October 20, 2014

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

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

Dear Ms. Green:

Enclosed, please find the Third 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) in 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

Third Quarter 2014 Groundwater Monitoring Report

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

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

Prepared for:
NuStar Pipeline Operating Partnership L.P.

October 20, 2014
1641-06

APEX

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

Prepared for:
NuStar Pipeline Operating Partnership L.P.

October 20, 2014
1641-06

Sam Jackson
Associate Engineer

CHRIS BREEMER
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Principal Geologist

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GROUNDWATER MONITORING REPORT

Third 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
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	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 design, which will be submitted to KDHE during the fourth quarter 2014.

Since the release was discovered, NuStar has coordinated with property owners within the investigation area to deactivate several irrigation wells in the Neighborhood (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 of those wells are shown on Figure 2. The deactivated wells have not been permanently decommissioned; therefore, the well owners will have the option of reactivating their wells when the investigation and remediation in the Neighborhood is complete. The following irrigation wells in the investigation area have not been deactivated because: (1) the homeowners wished to maintain use of the wells (2025 N Ruger Court, 2007 N Mountain Court, 2009 N Mountain Court); or (2) the homeowner has not responded to NuStar (2001 N Colt Court).

In August 2013, a groundwater monitoring and SPH removal program was initiated. Currently, the groundwater monitoring program consists of quarterly collection and analysis of groundwater samples from monitoring wells MW-1 through MW-16 and from 16 irrigation wells. The SPH removal program currently consists of bi-weekly SPH removal from the irrigation well at 2006 N Colt Court, using a vacuum truck. The groundwater monitoring programs for monitoring wells and irrigation wells are presented in Tables 1 and 2, respectively.

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 Third Quarter 2014 Groundwater Monitoring, SPH Removal, and Irrigation Well Deactivation

The third quarter 2014 groundwater monitoring, SPH removal, and well deactivation activities were performed between July and September 2014. This section presents a summary of: (1) deactivation of the irrigation well at 2019 N Ruger Circle; (2) weekly groundwater gauging and measurement of stormwater pond stage; (3) removal of SPH from the irrigation well at 2006 N Colt Court; and (4) collection of groundwater samples from 16 monitoring wells and 16 irrigation wells during the comprehensive monitoring event that occurred the week of July 23. The groundwater monitoring programs for monitoring wells and irrigation wells (i.e., schedule and chemical analyses) are summarized in Tables 1 and 2, respectively.

2.1 Irrigation Well Deactivation

As shown in Table 2 and on Figure 2, nine irrigation wells have been deactivated. During the third quarter 2014, NuStar was authorized to deactivate the irrigation well at 2019 N Ruger Circle. On August 27, 2014, that irrigation well was deactivated. Other irrigation wells were deactivated prior to the third quarter 2014. Irrigation wells have been 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.

2.2 Groundwater and Stormwater Pond Elevations

Depth to water was measured weekly at each monitoring well and at the irrigation well at 2006 N Colt Court 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 this monitoring period are listed in Table 3. The groundwater elevations that were measured during the comprehensive third quarter 2014 monitoring event (July 22, 2014) are shown on Figure 3. Copies of field data sheets are included in Appendix A. Historical groundwater and stormwater retention pond elevations for the period August 2013 through September 2014 are tabulated in Appendix B.

During the three-month monitoring period of July through September 2014, depth to groundwater in Site monitoring wells ranged from approximately 15 to 53 feet bgs (equivalent to approximately 1298 to 1334 feet above mean sea level [msl]). Over the duration of the monitoring period, groundwater elevations decreased an average of 1.33 feet and were lowest during the September 24, 2014 gauging event.

During the comprehensive third quarter 2014 monitoring event (July 22, 2014), groundwater levels at the Site ranged between 15.39 and 42.80 feet bgs (equivalent to 1333.59 to 1307.67 feet msl). These levels are, on average, approximately 0.10 foot higher than levels measured in April 2014.

During the three-month monitoring period, the elevation of the stormwater pond surface ranged from 1344.50 to 1344.00 feet msl. During the comprehensive monitoring event, the surface elevation of the stormwater retention pond was 1344.00 feet msl.

As shown on Figure 3, the groundwater levels measured during this monitoring period 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 shallower gradient, consistent with regional patterns (O'Connor et al., 1982).

2.3 SPH Occurrence and Removal

SPH have been observed at the Site only in the irrigation well at 2006 N Colt Court. On a weekly to bi-weekly interval since June 2013, a vacuum truck has been used to extract SPH from the irrigation 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. SPH 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 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.

During the monitoring period, SPH thicknesses ranged from no SPH to 0.23 foot. Compared to the second quarter 2014 monitoring event, the water level in the irrigation well declined approximately 7 feet. On September 24, 2014, the water level was approximately 20 feet lower than the elevation measured in January 2014. Groundwater elevation data, SPH thicknesses measurements, and the estimated volume of SPH removed from the irrigation well at 2006 N Colt Court for the third quarter 2014 are listed in Table 4. Historical data are included in Appendix B.

2.3.1 SPH Removal Program

In general, the SPH thickness in the irrigation well at 2006 Colt Court has slightly increased as groundwater levels have seasonally decreased. For example, at the start of this monitoring period, the SPH thickness in the irrigation well at 2006 Colt Court was approximately 0.14 foot and the groundwater level was approximately 44.64 feet bgs. At the end of the monitoring period, the SPH thickness was approximately 0.23 foot and the groundwater level was approximately 60.58 feet bgs. To take advantage of the low groundwater levels and maximize SPH recovery, vacuum extraction events were performed twice per week during the third quarter 2014.

2.4 Third Quarter 2014 Groundwater Monitoring Event Scope

The comprehensive third quarter 2014 groundwater monitoring event was conducted during the week of July 22, 2014 and included the following activities:

- Groundwater levels were gauged in monitoring wells MW-1 through MW-16.

- Groundwater samples were collected from monitoring wells MW-1 through MW-9 and MW-11 through MW-16. On July 22, 2014, the purge water from well MW-10 exhibited high turbidity; therefore, a groundwater sample was not collected. On July 31, 2014, well MW-10 was redeveloped by over-purging and on August 1, a groundwater sample was collected from that well.
- Groundwater samples were collected from the irrigation wells at 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 was not able to contact the owners of the property at 2001 N Colt Court; therefore, a groundwater sample was not collected from that irrigation well.

The groundwater monitoring programs for monitoring wells and irrigation wells are summarized in Tables 1 and 2, respectively. Groundwater samples were collected from monitoring wells using low-flow sampling techniques. Prior to sampling, each monitoring well was purged using a peristaltic pump while water quality parameters (pH, temperature, specific conductance, dissolved oxygen, and oxidation-reduction potential [ORP]) were recorded (Table 5). Groundwater samples were collected from irrigation wells using disposable bailers.

The groundwater analytical data for monitoring wells are presented in Section 2.4. Analytical data for irrigation wells are presented in Section 2.5.

2.5 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 during the last year. Figures 4 through 7 present analytical data for this monitoring period. Figure 8 compares the approximate extent of benzene in groundwater in July/August/September 2013 to the extent in July/August 2014. Copies of the laboratory reports are included in Appendix C. The monitoring well groundwater data are discussed below.

- The extent of dissolved-phase hydrocarbon concentrations in groundwater has significantly decreased over the last year. As shown on Figure 8, in July/August/September 2013, six monitoring wells exhibited benzene concentrations that exceeded the corresponding Tier 2 Risk-Based Screening Value (RBSV); as of July 2014, only four monitoring wells exhibited benzene concentrations above the corresponding RBSV. The approximate extent of the benzene above the

Tier 2 RBSV of 0.005 milligrams per liter (mg/L) has decreased by approximately 70 percent since July/August/September 2013.

- The constituent concentrations in groundwater have decreased in most wells in the last year. For example, in July/August/September 2013, the benzene concentrations in samples collected from monitoring wells MW-1, MW-2, MW-5, and MW-9 were 9.1, 0.15, 0.038, and 0.99 mg/L, respectively. In July 2014, the benzene concentrations in wells MW-1 and MW-9 were 3.1 and 0.0017 mg/L, respectively, and benzene was not detected in wells MW-2 and MW-5.

2.6 Irrigation Well Analytical Program and Results

As shown in Table 7 and on Figures 4 through 7, water 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). A water sample was not collected from the irrigation well at 2001 N Colt Court because NuStar was unable to contact the property owner to confirm access to the well. 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 third 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 this monitoring event, dissolved-phase hydrocarbon constituents were: (1) not detected in 12 irrigation wells (2002 N Colt Court; 2007 N Colt Court; HOA-1; HOA-2; 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); and (2) detected at concentrations less than KDHE Tier 2 RBSVs in two irrigation wells (2020 N Ruger Circle and 2028 N Ruger Circle).
- Water samples collected from the irrigation wells at 2019 N Ruger Circle and 2005 N Colt Court contained detectable concentrations of dissolved-phase petroleum constituents. Benzene (0.069 and 0.027 mg/L, respectively) and naphthalene (0.0016 and 0.0025 mg/L, respectively) concentrations were above the corresponding KDHE Tier 2 RBSVs in samples from both wells. 1,2,4-Trimethylbenzene was above the KDHE Tier 2 RBSV at 2005 N Colt Court. The concentrations of benzene detected at 2019 N Ruger Circle and 2005 N Colt Court were reduced approximately 19 to 43 percent, relative to the concentrations measured in July/August 2013. At the time of sampling, the irrigation well at 2019 N Ruger Circle was active. On August 27, the irrigation well at 2019 N Ruger Circle was deactivated. The irrigation well at 2005 N Colt Court was

previously deactivated. Under current conditions, the constituents in these wells do not pose a health risk.

- Irrigation wells with constituent concentrations 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 concentrations of dissolved-phase hydrocarbons. During the third quarter 2014 sampling event, dissolved-phase hydrocarbons were not detected in the samples collected from those wells.

3.0 Status Report

Work Completed – Third Quarter 2014:

- Groundwater levels were gauged on a weekly schedule.
- SPH removal, using a vacuum truck, was performed twice per week.
- The Second Quarter Groundwater Monitoring Report (Apex, 2014d) was submitted on July 9 and approved by KDHE on July 18.
- The third quarter 2014 comprehensive groundwater monitoring event was performed during the week of July 22. A sample was collected from well MW-10 on July 31.
- The *Soil Investigation Report and Proposed Soil Excavation Work Plan* (Apex, 2014e) was submitted on July 17, 2014 and approved by KDHE on August 8, 2014.
- Groundwater data show that the magnitude and extent of gasoline constituents in groundwater at the Site continue to decrease, consistent with the trend that has been observed since groundwater monitoring was initiated at the Site.

Work Planned – Fourth Quarter 2014:

The following activities are planned for fourth quarter 2014, pending KDHE approval:

- Submittal of the third quarter 2014 groundwater monitoring report.
- Weekly gauging of monitoring wells.
- Submittal of a groundwater remediation pilot test work plan in October.
- Submittal of the detailed soil excavation design. NuStar planned to submit this work plan during the third quarter 2014; however, information requests from the City of Andover and the Quail Crossing Homeowners Association resulted in additional preparation time.

- Preferential pathways for vapor intrusion will be evaluated concurrent with preparation of the detailed excavation design and implementation of that work. The results of the preferential pathway evaluation will be submitted to KDHE following completion of the planned soil excavation.
- Performance of the fourth quarter 2014 comprehensive groundwater monitoring event, anticipated to be completed during the week of October 27.
- SPH occurrence and recovery data will be evaluated. Based on this evaluation, NuStar may propose modifications to the current SPH recovery program and/or other methods to maximize SPH recovery.

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 to the municipal water system; however, 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	7/1/2014	4.0	1352.13	35.0	20-35	31.66	--	--	1320.47
	7/10/2014					31.79	--	--	1320.34
	7/15/2014					31.82	--	--	1320.31
	7/22/2014					31.31	--	--	1320.82
	7/31/2014					31.65	--	--	1320.48
	8/5/2014					31.78	--	--	1320.35
	8/14/2015					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
	9/16/2014					31.72	--	--	1320.41
	9/24/2014					31.75	--	--	1320.38
MW-2	7/1/2014	2.0	1353.17	44.0	29-44	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
	8/14/2015					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
	9/16/2014					32.58	--	--	1320.59
	9/24/2014					33.38	--	--	1319.79
MW-3	7/1/2014	2.0	1350.47	60.0	40-60	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
	8/14/2015					45.27	--	--	1305.20
	8/20/2014					47.96	--	--	1302.51
	8/26/2014					51.32	--	--	1299.15
	9/3/2014					51.10	--	--	1299.37
	9/10/2014					51.71	--	--	1298.76
	9/16/2014					51.84	--	--	1298.63
	9/24/2014					52.93	--	--	1297.54

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	7/1/2014	2.0	1350.73	41.0	26-41	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
	8/14/2015					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
	9/16/2014					30.91	--	--	1319.82
	9/24/2014					29.98	--	--	1320.75
MW-5	7/1/2014	2.0	1352.77	30.0	15-30	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
	8/14/2015					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
	9/16/2014					20.54	--	--	1332.23
	9/24/2014					20.66	--	--	1332.11
MW-6	7/1/2014	2.0	1349.76	41.0	26-41	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
	8/14/2015					20.42	--	--	1329.34
	8/20/2014					20.56	--	--	1329.20
	8/26/2014					20.72	--	--	1329.04
	9/3/2014					20.98	--	--	1328.78
	9/10/2014					21.02	--	--	1328.74
	9/16/2014					21.49	--	--	1328.27
	9/24/2014					21.50	--	--	1328.26

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	7/1/2014	2.0	1348.98	24.0	9-24	14.74	--	--	1334.24
	7/10/2014					15.10	--	--	1333.88
	7/15/2014					15.31	--	--	1333.67
	7/22/2014					15.39	--	--	1333.59
	7/31/2014					15.72	--	--	1333.26
	8/5/2014					15.82	--	--	1333.16
	8/14/2015					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
	9/16/2014					16.14	--	--	1332.84
	9/24/2014					16.24	--	--	1332.74
MW-8	7/1/2014	2.0	1353.38	30.0	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
	8/14/2015					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
	9/16/2014					21.56	--	--	1331.82
	9/24/2014					21.69	--	--	1331.69
MW-9	7/1/2014	2.0	1349.48	34.0	19-34	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
	8/14/2015					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
	9/16/2014					NM	--	--	NM
	9/24/2014					32.98	--	--	1316.50

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	7/1/2014	2.0	1348.79	34.0	19-34	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
	8/14/2015					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
	9/16/2014					28.46	--	--	1320.33
	9/24/2014					28.47	--	--	1320.32
MW-11	7/1/2014	2.0	1351.34	42.0	22-42	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
	8/14/2015					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
	9/16/2014					28.69	--	--	1322.65
	9/24/2014					23.69	--	--	1327.65
MW-12	7/1/2014	2.0	1349.74	43.0	23-43	30.42	--	--	1319.32
	7/10/2014					30.48	--	--	1319.26
	7/15/2014					30.75	--	--	1318.99
	7/22/2014					30.72	--	--	1319.02
	7/31/2014					31.07	--	--	1318.67
	8/5/2014					31.15	--	--	1318.59
	8/14/2015					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
	9/16/2014					31.12	--	--	1318.62
	9/24/2014					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	7/1/2014	2.0	1354.58	45.0	25-45	32.90	--	--	1321.68
	7/10/2014					32.75	--	--	1321.83
	7/15/2014					32.99	--	--	1321.59
	7/22/2014					32.46	--	--	1322.12
	7/31/2014					32.47	--	--	1322.11
	8/5/2014					32.40	--	--	1322.18
	8/14/2015					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
	9/16/2014					32.42	--	--	1322.16
	9/24/2014					32.51	--	--	1322.07
MW-14	7/1/2014	2.0	1354.99	45.0	25-45	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
	8/14/2015					32.04	--	--	1322.95
	8/20/2014					32.01	--	--	1322.98
	8/26/2014					32.15	--	--	1322.84
	9/3/2014					32.19	--	--	1322.80
	9/10/2014					32.30	--	--	1322.69
	9/16/2014					32.38	--	--	1322.61
	9/24/2014					32.52	--	--	1322.47
MW-15	7/1/2014	2.0	1351.79	45.0	25-45	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
	8/14/2015					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
	9/16/2014					34.98	--	--	1316.81
	9/24/2014					35.29	--	--	1316.50

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	7/1/2014	2.0	1352.13	45.0	25-45	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
	8/14/2015					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
	9/16/2014					29.71	--	--	1322.42
	9/24/2014					29.95	--	--	1322.18
Stormwater Pond (Pond Stage (feet MSL))	7/1/2014	NA	NA	NA	NA	NA	NA	NA	1344.50
	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
	8/14/2015								1344.50
	8/20/2014								1344.50
	8/26/2014								1344.25
	9/3/2014								1344.50
	9/10/2014								1344.25
	9/16/2014								1344.00
	9/24/2014								1344.00

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 me
5. NA = Not applicable.

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

Well	Date	Depth to Groundwater (feet bgs)	Depth to Product (feet)	Product Thickness (feet)	Fluid Removal Technology	Product Thickness At Completion of SPH Removal Event (feet)
		Before SPH Removal Event				After SPH Removal Event
Irrigation Well - 2006 N Colt Court	7/1/2014	44.64	44.50	0.14	Mobile vacuum truck	0.01
	7/2/2014	44.78	44.64	0.14	Mobile vacuum truck	0.00
	7/10/2014	46.12	46.03	0.09	Mobile vacuum truck	0.01
	7/11/2014	47.02	46.91	0.11	Mobile vacuum truck	0.00
	7/15/2014	46.41	46.33	0.08	Mobile vacuum truck	0.03
	7/16/2014	47.55	47.41	0.14	Mobile vacuum truck	0.04
	7/22/2014	48.32	48.21	0.11	Mobile vacuum truck	0.00
	7/23/2014	49.38	49.27	0.11	Mobile vacuum truck	0.00
	7/31/2014	49.18	49.06	0.12	Mobile vacuum truck	0.00
	8/1/2014	51.04	--	0.00	Mobile vacuum truck	0.00
	8/5/2014	52.05	51.92	0.13	Mobile vacuum truck	0.08
	8/6/2014	52.92	52.79	0.13	Mobile vacuum truck	sheen
	8/14/2015	52.94	52.79	0.15	Mobile vacuum truck	0.08
	8/15/2014	51.40	51.31	0.09	Mobile vacuum truck	0.01
	8/20/2014	54.23	54.09	0.14	Mobile vacuum truck	0.03
	8/21/2014	55.02	54.98	0.04	Mobile vacuum truck	0.02
	8/26/2014	58.27	58.20	0.07	Mobile vacuum truck	0.04
	8/27/2014	58.57	58.39	0.18	Mobile vacuum truck	0.00
	9/3/2014	57.48	57.29	0.19	Mobile vacuum truck	0.01
	9/4/2014	58.28	58.22	0.06	Mobile vacuum truck	0.00
	9/10/2014	58.12	57.94	0.18	Mobile vacuum truck	0.00
	9/11/2014	59.15	58.96	0.19	Mobile vacuum truck	0.03
	9/16/2014	58.14	57.98	0.16	Mobile vacuum truck	0.00
	9/17/2014	58.95	58.75	0.20	Mobile vacuum truck	0.00
	9/24/2014	59.17	58.95	0.22	Mobile vacuum truck	sheen
	9/25/2014	60.58	60.35	0.23	Mobile vacuum truck	0.00

Notes

1. SPH = Separate-phase hydrocarbons.

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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

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
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
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
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
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
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

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
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
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
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
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
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
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

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
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
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
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
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
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
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
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

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)																
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
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
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
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
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

Please refer to notes at end of table.

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

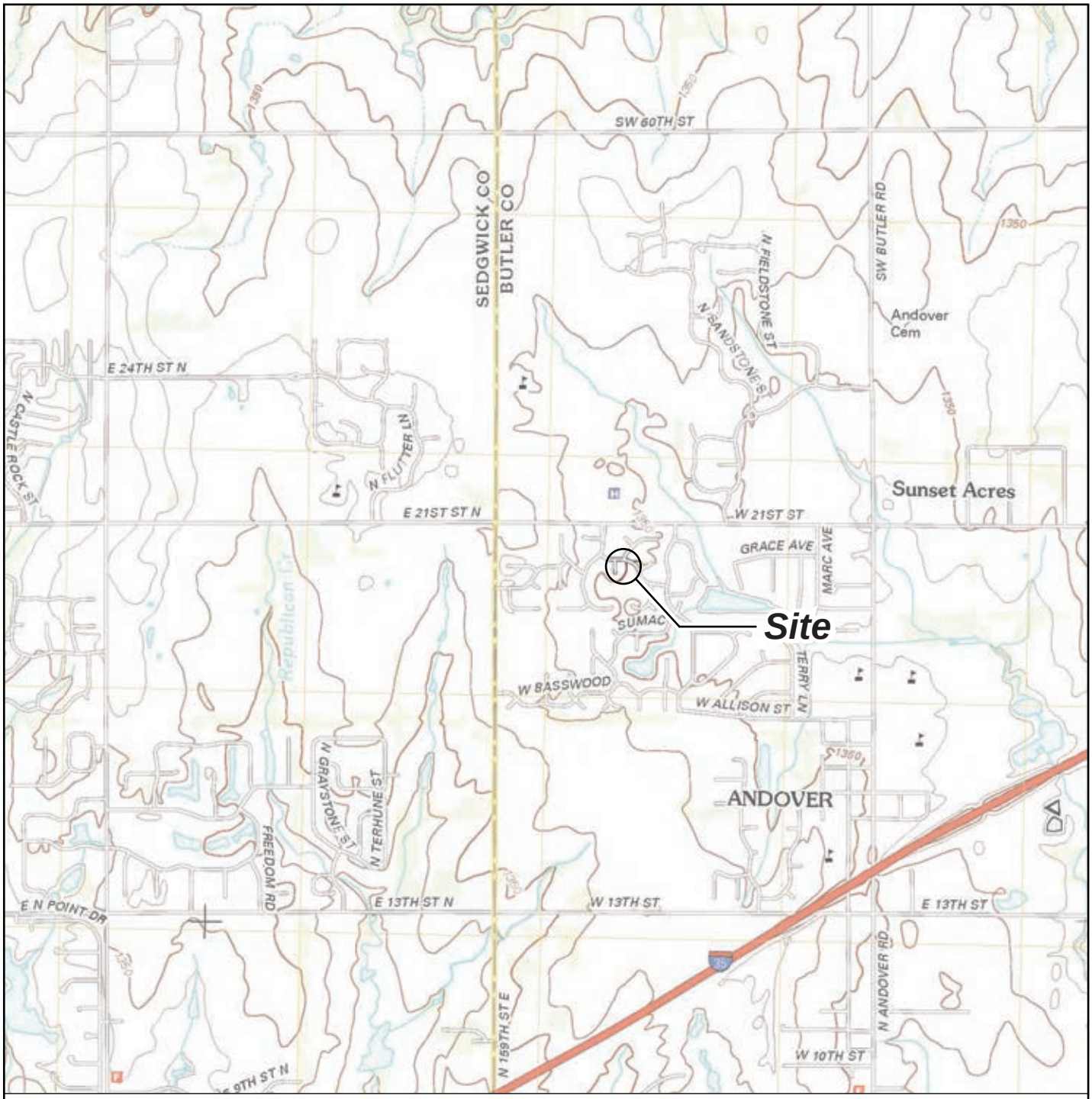
Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
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
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
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
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

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
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
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

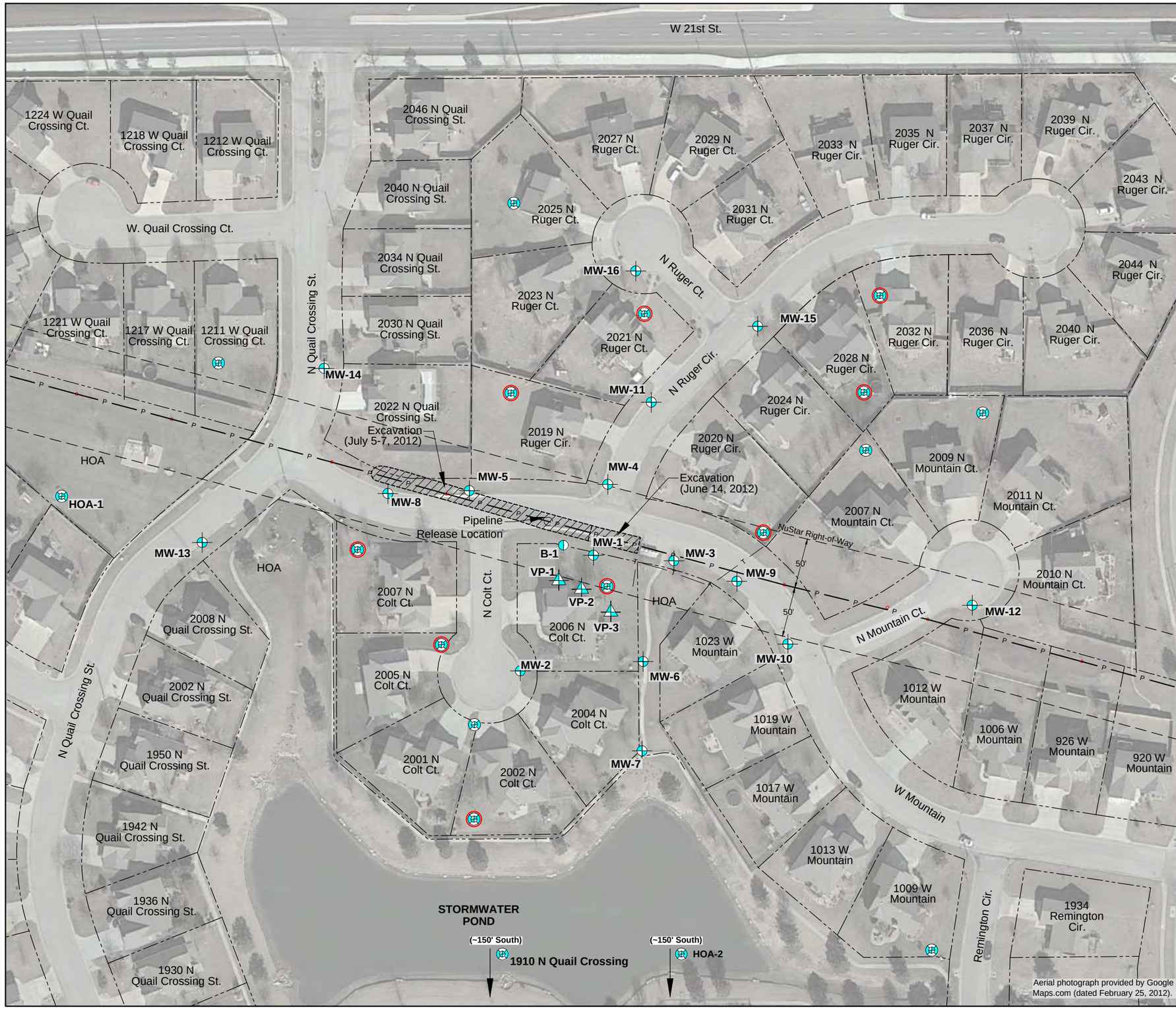
KANSAS

N

Site Location Map

Third 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
	October 2014		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

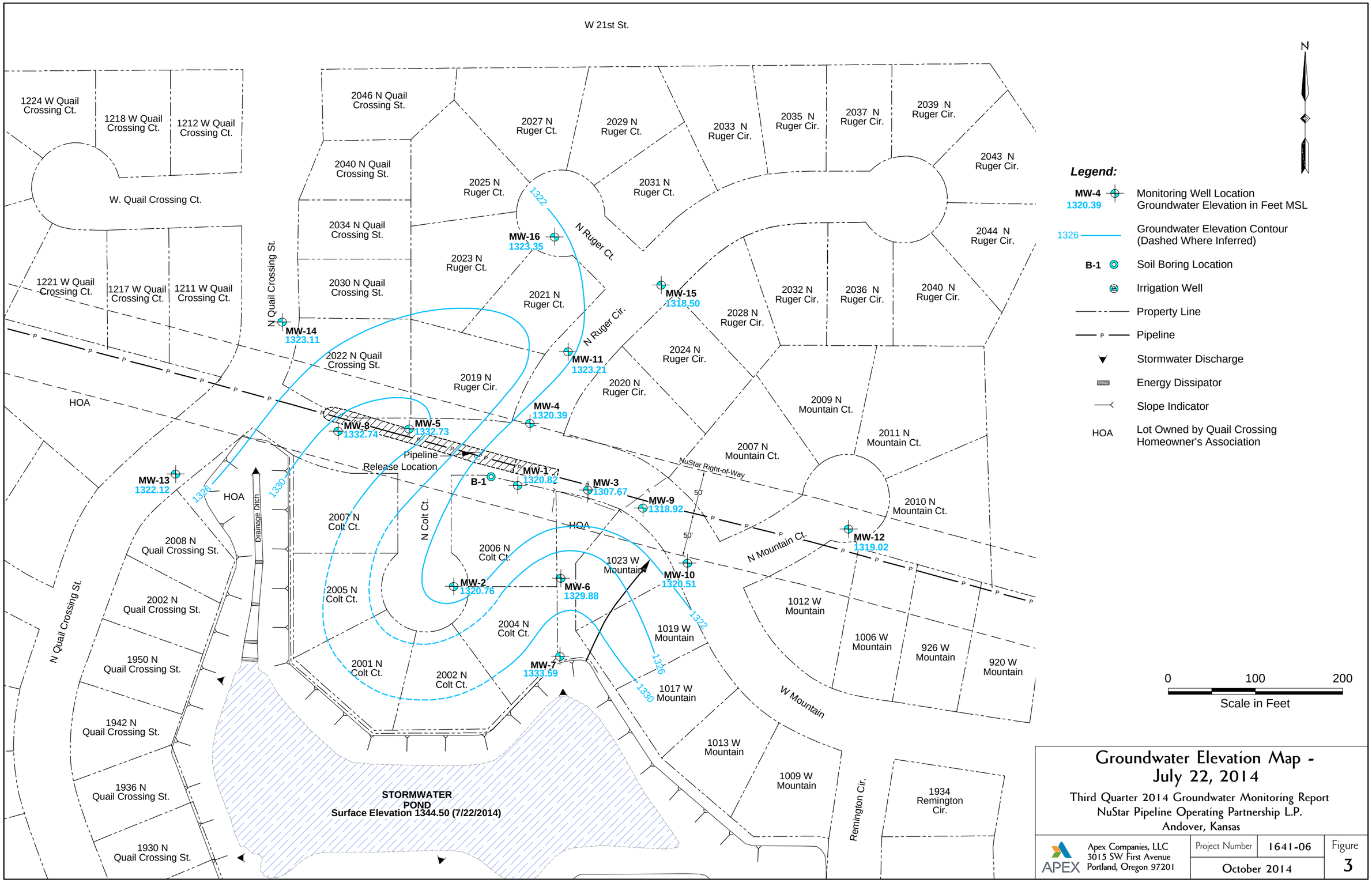
Scale in Feet

Site Plan and Sampling Location Map

Third 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
October 2014		2

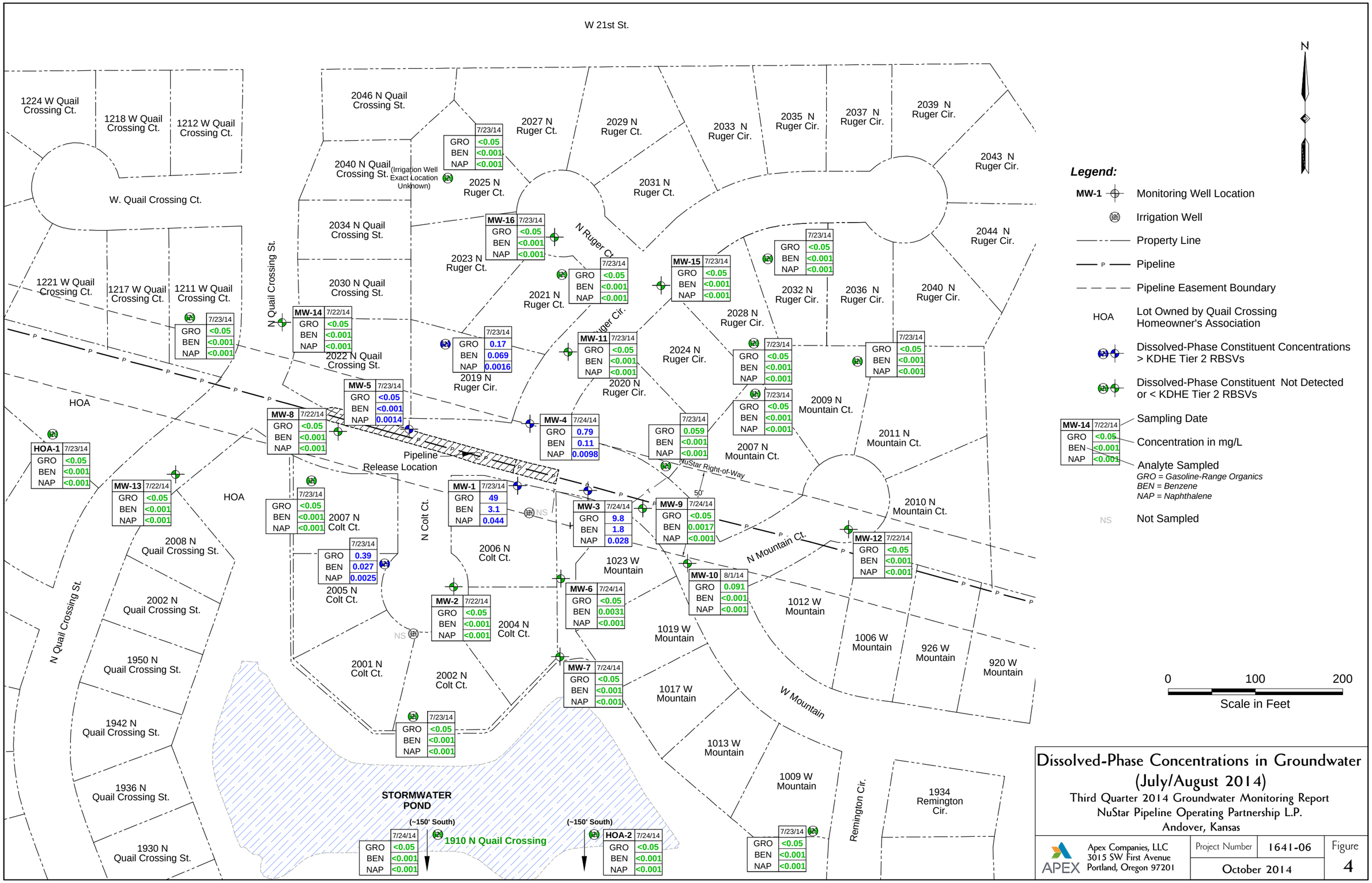


Groundwater Elevation Map - July 22, 2014

Third 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
October 2014		3

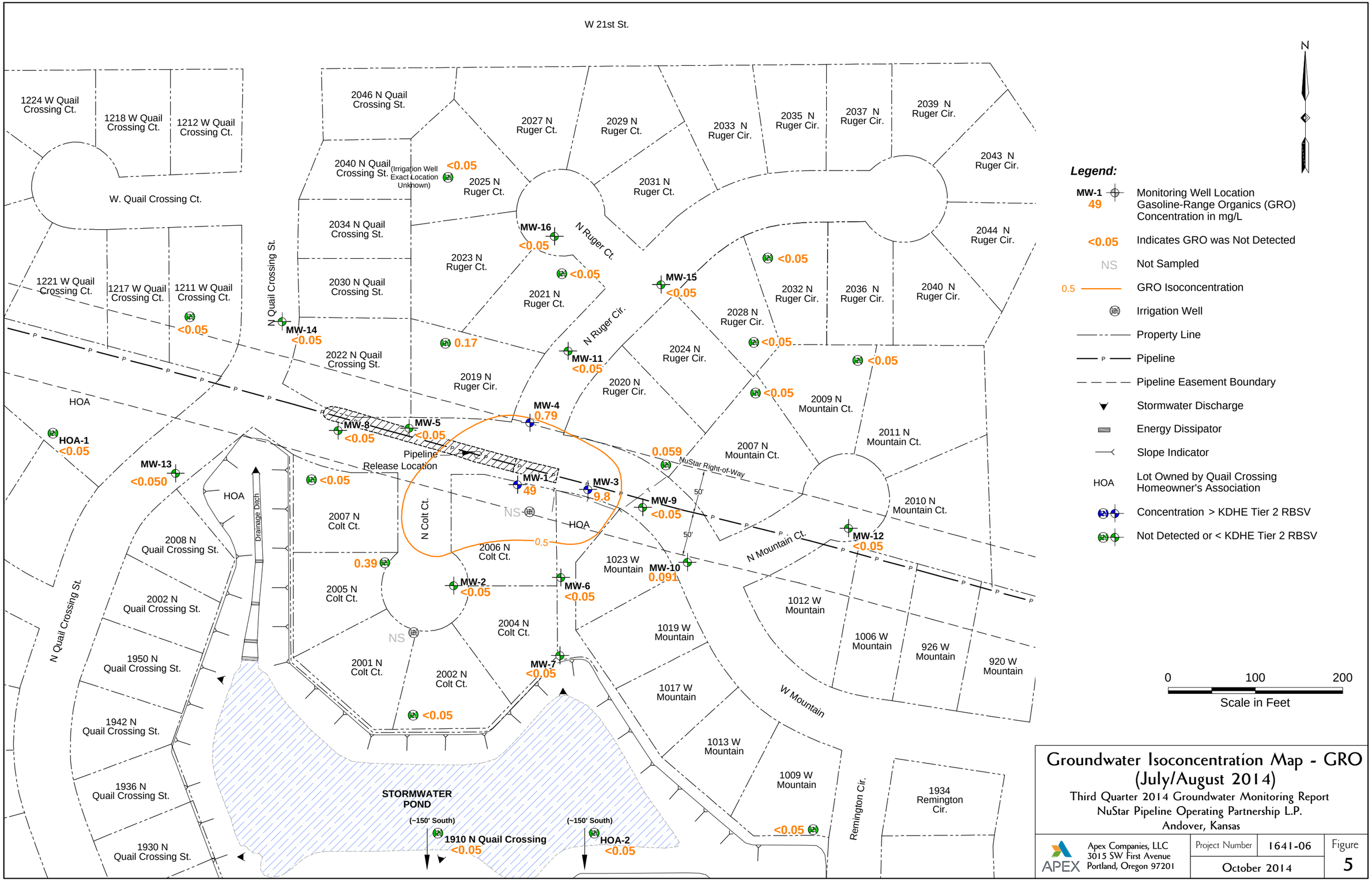


Dissolved-Phase Concentrations in Groundwater (July/August 2014)

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

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

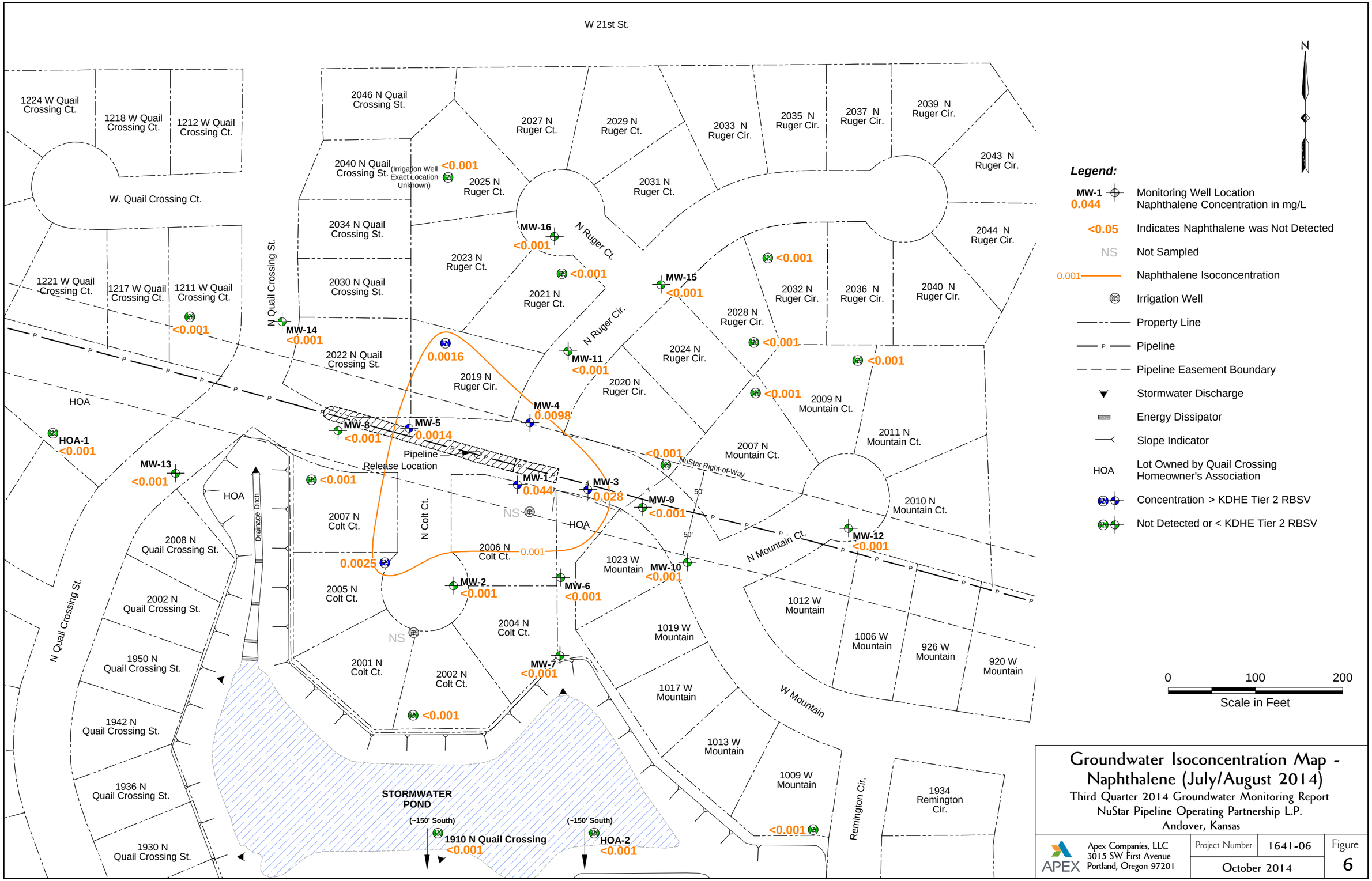
Project Number	1641-06	Figure
October 2014		4



Groundwater Isoconcentration Map - GRO (July/August 2014)

Third 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
	October 2014		5

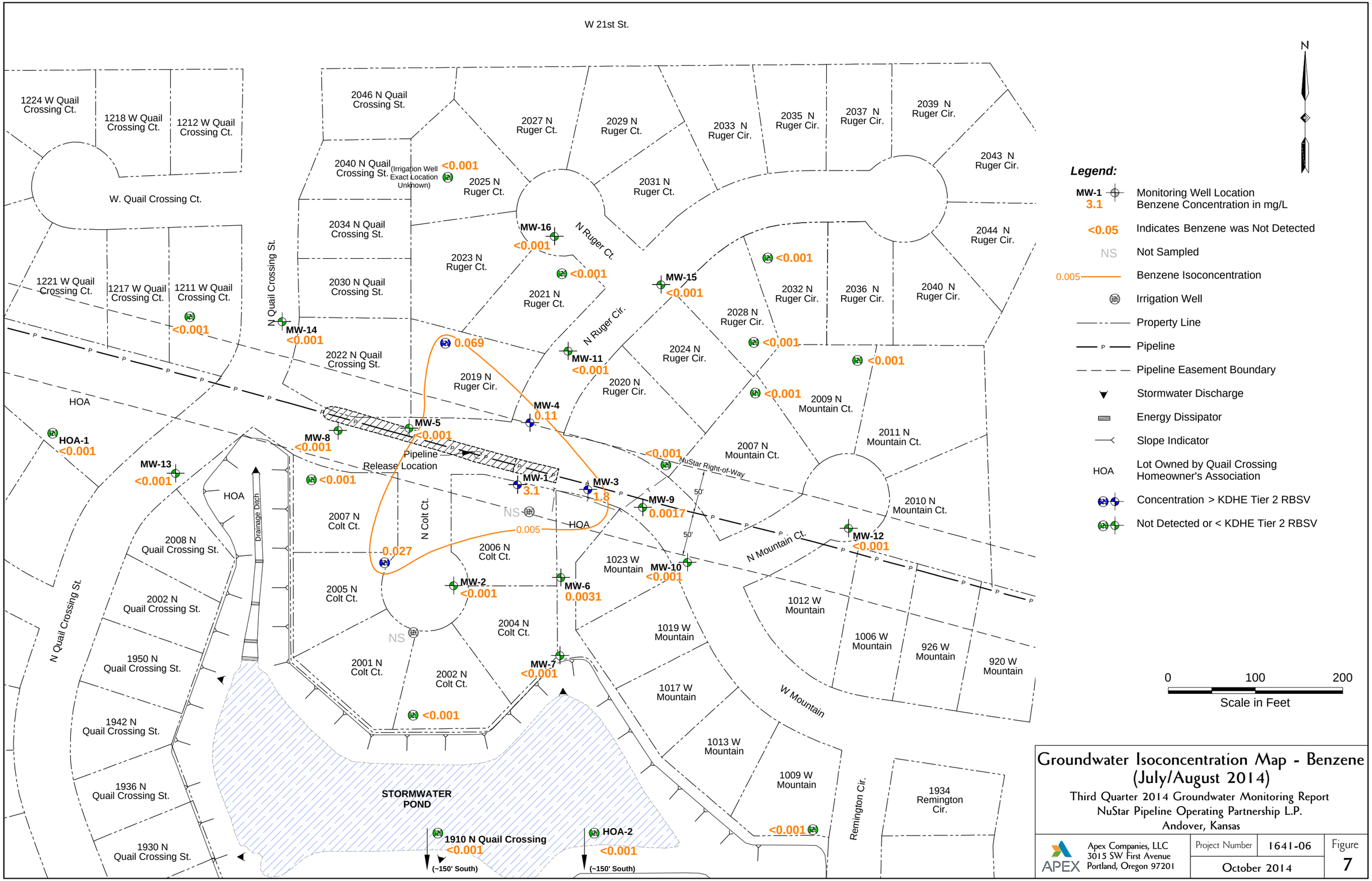


Groundwater Isoconcentration Map - Naphthalene (July/August 2014)

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

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

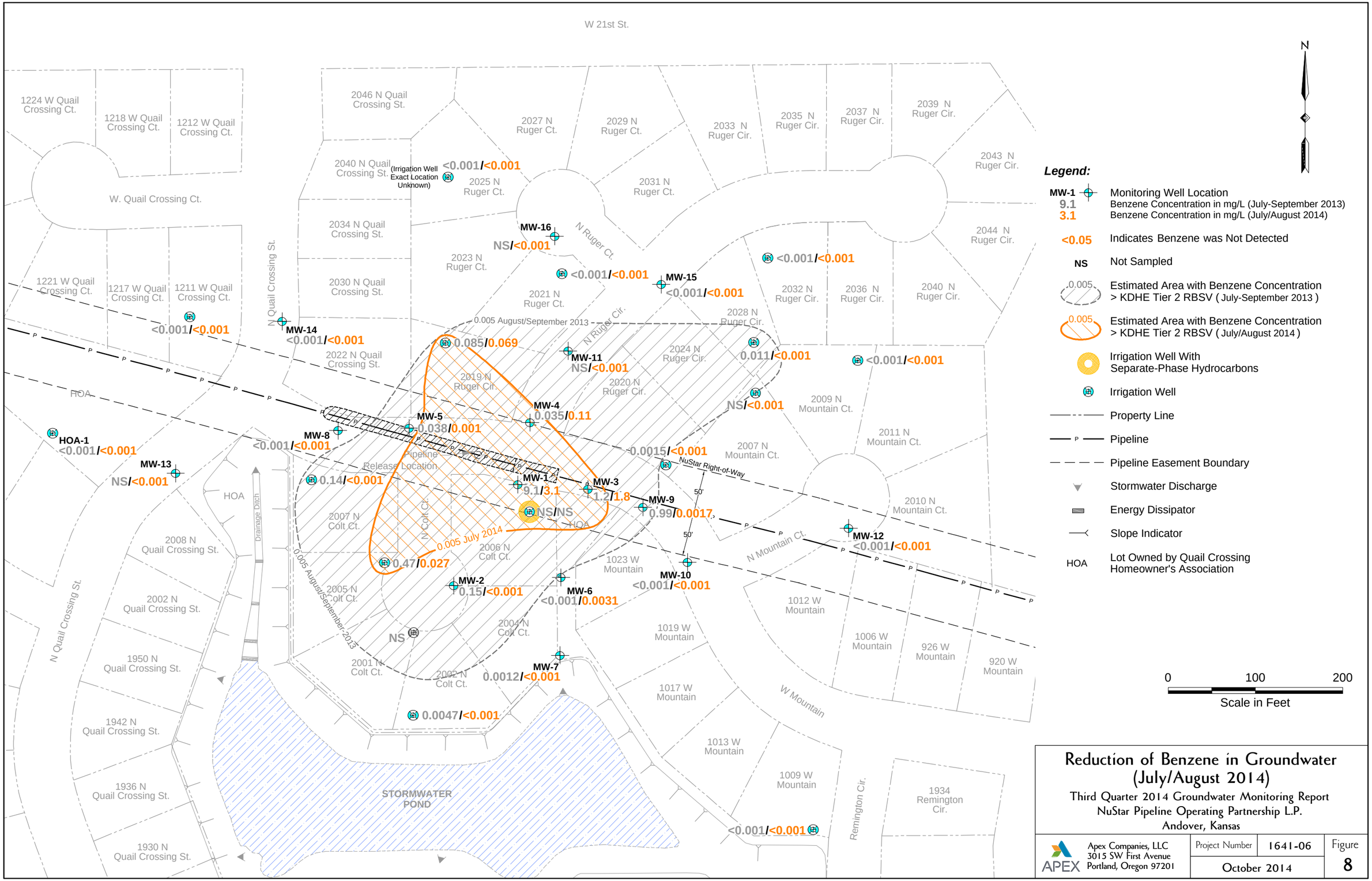
Project Number	1641-06	Figure
October 2014		6



Groundwater Isoconcentration Map - Benzene (July/August 2014)

Third 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 October 2014	Figure 7



Reduction of Benzene in Groundwater (July/August 2014)

Third 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
October 2014		8

Appendix A

Field Data Sheets

WELL GAGING DATA SHEET

Client:	Nustar	Job Number:	32600761-06-004
Project:	Ambrose/Holt CT	Date:	20140701
Weather:	Sunny 85°	Sampler:	P. Wm
		Time In/Out:	11:45

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
200L	11:50	44.50	44.64	—	—	—	START VAC @ 12:10
200L	14:25	44.21	44.22	—	—	—	POST VAC 0 gal
MW-1	13:25	—	31.66	—	—	—	START VAC at 14:10
MW-1	16:15	—	28.24	—	—	—	POST VAC 25 gal
MW-2	08:15	—	32.31	—	—	—	
MW-3	08:45	—	29.58	—	—	—	
MW-4	08:37	—	30.60	—	—	—	
MW-5	08:18	—	19.74	—	—	—	
MW-6	09:10	—	19.46	—	—	—	
MW-7	09:15	—	14.74	—	—	—	
MW-8	08:21	—	20.22	—	—	—	
MW-9	09:38	—	30.14	—	—	—	
MW-10	09:43	—	28.44	—	—	—	
MW-11	08:40	—	27.76	—	—	—	
MW-12	08:46	—	30.42	—	—	—	
MW-13	08:23	—	32.90	—	—	—	
MW-14	08:27	—	31.96	—	—	—	
MW-15	08:53	—	33.78	—	—	—	
MW 16	08:45	—	29.65	—	—	—	
Pond	—	—	—	—	—	—	1344.6
200L	08:05	44.64	44.70	—	—	—	START VAC @ 0810
200L	10:45	—	44.40	—	—	—	POST VAC 0 gal

APEX	NuStar Colt Court Air Monitoring					Date	20140701
						Employee	P. Ward
						Wind Direction	Calm
						Weather	Sunny 85°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:15	0	0.4	0	0	1418	
	12:40	0	0	0.1	0	1220	
	13:05	0	0	0	0	1137	
	13:30	0	0	0	0	1181	
	13:55	0	0	0	0	1194	
MW-1	14:15	0.3	0	0	0	1201	
	14:40	0	0	0	0	1035	wind from NW
	15:05	0	0	0	0	939	
	15:30	0	0	0.1	0	802	
	16:00	0	0	0	0	1127	
—	—	—	20140702		—	—	—
2006	08:30	0	0	0	0	1546	Calm
	09:00	0	0	0	0	1433	wind from NW
	09:30	0	0.7	0	0	1273	
	09:50	0	0	0	0	1206	

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

WELL GAGING DATA SHEET

		Job Number:	32000164106.004
Client:	Nustar	Date:	20140710
Project:	Colt Court	Sampler:	P. Ward
Weather:	Sunny 81°	Time In/Out:	12:00

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	12:15	46.03	46.12	—	—	—	START Vac @ 12:30
2006	15:13	45.48	45.49	—	—	—	POST Vac 10 gal
MW-1	13:43	—	31.79	—	—	—	START Vac - 0 gal 14:35
MW-1	16:40	—	29.06	—	—	—	POST Vac - 0 gal
MW-2	13:30	—	31.60	—	—	—	
MW-3	15:28	—	40.35	—	—	—	
MW-4	14:55	—	30.39	—	—	—	
MW-5	13:34	—	19.91	—	—	—	
MW-6	15:33	—	19.82	—	—	—	
MW-7	15:37	—	15.10	—	—	—	
MW-8	13:38	—	20.24	—	—	—	
MW-9	15:19	—	35.21	—	—	—	
MW-10	15:23	—	28.28	—	—	—	
MW-11	14:57	—	27.85	—	—	—	
MW-12	15:25	—	30.48	—	—	—	
MW-13	08:50	—	32.75	—	—	—	
MW-14	08:57	—	31.84	—	—	—	
MW-15	15:08	—	33.35	—	—	—	
MW-16	15:04	—	28.95	—	—	—	
POND	—	—	—	—	—	—	1344.75
— 20140710	—	—	—				
2006	07:55	46.91	47.02	—	—	—	START Vac @ 08:00
2006	16:05	—	46.36	—	—	—	POST Vac 0 gal

APEX	NuStar Colt Court Air Monitoring					Date	20140710
						Employee	P. Ward
						Wind Direction	SE TO NW
						Weather	Sunny, 81°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:45	0	0	0	0.1	958	
	13:15	0.1	0.2	0.2	0.1	1211	
	13:45	0	0	0	0	1124	
	14:15	0	0	0	0	1060	
MW-1	14:45	0	0	0	0	967	
	15:15	0	0	0	0	931	
	15:45	0	0	0	0	856	
	16:15	0	0	0	0	822	
—	20140711	—	—	—	—		
2006	08:15	0	0	0	0	1311	CALM
	08:45	0	0	0	0	1004	
	09:15	0	0	0	0	1028	out of south
	09:45	0	0	0	0	936	

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:	32000164106.004
Project:	Colt County	Date:	20140710
Weather:	Sunny 81°	Sampler:	P. Ward
		Time In/Out:	12:00

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	12:15	46.03	46.12	—	—	—	START VAC @ 12:30
2006	15:13	45.48	45.49	—	—	—	POST VAC 10 gal
MW-1	13:43	—	31.79	—	—	—	START VAC - 0 gal 14:35
MW-1	16:40	—	29.06	—	—	—	POST VAC - 0 gal
MW-2	13:30	—	31.60	—	—	—	
MW-3	15:28	—	40.35	—	—	—	
MW-4	14:55	—	30.39	—	—	—	
MW-5	13:34	—	19.91	—	—	—	
MW-6	15:33	—	19.82	—	—	—	
MW-7	15:37	—	15.10	—	—	—	
MW-8	13:38	—	20.24	—	—	—	
MW-9	15:19	—	35.21	—	—	—	
MW-10	15:23	—	28.28	—	—	—	
MW-11	14:57	—	27.85	—	—	—	
MW-12	15:25	—	30.48	—	—	—	
MW-13	08:50	—	32.75	—	—	—	
MW-14	08:57	—	31.84	—	—	—	
MW-15	15:08	—	33.35	—	—	—	
MW-16	15:04	—	28.95	—	—	—	
POND	—	—	—	—	—	—	1344.75
— 20140710	—	—	—				
2006	07:55	46.91	47.02	—	—	—	START VAC @ 08:00
2006	16:05	—	46.36	—	—	—	POST VAC 0 gal

APEX	NuStar Colt Court Air Monitoring					Date	20140710
						Employee	P. Ward
						Wind Direction	SE TO NW
						Weather	Sunny 81°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:45	0	0	0	0.1	958	
	13:15	0.1	0.2	0.2	0.1	1211	
	13:45	0	0	0	0	1124	
	14:15	0	0	0	0	1060	
MW-1	14:45	0	0	0	0	967	
	15:15	0	0	0	0	931	
	15:45	0	0	0	0	856	
	16:15	0	0	0	0	822	
—	20140711	—	—	—	—		
2006	08:15	0	0	0	0	1311	CALM
	08:45	0	0	0	0	1004	
	09:15	0	0	0	0	1028	out of south
	09:45	0	0	0	0	936	

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

APEX

NuStar Colt Court Air Monitoring

Date	20140715
Employee	Paul Ward
Wind Direction	N. To S.
Weather	Sunny 83

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	15:45	0	0	0	0	779	
	16:15	0	0	0	0	858	
	16:45	0	0	0	0	843	
	17:15	0	0	0	0	942	
—	20140716	—	—	—	—		
2006	08:15	0	0	0	0	~~1768~~ 1363	Calum
	08:45	0	0	0	0	1223	
	09:15	0	0	0	0	1137	
	09:45	0	0	0	0	1165	
MW-1	10:15	0	0	0	0	975	
	10:45	0	0	0	0	942	
	11:15	0.2	0	0	0	1168	S. to N.
	11:45	0	0	0	0	1069	

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

WELL GAGING DATA SHEET

		Job Number:	32000164I-06 + 004
Client:	Nustar	Date:	20140715
Project:	Colt Court	Sampler:	P. Ward
Weather:	Sunny	Time In/Out:	15:20

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	1525	46.33	46.41	—	—	—	START Vac @ 15:30
2006	17:35	45.91	45.94	—	—	—	POST Vac 50 gal
—	20140716	—	—	—	—	—	
2006	07:50	47.41	47.55	—	—	—	START Vac @ 08:00
2006	10:14	47.40	47.44	—	—	—	POST Vac 50 gal
MW1	09:42	—	31.82	—	—	—	START Vac @ 10:00
MW1	12:05	—	29.84	—	—	—	POST Vac 75 gal
MW2	09:40		31.86	—	—	—	
MW3	10:50	—	42.02	—	—	—	
MW4	09:30	—	30.56	—	—	—	
MW5	09:05	—	20.10	—	—	—	
MW6	10:53	—	19.006	—	—	—	
MW7	10:56	—	~~19.80~~ 15.31	—	—	—	
MW8	09:02	—	20.47	—	—	—	
MW9	11:11	—	30.46	—	—	—	
MW10	11:08	—	28.32	—	—	—	
MW11	09:37	—	29.83	—	—	—	
MW12	11:03	—	30.75	—	—	—	
MW13	09:57	—	32.55	—	—	—	
MW14	09:59	—	31.85	—	—	—	
MW15	09:50	—	33.40	—	—	—	
MW16	09:40	—	28.82	—	—	—	
POND	—	—	—	—	—	—	1344.5

WELL GAGING DATA SHEET

		Job Number:	32606 1641-26-004
Client:	Nustar	Date:	20140722
Project:	Colt Court	Sampler:	AW / JH
Weather:	Sunny 83°	Time In/Out:	08:30

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	11:25	48.21	48.32	—	—	—	Start Vac @ 11:45
2006	14:40	47.44	47.44				Post Vac 25gal
MW-1	11:20	—	31.31	—	—	—	Start Vac @ 13:50
MW-1	16:00	—	30.53	—	—	—	Post Vac 75gal
MW-2	09:46	—	32.41	—	—	—	
MW 3	10:35	—	42.80	—	—	—	
MW-4	09:50	—	30.34	—	—	—	
MW-5	09:42	—	20.04	—	—	—	
MW-6	10:41	—	19.88	—	—	—	
MW-7	10:46	—	15.59	—	—	—	
MW-8	09:38	—	20.64	—	—	—	
MW-9	12:26	—	30.56	—	—	—	
MW-10	10:16	—	28.25	—	—	—	
MW-11	09:54	—	28.13	—	—	—	
MW-12	10:12	—	30.72	—	—	—	
MW-13	09:30	—	32.46	—	—	—	
MW-14	09:35	—	31.88	—	—	—	
MW-15	10:28	—	33.29	—	—	—	
MW-16	10:01	—	28.78	—	—	—	
Pond	—	—	—	—	—	—	1344.55
2006	20140723	—	—	—	—	—	
2006	08:55	49.27	49.38	—	—	—	Start Vac @ 09:00
2006	11:10	—	48.82	—	—	—	Post Vac 25gal

APEX

NuStar Colt Court Air Monitoring

Date	20140722
Employee	RW/JH
Wind Direction	S. To North
Weather	Sunny 92°

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:00	Ø	Ø	Ø	Ø	1780	
	12:30	Ø	Ø	Ø	Ø	666.6	
	13:15	Ø	Ø	Ø	Ø	578.1	
MW-1	14:00	Ø	Ø	Ø	Ø	901.0	
	14:45	Ø	Ø	Ø	Ø	1321	
	15:15	Ø	Ø	Ø	Ø	477.3	
2006	09:30	Ø	Ø	Ø	Ø	763.7	20140723
	10:10	Ø	Ø	Ø	Ø	852.3	

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-1	Job Number:	
Client:	NUSTAR	Date:	7-23
Project:	Colt County	Sampler:	RW / JH
Weather:	Cloudy 79°	Time In/Out:	11:10

WELL DATA

Well Depth:	35	Well Diameter:	4"	Water Height	—
Depth to Water:	31.31	Screened Interval:	20-35	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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'	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
11:19	.6	.6	31.79	.2	7.55	20.19	1.297	90.2	39.0		C
11:22	.6	1.2 ~~1.8~~	31.93	.2	7.50	19.34	1.291	7.64	-0.8		C
11:25	.6	1.8 ~~2.4~~	32.05	.2	7.50	19.35	1.270	6.30	-75.8		C
11:28	.6	2.4 ~~3.00~~	32.08	.2	7.50	19.83	1.251	4.64	-105.9		C
11:31	.6	3.00	32.09	.2	7.49	19.98	1.251	5.35	-110.2		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/min	Analytical Laboratory:	ALS
Sample Time:	11:36	Final Depth to Water:	32.60	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
9 VOA	HCL	8021 / 620	yes (no)			
2 VOA	H2SO4		yes (no)			
250 ml Amber	H2SO4		yes (no)			
" "	HNO3		yes (no)			
2 " "	NEAT		yes (no)			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-2	Job Number:	
Client:	Western	Date:	7-22
Project:	Colt Court	Sampler:	RW/JH
Weather:	Sunny 99°	Time In/Out:	13:05

WELL DATA

Well Depth:	44.0	Well Diameter:	2"	Water Height	—
Depth to Water:	32.41	Screened Interval:	29-44	x Multiplier	—
Water Column Length:		Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	NA	= 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'		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
13:17	.6	.6	32.45	.2	7.50	22.22	.844	5.11	43.7		C
13:20	.6	1.2	32.74	.2	7.33	21.00	.841	4.70	52.9		C
13:23	.6	1.8	33.00	.2	7.23	21.56	.840	4.39	52.2		C
13:26	.6	2.2	33.19	.2	7.22	21.74	.852	4.79	54.7		C
					7.22						

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

SAMPLING DATA

Sample ID:	MW-2	Sampling Flow Rate	.2/min	Analytical Laboratory:	ALS
Sample Time:	13:29	Final Depth to Water:	33.20	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/GRO	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-3	Job Number:	
Client:	NISTAR	Date:	7-24
Project:	Colt Court	Sampler:	PW / JH
Weather:	Sunny	Time In/Out:	12:50

WELL DATA

Well Depth:	60	Well Diameter:	2"	Water Height	—
Depth to Water:	42.80	Screened Interval:	40-60	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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:	50'
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
12:56	.45	.45	43.21	.15	7.38	26.21	.094	2.21	-98.6		C
12:59	.45	.90	43.20	.15	7.13	24.68	.925	1.11	-98.2		C
13:02	.45	1.35	43.20	.15	7.15	25.60	.968	2.06	-98.1		C
13:05	.45	1.80	43.20	.15	7.17	25.73	.973	2.57	-97.3		C
13:08	.45	2.25	43.20	.15	7.18	25.79	.971	2.89	-95.2		C

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

SAMPLING DATA

Sample ID:	MW-3	Sampling Flow Rate	.15/min	Analytical Laboratory:	ALS
Sample Time:	13:12	Final Depth to Water:	43.21	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 - VOA	HCL	VOC 6200	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW4	Job Number:	
Client:	NuStar	Date:	7-24-14
Project:	CCC Court	Sampler:	GW / JH
Weather:	Sunny	Time In/Out:	11:30

WELL DATA

Well Depth:	41.00	Well Diameter:	2"	Water Height	—
Depth to Water:	30.34	Screened Interval:	26-41	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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

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
11:35	.6	.6	30.94	.2	7.17	20.37	1.144	.73	25.8		C
11:38	.6	~~1.8~~ 1.2	31.11	.2	7.19	19.89	1.140	.70	16.9		C
11:41	.6	~~2.4~~ 1.8	31.31	.2	7.22	20.60	1.137	.62	2.5		C
11:44	.6	~~3.0~~ 2.4	31.45	.2	7.24	20.53	1.135	.57	-9.2		C

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

SAMPLING DATA

Sample ID:	MW4	Sampling Flow Rate	.2/min	Analytical Laboratory:	ACS
Sample Time:	11:48	Final Depth to Water:	31.56	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
12	HCL	VOC/6020	yes (no)			DUP2
			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:	
Client:	Nustar	Date:	7-23
Project:	Colt Court	Sampler:	PN/JK
Weather:	Sunny 81°	Time In/Out:	09:05

WELL DATA

Well Depth:	30	Well Diameter:	2"	Water Height	—
Depth to Water:	20.04	Screened Interval:	15-30	x Multiplier	—
Water Column Length:		Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	NA	= 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:	Peristaltic	Pump Intake Depth:	25'	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
09:09	.6	.6	20.18	.2	7.09	22.23	1.410	2.15	77.0		C
09:12	.6	1.8	20.35	.2	7.12	21.35	1.413	0.66	64.0		C
09:15	.6	~~2.4~~ 1.8	20.40	.2	7.15	~~21.35~~ 21.26	1.442	2.04	63.8		C
09:18	.6	~~3.0~~ 2.4	20.51	.2	7.17	20.70	1.458	2.28	63.5		C

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

SAMPLING DATA

Sample ID:	MW-5	Sampling Flow Rate	.2/min	Analytical Laboratory:	ALS
Sample Time:	09:21	Final Depth to Water:	21.52	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/6260	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-6	Job Number:	
Client:	NUSTAR	Date:	7-24
Project:	Colt Court	Sampler:	[illegible] / JH
Weather:	Sunny	Time In/Out:	13:15

WELL DATA

Well Depth:	41	Well Diameter:	2"	Water Height	—
Depth to Water:	19.88	Screened Interval:	26-41	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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'	Comments
Sampling Method:	Same	Tubing Type:	PLY	

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
13:23	.9	.9	20.66	.3	7.38	18.08	1.303	6.22	20.5		C
13:26	.9	1.8	20.99	.3	7.29	19.35	1.299	5.74	18.6		C
13:29	.9	2.7	21.05	.3	7.28	19.48	1.306	5.87	17.0		C
13:32	.9	3.6	21.12	.3	7.27	19.56	1.303	5.64	17.1		C

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

SAMPLING DATA

Sample ID:	MW-6	Sampling Flow Rate	.3/min	Analytical Laboratory:	ALS
Sample Time:	~~20.66~~ 13:16	Final Depth to Water:	21.24	Did Well Dewater?	NO

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

COMMENTS

Sample time should have been 13:36. Labels say 13:16 Also

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-7	Job Number:	
Client:	NUSTAR	Date:	7-24
Project:	NUSTAR	Sampler:	PW / JH
Weather:	Sunny	Time In/Out:	13:40

WELL DATA

Well Depth:	24	Well Diameter:	2"	Water Height	—
Depth to Water:	15.39	Screened Interval:	9-24	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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:	19'	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
13:45	.9	.9	15.66	.3	7.50	18.89	.742	.43	8.5		C
13:48	.9	1.8	15.79	.3	7.43	18.50	.741	.45	-1.2		C
13:51	.9	2.7	15.80	.3	7.40	18.40	.741	.59	-6.5		C
13:54	.9	3.6	15.82	.3	7.38	18.24	.740	.66	-10.9		C

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

SAMPLING DATA

Sample ID:	MW-7	Sampling Flow Rate	.3 / min	Analytical Laboratory:	ALS
Sample Time:	13:58	Final Depth to Water:	15.84	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/GEO	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:	
Client:	Nustar	Date:	7-22
Project:	Colt Court	Sampler:	PW/JH
Weather:	104° Sunny	Time In/Out:	15:25

WELL DATA

Well Depth:	30'	Well Diameter:	2"	Water Height	—
Depth to Water:	20.64	Screened Interval:	15-30'	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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:	25'	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
15:32	.75	.75	20.95	.25	7.52	21.77	1.101	6.57	100.4		C
15:35	.75	1.5	21.10	.25	7.33	20.53	1.100	5.56	93.3		C
15:38	.75	2.25	21.11	.25	7.27	20.04	1.128	5.21	81.5		C
15:41	.75	3.00	21.17	.25	7.27	19.71	1.156	4.88	70.1		C

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

SAMPLING DATA

Sample ID:	MW-8	Sampling Flow Rate	.25/min	Analytical Laboratory:	ALS
Sample Time:	15:46	Final Depth to Water:	21.19	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/6010	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:	
Client:	Mission	Date:	7-24
Project:	Colt Court	Sampler:	PW/JH
Weather:	Sunny	Time In/Out:	12:20

WELL DATA

Well Depth:	34	Well Diameter:	2"	Water Height	—
Depth to Water:	30.56	Screened Interval:	19.34	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	No	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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:	32'	Comments
Sampling Method:	Same	Tubing Type:	PVC	

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
12:30	.6	.6	30.66	.2	7.20	23.20	1.074	4.42	48.2		C
12:33	.6	1.2	30.74	.2	7.09	23.61	1.076	3.77	50.2		C
12:36	.6	1.8	30.80	.2	7.10	23.37	1.076	3.67	48.9		C
12:39	.6	2.4	30.88	.2	7.11	23.24	1.080	3.59	48.1		C

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

SAMPLING DATA

Sample ID:	MW9	Sampling Flow Rate	.2/min	Analytical Laboratory:	ALS
Sample Time:	12:43	Final Depth to Water:	30.98	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/GRO	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:	
Client:	NuStar	Date:	7-24
Project:	Colt Court	Sampler:	PW / JH
Weather:	Sunny	Time In/Out:	12:55

WELL DATA

Well Depth:	34	Well Diameter:	2"	Water Height	—
Depth to Water:	28.38	Screened Interval:	19-34	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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'	Comments	
Sampling Method:	same	Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria

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

SAMPLING DATA

Sample ID:		Sampling Flow Rate		Analytical Laboratory:	
Sample Time:		Final Depth to Water:		Did Well Dewater?	

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

COMMENTS

Could not sample, Needs Re Development

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-11	Job Number:	
Client:	NUSTAR	Date:	7-23
Project:	COLT COAST	Sampler:	PW JJH
Weather:	cloudy 81°	Time In/Out:	10:40

WELL DATA

Well Depth:	42	Well Diameter:	2"	Water Height	—
Depth to Water:	28.13	Screened Interval:	22-42	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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:	32'
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
10:47	.75	.75	28.13	.25	7.36	19.46	1.421	2.71	105.8		SC
10:50	.75	1.5	28.14	.25	7.27	19.75	1.426	2.43	103.6		SC
10:53	.75	2.25	28.14	.25	7.25	20.04	1.425	2.40	102.5		SC
10:56	.75	3.00	28.29	.25	7.24	20.17	1.438	2.45	100.1		

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

SAMPLING DATA

Sample ID:	MW-11	Sampling Flow Rate	.25/min	Analytical Laboratory:	ALS
Sample Time:	10:59	Final Depth to Water:	28.59	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/8260	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:	
Client:	Nustar	Date:	7/22/14
Project:	Colt Ct.	Sampler:	JHr PW
Weather:	Sun-Hot 100F	Time In/Out:	12:00

WELL DATA

Well Depth:	43.00	Well Diameter:	2"	Water Height	—
Depth to Water:	30.92	Screened Interval:	23-43	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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 (mS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.2	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
12:10	.6	.6	30.84	.2	7.01	21.10	1.045	1.19	-4.6		SC
12:13	.6	1.2	30.81	.2	7.02	23.65	1.054	1.03	-4.3		SC
12:16	.6	1.8	30.82	.2	7.05	23.97	1.063	.93	-4.5		SC
12:19	.6	2.4	30.84	.2	7.08	24.45	1.067	.90	-5.5		SC
12:22	.6	3.0	30.84	.2	7.11	24.34	1.067	.85	-5.0		SC

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

SAMPLING DATA

Sample ID:	MW-12	Sampling Flow Rate	.2/min	Analytical Laboratory:	ACS
Sample Time:	12:25	Final Depth to Water:	30.96	Did Well Dewater?	N/A

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
4 VOAs	HCl	—	yes no			
2 VOAs	H_2SO_4	—	yes no			
250 ml Plastic	" "	—	yes no			
" "	HNO_3	—	yes no			
" "	Neat	—	yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	mw-13	Job Number:	
Client:	NUSTAR	Date:	7-22-14
Project:	Colt Court	Sampler:	AW / JH
Weather:	102° Sunny	Time In/Out:	14:50

WELL DATA

Well Depth:	45'	Well Diameter:	2"	Water Height	—
Depth to Water:	32.46	Screened Interval:	25'-45'	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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
14:57	.9	.9	32.42	.3	7.54	26.09	.798	11.68	75.4		SC
1500	.9	1.8	32.69	.3	7.34	23.92	.790	8.57	81.2		SC
1503	.9	2.7	32.89	.3	7.30	23.67	.790	8.17	78.8		SC
1506	.9	3.6	33.00	.3	7.31	23.53	.790	8.10	75.8		AC

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

SAMPLING DATA

Sample ID:	mw-13	Sampling Flow Rate	.3/min	Analytical Laboratory:	ALS
Sample Time:	15:10	Final Depth to Water:	33.25	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC / 8260	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-14	Job Number:	32000/641-06
Client:	NUSTAR	Date:	7-22
Project:	Colt Ct.	Sampler:	PW/JTH
Weather:	Sunny 99°	Time In/Out:	

WELL DATA

Well Depth:	45.00	Well Diameter:	2"	Water Height	—
Depth to Water:	31.88	Screened Interval:	25-45'	x Multiplier	—
Water Column Length:		Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	NA	= 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'	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
14:15	.75	.75	31.94	.25	7.57	24.09	.701	8.61	54.2		C
14:18	.75	1.5	32.32	.25	7.36	22.65	.692	6.26	67.9		C
14:21	.75	2.25	32.79	.25	7.30	22.17	.682	~~6.0~~ 5.26	68.8		C
14:24	.75	3.00	32.92	.25	7.32	22.63	.683	4.81	66.2		C

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

SAMPLING DATA

Sample ID:	MW-14	Sampling Flow Rate	SAME	Analytical Laboratory:	ALS
Sample Time:	14:28	Final Depth to Water:	34.07	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
9 VOA	HCL		yes (no)			
2 VOA	H2SO4		yes (no)			
250 mL PLASTIC	" "		yes (no)			
" "	HNO3		yes (no)			
" "	NEAT		yes (no)			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.

Well I.D.	MW-15	Job Number:	
Client:	NUSTAR	Date:	20140723
Project:	Colt Court	Sampler:	PW / JH
Weather:	Cloudy 81°	Time In/Out:	10:15

WELL DATA

Well Depth:	45'	Well Diameter:	2"	Water Height	—
Depth to Water:	33.29	Screened Interval:	25-45	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	NA	= 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:	Pneumat. 2	Pump Intake Depth:	35'	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
10:20	.45	.45	33.84	.15	7.34	18.45	.736	5.41	89.4		C
10:23	.45	.90	34.00	.15	7.31	18.32	.735	5.06	90.9		C
10:26	.45	1.35	34.18	.15	7.30	18.17	.735	4.78	91.8		C
10:29	.45	1.80	34.22	.15	7.31	18.11	.734	4.78	91.7		C

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

SAMPLING DATA

Sample ID:	MW-15	Sampling Flow Rate	.15/min	Analytical Laboratory:	ALS
Sample Time:	10:32	Final Depth to Water:	34.28	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCL	VOC/GRO	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:	
Client:	NUSTAR	Date:	20140723
Project:	Colt Court	Sampler:	PW/JH
Weather:	Partly Cloudy 83°	Time In/Out:	09:35

WELL DATA

Well Depth:	45'	Well Diameter:	2"	Water Height	—
Depth to Water:	28.78	Screened Interval:	25-45	x Multiplier	—
Water Column Length:		Depth to Free Product:	NA	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	NA	= 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'	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
09:46	.75	.75	28.91	.25	7.46	22.93	.973	8.39	80.2		C
09:49	.75	1.5	29.15	.25	7.32	22.20	.991	4.80	83.3		C
09:52	.75	2.25	29.42	.25	7.29	22.02	.989	4.54	84.5		C
09:55	.75	3.00	29.55	.25	7.28	21.63	.986	4.56	85.5		C
09:58	.75	3.75	29.69	.25	7.28	21.58	.981	4.60	86.7		C

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

SAMPLING DATA

Sample ID:	MW-16	Sampling Flow Rate	.25/min	Analytical Laboratory:	ALS
Sample Time:	10:02	Final Depth to Water:	29.95	Did Well Dewater?	No

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

COMMENTS

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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	* #3 2006 N Colt CT
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	HAD Free product at
Phone	(503) 924-4704	Phone	(503) 924-4704	H	Sampling
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	2002 N Colt Ct	7-23	15:15	Water	HCL	6	X	X									
2	2007 N Colt Ct	7-23	15:35				X	X									
3	2006 N Colt Ct.	7-23	15:55				X	X									X
4	1211 W. Quail Ct	7-23	16:05				X	X									
5	HOA 1	7-23	16:20				X	X									
6	Dup 1	—	—				X	X									
7	Dup 2	—	—	Water	HCL	6											
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Ward [signature]

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: 7-23-14	Time: 18:30	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/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

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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	1009 W. Mountain	7-23	13:15	Water	HCL	6	X	X									
2	2009 N Mountain CT	7-23	13:40	|	|	|	|	|									
3	2007 N mountain CT	7-23	13:50	|	|	|	|	|									
4	2019 N. Ruger Circle	7-23	14:00	|	|	|	|	|									
5	2020 N Ruger Circle	7-23	14:10	|	|	|	|	|									
6	2028 N Ruger circle	7-23	14:20	|	|	|	|	|									
7	2032 N. Ruger circle	7-23	14:30	|	|	|	|	|									
8	2025 N Ruger CT.	7-23	14:40	|	|	|	|	|									
9	2021 N Ruger CT	7-23	14:50	|	|	|	|	|									
0	2005 N. colt CT	7-23	15:05	Water	HCL	6	X	X									

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

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:

	Date:	Time:		
Relinquished by: [signature]			Received by:	
Relinquished by: [signature]	7-23-14	18:30	Received by (Laboratory):	
Logged by (Laboratory):			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 d2
- [ ] 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

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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 (Case)	City/State/Zip	Portland, OR 97201	G	VOL'S (8260) Colt Ct GW List
Phone	(503) 924-4704 NO - HAV - GAS	Phone	(503) 924-4704	H	GRO - VPH - DA - 1
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

o.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	~~DUP 1~~	~~XXX~~	~~XXX~~ —	water	~~HCL~~	~~6~~	~~1~~	~~5~~	~~5~~				~~X~~	~~X~~	1	1	
2	~~XX~~		NOTHING		FOLLOWS										5	1	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
0																	

ampler(s) Please Print & Sign: Paul Weand

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:

	Date:	Time:		
elinquished by: Paul Weand	7-23-14	18:30	Received by:	
elinquished by:	Date:	Time:	Received by (Laboratory):	
gged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: Andover SQ 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 ChkList
- [ ] TRRP Level 4

Reservative 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

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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	VOC's (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	

o.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-12	7-22	12:25	Water			X	X	X	X	X	X	X	X			
2	MW-2		13:29										X	X			
3	MW-14		14:28				X	X	X	X	X	X	X	X			
4	MW-13		15:10										X	X			
5	MW-8		15:46										X	X			
6	MW-5	7-23-14	09:21										X	X			
7	MW-16		10:02										X	X			
8	MW-15		10:32										X	X			
9	MW-11		10:59										X	X			
0	MW-1						X	X	X	X	X	X	X	X			

mpler(s) Please Print & Sign: Paul Wood

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:

linquished by:	Date: 7-23-14	Time: 18:30	Received by:
linquished by:	Date:	Time:	Received by (Laboratory):
gged 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 ChkList
[ ] TRRP Level 4

eservative 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

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Holland, MI 49424-9263
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Fax: +1 616 399 6185

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 Ct. List
Work Order		Project Number	ACE 0065	B	GRO - UPH - OA-1
Company Name	Apex Companies	Bill To Company	Same	C	
Send Report To	Sam Jackson	Invoice Attn	← Sam	D	
Address	3015 SW 1st Ave	Address	Same	E	
				F	
City/State/Zip	Portland, OR	City/State/Zip	" "	G	
Phone	503-924-4704	Phone	" "	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	← " "	J	

#	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
	MW-4	7-24	11:48	Water	HCL	6	X	X									
	MW-9	7-24	12:43	Water	HCL	6	X	X									
	MW-3	7-24-14	13:12	" "	" "	6	X	X									
	MW-6	"	13:16*	" "	" "	6	X	X									
	MW-7	"	13:58	" "	" "	6	X	X									
	Dup-2	" "		" "													

Sampler(s) Please Print & Sign: Paul Ward

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☐ Other ____ ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date: 7/24/14	Time: 13:30	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: *MW-6 should read Same time @ 13:36

Cooler ID	Cooler Temp

QC Package: (Check One Box Below)
☐ Level II Std QC
☐ Level III Std QC/Raw Date
☐ Level IV SW846/CLP
☐ Other ____
☐ TRRP Checklist
☐ TRRP Level IV

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

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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	7-24	11:07	water	HCL	6	X	X									
2	HOA Z	7-24	11:15	water	HCL	6	X	X									
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

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:
[signature]	7/24/14	18:30	
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

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WELL GAGING DATA SHEET

Client:	Nustar	Job Number:	32000164-06.004
Project:	Colt Cart	Date:	20140731
Weather:	Sunny 82°	Sampler:	P.Ward
		Time In/Out:	12:15

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	12:20	49.06	49.18	—	—	—	START Vac @ 12:25
2006	15:15	—	48.55	—	—	—	POST Vac 25 gal
MW-1	14:18	—	31.65	—	—	—	START Vac @ 14:25
MW-1	16:30	—	26.52	—	—	—	POST Vac 75 gal
MW-2	14:07	—	31.91	—	—	—	
MW 3	15:04		43.14	—	—	—	
MW-4	14:33	—	30.52	—	—	—	
MW-5	14:11	—	20.26	—	—	—	
MW-6	15:07	—	20.00	—	—	—	
MW-7	15:10	—	15.72	—	—	—	
MW-8	14:15	—	20.39	—	—	—	
MW-9	CAR	PARKED	OVER	Well			
MW-10	0848	—	28.50	—	—	—	GAUGED ON 8-1
MW-11	14:37	—	28.49	—	—	—	
MW-12	~~14:46~~	15:19 —	31.07	—	—	—	
MW-13	13:50	—	32.47	—	—	—	
MW-14	13:56	—	31.94	—	—	—	
MW-15	14:46	—	33.89	—	—	—	
MW-16	14:43	—	29.19	—	—	—	
POND	—	—	—	—	—	—	1344.35
2006	07:55	—	51.04	—	—	—	START Vac @ 0800
2006	10:07	—	50.79	—	—	—	

APEX

NuStar Colt Court Air Monitoring

Date	20140731
Employee	P. Wang
Wind Direction	CALM
Weather	Sunny 81°

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	13:00	Ø	Ø	Ø	Ø	1450	
	13:30	Ø	Ø	Ø	Ø	1248	
	14:00	Ø	Ø	Ø	Ø	1216	wind N-S
MW-1	15:00	Ø	Ø	Ø	Ø	848	
	15:30	Ø	Ø	Ø	Ø	910	
	16:00	Ø	Ø	Ø	Ø	927	
2006	08:30	Ø	Ø	Ø	Ø	1781	20140801
	09:00	Ø	Ø	Ø	Ø	1301	
	09:30	Ø	Ø	Ø	Ø	1201	

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-10	Job Number:	320001641-86-003
Client:	NUSTAR	Date:	8-1-14
Project:	Colt County	Sampler:	J. Wind
Weather:	Sunny 72°	Time In/Out:	08:50

WELL DATA

Well Depth:	34'	Well Diameter:	2"	Water Height	—
Depth to Water:	28.50	Screened Interval:	19-34'	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'	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
09:14	.45	.45	28.75	.15	7.49	21.37	1.234	10.04	96.4		AC
09:17	.45	.90	28.90	.15	7.54	21.22	1.235	9.69	85.0		AC
09:20	.45	1.35	29.06	.15	7.58	21.06	1.236	9.81	78.8		AC
09:23	.45	1.80	29.20	.15	7.59	21.23	1.236	9.61	76.9		AC

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

SAMPLING DATA

Sample ID:	MW-10	Sampling Flow Rate	.15/min	Analytical Laboratory:	ALS
Sample Time:	09:27	Final Depth to Water:	29.42	Did Well Dewater?	NO

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

COMMENTS

WELL GAGING DATA SHEET

		Job Number:	32002641-06.004
Client:	Nustar	Date:	20140805
Project:	Colt Court	Sampler:	P. Wane
Weather:	Sunny 92°	Time In/Out:	12:00

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	12:00	51.92	52.05	—	—	—	START Vac @ 12:05
2006	14:50	51.30	51.38	—	—	—	Post Vac 25 gal
MW-1	1347	—	31.78	—	—	—	START Vac @ 14:05
MW-1	16:10	—	28.46	—	—	—	Post Vac 75 gal
MW-2	08:38	—	32.25	—	—	—	
MW-3	09:06	—	47.55	—	—	—	
MW-4	08:46	—	30.69	—	—	—	
MW-5	08:45	—	20.29	—	—	—	
MW-6	09:09	—	20.29	—	—	—	
MW-7	09:14	—	15.32	—	—	—	
MW-8	09:42	—	20.96	—	—	—	
MW-9	CAR	PARKED	OVER	well	—	—	
MW-10	09:20	—	28.47	—	—	—	
MW-11	08:20	—	28.49	—	—	—	
MW-12	0825	—	31.15	—	—	—	
MW-13	0855		32.40	—	—	—	
MW-14	08:50	—	32.01	—	—	—	
MW-15	08:28	—	34.09	—	—	—	
MW-16	08:24	—	29.80	—	—	—	
BND	09:11	—	—	—	—	—	134.25
2006	0755	52.79	52.92	—	—	—	Start Vac @ 08:00
2006	10:05	52.62	52.62	—	—	—	Post Vac 25 gal

APEX

NuStar Colt Court Air Monitoring

Date	20140805
Employee	Paul Ward
Wind Direction	S. TO N.
Weather	Sunny 92°

Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:30	0	0	0	0	1242	
	13:00	0	0	0	0	1118	
	13:30	0	0	0	0	1101	
mw-1	14:30	0	0	0	0	1441	
	1500	0	0	0	0	2045	
	15:30	0	0	0	0	1357	
—	20140806		—	—	—	—	
2006	08:30	0	0	0	0	1552	Wind S. TO N
	09:00	0	0	0	0	1089	
		0	0	0	0	1224	

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:	32000164-06.004
Project:	Colt Court	Date:	8-14-14
Weather:	Sunny 75°	Sampler:	P. Ulmer
		Time In/Out:	0750 - 16:45

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	0755	52.79	52.94	—	—	—	START Vac @ 08:00
2006	11:45	52.01	52.09	—	—	—	Post Vac 25 gal
MW-1	09:45	—	31.73	—	—	—	START Vac @ 10:05
MW-1	12:40	—	31.37	—	—	—	Post Vac 50 gal
MW-3	12:20	—	45.27	—	—	—	START Vac @ 12:30
MW-3	14:50	—	45.85	—	—	—	Post Vac 25 gal
2006	14:25	51.31	51.40	—	—	—	START Vac @ 14:30
2006	16:35	50.66	50.67	—	—	—	Post Vac 25 gal
MW-2	12:45	—	32.88	—	—	—	
MW-4	14:16	—	30.61	—	—	—	
MW-5	13:17	—	20.23	—	—	—	
MW-6	14:44	—	20.42	—	—	—	
MW-7	14:47	—	15.59	—	—	—	
MW-8	13:20	—	21.09	—	—	—	
MW-9	13:11	—	31.44	—	—	—	
MW-10	13:08	—	28.41	—	—	—	
MW-11	14:21	—	28.46	—	—	—	
MW-12	13:05	—	31.07	—	—	—	
MW-13	13:25	—	32.33	—	—	—	
MW-14	13:28	—	32.04	—	—	—	
MW-15	15:10	—	34.19	—	—	—	
MW-16	14:57	—	29.09	—	—	—	
POND	—	—	—	—	—	—	1344.5

APEX	NuStar Colt Court Air Monitoring					Date	8-14-14
						Employee	P. Wand
						Wind Direction	S. TO N.
						Weather	Sunny 72
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	08:30	0	0	0	0	1267	
	09:00	0	0	0	0	1553	
	09:30	0	0	0	0	1233	
MW-1	10:30	0.4	0	0	0	1180	
	11:00	1.0	0	0	0	1004	
	11:30	0.2	0	0	0	1494	
MW-3	13:00	0	0	0	0	397	
	13:30	0	0	0	0	29.1	
	14:00	0	0	0	0	14.7	
2006	15:00	0	0	0	0	725	
	15:30	0	0	0	0	704	
	16:00	0	0	0	0	617	

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:	320001641-06.004
Project:	Salt Creek	Date:	20140820
Weather:	Sunny 88°	Sampler:	T. Ward
		Time In/Out:	09:45-

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	09:55	54.09	54.23	—	—	—	START VAC @ 10:00
2006	12:56	53.41	53.44	—	—	—	POST VAC
MW-1	11:20	—	31.68	—	—	—	START VAC @ 12:00
MW-1	15:50	—	31.42	—	—	—	POST VAC 25 gal
MW-3	12:44	—	47.96	—	—	—	START VAC @ 1400
MW-3	11:10	—	49.15	—	—	—	POST VAC 0 gal 8-21-14
MW-2	12:20	—	32.54	—	—	—	
MW-4	12:05	—	30.81	—	—	—	
MW-5	13:52	—	20.24	—	—	—	
MW-6	12:47	—	20.56	—	—	—	
MW-7	12:53	—	15.73	—	—	—	
MW-8	13:48	—	21.06	—	—	—	
MW-9							
MW-10	13:08	—	28.40	—	—	—	
MW-11	12:08	—	28.54	—	—	—	
MW-12	13:14	—	31.01	—	—	—	
MW-13	13:36	—	32.35	—	—	—	
MW-14	13:43	—	33.01	—	—	—	
MW-15	12:16	—	34.28	—	—	—	
MW-16	12:12	—	29.21	—	—	—	
POND	12:54	—	—	—	—	—	1344.5
2006	08:55	54.98	55.02	—	—	—	START VAC @ 09:00
2006	11:05	54.48	54.50	—	—	—	POST VAC 0 gal

APEX	NuStar Colt Court Air Monitoring					Date	20140820
						Employee	P. Ward
						Wind Direction	S - N
						Weather	Sunny 88°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	10:30	0.5	0	0	0	1653	
	11:00	0	0	0	0	1525	
	11:30	0	0	0	0	1488	
MW-1	12:30	0.2	0	0	0	2263	
	13:00	0	0	0	0	1931	
	13:30	0	0	0	0	3033	Replaced Filter
MW-3	14:30	1.2	0	0	0	445	
	15:00	0	0	0	0	331	
	15:30	0	0	0	0	307	
—	20140821	0	0	0	0	—	
2006	~~09:30~~	0	0	0	0	2768	
	10:00	0.9	0	0	0	1307	
	10:30	0.2	0	0	0	1242	

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

APEX	NuStar Colt Court Air Monitoring					Date	8-26-14
						Employee	P. Ward
						Wind Direction	S TO N
						Weather	Sunny 80°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	11:30	Ø	Ø	Ø	Ø	1464	
	12:00	Ø	Ø	Ø	Ø	1982	
	12:30	Ø	Ø	Ø	Ø	1907	
MW-1	1330	Ø	Ø	Ø	~~20~~ Ø	2983	
	14:00	Ø	Ø	Ø	Ø	2756	
	14:30	Ø	Ø	Ø	Ø	2054	
MW-3	1530	Ø	Ø	Ø	Ø	539	
	16:00	Ø	Ø	Ø	Ø	435	
	16:30	Ø	Ø	Ø	Ø	385	
—	—	—	8-27-14	—	—	—	
2006	08:30	Ø	Ø	Ø	Ø	1954	
	09:00	Ø	Ø	Ø	Ø	2295	
	09:30	Ø	Ø	Ø	Ø	3178	

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:	32000/641-06.004
Project:	Colt Court	Date:	20140826
Weather:	Sunny 88°	Sampler:	P. Ward
		Time In/Out:	10:45

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	10:50	58.20	58.27	—	—	—	START Vac @ 11:00
2006	14:20	57.25	57.29	—	—	—	POST Vac 25 gal
MW-1	12:35	—	31.79	—	—	—	START Vac @ 13:00
MW-1	1527	—	31.35	—	—	—	POST Vac 50 gal
MW-3	14:52	—	51.32	—	—	—	START Vac @ 1500
MW-3	17:05	—	50.20	—	—	—	POST Vac 25 gal
MW-2	13:40	—	33.00	—	—	—	
MW-4	14:35	—	30.73	—	—	—	
MW-5	13:57	—	20.37	—	—	—	
MW-6	15:35	—	20.72	—	—	—	
MW-7	15:44	—	15.90	—	—	—	
MW-8	13:53	—	21.24	—	—	—	
MW-9	CAR	PARKED	OVER	WELL			
MW-10	15:18	—	28.44	—	—	—	
MW-11	14:38	—	28.53	—	—	—	
MW-12	1522	—	31.12	—	—	—	
MW-13	13:48	—	37.26	—	—	—	
MW-14	13:44	—	32.15	—	—	—	
MW-15	15:12	—	34.44	—	—	—	
MW-16	14:42	—	29.23	—	—	—	
POND	—	—	—	—	—	—	1344.25
2006	07:55	58.39	58.57	—	—	—	8-27-14 START at 0800
2006	10:05	—	58.25	—	—	—	POST Vac 25 gal

WELL GAGING DATA SHEET

Client:	Nustar	Job Number:	32000164I-06-004
Project:	Colt Court	Date:	20140903
Weather:	Sunny 86°	Sampler:	P. Wood
		Time In/Out:	10:00

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	10:15	57.29	57.48	—	—	—	START VAC @ 10:20
2006	14:10	56.42	56.43	—	—	—	POST VAC ~25gal
MW-1	12:15	—	31.79	—	—	—	START VAC @ 12:20
MW-1	14:29	—	31.23	—	—	—	POST VAC ~25gal
MW-2	12:57	—	32.96	—	—	—	
MW-3	12:30	—	51.10	—	—	—	
MW-4	11:00	—	30.91	—	—	—	
MW-8 ~~MW-5~~	11:44	—	24.36	—	—	—	
MW-6	12:33	—	20.98	—	—	—	
MW-7	12:37	—	15.99	—	—	—	
MW-5 ~~MW-8~~	11:40	—	20.44	—	—	—	
MW-9	RED CAP STILL PACKED OVER.						
MW-10	12:40	—	29.46	—	—	—	
MW-11	11:05	—	28.60	—	—	—	
MW-12	12:45	—	31.12	—	—	—	
MW-13	12:06	—	32.32	—	—	—	
MW-14	12:14	—	32.19	—	—	—	
MW-15	11:14	—	34.65	—	—	—	
MW-16	11:10	—	29.38	—	—	—	
POND	—	—	—	—	—	—	1344.40
2006	08:55	58.22	58.38	—	—	—	START VAC @ 09:00
2006	11:05	—	57.55	—	—	—	POST VAC / ~25gal

APEX	NuStar Colt Court Air Monitoring					Date	20140963
						Employee	P. Ward
						Wind Direction	S. TO N.
						Weather	Sunny 86°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	10:50	Ø	Ø	Ø	Ø	1279	
	11:20	Ø	Ø	Ø	Ø	1287	
	11:50	Ø	Ø	Ø	Ø	1438	
MW-1	12:50	Ø	Ø	Ø	Ø	1680	
	13:20	Ø	Ø	Ø	Ø	2566	
	13:50	Ø	Ø	Ø	Ø	2476	
2006	09:30	Ø	Ø	Ø	Ø	2566	20140904
	10:00	Ø	Ø	Ø	Ø	1427	
	10:30	1.2	Ø	Ø	Ø	877	

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

APEX	NuStar Colt Court Air Monitoring					Date	20140910
						Employee	P. Ward
						Wind Direction	North
						Weather	Cloudy 70°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	13:30	Ø	Ø	Ø	Ø	1087	
2006	14:00	Ø	Ø	2.3	Ø	1127	wind out of west
2006	14:30	Ø	Ø	Ø	Ø	1159	
MW-1	15:30	4.7	Ø	3.9	Ø	977	
MW-1	16:00	Ø	Ø	Ø	Ø	1104	
MW-1	16:30	Ø	Ø	Ø	Ø	1011	
—	2014	0911	—	—	—	—	
2006	09:30	Ø	Ø	Ø	Ø	1298	
2006	10:00	Ø	Ø	Ø	Ø	1126	
2006	10:30	Ø	Ø	Ø	Ø	1005	

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:	32000164-06.004
Project:	Andover/Cook St	Date:	20140910
Weather:	Cloudy 70°	Sampler:	P. Ward
		Time In/Out:	12:00

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	12:35	57.94	58.12	—	—	—	Start Vac @ 13:00
2006	15:50	57.40	57.40	—	—	—	Post Vac 0 gal / Sheen only
MW-1	13:50	~~31.71~~	31.71	—	—	—	Start Vac @ 15:00
MW-1	17:05	—	27.55	—	—	—	Post Vac 50 gal
MW-2	15:11	~~32.70~~	32.70	—	—	—	
MW-3	15:36	—	51.74	—	—	—	
MW-4	14:44	—	30.82	—	—	—	
MW-5	15:14	—	20.43	—	—	—	
MW-6	15:39	—	21.02	—	—	—	
MW-7	15:43	—	16.03	—	—	—	
MW-8	15:17	—	31.44	—	—	—	
MW-9	15:54	—	32.21	—	—	—	
MW-10	15:57	—	28.44	—	—	—	
MW-11	14:47	—	28.65	—	—	—	
MW-12	16:05	—	31.12	—	—	—	
MW-13	15:~~40~~	—	32.46	—	—	—	
MW-14	15:27	—	32.30	—	—	—	
MW-15	14:53	—	34.79	—	—	—	
MW-16	14:50	—	29.58	—	—	—	
Pond	—	—	—	—	—	—	1344.25
—	2014	0911	—	—	—	—	
2006	08:55	58.96	59.15	—	—	—	Start Vac @ 09:00
2006	11:05	58.54	58.57	—	—	—	Post Vac 0 gal

APEX	NuStar Colt Court Air Monitoring					Date	9-16-14
						Employee	P. Ward
						Wind Direction	CALM
						Weather	OVERCAST 70°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:30	Ø	Ø	Ø	Ø	1654	
2006	13:00	Ø	Ø	Ø	Ø	1173	
2006	13:30	Ø	Ø	Ø	Ø	1312	
MW-1	14:30	Ø	Ø	Ø	Ø	1746	
MW-1	15:00	Ø	Ø	Ø	Ø	932	
MW-1	15:30	Ø	Ø	Ø	Ø	935	
—	20140917		—	—	—	—	
2006	08:30	Ø	Ø	Ø	Ø	2366	CALM
2006	09:00	Ø	Ø	Ø	Ø	1007	
2006	09:30	Ø	Ø	Ø	Ø	1042	

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:	32000164I-06.004
Project:	Colt Court	Date:	9-16-14
Weather:	OVERCAST 70°	Sampler:	P. Ward
		Time In/Out:	11:50

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	11:55	57.98	58.14	—	—	—	START Vac @ 12:00
2006	14:52	57.58	57.58	—	—	—	POST Vac 0gal / sheen only
MW-1	13:25	—	31.72	—	—	—	START Vac @ 14:05
MW-1	16:00	—	28.50	—	—	—	Post Vac 25 gal
MW-2	14:06	—	32.58	—	—	—	
MW-3	14:40	—	51.84	—	—	—	
MW-4	13:45	—	30.91	—	—	—	
MW-5	14:11	—	20.54	—	—	—	
MW-6	14:43	—	21.49	—	—	—	
MW-7	14:47	—	16.14	—	—	—	
MW-8	14:17	—	21.56	—	—	—	
MW-9							
MW-10	15:06	—	28.46	—	—	—	
MW-11	13:48	—	28.69	—	—	—	
MW-12	15:10	—	31.12	—	—	—	
MW-13	14:19	—	32.42	—	—	—	
MW-14	14:24	—	32.38	—	—	—	
MW-15	13:56	—	34.98	—	—	—	
MW-16	13:53	—	29.71	—	—	—	
POND		—	—	—	—	—	1344.10
—	—	20140917	—	—	—	—	
2006	0755	58.75	58.95	—	—	—	START Vac @ 08:00
2006	10:05	—	58.77	—	—	—	POST Vac 25gal

WELL GAGING DATA SHEET

		Job Number:	320001641-06.004
Client:	Nustar	Date:	9-24-14
Project:	Colt Comet	Sampler:	P. Wump
Weather:	67° Light Rain	Time In/Out:	11:45

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	12:50	58.95	59.17	—	—	—	START Vac @ 12:00
2006	15:06	58.80	58.80	—	—	—	POST Vac 0 gal / sheen only
MW-1	13:17	—	31.75	—	—	—	START Vac @ 14:00
MW-1	16:05	—	30.18	—	—	—	POST Vac 50 gal
MW-2	14:04	—	33.38	—	—	—	
MW-3	14:37	—	52.93	—	—	—	
MW-4	13:37	—	29.98	—	—	—	
MW-5	14:06	—	20.66	—	—	—	
MW-6	14:40	—	21.50	—	—	—	
MW-7	14:44	—	16.24	—	—	—	
MW-8	14:10	—	21.69	—	—	—	
MW-9	14:48	—	32.48	—	—	—	
MW-10	14:50	—	28.47	—	—	—	
MW-11	13:40	—	28.69	—	—	—	
MW-12	14:54	—	31.11	—	—	—	
MW-13	14:14	—	32.51	—	—	—	
MW-14	14:17	—	32.52	—	—	—	
MW-15	13:48	—	35.29	—	—	—	
MW-16	13:44	—	29.95	—	—	—	
POND	—	—	—	—	—	—	1344.0
2006	07:50	60.35	60.58	—	—	—	START Vac @ 0800
2006	10:05	—	60.26	—	—	—	POST Vac 0 gal

APEX	NuStar Colt Court Air Monitoring					Date	9-25-14
						Employee	J. Ward
						Wind Direction	South
						Weather	67° Light Rain
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:30	0.2	Ø	Ø	Ø	1457	
	13:00	Ø	Ø	Ø	Ø	~~13:03~~ 1303	
	13:30	Ø	Ø	Ø	Ø	1311	
MW-1	14:30	0.6	Ø	Ø	Ø	994	
	15:00	Ø	Ø	Ø	Ø	1059	
	15:30	Ø	Ø	Ø	Ø	1037	
2006	0830	Ø	Ø	Ø	Ø	1551	wind Calm 9-25-14
	09:00	Ø	Ø	Ø	Ø	1282	
	09:30	0.6	Ø	Ø	Ø	1234	

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)
MW-1	8/8/2013	4.0	1352.13	35.0	20-35	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
	1/16/2014					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
	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

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	8/8/2013	2.0	1353.17	44	29-44	31.93	--	--	1321.24
	8/13/2013					31.27	--	--	1321.90
	8/21/2013					30.85	--	--	1322.32
	8/28/2013					31.45	--	--	1321.72
	9/5/2013					31.45	--	--	1321.72
	9/11/2013					32.18	--	--	1320.99
	9/17/2013					32.10	--	--	1321.07
	9/23/2013					31.66	--	--	1321.51
	9/30/2013					32.55	--	--	1320.62
	10/10/2013					29.11	--	--	1324.06
	10/17/2013					31.91	--	--	1321.26
	10/23/2013					32.47	--	--	1320.70
	10/31/2013					32.19	--	--	1320.98
	11/6/2013					31.46	--	--	1321.71
	11/13/2013					31.96	--	--	1321.21
	11/20/2013					31.19	--	--	1321.98
	11/26/2013					31.38	--	--	1321.79
	12/3/2013					30.94	--	--	1322.23
	12/11/2013					NM	--	--	NM
	12/19/2013					31.45	--	--	1321.72
	12/27/2013					NM	--	--	NM
	1/3/2014					NM	--	--	NM
	1/10/2014					NM	--	--	NM
	1/16/2014					31.21	--	--	1321.96
	1/21/2014					31.49	--	--	1321.68
	1/27/2014					31.90	--	--	1321.27
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					32.06	--	--	1321.11
	2/26/2014					31.96	--	--	1321.21
	3/4/2014					32.41	--	--	1320.76
	3/13/2014					32.09	--	--	1321.08
	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
	8/14/2015					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

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	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
	5/8/2014					45.96	--	--	1304.51
	5/13/2014					47.00	--	--	1303.47
	5/20/2014					49.95	--	--	1300.52
	5/29/2014					47.07	--	--	1303.40
	6/3/2014					47.89	--	--	1302.58
	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
	8/14/2015					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

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	8/8/2013	2.0	1350.73	41	26-41	28.89	--	--	1321.84
	8/13/2013					28.85	--	--	1321.88
	8/21/2013					28.18	--	--	1322.55
	8/28/2013					28.56	--	--	1322.17
	9/5/2013					29.16	--	--	1321.57
	9/11/2013					29.55	--	--	1321.18
	9/17/2013					30.06	--	--	1320.67
	9/23/2013					30.32	--	--	1320.41
	9/30/2013					30.11	--	--	1320.62
	10/10/2013					30.45	--	--	1320.28
	10/17/2013					30.43	--	--	1320.30
	10/23/2013					30.36	--	--	1320.37
	10/31/2013					30.14	--	--	1320.59
	11/6/2013					29.78	--	--	1320.95
	11/13/2013					30.21	--	--	1320.52
	11/20/2013					29.81	--	--	1320.92
	11/26/2013					30.34	--	--	1320.39
	12/3/2013					30.64	--	--	1320.09
	12/11/2013					30.19	--	--	1320.54
	12/19/2013					30.47	--	--	1320.26
	12/27/2013					30.43	--	--	1320.30
	1/3/2014					NM	--	--	NM
	1/10/2014					29.44	--	--	1321.29
	1/16/2014					29.38	--	--	1321.35
	1/21/2014					29.53	--	--	1321.20
	1/27/2014					30.36	--	--	1320.37
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					30.61	--	--	1320.12
	2/26/2014					31.56	--	--	1319.17
	3/4/2014					30.54	--	--	1320.19
	3/13/2014					30.56	--	--	1320.17
	3/18/2014					30.80	--	--	1319.93
	3/27/2014					30.72	--	--	1320.01
	4/3/2014					30.49	--	--	1320.24
	4/7/2014					30.53	--	--	1320.20
	4/17/2014					30.54	--	--	1320.19
	4/22/2014					31.02	--	--	1319.71
	4/29/2014					31.25	--	--	1319.48
	5/8/2014					31.59	--	--	1319.14
	5/13/2014					31.30	--	--	1319.43
	5/20/2014					31.73	--	--	1319.00
	5/29/2014					31.63	--	--	1319.10
	6/3/2014					32.68	--	--	1318.05
	6/10/2014					32.52	--	--	1318.21
	6/18/2014					31.71	--	--	1319.02
	6/24/2014					30.73	--	--	1320.00
	7/1/2014					30.60	--	--	1320.13
	7/10/2014					30.39	--	--	1320.34
	7/15/2014					30.56	--	--	1320.17
	7/22/2014					30.34	--	--	1320.39
	7/31/2014					30.52	--	--	1320.21
	8/5/2014					30.69	--	--	1320.04
	8/14/2015					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-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
	4/3/2014					21.70	--	--	1331.07
	4/7/2014					21.05	--	--	1331.72
	4/17/2014					21.10	--	--	1331.67
	4/22/2014					21.30	--	--	1331.47
	4/29/2014					21.15	--	--	1331.62
	5/8/2014					21.33	--	--	1331.44
	5/13/2014					21.17	--	--	1331.60
	5/20/2014					21.48	--	--	1331.29
	5/29/2014					21.41	--	--	1331.36
	6/3/2014					21.16	--	--	1331.61
	6/10/2014					20.65	--	--	1332.12
	6/18/2014					20.30	--	--	1332.47
	6/24/2014					19.96	--	--	1332.81
	7/1/2014					19.74	--	--	1333.03
	7/10/2014					19.91	--	--	1332.86
	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
	8/14/2015					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

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	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
	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
	3/4/2014					22.06	--	--	1327.70
	3/13/2014					22.30	--	--	1327.46
	3/18/2014					22.14	--	--	1327.62
	3/27/2014					21.89	--	--	1327.87
	4/3/2014					21.92	--	--	1327.84
	4/7/2014					22.37	--	--	1327.39
	4/17/2014					22.33	--	--	1327.43
	4/22/2014					22.41	--	--	1327.35
	4/29/2014					22.16	--	--	1327.60
	5/8/2014					22.02	--	--	1327.74
	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
	8/14/2015					20.42	--	--	1329.34
	8/20/2014					20.56	--	--	1329.20
	8/26/2014					20.72	--	--	1329.04
	9/3/2014					20.98	--	--	1328.78
	9/10/2014					21.02	--	--	1328.74
	9/17/2014					21.49	--	--	1328.27
	9/24/2014					21.50	--	--	1328.26

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-7	8/8/2013	2.0	1348.98	24	9-24	13.32	--	--	1335.66
	8/13/2013					13.68	--	--	1335.30
	8/21/2013					14.03	--	--	1334.95
	8/28/2013					14.76	--	--	1334.22
	9/5/2013					15.44	--	--	1333.54
	9/11/2013					15.66	--	--	1333.32
	9/17/2013					15.78	--	--	1333.20
	9/23/2013					15.54	--	--	1333.44
	9/30/2013					15.39	--	--	1333.59
	10/10/2013					15.65	--	--	1333.33
	10/17/2013					15.68	--	--	1333.30
	10/23/2013					15.64	--	--	1333.34
	10/31/2013					15.66	--	--	1333.32
	11/6/2013					15.11	--	--	1333.87
	11/13/2013					15.21	--	--	1333.77
	11/20/2013					15.62	--	--	1333.36
	11/26/2013					15.89	--	--	1333.09
	12/3/2013					16.03	--	--	1332.95
	12/11/2013					16.45	--	--	1332.53
	12/19/2013					16.41	--	--	1332.57
	12/27/2013					16.59	--	--	1332.39
	1/3/2014					NM	--	--	NM
	1/10/2014					16.47	--	--	1332.51
	1/16/2014					16.45	--	--	1332.53
	1/21/2014					16.66	--	--	1332.32
	1/27/2014					16.68	--	--	1332.30
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					16.61	--	--	1332.37
	2/26/2014					16.64	--	--	1332.34
	3/4/2014					16.65	--	--	1332.33
	3/13/2014					16.73	--	--	1332.25
	3/18/2014					16.68	--	--	1332.30
	3/27/2014					16.56	--	--	1332.42
	4/3/2014					16.64	--	--	1332.34
	4/7/2014					16.60	--	--	1332.38
	4/17/2014					16.66	--	--	1332.32
	4/22/2014					16.70	--	--	1332.28
	4/29/2014					16.70	--	--	1332.28
	5/8/2014					16.95	--	--	1332.03
	5/13/2014					16.80	--	--	1332.18
	5/20/2014					15.69	--	--	1333.29
	5/29/2014					17.44	--	--	1331.54
	6/3/2014					16.13	--	--	1332.85
	6/10/2014					14.85	--	--	1334.13
	6/18/2014					15.52	--	--	1333.46
	6/24/2014					14.78	--	--	1334.20
	7/1/2014					14.74	--	--	1334.24
	7/10/2014					15.10	--	--	1333.88
	7/15/2014					15.31	--	--	1333.67
	7/22/2014					15.39	--	--	1333.59
	7/31/2014					15.72	--	--	1333.26
	8/5/2014					15.82	--	--	1333.16
	8/14/2015					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

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	8/8/2013	2.0	1353.38	30	15-30	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
	1/16/2014					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
	7/1/2014					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
	8/14/2015					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

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	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
	1/3/2014					NM	--	--	NM
	1/10/2014					28.65	--	--	1320.83
	1/16/2014					28.75	--	--	1320.73
	1/21/2014					28.91	--	--	1320.57
	1/27/2014					28.93	--	--	1320.55
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					29.09	--	--	1320.39
	2/26/2014					29.16	--	--	1320.32
	3/4/2014					NM	--	--	NM
	3/13/2014					29.31	--	--	1320.17
	3/18/2014					29.17	--	--	1320.31
	3/27/2014					28.59	--	--	1320.89
	4/3/2014					30.00	--	--	1319.48
	4/7/2014					30.25	--	--	1319.23
	4/17/2014					30.81	--	--	1318.67
	4/22/2014					31.06	--	--	1318.42
	4/29/2014					31.50	--	--	1317.98
	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
	8/14/2015					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

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	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
	5/8/2014					29.01	--	--	1319.78
	5/13/2014					29.08	--	--	1319.71
	5/20/2014					29.21	--	--	1319.58
	5/29/2014					28.95	--	--	1319.84
	6/3/2014					28.46	--	--	1320.33
	6/10/2014					28.25	--	--	1320.54
	6/18/2014					27.25	--	--	1321.54
	6/24/2014					NM	--	--	NM
	7/1/2014					28.44	--	--	1320.35
	7/10/2014					28.28	--	--	1320.51
	7/15/2014					28.32	--	--	1320.47
	7/22/2014					28.28	--	--	1320.51
	7/31/2014					28.50	--	--	1320.29
	8/5/2014					28.47	--	--	1320.32
	8/14/2015					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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-11	9/30/2013	2.0	1351.34	42	22-42	29.03	--	--	1322.31
	10/10/2013					28.08	--	--	1323.26
	10/17/2013					28.26	--	--	1323.08
	10/23/2013					29.36	--	--	1321.98
	10/31/2013					28.92	--	--	1322.42
	11/6/2013					28.14	--	--	1323.20
	11/13/2013					28.16	--	--	1323.18
	11/20/2013					27.70	--	--	1323.64
	11/26/2013					28.03	--	--	1323.31
	12/3/2013					28.03	--	--	1323.31
	12/11/2013					28.54	--	--	1322.80
	12/19/2013					28.53	--	--	1322.81
	12/27/2013					28.80	--	--	1322.54
	1/3/2014					NM	--	--	NM
	1/10/2014					29.60	--	--	1321.74
	1/16/2014					28.89	--	--	1322.45
	1/21/2014					28.99	--	--	1322.35
	1/27/2014					28.91	--	--	1322.43
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					28.52	--	--	1322.82
	2/26/2014					28.71	--	--	1322.63
	3/4/2014					28.61	--	--	1322.73
	3/13/2014					28.77	--	--	1322.57
	3/18/2014					28.51	--	--	1322.83
	3/27/2014					28.68	--	--	1322.66
	4/3/2014					28.77	--	--	1322.57
	4/7/2014					28.75	--	--	1322.59
	4/17/2014					28.79	--	--	1322.55
	4/22/2014					28.92	--	--	1322.42
	4/29/2014					28.90	--	--	1322.44
	5/8/2014					29.84	--	--	1321.50
	5/13/2014					29.91	--	--	1321.43
	5/20/2014					28.52	--	--	1322.82
	5/29/2014					30.09	--	--	1321.25
	6/3/2014					29.34	--	--	1322.00
	6/10/2014					28.71	--	--	1322.63
	6/18/2014					28.44	--	--	1322.90
	6/24/2014					28.09	--	--	1323.25
	7/1/2014					27.76	--	--	1323.58
	7/10/2014					27.85	--	--	1323.49
	7/15/2014					29.83	--	--	1321.51
	7/22/2014					28.13	--	--	1323.21
	7/31/2014					28.49	--	--	1322.85
	8/5/2014					28.49	--	--	1322.85
	8/14/2015					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

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	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
	7/15/2014					30.75	--	--	1318.99
	7/22/2014					30.72	--	--	1319.02
	7/31/2014					31.07	--	--	1318.67
	8/5/2014					31.15	--	--	1318.59
	8/14/2015					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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-13	9/30/2013	2.0	1354.58	45	25-45	31.25	--	--	1323.33
	10/10/2013					31.59	--	--	1322.99
	10/17/2013					31.74	--	--	1322.84
	10/23/2013					31.70	--	--	1322.88
	10/31/2013					31.72	--	--	1322.86
	11/6/2013					31.61	--	--	1322.97
	11/13/2013					31.70	--	--	1322.88
	11/20/2013					30.84	--	--	1323.74
	11/26/2013					31.30	--	--	1323.28
	12/3/2013					31.02	--	--	1323.56
	12/11/2013					31.26	--	--	1323.32
	12/19/2013					31.16	--	--	1323.42
	12/27/2013					31.48	--	--	1323.10
	1/3/2014					NM	--	--	NM
	1/10/2014					31.22	--	--	1323.36
	1/16/2014					32.70	--	--	1321.88
	1/21/2014					31.94	--	--	1322.64
	1/27/2014					31.98	--	--	1322.60
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.92	--	--	1322.66
	2/26/2014					32.10	--	--	1322.48
	3/4/2014					32.05	--	--	1322.53
	3/13/2014					32.25	--	--	1322.33
	3/18/2014					32.05	--	--	1322.53
	3/27/2014					32.16	--	--	1322.42
	4/3/2014					32.41	--	--	1322.17
	4/7/2014					32.35	--	--	1322.23
	4/17/2014					32.38	--	--	1322.20
	4/22/2014					32.70	--	--	1321.88
	4/29/2014					32.91	--	--	1321.67
	5/8/2014					33.03	--	--	1321.55
	5/13/2014					32.95	--	--	1321.63
	5/20/2014					33.39	--	--	1321.19
	5/29/2014					33.34	--	--	1321.24
	6/3/2014					33.45	--	--	1321.13
	6/10/2014					33.50	--	--	1321.08
	6/18/2014					33.44	--	--	1321.14
	6/24/2014					33.16	--	--	1321.42
	7/1/2014					32.90	--	--	1321.68
	7/10/2014					32.75	--	--	1321.83
	7/15/2014					32.99	--	--	1321.59
	7/22/2014					32.46	--	--	1322.12
	7/31/2014					32.47	--	--	1322.11
	8/5/2014					32.40	--	--	1322.18
	8/14/2015					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

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
	8/14/2015					32.04	--	--	1322.95
	8/20/2014					32.01	--	--	1322.98
	8/26/2014					32.15	--	--	1322.84
	9/3/2014					32.19	--	--	1322.80
	9/10/2014					32.30	--	--	1322.69
	9/17/2014					32.38	--	--	1322.61
	9/24/2014					32.52	--	--	1322.47

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-15	9/30/2013	2.0	1351.79	45	25-45	32.64	--	--	1319.15
	10/10/2013					32.75	--	--	1319.04
	10/17/2013					32.93	--	--	1318.86
	10/23/2013					32.84	--	--	1318.95
	10/31/2013					32.77	--	--	1319.02
	11/6/2013					32.23	--	--	1319.56
	11/13/2013					31.72	--	--	1320.07
	11/20/2013					30.80	--	--	1320.99
	11/26/2013					30.96	--	--	1320.83
	12/3/2013					30.63	--	--	1321.16
	12/11/2013					30.93	--	--	1320.86
	12/19/2013					31.75	--	--	1320.04
	12/27/2013					31.05	--	--	1320.74
	1/3/2014					NM	--	--	NM
	1/10/2014					31.10	--	--	1320.69
	1/16/2014					31.30	--	--	1320.49
	1/21/2014					31.61	--	--	1320.18
	1/27/2014					31.61	--	--	1320.18
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.82	--	--	1319.97
	2/26/2014					32.03	--	--	1319.76
	3/4/2014					32.10	--	--	1319.69
	3/13/2014					37.20	--	--	1314.59
	3/18/2014					37.00	--	--	1314.79
	3/27/2014					32.29	--	--	1319.50
	4/3/2014					32.60	--	--	1319.19
	4/7/2014					32.89	--	--	1318.90
	4/17/2014					33.69	--	--	1318.10
	4/22/2014					34.24	--	--	1317.55
	4/29/2014					34.95	--	--	1316.84
	5/8/2014					35.85	--	--	1315.94
	5/13/2014					35.89	--	--	1315.90
	5/20/2014					38.63	--	--	1313.16
	5/29/2014					36.85	--	--	1314.94
	6/3/2014					NM	--	--	NM
	6/10/2014					NM	--	--	NM
	6/18/2014					35.10	--	--	1316.69
	6/24/2014					34.65	--	--	1317.14
	7/1/2014					33.78	--	--	1318.01
	7/10/2014					33.35	--	--	1318.44
	7/15/2014					33.40	--	--	1318.39
	7/22/2014					33.29	--	--	1318.50
	7/31/2014					33.89	--	--	1317.90
	8/5/2014					34.04	--	--	1317.75
	8/14/2015					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

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	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
	12/3/2013					29.52	--	--	1322.61
	12/11/2013					29.71	--	--	1322.42
	12/19/2013					28.51	--	--	1323.62
	12/27/2013					29.97	--	--	1322.16
	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
	8/14/2015					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

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	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
	4/3/2014						--	--	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
	8/14/2015						--	--	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

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
Andover Colt Court Release Site
Andover, Kansas

Well	Date	Depth to Groundwater (feet bgs)	Depth to Product (feet)	Product Thickness (feet)	SPH Recovered (gallons)	Water Recovered (gallons)	Total Gallons Recovered	Fluid Removal Technology
Irrigation Well - 2006 N. Colt Court	6/14/2012	NM	NM	NM	20	NM	NM	Mobile vacuum truck
	6/15/2012	NM	NM	NM	20	NM	NM	Mobile vacuum truck
	6/28/2012	NM	NM	NM	10	0	10	Hand bailer
	7/2/2012	NM	NM	NM	10	0	10	Hand bailer
	7/3/2012	NM	NM	NM	5	0	5	Hand bailer
	7/5/2012	NM	NM	NM	8	0	8	Hand bailer
	7/5/2012	NM	NM	NM	5	NM	NM	Mobile vacuum truck
	8/15/2012	NM	NM	NM	15	0	15	Hand bailer
	8/20/2012	NM	NM	NM	5	0	5	Hand bailer
	11/8/2012	NM	NM	NM	15	NM	NM	Hand bailer
	11/15/2012	NM	NM	NM	15	0	15	Hand bailer
	11/21/2012	NM	NM	NM	15	0	15	Hand bailer
	11/30/2012	NM	NM	NM	7	0	15	Hand bailer
	12/7/2012	NM	NM	NM	4	4	11	Hand bailer
	12/14/2012	NM	NM	NM	2	2	6	Hand bailer
	12/21/2012	NM	NM	NM	2	2	4	Hand bailer
	12/28/2012	NM	NM	NM	1.5	2	4	Hand bailer
	1/4/2013	NM	NM	NM	1	1	2.5	Hand bailer
	1/17/2013	NM	NM	NM	1.5	2	3	Hand bailer
	2/1/2013	NM	NM	NM	2	1.5	3	Hand bailer
	2/13/2013	NM	NM	NM	3	1.5	3.5	Hand bailer
	3/15/2013	NM	NM	NM	10	1	4	Hand bailer
	3/20/2013	NM	NM	NM	5	0	10	Hand bailer
	4/5/2013	NM	NM	NM	8	1	6	Hand bailer
	4/12/2013	NM	NM	NM	1	4	4	Hand bailer
	4/25/2013	NM	NM	NM	4	2	3	Hand bailer

Please refer to notes at end of table.

Table B-2
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
Andover Colt Court Release Site
Andover, Kansas

Well	Date	Depth to Groundwater (feet bgs)	Depth to Product (feet)	Product Thickness (feet)	SPH Recovered (gallons)	Water Recovered (gallons)	Total Gallons Recovered	Fluid Removal Technology
Irrigation Well - 2006 N. Colt Court	5/10/2013	NM	NM	NM	9	2	6	Hand bailer
	5/17/2013	NM	NM	NM	4	1	8	Hand bailer
	5/21/2013	NM	NM	NM	1	2	6	Hand bailer
	6/5/2013	NM	NM	NM	1	2	3	Hand bailer
	6/12/2013	42.19	41.38	0.81	8	1	2	Mobile vacuum truck and hand bailing
	6/21/2013	43.73	43.40	0.33	4	NM	NM	Mobile vacuum truck
	6/26/2013	43.59	43.16	0.43	2.5	NM	NM	Mobile vacuum truck
	7/2/2013	49.31	49.01	0.30	1.5	NM	NM	Mobile vacuum truck
	7/12/2013	55.11	54.82	0.29	2	NM	NM	Mobile vacuum truck
	7/17/2013	55.10	54.88	0.22	4	NM	NM	Mobile vacuum truck
	8/1/2013	46.35	46.15	0.20	2	NM	NM	Mobile vacuum truck
	8/8/2013	41.49	--	0.00	0	NM	NM	Mobile vacuum truck
	8/13/2013	39.10	--	0.00	0	NM	NM	Mobile vacuum truck
	8/20/2013	37.40	--	0.00	0	NM	NM	Mobile vacuum truck
	8/28/2013	43.81	--	0.00	0	NM	NM	Mobile vacuum truck
	9/5/2013	47.86	--	0.00	0	NM	NM	Mobile vacuum truck
	9/11/2013	50.61	--	0.00	0	NM	NM	Mobile vacuum truck
	9/17/2013	49.06	--	0.00	0	NM	NM	Mobile vacuum truck
	9/23/2013	48.97	--	0.00	0	NM	NM	Mobile vacuum truck
	9/30/2013	48.63	--	0.00	0	NM	NM	Mobile vacuum truck
	10/10/2013	49.16	49.01	0.15	1	NM	NM	Mobile vacuum truck
	10/17/2013	48.40	--	0.00	0	NM	NM	Mobile vacuum truck
	10/24/2013	48.71	--	0.00	0	NM	NM	Mobile vacuum truck
	10/31/2013	44.86	--	0.00	0	NM	NM	Mobile vacuum truck

Please refer to notes at end of table.

Table B-2
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
Andover Colt Court Release Site
Andover, Kansas

Well	Date	Depth to Groundwater (feet bgs)	Depth to Product (feet)	Product Thickness (feet)	SPH Recovered (gallons)	Water Recovered (gallons)	Total Gallons Recovered	Fluid Removal Technology
Irrigation Well - 2006 N. Colt Court	11/6/2013	43.66	--	0.00	0	NM	NM	Mobile vacuum truck
	11/13/2013	41.82	--	0.00	0	NM	NM	Mobile vacuum truck
	11/20/2013	40.60	--	0.00	0	NM	NM	Mobile vacuum truck
	11/26/2013	40.30	40.19	0.11	1	NM	NM	Mobile vacuum truck
	12/3/2013	39.44	sheen	0.00	0	NM	NM	Mobile vacuum truck
	12/11/2013	39.63	sheen	0.00	0	NM	NM	Mobile vacuum truck
	12/19/2013	39.23	--	0.00	0	NM	NM	Mobile vacuum truck
	12/27/2013	39.38	39.34	0.04	1	NM	NM	Mobile vacuum truck
	1/3/2014	NM	NM	NM	--	NM	NM	Mobile vacuum truck
	1/10/2014	39.89	--	0.00	0	NM	NM	Mobile vacuum truck
	1/16/2014	39.83	--	0.00	0	NM	NM	Mobile vacuum truck
	1/21/2014	39.34	--	0.00	0	NM	NM	Mobile vacuum truck
	1/30/2014	38.85	--	0.00	0	NM	NM	Mobile vacuum truck
	2/12/2014	39.44	39.43	0.01	0	NM	NM	Mobile vacuum truck
	2/19/2014	39.37	39.36	0.01	0	NM	NM	Mobile vacuum truck
	2/26/2014	39.64	39.60	0.04	0	NM	NM	Mobile vacuum truck
	3/4/2014	39.76	39.73	0.03	0	NM	NM	Mobile vacuum truck
	3/13/2014	39.89	39.86	0.03	0	NM	NM	Mobile vacuum truck
	3/18/2014	39.65	39.61	0.04	0	NM	NM	Mobile vacuum truck
	3/27/2014	39.73	39.69	0.04	0	NM	NM	Mobile vacuum truck
	4/3/2014	40.46	40.42	0.04	0	NM	NM	Mobile vacuum truck
	4/8/2014	41.14	41.11	0.03	0	NM	NM	Mobile vacuum truck
	4/9/2014	41.47	41.43	0.04	0	NM	NM	Mobile vacuum truck
	4/10/2014	41.82	41.76	0.06	0	NM	NM	Mobile vacuum truck
	4/11/2014	43.25	43.21	0.04	0	NM	NM	Mobile vacuum truck
	4/17/2014	43.17	43.13	0.04	0	NM	NM	Mobile vacuum truck
	4/22/2014	44.95	44.90	0.05	0	NM	NM	Mobile vacuum truck
	4/29/2014	46.43	46.36	0.07	0	NM	NM	Mobile vacuum truck

Please refer to notes at end of table.

Table B-2
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
Andover Colt Court Release Site
Andover, Kansas

Well	Date	Depth to Groundwater (feet bgs)	Depth to Product (feet)	Product Thickness (feet)	SPH Recovered (gallons)	Water Recovered (gallons)	Total Gallons Recovered	Fluid Removal Technology
Irrigation Well - 2006 N. Colt Court	5/8/2014	51.28	51.15	0.13	0	NM	NM	Mobile vacuum truck
	5/13/2014	51.83	51.66	0.17	0	NM	NM	Mobile vacuum truck
	5/20/2014	54.12	53.94	0.18	0	NM	NM	Mobile vacuum truck
	5/21/2014	55.28	55.11	0.17	0	NM	NM	Mobile vacuum truck
	5/29/2014	52.24	52.06	0.18	0	NM	NM	Mobile vacuum truck
	5/30/2014	53.32	53.13	0.19	0	NM	NM	Mobile vacuum truck
	6/2/2014	52.65	52.50	0.15	0	NM	NM	Mobile vacuum truck
	6/3/2014	52.63	52.49	0.14	0	NM	NM	Mobile vacuum truck
	6/10/2014	48.48	48.31	0.17	0	NM	NM	Mobile vacuum truck
	6/11/2014	49.10	48.95	0.15	0	NM	NM	Mobile vacuum truck
	6/18/2014	46.34	46.20	0.14	0	NM	NM	Mobile vacuum truck
	6/19/2014	47.60	47.43	0.17	0	NM	NM	Mobile vacuum truck
	6/24/2014	47.80	47.67	0.13	0	NM	NM	Mobile vacuum truck
	6/25/2014	46.94	46.81	0.13	0	NM	NM	Mobile vacuum truck
	7/1/2014	44.64	44.50	0.14	0	NM	NM	Mobile vacuum truck
	7/2/2014	44.78	44.64	0.14	0	NM	NM	Mobile vacuum truck
	7/10/2014	46.12	46.03	0.09	0	NM	NM	Mobile vacuum truck
	7/11/2014	47.02	46.91	0.11	0	NM	NM	Mobile vacuum truck
	7/15/2014	46.41	46.33	0.08	0	NM	NM	Mobile vacuum truck
	7/16/2014	47.55	47.41	0.14	0	NM	NM	Mobile vacuum truck
	7/22/2014	48.32	48.21	0.11	0	NM	NM	Mobile vacuum truck
	7/23/2014	49.38	49.27	0.11	0	NM	NM	Mobile vacuum truck
	7/31/2014	49.18	49.06	0.12	0	NM	NM	Mobile vacuum truck
	8/1/2014	51.04	--	0.00	0	NM	NM	Mobile vacuum truck
	8/5/2014	52.05	51.92	0.13	0	NM	NM	Mobile vacuum truck
	8/6/2014	52.92	52.79	0.13	0	NM	NM	Mobile vacuum truck
	8/14/2015	52.94	52.79	0.15	0	NM	NM	Mobile vacuum truck
	8/15/2014	51.40	51.31	0.09	0	NM	NM	Mobile vacuum truck
	8/20/2014	54.23	54.09	0.14	0	NM	NM	Mobile vacuum truck

Please refer to notes at end of table.

Table B-2
Separate- and Dissolved-Phase Recovery Data - 2006 N. Colt Court
Andover Colt Court Release Site
Andover, Kansas

Well	Date	Depth to Groundwater (feet bgs)	Depth to Product (feet)	Product Thickness (feet)	SPH Recovered (gallons)	Water Recovered (gallons)	Total Gallons Recovered	Fluid Removal Technology
Irrigation Well - 2006 N. Colt Court	8/21/2014	55.02	54.98	0.04	0	NM	NM	Mobile vacuum truck
	8/26/2014	58.27	58.20	0.07	0	NM	NM	Mobile vacuum truck
	8/27/2014	58.57	58.39	0.18	0	NM	NM	Mobile vacuum truck
	9/3/2014	57.48	57.29	0.19	0	NM	NM	Mobile vacuum truck
	9/4/2014	58.28	58.22	0.06	0	NM	NM	Mobile vacuum truck
	9/10/2014	58.12	57.94	0.18	0	NM	NM	Mobile vacuum truck
	9/11/2014	59.15	58.96	0.19	0	NM	NM	Mobile vacuum truck
	9/16/2014	58.14	57.98	0.16	0	NM	NM	Mobile vacuum truck
	9/17/2014	58.95	58.75	0.20	0	NM	NM	Mobile vacuum truck
	9/24/2014	59.17	58.95	0.22	0	NM	NM	Mobile vacuum truck
	9/25/2014	60.58	60.35	0.23	0	NM	NM	Mobile vacuum truck

Notes

1. The SPH volume removed using vacuum technology was calculated by measuring the SPH thicknesses in the well before and after each event. The volume of SPH removed is approximate.
2. SPH = Separate-phase hydrocarbons.
3. NM = Not measured.
4. -- = No SPH.
5. Depth to water and depth to SPH were not measured on 1/3/2014 due to equipment malfunction.
6. An SPH removal event was not performed on 2/5/14 due to severe weather.

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 July 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 HS14070940

The data reviewed includes groundwater samples collected from monitoring wells on July 22, 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 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 methylcyclohexane in batch R238509 was outside of the recommended limits. The RPD for the MS and MSD for orthophosphate was outside of the control limits for sample MW-14.

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 wells MW-5. Only naphthalene was detected in the primary and duplicate samples. The RPD was 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 HS14070994

The data reviewed includes groundwater sample data collected from irrigation wells on July 23 and 24, 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 percent recovery of GRO in the MS/MSD for the sample from 2032 Ruger Court was side of the recommended limits; however, the associated LCS recovery was within control limits, providing quality control for the batch. The percent recovery of methylcyclohexane in the MS/MSD for the sample from 1910 Colt Court was outside of the control limits; however, the associated LCS recovery was within control limits, providing quality control for the batch. The MS/MSD performed on an unrelated sample was outside control limits for cyclohexane; however, the associated LCS recovery was within control limits, providing quality control for the batch.

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 both the primary and duplicate samples collected from that well.

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 HS14071011

The data reviewed includes groundwater sample data collected during sampling performed on July 24, 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 an unrelated sample was outside control limits for GRO; however, the associated LCS recovery was within control limits, providing quality control for the batch. The MS/MSD performed on an unrelated sample was outside control limits for 1,3,5-trimethylbenzene; however, the associated LCS recovery was within control limits, providing quality control for the batch. The MS performed on an unrelated sample was outside control limits for naphthalene; however, the associated LCS recovery was within control limits, providing quality control for the batch.

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 monitoring wells MW-4. The RPDs fro constituents detected in the primary and duplicate samples were within the recommended limits. The higher concentration in the primary/duplicate samples is shown on the report figures.

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.

4.3 Groundwater Lab Report HS14080060

The data reviewed includes groundwater sample data collected during sampling performed on August 1, 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.

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

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. 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.

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August 08, 2014

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

Work Order: **HS14070940**

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

Dear Samuel,

ALS Environmental received 14 sample(s) on Jul 24, 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: E3CE-0065 Andover Release Site
Work Order: HS14070940

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14070940-01	MW-12	Water		22-Jul-2014 12:25	24-Jul-2014 09:50	☐
HS14070940-02	MW-2	Water		22-Jul-2014 13:29	24-Jul-2014 09:50	☐
HS14070940-03	MW-14	Water		22-Jul-2014 14:28	24-Jul-2014 09:50	☐
HS14070940-04	MW-13	Water		22-Jul-2014 15:10	24-Jul-2014 09:50	☐
HS14070940-05	MW-8	Water		22-Jul-2014 15:46	24-Jul-2014 09:50	☐
HS14070940-06	MW-5	Water		23-Jul-2014 09:21	24-Jul-2014 09:50	☐
HS14070940-07	MW-16	Water		23-Jul-2014 10:02	24-Jul-2014 09:50	☐
HS14070940-08	MW-15	Water		23-Jul-2014 10:32	24-Jul-2014 09:50	☐
HS14070940-09	MW-11	Water		23-Jul-2014 10:59	24-Jul-2014 09:50	☐
HS14070940-10	MW-1	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☐
HS14070940-11	Dup 1	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☐
HS14070940-12	Trip Blank 070714-61	Water		22-Jul-2014 00:00	24-Jul-2014 09:50	☑
HS14070940-13	Trip Blank 071114-06	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☑
HS14070940-14	Trip Blank 070714-53	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☑

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070940

CASE NARRATIVE

GC Semivolatiles by Method RSK-175

Batch ID: R238186

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

GC Volatiles by Method IA OA-1

Batch ID: R238041

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

GCMS Volatiles by Method HS14071242-13

Batch ID: R238578

Sample ID: **HS14070940-10**
- MS/MSD performed on unrelated sample

GCMS Volatiles by Method SW8260

Batch ID: R238509

Sample ID: **HS14070994-19**
- MS/MSD performed on unrelated sample.

Metals by Method SW6020

Batch ID: 84506,84559,84637

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

WetChemistry by Method SM4500 NH3-D

Batch ID: R238397

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

WetChemistry by Method E415.1

Batch ID: R238372

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

WetChemistry by Method E300

Batch ID: R238038

Sample ID: **MW-14 (HS14070940-03MS)**
- The recoveries of the Matrix Spike/ Matrix Spike Duplicate was outside of the established control limits for Phosphorus, Dissolved Orthophosphate (As P). However, the LCS was within control limits. The failed recoveries of the MS/MSD may be due to sample matrix interference.

Sample ID: **MW-14 (HS14070940-03MSD)**
- The RPD between the MS and MSD was outside of the control limit.

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070940
Sample ID:	MW-12	Lab ID:HS14070940-01
Collection Date:	22-Jul-2014 12:25	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 17:47
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 17:47
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 17:47
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 17:47
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 17:47
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 17:47
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 17:47
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*31-Jul-2014 17:47*
Surr: 4-Bromofluorobenzene	*97.7*		*70-125*	*%REC*	*1*	*31-Jul-2014 17:47*
Surr: Dibromofluoromethane	*99.5*		*74-125*	*%REC*	*1*	*31-Jul-2014 17:47*
Surr: Toluene-d8	*97.8*		*75-125*	*%REC*	*1*	*31-Jul-2014 17:47*
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 30-Jul-2014		Analyst: RPM
Iron	ND		0.200	mg/L	1	30-Jul-2014 19:00
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: MYA
Methane	**2.53**		**0.500**	**ug/L**	1	28-Jul-2014 13:41
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: MYC
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	30-Jul-2014 12:00
TOTAL ORGANIC CARBON BY E415.1		**Method:E415.1**				Analyst: KHT
Organic Carbon, Total	**1.3**		**1.0**	**mg/L**	1	30-Jul-2014 09:27
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 25-Jul-2014		Analyst: RPM
Potassium	**2.28**		**0.200**	**mg/L**	1	28-Jul-2014 15:46
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 16:24
Surr: 4-Bromofluorobenzene	*79.1*		*70-130*	*%REC*	*1*	*24-Jul-2014 16:24*
ANIONS BY E300.0		**Method:E300**				Analyst: KKB
Nitrogen, Nitrate (As N)	**1.14**		**0.100**	**mg/L**	1	24-Jul-2014 19:25
Phosphorus, Dissolved Orthophosphate (As P)	**0.991**		**0.100**	**mg/L**	1	24-Jul-2014 19:25
Sulfate	**69.4**		**0.500**	**mg/L**	1	24-Jul-2014 19:25

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-2
Collection Date: 22-Jul-2014 13:29

WorkOrder:HS14070940
Lab ID:HS14070940-02
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	31-Jul-2014 18:11
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 18:11
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 18:11
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 18:11
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 18:11
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 18:11
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 18:11
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 18:11
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*31-Jul-2014 18:11*
Surr: 4-Bromofluorobenzene	*97.3*		*70-125*	*%REC*	*1*	*31-Jul-2014 18:11*
Surr: Dibromofluoromethane	*99.8*		*74-125*	*%REC*	*1*	*31-Jul-2014 18:11*
Surr: Toluene-d8	*99.2*		*75-125*	*%REC*	*1*	*31-Jul-2014 18:11*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 16:40
Surr: 4-Bromofluorobenzene	*79.7*		*70-130*	*%REC*	*1*	*24-Jul-2014 16:40*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070940
Sample ID:	MW-14	Lab ID:HS14070940-03
Collection Date:	22-Jul-2014 14:28	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	31-Jul-2014 18:35
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 18:35
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 18:35
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 18:35
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 18:35
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 18:35
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 18:35
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 18:35
Surr: 1,2-Dichloroethane-d4	*98.9*		*71-125*	*%REC*	*1*	*31-Jul-2014 18:35*
Surr: 4-Bromofluorobenzene	*97.4*		*70-125*	*%REC*	*1*	*31-Jul-2014 18:35*
Surr: Dibromofluoromethane	*97.9*		*74-125*	*%REC*	*1*	*31-Jul-2014 18:35*
Surr: Toluene-d8	*99.9*		*75-125*	*%REC*	*1*	*31-Jul-2014 18:35*
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 30-Jul-2014		Analyst: RPM
Iron	ND		0.200	mg/L	1	30-Jul-2014 19:03
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: MYA
Methane	**0.835**		**0.500**	**ug/L**	1	28-Jul-2014 13:54
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: MYC
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	30-Jul-2014 12:00
TOTAL ORGANIC CARBON BY E415.1		**Method:E415.1**				Analyst: KHT
Organic Carbon, Total	ND		1.0	mg/L	1	30-Jul-2014 09:43
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 25-Jul-2014		Analyst: RPM
Potassium	**1.36**		**0.200**	**mg/L**	1	28-Jul-2014 15:49
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 16:55
Surr: 4-Bromofluorobenzene	*80.3*		*70-130*	*%REC*	*1*	*24-Jul-2014 16:55*
ANIONS BY E300.0		**Method:E300**				Analyst: KKB
Nitrogen, Nitrate (As N)	**6.09**		**0.100**	**mg/L**	1	24-Jul-2014 19:54
Phosphorus, Dissolved Orthophosphate (As P)	**0.182**		**0.100**	**mg/L**	1	24-Jul-2014 19:54
Sulfate	**25.3**		**0.500**	**mg/L**	1	24-Jul-2014 19:54

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-13
Collection Date: 22-Jul-2014 15:10

WorkOrder:HS14070940
Lab ID:HS14070940-04
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	31-Jul-2014 18:58
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 18:58
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 18:58
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 18:58
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 18:58
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 18:58
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 18:58
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 18:58
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*31-Jul-2014 18:58*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*1*	*31-Jul-2014 18:58*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*31-Jul-2014 18:58*
Surr: Toluene-d8	*98.2*		*75-125*	*%REC*	*1*	*31-Jul-2014 18:58*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 17:11
Surr: 4-Bromofluorobenzene	*81.6*		*70-130*	*%REC*	*1*	*24-Jul-2014 17:11*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-8
Collection Date: 22-Jul-2014 15:46

WorkOrder:HS14070940
Lab ID:HS14070940-05
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	31-Jul-2014 19:23
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 19:23
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 19:23
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 19:23
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 19:23
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 19:23
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 19:23
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 19:23
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*31-Jul-2014 19:23*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*1*	*31-Jul-2014 19:23*
Surr: Dibromofluoromethane	*98.1*		*74-125*	*%REC*	*1*	*31-Jul-2014 19:23*
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	*1*	*31-Jul-2014 19:23*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 17:27
Surr: 4-Bromofluorobenzene	*79.8*		*70-130*	*%REC*	*1*	*24-Jul-2014 17:27*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-5
Collection Date: 23-Jul-2014 09:21

WorkOrder:HS14070940
Lab ID:HS14070940-06
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	31-Jul-2014 19:47
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 19:47
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 19:47
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 19:47
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 19:47
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 19:47
Naphthalene	**0.0014**		**0.0010**	**mg/L**	1	31-Jul-2014 19:47
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 19:47
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 19:47
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*31-Jul-2014 19:47*
Surr: 4-Bromofluorobenzene	*97.4*		*70-125*	*%REC*	*1*	*31-Jul-2014 19:47*
Surr: Dibromofluoromethane	*98.5*		*74-125*	*%REC*	*1*	*31-Jul-2014 19:47*
Surr: Toluene-d8	*99.0*		*75-125*	*%REC*	*1*	*31-Jul-2014 19:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 17:43
Surr: 4-Bromofluorobenzene	*79.0*		*70-130*	*%REC*	*1*	*24-Jul-2014 17:43*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-16
Collection Date: 23-Jul-2014 10:02

WorkOrder:HS14070940
Lab ID:HS14070940-07
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	31-Jul-2014 20:11
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 20:11
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 20:11
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 20:11
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 20:11
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 20:11
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 20:11
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 20:11
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*31-Jul-2014 20:11*
Surr: 4-Bromofluorobenzene	*97.7*		*70-125*	*%REC*	*1*	*31-Jul-2014 20:11*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*31-Jul-2014 20:11*
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	*1*	*31-Jul-2014 20:11*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 17:58
Surr: 4-Bromofluorobenzene	*79.9*		*70-130*	*%REC*	*1*	*24-Jul-2014 17:58*

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: 23-Jul-2014 10:32

WorkOrder:HS14070940
Lab ID:HS14070940-08
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	31-Jul-2014 20:35
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 20:35
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 20:35
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 20:35
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 20:35
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 20:35
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 20:35
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 20:35
Surr: 1,2-Dichloroethane-d4	*98.5*		*71-125*	*%REC*	*1*	*31-Jul-2014 20:35*
Surr: 4-Bromofluorobenzene	*97.4*		*70-125*	*%REC*	*1*	*31-Jul-2014 20:35*
Surr: Dibromofluoromethane	*98.1*		*74-125*	*%REC*	*1*	*31-Jul-2014 20:35*
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	*1*	*31-Jul-2014 20:35*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 18:14
Surr: 4-Bromofluorobenzene	*82.2*		*70-130*	*%REC*	*1*	*24-Jul-2014 18:14*

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-11
Collection Date: 23-Jul-2014 10:59

WorkOrder:HS14070940
Lab ID:HS14070940-09
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	31-Jul-2014 21:00
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 21:00
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 21:00
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 21:00
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 21:00
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 21:00
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 21:00
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 21:00
Surr: 1,2-Dichloroethane-d4	*99.7*		*71-125*	*%REC*	*1*	*31-Jul-2014 21:00*
Surr: 4-Bromofluorobenzene	*96.2*		*70-125*	*%REC*	*1*	*31-Jul-2014 21:00*
Surr: Dibromofluoromethane	*99.1*		*74-125*	*%REC*	*1*	*31-Jul-2014 21:00*
Surr: Toluene-d8	*97.9*		*75-125*	*%REC*	*1*	*31-Jul-2014 21:00*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 18:30
Surr: 4-Bromofluorobenzene	*78.8*		*70-130*	*%REC*	*1*	*24-Jul-2014 18:30*

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-1
Collection Date: 23-Jul-2014 00:00

ANALYTICAL REPORT
WorkOrder:HS14070940
Lab ID:HS14070940-10
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	**0.39**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
1,2-Dichloroethane	ND		0.010	mg/L	10	01-Aug-2014 20:38
1,3,5-Trimethylbenzene	**0.11**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
2-Butanone	**0.023**		**0.020**	**mg/L**	10	01-Aug-2014 20:38
Benzene	**3.1**		**0.050**	**mg/L**	50	01-Aug-2014 14:11
Cyclohexane	**0.059**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
Ethylbenzene	**0.61**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
Isopropylbenzene	**0.011**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
m,p-Xylene	**2.2**		**0.020**	**mg/L**	10	01-Aug-2014 20:38
Methylcyclohexane	ND		0.010	mg/L	10	01-Aug-2014 20:38
Naphthalene	**0.044**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
n-Butylbenzene	ND		0.010	mg/L	10	01-Aug-2014 20:38
n-Propylbenzene	**0.019**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
o-Xylene	**1.2**		**0.010**	**mg/L**	10	01-Aug-2014 20:38
Toluene	**6.4**		**0.050**	**mg/L**	50	01-Aug-2014 14:11
Xylenes, Total	**3.4**		**0.030**	**mg/L**	10	01-Aug-2014 20:38
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*50*	*01-Aug-2014 14:11*
Surr: 1,2-Dichloroethane-d4	*98.8*		*71-125*	*%REC*	*10*	*01-Aug-2014 20:38*
Surr: 4-Bromofluorobenzene	*99.7*		*70-125*	*%REC*	*10*	*01-Aug-2014 20:38*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*50*	*01-Aug-2014 14:11*
Surr: Dibromofluoromethane	*99.5*		*74-125*	*%REC*	*50*	*01-Aug-2014 14:11*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*10*	*01-Aug-2014 20:38*
Surr: Toluene-d8	*102*		*75-125*	*%REC*	*10*	*01-Aug-2014 20:38*
Surr: Toluene-d8	*98.5*		*75-125*	*%REC*	*50*	*01-Aug-2014 14:11*
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 30-Jul-2014		Analyst: RPM
Iron	ND		0.200	mg/L	1	30-Jul-2014 19:06
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: MYA
Methane	**1.06**		**0.500**	**ug/L**	1	28-Jul-2014 14:05
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: MYC
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	30-Jul-2014 12:00
TOTAL ORGANIC CARBON BY E415.1		**Method:E415.1**				Analyst: KHT
Organic Carbon, Total	**8.9**		**1.0**	**mg/L**	1	30-Jul-2014 09:59
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 28-Jul-2014		Analyst: RPM
Potassium	**0.264**		**0.200**	**mg/L**	1	29-Jul-2014 14:46
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**49**		**0.050**	**mg/L**	1	24-Jul-2014 18:46
Surr: 4-Bromofluorobenzene	*86.2*		*70-130*	*%REC*	*1*	*24-Jul-2014 18:46*
ANIONS BY E300.0		**Method:E300**				Analyst: KKB
Nitrogen, Nitrate (As N)	ND		0.100	mg/L	1	24-Jul-2014 20:38
Phosphorus, Dissolved Orthophosphate (As P)	**0.446**		**0.100**	**mg/L**	1	24-Jul-2014 20:38
Sulfate	**49.5**		**0.500**	**mg/L**	1	24-Jul-2014 20:38

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: Dup 1
Collection Date: 23-Jul-2014 00:00

WorkOrder:HS14070940
Lab ID:HS14070940-11
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	31-Jul-2014 17:23
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 17:23
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 17:23
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 17:23
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 17:23
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 17:23
Naphthalene	**0.0013**		**0.0010**	**mg/L**	1	31-Jul-2014 17:23
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 17:23
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 17:23
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*31-Jul-2014 17:23*
Surr: 4-Bromofluorobenzene	*97.0*		*70-125*	*%REC*	*1*	*31-Jul-2014 17:23*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*31-Jul-2014 17:23*
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	*1*	*31-Jul-2014 17:23*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	24-Jul-2014 19:49
Surr: 4-Bromofluorobenzene	*80.2*		*70-130*	*%REC*	*1*	*24-Jul-2014 19:49*

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: HS14070940

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 84506	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25		25 Jul 2014 12:00	28 Jul 2014 15:46	1
HS14070940-03	MW-14	22 Jul 2014 14:28		25 Jul 2014 12:00	28 Jul 2014 15:49	1
Batch ID 84559	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS14070940-10	MW-1	23 Jul 2014 00:00		28 Jul 2014 11:15	29 Jul 2014 14:46	1
Batch ID 84637	**Test Name :** DISSOLVED METALS BY SW6020A			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25		30 Jul 2014 09:40	30 Jul 2014 19:00	1
HS14070940-03	MW-14	22 Jul 2014 14:28		30 Jul 2014 09:40	30 Jul 2014 19:03	1
HS14070940-10	MW-1	23 Jul 2014 00:00		30 Jul 2014 09:40	30 Jul 2014 19:06	1
Batch ID R238038	**Test Name :** ANIONS BY E300.0			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25			24 Jul 2014 19:25	1
HS14070940-03	MW-14	22 Jul 2014 14:28			24 Jul 2014 19:54	1
HS14070940-10	MW-1	23 Jul 2014 00:00			24 Jul 2014 20:38	1
Batch ID R238041	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25			24 Jul 2014 16:24	1
HS14070940-02	MW-2	22 Jul 2014 13:29			24 Jul 2014 16:40	1
HS14070940-03	MW-14	22 Jul 2014 14:28			24 Jul 2014 16:55	1
HS14070940-04	MW-13	22 Jul 2014 15:10			24 Jul 2014 17:11	1
HS14070940-05	MW-8	22 Jul 2014 15:46			24 Jul 2014 17:27	1
HS14070940-06	MW-5	23 Jul 2014 09:21			24 Jul 2014 17:43	1
HS14070940-07	MW-16	23 Jul 2014 10:02			24 Jul 2014 17:58	1
HS14070940-08	MW-15	23 Jul 2014 10:32			24 Jul 2014 18:14	1
HS14070940-09	MW-11	23 Jul 2014 10:59			24 Jul 2014 18:30	1
HS14070940-10	MW-1	23 Jul 2014 00:00			24 Jul 2014 18:46	1
HS14070940-11	Dup 1	23 Jul 2014 00:00			24 Jul 2014 19:49	1
Batch ID R238186	**Test Name :** DISSOLVED GASES BY RSK-175			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25			28 Jul 2014 13:41	1
HS14070940-03	MW-14	22 Jul 2014 14:28			28 Jul 2014 13:54	1
HS14070940-10	MW-1	23 Jul 2014 00:00			28 Jul 2014 14:05	1
Batch ID R238372	**Test Name :** TOTAL ORGANIC CARBON BY E415.1			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25			30 Jul 2014 09:27	1
HS14070940-03	MW-14	22 Jul 2014 14:28			30 Jul 2014 09:43	1
HS14070940-10	MW-1	23 Jul 2014 00:00			30 Jul 2014 09:59	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS14070940

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R238397	**Test Name :** AMMONIA AS N BY SM4500 NH3-D (ISE)			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25			30 Jul 2014 12:00	1
HS14070940-03	MW-14	22 Jul 2014 14:28			30 Jul 2014 12:00	1
HS14070940-10	MW-1	23 Jul 2014 00:00			30 Jul 2014 12:00	1
Batch ID R238509	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14070940-01	MW-12	22 Jul 2014 12:25			31 Jul 2014 17:47	1
HS14070940-02	MW-2	22 Jul 2014 13:29			31 Jul 2014 18:11	1
HS14070940-03	MW-14	22 Jul 2014 14:28			31 Jul 2014 18:35	1
HS14070940-04	MW-13	22 Jul 2014 15:10			31 Jul 2014 18:58	1
HS14070940-05	MW-8	22 Jul 2014 15:46			31 Jul 2014 19:23	1
HS14070940-06	MW-5	23 Jul 2014 09:21			31 Jul 2014 19:47	1
HS14070940-07	MW-16	23 Jul 2014 10:02			31 Jul 2014 20:11	1
HS14070940-08	MW-15	23 Jul 2014 10:32			31 Jul 2014 20:35	1
HS14070940-09	MW-11	23 Jul 2014 10:59			31 Jul 2014 21:00	1
HS14070940-11	Dup 1	23 Jul 2014 00:00			31 Jul 2014 17:23	1
Batch ID R238578	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14070940-10	MW-1	23 Jul 2014 00:00			01 Aug 2014 20:38	10
HS14070940-10	MW-1	23 Jul 2014 00:00			01 Aug 2014 14:11	50

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238186 **Instrument: FID-4** **Method: RSK-175**

MBLK Sample ID: **GBLKW1-140728** Units: **ug/L** Analysis Date: **28-Jul-2014 10:08**
Client ID: Run ID: **FID-4_238186** SeqNo: **2943276** 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: **GLCSW1-140728** Units: **ug/L** Analysis Date: **28-Jul-2014 09:23**
Client ID: Run ID: **FID-4_238186** SeqNo: **2943274** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	8.694	0.500	9.065	0	95.9	75 - 125				

LCSD Sample ID: **GLCSDW1-140728** Units: **ug/L** Analysis Date: **28-Jul-2014 09:34**
Client ID: Run ID: **FID-4_238186** SeqNo: **2943275** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	8.253	0.500	9.065	8.694	91.0	75 - 125	8.694	5.2	30	

The following samples were anayzed in this batch: HS14070940-01 HS14070940-03 HS14070940-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238041 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140724** Units: **mg/L** Analysis Date: **24-Jul-2014 12:31**
Client ID: Run ID: **FID-14_238041** SeqNo: **2940209** 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	*0.08322*	*0.0050*	*0.1*	*0*	*83.2*	*70 - 130*				

LCS Sample ID: **GLCSW1-140724** Units: **mg/L** Analysis Date: **24-Jul-2014 12:47**
Client ID: Run ID: **FID-14_238041** SeqNo: **2940210** 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	1.131	0.050	1	0	113	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08689*	*0.0050*	*0.1*	*0*	*86.9*	*70 - 130*				

MS Sample ID: **HS14070936-06MS** Units: **mg/L** Analysis Date: **24-Jul-2014 14:37**
Client ID: Run ID: **FID-14_238041** SeqNo: **2940217** 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	0.9469	0.050	1	0	94.7	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08695*	*0.0050*	*0.1*	*0*	*86.9*	*70 - 130*				

MSD Sample ID: **HS14070936-06MSD** Units: **mg/L** Analysis Date: **24-Jul-2014 14:53**
Client ID: Run ID: **FID-14_238041** SeqNo: **2940218** 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	1.024	0.050	1	0.9469	102	70 - 130	0.9469	7.85	30	
Surr: 4-Bromofluorobenzene	*0.08918*	*0.0050*	*0.1*	*0.08695*	*89.2*	*70 - 130*	*0.08695*	*2.53*	*30*	

The following samples were anayzed in this batch:

HS14070940-01	HS14070940-02	HS14070940-03	HS14070940-04
HS14070940-05	HS14070940-06	HS14070940-07	HS14070940-08
HS14070940-09	HS14070940-10	HS14070940-11	

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 84506 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-84506** Units: **mg/L** Analysis Date: **28-Jul-2014 15:32**
Client ID: Run ID: **ICPMS05_238148** SeqNo: **2943880** PrepDate: **25-Jul-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-84506** Units: **mg/L** Analysis Date: **28-Jul-2014 15:35**
Client ID: Run ID: **ICPMS05_238148** SeqNo: **2943881** PrepDate: **25-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	4.976	0.200	5	0	99.5	80 - 120				

MS Sample ID: **HS14070940-03MS** Units: **mg/L** Analysis Date: **28-Jul-2014 16:02**
Client ID: **MW-14** Run ID: **ICPMS05_238148** SeqNo: **2943891** PrepDate: **25-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	6.538	0.200	5	1.365	103	80 - 120				

MSD Sample ID: **HS14070940-03MSD** Units: **mg/L** Analysis Date: **28-Jul-2014 16:04**
Client ID: **MW-14** Run ID: **ICPMS05_238148** SeqNo: **2943892** PrepDate: **25-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	6.452	0.200	5	6.538	102	80 - 120	6.538	1.33	20	

DUP Sample ID: **HS14070940-03DUP** Units: **mg/L** Analysis Date: **28-Jul-2014 15:51**
Client ID: **MW-14** Run ID: **ICPMS05_238148** SeqNo: **2943887** PrepDate: **25-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	1.364	0.200		1.365			1.365	0.0344	20	

PDS Sample ID: **HS14070940-03BS** Units: **mg/L** Analysis Date: **28-Jul-2014 16:07**
Client ID: **MW-14** Run ID: **ICPMS05_238148** SeqNo: **2943893** PrepDate: **25-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	9.859	0.200	10	1.365	84.9	75 - 125				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 84506 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS14070940-03 DIL SX** Units: **mg/L** Analysis Date: **28-Jul-2014 15:54**
Client ID: **MW-14** Run ID: **ICPMS05_238148** SeqNo: **2943888** PrepDate: **25-Jul-2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	1.439	1.00		1.365			1.365	5.43	10	

The following samples were anayzed in this batch: HS14070940-01 HS14070940-03

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 84559 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-84559** Units: **mg/L** Analysis Date: **30-Jul-2014 10:22**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2946499** PrepDate: **28-Jul-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-84559** Units: **mg/L** Analysis Date: **30-Jul-2014 10:24**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2946500** PrepDate: **28-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	4.882	0.200	5	0	97.6	80 - 120				

MS Sample ID: **HS14071043-07MS** Units: **mg/L** Analysis Date: **29-Jul-2014 14:57**
Client ID: Run ID: **ICPMS05_238254** SeqNo: **2945771** PrepDate: **28-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	4.507	0.200	5	-0.0681	91.5	80 - 120				

MSD Sample ID: **HS14071043-07MSD** Units: **mg/L** Analysis Date: **29-Jul-2014 15:05**
Client ID: Run ID: **ICPMS05_238254** SeqNo: **2945774** PrepDate: **28-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	4.442	0.200	5	4.507	90.2	80 - 120	4.507	1.47	20	

DUP Sample ID: **HS14071043-07DUP** Units: **mg/L** Analysis Date: **29-Jul-2014 14:52**
Client ID: Run ID: **ICPMS05_238254** SeqNo: **2945769** PrepDate: **28-Jul-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		-0.0681			-0.0681	0	20	

PDS Sample ID: **HS14071043-07BS** Units: **mg/L** Analysis Date: **29-Jul-2014 15:07**
Client ID: Run ID: **ICPMS05_238254** SeqNo: **2945775** PrepDate: **28-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	8.404	0.200	10	-0.0681	84.7	75 - 125				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 84559 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS14071043-07 DIL SX** Units: **mg/L** Analysis Date: **29-Jul-2014 14:54**
Client ID: Run ID: **ICPMS05_238254** SeqNo: **2945770** PrepDate: **28-Jul-2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	ND	1.00		-0.0681			-0.0681	0	10	

The following samples were anayzed in this batch: HS14070940-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 84637 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-84637** Units: **mg/L** Analysis Date: **30-Jul-2014 18:41**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949048** PrepDate: **30-Jul-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-84637** Units: **mg/L** Analysis Date: **30-Jul-2014 18:44**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949049** PrepDate: **30-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.785	0.200	5	0	95.7	80 - 120				

MS Sample ID: **HS14071127-11MS** Units: **mg/L** Analysis Date: **30-Jul-2014 19:25**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949064** PrepDate: **30-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.646	0.200	5	0.04939	91.9	75 - 125				

MSD Sample ID: **HS14071127-11MSD** Units: **mg/L** Analysis Date: **30-Jul-2014 19:34**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949067** PrepDate: **30-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.466	0.200	5	4.646	88.3	75 - 125	4.646	3.96	20	

DUP Sample ID: **HS14071127-11DUP** Units: **mg/L** Analysis Date: **30-Jul-2014 19:20**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949062** PrepDate: **30-Jul-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		0.04939			0.04939	0	20	

PDS Sample ID: **HS14071127-11BS** Units: **mg/L** Analysis Date: **30-Jul-2014 19:37**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949068** PrepDate: **30-Jul-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	8.75	0.200	10	0.04939	87.0	75 - 125				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: 84637 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS14071127-11 DIL SX** Units: **mg/L** Analysis Date: **30-Jul-2014 19:23**
Client ID: Run ID: **ICPMS05_238334** SeqNo: **2949063** PrepDate: **30-Jul-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		0.04939			0.04939	0	10	

The following samples were anayzed in this batch: HS14070940-01 HS14070940-03 HS14070940-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-140731** Units: **ug/L** Analysis Date: **31-Jul-2014 12:06**
Client ID: Run ID: **VOA6_238509** SeqNo: **2950388** 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	*49.92*	*1.0*	*50*	*0*	*99.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.74*	*1.0*	*50*	*0*	*97.5*	*70 - 125*				
Surr: Dibromofluoromethane	*48.86*	*1.0*	*50*	*0*	*97.7*	*74 - 125*				
Surr: Toluene-d8	*49.01*	*1.0*	*50*	*0*	*98.0*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-140731** Units: **ug/L** Analysis Date: **31-Jul-2014 10:54**
Client ID: Run ID: **VOA6_238509** SeqNo: **2950387** 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	49.21	1.0	50	0	98.4	80 - 120			
1,2-Dichloroethane	44.71	1.0	50	0	89.4	79 - 120			
1,3,5-Trimethylbenzene	48.81	1.0	50	0	97.6	80 - 120			
2-Butanone	97.52	2.0	100	0	97.5	60 - 140			
Benzene	46.07	1.0	50	0	92.1	80 - 120			
Cyclohexane	50.05	1.0	50	0	100	75 - 125			
Ethylbenzene	48.45	1.0	50	0	96.9	80 - 120			
Isopropylbenzene	49.84	1.0	50	0	99.7	80 - 120			
m,p-Xylene	96.29	2.0	100	0	96.3	80 - 120			
Methylcyclohexane	39.45	1.0	50	0	78.9	70 - 122			
Naphthalene	50.33	1.0	50	0	101	70 - 130			
n-Butylbenzene	52.9	1.0	50	0	106	75 - 125			
n-Propylbenzene	49.99	1.0	50	0	100.0	75 - 130			
o-Xylene	48.53	1.0	50	0	97.1	80 - 120			
Toluene	46.51	1.0	50	0	93.0	80 - 121			
Xylenes, Total	144.8	3.0	150	0	96.5	80 - 124			
Surr: 1,2-Dichloroethane-d4	*49.97*	*1.0*	*50*	*0*	*99.9*	*71 - 125*			
Surr: 4-Bromofluorobenzene	*50.26*	*1.0*	*50*	*0*	*101*	*70 - 125*			
Surr: Dibromofluoromethane	*49.81*	*1.0*	*50*	*0*	*99.6*	*74 - 125*			
Surr: Toluene-d8	*49.82*	*1.0*	*50*	*0*	*99.6*	*75 - 125*			

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS14070994-19MS** Units: **ug/L** Analysis Date: **31-Jul-2014 15:45**
Client ID: Run ID: **VOA6_238509** SeqNo: **2950397** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.79	1.0	50	0	87.6	80 - 120				
1,2-Dichloroethane	43.1	1.0	50	0	86.2	79 - 120				
1,3,5-Trimethylbenzene	42.37	1.0	50	0	84.7	80 - 120				
2-Butanone	91.87	2.0	100	0	91.9	60 - 140				
Benzene	42.75	1.0	50	0	85.5	80 - 120				
Cyclohexane	38.26	1.0	50	0	76.5	75 - 125				
Ethylbenzene	44.27	1.0	50	0	88.5	80 - 120				
Isopropylbenzene	44.62	1.0	50	0	89.2	80 - 120				
m,p-Xylene	89.56	2.0	100	0	89.6	80 - 120				
Methylcyclohexane	28.74	1.0	50	0	57.5	70 - 122				S
Naphthalene	47.28	1.0	50	0	94.6	70 - 130				
n-Butylbenzene	43.77	1.0	50	0	87.5	75 - 125				
n-Propylbenzene	42.97	1.0	50	0	85.9	75 - 130				
o-Xylene	45.22	1.0	50	0	90.4	80 - 120				
Toluene	42.38	1.0	50	0	84.8	80 - 121				
Xylenes, Total	134.8	3.0	150	0	89.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	*49.34*	*1.0*	*50*	*0*	*98.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.42*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*49.08*	*1.0*	*50*	*0*	*98.2*	*74 - 125*				
Surr: Toluene-d8	*51.39*	*1.0*	*50*	*0*	*103*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS14070994-19MSD** Units: **ug/L** Analysis Date: **31-Jul-2014 16:09**
Client ID: Run ID: **VOA6_238509** SeqNo: **2950398** 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	47.55	1.0	50	43.79	95.1	80 - 120	43.79	8.23	20	
1,2-Dichloroethane	43.94	1.0	50	43.1	87.9	79 - 120	43.1	1.92	20	
1,3,5-Trimethylbenzene	46.17	1.0	50	42.37	92.3	80 - 120	42.37	8.6	20	
2-Butanone	101	2.0	100	91.87	101	60 - 140	91.87	9.46	20	
Benzene	43.78	1.0	50	42.75	87.6	80 - 120	42.75	2.4	20	
Cyclohexane	40.7	1.0	50	38.26	81.4	75 - 125	38.26	6.17	20	
Ethylbenzene	46.76	1.0	50	44.27	93.5	80 - 120	44.27	5.47	20	
Isopropylbenzene	47.74	1.0	50	44.62	95.5	80 - 120	44.62	6.77	20	
m,p-Xylene	93.17	2.0	100	89.56	93.2	80 - 120	89.56	3.95	20	
Methylcyclohexane	31.48	1.0	50	28.74	63.0	70 - 122	28.74	9.08	20	S
Naphthalene	54.16	1.0	50	47.28	108	70 - 130	47.28	13.6	20	
n-Butylbenzene	47.79	1.0	50	43.77	95.6	75 - 125	43.77	8.79	20	
n-Propylbenzene	46.78	1.0	50	42.97	93.6	75 - 130	42.97	8.49	20	
o-Xylene	47.4	1.0	50	45.22	94.8	80 - 120	45.22	4.72	20	
Toluene	44.63	1.0	50	42.38	89.3	80 - 121	42.38	5.19	20	
Xylenes, Total	140.6	3.0	150	134.8	93.7	80 - 124	134.8	4.21	20	
Surr: 1,2-Dichloroethane-d4	*48.85*	*1.0*	*50*	*49.34*	*97.7*	*71 - 125*	*49.34*	*1.01*	*20*	
Surr: 4-Bromofluorobenzene	*51.2*	*1.0*	*50*	*51.42*	*102*	*70 - 125*	*51.42*	*0.413*	*20*	
Surr: Dibromofluoromethane	*49.29*	*1.0*	*50*	*49.08*	*98.6*	*74 - 125*	*49.08*	*0.424*	*20*	
Surr: Toluene-d8	*50.8*	*1.0*	*50*	*51.39*	*102*	*75 - 125*	*51.39*	*1.15*	*20*	

The following samples were anayzed in this batch:

HS14070940-01	HS14070940-02	HS14070940-03	HS14070940-04
HS14070940-05	HS14070940-06	HS14070940-07	HS14070940-08
HS14070940-09	HS14070940-11		

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238578 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-140801** Units: **ug/L** Analysis Date: **01-Aug-2014 11:21**
Client ID: Run ID: **VOA6_238578** SeqNo: **2952010** 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	*49.76*	*1.0*	*50*	*0*	*99.5*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.41*	*1.0*	*50*	*0*	*96.8*	*70 - 125*				
Surr: Dibromofluoromethane	*49.7*	*1.0*	*50*	*0*	*99.4*	*74 - 125*				
Surr: Toluene-d8	*49.14*	*1.0*	*50*	*0*	*98.3*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238578 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-140801** Units: **ug/L** Analysis Date: **01-Aug-2014 10:09**
Client ID: Run ID: **VOA6_238578** SeqNo: **2952009** 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	48.02	1.0	50	0	96.0	80 - 120				
1,2-Dichloroethane	44.73	1.0	50	0	89.5	79 - 120				
1,3,5-Trimethylbenzene	47.76	1.0	50	0	95.5	80 - 120				
2-Butanone	89.77	2.0	100	0	89.8	60 - 140				
Benzene	45.59	1.0	50	0	91.2	80 - 120				
Cyclohexane	48.65	1.0	50	0	97.3	75 - 125				
Ethylbenzene	47.79	1.0	50	0	95.6	80 - 120				
Isopropylbenzene	49.5	1.0	50	0	99.0	80 - 120				
m,p-Xylene	95.08	2.0	100	0	95.1	80 - 120				
Methylcyclohexane	45.6	1.0	50	0	91.2	70 - 122				
Naphthalene	47.55	1.0	50	0	95.1	70 - 130				
n-Butylbenzene	51.7	1.0	50	0	103	75 - 125				
n-Propylbenzene	48.79	1.0	50	0	97.6	75 - 130				
o-Xylene	48.1	1.0	50	0	96.2	80 - 120				
Toluene	45.6	1.0	50	0	91.2	80 - 121				
Xylenes, Total	143.2	3.0	150	0	95.5	80 - 124				
Surr: 1,2-Dichloroethane-d4	*48.46*	*1.0*	*50*	*0*	*96.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.48*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*49.21*	*1.0*	*50*	*0*	*98.4*	*74 - 125*				
Surr: Toluene-d8	*49.78*	*1.0*	*50*	*0*	*99.6*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238578 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS14071242-13MS** Units: **ug/L** Analysis Date: **01-Aug-2014 14:35**
Client ID: Run ID: **VOA6_238578** SeqNo: **2952013** 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	44.94	1.0	50	0	89.9	80 - 120				
1,2-Dichloroethane	43.71	1.0	50	0	87.4	79 - 120				
1,3,5-Trimethylbenzene	43.76	1.0	50	0	87.5	80 - 120				
2-Butanone	87.73	2.0	100	0	87.7	60 - 140				
Benzene	43	1.0	50	0	86.0	80 - 120				
Cyclohexane	38.66	1.0	50	0	77.3	75 - 125				
Ethylbenzene	44.56	1.0	50	0	89.1	80 - 120				
Isopropylbenzene	45.28	1.0	50	0	90.6	80 - 120				
m,p-Xylene	88.58	2.0	100	0	88.6	80 - 120				
Methylcyclohexane	24.88	1.0	50	0	49.8	70 - 122				S
Naphthalene	45.74	1.0	50	0	91.5	70 - 130				
n-Butylbenzene	44.8	1.0	50	0	89.6	75 - 125				
n-Propylbenzene	44.64	1.0	50	0	89.3	75 - 130				
o-Xylene	45.14	1.0	50	0	90.3	80 - 120				
Toluene	44.06	1.0	50	0	88.1	80 - 121				
Xylenes, Total	133.7	3.0	150	0	89.1	80 - 124				
Surr: 1,2-Dichloroethane-d4	*48.91*	*1.0*	*50*	*0*	*97.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.99*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*49.83*	*1.0*	*50*	*0*	*99.7*	*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.

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238578 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS14071242-13MSD** Units: **ug/L** Analysis Date: **01-Aug-2014 15:00**
Client ID: Run ID: **VOA6_238578** SeqNo: **2952014** 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	46.9	1.0	50	44.94	93.8	80 - 120	44.94	4.27	20	
1,2-Dichloroethane	44.21	1.0	50	43.71	88.4	79 - 120	43.71	1.15	20	
1,3,5-Trimethylbenzene	46.09	1.0	50	43.76	92.2	80 - 120	43.76	5.18	20	
2-Butanone	92.68	2.0	100	87.73	92.7	60 - 140	87.73	5.49	20	
Benzene	43.59	1.0	50	43	87.2	80 - 120	43	1.36	20	
Cyclohexane	38.19	1.0	50	38.66	76.4	75 - 125	38.66	1.2	20	
Ethylbenzene	46.66	1.0	50	44.56	93.3	80 - 120	44.56	4.59	20	
Isopropylbenzene	47.4	1.0	50	45.28	94.8	80 - 120	45.28	4.57	20	
m,p-Xylene	92.98	2.0	100	88.58	93.0	80 - 120	88.58	4.85	20	
Methylcyclohexane	34.67	1.0	50	24.88	69.3	70 - 122	24.88	32.9	20	SR
Naphthalene	49.67	1.0	50	45.74	99.3	70 - 130	45.74	8.25	20	
n-Butylbenzene	47.67	1.0	50	44.8	95.3	75 - 125	44.8	6.21	20	
n-Propylbenzene	44.38	1.0	50	44.64	88.8	75 - 130	44.64	0.59	20	
o-Xylene	47.79	1.0	50	45.14	95.6	80 - 120	45.14	5.7	20	
Toluene	44.49	1.0	50	44.06	89.0	80 - 121	44.06	0.968	20	
Xylenes, Total	140.8	3.0	150	133.7	93.8	80 - 124	133.7	5.13	20	
Surr: 1,2-Dichloroethane-d4	*49.02*	*1.0*	*50*	*48.91*	*98.0*	*71 - 125*	*48.91*	*0.229*	*20*	
Surr: 4-Bromofluorobenzene	*50.71*	*1.0*	*50*	*50.99*	*101*	*70 - 125*	*50.99*	*0.551*	*20*	
Surr: Dibromofluoromethane	*49.33*	*1.0*	*50*	*49.83*	*98.7*	*74 - 125*	*49.83*	*0.998*	*20*	
Surr: Toluene-d8	*50.03*	*1.0*	*50*	*50.42*	*100*	*75 - 125*	*50.42*	*0.762*	*20*	

The following samples were anayzed in this batch: HS14070940-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238038 **Instrument: ICS2100** **Method: E300**

MBLK Sample ID: **WBLKW3** Units: **mg/L** Analysis Date: **24-Jul-2014 16:31**
Client ID: Run ID: **ICS2100_238038** SeqNo: **2939791** 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								
Phosphorus, Dissolved Orthophosphate (As P)	ND	0.100								
Sulfate	ND	0.500								

LCS Sample ID: **WLCSW3** Units: **mg/L** Analysis Date: **24-Jul-2014 16:45**
Client ID: Run ID: **ICS2100_238038** SeqNo: **2939792** 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)	4.065	0.100	4	0	102	90 - 110				
Phosphorus, Dissolved Orthophosphate (As P)	3.736	0.100	4	0	93.4	90 - 110				
Sulfate	19.77	0.500	20	0	98.9	90 - 110				

MS Sample ID: **HS14070940-03MS** Units: **mg/L** Analysis Date: **24-Jul-2014 20:09**
Client ID: **MW-14** Run ID: **ICS2100_238038** SeqNo: **2939806** 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)	7.989	0.100	2	6.093	94.8	80 - 120				
Phosphorus, Dissolved Orthophosphate (As P)	1.23	0.100	2	0.182	52.4	80 - 120				S
Sulfate	34.5	0.500	10	25.33	91.6	80 - 120				

MSD Sample ID: **HS14070940-03MSD** Units: **mg/L** Analysis Date: **24-Jul-2014 20:23**
Client ID: **MW-14** Run ID: **ICS2100_238038** SeqNo: **2939807** 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)	8.258	0.100	2	7.989	108	80 - 120	7.989	3.31	20	
Phosphorus, Dissolved Orthophosphate (As P)	0.567	0.100	2	1.23	19.2	80 - 120	1.23	73.8	20	SR
Sulfate	34.69	0.500	10	34.5	93.6	80 - 120	34.5	0.564	20	

The following samples were anayzed in this batch: HS14070940-01 HS14070940-03 HS14070940-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238372 **Instrument: TOC_02** **Method: E415.1**

MBLK Sample ID: **WBLKW2** Units: **mg/L** Analysis Date: **30-Jul-2014 03:25**
Client ID: Run ID: **TOC_02_238372** SeqNo: **2947297** 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: **WLCSW2** Units: **mg/L** Analysis Date: **30-Jul-2014 03:40**
Client ID: Run ID: **TOC_02_238372** SeqNo: **2947298** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	10.06	1.0	10	0	101	80 - 120				

LCSD Sample ID: **WLCSDW2** Units: **mg/L** Analysis Date: **30-Jul-2014 03:56**
Client ID: Run ID: **TOC_02_238372** SeqNo: **2947299** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.979	1.0	10	10.06	99.8	80 - 120	10.06	0.808	20	

MS Sample ID: **HS14071102-05MS** Units: **mg/L** Analysis Date: **30-Jul-2014 09:12**
Client ID: Run ID: **TOC_02_238372** SeqNo: **2947314** 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	1.144	99.7	80 - 120				

The following samples were anayzed in this batch: HS14070940-01 HS14070940-03 HS14070940-10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070940
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238397 **Instrument: WetChem_HS** **Method: SM4500 NH3-D**

MBLK Sample ID: **MBLK-238397** Units: **mg/L** Analysis Date: **30-Jul-2014 12:00**
Client ID: Run ID: **WetChem_HS_238397** SeqNo: **2947995** 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-238397** Units: **mg/L** Analysis Date: **30-Jul-2014 12:00**
Client ID: Run ID: **WetChem_HS_238397** SeqNo: **2947996** 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	0.20	10	0	100	80 - 120				

LCSD Sample ID: **LCSD-238397** Units: **mg/L** Analysis Date: **30-Jul-2014 12:00**
Client ID: Run ID: **WetChem_HS_238397** SeqNo: **2947997** 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)	10.3	0.20	10	10	103	80 - 120	10	2.96	20	

MS Sample ID: **HS14070872-01MS** Units: **mg/L** Analysis Date: **30-Jul-2014 12:00**
Client ID: Run ID: **WetChem_HS_238397** SeqNo: **2947998** 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)	10.7	0.20	10	0.284	104	80 - 120				

The following samples were anayzed in this batch: HS14070940-01 HS14070940-03 HS14070940-10

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

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: **HS14070940**

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

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	01-Oct-2014
Kentucky	KY 2014-2015	30-Apr-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2013-024	31-Aug-2014
Texas	TX104704231-14-13	30-Apr-2015

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070940

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	14C
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	14C
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	14C
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	14C
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-01	MW-12	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-02	MW-2	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-02	MW-2	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	14C
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	14C
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	14C
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	14C
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-03	MW-14	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-04	MW-13	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-04	MW-13	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-05	MW-8	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-05	MW-8	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-06	MW-5	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-06	MW-5	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-07	MW-16	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-07	MW-16	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-08	MW-15	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-08	MW-15	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-09	MW-11	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-09	MW-11	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	14C
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	14C
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	14C
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	14C
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-10	MW-1	Login	24-Jul-14 10:57	MES	TPH C2
HS14070940-11	Dup 1	Login	24-Jul-14 10:57	MES	VW-3
HS14070940-11	Dup 1	Login	24-Jul-14 10:57	MES	TPH C2

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070940

SAMPLE TRACKING

HS14070940-12	Trip Blank 070714-61	Login	24-Jul-14 11:31	MES	VW-3
HS14070940-13	Trip Blank 071114-06	Login	24-Jul-14 11:31	MES	VW-3
HS14070940-14	Trip Blank 070714-53	Login	24-Jul-14 11:31	MES	VW-3

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ALS Environmental

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Chain of Custody

Page 2 of 2

COC ID: 1089

HS14070940

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: [illegible]
B: RSK175 [illegible]
C: 8020-Petroleum only
D: Ammonia-3701
E: 8020-Dissolved Iron-Lab filtered
F: TOC
G: VOC'S (8260) Colt Ct 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	DUP 1	—	—	water	HCL	6							X	X			
2			NOTHING FOLLOWS														
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

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

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) [X] Standard 10 Working days [ ] 5 Work Days [ ] 2 Work Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by: [signature] Date: 7-23-14 Time: 18:30 Received by:

Relinquished by: Date: 7-24-14 Time: 9:50 Received by (Laboratory): Krystal Reno

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

Notes: Airbill: 9261 [illegible] NA

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level 3 [illegible] [ ] [illegible]
[ ] Level 3 [illegible] [ ] [illegible]
[ ] Level 3 [illegible]
[ ] Other [illegible]

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

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

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August 08, 2014

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

Work Order: **HS14070994**

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

Dear Samuel,

ALS Environmental received 21 sample(s) on Jul 24, 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

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070994

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14070994-01	1009 W Mountain	Water		23-Jul-2014 13:15	24-Jul-2014 09:50	☐
HS14070994-02	2009 N Mountain Ct	Water		23-Jul-2014 13:40	24-Jul-2014 09:50	☐
HS14070994-03	2007 N Mountain Ct	Water		23-Jul-2014 13:50	24-Jul-2014 09:50	☐
HS14070994-04	2019 N Ruger Cir	Water		23-Jul-2014 14:00	24-Jul-2014 09:50	☐
HS14070994-05	2020 N Ruger Cir	Water		23-Jul-2014 14:10	24-Jul-2014 09:50	☐
HS14070994-06	2028 N Ruger Cir	Water		23-Jul-2014 14:20	24-Jul-2014 09:50	☐
HS14070994-07	2032 N Ruger Cir	Water		23-Jul-2014 14:30	24-Jul-2014 09:50	☐
HS14070994-08	2025 N Ruger Ct	Water		23-Jul-2014 14:40	24-Jul-2014 09:50	☐
HS14070994-09	2021 N Ruger Ct	Water		23-Jul-2014 14:50	24-Jul-2014 09:50	☐
HS14070994-10	2005 N Colt Ct	Water		23-Jul-2014 15:05	24-Jul-2014 09:50	☐
HS14070994-11	2002 N Colt Ct	Water		23-Jul-2014 15:15	24-Jul-2014 09:50	☐
HS14070994-12	2007 N Colt Ct	Water		23-Jul-2014 15:35	24-Jul-2014 09:50	☐
HS14070994-13	2006 N Colt Ct	Water		23-Jul-2014 15:55	24-Jul-2014 09:50	☐
HS14070994-14	1211 W Quail Crossing Ct	Water		23-Jul-2014 16:05	24-Jul-2014 09:50	☐
HS14070994-15	HOA-1	Water		23-Jul-2014 16:20	24-Jul-2014 09:50	☐
HS14070994-16	Dup 1	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☐
HS14070994-17	Dup 2	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☐
HS14070994-18	Trip Blank 070714-62	Water		23-Jul-2014 00:00	24-Jul-2014 09:50	☑
HS14070994-19	1910 N Quail Crossing	Water	14071033-01	24-Jul-2014 11:07	24-Jul-2014 09:50	☐
HS14070994-20	HOA-2	Water	14071033-02	24-Jul-2014 11:15	24-Jul-2014 09:50	☐
HS14070994-21	Trip Blank-070714-60	Water	14071033-03	24-Jul-2014 00:00	24-Jul-2014 09:50	☑

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070994

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R238234

Sample ID: **2032 N Ruger Cir (HS14070994-07)**
- MS /MSD FAILED SAMPLE MATRIX INTERFERENCE

Sample ID: **2032 N Ruger Cir (HS14070994-07)**
- MS/MSD RPD FAILED SAMPLE MATRIX INTERFERENCE

GCMS Volatiles by Method SW8260

Batch ID: R238403, R238415

Sample ID: **HS14071130-03, HS14071027-18 MS/MSD**
- Performed on unrelated sample

Batch ID: R238509

Sample ID: **HS14070994-19MS**
- MS /MSD FAILED SAMPLE MATRIX INTERFERENCE

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: 1009 W Mountain
Collection Date: 23-Jul-2014 13:15

WorkOrder:HS14070994
Lab ID:HS14070994-01
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-Jul-2014 17:31
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 17:31
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 17:31
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 17:31
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 17:31
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 17:31
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 17:31
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 17:31
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*30-Jul-2014 17:31*
Surr: 4-Bromofluorobenzene	*98.5*		*70-125*	*%REC*	*1*	*30-Jul-2014 17:31*
Surr: Dibromofluoromethane	*99.7*		*74-125*	*%REC*	*1*	*30-Jul-2014 17:31*
Surr: Toluene-d8	*98.5*		*75-125*	*%REC*	*1*	*30-Jul-2014 17:31*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 14:56
Surr: 4-Bromofluorobenzene	*89.1*		*70-130*	*%REC*	*1*	*28-Jul-2014 14:56*

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: 2009 N Mountain Ct
Collection Date: 23-Jul-2014 13:40

WorkOrder:HS14070994
Lab ID:HS14070994-02
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-Jul-2014 17:54
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 17:54
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 17:54
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 17:54
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 17:54
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 17:54
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 17:54
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 17:54
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*30-Jul-2014 17:54*
Surr: 4-Bromofluorobenzene	*97.6*		*70-125*	*%REC*	*1*	*30-Jul-2014 17:54*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*30-Jul-2014 17:54*
Surr: Toluene-d8	*98.5*		*75-125*	*%REC*	*1*	*30-Jul-2014 17:54*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 15:12
Surr: 4-Bromofluorobenzene	*92.3*		*70-130*	*%REC*	*1*	*28-Jul-2014 15:12*

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: 2007 N Mountain Ct
Collection Date: 23-Jul-2014 13:50

WorkOrder:HS14070994
Lab ID:HS14070994-03
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-Jul-2014 18:19
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 18:19
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 18:19
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 18:19
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 18:19
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 18:19
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 18:19
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 18:19
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*30-Jul-2014 18:19*
Surr: 4-Bromofluorobenzene	*97.2*		*70-125*	*%REC*	*1*	*30-Jul-2014 18:19*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*30-Jul-2014 18:19*
Surr: Toluene-d8	*98.9*		*75-125*	*%REC*	*1*	*30-Jul-2014 18:19*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 15:28
Surr: 4-Bromofluorobenzene	*89.4*		*70-130*	*%REC*	*1*	*28-Jul-2014 15:28*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070994
Sample ID:	2019 N Ruger Cir	Lab ID:HS14070994-04
Collection Date:	23-Jul-2014 14:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	**0.0018**		**0.0010**	**mg/L**	1	30-Jul-2014 20:44
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 20:44
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:44
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 20:44
Benzene	**0.069**		**0.0010**	**mg/L**	1	30-Jul-2014 20:44
Cyclohexane	**0.0051**		**0.0010**	**mg/L**	1	30-Jul-2014 20:44
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:44
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:44
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 20:44
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 20:44
Naphthalene	**0.0016**		**0.0010**	**mg/L**	1	30-Jul-2014 20:44
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:44
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:44
o-Xylene	**0.0048**		**0.0010**	**mg/L**	1	30-Jul-2014 20:44
Toluene	**0.0020**		**0.0010**	**mg/L**	1	30-Jul-2014 20:44
Xylenes, Total	**0.0055**		**0.0030**	**mg/L**	1	30-Jul-2014 20:44
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*30-Jul-2014 20:44*
Surr: 4-Bromofluorobenzene	*98.2*		*70-125*	*%REC*	*1*	*30-Jul-2014 20:44*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*30-Jul-2014 20:44*
Surr: Toluene-d8	*98.1*		*75-125*	*%REC*	*1*	*30-Jul-2014 20:44*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.17**		**0.050**	**mg/L**	1	28-Jul-2014 15:44
Surr: 4-Bromofluorobenzene	*92.2*		*70-130*	*%REC*	*1*	*28-Jul-2014 15:44*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070994
Sample ID:	2020 N Ruger Cir	Lab ID:HS14070994-05
Collection Date:	23-Jul-2014 14:10	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-Jul-2014 18:42
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 18:42
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 18:42
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 18:42
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 18:42
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 18:42
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 18:42
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 18:42
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*30-Jul-2014 18:42*
Surr: 4-Bromofluorobenzene	*97.8*		*70-125*	*%REC*	*1*	*30-Jul-2014 18:42*
Surr: Dibromofluoromethane	*99.9*		*74-125*	*%REC*	*1*	*30-Jul-2014 18:42*
Surr: Toluene-d8	*98.9*		*75-125*	*%REC*	*1*	*30-Jul-2014 18:42*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.059**		**0.050**	**mg/L**	1	28-Jul-2014 15:59
Surr: 4-Bromofluorobenzene	*94.6*		*70-130*	*%REC*	*1*	*28-Jul-2014 15:59*

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: 2028 N Ruger Cir
Collection Date: 23-Jul-2014 14:20

WorkOrder:HS14070994
Lab ID:HS14070994-06
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	30-Jul-2014 19:06
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 19:06
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 19:06
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 19:06
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 19:06
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 19:06
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 19:06
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 19:06
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*30-Jul-2014 19:06*
Surr: 4-Bromofluorobenzene	*97.8*		*70-125*	*%REC*	*1*	*30-Jul-2014 19:06*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*30-Jul-2014 19:06*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*1*	*30-Jul-2014 19:06*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 18:06
Surr: 4-Bromofluorobenzene	*95.8*		*70-130*	*%REC*	*1*	*28-Jul-2014 18:06*

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: 2032 N Ruger Cir
Collection Date: 23-Jul-2014 14:30

WorkOrder:HS14070994
Lab ID:HS14070994-07
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-Jul-2014 19:31
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 19:31
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 19:31
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 19:31
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 19:31
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 19:31
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 19:31
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 19:31
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*30-Jul-2014 19:31*
Surr: 4-Bromofluorobenzene	*97.3*		*70-125*	*%REC*	*1*	*30-Jul-2014 19:31*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*30-Jul-2014 19:31*
Surr: Toluene-d8	*98.3*		*75-125*	*%REC*	*1*	*30-Jul-2014 19:31*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 16:15
Surr: 4-Bromofluorobenzene	*91.8*		*70-130*	*%REC*	*1*	*28-Jul-2014 16:15*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070994
Sample ID:	2025 N Ruger Ct	Lab ID:HS14070994-08
Collection Date:	23-Jul-2014 14:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 19:55
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 19:55
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 19:55
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 19:55
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 19:55
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 19:55
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 19:55
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*30-Jul-2014 19:55*
Surr: 4-Bromofluorobenzene	*97.9*		*70-125*	*%REC*	*1*	*30-Jul-2014 19:55*
Surr: Dibromofluoromethane	*96.8*		*74-125*	*%REC*	*1*	*30-Jul-2014 19:55*
Surr: Toluene-d8	*98.5*		*75-125*	*%REC*	*1*	*30-Jul-2014 19:55*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 18:22
Surr: 4-Bromofluorobenzene	*92.4*		*70-130*	*%REC*	*1*	*28-Jul-2014 18:22*

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: 2021 N Ruger Ct
Collection Date: 23-Jul-2014 14:50

WorkOrder:HS14070994
Lab ID:HS14070994-09
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-Jul-2014 20:19
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 20:19
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 20:19
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 20:19
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 20:19
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 20:19
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 20:19
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 20:19
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*30-Jul-2014 20:19*
Surr: 4-Bromofluorobenzene	*97.9*		*70-125*	*%REC*	*1*	*30-Jul-2014 20:19*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*30-Jul-2014 20:19*
Surr: Toluene-d8	*98.4*		*75-125*	*%REC*	*1*	*30-Jul-2014 20:19*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 18:38
Surr: 4-Bromofluorobenzene	*91.8*		*70-130*	*%REC*	*1*	*28-Jul-2014 18:38*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: 2005 N Colt Ct
Collection Date: 23-Jul-2014 15:05

WorkOrder:HS14070994
Lab ID:HS14070994-10
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	**0.018**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 01:35
1,3,5-Trimethylbenzene	**0.0039**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 01:35
Benzene	**0.027**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
Cyclohexane	**0.011**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
Ethylbenzene	**0.023**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:35
m,p-Xylene	**0.025**		**0.0020**	**mg/L**	1	31-Jul-2014 01:35
Methylcyclohexane	**0.0019**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
Naphthalene	**0.0025**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:35
n-Propylbenzene	**0.0022**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
o-Xylene	**0.019**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
Toluene	**0.043**		**0.0010**	**mg/L**	1	31-Jul-2014 01:35
Xylenes, Total	**0.044**		**0.0030**	**mg/L**	1	31-Jul-2014 01:35
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*31-Jul-2014 01:35*
Surr: 4-Bromofluorobenzene	*97.9*		*70-125*	*%REC*	*1*	*31-Jul-2014 01:35*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*31-Jul-2014 01:35*
Surr: Toluene-d8	*98.8*		*75-125*	*%REC*	*1*	*31-Jul-2014 01:35*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.39**		**0.050**	**mg/L**	1	28-Jul-2014 18:54
Surr: 4-Bromofluorobenzene	*96.0*		*70-130*	*%REC*	*1*	*28-Jul-2014 18:54*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070994
Sample ID:	2002 N Colt Ct	Lab ID:HS14070994-11
Collection Date:	23-Jul-2014 15:15	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 23:34
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 23:34
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 23:34
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 23:34
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 23:34
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 23:34
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 23:34
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*30-Jul-2014 23:34*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*1*	*30-Jul-2014 23:34*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*30-Jul-2014 23:34*
Surr: Toluene-d8	*97.7*		*75-125*	*%REC*	*1*	*30-Jul-2014 23:34*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 19:09
Surr: 4-Bromofluorobenzene	*94.8*		*70-130*	*%REC*	*1*	*28-Jul-2014 19:09*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: 2007 N Colt Ct
Collection Date: 23-Jul-2014 15:35

WorkOrder:HS14070994
Lab ID:HS14070994-12
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-Jul-2014 23:58
1,2-Dichloroethane	ND		0.0010	mg/L	1	30-Jul-2014 23:58
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
2-Butanone	ND		0.0020	mg/L	1	30-Jul-2014 23:58
Benzene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
Cyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 23:58
Ethylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
Isopropylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
m,p-Xylene	ND		0.0020	mg/L	1	30-Jul-2014 23:58
Methylcyclohexane	ND		0.0010	mg/L	1	30-Jul-2014 23:58
Naphthalene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
n-Butylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
n-Propylbenzene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
o-Xylene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
Toluene	ND		0.0010	mg/L	1	30-Jul-2014 23:58
Xylenes, Total	ND		0.0030	mg/L	1	30-Jul-2014 23:58
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*30-Jul-2014 23:58*
Surr: 4-Bromofluorobenzene	*95.3*		*70-125*	*%REC*	*1*	*30-Jul-2014 23:58*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*30-Jul-2014 23:58*
Surr: Toluene-d8	*97.2*		*75-125*	*%REC*	*1*	*30-Jul-2014 23:58*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 19:25
Surr: 4-Bromofluorobenzene	*93.8*		*70-130*	*%REC*	*1*	*28-Jul-2014 19:25*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: 1211 W Quail Crossing Ct
Collection Date: 23-Jul-2014 16:05

WorkOrder:HS14070994
Lab ID:HS14070994-14
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	31-Jul-2014 00:23
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 00:23
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 00:23
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 00:23
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 00:23
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 00:23
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 00:23
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 00:23
Surr: 1,2-Dichloroethane-d4	*99.1*		*71-125*	*%REC*	*1*	*31-Jul-2014 00:23*
Surr: 4-Bromofluorobenzene	*95.9*		*70-125*	*%REC*	*1*	*31-Jul-2014 00:23*
Surr: Dibromofluoromethane	*98.7*		*74-125*	*%REC*	*1*	*31-Jul-2014 00:23*
Surr: Toluene-d8	*98.6*		*75-125*	*%REC*	*1*	*31-Jul-2014 00:23*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 19:41
Surr: 4-Bromofluorobenzene	*95.0*		*70-130*	*%REC*	*1*	*28-Jul-2014 19:41*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: HOA-1
Collection Date: 23-Jul-2014 16:20

WorkOrder:HS14070994
Lab ID:HS14070994-15
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 00:47
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 00:47
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 00:47
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 00:47
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 00:47
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 00:47
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 00:47
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*31-Jul-2014 00:47*
Surr: 4-Bromofluorobenzene	*96.4*		*70-125*	*%REC*	*1*	*31-Jul-2014 00:47*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*31-Jul-2014 00:47*
Surr: Toluene-d8	*98.0*		*75-125*	*%REC*	*1*	*31-Jul-2014 00:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 19:57
Surr: 4-Bromofluorobenzene	*93.2*		*70-130*	*%REC*	*1*	*28-Jul-2014 19:57*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: Dup 1
Collection Date: 23-Jul-2014 00:00

WorkOrder:HS14070994
Lab ID:HS14070994-16
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	31-Jul-2014 01:11
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 01:11
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
2-Butanone	**0.0037**		**0.0020**	**mg/L**	1	31-Jul-2014 01:11
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 01:11
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 01:11
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 01:11
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 01:11
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 01:11
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*31-Jul-2014 01:11*
Surr: 4-Bromofluorobenzene	*97.6*		*70-125*	*%REC*	*1*	*31-Jul-2014 01:11*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*31-Jul-2014 01:11*
Surr: Toluene-d8	*97.5*		*75-125*	*%REC*	*1*	*31-Jul-2014 01:11*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 20:13
Surr: 4-Bromofluorobenzene	*94.0*		*70-130*	*%REC*	*1*	*28-Jul-2014 20:13*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14070994	
Sample ID:	1910 N Quail Crossing	Lab ID:HS14070994-19	
Collection Date:	24-Jul-2014 11:07	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	31-Jul-2014 12:31
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 12:31
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 12:31
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 12:31
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 12:31
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 12:31
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 12:31
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 12:31
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*31-Jul-2014 12:31*
Surr: 4-Bromofluorobenzene	*95.9*		*70-125*	*%REC*	*1*	*31-Jul-2014 12:31*
Surr: Dibromofluoromethane	*99.1*		*74-125*	*%REC*	*1*	*31-Jul-2014 12:31*
Surr: Toluene-d8	*97.3*		*75-125*	*%REC*	*1*	*31-Jul-2014 12:31*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 14:25
Surr: 4-Bromofluorobenzene	*93.6*		*70-130*	*%REC*	*1*	*28-Jul-2014 14:25*

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

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: HOA-2
Collection Date: 24-Jul-2014 11:15

WorkOrder:HS14070994
Lab ID:HS14070994-20
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 12:55
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 12:55
Benzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 12:55
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 12:55
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 12:55
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
Toluene	ND		0.0010	mg/L	1	31-Jul-2014 12:55
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 12:55
Surr: 1,2-Dichloroethane-d4	*99.0*		*71-125*	*%REC*	*1*	*31-Jul-2014 12:55*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*1*	*31-Jul-2014 12:55*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*1*	*31-Jul-2014 12:55*
Surr: Toluene-d8	*97.4*		*75-125*	*%REC*	*1*	*31-Jul-2014 12:55*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 14:40
Surr: 4-Bromofluorobenzene	*93.2*		*70-130*	*%REC*	*1*	*28-Jul-2014 14:40*

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: HS14070994

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R238234	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14070994-01	1009 W Mountain	23 Jul 2014 13:15			28 Jul 2014 14:56	1
HS14070994-02	2009 N Mountain Ct	23 Jul 2014 13:40			28 Jul 2014 15:12	1
HS14070994-03	2007 N Mountain Ct	23 Jul 2014 13:50			28 Jul 2014 15:28	1
HS14070994-04	2019 N Ruger Cir	23 Jul 2014 14:00			28 Jul 2014 15:44	1
HS14070994-05	2020 N Ruger Cir	23 Jul 2014 14:10			28 Jul 2014 15:59	1
HS14070994-06	2028 N Ruger Cir	23 Jul 2014 14:20			28 Jul 2014 18:06	1
HS14070994-07	2032 N Ruger Cir	23 Jul 2014 14:30			28 Jul 2014 16:15	1
HS14070994-08	2025 N Ruger Ct	23 Jul 2014 14:40			28 Jul 2014 18:22	1
HS14070994-09	2021 N Ruger Ct	23 Jul 2014 14:50			28 Jul 2014 18:38	1
HS14070994-10	2005 N Colt Ct	23 Jul 2014 15:05			28 Jul 2014 18:54	1
HS14070994-11	2002 N Colt Ct	23 Jul 2014 15:15			28 Jul 2014 19:09	1
HS14070994-12	2007 N Colt Ct	23 Jul 2014 15:35			28 Jul 2014 19:25	1
HS14070994-14	1211 W Quail Crossing Ct	23 Jul 2014 16:05			28 Jul 2014 19:41	1
HS14070994-15	HOA-1	23 Jul 2014 16:20			28 Jul 2014 19:57	1
HS14070994-16	Dup 1	23 Jul 2014 00:00			28 Jul 2014 20:13	1
HS14070994-19	1910 N Quail Crossing	24 Jul 2014 11:07			28 Jul 2014 14:25	1
HS14070994-20	HOA-2	24 Jul 2014 11:15			28 Jul 2014 14:40	1
Batch ID R238403	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14070994-01	1009 W Mountain	23 Jul 2014 13:15			30 Jul 2014 17:31	1
HS14070994-02	2009 N Mountain Ct	23 Jul 2014 13:40			30 Jul 2014 17:54	1
HS14070994-03	2007 N Mountain Ct	23 Jul 2014 13:50			30 Jul 2014 18:19	1
HS14070994-04	2019 N Ruger Cir	23 Jul 2014 14:00			30 Jul 2014 20:44	1
HS14070994-05	2020 N Ruger Cir	23 Jul 2014 14:10			30 Jul 2014 18:42	1
HS14070994-06	2028 N Ruger Cir	23 Jul 2014 14:20			30 Jul 2014 19:06	1
HS14070994-07	2032 N Ruger Cir	23 Jul 2014 14:30			30 Jul 2014 19:31	1
HS14070994-08	2025 N Ruger Ct	23 Jul 2014 14:40			30 Jul 2014 19:55	1
HS14070994-09	2021 N Ruger Ct	23 Jul 2014 14:50			30 Jul 2014 20:19	1
Batch ID R238415	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14070994-10	2005 N Colt Ct	23 Jul 2014 15:05			31 Jul 2014 01:35	1
HS14070994-11	2002 N Colt Ct	23 Jul 2014 15:15			30 Jul 2014 23:34	1
HS14070994-12	2007 N Colt Ct	23 Jul 2014 15:35			30 Jul 2014 23:58	1
HS14070994-14	1211 W Quail Crossing Ct	23 Jul 2014 16:05			31 Jul 2014 00:23	1
HS14070994-15	HOA-1	23 Jul 2014 16:20			31 Jul 2014 00:47	1
HS14070994-16	Dup 1	23 Jul 2014 00:00			31 Jul 2014 01:11	1
Batch ID R238509	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14070994-19	1910 N Quail Crossing	24 Jul 2014 11:07			31 Jul 2014 12:31	1
HS14070994-20	HOA-2	24 Jul 2014 11:15			31 Jul 2014 12:55	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS14070994

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238234 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140728** Units: **mg/L** Analysis Date: **28-Jul-2014 13:53**
Client ID: Run ID: **FID-14_238234** SeqNo: **2944192** 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	*0.09748*	*0.0050*	*0.1*	*0*	*97.5*	*70 - 130*				

LCS Sample ID: **GLCSW1-140728** Units: **mg/L** Analysis Date: **28-Jul-2014 14:09**
Client ID: Run ID: **FID-14_238234** SeqNo: **2944193** 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	1.1	0.050	1	0	110	70 - 130				
Surr: 4-Bromofluorobenzene	*0.09818*	*0.0050*	*0.1*	*0*	*98.2*	*70 - 130*				

MS Sample ID: **HS14070994-07MS** Units: **mg/L** Analysis Date: **28-Jul-2014 16:31**
Client ID: **2032 N Ruger Cir** Run ID: **FID-14_238234** SeqNo: **2944202** 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	0.3721	0.050	1	0	37.2	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.09443*	*0.0050*	*0.1*	*0*	*94.4*	*70 - 130*				

MSD Sample ID: **HS14070994-07MSD** Units: **mg/L** Analysis Date: **28-Jul-2014 16:47**
Client ID: **2032 N Ruger Cir** Run ID: **FID-14_238234** SeqNo: **2944203** 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	0.6535	0.050	1	0.3721	65.3	70 - 130	0.3721	54.9	30	SR
Surr: 4-Bromofluorobenzene	*0.09132*	*0.0050*	*0.1*	*0.09443*	*91.3*	*70 - 130*	*0.09443*	*3.35*	*30*	

The following samples were anayzed in this batch:

HS14070994-01	HS14070994-02	HS14070994-03	HS14070994-04
HS14070994-05	HS14070994-06	HS14070994-07	HS14070994-08
HS14070994-09	HS14070994-10	HS14070994-11	HS14070994-12
HS14070994-14	HS14070994-15	HS14070994-16	HS14070994-19
HS14070994-20			

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238403 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-140730** Units: **ug/L** Analysis Date: **30-Jul-2014 11:04**
Client ID: Run ID: **VOA6_238403** SeqNo: **2948106** 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	*49.27*	*1.0*	*50*	*0*	*98.5*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.27*	*1.0*	*50*	*0*	*96.5*	*70 - 125*				
Surr: Dibromofluoromethane	*49.26*	*1.0*	*50*	*0*	*98.5*	*74 - 125*				
Surr: Toluene-d8	*48.75*	*1.0*	*50*	*0*	*97.5*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238403 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-140730** Units: **ug/L** Analysis Date: **30-Jul-2014 09:48**
Client ID: Run ID: **VOA6_238403** SeqNo: **2948105** 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	47.63	1.0	50	0	95.3	80 - 120				
1,2-Dichloroethane	43.73	1.0	50	0	87.5	79 - 120				
1,3,5-Trimethylbenzene	47.31	1.0	50	0	94.6	80 - 120				
2-Butanone	92.3	2.0	100	0	92.3	60 - 140				
Benzene	45.07	1.0	50	0	90.1	80 - 120				
Cyclohexane	47.53	1.0	50	0	95.1	75 - 125				
Ethylbenzene	47.55	1.0	50	0	95.1	80 - 120				
Isopropylbenzene	48.68	1.0	50	0	97.4	80 - 120				
m,p-Xylene	94.54	2.0	100	0	94.5	80 - 120				
Methylcyclohexane	42.38	1.0	50	0	84.8	70 - 122				
Naphthalene	47.95	1.0	50	0	95.9	70 - 130				
n-Butylbenzene	51.11	1.0	50	0	102	75 - 125				
n-Propylbenzene	48.36	1.0	50	0	96.7	75 - 130				
o-Xylene	47.68	1.0	50	0	95.4	80 - 120				
Toluene	45.58	1.0	50	0	91.2	80 - 121				
Xylenes, Total	142.2	3.0	150	0	94.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*49.62*	*1.0*	*50*	*0*	*99.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.85*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*49.54*	*1.0*	*50*	*0*	*99.1*	*74 - 125*				
Surr: Toluene-d8	*50.95*	*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: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238403 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS14071130-03MS** Units: **ug/L** Analysis Date: **30-Jul-2014 14:18**
Client ID: Run ID: **VOA6_238403** SeqNo: **2948108** 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	46.76	1.0	50	0	93.5	80 - 120				
1,2-Dichloroethane	46.25	1.0	50	0	92.5	79 - 120				
1,3,5-Trimethylbenzene	46.25	1.0	50	0	92.5	80 - 120				
2-Butanone	99.87	2.0	100	0	99.9	60 - 140				
Benzene	49.83	1.0	50	4.027	91.6	80 - 120				
Cyclohexane	42.35	1.0	50	0	84.7	75 - 125				
Ethylbenzene	47.17	1.0	50	0	94.3	80 - 120				
Isopropylbenzene	47.89	1.0	50	0.4079	95.0	80 - 120				
m,p-Xylene	92.65	2.0	100	0	92.7	80 - 120				
Methylcyclohexane	27.44	1.0	50	0	54.9	70 - 122				S
Naphthalene	55.41	1.0	50	0	111	70 - 130				
n-Butylbenzene	48.73	1.0	50	0	97.5	75 - 125				
n-Propylbenzene	45.35	1.0	50	0	90.7	75 - 130				
o-Xylene	46.88	1.0	50	0	93.8	80 - 120				
Toluene	44.9	1.0	50	0	89.8	80 - 121				
Xylenes, Total	139.5	3.0	150	0	93.0	80 - 124				
Surr: 1,2-Dichloroethane-d4	*50.06*	*1.0*	*50*	*0*	*100*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.36*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*49.47*	*1.0*	*50*	*0*	*98.9*	*74 - 125*				
Surr: Toluene-d8	*50.91*	*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: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238403 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS14071130-03MSD** Units: **ug/L** Analysis Date: **30-Jul-2014 14:43**
Client ID: Run ID: **VOA6_238403** SeqNo: **2948109** 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	47.55	1.0	50	46.76	95.1	80 - 120	46.76	1.68	20	
1,2-Dichloroethane	47.01	1.0	50	46.25	94.0	79 - 120	46.25	1.62	20	
1,3,5-Trimethylbenzene	47.14	1.0	50	46.25	94.3	80 - 120	46.25	1.91	20	
2-Butanone	104.1	2.0	100	99.87	104	60 - 140	99.87	4.14	20	
Benzene	48.76	1.0	50	49.83	89.5	80 - 120	49.83	2.18	20	
Cyclohexane	42.99	1.0	50	42.35	86.0	75 - 125	42.35	1.49	20	
Ethylbenzene	48.12	1.0	50	47.17	96.2	80 - 120	47.17	1.99	20	
Isopropylbenzene	49.71	1.0	50	47.89	98.6	80 - 120	47.89	3.72	20	
m,p-Xylene	95.37	2.0	100	92.65	95.4	80 - 120	92.65	2.89	20	
Methylcyclohexane	30.26	1.0	50	27.44	60.5	70 - 122	27.44	9.78	20	S
Naphthalene	57.81	1.0	50	55.41	116	70 - 130	55.41	4.24	20	
n-Butylbenzene	49.54	1.0	50	48.73	99.1	75 - 125	48.73	1.64	20	
n-Propylbenzene	48.14	1.0	50	45.35	96.3	75 - 130	45.35	5.96	20	
o-Xylene	48.76	1.0	50	46.88	97.5	80 - 120	46.88	3.93	20	
Toluene	46.08	1.0	50	44.9	92.2	80 - 121	44.9	2.58	20	
Xylenes, Total	144.1	3.0	150	139.5	96.1	80 - 124	139.5	3.24	20	
Surr: 1,2-Dichloroethane-d4	*50.49*	*1.0*	*50*	*50.06*	*101*	*71 - 125*	*50.06*	*0.849*	*20*	
Surr: 4-Bromofluorobenzene	*50.89*	*1.0*	*50*	*51.36*	*102*	*70 - 125*	*51.36*	*0.908*	*20*	
Surr: Dibromofluoromethane	*49.77*	*1.0*	*50*	*49.47*	*99.5*	*74 - 125*	*49.47*	*0.6*	*20*	
Surr: Toluene-d8	*50.82*	*1.0*	*50*	*50.91*	*102*	*75 - 125*	*50.91*	*0.18*	*20*	

The following samples were anayzed in this batch: HS14070994-01 HS14070994-02 HS14070994-03 HS14070994-04 HS14070994-05 HS14070994-06 HS14070994-07 HS14070994-08 HS14070994-09

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238415 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-140730** Units: **ug/L** Analysis Date: **30-Jul-2014 23:10**
Client ID: Run ID: **VOA6_238415** SeqNo: **2948408** 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	*50.23*	*1.0*	*50*	*0*	*100*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.31*	*1.0*	*50*	*0*	*96.6*	*70 - 125*				
Surr: Dibromofluoromethane	*50.7*	*1.0*	*50*	*0*	*101*	*74 - 125*				
Surr: Toluene-d8	*49*	*1.0*	*50*	*0*	*98.0*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238415 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-140730** Units: **ug/L** Analysis Date: **30-Jul-2014 21:57**
Client ID: Run ID: **VOA6_238415** SeqNo: **2948407** 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	46.78	1.0	50	0	93.6	80 - 120				
1,2-Dichloroethane	44.12	1.0	50	0	88.2	79 - 120				
1,3,5-Trimethylbenzene	46.63	1.0	50	0	93.3	80 - 120				
2-Butanone	95.51	2.0	100	0	95.5	60 - 140				
Benzene	45.19	1.0	50	0	90.4	80 - 120				
Cyclohexane	47.46	1.0	50	0	94.9	75 - 125				
Ethylbenzene	46.63	1.0	50	0	93.3	80 - 120				
Isopropylbenzene	47.72	1.0	50	0	95.4	80 - 120				
m,p-Xylene	92.69	2.0	100	0	92.7	80 - 120				
Methylcyclohexane	43.58	1.0	50	0	87.2	70 - 122				
Naphthalene	49.71	1.0	50	0	99.4	70 - 130				
n-Butylbenzene	49.48	1.0	50	0	99.0	75 - 125				
n-Propylbenzene	47.97	1.0	50	0	95.9	75 - 130				
o-Xylene	46.71	1.0	50	0	93.4	80 - 120				
Toluene	44.96	1.0	50	0	89.9	80 - 121				
Xylenes, Total	139.4	3.0	150	0	92.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	*49.57*	*1.0*	*50*	*0*	*99.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.89*	*1.0*	*50*	*0*	*99.8*	*70 - 125*				
Surr: Dibromofluoromethane	*49.23*	*1.0*	*50*	*0*	*98.5*	*74 - 125*				
Surr: Toluene-d8	*50.49*	*1.0*	*50*	*0*	*101*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238415 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS14071027-18MS** Units: **ug/L** Analysis Date: **31-Jul-2014 02:24**
Client ID: Run ID: **VOA6_238415** SeqNo: **2948416** 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	848.2	20	1000	8.467	84.0	80 - 120				
1,2-Dichloroethane	846.7	20	1000	0	84.7	79 - 120				
1,3,5-Trimethylbenzene	840.5	20	1000	0	84.1	80 - 120				
2-Butanone	1715	40	2000	0	85.7	60 - 140				
Benzene	833.4	20	1000	0	83.3	80 - 120				
Cyclohexane	749.4	20	1000	0	74.9	75 - 125				S
Ethylbenzene	867.5	20	1000	6.124	86.1	80 - 120				
Isopropylbenzene	865	20	1000	0	86.5	80 - 120				
m,p-Xylene	1695	40	2000	0	84.7	80 - 120				
Methylcyclohexane	529.5	20	1000	0	53.0	70 - 122				S
Naphthalene	888.1	20	1000	0	88.8	70 - 130				
n-Butylbenzene	799.9	20	1000	0	80.0	75 - 125				
n-Propylbenzene	846.4	20	1000	0	84.6	75 - 130				
o-Xylene	881.6	20	1000	0	88.2	80 - 120				
Toluene	841.1	20	1000	8.439	83.3	80 - 121				
Xylenes, Total	2576	60	3000	0	85.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	*998.6*	*20*	*1000*	*0*	*99.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*1014*	*20*	*1000*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*1004*	*20*	*1000*	*0*	*100*	*74 - 125*				
Surr: Toluene-d8	*999*	*20*	*1000*	*0*	*99.9*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238415 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS14071027-18MSD** Units: **ug/L** Analysis Date: **31-Jul-2014 02:48**
Client ID: Run ID: **VOA6_238415** SeqNo: **2948417** 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	880.1	20	1000	848.2	87.2	80 - 120	848.2	3.69	20	
1,2-Dichloroethane	878.4	20	1000	846.7	87.8	79 - 120	846.7	3.68	20	
1,3,5-Trimethylbenzene	869.7	20	1000	840.5	87.0	80 - 120	840.5	3.41	20	
2-Butanone	1799	40	2000	1715	90.0	60 - 140	1715	4.82	20	
Benzene	846.9	20	1000	833.4	84.7	80 - 120	833.4	1.6	20	
Cyclohexane	729	20	1000	749.4	72.9	75 - 125	749.4	2.76	20	S
Ethylbenzene	888.1	20	1000	867.5	88.2	80 - 120	867.5	2.34	20	
Isopropylbenzene	881.3	20	1000	865	88.1	80 - 120	865	1.87	20	
m,p-Xylene	1761	40	2000	1695	88.1	80 - 120	1695	3.86	20	
Methylcyclohexane	662.1	20	1000	529.5	66.2	70 - 122	529.5	22.3	20	SR
Naphthalene	975.2	20	1000	888.1	97.5	70 - 130	888.1	9.35	20	
n-Butylbenzene	848.9	20	1000	799.9	84.9	75 - 125	799.9	5.94	20	
n-Propylbenzene	872.5	20	1000	846.4	87.2	75 - 130	846.4	3.04	20	
o-Xylene	899.1	20	1000	881.6	89.9	80 - 120	881.6	1.96	20	
Toluene	859.8	20	1000	841.1	85.1	80 - 121	841.1	2.19	20	
Xylenes, Total	2660	60	3000	2576	88.7	80 - 124	2576	3.21	20	
Surr: 1,2-Dichloroethane-d4	*986.5*	*20*	*1000*	*998.6*	*98.6*	*71 - 125*	*998.6*	*1.22*	*20*	
Surr: 4-Bromofluorobenzene	*1014*	*20*	*1000*	*1014*	*101*	*70 - 125*	*1014*	*0.0392*	*20*	
Surr: Dibromofluoromethane	*984.7*	*20*	*1000*	*1004*	*98.5*	*74 - 125*	*1004*	*1.89*	*20*	
Surr: Toluene-d8	*1011*	*20*	*1000*	*999*	*101*	*75 - 125*	*999*	*1.23*	*20*	

The following samples were anayzed in this batch: HS14070994-10 HS14070994-11 HS14070994-12 HS14070994-14 HS14070994-15 HS14070994-16

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-140731** Units: **ug/L** Analysis Date: **31-Jul-2014 12:06**
Client ID: Run ID: **VOA6_238509** SeqNo: **2950388** 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	*49.92*	*1.0*	*50*	*0*	*99.8*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.74*	*1.0*	*50*	*0*	*97.5*	*70 - 125*				
Surr: Dibromofluoromethane	*48.86*	*1.0*	*50*	*0*	*97.7*	*74 - 125*				
Surr: Toluene-d8	*49.01*	*1.0*	*50*	*0*	*98.0*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-140731** Units: **ug/L** Analysis Date: **31-Jul-2014 10:54**
Client ID: Run ID: **VOA6_238509** SeqNo: **2950387** 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	49.21	1.0	50	0	98.4	80 - 120			
1,2-Dichloroethane	44.71	1.0	50	0	89.4	79 - 120			
1,3,5-Trimethylbenzene	48.81	1.0	50	0	97.6	80 - 120			
2-Butanone	97.52	2.0	100	0	97.5	60 - 140			
Benzene	46.07	1.0	50	0	92.1	80 - 120			
Cyclohexane	50.05	1.0	50	0	100	75 - 125			
Ethylbenzene	48.45	1.0	50	0	96.9	80 - 120			
Isopropylbenzene	49.84	1.0	50	0	99.7	80 - 120			
m,p-Xylene	96.29	2.0	100	0	96.3	80 - 120			
Methylcyclohexane	39.45	1.0	50	0	78.9	70 - 122			
Naphthalene	50.33	1.0	50	0	101	70 - 130			
n-Butylbenzene	52.9	1.0	50	0	106	75 - 125			
n-Propylbenzene	49.99	1.0	50	0	100.0	75 - 130			
o-Xylene	48.53	1.0	50	0	97.1	80 - 120			
Toluene	46.51	1.0	50	0	93.0	80 - 121			
Xylenes, Total	144.8	3.0	150	0	96.5	80 - 124			
Surr: 1,2-Dichloroethane-d4	*49.97*	*1.0*	*50*	*0*	*99.9*	*71 - 125*			
Surr: 4-Bromofluorobenzene	*50.26*	*1.0*	*50*	*0*	*101*	*70 - 125*			
Surr: Dibromofluoromethane	*49.81*	*1.0*	*50*	*0*	*99.6*	*74 - 125*			
Surr: Toluene-d8	*49.82*	*1.0*	*50*	*0*	*99.6*	*75 - 125*			

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS14070994-19MS** Units: **ug/L** Analysis Date: **31-Jul-2014 15:45**
Client ID: **1910 N Quail Crossing** Run ID: **VOA6_238509** SeqNo: **2950397** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.79	1.0	50	0	87.6	80 - 120				
1,2-Dichloroethane	43.1	1.0	50	0	86.2	79 - 120				
1,3,5-Trimethylbenzene	42.37	1.0	50	0	84.7	80 - 120				
2-Butanone	91.87	2.0	100	0	91.9	60 - 140				
Benzene	42.75	1.0	50	0	85.5	80 - 120				
Cyclohexane	38.26	1.0	50	0	76.5	75 - 125				
Ethylbenzene	44.27	1.0	50	0	88.5	80 - 120				
Isopropylbenzene	44.62	1.0	50	0	89.2	80 - 120				
m,p-Xylene	89.56	2.0	100	0	89.6	80 - 120				
Methylcyclohexane	28.74	1.0	50	0	57.5	70 - 122				S
Naphthalene	47.28	1.0	50	0	94.6	70 - 130				
n-Butylbenzene	43.77	1.0	50	0	87.5	75 - 125				
n-Propylbenzene	42.97	1.0	50	0	85.9	75 - 130				
o-Xylene	45.22	1.0	50	0	90.4	80 - 120				
Toluene	42.38	1.0	50	0	84.8	80 - 121				
Xylenes, Total	134.8	3.0	150	0	89.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	*49.34*	*1.0*	*50*	*0*	*98.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.42*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*49.08*	*1.0*	*50*	*0*	*98.2*	*74 - 125*				
Surr: Toluene-d8	*51.39*	*1.0*	*50*	*0*	*103*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14070994
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238509 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS14070994-19MSD** Units: **ug/L** Analysis Date: **31-Jul-2014 16:09**
Client ID: **1910 N Quail Crossing** Run ID: **VOA6_238509** SeqNo: **2950398** 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	47.55	1.0	50	43.79	95.1	80 - 120	43.79	8.23	20	
1,2-Dichloroethane	43.94	1.0	50	43.1	87.9	79 - 120	43.1	1.92	20	
1,3,5-Trimethylbenzene	46.17	1.0	50	42.37	92.3	80 - 120	42.37	8.6	20	
2-Butanone	101	2.0	100	91.87	101	60 - 140	91.87	9.46	20	
Benzene	43.78	1.0	50	42.75	87.6	80 - 120	42.75	2.4	20	
Cyclohexane	40.7	1.0	50	38.26	81.4	75 - 125	38.26	6.17	20	
Ethylbenzene	46.76	1.0	50	44.27	93.5	80 - 120	44.27	5.47	20	
Isopropylbenzene	47.74	1.0	50	44.62	95.5	80 - 120	44.62	6.77	20	
m,p-Xylene	93.17	2.0	100	89.56	93.2	80 - 120	89.56	3.95	20	
Methylcyclohexane	31.48	1.0	50	28.74	63.0	70 - 122	28.74	9.08	20	S
Naphthalene	54.16	1.0	50	47.28	108	70 - 130	47.28	13.6	20	
n-Butylbenzene	47.79	1.0	50	43.77	95.6	75 - 125	43.77	8.79	20	
n-Propylbenzene	46.78	1.0	50	42.97	93.6	75 - 130	42.97	8.49	20	
o-Xylene	47.4	1.0	50	45.22	94.8	80 - 120	45.22	4.72	20	
Toluene	44.63	1.0	50	42.38	89.3	80 - 121	42.38	5.19	20	
Xylenes, Total	140.6	3.0	150	134.8	93.7	80 - 124	134.8	4.21	20	
Surr: 1,2-Dichloroethane-d4	*48.85*	*1.0*	*50*	*49.34*	*97.7*	*71 - 125*	*49.34*	*1.01*	*20*	
Surr: 4-Bromofluorobenzene	*51.2*	*1.0*	*50*	*51.42*	*102*	*70 - 125*	*51.42*	*0.413*	*20*	
Surr: Dibromofluoromethane	*49.29*	*1.0*	*50*	*49.08*	*98.6*	*74 - 125*	*49.08*	*0.424*	*20*	
Surr: Toluene-d8	*50.8*	*1.0*	*50*	*51.39*	*102*	*75 - 125*	*51.39*	*1.15*	*20*	

The following samples were anayzed in this batch: HS14070994-19 HS14070994-20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: **HS14070994**

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

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	01-Oct-2014
Kentucky	KY 2014-2015	30-Apr-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2013-024	31-Aug-2014
Texas	TX104704231-14-13	30-Apr-2015

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070994

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14070994-01	1009 W Mountain	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-01	1009 W Mountain	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-02	2009 N Mountain Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-02	2009 N Mountain Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-03	2007 N Mountain Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-03	2007 N Mountain Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-04	2019 N Ruger Cir	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-04	2019 N Ruger Cir	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-05	2020 N Ruger Cir	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-05	2020 N Ruger Cir	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-06	2028 N Ruger Cir	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-06	2028 N Ruger Cir	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-07	2032 N Ruger Cir	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-07	2032 N Ruger Cir	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-08	2025 N Ruger Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-08	2025 N Ruger Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-09	2021 N Ruger Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-09	2021 N Ruger Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-10	2005 N Colt Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-10	2005 N Colt Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-11	2002 N Colt Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-11	2002 N Colt Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-12	2007 N Colt Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-12	2007 N Colt Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-13	2006 N Colt Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-13	2006 N Colt Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-14	1211 W Quail Crossing Ct	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-14	1211 W Quail Crossing Ct	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-15	HOA-1	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-15	HOA-1	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-16	Dup 1	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-16	Dup 1	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-17	Dup 2	Login	25-Jul-14 10:03	MES	VW-3
HS14070994-17	Dup 2	Login	25-Jul-14 10:03	MES	TPH C2
HS14070994-18	Trip Blank 070714-62	Login	25-Jul-14 10:08	MES	VW-2
HS14070994-19	1910 N Quail Crossing	Login	28-Jul-14 12:16	BA11	BTEX A1
HS14070994-19	1910 N Quail Crossing	Login	28-Jul-14 12:16	BA11	VW-1
HS14070994-20	HOA-2	Login	28-Jul-14 12:16	BA11	BTEX A1
HS14070994-20	HOA-2	Login	28-Jul-14 12:16	BA11	VW-1
HS14070994-21	Trip Blank-070714-60	Login	28-Jul-14 12:18	BA11	VW-1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14070994

SAMPLE TRACKING

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Environmental

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Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody F

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COC ID: 10893

HS14070994

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: VOCs (8260) (10) Cond HCV List
B: GRO VPH, EPH
C
D
E
F
G
H
I
J

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	1009 W. Mountain	7-23	13:15	Water	HCL	6	X	X									
2	2009 N Mountain Ct	7-23	13:40														
3	2007 N mountain Ct	7-23	13:50														
4	2019 N. Ruger Circle	7-23	14:00														
5	2020 N Ruger Circle	7-23	14:10														
6	2028 N Ruger Circle	7-23	14:20														
7	2032 N. Ruger Circle	7-23	14:30														
8	2025 N Ruger Ct.	7-23	14:40														
9	2021 N Ruger Ct	7-23	14:50														
10	2005 N. Court Ct	7-23	15:05	Water	HCL	6	X	X									

Sampler(s) Please Print & Sign: Paul Wand

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☒ Std 10 Work Days ☐ 5 Work Days ☐ 2 Work Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: Date: 7-23-14 Time: 18:30 Received by:

Relinquished by: Date: 7-24-14 Time: 0950 Received by (Laboratory): D. Smith

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

Notes:

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☒ Level 1 (Std)
☐ Level 2 (Std + QC Summary)
☐ Level 3 (Std + QC + Raw Data)
☐ Level 4 (Full Data Pkg)
☐ Other

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

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

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ALS Environmental

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COC ID: 10893!

HS14070994

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: YOTS (3,500) Cost Cont GW Eval
B: GRO - VPH (OA-1)
C
D
E
F
G
H
I
J

* #3 2006 N Cout Ct HAD Free Product at Sampling

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	2002 N Colt Ct	7-23	15:15	Water	HCL	6	X	X									
2	2007 N cout ct	7-23	15:35				X	X									
3	2006 N colt Ct.	7-23	15:55				X	X									
4	1211 W. Quail Ct	7-23	16:05				X	X									X
5	Hoa 1	7-23	16:20				X	X									
6	DUP 1	—	—				X	X									
7	DUP 2	—	—	Water	HCL	6	X	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Hand

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) [X] Std 10 Working Days [ ] 5 Days [ ] 3 Days [ ] 2 Days [ ] 1 Day

Results Due Date:

Relinquished by: Date: 7-23-14 Time: 18:30 Received by:

Relinquished by: Date: 7-24-14 Time: 0950 Received by (Laboratory):

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

Notes:

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level 2 Std QC
[ ] Level 2 Std QC Raw Data
[ ] Level 4 EPA 10 Data
[ ] Other

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

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

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Chain of Custody Form

Page 1 of 1

COC ID: 108933

HS14071033

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	Sam Jackson	Invoice Attn	Sam Jackson
Address	3815 SW First Avenue	Address	3815 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: VOCs (8260) Gas Cond (GC/FID)
B: SIM - VOH GC/FID

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	1910 N Quail	7-24	11:07	water	HCL	6	X	X									
2	Hoa Z	7-24	11:15	water	HCL	6	X	X									
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

Shipment Method: FEDEX

Required Turnaround Time: [Check Box] [X] Std. 10 Working Days [ ] 15 Days [ ] 5 Working Days [ ] 24 Hrs [ ] 48 Hrs

Results Due Date:

Relinquished by: [signature] Date: 7/24/14 Time: 18:30 Received by:

Relinquished by: Date: 7/25/14 Time: 9:20 Received by (Laboratory): [signature]

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

Notes: Call Sam Jackson for Results

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level 3 (Std. QC) [ ] TRRP Checklist
[ ] Level 3 (Std. QC) + Raw Data [ ] Level 4 (CLP)
[ ] Level 3 (Std. QC) + EDD
[ ] Other

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

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
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August 06, 2014

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

Work Order: **HS14071011**

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

Dear Samuel,

ALS Environmental received 7 sample(s) on Jul 25, 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: Ana.Spencer

Bethany McDaniel
Project Manager

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14071011

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14071011-01	MW-4	Water		24-Jul-2014 11:48	25-Jul-2014 09:20	☐
HS14071011-02	MW-9	Water		24-Jul-2014 12:43	25-Jul-2014 09:20	☐
HS14071011-03	MW-3	Water		24-Jul-2014 13:12	25-Jul-2014 09:20	☐
HS14071011-04	MW-6	Water		24-Jul-2014 13:36	25-Jul-2014 09:20	☐
HS14071011-05	MW-7	Water		24-Jul-2014 13:58	25-Jul-2014 09:20	☐
HS14071011-06	DUP-2	Water		24-Jul-2014 00:00	25-Jul-2014 09:20	☐
HS14071011-07	Trip Blank-070714-60	Water		24-Jul-2014 00:00	25-Jul-2014 09:20	☑

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14071011

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R238234

Sample ID: **HS14070994-07**
- MS/MSD is for an unrelated sample.

Batch ID: R238235

Sample ID: **HS14071057-05**
- MS/MSD is for an unrelated sample.

GCMS Volatiles by Method SW8260

Batch ID: R238406

Sample ID: **HS14071127-11**
- MS/MSD is for an unrelated sample.

Batch ID: R238632

Sample ID: **HS14080048-04MS**
- MS/MSD is for an unrelated sample.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14071011
Sample ID:	MW-4	Lab ID:HS14071011-01
Collection Date:	24-Jul-2014 11:48	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.047**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 07:41
1,3,5-Trimethylbenzene	**0.017**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 07:41
Benzene	**0.11**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
Cyclohexane	**0.022**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
Ethylbenzene	**0.049**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
Isopropylbenzene	**0.0029**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
m,p-Xylene	**0.043**		**0.0020**	**mg/L**	1	31-Jul-2014 07:41
Methylcyclohexane	**0.0027**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
Naphthalene	**0.0092**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 07:41
n-Propylbenzene	**0.0070**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
o-Xylene	**0.028**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
Toluene	**0.015**		**0.0010**	**mg/L**	1	31-Jul-2014 07:41
Xylenes, Total	**0.070**		**0.0030**	**mg/L**	1	31-Jul-2014 07:41
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*31-Jul-2014 07:41*
Surr: 4-Bromofluorobenzene	*94.9*		*70-125*	*%REC*	*1*	*31-Jul-2014 07:41*
Surr: Dibromofluoromethane	*98.9*		*74-125*	*%REC*	*1*	*31-Jul-2014 07:41*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*1*	*31-Jul-2014 07:41*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.75**		**0.050**	**mg/L**	1	28-Jul-2014 20:29
Surr: 4-Bromofluorobenzene	*93.0*		*70-130*	*%REC*	*1*	*28-Jul-2014 20:29*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14071011
Sample ID:	MW-9	Lab ID:HS14071011-02
Collection Date:	24-Jul-2014 12:43	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 08:05
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 08:05
Benzene	**0.0017**		**0.0010**	**mg/L**	1	31-Jul-2014 08:05
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 08:05
Ethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
m,p-Xylene	ND		0.0020	mg/L	1	31-Jul-2014 08:05
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 08:05
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
o-Xylene	ND		0.0010	mg/L	1	31-Jul-2014 08:05
Toluene	**0.0034**		**0.0010**	**mg/L**	1	31-Jul-2014 08:05
Xylenes, Total	ND		0.0030	mg/L	1	31-Jul-2014 08:05
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*31-Jul-2014 08:05*
Surr: 4-Bromofluorobenzene	*93.7*		*70-125*	*%REC*	*1*	*31-Jul-2014 08:05*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*31-Jul-2014 08:05*
Surr: Toluene-d8	*97.1*		*75-125*	*%REC*	*1*	*31-Jul-2014 08:05*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 21:16
Surr: 4-Bromofluorobenzene	*96.2*		*70-130*	*%REC*	*1*	*28-Jul-2014 21:16*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14071011
Sample ID:	MW-3	Lab ID:HS14071011-03
Collection Date:	24-Jul-2014 13:12	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.16**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
1,2-Dichloroethane	ND		0.010	mg/L	10	05-Aug-2014 00:33
1,3,5-Trimethylbenzene	**0.037**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
2-Butanone	ND		0.020	mg/L	10	05-Aug-2014 00:33
Benzene	**1.8**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
Cyclohexane	**0.081**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
Ethylbenzene	**0.51**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
Isopropylbenzene	ND		0.010	mg/L	10	05-Aug-2014 00:33
m,p-Xylene	**0.32**		**0.020**	**mg/L**	10	05-Aug-2014 00:33
Methylcyclohexane	ND		0.010	mg/L	10	05-Aug-2014 00:33
Naphthalene	**0.028**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
n-Butylbenzene	ND		0.010	mg/L	10	05-Aug-2014 00:33
n-Propylbenzene	**0.023**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
o-Xylene	**0.51**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
Toluene	**1.6**		**0.010**	**mg/L**	10	05-Aug-2014 00:33
Xylenes, Total	**0.83**		**0.030**	**mg/L**	10	05-Aug-2014 00:33
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*10*	*05-Aug-2014 00:33*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*10*	*05-Aug-2014 00:33*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*10*	*05-Aug-2014 00:33*
Surr: Toluene-d8	*98.3*		*75-125*	*%REC*	*10*	*05-Aug-2014 00:33*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**9.8**		**0.050**	**mg/L**	1	28-Jul-2014 21:32
Surr: 4-Bromofluorobenzene	*96.2*		*70-130*	*%REC*	*1*	*28-Jul-2014 21:32*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14071011
Sample ID:	MW-6	Lab ID:HS14071011-04
Collection Date:	24-Jul-2014 13:36	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:30
1,2-Dichloroethane	ND		0.0010	mg/L	1	31-Jul-2014 08:30
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:30
2-Butanone	ND		0.0020	mg/L	1	31-Jul-2014 08:30
Benzene	**0.0031**		**0.0010**	**mg/L**	1	31-Jul-2014 08:30
Cyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 08:30
Ethylbenzene	**0.0032**		**0.0010**	**mg/L**	1	31-Jul-2014 08:30
Isopropylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:30
m,p-Xylene	**0.0027**		**0.0020**	**mg/L**	1	31-Jul-2014 08:30
Methylcyclohexane	ND		0.0010	mg/L	1	31-Jul-2014 08:30
Naphthalene	ND		0.0010	mg/L	1	31-Jul-2014 08:30
n-Butylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:30
n-Propylbenzene	ND		0.0010	mg/L	1	31-Jul-2014 08:30
o-Xylene	**0.0031**		**0.0010**	**mg/L**	1	31-Jul-2014 08:30
Toluene	**0.0083**		**0.0010**	**mg/L**	1	31-Jul-2014 08:30
Xylenes, Total	**0.0059**		**0.0030**	**mg/L**	1	31-Jul-2014 08:30
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*31-Jul-2014 08:30*
Surr: 4-Bromofluorobenzene	*94.0*		*70-125*	*%REC*	*1*	*31-Jul-2014 08:30*
Surr: Dibromofluoromethane	*99.1*		*74-125*	*%REC*	*1*	*31-Jul-2014 08:30*
Surr: Toluene-d8	*97.4*		*75-125*	*%REC*	*1*	*31-Jul-2014 08:30*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 23:07
Surr: 4-Bromofluorobenzene	*93.8*		*70-130*	*%REC*	*1*	*28-Jul-2014 23:07*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14071011
Sample ID:	MW-7	Lab ID:HS14071011-05
Collection Date:	24-Jul-2014 13:58	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
1,2-Dichloroethane	ND		0.0010	mg/L	1	05-Aug-2014 02:12
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
2-Butanone	ND		0.0020	mg/L	1	05-Aug-2014 02:12
Benzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
Cyclohexane	ND		0.0010	mg/L	1	05-Aug-2014 02:12
Ethylbenzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
Isopropylbenzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
m,p-Xylene	ND		0.0020	mg/L	1	05-Aug-2014 02:12
Methylcyclohexane	ND		0.0010	mg/L	1	05-Aug-2014 02:12
Naphthalene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
n-Butylbenzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
n-Propylbenzene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
o-Xylene	ND		0.0010	mg/L	1	05-Aug-2014 02:12
Toluene	**0.0016**		**0.0010**	**mg/L**	1	05-Aug-2014 02:12
Xylenes, Total	ND		0.0030	mg/L	1	05-Aug-2014 02:12
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*05-Aug-2014 02:12*
Surr: 4-Bromofluorobenzene	*95.1*		*70-125*	*%REC*	*1*	*05-Aug-2014 02:12*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*05-Aug-2014 02:12*
Surr: Toluene-d8	*98.2*		*75-125*	*%REC*	*1*	*05-Aug-2014 02:12*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	28-Jul-2014 23:23
Surr: 4-Bromofluorobenzene	*97.2*		*70-130*	*%REC*	*1*	*28-Jul-2014 23:23*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14071011
Sample ID:	DUP-2	Lab ID:HS14071011-06
Collection Date:	24-Jul-2014 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.054**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
1,2-Dichloroethane	ND		0.0010	mg/L	1	05-Aug-2014 02:36
1,3,5-Trimethylbenzene	**0.019**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
2-Butanone	ND		0.0020	mg/L	1	05-Aug-2014 02:36
Benzene	**0.11**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
Cyclohexane	**0.025**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
Ethylbenzene	**0.057**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
Isopropylbenzene	**0.0033**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
m,p-Xylene	**0.050**		**0.0020**	**mg/L**	1	05-Aug-2014 02:36
Methylcyclohexane	**0.0031**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
Naphthalene	**0.0098**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
n-Butylbenzene	**0.0017**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
n-Propylbenzene	**0.0080**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
o-Xylene	**0.032**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
Toluene	**0.017**		**0.0010**	**mg/L**	1	05-Aug-2014 02:36
Xylenes, Total	**0.083**		**0.0030**	**mg/L**	1	05-Aug-2014 02:36
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*05-Aug-2014 02:36*
Surr: 4-Bromofluorobenzene	*96.2*		*70-125*	*%REC*	*1*	*05-Aug-2014 02:36*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*05-Aug-2014 02:36*
Surr: Toluene-d8	*97.9*		*75-125*	*%REC*	*1*	*05-Aug-2014 02:36*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.79**		**0.050**	**mg/L**	1	28-Jul-2014 23:38
Surr: 4-Bromofluorobenzene	*93.7*		*70-130*	*%REC*	*1*	*28-Jul-2014 23:38*

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS14071011

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R238234	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14071011-01	MW-4	24 Jul 2014 11:48			28 Jul 2014 20:29	1
HS14071011-02	MW-9	24 Jul 2014 12:43			28 Jul 2014 21:16	1
HS14071011-03	MW-3	24 Jul 2014 13:12			28 Jul 2014 21:32	1
Batch ID R238235	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14071011-04	MW-6	24 Jul 2014 13:36			28 Jul 2014 23:07	1
HS14071011-05	MW-7	24 Jul 2014 13:58			28 Jul 2014 23:23	1
HS14071011-06	DUP-2	24 Jul 2014 00:00			28 Jul 2014 23:38	1
Batch ID R238406	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14071011-01	MW-4	24 Jul 2014 11:48			31 Jul 2014 07:41	1
HS14071011-02	MW-9	24 Jul 2014 12:43			31 Jul 2014 08:05	1
HS14071011-04	MW-6	24 Jul 2014 13:36			31 Jul 2014 08:30	1
Batch ID R238632	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14071011-03	MW-3	24 Jul 2014 13:12			05 Aug 2014 00:33	10
HS14071011-05	MW-7	24 Jul 2014 13:58			05 Aug 2014 02:12	1
HS14071011-06	DUP-2	24 Jul 2014 00:00			05 Aug 2014 02:36	1

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238234 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140728** Units: **mg/L** Analysis Date: **28-Jul-2014 13:53**
Client ID: Run ID: **FID-14_238234** SeqNo: **2944192** 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	*0.09748*	*0.0050*	*0.1*	*0*	*97.5*	*70 - 130*				

LCS Sample ID: **GLCSW1-140728** Units: **mg/L** Analysis Date: **28-Jul-2014 14:09**
Client ID: Run ID: **FID-14_238234** SeqNo: **2944193** 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	1.1	0.050	1	0	110	70 - 130				
Surr: 4-Bromofluorobenzene	*0.09818*	*0.0050*	*0.1*	*0*	*98.2*	*70 - 130*				

MS Sample ID: **HS14070994-07MS** Units: **mg/L** Analysis Date: **28-Jul-2014 16:31**
Client ID: Run ID: **FID-14_238234** SeqNo: **2944202** 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	0.3721	0.050	1	0	37.2	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.09443*	*0.0050*	*0.1*	*0*	*94.4*	*70 - 130*				

MSD Sample ID: **HS14070994-07MSD** Units: **mg/L** Analysis Date: **28-Jul-2014 16:47**
Client ID: Run ID: **FID-14_238234** SeqNo: **2944203** 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	0.6535	0.050	1	0.3721	65.3	70 - 130	0.3721	54.9	30	SR
Surr: 4-Bromofluorobenzene	*0.09132*	*0.0050*	*0.1*	*0.09443*	*91.3*	*70 - 130*	*0.09443*	*3.35*	*30*	

The following samples were anayzed in this batch: HS14071011-01 HS14071011-02 HS14071011-03

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238235 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140728** Units: **mg/L** Analysis Date: **28-Jul-2014 22:35**
Client ID: Run ID: **FID-14_238235** SeqNo: **2944233** 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	*0.0944*	*0.0050*	*0.1*	*0*	*94.4*	*70 - 130*				

LCS Sample ID: **GLCSW1-140728** Units: **mg/L** Analysis Date: **28-Jul-2014 22:51**
Client ID: Run ID: **FID-14_238235** SeqNo: **2944234** 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	0.7589	0.050	1	0	75.9	70 - 130				
Surr: 4-Bromofluorobenzene	*0.09754*	*0.0050*	*0.1*	*0*	*97.5*	*70 - 130*				

MS Sample ID: **HS14071057-05MS** Units: **mg/L** Analysis Date: **29-Jul-2014 01:13**
Client ID: Run ID: **FID-14_238235** SeqNo: **2944243** 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	0.6977	0.050	1	0	69.8	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.09507*	*0.0050*	*0.1*	*0*	*95.1*	*70 - 130*				

MSD Sample ID: **HS14071057-05MSD** Units: **mg/L** Analysis Date: **29-Jul-2014 01:29**
Client ID: Run ID: **FID-14_238235** SeqNo: **2944244** 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	0.8791	0.050	1	0.6977	87.9	70 - 130	0.6977	23	30	
Surr: 4-Bromofluorobenzene	*0.09906*	*0.0050*	*0.1*	*0.09507*	*99.1*	*70 - 130*	*0.09507*	*4.11*	*30*	

The following samples were anayzed in this batch: HS14071011-04 HS14071011-05 HS14071011-06

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238406 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-140730** Units: **ug/L** Analysis Date: **30-Jul-2014 23:24**
Client ID: Run ID: **VOA4_238406** SeqNo: **2948211** 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	*53.27*	*1.0*	*50*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.45*	*1.0*	*50*	*0*	*94.9*	*70 - 125*				
Surr: Dibromofluoromethane	*49.64*	*1.0*	*50*	*0*	*99.3*	*74 - 125*				
Surr: Toluene-d8	*48.89*	*1.0*	*50*	*0*	*97.8*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238406 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140730** Units: **ug/L** Analysis Date: **30-Jul-2014 22:34**
Client ID: Run ID: **VOA4_238406** SeqNo: **2948210** 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	49.1	1.0	50	0	98.2	80 - 120			
1,2-Dichloroethane	52.35	1.0	50	0	105	79 - 120			
1,3,5-Trimethylbenzene	49.21	1.0	50	0	98.4	80 - 120			
2-Butanone	110.7	2.0	100	0	111	60 - 140			
Benzene	50.49	1.0	50	0	101	80 - 120			
Cyclohexane	53.2	1.0	50	0	106	75 - 125			
Ethylbenzene	48.79	1.0	50	0	97.6	80 - 120			
Isopropylbenzene	48.55	1.0	50	0	97.1	80 - 120			
m,p-Xylene	97	2.0	100	0	97.0	80 - 120			
Methylcyclohexane	49.38	1.0	50	0	98.8	70 - 122			
Naphthalene	44.8	1.0	50	0	89.6	70 - 130			
n-Butylbenzene	49.6	1.0	50	0	99.2	75 - 125			
n-Propylbenzene	49.75	1.0	50	0	99.5	75 - 130			
o-Xylene	48.31	1.0	50	0	96.6	80 - 120			
Toluene	50.14	1.0	50	0	100	80 - 121			
Xylenes, Total	145.3	3.0	150	0	96.9	80 - 124			
Surr: 1,2-Dichloroethane-d4	*50.28*	*1.0*	*50*	*0*	*101*	*71 - 125*			
Surr: 4-Bromofluorobenzene	*48.29*	*1.0*	*50*	*0*	*96.6*	*70 - 125*			
Surr: Dibromofluoromethane	*49.98*	*1.0*	*50*	*0*	*100.0*	*74 - 125*			
Surr: Toluene-d8	*48.89*	*1.0*	*50*	*0*	*97.8*	*75 - 125*			

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238406 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS14071127-11MS** Units: **ug/L** Analysis Date: **31-Jul-2014 00:39**
Client ID: Run ID: **VOA4_238406** SeqNo: **2948214** 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	45.39	1.0	50	0	90.8	80 - 120				
1,2-Dichloroethane	48.87	1.0	50	0	97.7	79 - 120				
1,3,5-Trimethylbenzene	37.56	1.0	50	0	75.1	80 - 120				S
2-Butanone	91.15	2.0	100	0	91.2	60 - 140				
Benzene	48.73	1.0	50	0	97.5	80 - 120				
Cyclohexane	51.71	1.0	50	0	103	75 - 125				
Ethylbenzene	46.9	1.0	50	0	93.8	80 - 120				
Isopropylbenzene	46.55	1.0	50	0	93.1	80 - 120				
m,p-Xylene	92.61	2.0	100	0	92.6	80 - 120				
Methylcyclohexane	46.9	1.0	50	0	93.8	70 - 122				
Naphthalene	37.45	1.0	50	0	74.9	70 - 130				
n-Butylbenzene	46.39	1.0	50	0	92.8	75 - 125				
n-Propylbenzene	46.99	1.0	50	0	94.0	75 - 130				
o-Xylene	45.52	1.0	50	0	91.0	80 - 120				
Toluene	47.79	1.0	50	0	95.6	80 - 121				
Xylenes, Total	138.1	3.0	150	0	92.1	80 - 124				
Surr: 1,2-Dichloroethane-d4	*51.92*	*1.0*	*50*	*0*	*104*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.34*	*1.0*	*50*	*0*	*98.7*	*70 - 125*				
Surr: Dibromofluoromethane	*50.16*	*1.0*	*50*	*0*	*100*	*74 - 125*				
Surr: Toluene-d8	*49.05*	*1.0*	*50*	*0*	*98.1*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238406 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS14071127-11MSD** Units: **ug/L** Analysis Date: **31-Jul-2014 01:03**
Client ID: Run ID: **VOA4_238406** SeqNo: **2948215** 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	47.57	1.0	50	45.39	95.1	80 - 120	45.39	4.68	20	
1,2-Dichloroethane	50.76	1.0	50	48.87	102	79 - 120	48.87	3.78	20	
1,3,5-Trimethylbenzene	37.81	1.0	50	37.56	75.6	80 - 120	37.56	0.651	20	S
2-Butanone	95.86	2.0	100	91.15	95.9	60 - 140	91.15	5.04	20	
Benzene	50.26	1.0	50	48.73	101	80 - 120	48.73	3.08	20	
Cyclohexane	54.13	1.0	50	51.71	108	75 - 125	51.71	4.58	20	
Ethylbenzene	48.9	1.0	50	46.9	97.8	80 - 120	46.9	4.18	20	
Isopropylbenzene	48.77	1.0	50	46.55	97.5	80 - 120	46.55	4.65	20	
m,p-Xylene	96.6	2.0	100	92.61	96.6	80 - 120	92.61	4.22	20	
Methylcyclohexane	49.1	1.0	50	46.9	98.2	70 - 122	46.9	4.57	20	
Naphthalene	41.5	1.0	50	37.45	83.0	70 - 130	37.45	10.2	20	
n-Butylbenzene	49.15	1.0	50	46.39	98.3	75 - 125	46.39	5.77	20	
n-Propylbenzene	49	1.0	50	46.99	98.0	75 - 130	46.99	4.2	20	
o-Xylene	47.59	1.0	50	45.52	95.2	80 - 120	45.52	4.43	20	
Toluene	49.55	1.0	50	47.79	99.1	80 - 121	47.79	3.62	20	
Xylenes, Total	144.2	3.0	150	138.1	96.1	80 - 124	138.1	4.29	20	
Surr: 1,2-Dichloroethane-d4	*51.4*	*1.0*	*50*	*51.92*	*103*	*71 - 125*	*51.92*	*1.01*	*20*	
Surr: 4-Bromofluorobenzene	*48.55*	*1.0*	*50*	*49.34*	*97.1*	*70 - 125*	*49.34*	*1.6*	*20*	
Surr: Dibromofluoromethane	*50.58*	*1.0*	*50*	*50.16*	*101*	*74 - 125*	*50.16*	*0.822*	*20*	
Surr: Toluene-d8	*49.17*	*1.0*	*50*	*49.05*	*98.3*	*75 - 125*	*49.05*	*0.242*	*20*	

The following samples were anayzed in this batch: HS14071011-01 HS14071011-02 HS14071011-04

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238632 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-140804** Units: **ug/L** Analysis Date: **04-Aug-2014 22:29**
Client ID: Run ID: **VOA4_238632** SeqNo: **2953093** 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	*53.84*	*1.0*	*50*	*0*	*108*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.42*	*1.0*	*50*	*0*	*94.8*	*70 - 125*				
Surr: Dibromofluoromethane	*50.51*	*1.0*	*50*	*0*	*101*	*74 - 125*				
Surr: Toluene-d8	*48.58*	*1.0*	*50*	*0*	*97.2*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238632 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140804** Units: **ug/L** Analysis Date: **04-Aug-2014 21:40**
Client ID: Run ID: **VOA4_238632** SeqNo: **2953185** 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	48.22	1.0	50	0	96.4	80 - 120			
1,2-Dichloroethane	53.22	1.0	50	0	106	79 - 120			
1,3,5-Trimethylbenzene	47.72	1.0	50	0	95.4	80 - 120			
2-Butanone	111.3	2.0	100	0	111	60 - 140			
Benzene	51.18	1.0	50	0	102	80 - 120			
Cyclohexane	54.22	1.0	50	0	108	75 - 125			
Ethylbenzene	48.39	1.0	50	0	96.8	80 - 120			
Isopropylbenzene	47.68	1.0	50	0	95.4	80 - 120			
m,p-Xylene	95.85	2.0	100	0	95.8	80 - 120			
Methylcyclohexane	48.85	1.0	50	0	97.7	70 - 122			
Naphthalene	41.13	1.0	50	0	82.3	70 - 130			
n-Butylbenzene	47.19	1.0	50	0	94.4	75 - 125			
n-Propylbenzene	47.68	1.0	50	0	95.4	75 - 130			
o-Xylene	48.33	1.0	50	0	96.7	80 - 120			
Toluene	49.67	1.0	50	0	99.3	80 - 121			
Xylenes, Total	144.2	3.0	150	0	96.1	80 - 124			
Surr: 1,2-Dichloroethane-d4	*52.31*	*1.0*	*50*	*0*	*105*	*71 - 125*			
Surr: 4-Bromofluorobenzene	*48.8*	*1.0*	*50*	*0*	*97.6*	*70 - 125*			
Surr: Dibromofluoromethane	*52.33*	*1.0*	*50*	*0*	*105*	*74 - 125*			
Surr: Toluene-d8	*49.1*	*1.0*	*50*	*0*	*98.2*	*75 - 125*			

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238632 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS14080048-04MS** Units: **ug/L** Analysis Date: **05-Aug-2014 00:57**
Client ID: Run ID: **VOA4_238632** SeqNo: **2953099** 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	48.7	1.0	50	0	97.4	80 - 120				
1,2-Dichloroethane	53.33	1.0	50	0	107	79 - 120				
1,3,5-Trimethylbenzene	48.76	1.0	50	0	97.5	80 - 120				
2-Butanone	101.4	2.0	100	0	101	60 - 140				
Benzene	53.38	1.0	50	0	107	80 - 120				
Cyclohexane	58.89	1.0	50	0	118	75 - 125				
Ethylbenzene	49.1	1.0	50	0	98.2	80 - 120				
Isopropylbenzene	48.66	1.0	50	0	97.3	80 - 120				
m,p-Xylene	96.78	2.0	100	0	96.8	80 - 120				
Methylcyclohexane	52.86	1.0	50	0	106	70 - 122				
Naphthalene	34.98	1.0	50	0	70.0	70 - 130				S
n-Butylbenzene	49.57	1.0	50	0	99.1	75 - 125				
n-Propylbenzene	49.44	1.0	50	0	98.9	75 - 130				
o-Xylene	48.26	1.0	50	0	96.5	80 - 120				
Toluene	50.27	1.0	50	0	101	80 - 121				
Xylenes, Total	145	3.0	150	0	96.7	80 - 124				
Surr: 1,2-Dichloroethane-d4	*52.07*	*1.0*	*50*	*0*	*104*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.35*	*1.0*	*50*	*0*	*96.7*	*70 - 125*				
Surr: Dibromofluoromethane	*51.97*	*1.0*	*50*	*0*	*104*	*74 - 125*				
Surr: Toluene-d8	*48.86*	*1.0*	*50*	*0*	*97.7*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14071011
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238632 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS14080048-04MSD** Units: **ug/L** Analysis Date: **05-Aug-2014 01:22**
Client ID: Run ID: **VOA4_238632** SeqNo: **2953100** 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	50.95	1.0	50	48.7	102	80 - 120	48.7	4.53	20	
1,2-Dichloroethane	55.37	1.0	50	53.33	111	79 - 120	53.33	3.75	20	
1,3,5-Trimethylbenzene	51.22	1.0	50	48.76	102	80 - 120	48.76	4.92	20	
2-Butanone	107.6	2.0	100	101.4	108	60 - 140	101.4	5.9	20	
Benzene	55.42	1.0	50	53.38	111	80 - 120	53.38	3.75	20	
Cyclohexane	60.63	1.0	50	58.89	121	75 - 125	58.89	2.91	20	
Ethylbenzene	51.67	1.0	50	49.1	103	80 - 120	49.1	5.11	20	
Isopropylbenzene	51.51	1.0	50	48.66	103	80 - 120	48.66	5.68	20	
m,p-Xylene	103.1	2.0	100	96.78	103	80 - 120	96.78	6.29	20	
Methylcyclohexane	54.56	1.0	50	52.86	109	70 - 122	52.86	3.17	20	
Naphthalene	40.49	1.0	50	34.98	81.0	70 - 130	34.98	14.6	20	
n-Butylbenzene	52.46	1.0	50	49.57	105	75 - 125	49.57	5.68	20	
n-Propylbenzene	51.94	1.0	50	49.44	104	75 - 130	49.44	4.93	20	
o-Xylene	50.82	1.0	50	48.26	102	80 - 120	48.26	5.17	20	
Toluene	53.31	1.0	50	50.27	107	80 - 121	50.27	5.87	20	
Xylenes, Total	153.9	3.0	150	145	103	80 - 124	145	5.92	20	
Surr: 1,2-Dichloroethane-d4	*52.22*	*1.0*	*50*	*52.07*	*104*	*71 - 125*	*52.07*	*0.276*	*20*	
Surr: 4-Bromofluorobenzene	*49.36*	*1.0*	*50*	*48.35*	*98.7*	*70 - 125*	*48.35*	*2.07*	*20*	
Surr: Dibromofluoromethane	*50.58*	*1.0*	*50*	*51.97*	*101*	*74 - 125*	*51.97*	*2.72*	*20*	
Surr: Toluene-d8	*49.41*	*1.0*	*50*	*48.86*	*98.8*	*75 - 125*	*48.86*	*1.1*	*20*	

The following samples were anayzed in this batch: HS14071011-03 HS14071011-05 HS14071011-06

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: **HS14071011**

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
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kentucky	KY 2014-2015	30-Apr-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2013-024	31-Aug-2014
Texas	TX104704231-14-13	30-Apr-2015

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14071011

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14071011-01	MW-4	Login	25-Jul-14 11:54	NDR	VW-3
HS14071011-01	MW-4	Login	25-Jul-14 11:54	NDR	BTEX B1
HS14071011-02	MW-9	Login	25-Jul-14 11:54	NDR	VW-3
HS14071011-02	MW-9	Login	25-Jul-14 11:54	NDR	BTEX B1
HS14071011-03	MW-3	Login	25-Jul-14 11:54	NDR	VW-3
HS14071011-03	MW-3	Login	25-Jul-14 11:54	NDR	BTEX B1
HS14071011-04	MW-6	Login	25-Jul-14 11:54	NDR	VW-3
HS14071011-04	MW-6	Login	25-Jul-14 11:54	NDR	BTEX B1
HS14071011-05	MW-7	Login	25-Jul-14 11:54	NDR	VW-3
HS14071011-05	MW-7	Login	25-Jul-14 11:54	NDR	BTEX B1
HS14071011-06	DUP-2	Login	25-Jul-14 11:54	NDR	VW-3
HS14071011-06	DUP-2	Login	25-Jul-14 11:54	NDR	BTEX B1
HS14071011-07	Trip Blank-070714-60	Login	25-Jul-14 12:02	NDR	VW-3

ALS Laboratory Group
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Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

HS14071011

Page 1 of 1

Apex Companies
E3CE-0065 Andover Release Site

Customer Information		Project Information		ALS Project Manager:	
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) Full Cat. List
Work Order		Project Number	ECE-0065	B	GRO-VPH-OA-1
Company Name	Apex Companies	Bill To Company	Apex	C	
Send Report To	Sam Jackson	Invoice Attn	← Sam	D	
Address	3015 SW 1st Ave	Address	Same	E	
City/State/Zip	Portland, OR	City/State/Zip	" "	F	
Phone	503-924-4704	Phone	" "	G	
Fax		Fax		H	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	← " "	I	
				J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-4	7-24	11:48	Water	HCl	6	X	X									
2	MW-9	7-24	12:43	Water	HCl	6	X	X									
3	MW-3	7-24-14	13:12	" "	" "	6	X	X									
4	MW-6	"	13:16*	" "	" "	6	X	X									
5	MW-7	"	13:58	" "	" "	6	X	X									
6	Dup-2	" "		" "	" "	6	X	X									
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Paul Uhrel

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☐ Other ____ ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by: Date: 7/24/14 Time: 18:30 Received by:

Relinquished by: Date: 7-25-14 Time: 9:20 Received by (Laboratory): Skyll

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

Notes: * MW-6 should read Sample time @ 13:36

Cooler ID	Cooler Temp

QC Package: (Check One Box Below)
☐ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other ____
☐ TRRP Checklist
☐ TRRP Level IV

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

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August 12, 2014

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

Work Order: **HS14080060**

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

Dear Samuel,

ALS Environmental received 1 sample(s) on Aug 02, 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: Jumoke.Lawal

Bethany McDaniel
Project Manager

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14080060

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14080060-01	MW-10	Water		01-Aug-2014 09:27	02-Aug-2014 09:45	☐

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14080060

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R238631

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

GCMS Volatiles by Method SW8260

Batch ID: R238956

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS14080060
Sample ID:	MW-10	Lab ID:HS14080060-01
Collection Date:	01-Aug-2014 09:27	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
1,2-Dichloroethane	ND		0.0010	mg/L	1	08-Aug-2014 19:17
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
2-Butanone	**0.0066**		**0.0020**	**mg/L**	1	08-Aug-2014 19:17
Benzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
Cyclohexane	ND		0.0010	mg/L	1	08-Aug-2014 19:17
Ethylbenzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
Isopropylbenzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
m,p-Xylene	ND		0.0020	mg/L	1	08-Aug-2014 19:17
Methylcyclohexane	ND		0.0010	mg/L	1	08-Aug-2014 19:17
Naphthalene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
n-Butylbenzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
n-Propylbenzene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
o-Xylene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
Toluene	ND		0.0010	mg/L	1	08-Aug-2014 19:17
Xylenes, Total	ND		0.0030	mg/L	1	08-Aug-2014 19:17
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*08-Aug-2014 19:17*
Surr: 4-Bromofluorobenzene	*95.4*		*70-125*	*%REC*	*1*	*08-Aug-2014 19:17*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*08-Aug-2014 19:17*
Surr: Toluene-d8	*96.8*		*75-125*	*%REC*	*1*	*08-Aug-2014 19:17*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: PPM
VPH - Gasoline Range Organics	**0.091**		**0.050**	**mg/L**	1	04-Aug-2014 20:14
Surr: 4-Bromofluorobenzene	*99.5*		*70-130*	*%REC*	*1*	*04-Aug-2014 20:14*

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS14080060

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R238631	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14080060-01	MW-10	01 Aug 2014 09:27			04 Aug 2014 20:14	1
Batch ID R238956	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS14080060-01	MW-10	01 Aug 2014 09:27			08 Aug 2014 19:17	1

Client: Apex Companies
WorkOrder: HS14080060
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238631 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140804** Units: **mg/L** Analysis Date: **04-Aug-2014 13:23**
Client ID: Run ID: **FID-14_238631** SeqNo: **2953068** 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	*0.102*	*0.0050*	*0.1*	*0*	*102*	*70 - 130*				

LCS Sample ID: **GLCSW1-140804** Units: **mg/L** Analysis Date: **04-Aug-2014 13:39**
Client ID: Run ID: **FID-14_238631** SeqNo: **2953069** 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	0.8238	0.050	1	0	82.4	70 - 130				
Surr: 4-Bromofluorobenzene	*0.09783*	*0.0050*	*0.1*	*0*	*97.8*	*70 - 130*				

MS Sample ID: **HS14080021-09MS** Units: **mg/L** Analysis Date: **04-Aug-2014 16:01**
Client ID: Run ID: **FID-14_238631** SeqNo: **2953071** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
VPH - Gasoline Range Organics	1.256	0.050	1	0	126	70 - 130				
Surr: 4-Bromofluorobenzene	*0.09631*	*0.0050*	*0.1*	*0*	*96.3*	*70 - 130*				

MSD Sample ID: **HS14080021-09MSD** Units: **mg/L** Analysis Date: **04-Aug-2014 16:17**
Client ID: Run ID: **FID-14_238631** SeqNo: **2953072** 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	1.282	0.050	1	1.256	128	70 - 130	1.256	2.02	30	
Surr: 4-Bromofluorobenzene	*0.09798*	*0.0050*	*0.1*	*0.09631*	*98.0*	*70 - 130*	*0.09631*	*1.72*	*30*	

The following samples were anayzed in this batch: HS14080060-01

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

Client: Apex Companies
WorkOrder: HS14080060
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238956 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-140807** Units: **ug/L** Analysis Date: **08-Aug-2014 11:33**
Client ID: Run ID: **VOA4_238956** SeqNo: **2959980** 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	*52.39*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.31*	*1.0*	*50*	*0*	*94.6*	*70 - 125*				
Surr: Dibromofluoromethane	*49.73*	*1.0*	*50*	*0*	*99.5*	*74 - 125*				
Surr: Toluene-d8	*49.51*	*1.0*	*50*	*0*	*99.0*	*75 - 125*				

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

Client: Apex Companies
WorkOrder: HS14080060
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238956 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140807** Units: **ug/L** Analysis Date: **08-Aug-2014 10:41**
Client ID: Run ID: **VOA4_238956** SeqNo: **2959979** 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	47.4	1.0	50	0	94.8	80 - 120			
1,2-Dichloroethane	50.2	1.0	50	0	100	79 - 120			
1,3,5-Trimethylbenzene	47.31	1.0	50	0	94.6	80 - 120			
2-Butanone	109.9	2.0	100	0	110	60 - 140			
Benzene	48.92	1.0	50	0	97.8	80 - 120			
Cyclohexane	50.77	1.0	50	0	102	75 - 125			
Ethylbenzene	46.76	1.0	50	0	93.5	80 - 120			
Isopropylbenzene	46.04	1.0	50	0	92.1	80 - 120			
m,p-Xylene	92.7	2.0	100	0	92.7	80 - 120			
Methylcyclohexane	45.27	1.0	50	0	90.5	70 - 122			
Naphthalene	45.73	1.0	50	0	91.5	70 - 130			
n-Butylbenzene	45.6	1.0	50	0	91.2	75 - 125			
n-Propylbenzene	47.4	1.0	50	0	94.8	75 - 130			
o-Xylene	46.35	1.0	50	0	92.7	80 - 120			
Toluene	48.38	1.0	50	0	96.8	80 - 121			
Xylenes, Total	139.1	3.0	150	0	92.7	80 - 124			
Surr: 1,2-Dichloroethane-d4	*50.77*	*1.0*	*50*	*0*	*102*	*71 - 125*			
Surr: 4-Bromofluorobenzene	*48.55*	*1.0*	*50*	*0*	*97.1*	*70 - 125*			
Surr: Dibromofluoromethane	*50.65*	*1.0*	*50*	*0*	*101*	*74 - 125*			
Surr: Toluene-d8	*49.49*	*1.0*	*50*	*0*	*99.0*	*75 - 125*			

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

Client: Apex Companies
WorkOrder: HS14080060
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238956 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS14080155-14MS** Units: **ug/L** Analysis Date: **08-Aug-2014 16:01**
Client ID: Run ID: **VOA4_238956** SeqNo: **2959990** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,2,4-Trimethylbenzene	482.8	10	500	0	96.6	80 - 120			
1,2-Dichloroethane	526	10	500	0	105	79 - 120			
1,3,5-Trimethylbenzene	483	10	500	0	96.6	80 - 120			
2-Butanone	1236	20	1000	0	124	60 - 140			
Benzene	495	10	500	0	99.0	80 - 120			
Cyclohexane	515.1	10	500	0	103	75 - 125			
Ethylbenzene	482.9	10	500	0	96.6	80 - 120			
Isopropylbenzene	479.5	10	500	0	95.9	80 - 120			
m,p-Xylene	963.6	20	1000	0	96.4	80 - 120			
Methylcyclohexane	458.5	10	500	0	91.7	70 - 122			
Naphthalene	468.2	10	500	0	93.6	70 - 130			
n-Butylbenzene	464.2	10	500	0	92.8	75 - 125			
n-Propylbenzene	480.9	10	500	0	96.2	75 - 130			
o-Xylene	481	10	500	0	96.2	80 - 120			
Toluene	496.7	10	500	0	99.3	80 - 121			
Xylenes, Total	1445	30	1500	0	96.3	80 - 124			
Surr: 1,2-Dichloroethane-d4	*520.1*	*10*	*500*	*0*	*104*	*71 - 125*			
Surr: 4-Bromofluorobenzene	*483.8*	*10*	*500*	*0*	*96.8*	*70 - 125*			
Surr: Dibromofluoromethane	*504.2*	*10*	*500*	*0*	*101*	*74 - 125*			
Surr: Toluene-d8	*488.5*	*10*	*500*	*0*	*97.7*	*75 - 125*			

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

Client: Apex Companies
WorkOrder: HS14080060
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R238956 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS14080155-14MSD** Units: **ug/L** Analysis Date: **08-Aug-2014 16:29**
Client ID: Run ID: **VOA4_238956** SeqNo: **2959991** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	476.2	10	500	482.8	95.2	80 - 120	482.8	1.37	20	
1,2-Dichloroethane	530.2	10	500	526	106	79 - 120	526	0.79	20	
1,3,5-Trimethylbenzene	472.5	10	500	483	94.5	80 - 120	483	2.22	20	
2-Butanone	1279	20	1000	1236	128	60 - 140	1236	3.44	20	
Benzene	496.9	10	500	495	99.4	80 - 120	495	0.385	20	
Cyclohexane	492.6	10	500	515.1	98.5	75 - 125	515.1	4.47	20	
Ethylbenzene	469.4	10	500	482.9	93.9	80 - 120	482.9	2.83	20	
Isopropylbenzene	465.8	10	500	479.5	93.2	80 - 120	479.5	2.9	20	
m,p-Xylene	937.9	20	1000	963.6	93.8	80 - 120	963.6	2.71	20	
Methylcyclohexane	454.6	10	500	458.5	90.9	70 - 122	458.5	0.87	20	
Naphthalene	512.2	10	500	468.2	102	70 - 130	468.2	8.99	20	
n-Butylbenzene	460	10	500	464.2	92.0	75 - 125	464.2	0.92	20	
n-Propylbenzene	471.3	10	500	480.9	94.3	75 - 130	480.9	2.02	20	
o-Xylene	475.3	10	500	481	95.1	80 - 120	481	1.18	20	
Toluene	482.8	10	500	496.7	96.6	80 - 121	496.7	2.85	20	
Xylenes, Total	1413	30	1500	1445	94.2	80 - 124	1445	2.2	20	
Surr: 1,2-Dichloroethane-d4	*514.3*	*10*	*500*	*520.1*	*103*	*71 - 125*	*520.1*	*1.12*	*20*	
Surr: 4-Bromofluorobenzene	*493.8*	*10*	*500*	*483.8*	*98.8*	*70 - 125*	*483.8*	*2.04*	*20*	
Surr: Dibromofluoromethane	*507.5*	*10*	*500*	*504.2*	*102*	*74 - 125*	*504.2*	*0.646*	*20*	
Surr: Toluene-d8	*493.8*	*10*	*500*	*488.5*	*98.8*	*75 - 125*	*488.5*	*1.09*	*20*	

The following samples were anayzed in this batch: HS14080060-01

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: **HS14080060**

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
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 8/15/2013-2014	01-Oct-2014
Kentucky	KY 2014-2015	30-Apr-2015
North Carolina	624 - 2014	31-Dec-2014
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2013-024	31-Aug-2014
Texas	TX104704231-14-13	30-Apr-2015

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14080060

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14080060-01	MW-10	Login	02-Aug-14 01:25	MES	VW-3
HS14080060-01	MW-10	Login	02-Aug-14 01:25	MES	BTEX A1

ALS Environmental

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Chain of Custody For

Page 1 of 1

COC ID: 108936

HS14080060

Apex Companies

E3CE-0665 Andover Release Site

ALS Project Manager:

Customer Information		Project Information	
Purchase Order		Project Name	Andover Release Site
Work Order		Project Number	[illegible]
Company Name	Apex Companies	Bill To Company	Apex Companies
Send Report To	Brian [illegible]	Invoice Attn	Brian [illegible]
Address	3615 SW First Avenue	Address	3615 SW First Avenue
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201
Phone	[illegible]	Phone	[illegible]
Fax		Fax	
e-Mail Address	[illegible]@apexcos.com	e-Mail Address	[illegible]@apexcos.com

A: VOCs (8260) [illegible]
B: [illegible]

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-10	8-1-14	09:27	Water	HCL	6	X	X									
2	Nothing Follows																
3																	
4																	
5																	
6																	
7																	
8																	
9																	
0																	

Sampler(s) Please Print & Sign: Paul Ward

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) [illegible] Results Due Date:

Relinquished by: [signature] Date: 8-1-14 Time: 16:00 Received by: [signature] 8-2-14 9:45

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

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

Notes:

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

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 [illegible]

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