	—	
POND	—	—	—	—	—	—	1344.05

APEX	NuStar Colt Court Air Monitoring					Date	2/14/2013
						Employee	[illegible]
						Wind Direction	ESE
						Weather	Cloudy, 43°F
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	13:30	0	0	0	1.0		
2006	14:00	0	0	0	0		
2006	15:00	0	0	0	.7		
MW-1	15:30	0	0	0	.7		

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

-06.004

Ash Creek Associates, Inc.

		Job Number:	320001641-04.004
Client:	NuStar	Date:	12/9/14
Project:	Andover Colt Court	Sampler:	TA
Weather:	Sunny	Time In/Out:	0930 - 1410

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
2006	0940	48.61	48.71		0.10		Begin Vac @ 10:00 (time)
MW-1	0945	—	31.48				Begin Vac @ 12:00 (time)
MW-2	1054	—	33.25				
MW-3	1035	—	43.67				
MW-4	1116	—	31.43				
MW-5	1120	—	20.78				
MW-6	1137	—	22.32				
MW-7	1139	—	16.54				
MW-8	1124	—	21.69				
MW-9	1041	—	31.97				
MW-10	1045	—	28.65				
MW-11	1112	—	28.94				
MW-12	1050	—	31.12				
MW-13	1147	—	32.76				
MW-14	1128	—	33.08				
MW-15	11:02	—	35.42				
MW-16	11:07	—	30.30				
Pond	11:40	—					1344.20 ft
2006	12:09	48.67	48.70		0.03		Post Vac 12:00 50gal
MW-1	14:05	—	31.33				Post Vac 1400 75gal
PID's 2006	N	S	E	W			• Exhaust vent did not
1030	0	1.3	0	0			have a port to sample
1100	0	1.7	0	0			from. All readings
1130	0	0	0.1	0.1			are directional @ ~
1155	0	0.2	0	0			40-50 ft
PID's MW-1							
1230	0.1	0.9	0	0			
1300	0	1.7	0	0			
1330	0	2.7	0	0			
1355	0	1.0	0	0			Sam Jackson 503-278-9815

WELL GAGING DATA SHEET

APEX

		Job Number:	32001641-06001
Client:	NUSTAR	Date:	20141217
Project:	Colt Court	Sampler:	P. Ward
Weather:	Cloudy 29°F	Time In/Out:	08:45

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
2006	08:50	47.88	47.93	—	—	—	start Vac at 09:00
2006	12:21	47.94	47.96	—	—	—	Post Vac ~25gal
MW-1	10:49	—	31.77	—	—	—	start Vac at 11:00
MW-1	13:05	—	30.26	—	—	—	Post Vac ~75gal
MW-2	11:17	—	33.24	—	—	—	
MW-3	12:11	—	42.83	—	—	—	
MW-4	11:03	—	31.44	—	—	—	
MW-5	11:20	—	20.68	—	—	—	
MW-6	12:14	—	22.20	—	—	—	
MW-7	12:18	—	16.52	—	—	—	
MW-8	11:23	—	21.74	—	—	—	
MW-9	12:38	—	32.04	—	—	—	
MW-10	12:43	—	28.61	—	—	—	
MW-11	11:06	—	28.93	—	—	—	
MW-12	12:47	—	31.11	—	—	—	
MW-13	11:26	—	32.95	—	—	—	
MW-14	11:29	—	33.33	—	—	—	
MW-15	CAR	Parked	over	Well	—	—	
MW-16	11:11	—	30.47	—	—	—	
Pond	—	—	—	—	—	—	1344.15

APEX	NuStar Colt Court Air Monitoring					Date	20141217
						Employee	P. [illegible]
						Wind Direction	SE
						Weather	29°F
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	10:00	Ø	Ø	Ø	Ø	920.5	
2006	10:30	Ø	Ø	Ø	0.4	988.7	
MW-1	11:30	Ø	Ø	Ø	Ø	806.7	
MW-1	12:00	Ø	Ø	Ø	2.4	846.2	
MW-1	12:30	Ø	Ø	Ø	Ø	882.7	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

APEX	NuStar Colt Court Air Monitoring					Date	2014.12.23
						Employee	P. Wend
						Wind Direction	West
						Weather	36°F
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2005	08:30	0	0	0.8	0		
2006	09:00	0	0	0.2	0		
2006	09:30	0	0	0.6	0		
MW-1	10:30	0	0	1.5	0		
MW-1	11:00	0	0	0.4	0		
MW-1	11:30	0	0	0.7	0		
*	VAC TRUCK HAD PICKED UP DIESEL DAY before and had NO chance TO clean out. Did NOT TAKE EXHAUST READING.						

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

WELL GAGING DATA SHEET

APEX

		Job Number:	32000 1641-06-004
Client:	NuSTAR	Date:	2014 12 23
Project:	Colt Court	Sampler:	P. Ward
Weather:	36°F	Time In/Out:	07:50

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
2006	07:55	47.66	47.13	—	—	—	START Vac at 08:00
2006	10:58	—	47.20	—	—	—	POST Vac 50 gal
MW-1	09:25	—	31.81	—	—	—	START Vac at 10:00
MW-1	10:05	—	29.90	—	—	—	POST Vac 75 gal
MW-2	10:23	—	33.10	—	—	—	
MW3	10:45	—	47.12	—	—	—	
MW4	09:42	—	31.52	—	—	—	
MW5	11:17	—	20.60	—	—	—	
MW-6	10:49	—	21.96	—	—	—	
MW7	10:54	—	16.41	—	—	—	
MW8	11:20	—	21.61	—	—	—	
MW9	10:04	—	31.96	—	—	—	
MW-10	10:08	—		—	—	—	
MW11	09:45	—	28.96	—	—	—	
MW12	11:11	—	31.06	—	—	—	
MW13	11:24	—	32.94	—	—	—	
MW-14	11:27	—	33.33	—	—	—	
MW-15	09:51	—	35.13	—	—	—	
MW-16	09:48	—	30.36	—	—	—	
POND	—	—	—	—	—	—	1344.30

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.

		Job Number:	320001641-04.004
Client:	NuStar	Date:	12/31/14
Project:	Andover Colt Court	Sampler:	TA
Weather:	Cloudy	Time In/Out:	0730 / 1245

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
2006	0750	46.98	47.03	—	0.05		Begin Vac @ 0800 (time)
MW-1	1157		31.44				~~Begin Vac @ (time)~~
MW-2	1035		32.87				
MW-3	0929		29.37				
MW-4	0904		31.71				
MW-5	1040		20.61				
MW-6	11:53		22.45				
MW-7	11:50		16.48				
MW-8	1044		21.73				
MW-9	0923		31.93				
MW-10	0918		29.36				
MW-11	0857		29.63				
MW-12	0910		31.11				
MW-13	10:54		32.97				
MW-14	11:23		33.51				
MW-15	0835		30.59				
MW-16	0843		30.56				
Pond	1147						1344.20'
2006	10:03	—	46.90				Post Vac 50 gal 1000 AM
~~MW-1~~							~~Post Vac~~
2005	0820	—	47.56				Start vac @ 10:30
	1245		48.97				Stop vac @ 12:30
							Sam Jackson 503-278-9815

500 gal

APEX

NuStar Colt Court Air Monitoring

Date	12/31/14
Employee	Ted Alfred
Wind Direction	S/SW/SE
Weather	Cloudy

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2005	1100	0	0	0	0	142.7	
	1130	0	0	0	0	111.3	
	1200	0	0	0	0	106.2	
	~~1730~~						
2006	0830	0	0	0	0	544	
	0900	0	0	SE 0.8/E 0.0	0	379	
	0930	0	0	0	0	468	

Note: The N, S, E, and W air sample locations are relative of the vac truck location.

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)
	7/1/2014					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
MW-1 (cont.)	10/1/2014	4.0	1352.13	35.0	20-35	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
	8/8/2013					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
	10/10/2013					29.11	--	--	1324.06
MW-2	10/17/2013	2.0	1353.17	44	29-44	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

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-2 (cont.)	1/3/2014	2.0	1353.17	44	29-44	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
	3/18/2014					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
	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

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-2 (cont.)	11/4/2014	2.0	1353.17	44	29-44	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
	12/9/2014					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
MW-3	8/8/2013	2.0	1350.47	60	40-60	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
	10/17/2013					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
	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

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.)	5/8/2014	2.0	1350.47	60	40-60	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
	6/10/2014					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
	12/3/2014					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
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

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)
	11/6/2013					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
	4/3/2014					30.49	--	--	1320.24
	4/7/2014					30.53	--	--	1320.20
MW-4 (cont.)	4/17/2014	2.0	1350.73	41	26-41	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

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.)	10/1/2014	2.0	1350.73	41	26-41	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
MW-5	8/8/2013	2.0	1352.77	30	15-30	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
	1/21/2014					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

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-5 (cont.)	4/3/2014	2.0	1352.77	30	15-30	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
	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
	11/11/2014					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
MW-6	8/8/2013	2.0	1349.76	41	26-41	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

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)
	9/23/2013					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
	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
MW-6 (cont.	3/4/2014	2.0	1349.76	41	26-41	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
	5/13/2014					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

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.	8/20/2014	2.0	1349.76	41	26-41	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
	11/11/2014					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
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

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)
	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
	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
MW-7 (cont.)	7/15/2014	2.0	1348.98	24	9-24	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
	9/10/2014					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

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
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
	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

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.)	1/3/2014	2.0	1349.48	34	19-34	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
	5/8/2014					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
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
	3/27/2014					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

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.)	5/8/2014	2.0	1348.79	34	19-34	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
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

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 (cont.)	1/3/2014	2.0	1351.34	42	22-42	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
	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

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 (cont.)	11/25/2014	2.0	1351.34	42	22-42	28.93	--	--	1322.41
	12/3/2014					29.00	--	--	1322.34
	12/9/2014					28.94	--	--	1322.40
	12/17/2014					28.93	--	--	1322.41
	12/23/2014					28.96	--	--	1322.38
	12/31/2014					29.03	--	--	1322.31
MW-12	9/30/2013	2.0	1349.74	43	23-43	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
	12/27/2013					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
	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

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-12 (cont.)	7/15/2014	2.0	1349.74	43	23-43	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
	9/17/2014					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
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

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)
	3/4/2014					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
MW-13 (cont.)	7/31/2014	2.0	1354.58	45	25-45	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
	9/17/2014					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

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-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
	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

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-14 (cont.)	8/20/2014	2.0	1354.99	45	25-45	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
	9/17/2014					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
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

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 (cont.)	4/17/2014	2.0	1351.79	45	25-45	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
	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
	12/17/2014					NM	--	--	NM
	12/23/2014					35.13	--	--	1316.66
	12/31/2014					30.59	--	--	1321.20
MW-16	9/30/2013	2.0	1352.13	45	25-45	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

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-16 (cont.)	12/3/2013	2.0	1352.13	45	25-45	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
	1/3/2014					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
	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
	9/17/2014					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

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-16 (cont.)	10/21/2014	2.0	1352.13	45	25-45	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
									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

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

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
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
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

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
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
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

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
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
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	60.39	60.18	0.21	0.3	25.0	0.1	Mobile vacuum truck
10/8/2014	60.24	60.12	0.12	0.2	25.0	0.1	Mobile vacuum truck
10/17/2014	--	--	--	--	25.0	--	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
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
			Total Fluids Recovered	32	2610		

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 October 2014 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;
- 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.

- Methane by Method RSK-175;
- Ammonia by Method SM4500;
- Nitrate, phosphorus, and sulfate by Method E300; and
- Potassium by EPA Method SW6020.

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.

4.0 QA/QC Review Results

4.1 Groundwater Lab Report HS14101299

The data reviewed includes groundwater samples collected from monitoring wells on October 29, 2014. 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. With the exception of phosphate analyses in samples MW-1, MW-12, and MW-14, the samples were analyzed within all applicable holding times. Due to laboratory error, the phosphate analyses were performed 12 days after the samples were collected. The phosphate data are not presented in this report.

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. The RPD for the MS and MS duplicate (MSD) for naphthalene in sample MW-7 was outside of the recommended limits due to a system failure. Naphthalene was not detected in the primary sample, which is consistent with historical results from samples collected at that location.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. A field duplicate was collected from well MW-8. Benzene, xylenes, and toluene were detected in the primary and duplicate samples. The RPDs were within recommended limits.

Trip Blank. Trip blanks were not analyzed. Target compounds were not detected in several primary samples, which act as trip blanks, as sample containers and coolers were delivered together.

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 HS14101349

The data reviewed includes groundwater sample data collected from irrigation wells on October 30, 2014. 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 samples were within control limits.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. A field duplicate was collected from well MW-9. Only toluene was detected in both the primary and duplicate samples collected from that well, and the RPD was within acceptable limits.

Trip Blank. Trip blanks were not analyzed. Target compounds were not detected in several primary samples, which act as trip blanks, as sample containers and coolers were delivered together.

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 HS14101262

The data reviewed includes groundwater sample data collected during sampling performed on October 28, 2014. 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. The MS/MSD performed on the sample collected from the irrigation well at 2020 N Ruger Circle was outside control limits for cyclohexane, isopropylbenzene, and n-butylbenzene; however, the associated LCS recovery was within control limits, providing quality control for the batch. Analytical results for the sample collected at this location are consistent with historical results.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. A field duplicate was collected from the irrigation well at 2028 N Ruger Circle. Constituents were not detected in the primary and duplicate samples.

Trip Blank. No trip blank was analyzed.

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.

4.4 Groundwater Lab Report HS14110008

The data reviewed includes groundwater sample data collected during sampling performed on October 30, 2014. 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.

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

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. Percent recoveries of the MS/MSD were within control limits.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. No field duplicate was collected.

Trip Blank. No trip blank was analyzed.

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.

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

October 31, 2014

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

Work Order: **HS14101262**

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

Dear Samuel,

ALS Environmental received 15 sample(s) on Oct 29, 2014 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,

Bethany McDaniel

Generated By: Amanda.Hilliard

Bethany McDaniel
Project Manager

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14101262

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14101262-01	2020 N Ruger Circle	Water		28-Oct-2014 09:54	29-Oct-2014 09:17	☐
HS14101262-02	2019 N. Ruger Circle	Water		28-Oct-2014 10:20	29-Oct-2014 09:17	☐
HS14101262-03	2025 N. Ruger Ct	Water		28-Oct-2014 10:30	29-Oct-2014 09:17	☐
HS14101262-04	2021 N. Ruger Ct	Water		28-Oct-2014 10:45	29-Oct-2014 09:17	☐
HS14101262-05	2028 N. Ruger Circle	Water		28-Oct-2014 11:25	29-Oct-2014 09:17	☐
HS14101262-06	2032 N. Ruger Circle	Water		28-Oct-2014 11:38	29-Oct-2014 09:17	☐
HS14101262-07	2009 N. Mountain Ct	Water		28-Oct-2014 11:58	29-Oct-2014 09:17	☐
HS14101262-08	2007 N. Mountain Ct	Water		28-Oct-2014 12:09	29-Oct-2014 09:17	☐
HS14101262-09	1009 W. Mountain	Water		28-Oct-2014 12:23	29-Oct-2014 09:17	☐
HS14101262-10	HOA-2	Water		28-Oct-2014 12:42	29-Oct-2014 09:17	☐
HS14101262-11	1910 N. Quail Cross St	Water		28-Oct-2014 12:53	29-Oct-2014 09:17	☐
HS14101262-12	HOA-1	Water		28-Oct-2014 13:10	29-Oct-2014 09:17	☐
HS14101262-13	1211 W Quail Cross Ct	Water		28-Oct-2014 13:33	29-Oct-2014 09:17	☐
HS14101262-14	DUP-1	Water		28-Oct-2014 00:00	29-Oct-2014 09:17	☐
HS14101262-15	Trip Blank 100814-50	Water		28-Oct-2014 00:00	29-Oct-2014 09:17	☑

Client: Apex Companies

CASE NARRATIVE

Project: Andover Release Site E3CE-0065

Work Order: HS14101262

GC Volatiles by Method IA OA-1

Batch ID: R243926

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

GCMS Volatiles by Method SW8260

Batch ID: R243958

Sample ID: **2020 N Ruger Circle (HS14101262-01)**

- The MS and/or MSD recovery was below the lower control limit.

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2020 N Ruger Circle
Collection Date: 28-Oct-2014 09:54

WorkOrder:HS14101262
Lab ID:HS14101262-01
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	30-Oct-2014 13:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 13:01
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 13:01
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 13:01
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 13:01
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 13:01
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 13:01
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 13:01
Surr: 1,2-Dichloroethane-d4	*92.9*		*71-125*	*%REC*	*1*	*30-Oct-2014 13:01*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*30-Oct-2014 13:01*
Surr: Dibromofluoromethane	*89.2*		*74-125*	*%REC*	*1*	*30-Oct-2014 13:01*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*30-Oct-2014 13:01*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 12:17
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*30-Oct-2014 12:17*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2019 N. Ruger Circle
Collection Date: 28-Oct-2014 10:20

WorkOrder:HS14101262
Lab ID:HS14101262-02
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	30-Oct-2014 13:25
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 13:25
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 13:25
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 13:25
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 13:25
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 13:25
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 13:25
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 13:25
Surr: 1,2-Dichloroethane-d4	*92.7*		*71-125*	*%REC*	*1*	*30-Oct-2014 13:25*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*30-Oct-2014 13:25*
Surr: Dibromofluoromethane	*91.7*		*74-125*	*%REC*	*1*	*30-Oct-2014 13:25*
Surr: Toluene-d8	*99.4*		*75-125*	*%REC*	*1*	*30-Oct-2014 13:25*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 12:33
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*30-Oct-2014 12:33*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2025 N. Ruger Ct
Collection Date: 28-Oct-2014 10:30

WorkOrder:HS14101262
Lab ID:HS14101262-03
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	30-Oct-2014 13:50
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 13:50
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 13:50
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 13:50
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 13:50
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 13:50
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 13:50
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 13:50
Surr: 1,2-Dichloroethane-d4	*94.6*		*71-125*	*%REC*	*1*	*30-Oct-2014 13:50*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*30-Oct-2014 13:50*
Surr: Dibromofluoromethane	*91.6*		*74-125*	*%REC*	*1*	*30-Oct-2014 13:50*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*30-Oct-2014 13:50*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 12:48
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*30-Oct-2014 12:48*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2021 N. Ruger Ct
Collection Date: 28-Oct-2014 10:45

WorkOrder:HS14101262
Lab ID:HS14101262-04
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	30-Oct-2014 14:14
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 14:14
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 14:14
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 14:14
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 14:14
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 14:14
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 14:14
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 14:14
Surr: 1,2-Dichloroethane-d4	*95.6*		*71-125*	*%REC*	*1*	*30-Oct-2014 14:14*
Surr: 4-Bromofluorobenzene	*99.3*		*70-125*	*%REC*	*1*	*30-Oct-2014 14:14*
Surr: Dibromofluoromethane	*88.9*		*74-125*	*%REC*	*1*	*30-Oct-2014 14:14*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*30-Oct-2014 14:14*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 13:04
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*30-Oct-2014 13:04*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2028 N. Ruger Circle
Collection Date: 28-Oct-2014 11:25

WorkOrder:HS14101262
Lab ID:HS14101262-05
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	30-Oct-2014 14:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 14:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 14:38
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 14:38
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 14:38
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 14:38
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 14:38
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 14:38
Surr: 1,2-Dichloroethane-d4	*94.6*		*71-125*	*%REC*	*1*	*30-Oct-2014 14:38*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*1*	*30-Oct-2014 14:38*
Surr: Dibromofluoromethane	*92.4*		*74-125*	*%REC*	*1*	*30-Oct-2014 14:38*
Surr: Toluene-d8	*98.0*		*75-125*	*%REC*	*1*	*30-Oct-2014 14:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 13:20
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*30-Oct-2014 13:20*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14101262
Sample ID:	2032 N. Ruger Circle	Lab ID:HS14101262-06
Collection Date:	28-Oct-2014 11:38	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	30-Oct-2014 15:03
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 15:03
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 15:03
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 15:03
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 15:03
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 15:03
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 15:03
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 15:03
Surr: 1,2-Dichloroethane-d4	*89.1*		*71-125*	*%REC*	*1*	*30-Oct-2014 15:03*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*1*	*30-Oct-2014 15:03*
Surr: Dibromofluoromethane	*88.7*		*74-125*	*%REC*	*1*	*30-Oct-2014 15:03*
Surr: Toluene-d8	*99.1*		*75-125*	*%REC*	*1*	*30-Oct-2014 15:03*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 13:35
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*30-Oct-2014 13:35*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2009 N. Mountain Ct
Collection Date: 28-Oct-2014 11:58

WorkOrder:HS14101262
Lab ID:HS14101262-07
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	30-Oct-2014 17:06
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 17:06
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 17:06
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 17:06
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 17:06
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 17:06
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 17:06
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 17:06
Surr: 1,2-Dichloroethane-d4	*94.3*		*71-125*	*%REC*	*1*	*30-Oct-2014 17:06*
Surr: 4-Bromofluorobenzene	*97.0*		*70-125*	*%REC*	*1*	*30-Oct-2014 17:06*
Surr: Dibromofluoromethane	*91.6*		*74-125*	*%REC*	*1*	*30-Oct-2014 17:06*
Surr: Toluene-d8	*98.9*		*75-125*	*%REC*	*1*	*30-Oct-2014 17:06*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 13:51
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*30-Oct-2014 13:51*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 2007 N. Mountain Ct
Collection Date: 28-Oct-2014 12:09

WorkOrder:HS14101262
Lab ID:HS14101262-08
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	30-Oct-2014 17:30
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 17:30
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 17:30
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 17:30
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 17:30
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 17:30
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 17:30
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 17:30
Surr: 1,2-Dichloroethane-d4	*92.0*		*71-125*	*%REC*	*1*	*30-Oct-2014 17:30*
Surr: 4-Bromofluorobenzene	*99.9*		*70-125*	*%REC*	*1*	*30-Oct-2014 17:30*
Surr: Dibromofluoromethane	*90.5*		*74-125*	*%REC*	*1*	*30-Oct-2014 17:30*
Surr: Toluene-d8	*99.1*		*75-125*	*%REC*	*1*	*30-Oct-2014 17:30*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 14:07
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*30-Oct-2014 14:07*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 1009 W. Mountain
Collection Date: 28-Oct-2014 12:23

WorkOrder:HS14101262
Lab ID:HS14101262-09
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	30-Oct-2014 17:55
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 17:55
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 17:55
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 17:55
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 17:55
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 17:55
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 17:55
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 17:55
Surr: 1,2-Dichloroethane-d4	*91.7*		*71-125*	*%REC*	*1*	*30-Oct-2014 17:55*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*30-Oct-2014 17:55*
Surr: Dibromofluoromethane	*89.9*		*74-125*	*%REC*	*1*	*30-Oct-2014 17:55*
Surr: Toluene-d8	*99.2*		*75-125*	*%REC*	*1*	*30-Oct-2014 17:55*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 14:54
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*30-Oct-2014 14:54*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: HOA-2
Collection Date: 28-Oct-2014 12:42

WorkOrder:HS14101262
Lab ID:HS14101262-10
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	30-Oct-2014 18:19
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 18:19
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 18:19
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 18:19
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 18:19
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 18:19
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 18:19
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 18:19
Surr: 1,2-Dichloroethane-d4	*99.0*		*71-125*	*%REC*	*1*	*30-Oct-2014 18:19*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*30-Oct-2014 18:19*
Surr: Dibromofluoromethane	*93.0*		*74-125*	*%REC*	*1*	*30-Oct-2014 18:19*
Surr: Toluene-d8	*99.7*		*75-125*	*%REC*	*1*	*30-Oct-2014 18:19*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 15:09
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*30-Oct-2014 15:09*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 1910 N. Quail Cross St
Collection Date: 28-Oct-2014 12:53

WorkOrder:HS14101262
Lab ID:HS14101262-11
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	30-Oct-2014 18:44
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 18:44
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 18:44
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 18:44
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 18:44
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 18:44
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 18:44
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 18:44
Surr: 1,2-Dichloroethane-d4	*96.2*		*71-125*	*%REC*	*1*	*30-Oct-2014 18:44*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*30-Oct-2014 18:44*
Surr: Dibromofluoromethane	*93.1*		*74-125*	*%REC*	*1*	*30-Oct-2014 18:44*
Surr: Toluene-d8	*102*		*75-125*	*%REC*	*1*	*30-Oct-2014 18:44*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 15:25
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*30-Oct-2014 15:25*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: HOA-1
Collection Date: 28-Oct-2014 13:10

WorkOrder:HS14101262
Lab ID:HS14101262-12
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	30-Oct-2014 19:09
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 19:09
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 19:09
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 19:09
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 19:09
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 19:09
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 19:09
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 19:09
Surr: 1,2-Dichloroethane-d4	*94.8*		*71-125*	*%REC*	*1*	*30-Oct-2014 19:09*
Surr: 4-Bromofluorobenzene	*99.1*		*70-125*	*%REC*	*1*	*30-Oct-2014 19:09*
Surr: Dibromofluoromethane	*94.7*		*74-125*	*%REC*	*1*	*30-Oct-2014 19:09*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*30-Oct-2014 19:09*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 15:41
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*30-Oct-2014 15:41*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: 1211 W Quail Cross Ct
Collection Date: 28-Oct-2014 13:33

WorkOrder:HS14101262
Lab ID:HS14101262-13
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	30-Oct-2014 19:33
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 19:33
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 19:33
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 19:33
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 19:33
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 19:33
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 19:33
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 19:33
Surr: 1,2-Dichloroethane-d4	*94.7*		*71-125*	*%REC*	*1*	*30-Oct-2014 19:33*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*30-Oct-2014 19:33*
Surr: Dibromofluoromethane	*93.5*		*74-125*	*%REC*	*1*	*30-Oct-2014 19:33*
Surr: Toluene-d8	*99.9*		*75-125*	*%REC*	*1*	*30-Oct-2014 19:33*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 15:56
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*30-Oct-2014 15:56*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: DUP-1
Collection Date: 28-Oct-2014 00:00

WorkOrder:HS14101262
Lab ID:HS14101262-14
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	30-Oct-2014 19:58
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Oct-2014 19:58
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
2-Butanone	ND		0.0020	mg/L	1	30-Oct-2014 19:58
Benzene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
Cyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 19:58
Ethylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
Isopropylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
m,p-Xylene	ND		0.0020	mg/L	1	30-Oct-2014 19:58
Methylcyclohexane	ND		0.0010	mg/L	1	30-Oct-2014 19:58
Naphthalene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
n-Butylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
n-Propylbenzene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
o-Xylene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
Toluene	ND		0.0010	mg/L	1	30-Oct-2014 19:58
Xylenes, Total	ND		0.0030	mg/L	1	30-Oct-2014 19:58
Surr: 1,2-Dichloroethane-d4	*93.4*		*71-125*	*%REC*	*1*	*30-Oct-2014 19:58*
Surr: 4-Bromofluorobenzene	*99.9*		*70-125*	*%REC*	*1*	*30-Oct-2014 19:58*
Surr: Dibromofluoromethane	*93.3*		*74-125*	*%REC*	*1*	*30-Oct-2014 19:58*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*30-Oct-2014 19:58*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	30-Oct-2014 16:12
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*30-Oct-2014 16:12*

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS14101262

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R243926	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14101262-01	2020 N Ruger Circle	28 Oct 2014 09:54			30 Oct 2014 12:17	1
HS14101262-02	2019 N. Ruger Circle	28 Oct 2014 10:20			30 Oct 2014 12:33	1
HS14101262-03	2025 N. Ruger Ct	28 Oct 2014 10:30			30 Oct 2014 12:48	1
HS14101262-04	2021 N. Ruger Ct	28 Oct 2014 10:45			30 Oct 2014 13:04	1
HS14101262-05	2028 N. Ruger Circle	28 Oct 2014 11:25			30 Oct 2014 13:20	1
HS14101262-06	2032 N. Ruger Circle	28 Oct 2014 11:38			30 Oct 2014 13:35	1
HS14101262-07	2009 N. Mountain Ct	28 Oct 2014 11:58			30 Oct 2014 13:51	1
HS14101262-08	2007 N. Mountain Ct	28 Oct 2014 12:09			30 Oct 2014 14:07	1
HS14101262-09	1009 W. Mountain	28 Oct 2014 12:23			30 Oct 2014 14:54	1
HS14101262-10	HOA-2	28 Oct 2014 12:42			30 Oct 2014 15:09	1
HS14101262-11	1910 N. Quail Cross St	28 Oct 2014 12:53			30 Oct 2014 15:25	1
HS14101262-12	HOA-1	28 Oct 2014 13:10			30 Oct 2014 15:41	1
HS14101262-13	1211 W Quail Cross Ct	28 Oct 2014 13:33			30 Oct 2014 15:56	1
HS14101262-14	DUP-1	28 Oct 2014 00:00			30 Oct 2014 16:12	1
Batch ID R243958	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14101262-01	2020 N Ruger Circle	28 Oct 2014 09:54			30 Oct 2014 13:01	1
HS14101262-02	2019 N. Ruger Circle	28 Oct 2014 10:20			30 Oct 2014 13:25	1
HS14101262-03	2025 N. Ruger Ct	28 Oct 2014 10:30			30 Oct 2014 13:50	1
HS14101262-04	2021 N. Ruger Ct	28 Oct 2014 10:45			30 Oct 2014 14:14	1
HS14101262-05	2028 N. Ruger Circle	28 Oct 2014 11:25			30 Oct 2014 14:38	1
HS14101262-06	2032 N. Ruger Circle	28 Oct 2014 11:38			30 Oct 2014 15:03	1
HS14101262-07	2009 N. Mountain Ct	28 Oct 2014 11:58			30 Oct 2014 17:06	1
HS14101262-08	2007 N. Mountain Ct	28 Oct 2014 12:09			30 Oct 2014 17:30	1
HS14101262-09	1009 W. Mountain	28 Oct 2014 12:23			30 Oct 2014 17:55	1
HS14101262-10	HOA-2	28 Oct 2014 12:42			30 Oct 2014 18:19	1
HS14101262-11	1910 N. Quail Cross St	28 Oct 2014 12:53			30 Oct 2014 18:44	1
HS14101262-12	HOA-1	28 Oct 2014 13:10			30 Oct 2014 19:09	1
HS14101262-13	1211 W Quail Cross Ct	28 Oct 2014 13:33			30 Oct 2014 19:33	1
HS14101262-14	DUP-1	28 Oct 2014 00:00			30 Oct 2014 19:58	1

Client: Apex Companies
WorkOrder: HS14101262
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R243926 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-141030** Units: **mg/L** Analysis Date: **30-Oct-2014 12:01**
Client ID: Run ID: **FID-14_243926** SeqNo: **3071047** 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	*0.1035*	*0.0050*	*0.1*	*0*	*104*	*70 - 130*				

LCS Sample ID: **GLCSW1-141030** Units: **mg/L** Analysis Date: **30-Oct-2014 11:30**
Client ID: Run ID: **FID-14_243926** SeqNo: **3071046** 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	1.059	0.050	1	0	106	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1086*	*0.0050*	*0.1*	*0*	*109*	*70 - 130*				

MS Sample ID: **HS14101262-14MS** Units: **mg/L** Analysis Date: **30-Oct-2014 16:28**
Client ID: **DUP-1** Run ID: **FID-14_243926** SeqNo: **3071063** 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	0.8764	0.050	1	0	87.6	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1071*	*0.0050*	*0.1*	*0*	*107*	*70 - 130*				

MSD Sample ID: **HS14101262-14MSD** Units: **mg/L** Analysis Date: **30-Oct-2014 16:43**
Client ID: **DUP-1** Run ID: **FID-14_243926** SeqNo: **3071064** 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	0.935	0.050	1	0	93.5	70 - 130	0.8764	6.47	30	
Surr: 4-Bromofluorobenzene	*0.1121*	*0.0050*	*0.1*	*0*	*112*	*70 - 130*	*0.1071*	*4.5*	*30*	

The following samples were anayzed in this batch:

HS14101262-01	HS14101262-02	HS14101262-03	HS14101262-04
HS14101262-05	HS14101262-06	HS14101262-07	HS14101262-08
HS14101262-09	HS14101262-10	HS14101262-11	HS14101262-12
HS14101262-13	HS14101262-14		

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

Client: Apex Companies
WorkOrder: HS14101262
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R243958 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141030** Units: **ug/L** Analysis Date: **30-Oct-2014 12:36**
Client ID: Run ID: **VOA1_243958** SeqNo: **3071988** 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								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*48.46*	*1.0*	*50*	*0*	*96.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.62*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*45.57*	*1.0*	*50*	*0*	*91.1*	*74 - 125*				
Surr: Toluene-d8	*50.42*	*1.0*	*50*	*0*	*101*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14101262
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R243958 **Instrument: VOA1** **Method: SW8260**

LCS Sample ID: **VLCSW-141030** Units: **ug/L** Analysis Date: **30-Oct-2014 11:47**
Client ID: Run ID: **VOA1_243958** SeqNo: **3071987** 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	46.93	1.0	50	0	93.9	79 - 124				
1,2-Dichloroethane	43.26	1.0	50	0	86.5	76 - 120				
1,3,5-Trimethylbenzene	47.12	1.0	50	0	94.2	80 - 123				
2-Butanone	90.7	2.0	100	0	90.7	60 - 140				
Benzene	43.47	1.0	50	0	86.9	80 - 120				
Cyclohexane	44.34	1.0	50	0	88.7	75 - 126				
Ethylbenzene	47.89	1.0	50	0	95.8	80 - 120				
Isopropylbenzene	47.08	1.0	50	0	94.2	80 - 126				
m,p-Xylene	92.42	2.0	100	0	92.4	80 - 120				
Methylcyclohexane	45.24	1.0	50	0	90.5	70 - 126				
Naphthalene	51	1.0	50	0	102	65 - 135				
n-Butylbenzene	49.16	1.0	50	0	98.3	75 - 128				
n-Propylbenzene	44.95	1.0	50	0	89.9	75 - 130				
o-Xylene	48.3	1.0	50	0	96.6	80 - 120				
Toluene	43.47	1.0	50	0	86.9	80 - 121				
Xylenes, Total	140.7	3.0	150	0	93.8	79 - 124				
Surr: 1,2-Dichloroethane-d4	*49.32*	*1.0*	*50*	*0*	*98.6*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.8*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*48.15*	*1.0*	*50*	*0*	*96.3*	*74 - 125*				
Surr: Toluene-d8	*50.39*	*1.0*	*50*	*0*	*101*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14101262
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R243958 **Instrument: VOA1** **Method: SW8260**

MS Sample ID: **HS14101262-01MS** Units: **ug/L** Analysis Date: **30-Oct-2014 15:52**
Client ID: **2020 N Ruger Circle** Run ID: **VOA1_243958** SeqNo: **3071995** 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	41.63	1.0	50	0	83.3	80 - 120				
1,2-Dichloroethane	45.75	1.0	50	0	91.5	79 - 120				
1,3,5-Trimethylbenzene	41.41	1.0	50	0	82.8	80 - 120				
2-Butanone	89.24	2.0	100	0	89.2	60 - 140				
Benzene	44.18	1.0	50	0	88.4	80 - 120				
Cyclohexane	32.65	1.0	50	0	65.3	75 - 125				S
Ethylbenzene	42.38	1.0	50	0	84.8	80 - 120				
Isopropylbenzene	38.92	1.0	50	0	77.8	80 - 120				S
m,p-Xylene	82.19	2.0	100	0	82.2	80 - 120				
Methylcyclohexane	45.3	1.0	50	0	90.6	70 - 122				
Naphthalene	44.94	1.0	50	0	89.9	70 - 130				
n-Butylbenzene	37.23	1.0	50	0	74.5	75 - 125				S
n-Propylbenzene	38.35	1.0	50	0	76.7	75 - 130				
o-Xylene	42.93	1.0	50	0	85.9	80 - 120				
Toluene	41.75	1.0	50	0	83.5	80 - 121				
Xylenes, Total	125.1	3.0	150	0	83.4	80 - 124				
Surr: 1,2-Dichloroethane-d4	*46.52*	*1.0*	*50*	*0*	*93.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.85*	*1.0*	*50*	*0*	*97.7*	*70 - 125*				
Surr: Dibromofluoromethane	*48.5*	*1.0*	*50*	*0*	*97.0*	*74 - 125*				
Surr: Toluene-d8	*48.22*	*1.0*	*50*	*0*	*96.4*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14101262
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R243958 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101262-01MSD** Units: **ug/L** Analysis Date: **30-Oct-2014 16:16**
Client ID: **2020 N Ruger Circle** Run ID: **VOA1_243958** SeqNo: **3071996** 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	45.03	1.0	50	0	90.1	80 - 120	41.63	7.83	20	
1,2-Dichloroethane	44.82	1.0	50	0	89.6	79 - 120	45.75	2.04	20	
1,3,5-Trimethylbenzene	44.44	1.0	50	0	88.9	80 - 120	41.41	7.06	20	
2-Butanone	84.32	2.0	100	0	84.3	60 - 140	89.24	5.66	20	
Benzene	44.18	1.0	50	0	88.4	80 - 120	44.18	0.0042	20	
Cyclohexane	42.71	1.0	50	0	85.4	75 - 125	32.65	26.7	20	R
Ethylbenzene	44.96	1.0	50	0	89.9	80 - 120	42.38	5.9	20	
Isopropylbenzene	44.63	1.0	50	0	89.3	80 - 120	38.92	13.7	20	
m,p-Xylene	86.53	2.0	100	0	86.5	80 - 120	82.19	5.14	20	
Methylcyclohexane	26.03	1.0	50	0	52.1	70 - 122	45.3	54	20	SR
Naphthalene	49.28	1.0	50	0	98.6	70 - 130	44.94	9.21	20	
n-Butylbenzene	44	1.0	50	0	88.0	75 - 125	37.23	16.7	20	
n-Propylbenzene	42.93	1.0	50	0	85.9	75 - 130	38.35	11.3	20	
o-Xylene	44.07	1.0	50	0	88.1	80 - 120	42.93	2.61	20	
Toluene	42.24	1.0	50	0	84.5	80 - 121	41.75	1.16	20	
Xylenes, Total	130.6	3.0	150	0	87.1	80 - 124	125.1	4.28	20	
Surr: 1,2-Dichloroethane-d4	*47.29*	*1.0*	*50*	*0*	*94.6*	*71 - 125*	*46.52*	*1.63*	*20*	
Surr: 4-Bromofluorobenzene	*48.73*	*1.0*	*50*	*0*	*97.5*	*70 - 125*	*48.85*	*0.246*	*20*	
Surr: Dibromofluoromethane	*46.78*	*1.0*	*50*	*0*	*93.6*	*74 - 125*	*48.5*	*3.6*	*20*	
Surr: Toluene-d8	*49.23*	*1.0*	*50*	*0*	*98.5*	*75 - 125*	*48.22*	*2.07*	*20*	

The following samples were anayzed in this batch:

HS14101262-01	HS14101262-02	HS14101262-03	HS14101262-04
HS14101262-05	HS14101262-06	HS14101262-07	HS14101262-08
HS14101262-09	HS14101262-10	HS14101262-11	HS14101262-12
HS14101262-13	HS14101262-14		

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: **HS14101262**

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	AR - 2014	27-Mar-2015
California	2919	31-Jul-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	TX104704231-14-13	30-Apr-2015

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14101262

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14101262-01	2020 N Ruger Circle	Login	10/29/2014 7:35:37 PM	NDR	VW-3
HS14101262-01	2020 N Ruger Circle	Login	10/29/2014 7:35:37 PM	NDR	BTEX A1
HS14101262-02	2019 N. Ruger Circle	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-02	2019 N. Ruger Circle	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-03	2025 N. Ruger Ct	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-03	2025 N. Ruger Ct	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-04	2021 N. Ruger Ct	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-04	2021 N. Ruger Ct	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-05	2028 N. Ruger Circle	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-05	2028 N. Ruger Circle	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-06	2032 N. Ruger Circle	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-06	2032 N. Ruger Circle	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-07	2009 N. Mountain Ct	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-07	2009 N. Mountain Ct	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-08	2007 N. Mountain Ct	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-08	2007 N. Mountain Ct	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-09	1009 W. Mountain	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-09	1009 W. Mountain	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-10	HOA-2	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-10	HOA-2	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-11	1910 N. Quail Cross St	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-11	1910 N. Quail Cross St	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-12	HOA-1	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-12	HOA-1	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-13	1211 W Quail Cross Ct	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-13	1211 W Quail Cross Ct	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-14	DUP-1	Login	10/29/2014 7:42:42 PM	NDR	VW-3
HS14101262-14	DUP-1	Login	10/29/2014 7:42:42 PM	NDR	BTEX A1
HS14101262-15	Trip Blank 100814-50	Login	10/29/2014 7:43:33 PM	NDR	VW-3

ALS Environmental

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

Chain of Custody Form

Page 1 of 2

COC ID: 111774

HS14101262

Apex Companies
Andover Release Site E3CE-0065

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) Colt Court GW 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	2020 N Ruger Circle	10-28-14	09:54	Water	HCL	6	X	X									
2	2019 N. Ruger Circle		10:20														
3	2025 N. Ruger CT.		10:30														
4	2021 N. Ruger CT.		10:45														
5	2028 N. Ruger Circle		11:25														
6	2032 N. Ruger Circle		11:38														
7	2009 N. Mountain CT.		11:58														
8	2007 N. Mountain CT.		12:09														
9	1009 W. Mountain		12:23														
10	HOA-2		12:42														

Sampler(s) Please Print & Sign: Paul Ward

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: 10-28-14 Time: 17:00 Received by:

Relinquished by: Date: Time: Received by (Laboratory): NR 10/29/14 9-17AM

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.
23633	4.5°

QC Package: (Check One Box Below)
[X] Level 2 Std QC
[ ] Level 3 Std QC/Row 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.
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.

Copyright 2011 by ALS Environmental.

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 2 of 2

COC ID: 111776

Houston, TX +1 281 530 5656 | Spring City, PA +1 610 948 4903 | South Charleston, WV +1 304 356 3168 | Middletown, PA +1 717 944 5541 | Salt Lake City, UT +1 801 266 7700 | York, PA +1 717 505 5280

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) Colt Court GW 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	1910 N. Quail Cross St	10-28-14	1253	Water	HCl	6	X	X									
2	HOA-1	10-28-14	1310	|	|	|	|	|									
3	1211 W Quail Cross CT	10-28-14	1333	|	|	|	|	|									
4	— NOPW			—	—	—	—	—									
5	DUP 1	10-28-14	—	Water	HCL	6	X	X									
6	— Nothing	Follows															
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Ward

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: 10-28-14 Time: 17:00 Received by:

Relinquished by: Date: Time: Received by (Laboratory): NL 10/29/14 9:17AM

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.
23633	4.50

QC Package: (Check One Box Below)
[X] Level 2 Std QC
[ ] Level 3 Std QC/Row 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.
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.

Copyright 2011 by ALS Environmental.

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

November 13, 2014

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

Work Order: **HS14101299**

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

Dear Samuel,

ALS Environmental received 13 sample(s) on Oct 30, 2014 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,

Bethany McDaniel

Generated By: Amanda.Hilliard

Bethany McDaniel
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14101299

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14101299-01	MW-1	Water		29-Oct-2014 09:34	30-Oct-2014 09:20	☐
HS14101299-02	MW-14	Water		29-Oct-2014 10:20	30-Oct-2014 09:20	☐
HS14101299-03	MW-12	Water		29-Oct-2014 11:35	30-Oct-2014 09:20	☐
HS14101299-04	MW-10	Water		29-Oct-2014 12:20	30-Oct-2014 09:20	☐
HS14101299-05	MW-13	Water		29-Oct-2014 12:58	30-Oct-2014 09:20	☐
HS14101299-06	MW-8	Water		29-Oct-2014 13:22	30-Oct-2014 09:20	☐
HS14101299-07	MW-5	Water		29-Oct-2014 14:25	30-Oct-2014 09:20	☐
HS14101299-08	MW-15	Water		29-Oct-2014 15:02	30-Oct-2014 09:20	☐
HS14101299-09	MW-16	Water		29-Oct-2014 15:29	30-Oct-2014 09:20	☐
HS14101299-10	MW-6	Water		29-Oct-2014 16:03	30-Oct-2014 09:20	☐
HS14101299-11	MW-7	Water		29-Oct-2014 16:30	30-Oct-2014 09:20	☐
HS14101299-12	DUP-1	Water		29-Oct-2014 00:00	30-Oct-2014 09:20	☐
HS14101299-13	Trip Blank - 100814-36	Water		29-Oct-2014 00:00	30-Oct-2014 09:20	☑

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14101299

CASE NARRATIVE

GC Semivolatiles by Method RSK-175

Batch ID: R244642

Sample ID: **HS14101149-08**
• MS/MSD performed on an unrelated sample

GC Volatiles by Method IA OA-1

Batch ID: R244257

Sample ID: **HS14110054-06**
• MS/MSD performed on an unrelated sample

GCMS Volatiles by Method SW8260

Batch ID: R244263

Sample ID: **MW-7 (HS14101299-11)**
• Naphthalene recovery in MSD is missing due to system failure.

Batch ID: R244140

Sample ID: **HS14101318-11**
• MS/MSD performed on an unrelated sample

Metals by Method SW6020

Batch ID: 87667

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

Batch ID: 87666

Sample ID: **HS14101291-05**
• MS/MSD performed on an unrelated sample

WetChemistry by Method E365.3

Batch ID: R244551

Sample ID: **HS14110282-01**
• MS/MSD performed on an unrelated sample

Sample ID: **MW-1 (HS14101299-01)**
• Analyst ran work order HS14101293 in error.dq.

Sample ID: **MW-1 (HS14101299-01)**
Sample ID: **MW-12 (HS14101299-03)**
Sample ID: **MW-14 (HS14101299-02)**
• Sample was analyzed outside of the holding time due to laboratory error. Sample results should be considered as estimated.

WetChemistry by Method E415.1

Batch ID: R244821

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

WetChemistry by Method SM4500 NH3-D

Batch ID: R244404

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14101299

CASE NARRATIVE

WetChemistry by Method E300

Batch ID: R243985

Sample ID: **CCV**
- Ortho PO not reported in this analytical sequence

Sample ID: **HS14101282-01**
- MS/MSD performed on an unrelated sample

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-1
Collection Date: 29-Oct-2014 09:34

ANALYTICAL REPORT
WorkOrder:HS14101299
Lab ID:HS14101299-01
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	**0.47**		**0.010**	**mg/L**	10	04-Nov-2014 22:46
1,2-Dichloroethane	ND		0.010	mg/L	10	04-Nov-2014 22:46
1,3,5-Trimethylbenzene	**0.19**		**0.010**	**mg/L**	10	04-Nov-2014 22:46
2-Butanone	ND		0.020	mg/L	10	04-Nov-2014 22:46
Benzene	**5.0**		**0.20**	**mg/L**	200	04-Nov-2014 22:21
Cyclohexane	**0.051**		**0.010**	**mg/L**	10	04-Nov-2014 22:46
Ethylbenzene	**0.50**		**0.010**	**mg/L**	10	04-Nov-2014 22:46
Isopropylbenzene	ND		0.010	mg/L	10	04-Nov-2014 22:46
m,p-Xylene	**3.4**		**0.40**	**mg/L**	200	04-Nov-2014 22:21
Methylcyclohexane	**0.015**		**0.010**	**mg/L**	10	04-Nov-2014 22:46
Naphthalene	**0.043**		**0.010**	**mg/L**	10	04-Nov-2014 22:46
n-Butylbenzene	ND		0.010	mg/L	10	04-Nov-2014 22:46
n-Propylbenzene	ND		0.010	mg/L	10	04-Nov-2014 22:46
o-Xylene	**2.2**		**0.20**	**mg/L**	200	04-Nov-2014 22:21
Toluene	**12**		**0.20**	**mg/L**	200	04-Nov-2014 22:21
Xylenes, Total	**5.5**		**0.60**	**mg/L**	200	04-Nov-2014 22:21
Surr: 1,2-Dichloroethane-d4	*95.5*		*71-125*	*%REC*	*10*	*04-Nov-2014 22:46*
Surr: 1,2-Dichloroethane-d4	*95.0*		*71-125*	*%REC*	*200*	*04-Nov-2014 22:21*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*200*	*04-Nov-2014 22:21*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*10*	*04-Nov-2014 22:46*
Surr: Dibromofluoromethane	*97.1*		*74-125*	*%REC*	*10*	*04-Nov-2014 22:46*
Surr: Dibromofluoromethane	*94.6*		*74-125*	*%REC*	*200*	*04-Nov-2014 22:21*
Surr: Toluene-d8	*95.4*		*75-125*	*%REC*	*10*	*04-Nov-2014 22:46*
Surr: Toluene-d8	*97.2*		*75-125*	*%REC*	*200*	*04-Nov-2014 22:21*
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 05-Nov-2014		Analyst: RPM
Iron	**0.638**		**0.200**	**mg/L**	1	06-Nov-2014 16:52
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: MYA
Methane	**2.33**		**0.500**	**ug/L**	1	07-Nov-2014 12:10
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: JBA
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	06-Nov-2014 11:25
TOTAL ORGANIC CARBON BY E415.1		**Method:E415.1**				Analyst: KMU
Organic Carbon, Total	**13**		**1.0**	**mg/L**	1	11-Nov-2014 17:29
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**				Analyst: KHT
Phosphorus, Total Orthophosphate (As P)	ND	H	0.0250	mg/L	1	08-Nov-2014 12:55
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 05-Nov-2014		Analyst: RPM
Potassium	**0.424**		**0.200**	**mg/L**	1	10-Nov-2014 14:56
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**45**		**0.050**	**mg/L**	1	04-Nov-2014 19:35
Surr: 4-Bromofluorobenzene	*110*		*70-130*	*%REC*	*1*	*04-Nov-2014 19:35*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-1
Collection Date: 29-Oct-2014 09:34

WorkOrder:HS14101299
Lab ID:HS14101299-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	ND		0.100	mg/L	1	30-Oct-2014 20:01
Sulfate	**8.22**		**0.500**	**mg/L**	1	30-Oct-2014 20:01

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
Sample ID: MW-14
Collection Date: 29-Oct-2014 10:20

ANALYTICAL REPORT
WorkOrder:HS14101299
Lab ID:HS14101299-02
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	**0.0029**		**0.0010**	**mg/L**	1	03-Nov-2014 18:35
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 18:35
1,3,5-Trimethylbenzene	**0.0013**		**0.0010**	**mg/L**	1	03-Nov-2014 18:35
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 18:35
Benzene	**0.021**		**0.0010**	**mg/L**	1	03-Nov-2014 18:35
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 18:35
Ethylbenzene	**0.0049**		**0.0010**	**mg/L**	1	03-Nov-2014 18:35
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:35
m,p-Xylene	**0.036**		**0.0020**	**mg/L**	1	03-Nov-2014 18:35
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 18:35
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 18:35
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:35
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:35
o-Xylene	**0.022**		**0.0010**	**mg/L**	1	03-Nov-2014 18:35
Toluene	**0.10**		**0.0010**	**mg/L**	1	03-Nov-2014 18:35
Xylenes, Total	**0.058**		**0.0030**	**mg/L**	1	03-Nov-2014 18:35
Surr: 1,2-Dichloroethane-d4	*91.5*		*71-125*	*%REC*	*1*	*03-Nov-2014 18:35*
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	*1*	*03-Nov-2014 18:35*
Surr: Dibromofluoromethane	*94.0*		*74-125*	*%REC*	*1*	*03-Nov-2014 18:35*
Surr: Toluene-d8	*98.2*		*75-125*	*%REC*	*1*	*03-Nov-2014 18:35*
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 05-Nov-2014		Analyst: RPM
Iron	ND		0.200	mg/L	1	06-Nov-2014 16:54
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: MYA
Methane	**2.38**		**0.500**	**ug/L**	1	07-Nov-2014 12:31
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: JBA
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	06-Nov-2014 11:25
TOTAL ORGANIC CARBON BY E415.1		**Method:E415.1**				Analyst: KMU
Organic Carbon, Total	ND		1.0	mg/L	1	11-Nov-2014 17:45
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**				Analyst: KHT
Phosphorus, Total Orthophosphate (As P)	**0.0380**	H	**0.0250**	**mg/L**	1	08-Nov-2014 12:55
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 05-Nov-2014		Analyst: RPM
Potassium	**2.77**		**0.200**	**mg/L**	1	10-Nov-2014 14:58
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.54**		**0.050**	**mg/L**	1	04-Nov-2014 19:51
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*04-Nov-2014 19:51*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**4.46**		**0.100**	**mg/L**	1	30-Oct-2014 21:36
Sulfate	**30.9**		**0.500**	**mg/L**	1	30-Oct-2014 21:36

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
Sample ID: MW-12
Collection Date: 29-Oct-2014 11:35

ANALYTICAL REPORT
WorkOrder:HS14101299
Lab ID:HS14101299-03
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	**0.0011**		**0.0010**	**mg/L**	1	03-Nov-2014 18:59
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 18:59
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:59
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 18:59
Benzene	**0.0050**		**0.0010**	**mg/L**	1	03-Nov-2014 18:59
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 18:59
Ethylbenzene	**0.0017**		**0.0010**	**mg/L**	1	03-Nov-2014 18:59
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:59
m,p-Xylene	**0.010**		**0.0020**	**mg/L**	1	03-Nov-2014 18:59
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 18:59
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 18:59
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:59
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:59
o-Xylene	**0.0063**		**0.0010**	**mg/L**	1	03-Nov-2014 18:59
Toluene	**0.027**		**0.0010**	**mg/L**	1	03-Nov-2014 18:59
Xylenes, Total	**0.016**		**0.0030**	**mg/L**	1	03-Nov-2014 18:59
Surr: 1,2-Dichloroethane-d4	*96.5*		*71-125*	*%REC*	*1*	*03-Nov-2014 18:59*
Surr: 4-Bromofluorobenzene	*99.4*		*70-125*	*%REC*	*1*	*03-Nov-2014 18:59*
Surr: Dibromofluoromethane	*92.6*		*74-125*	*%REC*	*1*	*03-Nov-2014 18:59*
Surr: Toluene-d8	*96.7*		*75-125*	*%REC*	*1*	*03-Nov-2014 18:59*
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 05-Nov-2014		Analyst: RPM
Iron	**0.540**		**0.200**	**mg/L**	1	06-Nov-2014 16:57
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: MYA
Methane	**3.78**		**0.500**	**ug/L**	1	07-Nov-2014 12:48
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: JBA
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	06-Nov-2014 11:25
TOTAL ORGANIC CARBON BY E415.1		**Method:E415.1**				Analyst: KMU
Organic Carbon, Total	**1.5**		**1.0**	**mg/L**	1	11-Nov-2014 18:27
ORTHO PHOSPHATE (PO4) AS P BY E365.3		**Method:E365.3**				Analyst: KHT
Phosphorus, Total Orthophosphate (As P)	**0.0460**	H	**0.0250**	**mg/L**	1	08-Nov-2014 12:55
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 05-Nov-2014		Analyst: RPM
Potassium	**9.26**		**0.200**	**mg/L**	1	10-Nov-2014 15:01
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.12**		**0.050**	**mg/L**	1	04-Nov-2014 21:25
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*04-Nov-2014 21:25*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**0.648**		**0.100**	**mg/L**	1	30-Oct-2014 22:52
Sulfate	**62.9**		**0.500**	**mg/L**	1	30-Oct-2014 22:52

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-10
Collection Date: 29-Oct-2014 12:20

WorkOrder:HS14101299
Lab ID:HS14101299-04
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	03-Nov-2014 21:52
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 21:52
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:52
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 21:52
Benzene	**0.0021**		**0.0010**	**mg/L**	1	03-Nov-2014 21:52
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 21:52
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:52
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:52
m,p-Xylene	**0.0058**		**0.0020**	**mg/L**	1	03-Nov-2014 21:52
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 21:52
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 21:52
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:52
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:52
o-Xylene	**0.0034**		**0.0010**	**mg/L**	1	03-Nov-2014 21:52
Toluene	**0.013**		**0.0010**	**mg/L**	1	03-Nov-2014 21:52
Xylenes, Total	**0.0092**		**0.0030**	**mg/L**	1	03-Nov-2014 21:52
Surr: 1,2-Dichloroethane-d4	*91.3*		*71-125*	*%REC*	*1*	*03-Nov-2014 21:52*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*03-Nov-2014 21:52*
Surr: Dibromofluoromethane	*91.7*		*74-125*	*%REC*	*1*	*03-Nov-2014 21:52*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*03-Nov-2014 21:52*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.066**		**0.050**	**mg/L**	1	04-Nov-2014 21:40
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*04-Nov-2014 21:40*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-13
Collection Date: 29-Oct-2014 12:58

WorkOrder:HS14101299
Lab ID:HS14101299-05
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	03-Nov-2014 19:24
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 19:24
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:24
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 19:24
Benzene	**0.0028**		**0.0010**	**mg/L**	1	03-Nov-2014 19:24
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 19:24
Ethylbenzene	**0.0011**		**0.0010**	**mg/L**	1	03-Nov-2014 19:24
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:24
m,p-Xylene	**0.0065**		**0.0020**	**mg/L**	1	03-Nov-2014 19:24
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 19:24
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 19:24
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:24
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:24
o-Xylene	**0.0040**		**0.0010**	**mg/L**	1	03-Nov-2014 19:24
Toluene	**0.015**		**0.0010**	**mg/L**	1	03-Nov-2014 19:24
Xylenes, Total	**0.011**		**0.0030**	**mg/L**	1	03-Nov-2014 19:24
Surr: 1,2-Dichloroethane-d4	*93.8*		*71-125*	*%REC*	*1*	*03-Nov-2014 19:24*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*03-Nov-2014 19:24*
Surr: Dibromofluoromethane	*95.9*		*74-125*	*%REC*	*1*	*03-Nov-2014 19:24*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*03-Nov-2014 19:24*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.056**		**0.050**	**mg/L**	1	04-Nov-2014 21:56
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*04-Nov-2014 21:56*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-8
Collection Date: 29-Oct-2014 13:22

WorkOrder:HS14101299
Lab ID:HS14101299-06
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	03-Nov-2014 19:49
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 19:49
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:49
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 19:49
Benzene	**0.0014**		**0.0010**	**mg/L**	1	03-Nov-2014 19:49
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 19:49
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:49
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:49
m,p-Xylene	**0.0041**		**0.0020**	**mg/L**	1	03-Nov-2014 19:49
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 19:49
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 19:49
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:49
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 19:49
o-Xylene	**0.0024**		**0.0010**	**mg/L**	1	03-Nov-2014 19:49
Toluene	**0.0082**		**0.0010**	**mg/L**	1	03-Nov-2014 19:49
Xylenes, Total	**0.0065**		**0.0030**	**mg/L**	1	03-Nov-2014 19:49
Surr: 1,2-Dichloroethane-d4	*92.9*		*71-125*	*%REC*	*1*	*03-Nov-2014 19:49*
Surr: 4-Bromofluorobenzene	*98.4*		*70-125*	*%REC*	*1*	*03-Nov-2014 19:49*
Surr: Dibromofluoromethane	*93.6*		*74-125*	*%REC*	*1*	*03-Nov-2014 19:49*
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	*1*	*03-Nov-2014 19:49*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 22:12
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*04-Nov-2014 22:12*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-5
Collection Date: 29-Oct-2014 14:25

WorkOrder:HS14101299
Lab ID:HS14101299-07
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	03-Nov-2014 20:13
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 20:13
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:13
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 20:13
Benzene	**0.0018**		**0.0010**	**mg/L**	1	03-Nov-2014 20:13
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 20:13
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:13
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:13
m,p-Xylene	**0.0048**		**0.0020**	**mg/L**	1	03-Nov-2014 20:13
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 20:13
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 20:13
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:13
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:13
o-Xylene	**0.0027**		**0.0010**	**mg/L**	1	03-Nov-2014 20:13
Toluene	**0.010**		**0.0010**	**mg/L**	1	03-Nov-2014 20:13
Xylenes, Total	**0.0075**		**0.0030**	**mg/L**	1	03-Nov-2014 20:13
Surr: 1,2-Dichloroethane-d4	*91.1*		*71-125*	*%REC*	*1*	*03-Nov-2014 20:13*
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	*1*	*03-Nov-2014 20:13*
Surr: Dibromofluoromethane	*90.7*		*74-125*	*%REC*	*1*	*03-Nov-2014 20:13*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*03-Nov-2014 20:13*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 22:27
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*04-Nov-2014 22:27*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-15
Collection Date: 29-Oct-2014 15:02

WorkOrder:HS14101299
Lab ID:HS14101299-08
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	03-Nov-2014 20:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 20:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:38
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 20:38
Benzene	**0.0012**		**0.0010**	**mg/L**	1	03-Nov-2014 20:38
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 20:38
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:38
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:38
m,p-Xylene	**0.0030**		**0.0020**	**mg/L**	1	03-Nov-2014 20:38
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 20:38
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 20:38
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:38
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 20:38
o-Xylene	**0.0018**		**0.0010**	**mg/L**	1	03-Nov-2014 20:38
Toluene	**0.0072**		**0.0010**	**mg/L**	1	03-Nov-2014 20:38
Xylenes, Total	**0.0048**		**0.0030**	**mg/L**	1	03-Nov-2014 20:38
Surr: 1,2-Dichloroethane-d4	*92.8*		*71-125*	*%REC*	*1*	*03-Nov-2014 20:38*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*03-Nov-2014 20:38*
Surr: Dibromofluoromethane	*93.3*		*74-125*	*%REC*	*1*	*03-Nov-2014 20:38*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*03-Nov-2014 20:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 22:43
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*04-Nov-2014 22:43*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-16
Collection Date: 29-Oct-2014 15:29

WorkOrder:HS14101299
Lab ID:HS14101299-09
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	03-Nov-2014 21:03
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 21:03
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 21:03
Benzene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 21:03
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
m,p-Xylene	**0.0026**		**0.0020**	**mg/L**	1	03-Nov-2014 21:03
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 21:03
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:03
o-Xylene	**0.0014**		**0.0010**	**mg/L**	1	03-Nov-2014 21:03
Toluene	**0.0050**		**0.0010**	**mg/L**	1	03-Nov-2014 21:03
Xylenes, Total	**0.0040**		**0.0030**	**mg/L**	1	03-Nov-2014 21:03
Surr: 1,2-Dichloroethane-d4	*92.4*		*71-125*	*%REC*	*1*	*03-Nov-2014 21:03*
Surr: 4-Bromofluorobenzene	*96.0*		*70-125*	*%REC*	*1*	*03-Nov-2014 21:03*
Surr: Dibromofluoromethane	*90.4*		*74-125*	*%REC*	*1*	*03-Nov-2014 21:03*
Surr: Toluene-d8	*97.6*		*75-125*	*%REC*	*1*	*03-Nov-2014 21:03*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 22:59
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*04-Nov-2014 22:59*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-6
Collection Date: 29-Oct-2014 16:03

WorkOrder:HS14101299
Lab ID:HS14101299-10
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	03-Nov-2014 21:27
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 21:27
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 21:27
Benzene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 21:27
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
m,p-Xylene	**0.0028**		**0.0020**	**mg/L**	1	03-Nov-2014 21:27
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 21:27
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 21:27
o-Xylene	**0.0014**		**0.0010**	**mg/L**	1	03-Nov-2014 21:27
Toluene	**0.0052**		**0.0010**	**mg/L**	1	03-Nov-2014 21:27
Xylenes, Total	**0.0042**		**0.0030**	**mg/L**	1	03-Nov-2014 21:27
Surr: 1,2-Dichloroethane-d4	*95.4*		*71-125*	*%REC*	*1*	*03-Nov-2014 21:27*
Surr: 4-Bromofluorobenzene	*98.8*		*70-125*	*%REC*	*1*	*03-Nov-2014 21:27*
Surr: Dibromofluoromethane	*92.1*		*74-125*	*%REC*	*1*	*03-Nov-2014 21:27*
Surr: Toluene-d8	*98.7*		*75-125*	*%REC*	*1*	*03-Nov-2014 21:27*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 23:14
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*04-Nov-2014 23:14*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-7
Collection Date: 29-Oct-2014 16:30

WorkOrder:HS14101299
Lab ID:HS14101299-11
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	04-Nov-2014 14:07
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 14:07
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 14:07
Benzene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
Cyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 14:07
Ethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
Isopropylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
m,p-Xylene	ND		0.0020	mg/L	1	04-Nov-2014 14:07
Methylcyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 14:07
Naphthalene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
n-Propylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
o-Xylene	ND		0.0010	mg/L	1	04-Nov-2014 14:07
Toluene	**0.0024**		**0.0010**	**mg/L**	1	04-Nov-2014 14:07
Xylenes, Total	ND		0.0030	mg/L	1	04-Nov-2014 14:07
Surr: 1,2-Dichloroethane-d4	*98.3*		*71-125*	*%REC*	*1*	*04-Nov-2014 14:07*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*04-Nov-2014 14:07*
Surr: Dibromofluoromethane	*91.9*		*74-125*	*%REC*	*1*	*04-Nov-2014 14:07*
Surr: Toluene-d8	*95.2*		*75-125*	*%REC*	*1*	*04-Nov-2014 14:07*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 23:30
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	*1*	*04-Nov-2014 23:30*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: DUP-1
Collection Date: 29-Oct-2014 00:00

WorkOrder:HS14101299
Lab ID:HS14101299-12
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	03-Nov-2014 18:10
1,2-Dichloroethane	ND		0.0010	mg/L	1	03-Nov-2014 18:10
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:10
2-Butanone	ND		0.0020	mg/L	1	03-Nov-2014 18:10
Benzene	**0.0013**		**0.0010**	**mg/L**	1	03-Nov-2014 18:10
Cyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 18:10
Ethylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:10
Isopropylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:10
m,p-Xylene	**0.0041**		**0.0020**	**mg/L**	1	03-Nov-2014 18:10
Methylcyclohexane	ND		0.0010	mg/L	1	03-Nov-2014 18:10
Naphthalene	ND		0.0010	mg/L	1	03-Nov-2014 18:10
n-Butylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:10
n-Propylbenzene	ND		0.0010	mg/L	1	03-Nov-2014 18:10
o-Xylene	**0.0021**		**0.0010**	**mg/L**	1	03-Nov-2014 18:10
Toluene	**0.0081**		**0.0010**	**mg/L**	1	03-Nov-2014 18:10
Xylenes, Total	**0.0063**		**0.0030**	**mg/L**	1	03-Nov-2014 18:10
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*03-Nov-2014 18:10*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*03-Nov-2014 18:10*
Surr: Dibromofluoromethane	*97.8*		*74-125*	*%REC*	*1*	*03-Nov-2014 18:10*
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	*1*	*03-Nov-2014 18:10*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	04-Nov-2014 23:46
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*04-Nov-2014 23:46*

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: HS14101299

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 87666	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34		05 Nov 2014 11:26	10 Nov 2014 14:56	1
HS14101299-02	MW-14	29 Oct 2014 10:20		05 Nov 2014 11:26	10 Nov 2014 14:58	1
HS14101299-03	MW-12	29 Oct 2014 11:35		05 Nov 2014 11:26	10 Nov 2014 15:01	1
Batch ID 87667	**Test Name :** DISSOLVED METALS BY SW6020A			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34		05 Nov 2014 11:36	06 Nov 2014 16:52	1
HS14101299-02	MW-14	29 Oct 2014 10:20		05 Nov 2014 11:36	06 Nov 2014 16:54	1
HS14101299-03	MW-12	29 Oct 2014 11:35		05 Nov 2014 11:36	06 Nov 2014 16:57	1
Batch ID R243985	**Test Name :** ANIONS BY E300.0			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			30 Oct 2014 20:01	1
HS14101299-02	MW-14	29 Oct 2014 10:20			30 Oct 2014 21:36	1
HS14101299-03	MW-12	29 Oct 2014 11:35			30 Oct 2014 22:52	1
Batch ID R244140	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14101299-02	MW-14	29 Oct 2014 10:20			03 Nov 2014 18:35	1
HS14101299-03	MW-12	29 Oct 2014 11:35			03 Nov 2014 18:59	1
HS14101299-04	MW-10	29 Oct 2014 12:20			03 Nov 2014 21:52	1
HS14101299-05	MW-13	29 Oct 2014 12:58			03 Nov 2014 19:24	1
HS14101299-06	MW-8	29 Oct 2014 13:22			03 Nov 2014 19:49	1
HS14101299-07	MW-5	29 Oct 2014 14:25			03 Nov 2014 20:13	1
HS14101299-08	MW-15	29 Oct 2014 15:02			03 Nov 2014 20:38	1
HS14101299-09	MW-16	29 Oct 2014 15:29			03 Nov 2014 21:03	1
HS14101299-10	MW-6	29 Oct 2014 16:03			03 Nov 2014 21:27	1
HS14101299-12	DUP-1	29 Oct 2014 00:00			03 Nov 2014 18:10	1
Batch ID R244257	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			04 Nov 2014 19:35	1
HS14101299-02	MW-14	29 Oct 2014 10:20			04 Nov 2014 19:51	1
HS14101299-03	MW-12	29 Oct 2014 11:35			04 Nov 2014 21:25	1
HS14101299-04	MW-10	29 Oct 2014 12:20			04 Nov 2014 21:40	1
HS14101299-05	MW-13	29 Oct 2014 12:58			04 Nov 2014 21:56	1
HS14101299-06	MW-8	29 Oct 2014 13:22			04 Nov 2014 22:12	1
HS14101299-07	MW-5	29 Oct 2014 14:25			04 Nov 2014 22:27	1
HS14101299-08	MW-15	29 Oct 2014 15:02			04 Nov 2014 22:43	1
HS14101299-09	MW-16	29 Oct 2014 15:29			04 Nov 2014 22:59	1
HS14101299-10	MW-6	29 Oct 2014 16:03			04 Nov 2014 23:14	1
HS14101299-11	MW-7	29 Oct 2014 16:30			04 Nov 2014 23:30	1
HS14101299-12	DUP-1	29 Oct 2014 00:00			04 Nov 2014 23:46	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS14101299

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R244263	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			04 Nov 2014 22:46	10
HS14101299-01	MW-1	29 Oct 2014 09:34			04 Nov 2014 22:21	200
HS14101299-11	MW-7	29 Oct 2014 16:30			04 Nov 2014 14:07	1
Batch ID R244404	**Test Name :** AMMONIA AS N BY SM4500 NH3-D (ISE)			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			06 Nov 2014 11:25	1
HS14101299-02	MW-14	29 Oct 2014 10:20			06 Nov 2014 11:25	1
HS14101299-03	MW-12	29 Oct 2014 11:35			06 Nov 2014 11:25	1
Batch ID R244551	**Test Name :** ORTHO PHOSPHATE (PO4) AS P BY E365.3			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			08 Nov 2014 12:55	1
HS14101299-02	MW-14	29 Oct 2014 10:20			08 Nov 2014 12:55	1
HS14101299-03	MW-12	29 Oct 2014 11:35			08 Nov 2014 12:55	1
Batch ID R244642	**Test Name :** DISSOLVED GASES BY RSK-175			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			07 Nov 2014 12:10	1
HS14101299-02	MW-14	29 Oct 2014 10:20			07 Nov 2014 12:31	1
HS14101299-03	MW-12	29 Oct 2014 11:35			07 Nov 2014 12:48	1
Batch ID R244821	**Test Name :** TOTAL ORGANIC CARBON BY E415.1			**Matrix:** Water		
HS14101299-01	MW-1	29 Oct 2014 09:34			11 Nov 2014 17:29	1
HS14101299-02	MW-14	29 Oct 2014 10:20			11 Nov 2014 17:45	1
HS14101299-03	MW-12	29 Oct 2014 11:35			11 Nov 2014 18:27	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244642 **Instrument: FID-4** **Method: RSK-175**

MBLK Sample ID: **GBLKW1-141107** Units: **ug/L** Analysis Date: **07-Nov-2014 11:56**
Client ID: Run ID: **FID-4_244642** SeqNo: **3086124** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	ND	0.500								

LCS Sample ID: **GLCSW1-141107** Units: **ug/L** Analysis Date: **07-Nov-2014 10:33**
Client ID: Run ID: **FID-4_244642** SeqNo: **3086122** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	8.191	0.500	9.647	0	84.9	75 - 125				

LCSD Sample ID: **GLCSDW1-141107** Units: **ug/L** Analysis Date: **07-Nov-2014 10:44**
Client ID: Run ID: **FID-4_244642** SeqNo: **3086123** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	7.883	0.500	9.647	0	81.7	75 - 125	8.191	3.83	30	

MS Sample ID: **HS14101149-08MS** Units: **ug/L** Analysis Date: **07-Nov-2014 16:27**
Client ID: Run ID: **FID-4_244642** SeqNo: **3086143** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	9.632	0.500	9.647	2.629	72.6	75 - 125				S

MSD Sample ID: **HS14101149-08MSD** Units: **ug/L** Analysis Date: **07-Nov-2014 16:38**
Client ID: Run ID: **FID-4_244642** SeqNo: **3086144** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	10.41	0.500	9.647	2.629	80.6	75 - 125	9.632	7.73	30	

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244257 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-141104** Units: **mg/L** Analysis Date: **04-Nov-2014 18:01**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078509** 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	*0.105*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

LCS Sample ID: **GLCSW1-141104** Units: **mg/L** Analysis Date: **04-Nov-2014 17:30**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078508** 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	0.8832	0.050	1	0	88.3	70 - 130				
Surr: 4-Bromofluorobenzene	*0.109*	*0.0050*	*0.1*	*0*	*109*	*70 - 130*				

MS Sample ID: **HS14110054-06MS** Units: **mg/L** Analysis Date: **04-Nov-2014 20:22**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078513** 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	0.4563	0.050	1	0.04533	41.1	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.1102*	*0.0050*	*0.1*	*0*	*110*	*70 - 130*				

MSD Sample ID: **HS14110054-06MSD** Units: **mg/L** Analysis Date: **04-Nov-2014 20:38**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078514** 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	0.462	0.050	1	0.04533	41.7	70 - 130	0.4563	1.24	30	S
Surr: 4-Bromofluorobenzene	*0.1094*	*0.0050*	*0.1*	*0*	*109*	*70 - 130*	*0.1102*	*0.694*	*30*	

The following samples were anayzed in this batch:

HS14101299-01	HS14101299-02	HS14101299-03	HS14101299-04
HS14101299-05	HS14101299-06	HS14101299-07	HS14101299-08
HS14101299-09	HS14101299-10	HS14101299-11	HS14101299-12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 87666 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-87666** Units: **mg/L** Analysis Date: **10-Nov-2014 13:29**
Client ID: Run ID: **ICPMS05_244612** SeqNo: **3085789** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	ND	0.200								

LCS Sample ID: **MLCS-87666** Units: **mg/L** Analysis Date: **10-Nov-2014 13:32**
Client ID: Run ID: **ICPMS05_244612** SeqNo: **3085790** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	4.894	0.200	5	0	97.9	80 - 120				

MS Sample ID: **HS14101291-05MS** Units: **mg/L** Analysis Date: **10-Nov-2014 14:21**
Client ID: Run ID: **ICPMS05_244612** SeqNo: **3085808** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	12.8	0.200	5	8.379	88.4	80 - 120				

MSD Sample ID: **HS14101291-05MSD** Units: **mg/L** Analysis Date: **10-Nov-2014 14:24**
Client ID: Run ID: **ICPMS05_244612** SeqNo: **3085809** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	13.54	0.200	5	8.379	103	80 - 120	12.8	5.63	20	

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 87667 **Instrument: ICPMS05** **Method: SW6020 (DISSOLVED)**

MBLK Sample ID: **MBLK-87667** Units: **mg/L** Analysis Date: **06-Nov-2014 15:49**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081951** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	ND	0.200								

LCS Sample ID: **MLCS-87667** Units: **mg/L** Analysis Date: **06-Nov-2014 15:51**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081952** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.77	0.200	5	0	95.4	80 - 120				

MS Sample ID: **HS14101293-04MS** Units: **mg/L** Analysis Date: **06-Nov-2014 16:42**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081970** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.557	0.200	5	0.01093	90.9	75 - 125				

MSD Sample ID: **HS14101293-04MSD** Units: **mg/L** Analysis Date: **06-Nov-2014 16:45**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081971** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.287	0.200	5	0.01093	85.5	75 - 125	4.557	6.09	20	

DUP Sample ID: **HS14101293-04DUP** Units: **mg/L** Analysis Date: **06-Nov-2014 16:37**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081968** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	ND	0.200					0.01093	0	20	

PDS Sample ID: **HS14101293-04BS** Units: **mg/L** Analysis Date: **06-Nov-2014 16:49**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081972** PrepDate: **05-Nov-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	8.238	0.200	10	0	82.4	75 - 125				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 87667 **Instrument: ICPMS05** **Method: SW6020 (DISSOLVED)**

SD Sample ID: **HS14101293-04 DIL SX** Units: **mg/L** Analysis Date: **06-Nov-2014 16:40**
Client ID: Run ID: **ICPMS05_244381** SeqNo: **3081969** PrepDate: **05-Nov-2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	ND	1.00					0	0	10	

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244140 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141103** Units: **ug/L** Analysis Date: **03-Nov-2014 12:52**
Client ID: Run ID: **VOA1_244140** SeqNo: **3076402** 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								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*47.15*	*1.0*	*50*	*0*	*94.3*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.65*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*47.12*	*1.0*	*50*	*0*	*94.2*	*74 - 125*				
Surr: Toluene-d8	*50.87*	*1.0*	*50*	*0*	*102*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244140 **Instrument: VOA1** **Method: SW8260**

LCS Sample ID: **VLCSW-141103** Units: **ug/L** Analysis Date: **03-Nov-2014 12:03**
Client ID: Run ID: **VOA1_244140** SeqNo: **3076401** 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	50.32	1.0	50	0	101	79 - 124				
1,2-Dichloroethane	44.6	1.0	50	0	89.2	76 - 120				
1,3,5-Trimethylbenzene	48.83	1.0	50	0	97.7	80 - 123				
2-Butanone	85.02	2.0	100	0	85.0	60 - 140				
Benzene	47.49	1.0	50	0	95.0	80 - 120				
Cyclohexane	44.16	1.0	50	0	88.3	75 - 126				
Ethylbenzene	46.37	1.0	50	0	92.7	80 - 120				
Isopropylbenzene	46.92	1.0	50	0	93.8	80 - 126				
m,p-Xylene	92.39	2.0	100	0	92.4	80 - 120				
Methylcyclohexane	48.8	1.0	50	0	97.6	70 - 126				
Naphthalene	52.91	1.0	50	0	106	65 - 135				
n-Butylbenzene	50.57	1.0	50	0	101	75 - 128				
n-Propylbenzene	46.75	1.0	50	0	93.5	75 - 130				
o-Xylene	47.44	1.0	50	0	94.9	80 - 120				
Toluene	45.72	1.0	50	0	91.4	80 - 121				
Xylenes, Total	139.8	3.0	150	0	93.2	79 - 124				
Surr: 1,2-Dichloroethane-d4	*47.94*	*1.0*	*50*	*0*	*95.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.63*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*49.37*	*1.0*	*50*	*0*	*98.7*	*74 - 125*				
Surr: Toluene-d8	*47.51*	*1.0*	*50*	*0*	*95.0*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244140 **Instrument: VOA1** **Method: SW8260**

MS Sample ID: **HS14101318-11MS** Units: **ug/L** Analysis Date: **03-Nov-2014 16:57**
Client ID: Run ID: **VOA1_244140** SeqNo: **3076410** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	303.5	5.0	250	92.75	84.3	80 - 120				
1,2-Dichloroethane	221.8	5.0	250	0	88.7	79 - 120				
1,3,5-Trimethylbenzene	254.2	5.0	250	35.77	87.4	80 - 120				
2-Butanone	440.1	10	500	0	88.0	60 - 140				
Benzene	385.5	5.0	250	179.3	82.5	80 - 120				
Cyclohexane	240.6	5.0	250	48.97	76.7	75 - 125				
Ethylbenzene	334.7	5.0	250	112.9	88.7	80 - 120				
Isopropylbenzene	228.1	5.0	250	14.38	85.5	80 - 120				
m,p-Xylene	824.4	10	500	410.2	82.8	80 - 120				
Methylcyclohexane	227.5	5.0	250	58.06	67.8	70 - 122				S
Naphthalene	248.7	5.0	250	14.52	93.7	70 - 130				
n-Butylbenzene	205.8	5.0	250	0	82.3	75 - 125				
n-Propylbenzene	223.3	5.0	250	10.5	85.1	75 - 130				
o-Xylene	236.3	5.0	250	11.95	89.8	80 - 120				
Toluene	213.8	5.0	250	0	85.5	80 - 121				
Xylenes, Total	1061	15	750	422.1	85.1	80 - 124				
Surr: 1,2-Dichloroethane-d4	*231*	*5.0*	*250*	*0*	*92.4*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*248.9*	*5.0*	*250*	*0*	*99.6*	*70 - 125*				
Surr: Dibromofluoromethane	*245.6*	*5.0*	*250*	*0*	*98.3*	*74 - 125*				
Surr: Toluene-d8	*239.1*	*5.0*	*250*	*0*	*95.6*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244140 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101318-11MSD** Units: **ug/L** Analysis Date: **03-Nov-2014 17:22**
Client ID: Run ID: **VOA1_244140** SeqNo: **3076411** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	314.2	5.0	250	92.75	88.6	80 - 120	303.5	3.44	20	
1,2-Dichloroethane	217.1	5.0	250	0	86.8	79 - 120	221.8	2.17	20	
1,3,5-Trimethylbenzene	262.5	5.0	250	35.77	90.7	80 - 120	254.2	3.22	20	
2-Butanone	445.1	10	500	0	89.0	60 - 140	440.1	1.13	20	
Benzene	388.9	5.0	250	179.3	83.8	80 - 120	385.5	0.867	20	
Cyclohexane	270.5	5.0	250	48.97	88.6	75 - 125	240.6	11.7	20	
Ethylbenzene	332.9	5.0	250	112.9	88.0	80 - 120	334.7	0.53	20	
Isopropylbenzene	231.9	5.0	250	14.38	87.0	80 - 120	228.1	1.66	20	
m,p-Xylene	807.9	10	500	410.2	79.5	80 - 120	824.4	2.02	20	S
Methylcyclohexane	216.5	5.0	250	58.06	63.4	70 - 122	227.5	4.96	20	S
Naphthalene	259.2	5.0	250	14.52	97.9	70 - 130	248.7	4.14	20	
n-Butylbenzene	227.2	5.0	250	0	90.9	75 - 125	205.8	9.91	20	
n-Propylbenzene	235.5	5.0	250	10.5	90.0	75 - 130	223.3	5.31	20	
o-Xylene	230.7	5.0	250	11.95	87.5	80 - 120	236.3	2.41	20	
Toluene	211.8	5.0	250	0	84.7	80 - 121	213.8	0.932	20	
Xylenes, Total	1039	15	750	422.1	82.2	80 - 124	1061	2.11	20	
Surr: 1,2-Dichloroethane-d4	*238.5*	*5.0*	*250*	*0*	*95.4*	*71 - 125*	*231*	*3.17*	*20*	
Surr: 4-Bromofluorobenzene	*250.2*	*5.0*	*250*	*0*	*100*	*70 - 125*	*248.9*	*0.52*	*20*	
Surr: Dibromofluoromethane	*253.7*	*5.0*	*250*	*0*	*101*	*74 - 125*	*245.6*	*3.25*	*20*	
Surr: Toluene-d8	*243.2*	*5.0*	*250*	*0*	*97.3*	*75 - 125*	*239.1*	*1.69*	*20*	

The following samples were anayzed in this batch:

HS14101299-02	HS14101299-03	HS14101299-04	HS14101299-05
HS14101299-06	HS14101299-07	HS14101299-08	HS14101299-09
HS14101299-10	HS14101299-12		

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141104** Units: **ug/L** Analysis Date: **04-Nov-2014 13:43**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078328** 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								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.47*	*1.0*	*50*	*0*	*98.9*	*70 - 125*				
Surr: Dibromofluoromethane	*45.02*	*1.0*	*50*	*0*	*90.0*	*74 - 125*				
Surr: Toluene-d8	*48.08*	*1.0*	*50*	*0*	*96.2*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

LCS Sample ID: **VLCSW-141104** Units: **ug/L** Analysis Date: **04-Nov-2014 14:48**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078331** 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	47.67	1.0	50	0	95.3	79 - 124				
1,2-Dichloroethane	41.92	1.0	50	0	83.8	76 - 120				
1,3,5-Trimethylbenzene	47.76	1.0	50	0	95.5	80 - 123				
2-Butanone	85.01	2.0	100	0	85.0	60 - 140				
Benzene	44.03	1.0	50	0	88.1	80 - 120				
Cyclohexane	43.14	1.0	50	0	86.3	75 - 126				
Ethylbenzene	47.66	1.0	50	0	95.3	80 - 120				
Isopropylbenzene	46.58	1.0	50	0	93.2	80 - 126				
m,p-Xylene	93.27	2.0	100	0	93.3	80 - 120				
Methylcyclohexane	48.35	1.0	50	0	96.7	70 - 126				
Naphthalene	53.77	1.0	50	0	108	65 - 135				
n-Butylbenzene	48.41	1.0	50	0	96.8	75 - 128				
n-Propylbenzene	47.89	1.0	50	0	95.8	75 - 130				
o-Xylene	47.62	1.0	50	0	95.2	80 - 120				
Toluene	43.72	1.0	50	0	87.4	80 - 121				
Xylenes, Total	140.9	3.0	150	0	93.9	79 - 124				
Surr: 1,2-Dichloroethane-d4	*46.43*	*1.0*	*50*	*0*	*92.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.02*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*74 - 125*				
Surr: Toluene-d8	*48.39*	*1.0*	*50*	*0*	*96.8*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MS Sample ID: **HS14101299-11MS** Units: **ug/L** Analysis Date: **04-Nov-2014 14:57**
Client ID: **MW-7** Run ID: **VOA1_244263** SeqNo: **3078332** 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	44.19	1.0	50	0	88.4	80 - 120				
1,2-Dichloroethane	47.33	1.0	50	0	94.7	79 - 120				
1,3,5-Trimethylbenzene	44.68	1.0	50	0	89.4	80 - 120				
2-Butanone	95.67	2.0	100	0	95.7	60 - 140				
Benzene	49.81	1.0	50	0.3389	98.9	80 - 120				
Cyclohexane	39.91	1.0	50	0	79.8	75 - 125				
Ethylbenzene	46.89	1.0	50	0	93.8	80 - 120				
Isopropylbenzene	44.36	1.0	50	0	88.7	80 - 120				
m,p-Xylene	92.63	2.0	100	1.492	91.1	80 - 120				
Methylcyclohexane	31.38	1.0	50	0	62.8	70 - 122				S
Naphthalene	52.23	1.0	50	0	104	70 - 130				
n-Butylbenzene	44.78	1.0	50	0	89.6	75 - 125				
n-Propylbenzene	43.38	1.0	50	0	86.8	75 - 130				
o-Xylene	49.18	1.0	50	0.7704	96.8	80 - 120				
Toluene	53.47	1.0	50	2.392	102	80 - 121				
Xylenes, Total	141.8	3.0	150	2.262	93.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*46.42*	*1.0*	*50*	*0*	*92.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.93*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*48.43*	*1.0*	*50*	*0*	*96.9*	*74 - 125*				
Surr: Toluene-d8	*48.24*	*1.0*	*50*	*0*	*96.5*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101299-11MSD** Units: **ug/L** Analysis Date: **04-Nov-2014 15:22**
Client ID: **MW-7** Run ID: **VOA1_244263** SeqNo: **3078334** 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	46.03	1.0	50	0	92.1	80 - 120	44.19	4.06	20	
1,2-Dichloroethane	46.14	1.0	50	0	92.3	79 - 120	47.33	2.53	20	
1,3,5-Trimethylbenzene	47.8	1.0	50	0	95.6	80 - 120	44.68	6.75	20	
2-Butanone	95.6	2.0	100	0	95.6	60 - 140	95.67	0.0674	20	
Benzene	48.04	1.0	50	0.3389	95.4	80 - 120	49.81	3.61	20	
Cyclohexane	46.24	1.0	50	0	92.5	75 - 125	39.91	14.7	20	
Ethylbenzene	49.46	1.0	50	0	98.9	80 - 120	46.89	5.35	20	
Isopropylbenzene	47.78	1.0	50	0	95.6	80 - 120	44.36	7.41	20	
m,p-Xylene	97.52	2.0	100	1.492	96.0	80 - 120	92.63	5.14	20	
Methylcyclohexane	47.76	1.0	50	0	95.5	70 - 122	31.38	41.4	20	R
Naphthalene	ND	1.0	50	0	0	70 - 130	52.23	0	20	S
n-Butylbenzene	45.72	1.0	50	0	91.4	75 - 125	44.78	2.07	20	
n-Propylbenzene	46.55	1.0	50	0	93.1	75 - 130	43.38	7.06	20	
o-Xylene	50.67	1.0	50	0.7704	99.8	80 - 120	49.18	2.97	20	
Toluene	49.24	1.0	50	2.392	93.7	80 - 121	53.47	8.25	20	
Xylenes, Total	148.2	3.0	150	2.262	97.3	80 - 124	141.8	4.39	20	
Surr: 1,2-Dichloroethane-d4	*47.58*	*1.0*	*50*	*0*	*95.2*	*71 - 125*	*46.42*	*2.47*	*20*	
Surr: 4-Bromofluorobenzene	*53.05*	*1.0*	*50*	*0*	*106*	*70 - 125*	*50.93*	*4.07*	*20*	
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*74 - 125*	*48.43*	*0.0963*	*20*	
Surr: Toluene-d8	*46.32*	*1.0*	*50*	*0*	*92.6*	*75 - 125*	*48.24*	*4.06*	*20*	

The following samples were anayzed in this batch: HS14101299-01 HS14101299-11

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R243985 **Instrument: ICS3000** **Method: E300**

MBLK Sample ID: **WBLKW1-103014** Units: **mg/L** Analysis Date: **30-Oct-2014 16:49**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074289** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	ND	0.100								
Sulfate	ND	0.500								

LCS Sample ID: **WLCSW1-103014** Units: **mg/L** Analysis Date: **30-Oct-2014 17:13**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074290** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.82	0.100	4	0	95.5	90 - 110				
Sulfate	18.94	0.500	20	0	94.7	90 - 110				

LCSD Sample ID: **WLCSDW1-103014** Units: **mg/L** Analysis Date: **30-Oct-2014 17:37**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074291** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.804	0.100	4	0	95.1	90 - 110	3.82	0.42	20	
Sulfate	18.88	0.500	20	0	94.4	90 - 110	18.94	0.296	20	

MS Sample ID: **HS14101307-01MS** Units: **mg/L** Analysis Date: **31-Oct-2014 12:02**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074312** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	110	2.00	40	72.33	94.1	80 - 120				
Sulfate	612.4	10.0	200	424.9	93.7	80 - 120				

MS Sample ID: **HS14101282-01MS** Units: **mg/L** Analysis Date: **30-Oct-2014 18:49**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074294** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	1.854	0.100	2	0	92.7	80 - 120				
Sulfate	629	0.500	10	627.8	12.5	80 - 120				SEO

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R243985 **Instrument: ICS3000** **Method: E300**

MSD Sample ID: **HS14101307-01MSD** Units: **mg/L** Analysis Date: **31-Oct-2014 12:26**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074313** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	110.1	2.00	40	72.33	94.5	80 - 120	110	0.134	20	
Sulfate	614.4	10.0	200	424.9	94.7	80 - 120	612.4	0.327	20	

MSD Sample ID: **HS14101282-01MSD** Units: **mg/L** Analysis Date: **30-Oct-2014 19:13**
Client ID: Run ID: **ICS3000_243985** SeqNo: **3074295** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	1.84	0.100	2	0	92.0	80 - 120	1.854	0.758	20	
Sulfate	624.5	0.500	10	627.8	-33.3	80 - 120	629	0.731	20	SEO

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244404 **Instrument: WetChem_HS** **Method: SM4500 NH3-D**

MBLK Sample ID: **MBLK-244404** Units: **mg/L** Analysis Date: **06-Nov-2014 11:25**
Client ID: Run ID: **WetChem_HS_244404** SeqNo: **3081535** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	ND	0.20								

LCS Sample ID: **LCS-244404** Units: **mg/L** Analysis Date: **06-Nov-2014 11:25**
Client ID: Run ID: **WetChem_HS_244404** SeqNo: **3081536** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	11.3	0.20	10	0	113	80 - 120				

LCSD Sample ID: **LCSD-244404** Units: **mg/L** Analysis Date: **06-Nov-2014 11:25**
Client ID: Run ID: **WetChem_HS_244404** SeqNo: **3081537** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	10.9	0.20	10	0	109	80 - 120	11.3	3.6	20	

MS Sample ID: **HS14101164-01MS** Units: **mg/L** Analysis Date: **06-Nov-2014 11:25**
Client ID: Run ID: **WetChem_HS_244404** SeqNo: **3081533** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	8.6	0.20	10	0.0272	85.7	80 - 120				

MSD Sample ID: **HS14101164-01MSD** Units: **mg/L** Analysis Date: **06-Nov-2014 11:25**
Client ID: Run ID: **WetChem_HS_244404** SeqNo: **3081534** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	8.43	0.20	10	0.0272	84.0	80 - 120	8.6	2	20	

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244551 **Instrument: UV-2450** **Method: E365.3**

MBLK Sample ID: **MBLK-244551** Units: **mg/L** Analysis Date: **08-Nov-2014 12:55**
Client ID: Run ID: **UV-2450_244551** SeqNo: **3084258** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	ND	0.0250								

LCS Sample ID: **LCS-244551** Units: **mg/L** Analysis Date: **08-Nov-2014 12:55**
Client ID: Run ID: **UV-2450_244551** SeqNo: **3084259** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	0.241	0.0250	0.25	0	96.4	80 - 120				

MS Sample ID: **HS14110282-01MS** Units: **mg/L** Analysis Date: **08-Nov-2014 12:55**
Client ID: Run ID: **UV-2450_244551** SeqNo: **3091567** PrepDate: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	1.218	0.0500	0.5	1.206	2.40	80 - 120				S

MSD Sample ID: **HS14110282-01MSD** Units: **mg/L** Analysis Date: **08-Nov-2014 12:55**
Client ID: Run ID: **UV-2450_244551** SeqNo: **3091568** PrepDate: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Phosphorus, Total Orthophosphate (As P)	1.24	0.0500	0.5	1.206	6.80	80 - 120	1.218	1.79	20	S

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101299
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R244821 **Instrument: TOC_02** **Method: E415.1**

MBLK Sample ID: **WBLKW1-111114** Units: **mg/L** Analysis Date: **11-Nov-2014 16:43**
Client ID: Run ID: **TOC_02_244821** SeqNo: **3090042** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	ND	1.0								

LCS Sample ID: **WLCSW1-111114** Units: **mg/L** Analysis Date: **11-Nov-2014 16:57**
Client ID: Run ID: **TOC_02_244821** SeqNo: **3090043** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.74	1.0	10	0	107	80 - 120				

LCSD Sample ID: **WLCSDW1-111114** Units: **mg/L** Analysis Date: **11-Nov-2014 17:13**
Client ID: Run ID: **TOC_02_244821** SeqNo: **3090044** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.84	1.0	10	0	108	80 - 120	10.74	0.927	20	

MS Sample ID: **HS14101299-02MS** Units: **mg/L** Analysis Date: **11-Nov-2014 18:11**
Client ID: **MW-14** Run ID: **TOC_02_244821** SeqNo: **3090047** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	11.11	1.0	10	0.8014	103	80 - 120				

The following samples were anayzed in this batch: HS14101299-01 HS14101299-02 HS14101299-03

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: **HS14101299**

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

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
California	2919	31-Jul-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	30-Nov-2014
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-14-14	30-Apr-2015

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14101299

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	13A
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	13A
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	13A
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	13A
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	VW-3
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	BTEX A1
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	TPH C2
HS14101299-01	MW-1	Login	10/30/2014 4:15:39 PM	PMG	TPH C2
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	VW-3
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	BTEX A1
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	TPH C2
HS14101299-02	MW-14	Login	10/30/2014 4:28:00 PM	PMG	TPH C2
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	13A
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	VW-3
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	BTEX A1
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	TPH C2
HS14101299-03	MW-12	Login	10/30/2014 4:28:00 PM	PMG	TPH C2
HS14101299-04	MW-10	Login	10/30/2014 4:28:26 PM	PMG	VW-3
HS14101299-04	MW-10	Login	10/30/2014 4:28:26 PM	PMG	BTEX A1
HS14101299-05	MW-13	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-05	MW-13	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-06	MW-8	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-06	MW-8	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-07	MW-5	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-07	MW-5	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-08	MW-15	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-08	MW-15	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-09	MW-16	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-09	MW-16	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-10	MW-6	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-10	MW-6	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-11	MW-7	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-11	MW-7	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14101299

SAMPLE TRACKING

HS14101299-12	DUP-1	Login	10/30/2014 4:32:13 PM	PMG	VW-3
HS14101299-12	DUP-1	Login	10/30/2014 4:32:13 PM	PMG	BTEX A1
HS14101299-13	Trip Blank - 100814-36	Login	10/30/2014 4:34:23 PM	PMG	VW-3

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

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

Chain of Custody For

Page 1 of 2

COC ID: 11176

HS14101299

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Andover Release Site
Work Order		Project Number	E3CE-0065
Company Name	Apex Companies	Bill To Company	Apex Companies
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson
Address	3015 SW First Avenue	Address	3015 SW First Avenue
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201
Phone	(503) 924-4704	Phone	(503) 924-4704
Fax		Fax	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com

A	300-Sulfate, ortho-phos, and Nitrate (short hold)
B	RSK175-methane
C	6020-Potassium only
D	Ammonia-4500
E	6020-Dissolved Iron-Lab filtered
F	TOC
G	VOCs (8260) Colt Court GW List
H	GRO-VPH OA-1
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	10-29-14	0934	Water	HCl/H2SO4 HNO3/NaOH	15	X	X	X	X	X	X	X	X			
2	MW-14	↓	1020	↓	↓	15	X	X	X	X	X	X	X	X			
3	MW-12		1135			15	X	X	X	X	X	X	X	X			
4	MW-10		1220		HCl	6							X	X			
5	MW-13		1258		↓	↓							↓	↓			
6	MW-8		1322														
7	MW-5		1425														
8	MW-15		1502														
9	MW-16		1529														
10	MW-6		1603														

Sampler(s) Please Print & Sign: Paul Ward

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: 10-29-14 Time: 17:45 Received by:

Relinquished by: Date: 10-30-14 Time: 9:20 Received by (Laboratory):

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: Andover 3Q GWM-MNA

Cooler ID	Cooler Temp.
5773	0.3°

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.
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.

Copyright 2011 by ALS Environmental.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

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

Chain of Custody Form

Page 2 of 2

COC ID: 111759

HS14101299

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) Colt Court GW 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-7	10-29-14	1630	Water	HCl	6	X	X									
2	DUP-1	10-29-14		Water	HCl	6	X	X									
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Ward

Shipment Method: FED EX

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: 10-29-14 Time: 17:45 Received by:

Relinquished by: Date: 10-30-14 Time: 920 Received by (Laboratory):

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.
377J	0.3°
	1R2

QC Package: (Check One Box Below)
[X] Level 2 Std QC
[ ] Level 3 Std QC/Row 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.
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.

Copyright 2011 by ALS Environmental.

RIGHT SOLUTIONS | RIGHT PARTNER

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

November 07, 2014

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

Work Order: **HS14101349**

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

Dear Samuel,

ALS Environmental received 6 sample(s) on Oct 31, 2014 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,

Bethany McDaniel

Generated By: Bethany.McDaniel

Bethany McDaniel
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14101349

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14101349-01	MW-9	Water		30-Oct-2014 08:59	31-Oct-2014 09:25	☐
HS14101349-02	MW-4	Water		30-Oct-2014 09:47	31-Oct-2014 09:25	☐
HS14101349-03	MW-11	Water		30-Oct-2014 10:18	31-Oct-2014 09:25	☐
HS14101349-04	MW-2	Water		30-Oct-2014 10:55	31-Oct-2014 09:25	☐
HS14101349-08	MW-3	Water		30-Oct-2014 12:52	31-Oct-2014 09:25	☐
HS14101349-09	DUP-2	Water		30-Oct-2014 00:00	31-Oct-2014 09:25	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14101349

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R244334

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

Batch ID: R244257

Sample ID: **HS14110054-06**
- MS/MSD performed on an unrelated sample

GCMS Volatiles by Method SW8260

Batch ID: R244366

Sample ID: **MW-3 (HS14101349-08)**
- Lowest practical dilution for sample hs14101349-08 due to high concentration of non-target compounds.

Sample ID: **HS14101311-01**
- MS/MSD is for an unrelated sample.

Batch ID: R244263

Sample ID: **HS14101299-11**
- MS/MSD performed on an unrelated sample

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: MW-9
Collection Date: 30-Oct-2014 08:59

WorkOrder:HS14101349
Lab ID:HS14101349-01
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	04-Nov-2014 16:51
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 16:51
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 16:51
Benzene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
Cyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 16:51
Ethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
Isopropylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
m,p-Xylene	ND		0.0020	mg/L	1	04-Nov-2014 16:51
Methylcyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 16:51
Naphthalene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
n-Propylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
o-Xylene	ND		0.0010	mg/L	1	04-Nov-2014 16:51
Toluene	**0.0026**		**0.0010**	**mg/L**	1	04-Nov-2014 16:51
Xylenes, Total	ND		0.0030	mg/L	1	04-Nov-2014 16:51
Surr: 1,2-Dichloroethane-d4	*95.3*		*71-125*	*%REC*	*1*	*04-Nov-2014 16:51*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*04-Nov-2014 16:51*
Surr: Dibromofluoromethane	*92.7*		*74-125*	*%REC*	*1*	*04-Nov-2014 16:51*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*1*	*04-Nov-2014 16:51*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	05-Nov-2014 00:33
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	*1*	*05-Nov-2014 00:33*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14101349
Sample ID:	MW-4	Lab ID:HS14101349-02
Collection Date:	30-Oct-2014 09:47	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	**0.20**		**0.0050**	**mg/L**	5	05-Nov-2014 15:42
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 17:16
1,3,5-Trimethylbenzene	**0.089**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 17:16
Benzene	**0.49**		**0.0050**	**mg/L**	5	05-Nov-2014 15:42
Cyclohexane	**0.097**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
Ethylbenzene	**0.40**		**0.0050**	**mg/L**	5	05-Nov-2014 15:42
Isopropylbenzene	**0.014**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
m,p-Xylene	**0.20**		**0.010**	**mg/L**	5	05-Nov-2014 15:42
Methylcyclohexane	**0.017**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
Naphthalene	**0.062**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
n-Butylbenzene	**0.0078**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
n-Propylbenzene	**0.039**		**0.0010**	**mg/L**	1	04-Nov-2014 17:16
o-Xylene	**0.24**		**0.0050**	**mg/L**	5	05-Nov-2014 15:42
Toluene	**0.33**		**0.0050**	**mg/L**	5	05-Nov-2014 15:42
Xylenes, Total	**0.44**		**0.015**	**mg/L**	5	05-Nov-2014 15:42
Surr: 1,2-Dichloroethane-d4	*92.0*		*71-125*	*%REC*	*1*	*04-Nov-2014 17:16*
Surr: 1,2-Dichloroethane-d4	*97.6*		*71-125*	*%REC*	*5*	*05-Nov-2014 15:42*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*04-Nov-2014 17:16*
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	*5*	*05-Nov-2014 15:42*
Surr: Dibromofluoromethane	*91.3*		*74-125*	*%REC*	*1*	*04-Nov-2014 17:16*
Surr: Dibromofluoromethane	*97.1*		*74-125*	*%REC*	*5*	*05-Nov-2014 15:42*
Surr: Toluene-d8	*97.6*		*75-125*	*%REC*	*1*	*04-Nov-2014 17:16*
Surr: Toluene-d8	*97.5*		*75-125*	*%REC*	*5*	*05-Nov-2014 15:42*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**4.8**		**0.050**	**mg/L**	1	05-Nov-2014 00:49
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*05-Nov-2014 00:49*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: MW-11
Collection Date: 30-Oct-2014 10:18

WorkOrder:HS14101349
Lab ID:HS14101349-03
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	**0.016**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 17:41
1,3,5-Trimethylbenzene	**0.0058**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 17:41
Benzene	**0.012**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
Cyclohexane	**0.0078**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
Ethylbenzene	**0.038**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
Isopropylbenzene	**0.0011**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
m,p-Xylene	**0.021**		**0.0020**	**mg/L**	1	04-Nov-2014 17:41
Methylcyclohexane	**0.0014**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
Naphthalene	**0.0059**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 17:41
n-Propylbenzene	**0.0024**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
o-Xylene	**0.023**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
Toluene	**0.023**		**0.0010**	**mg/L**	1	04-Nov-2014 17:41
Xylenes, Total	**0.044**		**0.0030**	**mg/L**	1	04-Nov-2014 17:41
Surr: 1,2-Dichloroethane-d4	*98.2*		*71-125*	*%REC*	*1*	*04-Nov-2014 17:41*
Surr: 4-Bromofluorobenzene	*99.7*		*70-125*	*%REC*	*1*	*04-Nov-2014 17:41*
Surr: Dibromofluoromethane	*95.2*		*74-125*	*%REC*	*1*	*04-Nov-2014 17:41*
Surr: Toluene-d8	*97.9*		*75-125*	*%REC*	*1*	*04-Nov-2014 17:41*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.25**		**0.050**	**mg/L**	1	05-Nov-2014 02:07
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*05-Nov-2014 02:07*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14101349
Sample ID:	MW-2	Lab ID:HS14101349-04
Collection Date:	30-Oct-2014 10:55	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	**0.0085**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 18:06
1,3,5-Trimethylbenzene	**0.0030**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 18:06
Benzene	**0.0034**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
Cyclohexane	**0.0038**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
Ethylbenzene	**0.018**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
Isopropylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:06
m,p-Xylene	**0.010**		**0.0020**	**mg/L**	1	04-Nov-2014 18:06
Methylcyclohexane	**0.0013**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
Naphthalene	**0.0024**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:06
n-Propylbenzene	**0.0014**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
o-Xylene	**0.0097**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
Toluene	**0.0095**		**0.0010**	**mg/L**	1	04-Nov-2014 18:06
Xylenes, Total	**0.020**		**0.0030**	**mg/L**	1	04-Nov-2014 18:06
Surr: 1,2-Dichloroethane-d4	*95.9*		*71-125*	*%REC*	*1*	*04-Nov-2014 18:06*
Surr: 4-Bromofluorobenzene	*106*		*70-125*	*%REC*	*1*	*04-Nov-2014 18:06*
Surr: Dibromofluoromethane	*94.6*		*74-125*	*%REC*	*1*	*04-Nov-2014 18:06*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*04-Nov-2014 18:06*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.11**		**0.050**	**mg/L**	1	05-Nov-2014 02:23
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*05-Nov-2014 02:23*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14101349
Sample ID:	MW-3	Lab ID:HS14101349-08
Collection Date:	30-Oct-2014 12:52	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	**0.12**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
1,2-Dichloroethane	ND		0.010	mg/L	10	05-Nov-2014 15:18
1,3,5-Trimethylbenzene	**0.025**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
2-Butanone	ND		0.020	mg/L	10	05-Nov-2014 15:18
Benzene	**1.1**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
Cyclohexane	**0.085**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
Ethylbenzene	**0.36**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
Isopropylbenzene	ND		0.010	mg/L	10	05-Nov-2014 15:18
m,p-Xylene	**0.17**		**0.020**	**mg/L**	10	05-Nov-2014 15:18
Methylcyclohexane	**0.019**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
Naphthalene	**0.029**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
n-Butylbenzene	ND		0.010	mg/L	10	05-Nov-2014 15:18
n-Propylbenzene	**0.018**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
o-Xylene	**0.18**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
Toluene	**0.15**		**0.010**	**mg/L**	10	05-Nov-2014 15:18
Xylenes, Total	**0.35**		**0.030**	**mg/L**	10	05-Nov-2014 15:18
Surr: 1,2-Dichloroethane-d4	*95.5*		*71-125*	*%REC*	*10*	*05-Nov-2014 15:18*
Surr: 4-Bromofluorobenzene	*104*		*70-125*	*%REC*	*10*	*05-Nov-2014 15:18*
Surr: Dibromofluoromethane	*94.4*		*74-125*	*%REC*	*10*	*05-Nov-2014 15:18*
Surr: Toluene-d8	*97.4*		*75-125*	*%REC*	*10*	*05-Nov-2014 15:18*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**6.1**		**0.050**	**mg/L**	1	05-Nov-2014 02:39
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*05-Nov-2014 02:39*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: DUP-2
Collection Date: 30-Oct-2014 00:00

WorkOrder:HS14101349
Lab ID:HS14101349-09
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	04-Nov-2014 19:48
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 19:48
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 19:48
Benzene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
Cyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 19:48
Ethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
Isopropylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
m,p-Xylene	ND		0.0020	mg/L	1	04-Nov-2014 19:48
Methylcyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 19:48
Naphthalene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
n-Propylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
o-Xylene	ND		0.0010	mg/L	1	04-Nov-2014 19:48
Toluene	**0.0023**		**0.0010**	**mg/L**	1	04-Nov-2014 19:48
Xylenes, Total	ND		0.0030	mg/L	1	04-Nov-2014 19:48
Surr: 1,2-Dichloroethane-d4	*92.3*		*71-125*	*%REC*	*1*	*04-Nov-2014 19:48*
Surr: 4-Bromofluorobenzene	*98.6*		*70-125*	*%REC*	*1*	*04-Nov-2014 19:48*
Surr: Dibromofluoromethane	*90.7*		*74-125*	*%REC*	*1*	*04-Nov-2014 19:48*
Surr: Toluene-d8	*95.3*		*75-125*	*%REC*	*1*	*04-Nov-2014 19:48*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	05-Nov-2014 02:55
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*05-Nov-2014 02:55*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS14101349

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R244257	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14101349-01	MW-9	30 Oct 2014 08:59			05 Nov 2014 00:33	1
HS14101349-02	MW-4	30 Oct 2014 09:47			05 Nov 2014 00:49	1
Batch ID R244263	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14101349-01	MW-9	30 Oct 2014 08:59			04 Nov 2014 16:51	1
HS14101349-02	MW-4	30 Oct 2014 09:47			04 Nov 2014 17:16	1
HS14101349-03	MW-11	30 Oct 2014 10:18			04 Nov 2014 17:41	1
HS14101349-04	MW-2	30 Oct 2014 10:55			04 Nov 2014 18:06	1
HS14101349-09	DUP-2	30 Oct 2014 00:00			04 Nov 2014 19:48	1
Batch ID R244334	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14101349-03	MW-11	30 Oct 2014 10:18			05 Nov 2014 02:07	1
HS14101349-04	MW-2	30 Oct 2014 10:55			05 Nov 2014 02:23	1
HS14101349-08	MW-3	30 Oct 2014 12:52			05 Nov 2014 02:39	1
HS14101349-09	DUP-2	30 Oct 2014 00:00			05 Nov 2014 02:55	1
Batch ID R244366	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14101349-02	MW-4	30 Oct 2014 09:47			05 Nov 2014 15:42	5
HS14101349-08	MW-3	30 Oct 2014 12:52			05 Nov 2014 15:18	10

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244257 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-141104** Units: **mg/L** Analysis Date: **04-Nov-2014 18:01**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078509** 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	*0.105*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

LCS Sample ID: **GLCSW1-141104** Units: **mg/L** Analysis Date: **04-Nov-2014 17:30**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078508** 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	0.8832	0.050	1	0	88.3	70 - 130				
Surr: 4-Bromofluorobenzene	*0.109*	*0.0050*	*0.1*	*0*	*109*	*70 - 130*				

MS Sample ID: **HS14110054-06MS** Units: **mg/L** Analysis Date: **04-Nov-2014 20:22**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078513** 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	0.4563	0.050	1	0.04533	41.1	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.1102*	*0.0050*	*0.1*	*0*	*110*	*70 - 130*				

MSD Sample ID: **HS14110054-06MSD** Units: **mg/L** Analysis Date: **04-Nov-2014 20:38**
Client ID: Run ID: **FID-14_244257** SeqNo: **3078514** 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	0.462	0.050	1	0.04533	41.7	70 - 130	0.4563	1.24	30	S
Surr: 4-Bromofluorobenzene	*0.1094*	*0.0050*	*0.1*	*0*	*109*	*70 - 130*	*0.1102*	*0.694*	*30*	

The following samples were anayzed in this batch: HS14101349-01 HS14101349-02

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244334 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-141104** Units: **mg/L** Analysis Date: **05-Nov-2014 01:52**
Client ID: Run ID: **FID-14_244334** SeqNo: **3079903** 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	*0.1016*	*0.0050*	*0.1*	*0*	*102*	*70 - 130*				

LCS Sample ID: **GLCSW1-141104** Units: **mg/L** Analysis Date: **05-Nov-2014 01:20**
Client ID: Run ID: **FID-14_244334** SeqNo: **3079902** 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	1.045	0.050	1	0	105	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1124*	*0.0050*	*0.1*	*0*	*112*	*70 - 130*				

MS Sample ID: **HS14110008-06MS** Units: **mg/L** Analysis Date: **05-Nov-2014 04:13**
Client ID: Run ID: **FID-14_244334** SeqNo: **3079912** 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	0.9908	0.050	1	0	99.1	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1051*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

MSD Sample ID: **HS14110008-06MSD** Units: **mg/L** Analysis Date: **05-Nov-2014 04:29**
Client ID: Run ID: **FID-14_244334** SeqNo: **3079913** 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	0.9794	0.050	1	0	97.9	70 - 130	0.9908	1.16	30	
Surr: 4-Bromofluorobenzene	*0.107*	*0.0050*	*0.1*	*0*	*107*	*70 - 130*	*0.1051*	*1.77*	*30*	

The following samples were anayzed in this batch: HS14101349-03 HS14101349-04 HS14101349-08 HS14101349-09

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141104** Units: **ug/L** Analysis Date: **04-Nov-2014 13:43**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078328** 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								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.47*	*1.0*	*50*	*0*	*98.9*	*70 - 125*				
Surr: Dibromofluoromethane	*45.02*	*1.0*	*50*	*0*	*90.0*	*74 - 125*				
Surr: Toluene-d8	*48.08*	*1.0*	*50*	*0*	*96.2*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

LCS Sample ID: **VLCSW-141104** Units: **ug/L** Analysis Date: **04-Nov-2014 14:48**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078331** 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	47.67	1.0	50	0	95.3	79 - 124				
1,2-Dichloroethane	41.92	1.0	50	0	83.8	76 - 120				
1,3,5-Trimethylbenzene	47.76	1.0	50	0	95.5	80 - 123				
2-Butanone	85.01	2.0	100	0	85.0	60 - 140				
Benzene	44.03	1.0	50	0	88.1	80 - 120				
Cyclohexane	43.14	1.0	50	0	86.3	75 - 126				
Ethylbenzene	47.66	1.0	50	0	95.3	80 - 120				
Isopropylbenzene	46.58	1.0	50	0	93.2	80 - 126				
m,p-Xylene	93.27	2.0	100	0	93.3	80 - 120				
Methylcyclohexane	48.35	1.0	50	0	96.7	70 - 126				
Naphthalene	53.77	1.0	50	0	108	65 - 135				
n-Butylbenzene	48.41	1.0	50	0	96.8	75 - 128				
n-Propylbenzene	47.89	1.0	50	0	95.8	75 - 130				
o-Xylene	47.62	1.0	50	0	95.2	80 - 120				
Toluene	43.72	1.0	50	0	87.4	80 - 121				
Xylenes, Total	140.9	3.0	150	0	93.9	79 - 124				
Surr: 1,2-Dichloroethane-d4	*46.43*	*1.0*	*50*	*0*	*92.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.02*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*74 - 125*				
Surr: Toluene-d8	*48.39*	*1.0*	*50*	*0*	*96.8*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MS Sample ID: **HS14101299-11MS** Units: **ug/L** Analysis Date: **04-Nov-2014 14:57**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078332** 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	44.19	1.0	50	0	88.4	80 - 120				
1,2-Dichloroethane	47.33	1.0	50	0	94.7	79 - 120				
1,3,5-Trimethylbenzene	44.68	1.0	50	0	89.4	80 - 120				
2-Butanone	95.67	2.0	100	0	95.7	60 - 140				
Benzene	49.81	1.0	50	0.3389	98.9	80 - 120				
Cyclohexane	39.91	1.0	50	0	79.8	75 - 125				
Ethylbenzene	46.89	1.0	50	0	93.8	80 - 120				
Isopropylbenzene	44.36	1.0	50	0	88.7	80 - 120				
m,p-Xylene	92.63	2.0	100	1.492	91.1	80 - 120				
Methylcyclohexane	31.38	1.0	50	0	62.8	70 - 122				S
Naphthalene	52.23	1.0	50	0	104	70 - 130				
n-Butylbenzene	44.78	1.0	50	0	89.6	75 - 125				
n-Propylbenzene	43.38	1.0	50	0	86.8	75 - 130				
o-Xylene	49.18	1.0	50	0.7704	96.8	80 - 120				
Toluene	53.47	1.0	50	2.392	102	80 - 121				
Xylenes, Total	141.8	3.0	150	2.262	93.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*46.42*	*1.0*	*50*	*0*	*92.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.93*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*48.43*	*1.0*	*50*	*0*	*96.9*	*74 - 125*				
Surr: Toluene-d8	*48.24*	*1.0*	*50*	*0*	*96.5*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101299-11MSD** Units: **ug/L** Analysis Date: **04-Nov-2014 15:22**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078334** 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	46.03	1.0	50	0	92.1	80 - 120	44.19	4.06	20	
1,2-Dichloroethane	46.14	1.0	50	0	92.3	79 - 120	47.33	2.53	20	
1,3,5-Trimethylbenzene	47.8	1.0	50	0	95.6	80 - 120	44.68	6.75	20	
2-Butanone	95.6	2.0	100	0	95.6	60 - 140	95.67	0.0674	20	
Benzene	48.04	1.0	50	0.3389	95.4	80 - 120	49.81	3.61	20	
Cyclohexane	46.24	1.0	50	0	92.5	75 - 125	39.91	14.7	20	
Ethylbenzene	49.46	1.0	50	0	98.9	80 - 120	46.89	5.35	20	
Isopropylbenzene	47.78	1.0	50	0	95.6	80 - 120	44.36	7.41	20	
m,p-Xylene	97.52	2.0	100	1.492	96.0	80 - 120	92.63	5.14	20	
Methylcyclohexane	47.76	1.0	50	0	95.5	70 - 122	31.38	41.4	20	R
Naphthalene	ND	1.0	50	0	0	70 - 130	52.23	0	20	S
n-Butylbenzene	45.72	1.0	50	0	91.4	75 - 125	44.78	2.07	20	
n-Propylbenzene	46.55	1.0	50	0	93.1	75 - 130	43.38	7.06	20	
o-Xylene	50.67	1.0	50	0.7704	99.8	80 - 120	49.18	2.97	20	
Toluene	49.24	1.0	50	2.392	93.7	80 - 121	53.47	8.25	20	
Xylenes, Total	148.2	3.0	150	2.262	97.3	80 - 124	141.8	4.39	20	
Surr: 1,2-Dichloroethane-d4	*47.58*	*1.0*	*50*	*0*	*95.2*	*71 - 125*	*46.42*	*2.47*	*20*	
Surr: 4-Bromofluorobenzene	*53.05*	*1.0*	*50*	*0*	*106*	*70 - 125*	*50.93*	*4.07*	*20*	
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*74 - 125*	*48.43*	*0.0963*	*20*	
Surr: Toluene-d8	*46.32*	*1.0*	*50*	*0*	*92.6*	*75 - 125*	*48.24*	*4.06*	*20*	

The following samples were anayzed in this batch: HS14101349-01 HS14101349-02 HS14101349-03 HS14101349-04 HS14101349-08 HS14101349-09

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244366 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141105** Units: **ug/L** Analysis Date: **05-Nov-2014 11:37**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080815** 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								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*46.4*	*1.0*	*50*	*0*	*92.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.51*	*1.0*	*50*	*0*	*99.0*	*70 - 125*				
Surr: Dibromofluoromethane	*47.54*	*1.0*	*50*	*0*	*95.1*	*74 - 125*				
Surr: Toluene-d8	*47.11*	*1.0*	*50*	*0*	*94.2*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244366 **Instrument: VOA1** **Method: SW8260**

LCS Sample ID: **VLCSW-141105** Units: **ug/L** Analysis Date: **05-Nov-2014 10:47**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080814** 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	49.52	1.0	50	0	99.0	79 - 124				
1,2-Dichloroethane	44.17	1.0	50	0	88.3	76 - 120				
1,3,5-Trimethylbenzene	47.44	1.0	50	0	94.9	80 - 123				
2-Butanone	87.85	2.0	100	0	87.8	60 - 140				
Benzene	45.64	1.0	50	0	91.3	80 - 120				
Cyclohexane	44.15	1.0	50	0	88.3	75 - 126				
Ethylbenzene	48.72	1.0	50	0	97.4	80 - 120				
Isopropylbenzene	49.88	1.0	50	0	99.8	80 - 126				
m,p-Xylene	92.78	2.0	100	0	92.8	80 - 120				
Methylcyclohexane	54.63	1.0	50	0	109	70 - 126				
Naphthalene	52.58	1.0	50	0	105	65 - 135				
n-Butylbenzene	51.34	1.0	50	0	103	75 - 128				
n-Propylbenzene	47.62	1.0	50	0	95.2	75 - 130				
o-Xylene	49.49	1.0	50	0	99.0	80 - 120				
Toluene	45.85	1.0	50	0	91.7	80 - 121				
Xylenes, Total	142.3	3.0	150	0	94.8	79 - 124				
Surr: 1,2-Dichloroethane-d4	*46.84*	*1.0*	*50*	*0*	*93.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.83*	*1.0*	*50*	*0*	*95.7*	*70 - 125*				
Surr: Dibromofluoromethane	*48.26*	*1.0*	*50*	*0*	*96.5*	*74 - 125*				
Surr: Toluene-d8	*48.26*	*1.0*	*50*	*0*	*96.5*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244366 **Instrument: VOA1** **Method: SW8260**

MS Sample ID: **HS14101311-01MS** Units: **ug/L** Analysis Date: **05-Nov-2014 13:41**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080817** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	924.2	20	1000	46.76	87.7	80 - 120				
1,2-Dichloroethane	865.4	20	1000	0	86.5	79 - 120				
1,3,5-Trimethylbenzene	898.9	20	1000	7.126	89.2	80 - 120				
2-Butanone	1785	40	2000	0	89.2	60 - 140				
Benzene	1048	20	1000	229.3	81.8	80 - 120				
Cyclohexane	917.4	20	1000	33.29	88.4	75 - 125				
Ethylbenzene	2235	20	1000	1887	34.8	80 - 120				S
Isopropylbenzene	907.9	20	1000	4.108	90.4	80 - 120				
m,p-Xylene	2057	40	2000	357.7	85.0	80 - 120				
Methylcyclohexane	933.7	20	1000	0	93.4	70 - 122				
Naphthalene	3355	20	1000	3091	26.4	70 - 130				S
n-Butylbenzene	882	20	1000	28.09	85.4	75 - 125				
n-Propylbenzene	872.3	20	1000	14.44	85.8	75 - 130				
o-Xylene	1092	20	1000	210.9	88.1	80 - 120				
Toluene	1045	20	1000	251.1	79.4	80 - 121				S
Xylenes, Total	3149	60	3000	568.6	86.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*953.8*	*20*	*1000*	*0*	*95.4*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*988.9*	*20*	*1000*	*0*	*98.9*	*70 - 125*				
Surr: Dibromofluoromethane	*959.7*	*20*	*1000*	*0*	*96.0*	*74 - 125*				
Surr: Toluene-d8	*930*	*20*	*1000*	*0*	*93.0*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14101349
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244366 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101311-01MSD** Units: **ug/L** Analysis Date: **05-Nov-2014 14:05**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080818** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1035	20	1000	46.76	98.8	80 - 120	924.2	11.3	20	
1,2-Dichloroethane	958.7	20	1000	0	95.9	79 - 120	865.4	10.2	20	
1,3,5-Trimethylbenzene	1004	20	1000	7.126	99.7	80 - 120	898.9	11.1	20	
2-Butanone	1924	40	2000	0	96.2	60 - 140	1785	7.49	20	
Benzene	1162	20	1000	229.3	93.3	80 - 120	1048	10.4	20	
Cyclohexane	943.5	20	1000	33.29	91.0	75 - 125	917.4	2.8	20	
Ethylbenzene	2438	20	1000	1887	55.1	80 - 120	2235	8.68	20	S
Isopropylbenzene	1006	20	1000	4.108	100	80 - 120	907.9	10.3	20	
m,p-Xylene	2282	40	2000	357.7	96.2	80 - 120	2057	10.4	20	
Methylcyclohexane	983.4	20	1000	0	98.3	70 - 122	933.7	5.18	20	
Naphthalene	3988	20	1000	3091	89.7	70 - 130	3355	17.2	20	
n-Butylbenzene	999.6	20	1000	28.09	97.2	75 - 125	882	12.5	20	
n-Propylbenzene	985.4	20	1000	14.44	97.1	75 - 130	872.3	12.2	20	
o-Xylene	1220	20	1000	210.9	101	80 - 120	1092	11	20	
Toluene	1167	20	1000	251.1	91.6	80 - 121	1045	11.1	20	
Xylenes, Total	3502	60	3000	568.6	97.8	80 - 124	3149	10.6	20	
Surr: 1,2-Dichloroethane-d4	*955.9*	*20*	*1000*	*0*	*95.6*	*71 - 125*	*953.8*	*0.217*	*20*	
Surr: 4-Bromofluorobenzene	*996.2*	*20*	*1000*	*0*	*99.6*	*70 - 125*	*988.9*	*0.741*	*20*	
Surr: Dibromofluoromethane	*954.2*	*20*	*1000*	*0*	*95.4*	*74 - 125*	*959.7*	*0.57*	*20*	
Surr: Toluene-d8	*978.3*	*20*	*1000*	*0*	*97.8*	*75 - 125*	*930*	*5.05*	*20*	

The following samples were anayzed in this batch: HS14101349-02 HS14101349-08

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: **HS14101349**

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

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
California	2919	31-Jul-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	30-Nov-2014
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-14-14	30-Apr-2015

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14101349

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14101349-01	MW-9	Login	10/31/2014 2:07:52 PM	NDR	VW-3
HS14101349-01	MW-9	Login	10/31/2014 2:07:52 PM	NDR	BTEX A1
HS14101349-02	MW-4	Login	10/31/2014 2:12:49 PM	NDR	VW-3
HS14101349-02	MW-4	Login	10/31/2014 2:12:49 PM	NDR	BTEX A1
HS14101349-03	MW-11	Login	10/31/2014 2:12:49 PM	NDR	VW-3
HS14101349-03	MW-11	Login	10/31/2014 2:12:49 PM	NDR	BTEX A1
HS14101349-04	MW-2	Login	10/31/2014 2:12:49 PM	NDR	VW-3
HS14101349-04	MW-2	Login	10/31/2014 2:12:49 PM	NDR	BTEX A1
HS14101349-08	MW-3	Login	10/31/2014 2:12:50 PM	NDR	VW-3
HS14101349-08	MW-3	Login	10/31/2014 2:12:50 PM	NDR	BTEX A1
HS14101349-09	DUP-2	Login	10/31/2014 2:12:50 PM	NDR	VW-3
HS14101349-09	DUP-2	Login	10/31/2014 2:12:50 PM	NDR	BTEX A1

RIGHT SOLUTIONS | RIGHT PARTNER

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 1

COC ID: 111763

HS14101349

Apex Companies
Andover Release Site E3CE-0065

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Andover Release Site
Work Order		Project Number	E3CE-0065
Company Name	Apex Companies	Bill To Company	Apex Companies
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson
Address	3015 SW First Avenue	Address	3015 SW First Avenue
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201
Phone	(503) 924-4704	Phone	(503) 924-4704
Fax		Fax	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com

A	300-Sulfate, ortho-phos, and Nitrate (short hold)
B	RSK175-methane
C	6020-Potassium only
D	Ammonia-4500
E	6020-Dissolved Iron-Lab filtered
F	TOC
G	VOCs (8260) Colt Court GW List
H	GRO-VPH OA-1
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-9	10-30-14	0859	Water	HCl	6							X	X			
2	MW-4		0947										X	X			
3	MW-11		1018										X	X			
4	MW-2		1055										X	X			
5	2005 N Colt Court		1106										X	X			
6	2002 N Colt Court		1117										X	X			
7	2007 N Colt Court		1131										X	X			
8	MW-3		1252										X	X			
9	DUP-2												X	X			
10																	

Sampler(s) Please Print & Sign: Paul Wand

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: Paul Wand — Date: 10-30-14 — Time: 1830

Relinquished by: — Date: — Time:

Received by:

Received by (Laboratory): Nat 10/31/14 09:25

Logged by (Laboratory): — Date: — Time:

Checked by (Laboratory):

Notes: Andover 3Q GWM-MNA

Cooler ID	Cooler Temp.
3180	4.7

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

IR # 2.

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.

Copyright 2011 by ALS Environmental.

RIGHT SOLUTIONS | RIGHT PARTNER

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

November 07, 2014

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

Work Order: **HS14110008**

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

Dear Samuel,

ALS Environmental received 3 sample(s) on Oct 31, 2014 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,

Bethany McDaniel

Generated By: Bethany.McDaniel

Bethany McDaniel
Project Manager

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14110008

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14110008-05	2005 N Colt Court	Water	HS14101349 05	30-Oct-2014 11:05	31-Oct-2014 09:25	☐
HS14110008-06	2002 N Colt Court	Water	HS14101349 06	30-Oct-2014 11:17	31-Oct-2014 09:25	☐
HS14110008-07	2007 N Colt Court	Water	HS14101349 07	30-Oct-2014 11:31	31-Oct-2014 09:25	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14110008

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R244334

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

GCMS Volatiles by Method SW8260

Batch ID: R244366

Sample ID: **HS14101311-01**
- MS/MSD performed on an unrelated sample

Batch ID: R244263

Sample ID: **HS14101299-11**
- MS/MSD performed on an unrelated sample

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14110008
Sample ID:	2005 N Colt Court	Lab ID:HS14110008-05
Collection Date:	30-Oct-2014 11:05	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	**0.077**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 18:31
1,3,5-Trimethylbenzene	**0.0094**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 18:31
Benzene	**0.23**		**0.0050**	**mg/L**	5	05-Nov-2014 16:07
Cyclohexane	**0.055**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
Ethylbenzene	**0.19**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
Isopropylbenzene	**0.0043**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
m,p-Xylene	**0.078**		**0.0020**	**mg/L**	1	04-Nov-2014 18:31
Methylcyclohexane	**0.0091**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
Naphthalene	**0.017**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
n-Butylbenzene	**0.0013**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
n-Propylbenzene	**0.014**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
o-Xylene	**0.043**		**0.0010**	**mg/L**	1	04-Nov-2014 18:31
Toluene	**0.21**		**0.0050**	**mg/L**	5	05-Nov-2014 16:07
Xylenes, Total	**0.12**		**0.0030**	**mg/L**	1	04-Nov-2014 18:31
Surr: 1,2-Dichloroethane-d4	*94.8*		*71-125*	*%REC*	*1*	*04-Nov-2014 18:31*
Surr: 1,2-Dichloroethane-d4	*92.5*		*71-125*	*%REC*	*5*	*05-Nov-2014 16:07*
Surr: 4-Bromofluorobenzene	*98.7*		*70-125*	*%REC*	*1*	*04-Nov-2014 18:31*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*5*	*05-Nov-2014 16:07*
Surr: Dibromofluoromethane	*94.1*		*74-125*	*%REC*	*1*	*04-Nov-2014 18:31*
Surr: Dibromofluoromethane	*93.7*		*74-125*	*%REC*	*5*	*05-Nov-2014 16:07*
Surr: Toluene-d8	*97.5*		*75-125*	*%REC*	*1*	*04-Nov-2014 18:31*
Surr: Toluene-d8	*96.6*		*75-125*	*%REC*	*5*	*05-Nov-2014 16:07*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**2.2**		**0.050**	**mg/L**	1	05-Nov-2014 03:42
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*05-Nov-2014 03:42*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14110008
Sample ID:	2002 N Colt Court	Lab ID:HS14110008-06
Collection Date:	30-Oct-2014 11:17	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	04-Nov-2014 18:57
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 18:57
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 18:57
Benzene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
Cyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 18:57
Ethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
Isopropylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
m,p-Xylene	ND		0.0020	mg/L	1	04-Nov-2014 18:57
Methylcyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 18:57
Naphthalene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
n-Propylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
o-Xylene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
Toluene	ND		0.0010	mg/L	1	04-Nov-2014 18:57
Xylenes, Total	ND		0.0030	mg/L	1	04-Nov-2014 18:57
Surr: 1,2-Dichloroethane-d4	*94.1*		*71-125*	*%REC*	*1*	*04-Nov-2014 18:57*
Surr: 4-Bromofluorobenzene	*99.1*		*70-125*	*%REC*	*1*	*04-Nov-2014 18:57*
Surr: Dibromofluoromethane	*93.8*		*74-125*	*%REC*	*1*	*04-Nov-2014 18:57*
Surr: Toluene-d8	*99.0*		*75-125*	*%REC*	*1*	*04-Nov-2014 18:57*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	05-Nov-2014 03:57
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*05-Nov-2014 03:57*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	Andover Release Site E3CE-0065	WorkOrder:HS14110008	
Sample ID:	2007 N Colt Court	Lab ID:HS14110008-07	
Collection Date:	30-Oct-2014 11:31	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	04-Nov-2014 19:22
1,2-Dichloroethane	ND		0.0010	mg/L	1	04-Nov-2014 19:22
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
2-Butanone	ND		0.0020	mg/L	1	04-Nov-2014 19:22
Benzene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
Cyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 19:22
Ethylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
Isopropylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
m,p-Xylene	ND		0.0020	mg/L	1	04-Nov-2014 19:22
Methylcyclohexane	ND		0.0010	mg/L	1	04-Nov-2014 19:22
Naphthalene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
n-Butylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
n-Propylbenzene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
o-Xylene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
Toluene	ND		0.0010	mg/L	1	04-Nov-2014 19:22
Xylenes, Total	ND		0.0030	mg/L	1	04-Nov-2014 19:22
Surr: 1,2-Dichloroethane-d4	*96.0*		*71-125*	*%REC*	*1*	*04-Nov-2014 19:22*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*04-Nov-2014 19:22*
Surr: Dibromofluoromethane	*93.9*		*74-125*	*%REC*	*1*	*04-Nov-2014 19:22*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*04-Nov-2014 19:22*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	05-Nov-2014 05:16
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*05-Nov-2014 05:16*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS14110008

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R244263	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14110008-05	2005 N Colt Court	30 Oct 2014 11:05			04 Nov 2014 18:31	1
HS14110008-06	2002 N Colt Court	30 Oct 2014 11:17			04 Nov 2014 18:57	1
HS14110008-07	2007 N Colt Court	30 Oct 2014 11:31			04 Nov 2014 19:22	1
Batch ID R244334	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14110008-05	2005 N Colt Court	30 Oct 2014 11:05			05 Nov 2014 03:42	1
HS14110008-06	2002 N Colt Court	30 Oct 2014 11:17			05 Nov 2014 03:57	1
HS14110008-07	2007 N Colt Court	30 Oct 2014 11:31			05 Nov 2014 05:16	1
Batch ID R244366	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14110008-05	2005 N Colt Court	30 Oct 2014 11:05			05 Nov 2014 16:07	5

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244334 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-141104** Units: **mg/L** Analysis Date: **05-Nov-2014 01:52**
Client ID: Run ID: **FID-14_244334** SeqNo: **3079903** 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	*0.1016*	*0.0050*	*0.1*	*0*	*102*	*70 - 130*				

LCS Sample ID: **GLCSW1-141104** Units: **mg/L** Analysis Date: **05-Nov-2014 01:20**
Client ID: Run ID: **FID-14_244334** SeqNo: **3079902** 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	1.045	0.050	1	0	105	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1124*	*0.0050*	*0.1*	*0*	*112*	*70 - 130*				

MS Sample ID: **HS14110008-06MS** Units: **mg/L** Analysis Date: **05-Nov-2014 04:13**
Client ID: **2002 N Colt Court** Run ID: **FID-14_244334** SeqNo: **3079912** 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	0.9908	0.050	1	0	99.1	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1051*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

MSD Sample ID: **HS14110008-06MSD** Units: **mg/L** Analysis Date: **05-Nov-2014 04:29**
Client ID: **2002 N Colt Court** Run ID: **FID-14_244334** SeqNo: **3079913** 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	0.9794	0.050	1	0	97.9	70 - 130	0.9908	1.16	30	
Surr: 4-Bromofluorobenzene	*0.107*	*0.0050*	*0.1*	*0*	*107*	*70 - 130*	*0.1051*	*1.77*	*30*	

The following samples were anayzed in this batch: HS14110008-05 HS14110008-06 HS14110008-07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141104** Units: **ug/L** Analysis Date: **04-Nov-2014 13:43**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078328** 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								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.47*	*1.0*	*50*	*0*	*98.9*	*70 - 125*				
Surr: Dibromofluoromethane	*45.02*	*1.0*	*50*	*0*	*90.0*	*74 - 125*				
Surr: Toluene-d8	*48.08*	*1.0*	*50*	*0*	*96.2*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

LCS Sample ID: **VLCSW-141104** Units: **ug/L** Analysis Date: **04-Nov-2014 14:48**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078331** 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	47.67	1.0	50	0	95.3	79 - 124				
1,2-Dichloroethane	41.92	1.0	50	0	83.8	76 - 120				
1,3,5-Trimethylbenzene	47.76	1.0	50	0	95.5	80 - 123				
2-Butanone	85.01	2.0	100	0	85.0	60 - 140				
Benzene	44.03	1.0	50	0	88.1	80 - 120				
Cyclohexane	43.14	1.0	50	0	86.3	75 - 126				
Ethylbenzene	47.66	1.0	50	0	95.3	80 - 120				
Isopropylbenzene	46.58	1.0	50	0	93.2	80 - 126				
m,p-Xylene	93.27	2.0	100	0	93.3	80 - 120				
Methylcyclohexane	48.35	1.0	50	0	96.7	70 - 126				
Naphthalene	53.77	1.0	50	0	108	65 - 135				
n-Butylbenzene	48.41	1.0	50	0	96.8	75 - 128				
n-Propylbenzene	47.89	1.0	50	0	95.8	75 - 130				
o-Xylene	47.62	1.0	50	0	95.2	80 - 120				
Toluene	43.72	1.0	50	0	87.4	80 - 121				
Xylenes, Total	140.9	3.0	150	0	93.9	79 - 124				
Surr: 1,2-Dichloroethane-d4	*46.43*	*1.0*	*50*	*0*	*92.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.02*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*74 - 125*				
Surr: Toluene-d8	*48.39*	*1.0*	*50*	*0*	*96.8*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MS Sample ID: **HS14101299-11MS** Units: **ug/L** Analysis Date: **04-Nov-2014 14:57**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078332** 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	44.19	1.0	50	0	88.4	80 - 120				
1,2-Dichloroethane	47.33	1.0	50	0	94.7	79 - 120				
1,3,5-Trimethylbenzene	44.68	1.0	50	0	89.4	80 - 120				
2-Butanone	95.67	2.0	100	0	95.7	60 - 140				
Benzene	49.81	1.0	50	0.3389	98.9	80 - 120				
Cyclohexane	39.91	1.0	50	0	79.8	75 - 125				
Ethylbenzene	46.89	1.0	50	0	93.8	80 - 120				
Isopropylbenzene	44.36	1.0	50	0	88.7	80 - 120				
m,p-Xylene	92.63	2.0	100	1.492	91.1	80 - 120				
Methylcyclohexane	31.38	1.0	50	0	62.8	70 - 122				S
Naphthalene	52.23	1.0	50	0	104	70 - 130				
n-Butylbenzene	44.78	1.0	50	0	89.6	75 - 125				
n-Propylbenzene	43.38	1.0	50	0	86.8	75 - 130				
o-Xylene	49.18	1.0	50	0.7704	96.8	80 - 120				
Toluene	53.47	1.0	50	2.392	102	80 - 121				
Xylenes, Total	141.8	3.0	150	2.262	93.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*46.42*	*1.0*	*50*	*0*	*92.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.93*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*48.43*	*1.0*	*50*	*0*	*96.9*	*74 - 125*				
Surr: Toluene-d8	*48.24*	*1.0*	*50*	*0*	*96.5*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244263 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101299-11MSD** Units: **ug/L** Analysis Date: **04-Nov-2014 15:22**
Client ID: Run ID: **VOA1_244263** SeqNo: **3078334** 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	46.03	1.0	50	0	92.1	80 - 120	44.19	4.06	20	
1,2-Dichloroethane	46.14	1.0	50	0	92.3	79 - 120	47.33	2.53	20	
1,3,5-Trimethylbenzene	47.8	1.0	50	0	95.6	80 - 120	44.68	6.75	20	
2-Butanone	95.6	2.0	100	0	95.6	60 - 140	95.67	0.0674	20	
Benzene	48.04	1.0	50	0.3389	95.4	80 - 120	49.81	3.61	20	
Cyclohexane	46.24	1.0	50	0	92.5	75 - 125	39.91	14.7	20	
Ethylbenzene	49.46	1.0	50	0	98.9	80 - 120	46.89	5.35	20	
Isopropylbenzene	47.78	1.0	50	0	95.6	80 - 120	44.36	7.41	20	
m,p-Xylene	97.52	2.0	100	1.492	96.0	80 - 120	92.63	5.14	20	
Methylcyclohexane	47.76	1.0	50	0	95.5	70 - 122	31.38	41.4	20	R
Naphthalene	ND	1.0	50	0	0	70 - 130	52.23	0	20	S
n-Butylbenzene	45.72	1.0	50	0	91.4	75 - 125	44.78	2.07	20	
n-Propylbenzene	46.55	1.0	50	0	93.1	75 - 130	43.38	7.06	20	
o-Xylene	50.67	1.0	50	0.7704	99.8	80 - 120	49.18	2.97	20	
Toluene	49.24	1.0	50	2.392	93.7	80 - 121	53.47	8.25	20	
Xylenes, Total	148.2	3.0	150	2.262	97.3	80 - 124	141.8	4.39	20	
Surr: 1,2-Dichloroethane-d4	*47.58*	*1.0*	*50*	*0*	*95.2*	*71 - 125*	*46.42*	*2.47*	*20*	
Surr: 4-Bromofluorobenzene	*53.05*	*1.0*	*50*	*0*	*106*	*70 - 125*	*50.93*	*4.07*	*20*	
Surr: Dibromofluoromethane	*48.38*	*1.0*	*50*	*0*	*96.8*	*74 - 125*	*48.43*	*0.0963*	*20*	
Surr: Toluene-d8	*46.32*	*1.0*	*50*	*0*	*92.6*	*75 - 125*	*48.24*	*4.06*	*20*	

The following samples were anayzed in this batch: HS14110008-05 HS14110008-06 HS14110008-07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244366 **Instrument: VOA1** **Method: SW8260**

MBLK Sample ID: **VBLKW-141105** Units: **ug/L** Analysis Date: **05-Nov-2014 11:37**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080815** 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	*46.4*	*1.0*	*50*	*0*	*92.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.51*	*1.0*	*50*	*0*	*99.0*	*70 - 125*				
Surr: Dibromofluoromethane	*47.54*	*1.0*	*50*	*0*	*95.1*	*74 - 125*				
Surr: Toluene-d8	*47.11*	*1.0*	*50*	*0*	*94.2*	*75 - 125*				

LCS Sample ID: **VLCSW-141105** Units: **ug/L** Analysis Date: **05-Nov-2014 10:47**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080814** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.64	1.0	50	0	91.3	80 - 120				
Toluene	45.85	1.0	50	0	91.7	80 - 121				
Surr: 1,2-Dichloroethane-d4	*46.84*	*1.0*	*50*	*0*	*93.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.83*	*1.0*	*50*	*0*	*95.7*	*70 - 125*				
Surr: Dibromofluoromethane	*48.26*	*1.0*	*50*	*0*	*96.5*	*74 - 125*				
Surr: Toluene-d8	*48.26*	*1.0*	*50*	*0*	*96.5*	*75 - 125*				

MS Sample ID: **HS14101311-01MS** Units: **ug/L** Analysis Date: **05-Nov-2014 13:41**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080817** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1048	20	1000	229.3	81.8	80 - 120				
Toluene	1045	20	1000	251.1	79.4	80 - 121				S
Surr: 1,2-Dichloroethane-d4	*953.8*	*20*	*1000*	*0*	*95.4*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*988.9*	*20*	*1000*	*0*	*98.9*	*70 - 125*				
Surr: Dibromofluoromethane	*959.7*	*20*	*1000*	*0*	*96.0*	*74 - 125*				
Surr: Toluene-d8	*930*	*20*	*1000*	*0*	*93.0*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14110008
Project: Andover Release Site E3CE-0065

QC BATCH REPORT

Batch ID: R244366 **Instrument: VOA1** **Method: SW8260**

MSD Sample ID: **HS14101311-01MSD** Units: **ug/L** Analysis Date: **05-Nov-2014 14:05**
Client ID: Run ID: **VOA1_244366** SeqNo: **3080818** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1162	20	1000	229.3	93.3	80 - 120	1048	10.4	20	
Toluene	1167	20	1000	251.1	91.6	80 - 121	1045	11.1	20	
Surr: 1,2-Dichloroethane-d4	*955.9*	*20*	*1000*	*0*	*95.6*	*71 - 125*	*953.8*	*0.217*	*20*	
Surr: 4-Bromofluorobenzene	*996.2*	*20*	*1000*	*0*	*99.6*	*70 - 125*	*988.9*	*0.741*	*20*	
Surr: Dibromofluoromethane	*954.2*	*20*	*1000*	*0*	*95.4*	*74 - 125*	*959.7*	*0.57*	*20*	
Surr: Toluene-d8	*978.3*	*20*	*1000*	*0*	*97.8*	*75 - 125*	*930*	*5.05*	*20*	

The following samples were anayzed in this batch: HS14110008-05

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: **HS14110008**

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

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
California	2919	31-Jul-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	30-Nov-2014
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-14-14	30-Apr-2015

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS14110008

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14110008-05	2005 N Colt Court	Login	11/3/2014 8:55:47 AM	BA11	VW-3
HS14110008-05	2005 N Colt Court	Login	11/3/2014 8:55:47 AM	BA11	BTEX A1
HS14110008-06	2002 N Colt Court	Login	11/3/2014 8:55:47 AM	BA11	VW-3
HS14110008-06	2002 N Colt Court	Login	11/3/2014 8:55:47 AM	BA11	BTEX A1
HS14110008-07	2007 N Colt Court	Login	11/3/2014 8:55:47 AM	BA11	VW-3
HS14110008-07	2007 N Colt Court	Login	11/3/2014 8:55:47 AM	BA11	BTEX A1

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

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

Chain of Custody Form

Page 1 of 1

COC ID: 111763

HS14110008

Apex Companies
Andover Release Site E3CE-0065

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Andover Release Site
Work Order		Project Number	E3CE-0065
Company Name	Apex Companies	Bill To Company	Apex Companies
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson
Address	3015 SW First Avenue	Address	3015 SW First Avenue
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201
Phone	(503) 924-4704	Phone	(503) 924-4704
Fax		Fax	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com

A	300-Sulfate, ortho-phos, and Nitrate (short hold)
B	RSK175-methane
C	6020-Potassium only
D	Ammonia-4500
E	6020-Dissolved Iron-Lab filtered
F	TOC
G	VOCs (8260) Colt Court GW List
H	GRO-VPH OA-1
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-9	10-30-14	0859	Water	HCl	6							X	X			
2	MW-4		0947										X	X			
3	MW-11		1018										X	X			
4	MW-2		1055										X	X			
5	2005 N Colt Court		1106										X	X			
6	2002 N Colt Court		1117										X	X			
7	2007 N Colt Court		1131										X	X			
8	MW-3		1252										X	X			
9	DUP-2												X	X			
10													X	X			

Sampler(s) Please Print & Sign: Paul Wand

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:
Paul Wand	10-30-14	1830	
Relinquished by:	Date:	Time:	Received by (Laboratory): Nil 10/31/14 09.25
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Andover 3Q GWM-MNA

Cooler ID	Cooler Temp.
3180	4.7

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.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated
3. The Chain of Custody is a legal document. All information must be completed

IR # 2.

Copyright 2011 by ALS Environ

RIGHT SOLUTIONS | RIGHT PARTNER