July 9, 2014

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

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

Dear Ms. Green:

Enclosed, please find the Second 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

Second Quarter 2014 Groundwater Monitoring Report

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

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

Prepared for:
NuStar Pipeline Operating Partnership L.P.

July 9, 2014
1641-06

APEX

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

Prepared for:
NuStar Pipeline Operating Partnership L.P.

July 9, 2014
1641-06

Sam Jackson
Associate Engineer

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Principal Geologist

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GROUNDWATER MONITORING REPORT

Second Quarter 2014

NuStar Pipeline Operating Partnership L.P.

Quail Crossing Neighborhood

Andover, Kansas

Site Name and Location:	Quail Crossing Neighborhood Site	
	West Mountain and North Colt Court	
	Andover, Kansas	
Owner (Contact):	NuStar Pipeline Operating Partnership L.P.	
	19003 IH-10 West	
	San Antonio, Texas 78257	
	Renee Robinson	(210) 918-2975
Consultant (Contact):	Apex Companies, LLC	
	3015 SW 1st Avenue	
	Portland, Oregon 97201	
	Sam Jackson	(503) 924-4704 x111
Lead Agency:	Kansas Department of Health and Environment	
	1000 SW Jackson Street, Suite 410	
	Topeka, Kansas 66612-1367	
	Pamela Green	(785) 296-1935

1.0 Introduction and Site Background

This groundwater monitoring report was prepared by Apex Companies, LLC (Apex) on behalf of NuStar Pipeline Operating Partnership L.P. (NuStar) as part of the continuing response to a gasoline release from a NuStar refined petroleum pipeline. The activities outlined herein were performed in accordance with the Consent Agreement and Final Order (CAFO) dated May 10, 2013 and in coordination with the Kansas Department of Health and Environment (KDHE) and the Quail Crossing Neighborhood Association.

1.1 Background

The pipeline release was discovered in June 2012 after separate-phase hydrocarbons (SPH) were detected in an irrigation well at 2006 N Colt Court, in the Quail Crossing Neighborhood (the Neighborhood) of Andover, Kansas (the Site; Figure 1). The NuStar pipeline release location was approximately 80 feet north of the affected irrigation well. Upon notification of the discovery of SPH in the irrigation well, NuStar

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

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 will be included in the forthcoming soil investigation report, which will be submitted in June 2014. Remedial alternatives for addressing residual gasoline in soil will be evaluated based upon the results of the soil investigation and may include excavation.

In August 2013, a quarterly groundwater monitoring and weekly SPH removal program were initiated. The SPH removal program involves use of a vacuum truck to extract groundwater and SPH, if present, from the irrigation well at 2006 N Colt Court. The current approved groundwater monitoring program consists of: (1) weekly gauging of water levels in monitoring wells MW-1 through MW-16; (2) quarterly collection and analysis of groundwater samples from monitoring wells MW-1 through MW-16; and (3) quarterly collection and analysis of groundwater monitoring samples from selected irrigation wells. The groundwater monitoring programs for monitoring wells and irrigation wells are presented in Tables 1 and 2, respectively.

Since the release was discovered, NuStar has coordinated with several 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 are shown on Figure 2. It is noted that the wells have not been permanently decommissioned so that the well owners will have the option of reactivating their wells when the investigation and remediation in the Neighborhood is complete. In addition, it is noted that nine Neighborhood wells were not deactivated because the homeowners wished to maintain use of the well (2019 N Ruger Circle, 2025 N Ruger Ct, 2007 N Mountain Ct, 2009 N Mountain Ct) or the wells are located outside the investigation area (1009 W Mountain, 1211 W Quail Crossing Ct, 1910 W Quail Crossing Ct, HOA-1, and HOA-2).

1.2 Site Description

The Site is located in the northern portion of the City of Andover, in southwest Butler County, Kansas (Figure 1). Land use at the Site and surrounding areas is residential. As shown on Figure 2, a stormwater retention pond is located near the Site, approximately 250 feet south of the NuStar pipeline. The pipeline is constructed of 8-inch-diameter carbon steel and is used to transport liquefied petroleum products. The pipeline was installed to an approximate depth of 3 feet below ground surface (bgs) in agricultural land in 1959. The pipeline remained in agricultural and/or undeveloped land until the late 1990s when development of the Quail Crossing Neighborhood began. As part of the Neighborhood development, the pipeline depth was increased to approximately 6 feet bgs by re-excavating and backfilling with native material. An approximately 50-foot-wide pipeline right of way (ROW) was created along the pipeline pathway for safety purposes during Neighborhood development. The ROW limits development activities near the pipeline. The pipeline location and associated ROW are shown on Figure 2.

2.0 Second Quarter 2014 Groundwater Monitoring and SPH Removal

This section describes the following second quarter 2014 comprehensive monitoring activities and results: (1) groundwater gauging and measurement of stormwater pond stage; (2) weekly SPH gauging and removal of SPH from the irrigation well at 2006 N Colt Court; and (3) comprehensive groundwater monitoring and sampling of 16 monitoring wells and selected irrigation wells. In addition, for the first time since the initial discovery of SPH in the irrigation well at 2006 N Colt Court, a water sample was collected from the well to determine the current dissolved-phase concentrations in groundwater located beneath SPH. The groundwater monitoring programs for monitoring wells and irrigation wells (i.e., schedule and chemical analyses) are shown in Tables 1 and 2, respectively.

2.1 Groundwater and Stormwater Pond Elevations

Depth to water was measured at each monitoring well location and at the irrigation well at 2006 N Colt Court to the nearest 0.01 foot using an electronic water interface probe. The stormwater pond stage was measured using a staff gauge permanently installed in the pond. Groundwater elevation and stormwater pond surface elevation data measured during the period April through June 2014 are listed in Table 3. The

groundwater elevations that were measured during the second quarter 2014 monitoring event (April 7) 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 June 2014 are tabulated in Appendix B.

During the period April through June 2014, depth to groundwater at the Site ranged from approximately 15 to 50 feet bgs (equivalent to approximately 1301 to 1334 feet above mean sea level [msl]). In general, groundwater elevations decreased throughout April and were lowest in late May; for example, the groundwater elevation measured in well MW-3 on May 20 was the lowest recorded since installation of the well in July 2013. Groundwater elevations increased in June 2014, and by the end of that month, recovered to elevations recorded in April.

During the second quarter 2014 monitoring event, groundwater levels at the Site ranged between 16.60 and 36.20 feet bgs (equivalent to 1318.90 to 1332.38 feet msl). For comparison, during the period July 2013 through March 2014 groundwater levels at the Site ranged from approximately 13 to 45 feet bgs (equivalent to approximately 1305 to 1336 feet msl). Groundwater levels in the monitoring wells during the second quarter 2014 monitoring event declined an average of 3.2 feet since January 2014.

During the period April through June 2014, elevation of the stormwater pond surface ranged from 1344.75 to less than 1343.0 feet msl (1343.0 feet msl is the base of the stormwater pond gauge). During the second quarter 2014 monitoring event, the surface elevation of the stormwater retention pond was 1343.75 feet msl. The stormwater pond surface elevation has decreased 0.25 foot since January 2014, and in May water levels dropped below the gauge and could not be measured. Since early June, water levels have increased to an elevation of 1344.60 msl on June 24

As shown on Figure 3, the groundwater levels measured on April 7, 2014 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).

2.2 SPH Occurrence and Removal

SPH have been observed at the Site only in the irrigation well at 2006 N Colt Court. On a weekly interval since June 2013, a vacuum truck is 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. Gauging occurred at the start and completion of each removal event.
- A vacuum truck, capable of generating vacuum equivalent to 100 inches of water, was used to extract groundwater and SPH, if present, from the well and to induce a vacuum in the surrounding formation. Vacuum was induced for approximately two hours, through flexible hosing that was secured to the well head. Extracted SPH, if present, and water were contained in a tank located on the truck. Extracted vapor was discharged through a temporary stack (comprised of a vertically installed 15-foot-length 4-inch-diameter PVC pipe).
- Extracted water and SPH, if any, were treated and disposed of at the Custom Wastewater Facility in Wichita, Kansas.

Groundwater elevation data, SPH thicknesses, and the estimated volume of SPH removed from the irrigation well at 2006 N Colt Court for the second quarter 2014 are listed in Table 4. Historical data are included in Appendix B. As discussed in the previous section, water levels have declined steadily since the beginning of this year and by mid-May, the water level decreased nearly 15 feet since early April. Beginning in early May 2014, SPH levels began to increase in the irrigation well at 2006 Colt Court to thicknesses ranging from 0.13 foot to 0.19 foot. Therefore, to maximize SPH extraction volumes and further stimulate attenuation in the vadose zone, vacuum extraction events were increased to twice per week starting in late May.

2.3 Second Quarter 2014 Groundwater Monitoring Event Scope

The second quarter 2014 groundwater monitoring event was conducted during the week of April 7, 2014 and included the following monitoring activities:

- Monitoring wells MW-1 through MW-16 were gauged and water samples were collected from those wells.
- Water samples were collected from the irrigation wells at 2002 N Colt Court; HOA-1; HOA-2; 2019 N Ruger Circle; 2020 N Ruger Circle; 2028 N Ruger Circle; 2032 N Ruger Circle; 2021 N Ruger Court; 2025 N Ruger Court; 1009 W Mountain; 2007 N Mountain Court; 2009 N Mountain Court; 1211 W Quail Crossing Court; 1910 N Quail Crossing, and, for the first time since June 2012, 2006 N Colt Court.

Despite multiple efforts, Apex was not able to contact the property owners at 2001 N Colt Court and 2007 N Colt Court; therefore, groundwater samples were not collected from those wells. An access agreement for 2005 N Colt Court has not been fully executed; therefore, a groundwater sample was not collected from the irrigation well at that address.

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. The analytical results for MNA parameters are presented in Section 2.6.

2.4 Monitoring Well Analytical Program and Results

Monitoring well groundwater samples were submitted to ALS Environmental (ALS), a Kansas-accredited analytical laboratory, for the following analyses: gasoline-range organics (GRO) by Method IOWA OA-1; and volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method SW846 8260B. Tables 6 and 7 present dissolved-phase petroleum constituent data for samples collected between July/August 2013 and April 2014. Figures 4 through 7 present analytical data for the second quarter 2014 monitoring event. Figure 8 shows a comparison of the approximate extent of benzene in groundwater in July/August 2013 compared to April 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 since July/August 2013. As shown on Figure 8, in July/August 2013, six wells exhibited benzene concentrations that exceeded the corresponding Tier 2 RBSV; as of April 2014, only five wells exhibited benzene concentrations above the corresponding RBSV. Based on the available data, the approximate extent of the benzene above the Tier 2 RBSV of 0.005 milligrams per liter (mg/L) has significantly reduced since July/August 2013. As previously noted, the irrigation wells at 2005 N Colt Court and 2007 N Colt Court were not accessible for sampling during the second quarter 2014 event; data from these two wells could refine our understanding of the extent of dissolved-phase benzene on the west side of Colt Court.
- Overall, the dissolved-phase hydrocarbon concentrations in groundwater have decreased in magnitude since August 2013. For example, in August 2013, the benzene concentrations in samples collected from monitoring wells MW-1, MW-3, and MW-9 were 9.1, 1.2, and 0.99 mg/L, respectively. In April 2014, the benzene concentrations in those wells were 1.1 and 0.64 mg/L in wells MW-1 and MW-3, respectively; and benzene was not detected in well MW-9.

2.5 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 15 properties (2002 N Colt Court; HOA-1; HOA-2; 2019 N Ruger Circle; 2020 N Ruger Circle; 2028 N Ruger Circle; 2032 N Ruger Circle; 2021 N Ruger Court; 2025 N Ruger Court; 1009 W Mountain; 2007 N Mountain Court; 2009 N Mountain Court; 1211 W Quail Crossing Court; 1910 N Quail Crossing; and, for the first time since June 2012, 2006 N Colt Court). Apex staff were not able to collect water samples from the irrigation wells at 2001 N Colt Court, 2005 N Colt Court, and 2007 Colt Court because the property owners have not provided access. NuStar will continue attempts to contact these property owners to obtain permission to collect water samples during future sampling events.

Irrigation well analytical data for the second quarter 2014 monitoring event are listed in Table 7 and shown on Figures 4 through 7. Copies of the laboratory reports are included in Appendix C. The irrigation well groundwater data are further discussed below:

- During the second quarter 2014 groundwater monitoring event, dissolved-phase hydrocarbon constituents were not detected or were detected at concentrations less than KDHE Tier 2 RBSVs in the regularly sampled irrigation wells (2002 N Colt Court; HOA-1; HOA-2; 2019 N Ruger Circle; 2020 N Ruger Circle; 2028 N Ruger Circle; 2032 N Ruger Circle; 2021 N Ruger Court; 2025 N Ruger Court; 1009 W Mountain; 2007 N Mountain Court; 2009 N Mountain Court; 1211 W Quail Crossing Court; and 1910 N Quail Crossing)
- For the first time since June 2012, a water sample was collected from the irrigation well at 2006 N Colt Court. Laboratory analyses indicated GRO and benzene concentrations were 23 and 0.98 mg/L, respectively. In June 2012, the sample collected from this well contained benzene at 17 mg/L.
- Constituent concentrations in irrigation wells show an overall downward trend, consistent with monitoring well data. For example, in 2013, water samples collected from the irrigation wells at 2019 N Ruger Circle and 2028 N Ruger Circle exhibited detections of dissolved-phase hydrocarbons above KDHE Tier 2 RSBVs. During the second quarter 2014 sampling event, dissolved-phase hydrocarbons were detected in both wells at concentrations below KDHE Tier 2 RBSVs. Similarly, in 2013, the irrigation wells at 2002 N Colt Court and 2020 N Ruger Circle contained detectable concentrations of benzene; groundwater samples collected from those wells during the second quarter 2014 sampling event did not contain benzene concentrations above method reporting limits. As noted above, Apex staff were not able to collect water samples from the irrigation wells at 2001 N Colt Court, 2005 N Colt Court, and 2007 Colt Court; these data could further refine our understanding of the dissolved-phase hydrocarbon concentration trends presented herein.

- Only the irrigation well at 2006 N Colt Court contained dissolved-phase hydrocarbon constituents at concentrations above the KDHE Tier 2 RBSV. That well intermittently contains SPH and is the subject of weekly vacuum extraction events.

3.0 Status Report

Work Completed – Second Quarter 2014:

- Weekly gauging and one to two SPH removal events per week were completed and are ongoing.
- The second quarter 2014 comprehensive groundwater monitoring event was performed during the week of April 7, 2014.
- The soil investigation, as proposed in the SVE Evaluation and Soil Investigation Report (Apex, 2014a), was performed during the week of April 7.
- The Revised CI Report and response to KDHE comments were submitted on April 30, 2014 and approved by KDHE on May 7, 2014.
- The First Quarter Groundwater Monitoring Report (Apex, 2014b) was submitted on May 2, 2014 and approved by KDHE on May 8, 2014.

Work Planned – Third Quarter 2014:

The following activities are planned for third quarter 2014:

- One gauging and two SPH removal events per week;
- Submittal of the Soil Investigation Report and Soil Excavation Work Plan;
- Performance of the third quarter 2014 comprehensive groundwater monitoring event;
- Submittal of the third quarter 2014 groundwater monitoring report; and
- Submittal of a pilot test work plan for groundwater remediation.

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.

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	Currently in Use	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	4/3/2014	4.0	1352.13	35.0	20-35	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
MW-2	4/3/2014	2.0	1353.17	44.0	29-44	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
MW-3	4/3/2014	2.0	1350.47	60.0	40-60	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

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	4/3/2014	2.0	1350.73	41.0	26-41	30.49	--	--	1320.24
	4/7/2014					30.53	--	--	1320.20
	4/17/2014					30.54	--	--	1320.19
	4/22/2014					31.02	--	--	1319.71
	4/29/2014					31.25	--	--	1319.48
	5/8/2014					31.59	--	--	1319.14
	5/13/2014					31.30	--	--	1319.43
	5/20/2014					31.73	--	--	1319.00
	5/29/2014					31.63	--	--	1319.10
	6/3/2014					32.68	--	--	1318.05
	6/10/2014					32.52	--	--	1318.21
	6/18/2014					31.71	--	--	1319.02
	6/24/2014					30.73	--	--	1320.00
MW-5	4/3/2014	2.0	1352.77	30.0	15-30	21.70	--	--	1331.07
	4/7/2014					21.05	--	--	1331.72
	4/17/2014					21.10	--	--	1331.67
	4/22/2014					21.30	--	--	1331.47
	4/29/2014					21.15	--	--	1331.62
	5/8/2014					21.33	--	--	1331.44
	5/13/2014					21.17	--	--	1331.60
	5/20/2014					21.48	--	--	1331.29
	5/29/2014					21.41	--	--	1331.36
	6/3/2014					21.16	--	--	1331.61
	6/10/2014					20.65	--	--	1332.12
	6/18/2014					20.30	--	--	1332.47
	6/24/2014					19.96	--	--	1332.81
MW-6	4/3/2014	2.0	1349.76	41.0	26-41	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

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	4/3/2014	2.0	1348.98	24.0	9-24	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
MW-8	4/3/2014	2.0	1353.38	30.0	15-30	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
MW-9	4/3/2014	2.0	1349.48	34.0	19-34	30.00	--	--	NM
	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

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	4/3/2014	2.0	1348.79	34.0	19-34	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
MW-11	4/3/2014	2.0	1351.34	42.0	22-42	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
MW-12	4/3/2014	2.0	1349.74	43.0	23-43	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

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	4/3/2014	2.0	1354.58	45.0	25-45	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
MW-14	4/3/2014	2.0	1354.99	45.0	25-45	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
MW-15	4/3/2014	2.0	1351.79	45.0	25-45	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

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	4/3/2014	2.0	1352.13	45.0	25-45	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
Stormwater Pond (Pond Stage (feet MSL))	4/3/2014	NA	NA	NA	NA	NA	NA	NA	1344.00
	4/7/2014								1343.75
	4/17/2014								1343.50
	4/22/2014								1343.50
	4/29/2014								1345.00
	5/8/2014								Below gauge
	5/13/2014								Below gauge
	5/20/2014								Below gauge
	5/29/2014								1343.75
	6/3/2014								1344.50
	6/10/2014								1344.75
	6/18/2014								1344.50
	6/24/2014								1344.60

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	4/3/2014	40.46	40.42	0.04	Mobile vacuum truck	0.00
	4/8/2014	41.14	41.11	0.03	Mobile vacuum truck	0.00
	4/9/2014	41.47	41.43	0.04	Mobile vacuum truck	0.00
	4/10/2014	41.82	41.76	0.06	Mobile vacuum truck	0.00
	4/11/2014	43.25	43.21	0.04	Mobile vacuum truck	0.00
	4/17/2014	43.17	43.13	0.04	Mobile vacuum truck	0.00
	4/22/2014	44.95	44.90	0.05	Mobile vacuum truck	0.00
	4/29/2014	46.43	46.36	0.07	Mobile vacuum truck	0.00
	5/8/2014	51.28	51.15	0.13	Mobile vacuum truck	0.00
	5/13/2014	51.83	51.66	0.17	Mobile vacuum truck	0.00
	5/20/2014	54.12	53.94	0.18	Mobile vacuum truck	0.00
	5/21/2014	55.28	55.11	0.17	Mobile vacuum truck	0.00
	5/29/2014	52.24	52.06	0.18	Mobile vacuum truck	0.00
	5/30/2014	53.32	53.13	0.19	Mobile vacuum truck	0.00
	6/2/2014	52.65	52.50	0.15	Mobile vacuum truck	0.00
	6/3/2014	52.63	52.49	0.14	Mobile vacuum truck	0.00
	6/10/2014	48.48	48.31	0.17	Mobile vacuum truck	0.00
	6/11/2014	49.10	48.95	0.15	Mobile vacuum truck	0.00
	6/18/2014	46.34	46.20	0.14	Mobile vacuum truck	0.00
	6/19/2014	47.60	47.43	0.17	Mobile vacuum truck	0.00
	6/24/2014	47.80	47.67	0.13	Mobile vacuum truck	0.00
	6/25/2014	46.94	46.81	0.13	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
MW-2	1/30/2014	15.50	0.00	843	6.22	99
	4/8/2014	15.29	4.05	752	6.77	7
MW-3	1/30/2014	11.91	0.00	853	4.05	18
	4/8/2014	17.25	8.41	740	6.96	-11
MW-4	1/30/2014	14.01	2.78	1130	5.46	158
	4/9/2014	14.99	2.54	968	6.95	132
MW-5	1/30/2014	15.57	0.00	1300	6.96	57
	4/8/2014	15.99	1.09	1190	6.92	189
MW- 6	1/30/2014	15.54	0.63	986	7.11	146
	4/9/2014	16.58	9.16	797	7.00	201
MW-7	1/30/2014	16.13	0.00	667	7.21	-37
	4/9/2014	15.78	9.43	566	7.08	23
MW-8	1/30/2014	16.94	1.56	1120	7.00	109
	4/8/2014	16.42	9.18	976	6.80	170
MW-9	1/30/2014	12.13	0.00	760	4.50	8
	4/8/2014	16.65	4.05	725	7.07	192
MW-10	1/30/2014	14.31	0.00	1340	4.90	-44
	4/8/2014	17.01	0.18	982	6.79	-105
MW-11	1/30/2014	16.22	6.91	1320	6.54	185
	4/8/2014	16.61	6.09	1140	7.05	199
MW-12	1/30/2014	14.13	0.00	927	5.44	66
	4/9/2014	19.96	8.58	774	7.01	30
MW-13	1/30/2014	15.00	6.53	774	7.04	158
	4/8/2014	15.35	7.03	674	6.93	109
MW-14	1/30/2014	15.31	3.53	724	7.00	183
	4/9/2014	18.75	5.62	608	7.06	181
MW-15	1/30/2014	12.24	0.00	732	5.65	218
	4/8/2014	15.84	9.96	653	6.93	180
MW-16	1/30/2014	12.34	2.39	929	5.79	191
	4/8/2014	15.65	8.32	713	6.91	181

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
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
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
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
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
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
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

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-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
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
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
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
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
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
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

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-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
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
KDHE Tier 2 Values		0.5	0.00844	0.005	0.044	4.92	0.005	--	0.7	0.45	--	--	0.00111	0.0338	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
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
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
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
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
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	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
2020 N Ruger Cir	7/26/2013	<0.05	<0.001	<0.001	<0.001	<0.002	0.0015	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	2/20/2014	0.075	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	0.38	<0.001	<0.001	<0.001	0.16	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003

Please refer to notes at end of table.

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

Well Location	Sample Date	GRO	1,2,4 Trimethylbenzene	1,2 Dichloroethane	1,3,5- Trimethylbenzene	2-Butanone	Benzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	m,p-Xylene	Methylcyclohexane	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	Toluene	Total Xylenes
		Concentrations in mg/L (ppm)																
2028 N Ruger Cir	8/20/2013	0.47	<0.001	<0.001	<0.001	<0.002	0.011	0.042	<0.001	<0.001	<0.002	0.0051	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	10/25/2013	<0.05	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	1/30/2014	<0.05	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.003
	4/10/2014	<0.05	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
DUP	4/10/2014	0.066	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.003
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
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
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
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
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
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

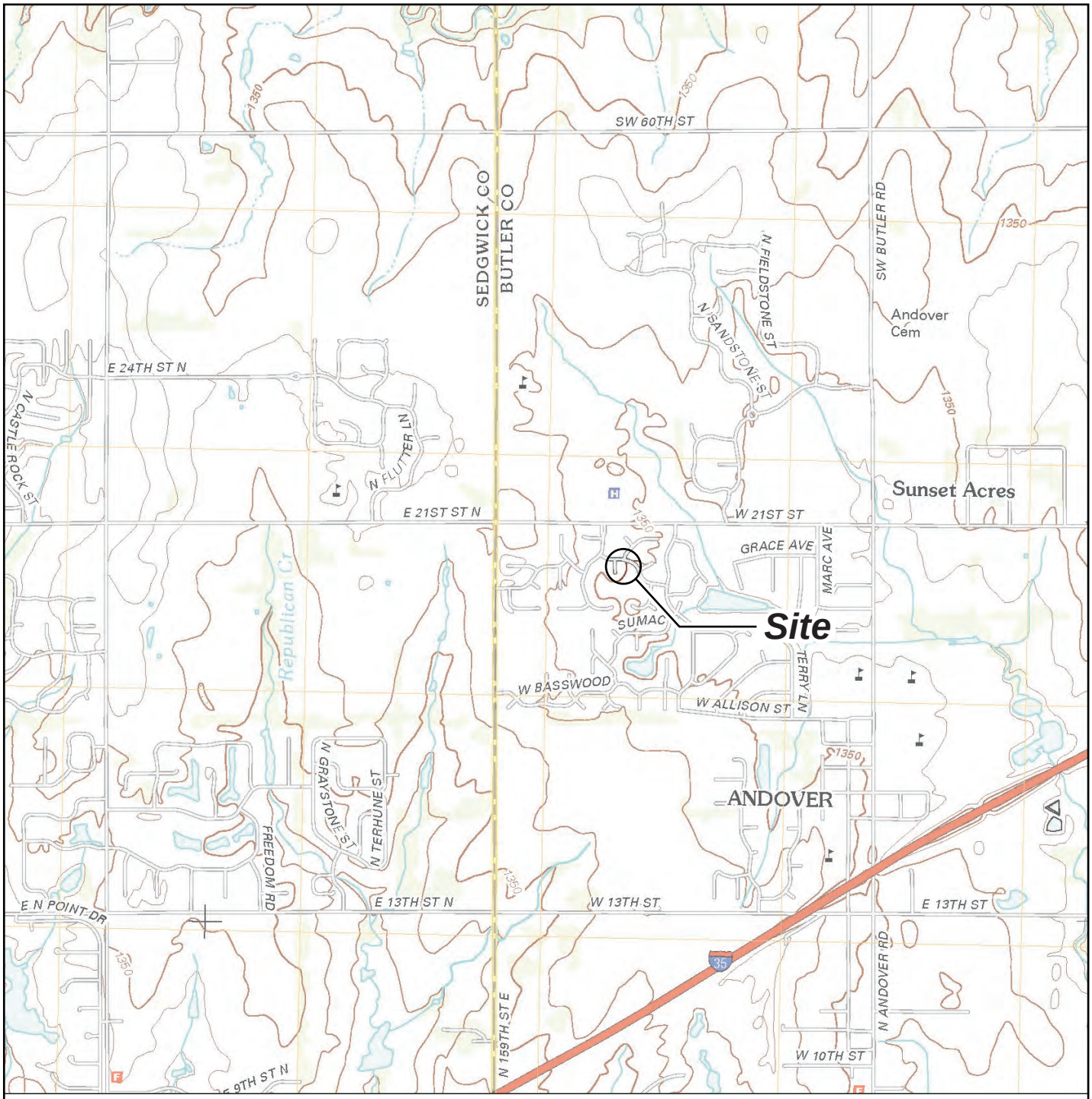
Please refer to notes at end of table.

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
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
KDHE Tier 2 Values		0.5	0.00844	0.005	0.044	4.92	0.005	NE	0.7	0.45	NE	NE	0.00111	0.0338	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

Second 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	1641-04	Figure
	June 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

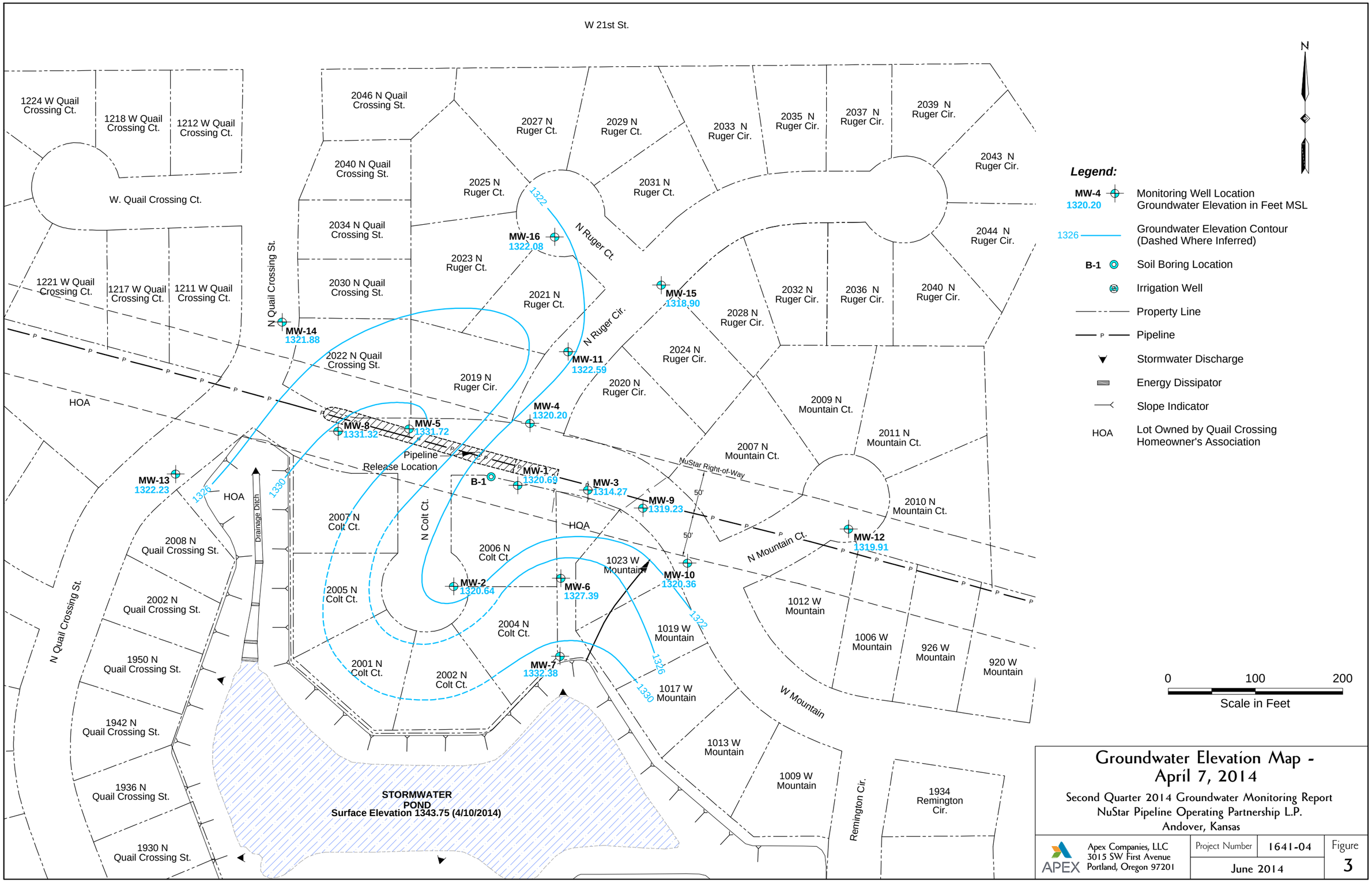
0 100 200

Scale in Feet

Site Plan and Sampling Location Map

Second 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 1641-04 June 2014	Figure 2

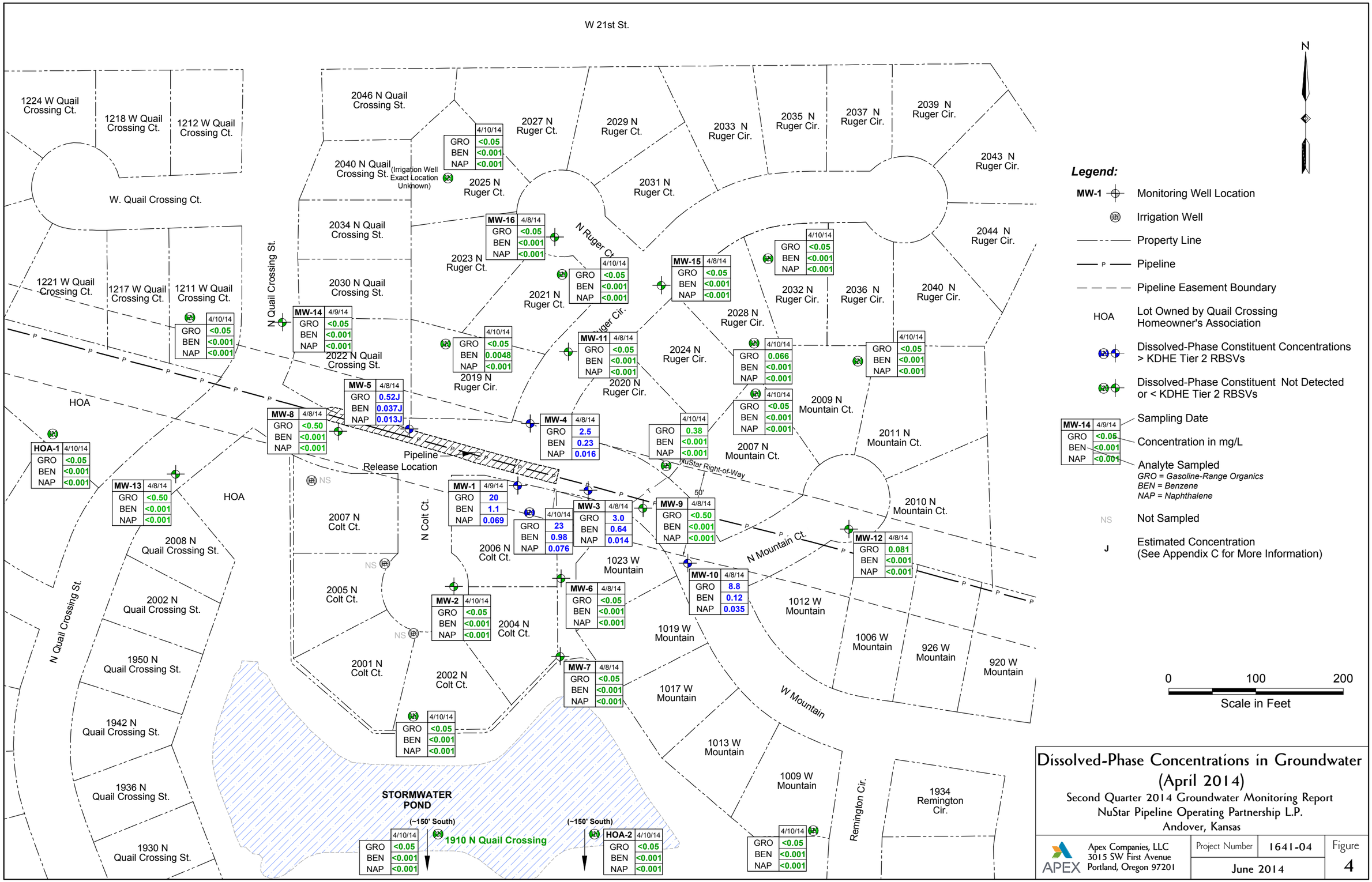


Groundwater Elevation Map - April 7, 2014

Second 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	1641-04	Figure
June 2014		3

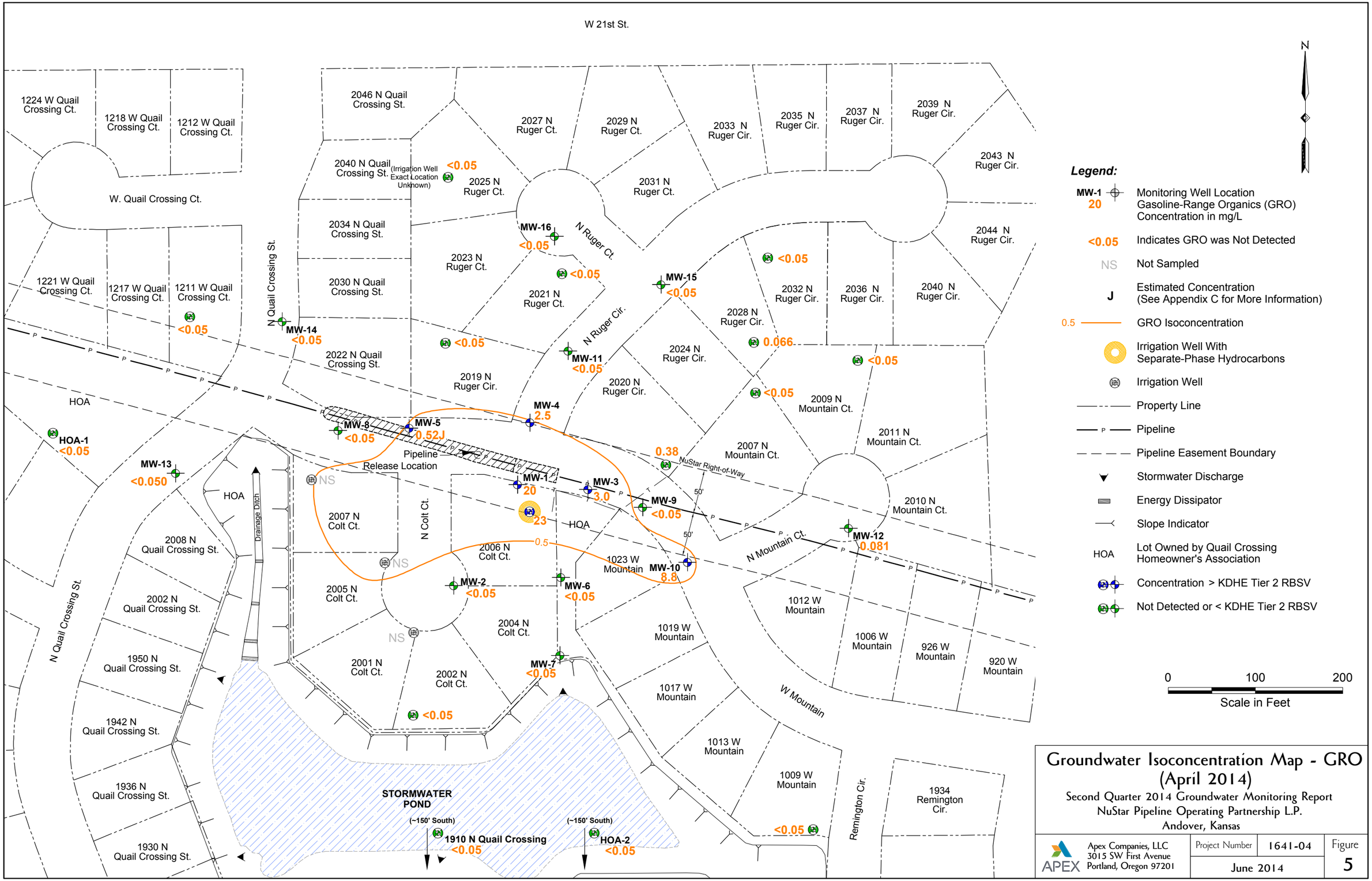


Dissolved-Phase Concentrations in Groundwater (April 2014)

Second 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	1641-04	Figure
June 2014		4

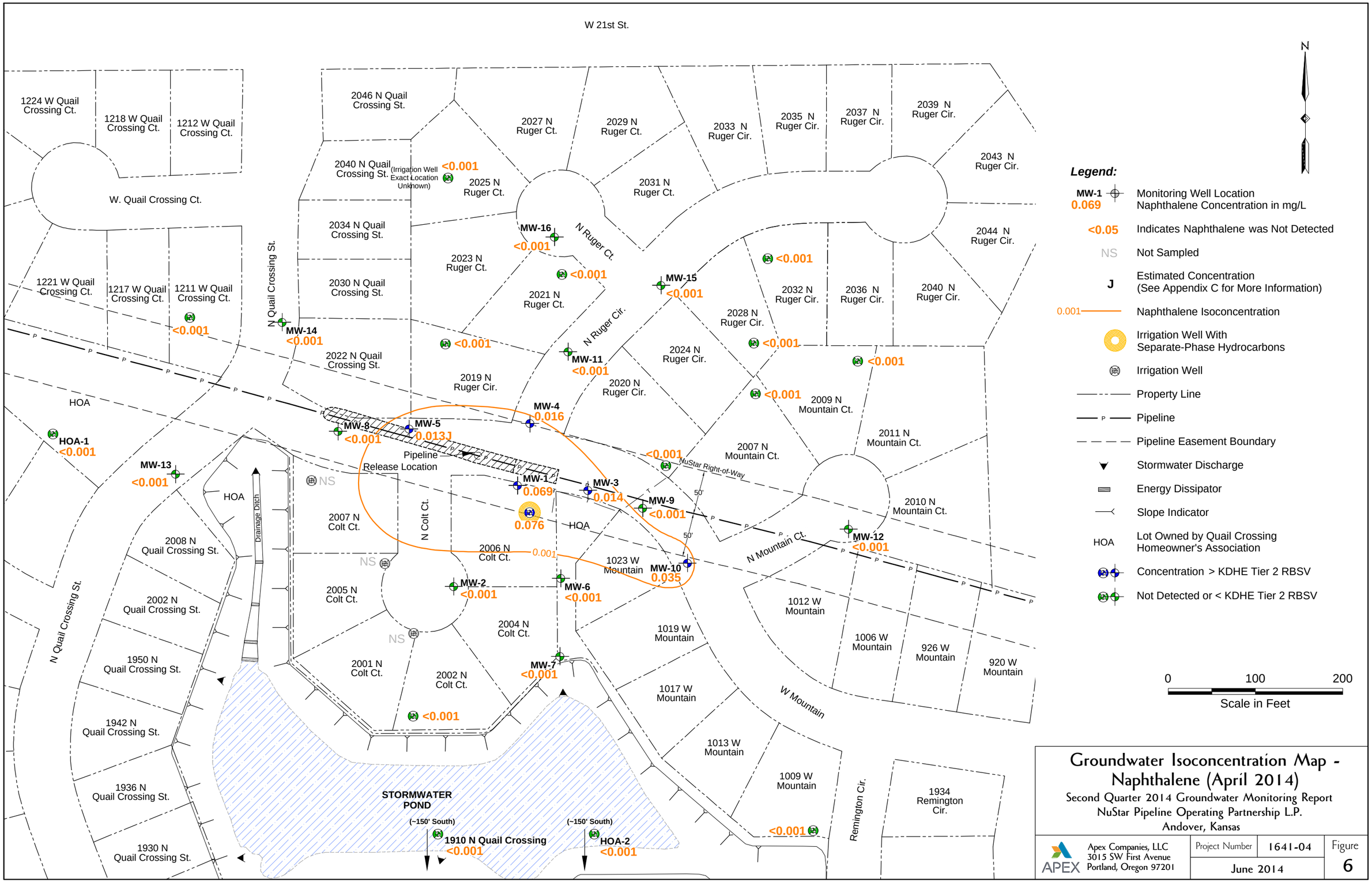


Groundwater Isoconcentration Map - GRO (April 2014)

Second 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	1641-04	Figure
June 2014		5

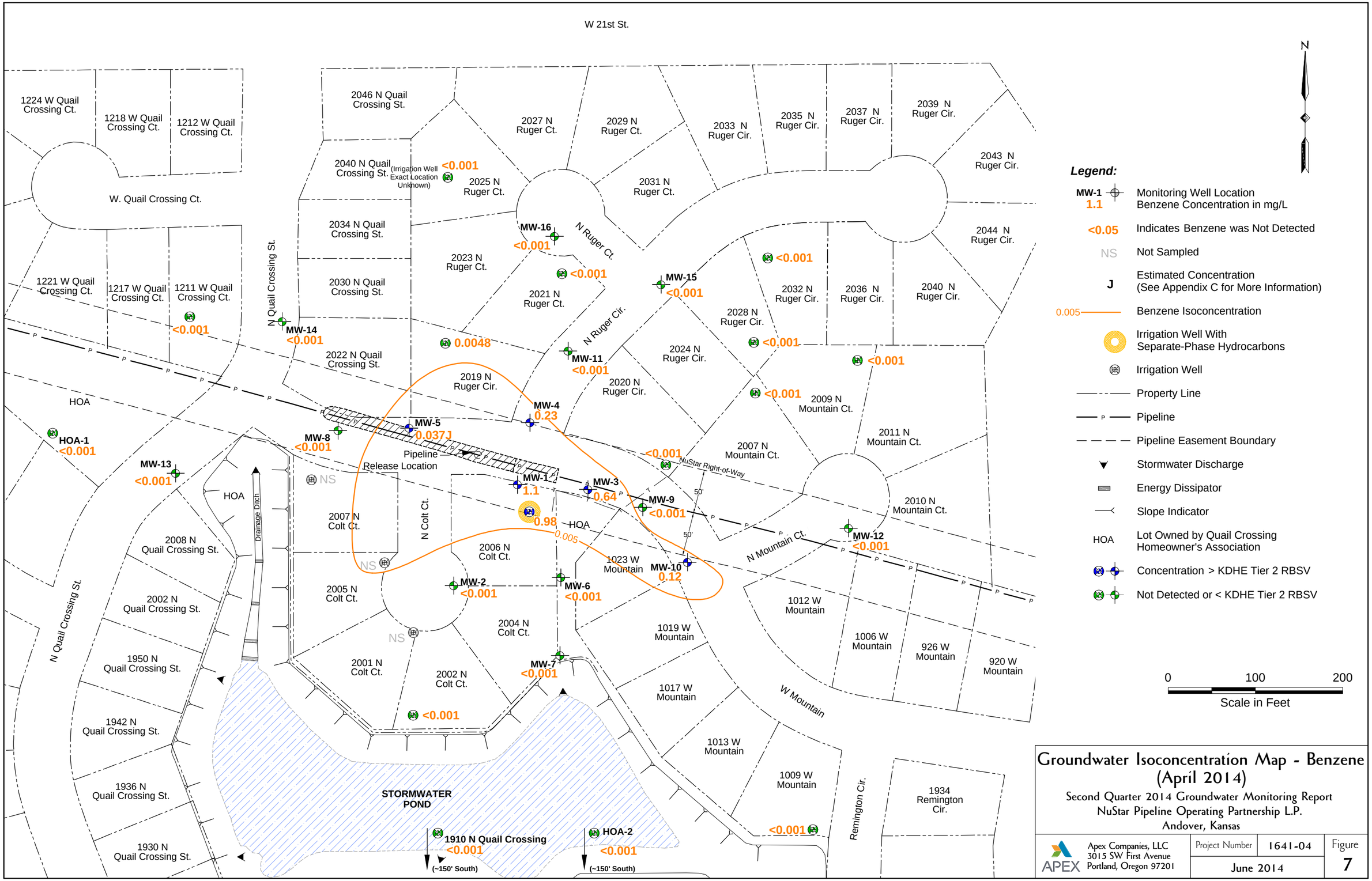


Groundwater Isoconcentration Map - Naphthalene (April 2014)

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

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

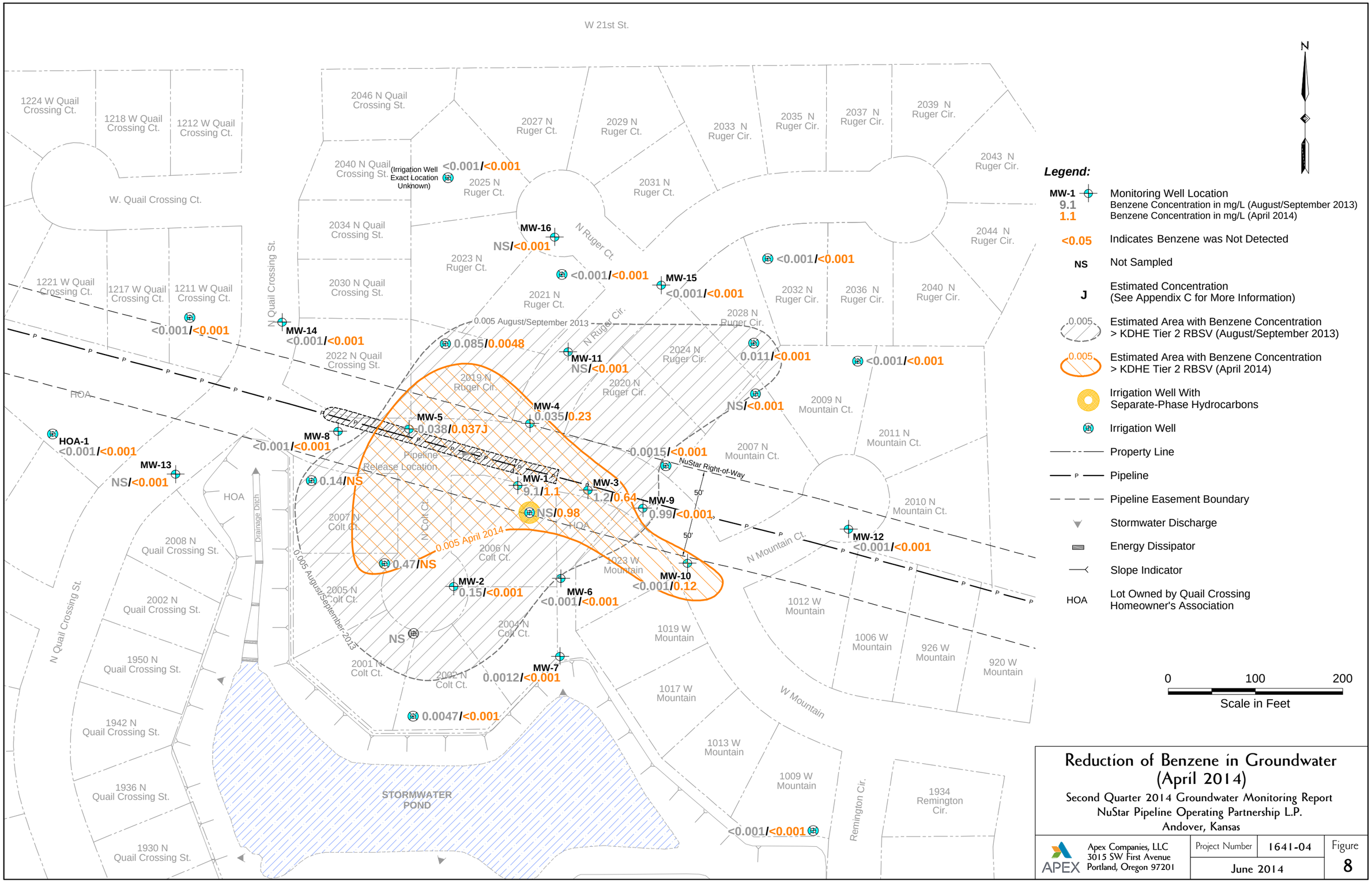
Project Number	1641-04	Figure
June 2014		6



Groundwater Isoconcentration Map - Benzene (April 2014)

Second 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	1641-04	Figure
	June 2014		7



Reduction of Benzene in Groundwater (April 2014)

Second 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	1641-04	Figure
	June 2014		8

Appendix A

Field Data Sheets

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	20140403
Project:	Andover Colt Court	Sampler:	Pickard
Weather:	47° OVERCAST	Time In/Out:	0745 / 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
					PID 1	PID 2	
2006	11:52	40.42	40.46	—	889	1522	Begin Vac @ 12:15 (time)
MW-1	13:58	—	31.69	—	342		Begin Vac @ 14:15 (time)
MW-2	12:55	—	32.16	—	—	—	
MW-3	09:52	—	35.39	—	976	266	START VAC @ 10:05
MW-4	11:39	—	30.49	—	—	—	
MW-5	12:52	—	21.70	—	—	—	
MW-6	15:20	—	21.92	—	—	—	
MW-7	15:25	—	16.64	—	—	—	
MW-8	12:49	—	21.95	—	—	—	
MW-9	13:29	—	30.00	—	—	—	
MW-10	07:55	—	28.36	—	1166	1150	START VAC @ 0800
MW-11	12:58	—	28.77	—	—	—	
MW-12	13:16	—	29.70	—	—	—	
MW-13	12:46	—	32.41	—	—	—	
MW-14	12:39	—	32.95	—	—	—	
MW-15	13:06	—	32.60	—	—	—	
MW-16	13:03	—	29.86	—	—	—	
Pond	15:26	—	—	—	—	—	1343.9
2006	14:25	—	40.46	—	—	—	Post Vac 50 gal
MW-1	16:17	—		—	—	—	Post Vac 50 gal
MW 10	10:04	—	28.24	—	—	—	Post Vac 50 gal
MW-3	12:05	—	35.39	—	—	—	Post Vac 50 gal

Sam Jackson 503-278-9815

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-01.002
Client:	NuStar	Date:	20140407
Project:	Andover GW Monitoring	Sampler:	P.Ward / T.Alvarez
Weather:	57°F	Time In/Out:	13:30 /

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
MW-1	16:59	—	31.44	—	—	—	
MW-2	16:50	~~32.53~~ SW	32.53	—	—	—	
MW-3	16:50	—	36.20				
MW-4	16:15	—	30.53				
MW-5	17:03	—	21.05				
MW-6	16:25	—	22.37				
MW-7	16:30	—	16.60				
MW-8	15:53	~~22.00~~ SW	22.06	—	—	—	
MW-9	16:53	—	30.25				
MW-10	16:10	—	28.43				
MW-11	16:20	—	28.75				
MW-12	16:05	—	29.83				
MW-13	15:37	—	32.35	—	—	—	
MW-14	15:45	—	33.11	—	—	—	
MW-15	16:48	—	32.89	—	—	—	
MW-16	16:44	—	30.05				

WELL GAGING DATA SHEET

-04.003/004

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-~~01.002~~
Client:	NuStar	Date:	20140407
Project:	Andover GW Monitoring	Sampler:	Pizzard / TAYLOR
Weather:	57°F	Time In/Out:	13:30 / 1700

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
MW-1	16:59	—	31.44	—	—	—	
MW-2	16:07	~~32.53~~ GW	32.53	—	—	—	
MW-3	16:50	—	36.20	—	—	—	
MW-4	16:15	—	30.53	—	—	—	
MW-5	17:03	—	21.05	—	—	—	
MW-6	16:25	—	22.37	—	—	—	
MW-7	16:30	—	16.60	—	—	—	
MW-8	15:53	~~22~~ GW	22.06	—	—	—	
MW-9	16:53	—	30.25	—	—	—	
MW-10	16:10	—	28.43	—	—	—	
MW-11	16:20	—	28.75	—	—	—	
MW-12	16:05	—	29.83	—	—	—	
MW-13	15:37	—	32.35	—	—	—	
MW-14	15:45	—	33.11	—	—	—	
MW-15	16:48	—	32.89	—	—	—	
MW-16	16:44	—	30.05	—	—	—	

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	20140408
Project:	Andover GW Monitoring	Sampler:	P. Ward, T Alfred
Weather:	43°F	Time In/Out:	0810

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
4-8-14	2006	08:20	41.11	41.14	—	—	—	
4-9-14	2006	16:44	41.43	41.47	—	—	—	
4-10-14	2006	13:04	41.76	41.82	—	—	—	
4-11-14	2006	09:00	43.21	43.25	—	—	—	

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-3	Job Number:	320001641-04.003
Client:	NuStar	Date:	4-8-14
Project:	Gulf Coast	Sampler:	TA, RW
Weather:	Sunny	Time In/Out:	16:07

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	36.20	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	39'
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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
16:20	.250	.250	35.96	.250	7.04	19.52	.856	9.11	-57	608	C
16:23	.750	1.000	35.98	.250	7.06	19.74	.846	8.88	-46	487	C
16:26	.750	1.750	35.98	.250	7.04	17.99	.780	9.40	-37	318	C
16.29	.750	2.500	36.00	.250	6.99	17.59	.746	8.82	-23	126	C
16:32	.750	3.250	35.99	.250	6.96	17.25	.790	8.41	-11	69.6	C

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

SAMPLING DATA

Sample ID:	MW-3	Sampling Flow Rate	.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	16:34	Final Depth to Water:	35.96	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-10	Job Number:	37000164 1-04.003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	15:26

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	28.43	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	32'	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
15:34	.250	.250	28.57	.250	7.02	17.63	.914	1.66	-69	0.00	C
15:37	.750	1.000	28.81	.250	6.88	17.20	.925	0.48	-98	0.00	C
15:40	.750	1.750	28.98	.250	6.85	17.10	.946	0.31	-105	0.00	AC
15:43	.750	2.500	29.22	.250	6.79	17.01	.982	0.18	-105	7.13	AC

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

SAMPLING DATA

Sample ID:	MW-10	Sampling Flow Rate	.250mL/min	Analytical Laboratory:	ALS
Sample Time:	15:44	Final Depth to Water:	29.61	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

Split Sample with Pamela Green, KDHE

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-9	Job Number:	372001641-04, 003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	14:41

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	30.25	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	35'
Sampling Method:	Same	Tubing Type:	poly

Comments

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
14:54	.500	.500	30.46	.250	7.15	16.79	.721	4.89	190	236	C
14:57	.750	1.250	30.49	.250	7.11	16.65	.723	4.40	191	251	C
15:00	.750	2.00	30.56	.250	7.07	16.65	.725	4.05	192	500	C

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

SAMPLING DATA

Sample ID:	MW-9	Sampling Flow Rate	0.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	15:02	Final Depth to Water:	30.58	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6/VOA	HCL	VOC/GRO	yes no	—		DUP-2
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

Split sample with Pamela Green, KDHE

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-11	Job Number:	32000164I-04.003
Client:	Nu Star	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	TA ~~2:03~~ 14:03

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	~~28.71~~ 28.75 TA	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	33'
Sampling Method:	Same	Tubing Type:	poly

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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
14:11	.500	.500	29.03	.250	7.13	17.06	1.12	7.36	193	0.00	Cl
14:14	.750	1.250	29.20	.250	7.09	16.72	1.13	6.45	197	0.00	Cl
14:17	.750	2.000	29.33	.250	7.05	16.61	1.14	6.09	199	0.00	Cl

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

SAMPLING DATA

Sample ID:	MW-11	Sampling Flow Rate	0.250	Analytical Laboratory:	ALS
Sample Time:	14:19	Final Depth to Water:	29.57	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-15	Job Number:	32000164.04.003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	1244

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	32.89	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	37'	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
12:48	0.500	.500	33.12	0.250	6.98	15.76	.650	11.61	183	309	C
12:51	0.750	1.250	33.24	0.250	6.95	15.79	.639	10.30	184	294	C
12:54	0.750	2.000	33.32	0.250	6.93	15.84	.633	9.96	186	384	C

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

SAMPLING DATA

Sample ID:	MW-15	Sampling Flow Rate	0.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	12:55	Final Depth to Water:	33.44	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-16	Job Number:	320001641-04.003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	12:09

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	30.05	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	34'
Sampling Method:	same	Tubing Type:	poly

Comments

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
12:14	.500	.500	30.31	.250	7.02	16.00	.918	11.62	175	708	AC
12:17	.750	1.250	30.91	.250	6.94	15.73	.812	9.52	178	485	AC
12:20	.750	2.00	31.41	.250	6.92	15.67	.743	8.76	180	486	AC
12:23	.750	2.75	31.82	.250	6.91	15.65	.713	8.32	181	515	AC

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

SAMPLING DATA

Sample ID:	MW-16	Sampling Flow Rate	.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	12:24	Final Depth to Water:	32.32	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-5	Job Number:	32001641-04.003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	11:30

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	21.05	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:		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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
11:36	.250	.250	21.20	.250	6.99	16.03	1.18	2.82	195	5.4	C
11:39	.750	1.000	21.28	.250	6.94	16.03	1.18	1.48	191	5.4	C
11:42	.750	1.750	21.32	.250	6.92	15.99	1.19	1.09	189	3.5	C

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

SAMPLING DATA

Sample ID:	MW-5	Sampling Flow Rate	0.250 mL	Analytical Laboratory:	ALS
Sample Time:	11:45	Final Depth to Water:	21.23	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6/VOA	HCL	VOC/GRO	yes no	—		DUP-1
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-8	Job Number:	32000164.1-04.003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	10:37

WELL DATA

Well Depth:	—	Well Diameter:	2in	Water Height	—
Depth to Water:	22.06	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	3.5	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:	26'	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
10:41	.5	.5	22.67	.5	6.97	16.02	0.965	11.07	158	0.00	AC
10:44	.5	1	22.89	.5	6.86	16.29	0.968	10.06	165	0.00	AC
10:47	.5	1.5	22.98	.5	6.80	16.42	0.976	9.18	170	0.00	AC

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

SAMPLING DATA

Sample ID:	MW-8	Sampling Flow Rate	0.5	Analytical Laboratory:	ALS	
Sample Time:	10:57	Final Depth to Water:	22.39	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-13	Job Number:	320061641-04.003
Client:	NISTAR	Date:	4-8-14
Project:	COLT COAST	Sampler:	RN/TA
Weather:	Sunny	Time In/Out:	10:10

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	32.35	Screened Interval:	—	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:	36	Comments	
Sampling Method:	Poly	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
10:14	.5	.5	32.34	.5	7.05	15.25	.701	6.93	73	0.0	AC
10:17	.5	1	32.65	.5	6.98	15.30	.678	7.02	72	0.0	AC
10:20	.5	1.5	32.89	.5	6.93	15.35	.674	7.03	109	0.0	AC

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

SAMPLING DATA

Sample ID:	MW-13	Sampling Flow Rate	.5	Analytical Laboratory:	ALS	
Sample Time:	10:24	Final Depth to Water:	33.05	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-2	Job Number:	32000641-04.003
Client:	NuStar	Date:	4-8-14
Project:	Colt Court	Sampler:	PN / TA
Weather:	Sunny	Time In/Out:	0907

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	32.53	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	36
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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
09:25	.5	.5	33.11	.5	6.92	14.98	.746	4.19	124	135	C
09:28	.5	1	33.49	.5	6.79	15.25	~~6.77~~ .747	3.60	110	126	C
09:31	.5	1.5	33.65	.5	6.77	15.30	~~6.76~~ .749	3.42	78	120	C
09:34	.5	2.0	33.76	.5	6.77	15.29	6.77 .752	4.05	7	105	C

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

SAMPLING DATA

Sample ID:	MW-2	Sampling Flow Rate	.5	Analytical Laboratory:	ALS
Sample Time:	09:39	Final Depth to Water:	33.04	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.
Environmental and Geotechnical Consultants

Well I.D.	MW-7	Job Number:	32008164L-04.003
Client:	NUSTAR	Date:	4-9-14
Project:	Colt Court	Sampler:	PW / TA
Weather:	Sunny	Time In/Out:	11:32

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	16.60	Screened Interval:	—	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:	20'
Sampling Method:	SALE	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
11:31	.250	.250	16.70	.250	7.20	16.40	.664	11.49	53	234	C
11:34	.750	1.000	16.84	.250	7.11	15.80	.578	10.67	24	389	AC
11:37	.750	1.750	16.84	.250	7.09	15.83	.568	9.84	23	355	AC
11:40	.750	2.500	16.79	.250	7.08	15.78	.566	9.43	23	360	AC

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

SAMPLING DATA

Sample ID:	MW-7	Sampling Flow Rate	.250 mL/min	Analytical Laboratory:	ALC
Sample Time:	11:44	Final Depth to Water:	16.75	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			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-1	Job Number:	32001641-04.03
Client:	NuStar	Date:	4-9-14
Project:	Cole Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	15:59

WELL DATA

Well Depth:	—	Well Diameter:	4" ~~2"~~ PW	Water Height	—
Depth to Water:	31.44	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	/

PURGING DATA

Purge Method:	Pneumatic	Pump Intake Depth:	36'	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
16:24	.250	.250	31.59	.250	7.08	21.50	.916	6.50	-74	289	AC
16:27	.750	1.000	31.64	.250	7.04	19.98	.960	6.17	-106	315	AC
16:30	.750	1.750	31.72	.250	7.00	19.47	.975	5.86	-120	303	AC
16:33	.750	2.500	31.82	.250	6.98	19.22	.979	5.52	-130	288	AC

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

SAMPLING DATA

Sample ID:	MW-1	Sampling Flow Rate	.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	16:37	Final Depth to Water:	32.19	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6 VOA	HCl	VOC / GRO	yes ~~no~~	—	—	
3 VOA	HCl	RSK-~~Ammonia~~ Methane	yes ~~no~~	—	Yes	
1 250mL Plastic	H_2SO_4	Ammonia - 4500	yes ~~no~~	—	Yes	
1 " "	HNO_3	6020-K only	yes ~~no~~	—	Yes	
1 " "	None	300-NO_3-SO_4	yes ~~no~~	—	Yes	
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-12	Job Number:	320001641-04.003
Client:	NuStar	Date:	4-9-14
Project:	Gulf Coast	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	14:25

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	29.83	Screened Interval:	—	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:	33.50
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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
14:51	.500	.500	29.92	.250	7.13	21.87	.745	12.05	14	0.00	Cl
14:54	.750	1.250	29.94	.250	7.06	20.86	.766	10.13	9	0.00	Cl
14:57	.750	2.000	29.93	.250	7.03	20.30	.771	9.14	20	0.00	Cl
15:00	.750	2.750	29.94	.250	7.01	19.96	.774	8.58	30	0.00	Cl
PS											

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

SAMPLING DATA

Sample ID:	MW-12	Sampling Flow Rate	.250mL/min	Analytical Laboratory:	ALS
Sample Time:	15:05	Final Depth to Water:	29.91	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6/VOA	HCl	VOC/GRO	yes no	—	—	
3/VOA	HCl	RSK-Methane	yes no	—	Yes	
1/250mL Plastic	H_2SO_4	Ammonia	yes no	—	Yes	
1/" Plastic	HNO_3	6020-K only	yes no	—	Yes	
1/" Plastic	None	300-NO_3-SO_4	yes no	—	Yes	
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-14	Job Number:	320001641-04.003
Client:	NuStar	Date:	4-9-14
Project:	Colt Lake	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	15:19

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	33.11	Screened Interval:	—	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:	37
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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
15:30	.500	.500	33.58	.250	7.14	19.54	.626	6.07	171	689	AC
15:33	.750	1.250	33.89	.250	7.09	18.95	0.614	5.78	177	310	C
15:36	.750	2.000	34.20	.250	7.06	18.75	0.608	5.62	181	241	C

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

SAMPLING DATA

Sample ID:	MW-14	Sampling Flow Rate	.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	15:40	Final Depth to Water:	35.04	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6/VOA	HCl	VOC/GRO	yes no	—	—	
3/VOA	HCl	RSK-Methane	yes no	—	Yes	
1/250mL Plastic	H_2SO_4	Ammonia-4500	yes no	—	Yes	
1/ "	HNO_3	6020-K only	yes no	—	Yes	
1/ "	None	300-NO_3-SO_4	yes no	—	Yes	
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-6	Job Number:	32000/641-04.003
Client:	NuStar	Date:	4-9-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	10:35

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	22.37	Screened Interval:	—	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:	26'	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<- Stabilization Criteria
11:08	.250	.250	22.69	.250	7.10	17.00	.807	10.60	202	124	C
11:11	.750	1.000	22.98	.250	7.02	16.69	.807	9.79	203	48.2	C
11:14	.750	1.750	23.21	.250	7.00	16.58	.797	9.16	201	15.4	C

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

SAMPLING DATA

Sample ID:	MW-6	Sampling Flow Rate	.250 ml/min	Analytical Laboratory:	ALS
Sample Time:	11:16	Final Depth to Water:	23.63	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6/VOA	HCl	VOC/6210	yes (no)	—		
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Well I.D.	MW-4	Job Number:	32000/641-04.003
Client:	NuStar	Date:	4-9-14
Project:	Colt Court	Sampler:	TA, PW
Weather:	Sunny	Time In/Out:	9:40

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	30.53	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	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:	34.5	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
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
9:47	.250	.250	31.01	.250	6.90	14.39	0.969	3.03	167	645	AC
9:50	.750	1.000	31.33	.250	6.85	15.04	0.968	2.58	152	371	AC
9:53	.750	1.750	31.44	.250	6.88	14.97	0.969	2.67	139	274	C
9:56	.750	2.500	31.53	.250	6.95	14.99	0.968	2.54	132	216	C

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

SAMPLING DATA

Sample ID:	MW-4	Sampling Flow Rate	0.250 mL/min	Analytical Laboratory:	ALS
Sample Time:	09:59	Final Depth to Water:	31.65	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 GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-01.~~002~~.004
Client:	NuStar	Date:	4-10-14
Project:	Andover GW Monitoring	Sampler:	PW/JA
Weather:	Sunny	Time In/Out:	08:30/17:30

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	~~Product Thickness (feet)~~ PID 1	~~Water Column Height (feet)~~ PID 2	Notes/Other Remarks
MW-10	0845	—	28.40	—	1213	869	Start vac @09:00
MW-10	11:08	—	28.32	—	—	—	Post Vac 125gal @ 11:00
MW-3	10:50	—	36.80	—	149.8	2.8	Start Vac @ 11:05
MW-3	13:10	—	36.65	—	—	—	Post Vac-50gal @ 13:10
2006	13:04	41.76	41.82	—	1212	1211	Start Vac @ 13:10
2006	15:11	—	41.80	—	—	—	Post Vac @ 15:15 - 25gal
MW-1	15:03	—	31.62	—	904	850	Start Vac @ 15:15
MW-1	17:20	—	31.23	—	—	—	Post Vac @ 17:20 - 20gal
Pond	10:55	—	—	—	—	—	1343.80 ft

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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) 14 compound select list
Work Order		Project Number	E3CE-0065	B	GRO - VPH OA-1
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-2	4-8-14	09:39	Water	HCL	6	X	X									
2	MW-13	4-8-14	10:24	Water	HCL	6	X	X									
3	MW-8	4-8-14	10:57	Water	HCL	6	X	X									
4	MW-5	4-8-14	11:45	Water	HCL	6	X	X									
5	MW-16	4-8-14	12:24	Water	HCL	6	X	X									
6	MW-15	4-8-14	12:55	Water	HCL	6	X	X									
7	MW-11	4-8-14	14:14	Water	HCL	6	X	X									
8	MW-9	4-8-14	15:02	Water	HCL	6	X	X									
9	MW-10	4-8-14	15:44	Water	HCL	6	X	X									
10	MW-3	4-8-14	16:34	Water	HCL	6	X	X									

Sampler(s) Please Print & Sign: Bud Ward

Shipment Method: FEDEX

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	4-9-14	18:00	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 2Q2014 GW Monitoring Wells

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 / EDD
☐ 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) 14 compound select list
Work Order		Project Number	E3CE-0065	B	GRO - VPH OA-1
Company Name	Apex Companies	Bill To Company	Apex Companies	C	300-Sulfate, ortho-phos, and Nitrate
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	RSK 175-methane
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	6020-Potassium only
				F	Ammonia-4500
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-4	4-9-14	09:59	water	HCl	6	X	X									
2	MW-6	4-9-14	11:16	water	HCl	6	X	X									
3	MW-7	4-9-14	11:44	water	HCl	6	X	X									
4	Dup-1	4-8-14		water	HCl	6	X	X									
5	Dup-2	4-8-14		water	HCl	6	X	X									
6	MW-12	4-9-14	15:05	water	HCl, H_2SO_4, HNO_3, none	12	X	X	X	X	X	X					
7	MW-14	4-9-14	15:40	water	HCl, H_2SO_4, HNO_3, none	12	X	X	X	X	X	X					
8	MW-1	4-9-14	16:37	water	HCl, H_2SO_4, HNO_3, none	12	X	X	X	X	X	X					
9																	
10																	

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

Shipment Method: FEDEX

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

Results Due Date:

Relinquished by:	Date: 4-9-14	Time: 1300	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 2Q2014 GW Monitoring Wells

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 / EDD
☐ 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) 14 compound select list
Work Order		Project Number	E3CE-0065	B	GRO - VPH OA-1
Company Name	Apex Companies	Bill To Company	Apex Companies	C	
Send Report To	Samuel Jackson	Invoice Attn	Samuel Jackson	D	
Address	3015 SW First Avenue	Address	3015 SW First Avenue	E	
				F	
City/State/Zip	Portland, OR 97201	City/State/Zip	Portland, OR 97201	G	
Phone	(503) 924-4704	Phone	(503) 924-4704	H	
Fax		Fax		I	
e-Mail Address	sjackson@apexcos.com	e-Mail Address	sjackson@apexcos.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	1009 W mountain	4-10	10:10	Water	HCL	6	X	X									
2	2009 N mountain CT		10:32														
3	2007 N mountain CT		10:41														
4	2020 N Ruger Circle		11:25														
5	2019 N Ruger Circle		11:37														
6	2028 N. Ruger Circle		11:55														
7	2032 N. Ruger Circle		12:07														
8	2021 N. Ruger Court		12:27														
9	2025 N. Ruger Court		12:45														
10	HOA 1	4-10	13:43	Water	HCL	6	X	X									

Sampler(s) Please Print & Sign: Paul Ward

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ____ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	4-10-14	~~15~~ 17:30	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 2Q2014 GW Monitoring Wells

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 / EDD
- ☐ 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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Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

ALS Project Manager: | ALS Work Order #:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	1910 N Quail Crossing St.	4-10	14:06	Water	HCL	6	X	X									
2	Hoa 2		14:20														
3	2002 N. Colt Court		14:43														
4	1211 W. Quail Crossing Court		15:30														
5	2006 Colt Court		15:30														
6	Dup 1		—														
7	Dup 2	4-10	—	Water	HCL	6	X	X									
8	Nothing Follows																
9																	
10																	

Sampler(s) Please Print & Sign: Paul Ward

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	4-10-14	17:30	
Relinquished by:	Date:	Time:	Received by (Laboratory):
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 2Q2014 GW Monitoring Wells

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 / EDD
- ☐ 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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WELL GAGING DATA SHEET

-04-009

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641 ~~01.002~~
Client:	NuStar	Date:	2009 04 17
Project:	Andover ~~SVE Monitoring~~ Root Cause	Sampler:	PCW/HA
Weather:	Cloudy	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)~~ PID	~~Water Column Height (feet)~~ PID	Notes/Other Remarks
2006	08:50	43.13	43.17		871	1147	START VAC @ 13:10
MW1	0847	—	31.44	—	471	503	START VAC @ 15:10
MW3	09:17	—	37.95	—	617	118	START VAC @ 11:05
MW-10	08:56	—	28.47	—	1161	1124	START VAC @ 09:00
2006	15:17	—	42.99	—	—	—	POST VAC 25 gal
MW1	15:14	—	31.07	—	—	—	POST VAC 200 gal
MW3	13:12 ~~37.74~~	—	37.74	—	—	—	POST VAC 25 gal
MW-10	11:05	—	28.41	—	—	—	POST VAC at 125 gal
MW2	09:27	—	32.73	—	—	—	
MW4	09:34	—	30.54	—	—	—	
MW5	09:37	—	21.10	—	—	—	
MW6	09:20	—	22.33	—	—	—	
MW7	09:22	—	16.66	—	—	—	
MW8	11:27	—	22.29	—	—	—	
MW9	08:10	—	30.81	—	—	—	
MW11	09:29	—	28.79	—	—	—	
MW12	08:58	—	30.45	—	—	—	
MW13	11:17	—	32.38	—	—	—	
MW14	11:25	—	33.56	—	—	—	
MW15	09:04	—	33.69	—	—	—	
MW16	09:07	—	30.84	—	—	—	
POND	—	—	—	—	—	—	1343.75

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-01.002
Client:	NuStar ~~Ash Creek~~	Date:	20140422
Project:	Andover ~~GW Monitoring~~	Sampler:	P Ward
Weather:	Sunny	Time In/Out:	08:45 / 17:30

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
MW-10	08:59	~~28.48~~ NP	28.48	—	890	969	Start Vac 0910
MW-3	09:07	—	39.94	—	395	86.3	Start Vac 11:15
2006	13:12	44.90	44.95	—	1146	1172	Start Vac 13:20
MW1	13:15	—	31.45		969	1126	Start Vac 15:20
MW-10	13:00	—	28.38	—	—	—	Post Vac 100 gal
MW-3	14:15	—	39.37	—	—	—	Post Vac 50 gal
2006	15:24	—	44.77	—	—	—	Post Vac 25 gal
MW-1	17:25	—	30.55	—	—	—	Post Vac 175
MW-2	14:05	—	32.99	—	—	—	
MW-4	14:45	—	31.02	—	—	—	
MW5	15:30	—	21.30	—	—	—	
MW-6	14:18	—	22.41	—	—	—	
MW-7	14:21	—	16.70	—	—	—	
MW-8	13:55	—	22.22	—	—	—	
MW9	14:27	—	31.06	—	—	—	
MW-11	14:47	—	28.92	—	—	—	
MW-12	14:31	—	30.85	—	—	—	
MW-13	13:47	—	32.70	—	—	—	
MW-14	1340	—	38.82	—	—	—	
MW-15	~~13:40~~ 14:53	—	~~33.82~~ 38.82	—	—	—	
MW-16	14:57	—	30.96	—	—	—	
Pond	14:22	—	—	—	—	—	Elev ~ 1483.60

WELL GAGING DATA SHEET

APEX

		Job Number:	32000164/-04.004
Client:	Nu Star	Date:	4/29/14
Project:	Andour Colt Ct.	Sampler:	J. Harris
Weather:	45° Overcast/windy	Time In/Out:	9:55

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	~~Product Thickness (feet)~~ PID Start	~~Water Column Height (feet)~~ PID Stop	Notes/Other Remarks
2006	13:41	46.36	46.43	—	830.7	910.9	Start @ 14:00
mw-1	14:14	—	31.80	—	371.3	—	Start @ 16:10
mw-2	13:51	—	33.08	—	—	—	
mw-3	11:55	—	41.00	—	386.1	—	Start vac @ 12:05
mw-4	15:00	-	31.25	—	—	—	
mw-5	16:15	—	21.15	—	—	—	
mw-6	16:40	—	22.16 ~~16.70~~	—	—	—	
mw-7	16:50		22.16.70	—	—	—	
mw-8	16:10	—	22.20	—	—	—	
mw-9	14:30	—	31.50	—	—	—	
mw-10	9:55	—	28.50	—	830.6	—	Start vac @ 10:00
mw-11	15:35	—	28.90	—	—	—	
mw-12	14:20	—	31.10	—	—	—	
mw-13	14:38	—	32.91	—	—	—	
mw-14	—	—	—	—	—	—	Truck over man-way
mw-15	15:25	—	34.95	—	—	—	
mw-16	15:18	—	31.30	—	—	—	
Pond	13:20	—	—	—	—	—	≈1335
2006	16:00 ~~15:59~~	—	46.20	—	—	—	Post vac: 25 gals Stop time 16:00
mw-1	18:03	—		—	—	401.2	Post vac: Stop vac @ 18:0
mw-3	14:03	—	40.50	—	—	96.9	Post vac: ~~50~~ 25 gals Stop time 14:00
mw-10	12:03	—	28.52	—	—	1035	Post vac: 50 gals Stop time 12:00

Post vac

WELL GAGING DATA SHEET

APEX

		Job Number:	
Client:	Nustar	Date:	5/8/14
Project:	Auburn Coll Ct.	Sampler:	J. Harris
Weather:	Cloudy 70°F	Time In/Out:	10:00 / 18:20

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	13:45	~~2~~ 51.15	51.28	~~+13~~	.13	—	Start @ 14:10 PID @ 14:15 767.1
MW-1	15:45	—	31.75	—	—	—	Start @ 16:05 ~~PID @ 16:20~~ PID @ 16:20 858.1 ppm
MW-2	14:55	—	33.06	—	—	—	
MW-3	11:08	—	45.96	—	—	—	Start vac @ 12:05
MW-4	15:15	—	31.59	—	—	—	
MW-5	15:10	—	21.33	—	—	—	
MW-6	16:14	—	22.02	—	—	—	
MW-7	16:24	—	16.95	—	—	—	
MW-8	15:05	—	22.23	—	—	—	
MW-9	11:13	—	31.81	—	—	—	
MW-10	9:59	—	29.01	—	—	—	Start @ 10:00
MW-11	14:45	—	29.84	—	—	—	PID @ 11:00 - 1455 ppm MW-10
MW-12	11:10	—	31.29	—	—	—	
MW-13	11:20	—	33.03	—	—	—	
MW-14	11:25	—	34.85	—	—	—	
MW-15	14:40	—	35.85	—	—	—	
MW-16	14:50	—	31.81	—	—	—	
Pond	13:30	—	—	—	—	—	Below pipe markers.
MW-10	12:02	—	29.10	—	—	—	Stop @ 12:00
					50 gals		PID @ 11:58 - 962.6
MW-3	14:02	—	45.50	—	50 gal		stop @ 2:00 PID @ 1:55 24.5 ppm
2006	16:12	—	50.95	—	50 gal		Stop @ 16:10 PID @ 15:55 861. ppm
							PID @ 17:50 - 776.3 ppm
MW-1	18:10	—	26.62	—	75 gals		

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	5/13/14
Project:	Andover Colt Court	Sampler:	J. Harris
Weather:	Sunny 60°F	Time In/Out:	9:45/

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	13:90	51.66	51.83	—	—	—	Begin Vac @ 14:00 (time) PID @ 14:05 240.6
1344 Pond	11:30	—	N/A	—	—	—	~~Pre-Vac~~ Below PVC pipe
MW-1	14:05	—	31.49	—	—	—	Start 15:55 PID @ 16:05 289.5
MW-2	13:00	—	33.90	—	—	—	
MW-3	11:45	—	47.00	—	—	—	Start vac @ 11:55 PID @ 12:08 - 274.6
MW-4	13:10	—	31.30	—	—	—	
MW-5	15:05	—	21.17	—	—	—	
MW-6	15:15	—	~~16.80~~ 21.95	—	—	—	
MW-7	15:20	—	16.80	—	—	—	
MW-8	12:30		22.42	—	—	—	
MW-9	~~9:45~~ 12:00	—	32.96	—	—	—	Start vac @ 9:50
MW-10	9:45	—	29.08	—	—	—	
MW-11	14:40	—	29.91	—	—	—	
MW-12	12:10	—	31.21	—	—	—	
MW-13	12:15	—	~~35.20~~ 32.95	—	—	—	
MW-14	12:20	—	35.20	—	—	—	
MW-15	13:30	—	35.89	—	—	—	
MW-16	13:35	—	31.84	—	—	—	
~~Pond~~	—	—	—	—	—	—	
MW-10 ~~SVE-1~~							
~~SVE-2~~							
~~SVE-3~~							
~~SVE-4~~							
~~2006~~							~~Post Vac~~
~~1344 Pond~~							~~Post Vac~~
MW-10	11:58	—	28.85		50 gals		Stop @ 11:50 PID @ 11:45 1086 ppm
MW-3	13:58	—	45.10		50 gals		Stop @ 13:55 PID @ 13:50 29.6 ppm
2006	15:55	—	51.30		50 gals		Stop @ 15:53 PID @ 15:50 875.0
MW-1		—			50 gals		~~Sam Jackson 503-278-9815~~ Stop @ 17:55 PID @ 17:50 1011 ppm

2737 36 305

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-
Client:	NuStar	Date:	20140520
Project:	Colt Court	Sampler:	P. Ward
Weather:	Sunny	Time In/Out:	07:50

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	~~Product Thickness (feet)~~ PID	~~Water Column Height (feet)~~ PID	Notes/Other Remarks
MW-10	08:55	—	29.21	—	1764	1047	Start Vac 08:50
MW-10	12:37	—	28.37	—	—	—	Post Vac ~~10:55~~ 25 gal
MW-3	10:37	—	49.95	—	1235	45.8	Start Vac 10:55
MW-3	15:05	—	48.07	—	—	—	Post Vac 25 gal
2006	12:30	53.94	54.12	—	789	858	Start Vac 13:00
2006	15:15	—	53.33	—	—	—	Post Vac 25 gal
MW1	12:25	—	31.50	—	792	819	Start Vac 15:00
MW-1	17:05	—	30.45	—	—	—	Post Vac 25 gal
MW2	—	—	33.77	—	—	—	
MW4	15:37	—	31.73	—	—	—	
MW5	14:32	—	21.48	—	—	—	
MW-6	15:08	—	22.46	—	—	—	
MW-7	15:11	—	15.69	—	—	—	
MW-8	12:16	—	22.27	—	—	—	
MW-9	12:35	—	33.39	—	—	—	
MW-11	16:22	—	28.52	—	—	—	
MW-12	12:41	—	31.13	—	—	—	
MW-13	12:05	—	33.39	—	—	—	
MW-14	11:58	—	34.95	—	—	—	
MW-15	—	—	38.63	—	—	—	
MW-16	—	—	32.91	—	—	—	
Pond	water	level	Below	meter	stick		
2006	7:42	55.11	55.28	—	—	—	Start Vac @ 07:50
2006	9:55	55.54	55.60	—	—	—	post vac 25 gal

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.		Job Number:	320081641.004
	Client:	Nustar	Date: 5/29/14 / 5/30/14
	Project:	Cobb Court	Sampler: J. Kook
	Weather:	Sunny/Clear 70's	Time In/Out: 0900/1730 0745/1030

WATER LEVEL DATA

	Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	~~Product Thickness (feet)~~ PID 1	~~Water Column Height (feet)~~ PID 2	Notes/Other Remarks
5-29-14	MW-10	08:50	—	28.95	—	3217	2784	Start Vac - 09:00
	MW-10	11:02	—	28.30	—	—	—	Stop Vac - 11:00 11 gallons
	MW-3	10:00	—	47.07	—	795	80.8	Start Vac - 11:05
	MW-3	13:08	—	46.85	—	—	—	Stop Vac - 13:05 2 gallons
	2006	10:08	52.06	52.24	—	4380	3135	Start Vac - 13:10
	2006	15:13	—	51.42	—	—	—	Stop Vac - 15:10 Ø gallons
	MW-1	10:10	—	31.57	—	4136		Start Vac - 15:15
	MW-1	17:20	—	30.49	—	—	—	Stop VAC - 17:15 Ø gallons
	MW-2	14:22	—	33.15	—			
	MW-4	14:02	—	31.63	—			
	MW-5	14:18	—	21.41	—			
	MW-6	14:29	—	22.32	—			
	MW-7	14:32	—	17.44	—			
	MW-8	14:05	—	22.43	—			
	MW-9	11:07	—	33.56	—			
	MW-11	14:00	—	30.09	—			
	MW-12	14:25	—	31.16	—			
	MW-13	14:12	—	33.34	—			
	MW-14	14:08	—	34.50	—			
	MW-15	13:45	—	36.85	—			
	MW-16	13:55	—	32.81	—			
	Pond Water Level @ 1443.8							
5-30-14	2006	0755	53.13	53.32	—	3826	3625	Start Vac 0800
	2006	10:05	—	53.05	—	—	—	Stop Vac 1000 Ø gallons

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.		Job Number:	32000641-06.004
	Client: Nustar	Date:	2014/06/02/03
	Project: Colt Court	Sampler:	P. Nowd
	Weather: Sunny 85°	Time In/Out:	13:20

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	~~Product Thickness (feet)~~ PID	~~Water Column Height (feet)~~ VOC	Notes/Other Remarks
2006	13:25	52.50	52.65	—	1544	1320	Start Vac at 13:30
2006	17:02	52.20	52.25	—	—	—	Post Vac 75 gal
MW-1	15:15	~~31.64~~	31.61	—	1550	1123	Start Vac at 15:30
MW-1	17:34	—	32.60	—	—	—	Post Vac 25 gal
2014	0603	—	—	—	—	—	— —
MW-10	07:55	—	28.46	—	970	1629	Start Vac at 0800
MW-10	10:04	—	~~28~~ 35	—	—	—	Post Vac ~25 gal
MW-3	09:57	—	47.89	—	653	330	Start Vac at 10:05
MW-3	12:39	—	47.47	—	—	—	Post Vac 25 gal
MW-4	12:55	—	32.68	—	—	—	
MW5	13:25	—	21.16	—	—	—	
MW6	12:43	—	22.09	—	—	—	
MW7	12:46	—	16.13	—	—	—	
MW-8	13:40	—	32.32	—	—	—	
MW 9	11:30	—	33.61	—	—	—	
MW-11	13:12	—	29.34	—	—	—	
MW12	12:35	—	31.14	—	—	—	
MW13	12:21	—	33.45	—	—	—	
MW14	12:24	—	34.55	—	—	—	
MW15	—	—	—	—	—	—	BOAT PARKED OVER Well.
MW16	13:06	—	32.88	—	—	—	
MW2	11:41	—	33.64	—	—	—	
2006	11:47	52.49	52.63	—	1256	1394	Start Vac at 12:05
2006	14:10	—	52.09	—	—	—	Post Vac 25 gal
POND	—	—	—	—	—	—	Elev 1344.5

FIELD OBSERVATION FORM

SITE: Andover Colt Court	DATE: 6/10/14
WEATHER: Sunny 72°F	ESTIMATED DURATION OF EVENT: ~~2~~ 1.5 days
EVENT TYPE: Vac Event	PTW #:
FIELD STAFF / COMPANY NAME: Jace Harris Apex Companies	

OBJECTIVE OF FIELD WORK: Vac Vapor from 4 wells (MW-10, MW-3, 2006 colt ct. irrigation well, + MW-1.)

LIST APPLICABLE SOPs: HASP, SOW, SOP

WERE SOPs FOLLOWED?	YES	NO	N/A
ARE THE WELLS IN GOOD CONDITION?	YES	NO	N/A
WERE WATER LEVELS CONSISTENT WITH PREVIOUS EVENTS?	YES	NO	N/A
WERE NAPL LEVELS CONSISTENT WITH PREVIOUS EVENTS (if applicable)?	YES	NO	N/A
ARE OFF-SITE ACTIVITIES/RECEPTORS NEAR SITE THE SAME AS DURING PREVIOUS EVENTS?	YES	NO	N/A
NUMBER OF DRUMS ONSITE UPON ARRIVAL: Ø ARE DRUMS LABELED:	YES	NO	N/A

(PROVIDE EXPLANATION BELOW FOR ALL "NO" ANSWERS. ATTACH ADDITIONAL DOCUMENTATION TO FORM IF NECESSARY)

NOTES/COMMENTS:

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	6/10/14
Project:	Andover Colt Court	Sampler:	J. Harris
Weather:	Sunny 72°F	Time In/Out:	

WATER LEVEL DATA

	Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
	2006	12:10	48.31	48.48				Begin Vac @ 14:55 (time)
6/11/14 →	MW-1	8:55	–	31.65				Begin Vac @ 9:20 (time)
	MW-2	13:00	–	33.00				
	MW-3	11:30	–	44.14	–	–	–	Start vac @ 12:50
	MW-4	13:05	–	32.52	–	–	–	
	MW-5	12:35	–	20.65	–	–	–	
	MW-6		–	~~14.~~ 21.00	–	–	–	
	MW-7		–	14.85	–	–	–	
	MW-8	12:30	–	21.73	–	–	–	
	MW-9	11:40	–	32.83	–	–	–	
	MW-10	10:40	~~28.25~~	28.25				Start vac @ 10:45
	MW-11	13:40	–	28.71	–	–	–	
	MW-12	12:15	–	31.15	–	–	–	
	MW-13	12:25	–	33.50	–	–	–	
	MW-14	12:20	–	32.69	–	–	–	
	MW-15	13:15	–	–	–	–	–	Truck w/boat trailer over MW-15
	MW-16	13:10	–	–	–	–	–	Couldn't get manhole off. Broke pry t trying to get off.
	Pond	11:00	–	1344.65	–	–	–	
	2006	–	48.50	–	–	–	–	~~Post Vac~~ Stop vac @ 16:55
6/11/14	MW-1	11:21	–	30.80	–	–	–	Post Vac ~~30.50~~ Stop @ 11:20
	MW-10	12:50	~~28.00~~	28.00	–	–	–	Stop @ 12:45 ~~25 gal~~ 50 gal
	MW-3	14:53	–	43.83	–	–	–	Stop @ 14:50 75 gals
6/11/14	2006	7:10	48.95	49.10	–		–	Start @ 7:15
	2006	9:17	–	48.90	–	–	–	Stop @ 9:15 25 gals
								Sam Jackson 503-278-9815

WELL GAGING DATA SHEET

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

		Job Number:	320001641-04.004
Client:	NuStar	Date:	6/17/14 - 6/18/14
Project:	Andover Colt Court	Sampler:	J. Harris
Weather:	Sun/windy 80°F	Time In/Out:	12:00 / 10:10 6-18-14

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	46.20	46.34				Begin Vac @ 12:15 (time)
MW-1	14:10	—	31.35				Begin Vac @ 14:20 (time)
MW-2							
MW-3							
MW-4							
MW-5							
MW-6							
MW-7							
MW-8							
MW-9							
MW-10							
MW-11							
MW-12							
MW-13							
MW-14							
MW-15							
MW-16							
Pond	13:30	—	1344.5				No Algae present
2006	14:15	—	46.10				Post Vac 14:15 25 gal
MW-1	16:20	—	27.40 and dropping				Post Vac 16:20 75 gal
6/18/14 2006	7:50	47.43	47.60	—			Start vac @ 8:00
2006	10:00	—	47.25				Stop @ 10:05 JH
							Sam Jackson 503-278-9815

Air Monitoring Data

Date	6/17/2014	Andover Cold Ct.				Weather	Sunny/windy
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:20	3.1 ppm	0.0	0.0	0.0	~~357.4 ppm @1250~~	Wind 20mph from S.
" "	12:50	1.7	0.0	0.0	0.0	357.4 ppm	
" "	13:20	2.1	0.0	0.0	0.0		
" "	13:50	0.8	0.0	0.0	0.0	628.7 ppm	
" "	14:15	0.0	0.0	0.0	0.0	587.1 ppm	Stop vac @ 14:15
MW-1	14:25	0.2	0.0	0.0	0.0	847.1 ppm	Begin vac @ 14:20
	14:55	0.0	0.0	0.0	0.0		
	15:25	0.4	0.0	0.0	0.0		
	15:55	0.0	0.0	0.0	0.0		
	16:20	0.1	0.0	0.0	0.0	1564 ppm	

Air monitoring Data

Date	6/18/2014	Andover Vac Event				Weather	Sun/windy
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
Pre vac Ambient 2006	7:55 am	0.0	0.0	0.0	0.0	N/A	Wind 20 from S.
	8:05	0.0	0.0	0.0	0.0	630.4	Start @ 8:00
	8:30	1.7	0.0	0.0	0.0		
	8:50	0.6	0.0	0.0	0.0		
	9:30	0.0	0.0	0.0	0.0		
	9:50	0.0	0.0	0.0	0.0		
	10:00	–	–	–	–	791.6	Stop vac @ 10:05

WELL GAGING DATA SHEET

		Job Number:	32000164.1-06.004
Client:	Nustar	Date:	20N 0624
Project:	Andover/Colt CT	Sampler:	T. Wand
Weather:	Sunny 86°	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	47.67	47.82	—	—	—	START Vac @ 12:00
200b	14:05	47.39	47.40	—	—	—	Post Vac 25 gal
MW-1	13:35	—	31.69	—	—	—	START Vac @ 14:05
MW-1	16:04	—	31.15	—	—	—	Post Vac 75 gal
—	20140625	—	—	—	—	—	
200L	0755	46.81	46.94	—	—	—	START Vac @ 08:00
200b	10:05	~~46.94~~	46.66	—	—	—	Post Vac 25 gal
MW2	09:54	—	31.89	—	—	—	
MW3	10:37	—	41.62	—	—	—	
MW4	09:11	—	30.73	—	—	—	
MW5	09:45	—	19.96	—	—	—	
MW-6	10:41	—	19.89	—	—	—	
MW-7	10:45	—	14.78	—	—	—	
MW 8	09:48	—	20.00	—	—	—	
MW-9	10:47	—	30.60	—	—	—	
MW10	TRAffic	PARKED	ONTO	Well			
MW11	09:17	—	28.09	—	—	—	
MW12	10:50	—	30.79			—	
MW-13	10:30	—	33.16	—	—		
MW 14	10:33	—	32.07	—	—	—	
MW-15	09:21	—	34.65	—	—	—	
MW-16	09:27	—	29.93	—	—	—	
PND	—	—	—	—	—	—	1346.6

APEX	NuStar Colt Court Air Monitoring					Date	20140624
						Employee	[illegible]
						Wind Direction	Calm
						Weather	Sunny 86°
Well ID	Time	North	South	East	West	Vacuum Exhaust	Comments
2006	12:30	0	0	0	0	1512	Calm
	13:00	2.1	0	0	0	397	Calm
2006	13:30	0	0	0	0	743	wind from north
MW-1	14:25	0.8	0	0	0	1389	
	15:00	0	0	0	0	1375	
	15:30	0	0	0	0.2	1175	
MW1	15:55	0	0	0	0.2	1161	out of the north / RAIN
—	20140625	—	—	—	—	—	—
2006	08:30	0	0	0	0	1133	CALM
	09:00	1.4	0	0	0	870	out of south
	09:30	0	0	0	0	914	
2006	09:50	0.2	0	0	0	861	

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

Appendix B

Historical Groundwater Elevations and SPH Removal Data

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

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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					31.93	--	--	1321.24
	8/13/2013					31.27	--	--	1321.90
	8/21/2013					30.85	--	--	1322.32
	8/28/2013					31.45	--	--	1321.72
	9/5/2013					31.45	--	--	1321.72
	9/11/2013					32.18	--	--	1320.99
	9/17/2013					32.10	--	--	1321.07
	9/23/2013					31.66	--	--	1321.51
	9/30/2013					32.55	--	--	1320.62
	10/10/2013					29.11	--	--	1324.06
	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
MW-2	1/16/2014	2.0	1353.17	44	29-44	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					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
MW-3	1/16/2014	2.0	1350.47	60	40-60	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					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
MW-4	1/16/2014	2.0	1350.73	41	26-41	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					19.61	--	--	1333.16
	8/13/2013					19.39	--	--	1333.38
	8/21/2013					19.66	--	--	1333.11
	8/28/2013					20.02	--	--	1332.75
	9/5/2013					20.54	--	--	1332.23
	9/11/2013					20.81	--	--	1331.96
	9/17/2013					21.03	--	--	1331.74
	9/23/2013					21.00	--	--	1331.77
	9/30/2013					21.17	--	--	1331.60
	10/10/2013					21.45	--	--	1331.32
	10/17/2013					21.18	--	--	1331.59
	10/23/2013					21.20	--	--	1331.57
	10/31/2013					21.19	--	--	1331.58
	11/6/2013					20.91	--	--	1331.86
	11/13/2013					20.79	--	--	1331.98
	11/20/2013					20.18	--	--	1332.59
	11/26/2013					21.29	--	--	1331.48
	12/3/2013					20.84	--	--	1331.93
	12/11/2013					20.96	--	--	1331.81
	12/19/2013					20.54	--	--	1332.23
	12/27/2013					20.82	--	--	1331.95
	1/3/2014					NM	--	--	NM
	1/10/2014					20.19	--	--	1332.58
MW-5	1/16/2014	2.0	1352.77	30.0	15-30	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					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
MW-6	1/16/2014	2.0	1349.76	41.0	26-41	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					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
MW-7	1/16/2014	2.0	1348.98	24	9-24	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

Please refer to notes at end of table.

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

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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					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
MW-9	1/16/2014	2.0	1349.48	34	19-34	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	8/8/2013					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
MW-10	1/16/2014	2.0	1348.79	34	19-34	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/30/2013					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
MW-11	2/12/2014	2.0	1351.34	42.0	22-42	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/30/2013					30.15	--	--	1319.59
	10/10/2013					30.55	--	--	1319.19
	10/17/2013					30.49	--	--	1319.25
	10/23/2013					30.40	--	--	1319.34
	10/31/2013					30.45	--	--	1319.29
	11/6/2013					29.91	--	--	1319.83
	11/13/2013					29.32	--	--	1320.42
	11/20/2013					28.16	--	--	1321.58
	11/26/2013					27.91	--	--	1321.83
	12/3/2013					27.41	--	--	1322.33
	12/11/2013					27.83	--	--	1321.91
	12/19/2013					27.74	--	--	1322.00
	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
MW-12	2/12/2014	2.0	1349.74	43	23-43	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/30/2013					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
MW-13	2/12/2014	2.0	1354.58	45.0	25-45	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/30/2013					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
MW-14	2/12/2014	2.0	1354.99	45.0	25-45	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/30/2013					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
MW-15	2/12/2014	2.0	1351.79	45	25-45	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

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	9/30/2013					31.60	--	--	1320.53
	10/10/2013					30.76	--	--	1321.37
	10/17/2013					30.79	--	--	1321.34
	10/23/2013					30.78	--	--	1321.35
	10/31/2013					30.80	--	--	1321.33
	11/6/2013					30.33	--	--	1321.80
	11/13/2013					30.01	--	--	1322.12
	11/20/2013					29.63	--	--	1322.50
	11/26/2013					29.71	--	--	1322.42
	12/3/2013					29.52	--	--	1322.61
	12/11/2013					29.71	--	--	1322.42
	12/19/2013					28.51	--	--	1323.62
	12/27/2013					29.97	--	--	1322.16
	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
MW-16	2/12/2014	2.0	1352.13	45.0	25-45	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

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

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 leve
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

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 April 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 during the week of April 7, 2014, and 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 HS14040705

The data reviewed includes groundwater samples collected from irrigation wells on April 10, 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 MS and MS duplicates (MSD) were analyzed on an unrelated sample and recovered within control limits.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. Feld duplicates were collected from wells at 2028 N Ruger Circle and 1211 W Quail Crossing Court. Constituents were not detected in the primary and field duplicate samples for 1211 W Quail Crossing Court. Only GRO was detected in the duplicate collected from well 2028 N Ruger Circle at 0.066 mg/L; GRO was not detected in the primary sample (<0.05 mg/L). The GRO detection limit (0.05 mg/L) and the detection (0.066mg/L) are within the acceptable RPD.

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 HS14040529

The data reviewed includes groundwater sample data collected from monitoring wells on April 8 and 9, 2014. Samples were analyzed for GRO and VOCs using the methods listed in Section 2.1.

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

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

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

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

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

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

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

Matrix Spike Analyses. The MS/MSD performed on an unrelated sample was outside control limits for cyclohexane and n-butylbenzene; however, the associated LCS recovery was within control limits, providing quality control for the batch.

Lab Duplicate. No lab duplicate was analyzed.

Surrogate Recovery. With the exception of sample MW-9, surrogate recoveries were within control limits for samples. The surrogate for MW-9 was outside control limits on the first analysis; however, the sample was reanalyzed outside method holding time with the surrogate within control limits. Both sets of data are reported.

Field Duplicate. Field duplicates were collected from monitoring wells MW-5 and MW-9. Constituents were not detected in the primary and duplicate sample collected from MW-9. RPDs for several constituents were above acceptable range of 30 percent for the primary and duplicate samples collected at MW-9. The constituents are flagged with a 'J', which indicates that the values are estimated. The higher concentration in the primary/duplicate samples is shown on the report figures.

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 HS14040511

The data reviewed includes groundwater sample data collected during sampling performed on April 9, 2014. Samples were analyzed for methane, ammonia, nitrate, phosphorus, sulfate, and potassium using the methods listed in Section 2.2.

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.

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

Holding Times. With the exception of the nitrate and phosphorus analyses, the samples were analyzed within all applicable holding times. The hold time for nitrate and phosphorous samples is 48 hours; however, due to a laboratory error, the samples were analyzed 76 hours after collection. The samples are flagged with an 'H' qualifier to indicate that the recommended hold time was exceeded.

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 and MS duplicates (MSD) were analyzed on an unrelated sample and recovered within control limits.

Lab Duplicate. One lab duplicate was analyzed for potassium and was within RPD.

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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April 29, 2014

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

Work Order: **HS14040511**

Laboratory Results for: **E3CE-0065 Andover-Colt Court MNA**

Dear Samuel,

ALS Environmental received 3 sample(s) on Apr 10, 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: Dayna.Fisher

Bethany McDaniel
Project Manager

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court MNA
Work Order: HS14040511

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14040511-01	MW-12	Water		09-Apr-2014 15:05	10-Apr-2014 09:25	☐
HS14040511-02	MW-14	Water		09-Apr-2014 15:40	10-Apr-2014 09:25	☐
HS14040511-03	MW-1	Water		09-Apr-2014 16:37	10-Apr-2014 09:25	☐

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court MNA
Work Order: HS14040511

CASE NARRATIVE

Analytical results are flagged with an H qualifier for Nitrogen, Nitrate (As N) and Phosphorus, Dissolved Orthophosphate (As P). .

ALS Group USA, Corp Date: 29-Apr-14

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court MNA
Sample ID: MW-12
Collection Date: 09-Apr-2014 15:05

WorkOrder:HS14040511
Lab ID:HS14040511-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED GASES - RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**6.26**		**0.500**	**ug/L**	1	17-Apr-2014 10:58
AMMONIA AS N - SM 4500 NH3 D (ISE)		**Method:SM4500 NH3-D**				Analyst: KKB
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	25-Apr-2014 16:36
ANIONS - EPA 300.0 (1993)		**Method:E300**				Analyst: JKP
Nitrogen, Nitrate (As N)	**0.470**	H	**0.100**	**mg/L**	1	12-Apr-2014 19:13
Phosphorus, Dissolved Orthophosphate (As P)	ND	H	0.100	mg/L	1	12-Apr-2014 19:13
Sulfate	**67.1**		**0.500**	**mg/L**	1	12-Apr-2014 19:13
METALS		**Method:SW6020**		Prep:SW3010A / 21-Apr-2014		Analyst: SKS
Potassium	**6.41**		**0.200**	**mg/L**	1	21-Apr-2014 21:58

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

ALS Group USA, Corp Date: 29-Apr-14

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover-Colt Court MNA	WorkOrder:HS14040511
Sample ID:	MW-14	Lab ID:HS14040511-02
Collection Date:	09-Apr-2014 15:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED GASES - RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**1.50**		**0.500**	**ug/L**	1	17-Apr-2014 11:09
AMMONIA AS N - SM 4500 NH3 D (ISE)		**Method:SM4500 NH3-D**				Analyst: KKB
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	25-Apr-2014 16:36
ANIONS - EPA 300.0 (1993)		**Method:E300**				Analyst: JKP
Nitrogen, Nitrate (As N)	**7.05**	H	**0.100**	**mg/L**	1	12-Apr-2014 19:39
Phosphorus, Dissolved Orthophosphate (As P)	ND	H	0.100	mg/L	1	12-Apr-2014 19:39
Sulfate	**28.7**		**0.500**	**mg/L**	1	12-Apr-2014 19:39
METALS		**Method:SW6020**		Prep:SW3010A / 21-Apr-2014		Analyst: SKS
Potassium	**2.33**		**0.200**	**mg/L**	1	21-Apr-2014 22:01

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

ALS Group USA, Corp Date: 29-Apr-14

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover-Colt Court MNA	WorkOrder:HS14040511
Sample ID:	MW-1	Lab ID:HS14040511-03
Collection Date:	09-Apr-2014 16:37	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED GASES - RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**0.956**		**0.500**	**ug/L**	1	17-Apr-2014 11:21
AMMONIA AS N - SM 4500 NH3 D (ISE)		**Method:SM4500 NH3-D**				Analyst: KKB
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	25-Apr-2014 16:36
ANIONS - EPA 300.0 (1993)		**Method:E300**				Analyst: JKP
Nitrogen, Nitrate (As N)	**0.103**	H	**0.100**	**mg/L**	1	12-Apr-2014 20:04
Phosphorus, Dissolved Orthophosphate (As P)	**0.121**	H	**0.100**	**mg/L**	1	12-Apr-2014 20:04
Sulfate	**3.56**		**0.500**	**mg/L**	1	12-Apr-2014 20:04
METALS		**Method:SW6020**		Prep:SW3010A / 21-Apr-2014		Analyst: SKS
Potassium	**0.848**		**0.200**	**mg/L**	1	21-Apr-2014 22:04

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

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court MNA
WorkOrder: HS14040511

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 80992	**Test Name :** METALS			**Matrix:** Water		
HS14040511-01	MW-12	09 Apr 2014 15:05		21 Apr 2014 11:00	21 Apr 2014 21:58	1
HS14040511-02	MW-14	09 Apr 2014 15:40		21 Apr 2014 11:00	21 Apr 2014 22:01	1
HS14040511-03	MW-1	09 Apr 2014 16:37		21 Apr 2014 11:00	21 Apr 2014 22:04	1
Batch ID R231782	**Test Name :** ANIONS - EPA 300.0 (1993)			**Matrix:** Water		
HS14040511-01	MW-12	09 Apr 2014 15:05			12 Apr 2014 19:13	1
HS14040511-02	MW-14	09 Apr 2014 15:40			12 Apr 2014 19:39	1
HS14040511-03	MW-1	09 Apr 2014 16:37			12 Apr 2014 20:04	1
Batch ID R232057	**Test Name :** DISSOLVED GASES - RSK-175			**Matrix:** Water		
HS14040511-01	MW-12	09 Apr 2014 15:05			17 Apr 2014 10:58	1
HS14040511-02	MW-14	09 Apr 2014 15:40			17 Apr 2014 11:09	1
HS14040511-03	MW-1	09 Apr 2014 16:37			17 Apr 2014 11:21	1
Batch ID R232579	**Test Name :** AMMONIA AS N - SM 4500 NH3 D (ISE)			**Matrix:** Water		
HS14040511-01	MW-12	09 Apr 2014 15:05			25 Apr 2014 16:36	1
HS14040511-02	MW-14	09 Apr 2014 15:40			25 Apr 2014 16:36	1
HS14040511-03	MW-1	09 Apr 2014 16:37			25 Apr 2014 16:36	1

Client: Apex Companies
WorkOrder: HS14040511
Project: E3CE-0065 Andover-Colt Court MNA

QC BATCH REPORT

Batch ID: R232057 **Instrument: FID-4** **Method: RSK-175**

MBLK Sample ID: **GBLKW1-140417** Units: **ug/L** Analysis Date: **17-Apr-2014 09:34**
Client ID: Run ID: **FID-4_232057** SeqNo: **2796727** 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: **GLCSW1-140417** Units: **ug/L** Analysis Date: **17-Apr-2014 08:47**
Client ID: Run ID: **FID-4_232057** SeqNo: **2796725** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	9.153	0.500	9.065	0	101	75 - 125				

LCSD Sample ID: **GLCSDW1-140417** Units: **ug/L** Analysis Date: **17-Apr-2014 09:03**
Client ID: Run ID: **FID-4_232057** SeqNo: **2796726** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	9.414	0.500	9.065	0	104	75 - 125	9.153	2.81	30	

The following samples were anayzed in this batch: HS14040511-01 HS14040511-02 HS14040511-03

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

Client: Apex Companies
WorkOrder: HS14040511
Project: E3CE-0065 Andover-Colt Court MNA

QC BATCH REPORT

Batch ID: 80992 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLKW5-042114** Units: **mg/L** Analysis Date: **21-Apr-2014 21:09**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802445** PrepDate: **21-Apr-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: **MLCSW5-042114** Units: **mg/L** Analysis Date: **21-Apr-2014 21:11**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802446** PrepDate: **21-Apr-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	5.589	0.200	5	0	112	80 - 120				

MS Sample ID: **HS14040377-01MS** Units: **mg/L** Analysis Date: **21-Apr-2014 21:41**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802458** PrepDate: **21-Apr-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	7.551	0.200	5	2.339	104	80 - 120				

MSD Sample ID: **HS14040377-01MSD** Units: **mg/L** Analysis Date: **21-Apr-2014 21:44**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802459** PrepDate: **21-Apr-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	7.92	0.200	5	2.339	112	80 - 120	7.551	4.77	15	

DUP Sample ID: **HS14040377-01DUP** Units: **mg/L** Analysis Date: **21-Apr-2014 21:39**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802457** PrepDate: **21-Apr-2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	2.229	0.200					2.339	4.83	25	

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

Client: Apex Companies
WorkOrder: HS14040511
Project: E3CE-0065 Andover-Colt Court MNA

QC BATCH REPORT

Batch ID: 80992 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS14040377-01BS** Units: **mg/L** Analysis Date: **21-Apr-2014 21:46**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802460** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	12.11	0.200	10	2.339	97.8	75 - 125				

SD Sample ID: **HS14040377-01 DIL SX** Units: **mg/L** Analysis Date: **21-Apr-2014 21:54**
Client ID: Run ID: **ICPMS05_232241** SeqNo: **2802463** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	2.407	1.00		0	0		2.339	2.91	10	

The following samples were anayzed in this batch: HS14040511-01 HS14040511-02 HS14040511-03

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

Client: Apex Companies
WorkOrder: HS14040511
Project: E3CE-0065 Andover-Colt Court MNA

QC BATCH REPORT

Batch ID: R231782 **Instrument: ICS3000** **Method: E300**

MBLK Sample ID: **WBLKW1** Units: **mg/L** Analysis Date: **12-Apr-2014 18:21**
Client ID: Run ID: **ICS3000_231782** SeqNo: **2790011** 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: **WLCSW1** Units: **mg/L** Analysis Date: **12-Apr-2014 18:47**
Client ID: Run ID: **ICS3000_231782** SeqNo: **2790012** 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)	4.261	0.100	4	0	107	90 - 110				
Phosphorus, Dissolved Orthophosphate (As P)	4.354	0.100	4	0	109	90 - 110				
Sulfate	20.04	0.500	20	0	100	90 - 110				

MS Sample ID: **HS14040519-01MS** Units: **mg/L** Analysis Date: **12-Apr-2014 20:56**
Client ID: Run ID: **ICS3000_231782** SeqNo: **2790017** 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)	2.414	0.100	2	0.086	116	80 - 120				
Phosphorus, Dissolved Orthophosphate (As P)	2.313	0.100	2	0	116	80 - 120				
Sulfate	21.79	0.500	10	10.9	109	80 - 120				

MSD Sample ID: **HS14040519-01MSD** Units: **mg/L** Analysis Date: **12-Apr-2014 21:22**
Client ID: Run ID: **ICS3000_231782** SeqNo: **2790018** 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)	2.422	0.100	2	0.086	117	80 - 120	2.414	0.331	20	
Phosphorus, Dissolved Orthophosphate (As P)	2.354	0.100	2	0	118	80 - 120	2.313	1.76	20	
Sulfate	21.81	0.500	10	10.9	109	80 - 120	21.79	0.055	20	

The following samples were anayzed in this batch: HS14040511-01 HS14040511-02 HS14040511-03

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

Client: Apex Companies
WorkOrder: HS14040511
Project: E3CE-0065 Andover-Colt Court MNA

QC BATCH REPORT

Batch ID: R232579 **Instrument: WetChem_HS** **Method: SM4500 NH3-D**

MBLK Sample ID: **MBLK-232579** Units: **mg/L** Analysis Date: **25-Apr-2014 16:36**
Client ID: Run ID: **WetChem_HS_232579** SeqNo: **2809740** 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-232579** Units: **mg/L** Analysis Date: **25-Apr-2014 16:36**
Client ID: Run ID: **WetChem_HS_232579** SeqNo: **2809741** 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)	9.95	0.20	10	0	99.5	80 - 120				

LCSD Sample ID: **LCSD-232579** Units: **mg/L** Analysis Date: **25-Apr-2014 16:36**
Client ID: Run ID: **WetChem_HS_232579** SeqNo: **2809742** 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)	9.92	0.20	10	0	99.2	80 - 120	9.95	0.302	20	

MS Sample ID: **HS14040511-03MS** Units: **mg/L** Analysis Date: **25-Apr-2014 16:36**
Client ID: **MW-1** Run ID: **WetChem_HS_232579** SeqNo: **2809743** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	8.89	0.20	10	0.0293	88.6	80 - 120				

MSD Sample ID: **HS14040511-03MSD** Units: **mg/L** Analysis Date: **25-Apr-2014 16:36**
Client ID: **MW-1** Run ID: **WetChem_HS_232579** SeqNo: **2809744** 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)	9.01	0.20	10	0.0293	89.8	80 - 120	8.89	1.34	20	

The following samples were anayzed in this batch: HS14040511-01 HS14040511-02 HS14040511-03

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

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court MNA
WorkOrder: **HS14040511**

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

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	AR - 2014	27-Mar-2015
California	06248CA 2013-2014	31-Jul-2014
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003180	09-May-2014
Kansas	E-10352 8/15/2013-2014	31-Jul-2014
Kentucky	95 Year- 2013	30-Apr-2014
Louisiana	03087 2013/2014	30-Jun-2014
North Carolina	624 - 2014	31-Dec-2014
Oklahoma	2013-024	31-Aug-2014
Texas	T104704231-13-12	30-Apr-2014

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court MNA
Work Order: HS14040511

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14040511-01	MW-12	Login	12-Apr-14 08:12	DRC	11A
HS14040511-01	MW-12	Login	12-Apr-14 08:12	DRC	11A
HS14040511-01	MW-12	Login	12-Apr-14 08:12	DRC	11A
HS14040511-01	MW-12	Login	12-Apr-14 08:12	DRC	VW-1
HS14040511-01	MW-12	Login	12-Apr-14 08:12	DRC	BTEX A1
HS14040511-01	MW-12	Login	12-Apr-14 08:12	DRC	TPH C2
HS14040511-02	MW-14	Login	12-Apr-14 08:12	DRC	11A
HS14040511-02	MW-14	Login	12-Apr-14 08:12	DRC	11A
HS14040511-02	MW-14	Login	12-Apr-14 08:12	DRC	11A
HS14040511-02	MW-14	Login	12-Apr-14 08:12	DRC	VW-1
HS14040511-02	MW-14	Login	12-Apr-14 08:12	DRC	BTEX A1
HS14040511-02	MW-14	Login	12-Apr-14 08:12	DRC	TPH C2
HS14040511-03	MW-1	Login	12-Apr-14 08:12	DRC	11A
HS14040511-03	MW-1	Login	12-Apr-14 08:12	DRC	11A
HS14040511-03	MW-1	Login	12-Apr-14 08:12	DRC	11A
HS14040511-03	MW-1	Login	12-Apr-14 08:12	DRC	VW-1
HS14040511-03	MW-1	Login	12-Apr-14 08:12	DRC	BTEX A1
HS14040511-03	MW-1	Login	12-Apr-14 08:12	DRC	TPH C2

ALS Group USA, Corp Date: 29-Apr-14

Sample Receipt Checklist

Client Name: Apex-Portland
Work Order: HS14040511

Date/Time Received: **10-Apr-2014 09:25**
Received by: **ECD**

Checklist completed by: *Dana.Capps* (eSignature) 12-Apr-2014 (Date)

Reviewed by: *Dane J. Wacasey* (eSignature) 12-Apr-2014 (Date)

Matrices: **Water**

Carrier name: **FedEx**

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shipping container/cooler?	☑	☐	☐
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	

Temperature(s)/Thermometer(s):	3.2/3.2 C/U	IR1
Cooler(s)/Kit(s):	5965	
Date/Time sample(s) sent to storage:	04/12/2014	

	Yes	No	No VOA vials submitted / N/A
Water - VOA vials have zero headspace?	☑	☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	☑	☐	N/A ☐
pH adjusted?	☐	☐	N/A ☑

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

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

April 28, 2014

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

Work Order: **HS14040529**

Laboratory Results for: **E3CE-0065 Andover-Colt Court 2Q2014 GW**

Dear Samuel,

ALS Environmental received 20 sample(s) on Apr 09, 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-Colt Court 2Q2014 GW
Work Order: HS14040529

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14040529-01	MW-2	Water		08-Apr-2014 09:39	09-Apr-2014 09:25	☐
HS14040529-02	MW-13	Water		08-Apr-2014 10:24	09-Apr-2014 09:25	☐
HS14040529-03	MW-8	Water		08-Apr-2014 10:57	09-Apr-2014 09:25	☐
HS14040529-04	MW-5	Water		08-Apr-2014 11:45	09-Apr-2014 09:25	☐
HS14040529-05	MW-16	Water		08-Apr-2014 12:24	09-Apr-2014 09:25	☐
HS14040529-06	MW-15	Water		08-Apr-2014 12:55	09-Apr-2014 09:25	☐
HS14040529-07	MW-11	Water		08-Apr-2014 14:19	09-Apr-2014 09:25	☐
HS14040529-08	MW-9	Water		08-Apr-2014 15:02	09-Apr-2014 09:25	☐
HS14040529-09	MW-10	Water		08-Apr-2014 15:44	09-Apr-2014 09:25	☐
HS14040529-10	MW-3	Water		08-Apr-2014 16:34	09-Apr-2014 09:25	☐
HS14040529-11	MW-4	Water		09-Apr-2014 09:59	09-Apr-2014 09:25	☐
HS14040529-12	MW-6	Water		09-Apr-2014 11:16	09-Apr-2014 09:25	☐
HS14040529-13	MW-7	Water		09-Apr-2014 11:44	09-Apr-2014 09:25	☐
HS14040529-14	Dup-1	Water		08-Apr-2014 00:00	09-Apr-2014 09:25	☐
HS14040529-15	Dup-2	Water		08-Apr-2014 00:00	09-Apr-2014 09:25	☐
HS14040529-16	Trip Blank 040714-72	Water		08-Apr-2014 00:00	09-Apr-2014 09:25	☑
HS14040529-17	Trip Blank 032714-27	Water		08-Apr-2014 00:00	09-Apr-2014 09:25	☑
HS14040529-18	MW-12	Water	14040511-01	09-Apr-2014 15:05	09-Apr-2014 09:25	☐
HS14040529-19	MW-14	Water	14040511-02	09-Apr-2014 15:40	09-Apr-2014 09:25	☐
HS14040529-20	MW-1	Water	14040511-03	09-Apr-2014 16:37	09-Apr-2014 09:25	☐

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Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW
Work Order: HS14040529

CASE NARRATIVE

Batch R232297, Method VPH OA-1, Sample HS14040529-08: Surrogate failure on first analysis within holding time. Sample was reanalyzed outside method holding time with passing surrogate. Both sets of data are reported.
Batch R232297, Method VPH OA-1, Sample MW-10: Surrogate failure due to background sample matrix interference.

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW
Sample ID: MW-2
Collection Date: 08-Apr-2014 09:39

WorkOrder:HS14040529
Lab ID:HS14040529-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 04:32
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 04:32
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 04:32
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 04:32
Surr: 1,2-Dichloroethane-d4	*96.2*		*71-125*	*%REC*	*1*	*16-Apr-2014 04:32*
Surr: 4-Bromofluorobenzene	*106*		*70-125*	*%REC*	*1*	*16-Apr-2014 04:32*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*16-Apr-2014 04:32*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*16-Apr-2014 04:32*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 02:02
Surr: 4-Bromofluorobenzene	*122*		*70-130*	*%REC*	*1*	*22-Apr-2014 02:02*

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-Colt Court 2Q2014 GW
Sample ID: MW-13
Collection Date: 08-Apr-2014 10:24

WorkOrder:HS14040529
Lab ID:HS14040529-02
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 04:55
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 04:55
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 04:55
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 04:55
Surr: 1,2-Dichloroethane-d4	*94.6*		*71-125*	*%REC*	*1*	*16-Apr-2014 04:55*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*16-Apr-2014 04:55*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*16-Apr-2014 04:55*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*16-Apr-2014 04:55*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 02:22
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*22-Apr-2014 02:22*

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-Colt Court 2Q2014 GW
Sample ID: MW-8
Collection Date: 08-Apr-2014 10:57

WorkOrder:HS14040529
Lab ID:HS14040529-03
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 07:19
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 07:19
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 07:19
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 07:19
Surr: 1,2-Dichloroethane-d4	*96.0*		*71-125*	*%REC*	*1*	*16-Apr-2014 07:19*
Surr: 4-Bromofluorobenzene	*106*		*70-125*	*%REC*	*1*	*16-Apr-2014 07:19*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*16-Apr-2014 07:19*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*16-Apr-2014 07:19*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 02:40
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*22-Apr-2014 02:40*

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-Colt Court 2Q2014 GW
Sample ID: MW-5
Collection Date: 08-Apr-2014 11:45

WorkOrder:HS14040529
Lab ID:HS14040529-04
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.0051**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 07:42
1,3,5-Trimethylbenzene	**0.0013**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
2-Butanone	**0.0021**		**0.0020**	**mg/L**	1	16-Apr-2014 07:42
Benzene	**0.025**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 07:42
Ethylbenzene	**0.0018**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
Isopropylbenzene	**0.0021**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
Methylcyclohexane	**0.0015**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
Naphthalene	**0.0085**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:42
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 07:42
Toluene	**0.0024**		**0.0010**	**mg/L**	1	16-Apr-2014 07:42
Xylenes, Total	**0.041**		**0.0030**	**mg/L**	1	16-Apr-2014 07:42
Surr: 1,2-Dichloroethane-d4	*90.1*		*71-125*	*%REC*	*1*	*16-Apr-2014 07:42*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*16-Apr-2014 07:42*
Surr: Dibromofluoromethane	*95.7*		*74-125*	*%REC*	*1*	*16-Apr-2014 07:42*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*16-Apr-2014 07:42*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**0.35**		**0.050**	**mg/L**	1	22-Apr-2014 02:58
Surr: 4-Bromofluorobenzene	*112*		*70-130*	*%REC*	*1*	*22-Apr-2014 02:58*

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-Colt Court 2Q2014 GW
Sample ID: MW-16
Collection Date: 08-Apr-2014 12:24

WorkOrder:HS14040529
Lab ID:HS14040529-05
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 08:05
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 08:05
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 08:05
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 08:05
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*16-Apr-2014 08:05*
Surr: 4-Bromofluorobenzene	*116*		*70-125*	*%REC*	*1*	*16-Apr-2014 08:05*
Surr: Dibromofluoromethane	*114*		*74-125*	*%REC*	*1*	*16-Apr-2014 08:05*
Surr: Toluene-d8	*119*		*75-125*	*%REC*	*1*	*16-Apr-2014 08:05*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 09:22
Surr: 4-Bromofluorobenzene	*114*		*70-130*	*%REC*	*1*	*22-Apr-2014 09:22*

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-Colt Court 2Q2014 GW
Sample ID: MW-15
Collection Date: 08-Apr-2014 12:55

WorkOrder:HS14040529
Lab ID:HS14040529-06
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 08:28
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 08:28
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 08:28
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 08:28
Surr: 1,2-Dichloroethane-d4	*96.8*		*71-125*	*%REC*	*1*	*16-Apr-2014 08:28*
Surr: 4-Bromofluorobenzene	*104*		*70-125*	*%REC*	*1*	*16-Apr-2014 08:28*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*16-Apr-2014 08:28*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*16-Apr-2014 08:28*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 10:00
Surr: 4-Bromofluorobenzene	*72.4*		*70-130*	*%REC*	*1*	*22-Apr-2014 10:00*

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-Colt Court 2Q2014 GW
Sample ID: MW-11
Collection Date: 08-Apr-2014 14:19

WorkOrder:HS14040529
Lab ID:HS14040529-07
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 08:52
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 08:52
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 08:52
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 08:52
Surr: 1,2-Dichloroethane-d4	*95.8*		*71-125*	*%REC*	*1*	*16-Apr-2014 08:52*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*16-Apr-2014 08:52*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*16-Apr-2014 08:52*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*16-Apr-2014 08:52*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 10:18
Surr: 4-Bromofluorobenzene	*112*		*70-130*	*%REC*	*1*	*22-Apr-2014 10:18*

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-Colt Court 2Q2014 GW
Sample ID: MW-9
Collection Date: 08-Apr-2014 15:02

WorkOrder:HS14040529
Lab ID:HS14040529-08
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 09:15
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 09:15
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 09:15
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 09:15
Surr: 1,2-Dichloroethane-d4	*97.6*		*71-125*	*%REC*	*1*	*16-Apr-2014 09:15*
Surr: 4-Bromofluorobenzene	*104*		*70-125*	*%REC*	*1*	*16-Apr-2014 09:15*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*16-Apr-2014 09:15*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*16-Apr-2014 09:15*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 10:54
VPH - Gasoline Range Organics	ND	H	0.050	mg/L	1	25-Apr-2014 12:25
Surr: 4-Bromofluorobenzene	*9.74*	*S*	*70-130*	*%REC*	*1*	*22-Apr-2014 10:54*
Surr: 4-Bromofluorobenzene	*116*		*70-130*	*%REC*	*1*	*25-Apr-2014 12:25*

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-Colt Court 2Q2014 GW
Sample ID: MW-10
Collection Date: 08-Apr-2014 15:44

WorkOrder:HS14040529
Lab ID:HS14040529-09
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.56**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
1,2-Dichloroethane	ND		0.0050	mg/L	5	16-Apr-2014 10:27
1,3,5-Trimethylbenzene	**0.23**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
2-Butanone	ND		0.010	mg/L	5	16-Apr-2014 10:27
Benzene	**0.12**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
Cyclohexane	ND		0.0050	mg/L	5	16-Apr-2014 10:27
Ethylbenzene	**0.11**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
Isopropylbenzene	**0.011**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
Methylcyclohexane	**0.026**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
Naphthalene	**0.035**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
n-Butylbenzene	ND		0.0050	mg/L	5	16-Apr-2014 10:27
n-Propylbenzene	ND		0.0050	mg/L	5	16-Apr-2014 10:27
Toluene	**0.30**		**0.0050**	**mg/L**	5	16-Apr-2014 10:27
Xylenes, Total	**1.1**		**0.015**	**mg/L**	5	16-Apr-2014 10:27
Surr: 1,2-Dichloroethane-d4	*92.6*		*71-125*	*%REC*	*5*	*16-Apr-2014 10:27*
Surr: 4-Bromofluorobenzene	*105*		*70-125*	*%REC*	*5*	*16-Apr-2014 10:27*
Surr: Dibromofluoromethane	*97.9*		*74-125*	*%REC*	*5*	*16-Apr-2014 10:27*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*5*	*16-Apr-2014 10:27*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**8.8**		**0.050**	**mg/L**	1	22-Apr-2014 10:36
Surr: 4-Bromofluorobenzene	*1210*	*S*	*70-130*	*%REC*	*1*	*22-Apr-2014 10:36*

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-Colt Court 2Q2014 GW
Sample ID: MW-3
Collection Date: 08-Apr-2014 16:34

WorkOrder:HS14040529
Lab ID:HS14040529-10
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.048**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
1,2-Dichloroethane	ND		0.0050	mg/L	5	16-Apr-2014 11:19
1,3,5-Trimethylbenzene	**0.010**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
2-Butanone	ND		0.010	mg/L	5	16-Apr-2014 11:19
Benzene	**0.64**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
Cyclohexane	ND		0.0050	mg/L	5	16-Apr-2014 11:19
Ethylbenzene	**0.058**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
Isopropylbenzene	**0.0061**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
Methylcyclohexane	**0.0075**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
Naphthalene	**0.014**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
n-Butylbenzene	ND		0.0050	mg/L	5	16-Apr-2014 11:19
n-Propylbenzene	**0.011**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
Toluene	**0.10**		**0.0050**	**mg/L**	5	16-Apr-2014 11:19
Xylenes, Total	**0.053**		**0.015**	**mg/L**	5	16-Apr-2014 11:19
Surr: 1,2-Dichloroethane-d4	*91.7*		*71-125*	*%REC*	*5*	*16-Apr-2014 11:19*
Surr: 4-Bromofluorobenzene	*104*		*70-125*	*%REC*	*5*	*16-Apr-2014 11:19*
Surr: Dibromofluoromethane	*96.1*		*74-125*	*%REC*	*5*	*16-Apr-2014 11:19*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*5*	*16-Apr-2014 11:19*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**3.0**		**0.050**	**mg/L**	1	22-Apr-2014 17:18
Surr: 4-Bromofluorobenzene	*98.9*		*70-130*	*%REC*	*1*	*22-Apr-2014 17:18*

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-Colt Court 2Q2014 GW
Sample ID: MW-4
Collection Date: 09-Apr-2014 09:59

WorkOrder:HS14040529
Lab ID:HS14040529-11
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.054**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 02:36
1,3,5-Trimethylbenzene	**0.027**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
2-Butanone	**0.0043**		**0.0020**	**mg/L**	1	16-Apr-2014 02:36
Benzene	**0.23**		**0.010**	**mg/L**	10	16-Apr-2014 03:46
Cyclohexane	**0.070**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
Ethylbenzene	**0.15**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
Isopropylbenzene	**0.0039**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
Methylcyclohexane	**0.0071**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
Naphthalene	**0.016**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
n-Butylbenzene	**0.0022**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
n-Propylbenzene	**0.0084**		**0.0010**	**mg/L**	1	16-Apr-2014 02:36
Toluene	**0.20**		**0.010**	**mg/L**	10	16-Apr-2014 03:46
Xylenes, Total	**0.14**		**0.0030**	**mg/L**	1	16-Apr-2014 02:36
Surr: 1,2-Dichloroethane-d4	*97.6*		*71-125*	*%REC*	*10*	*16-Apr-2014 03:46*
Surr: 1,2-Dichloroethane-d4	*93.8*		*71-125*	*%REC*	*1*	*16-Apr-2014 02:36*
Surr: 4-Bromofluorobenzene	*109*		*70-125*	*%REC*	*10*	*16-Apr-2014 03:46*
Surr: 4-Bromofluorobenzene	*109*		*70-125*	*%REC*	*1*	*16-Apr-2014 02:36*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*16-Apr-2014 02:36*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*10*	*16-Apr-2014 03:46*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*16-Apr-2014 02:36*
Surr: Toluene-d8	*109*		*75-125*	*%REC*	*10*	*16-Apr-2014 03:46*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**2.5**		**0.050**	**mg/L**	1	22-Apr-2014 17:34
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*22-Apr-2014 17:34*

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-Colt Court 2Q2014 GW
Sample ID: MW-6
Collection Date: 09-Apr-2014 11:16

WorkOrder:HS14040529
Lab ID:HS14040529-12
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 09:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 09:38
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 09:38
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 09:38
Surr: 1,2-Dichloroethane-d4	*95.5*		*71-125*	*%REC*	*1*	*16-Apr-2014 09:38*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*16-Apr-2014 09:38*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*16-Apr-2014 09:38*
Surr: Toluene-d8	*104*		*75-125*	*%REC*	*1*	*16-Apr-2014 09:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 17:50
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*22-Apr-2014 17:50*

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-Colt Court 2Q2014 GW
Sample ID: MW-7
Collection Date: 09-Apr-2014 11:44

WorkOrder:HS14040529
Lab ID:HS14040529-13
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	16-Apr-2014 10:01
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
2-Butanone	ND		0.0020	mg/L	1	16-Apr-2014 10:01
Benzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Cyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Ethylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Isopropylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Methylcyclohexane	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Naphthalene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
n-Butylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
n-Propylbenzene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Toluene	ND		0.0010	mg/L	1	16-Apr-2014 10:01
Xylenes, Total	ND		0.0030	mg/L	1	16-Apr-2014 10:01
Surr: 1,2-Dichloroethane-d4	*93.9*		*71-125*	*%REC*	*1*	*16-Apr-2014 10:01*
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	*1*	*16-Apr-2014 10:01*
Surr: Dibromofluoromethane	*99.4*		*74-125*	*%REC*	*1*	*16-Apr-2014 10:01*
Surr: Toluene-d8	*103*		*75-125*	*%REC*	*1*	*16-Apr-2014 10:01*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 18:06
Surr: 4-Bromofluorobenzene	*100*		*70-130*	*%REC*	*1*	*22-Apr-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-Colt Court 2Q2014 GW
Sample ID: Dup-1
Collection Date: 08-Apr-2014 00:00

WorkOrder:HS14040529
Lab ID:HS14040529-14
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.012**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
1,2-Dichloroethane	ND		0.0010	mg/L	1	17-Apr-2014 19:07
1,3,5-Trimethylbenzene	**0.0035**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
2-Butanone	**0.0033**		**0.0020**	**mg/L**	1	17-Apr-2014 19:07
Benzene	**0.037**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
Cyclohexane	ND		0.0010	mg/L	1	17-Apr-2014 19:07
Ethylbenzene	**0.0058**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
Isopropylbenzene	**0.0030**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
Methylcyclohexane	**0.0019**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
Naphthalene	**0.013**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
n-Butylbenzene	**0.0010**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
n-Propylbenzene	**0.0014**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
Toluene	**0.0061**		**0.0010**	**mg/L**	1	17-Apr-2014 19:07
Xylenes, Total	**0.060**		**0.0030**	**mg/L**	1	17-Apr-2014 19:07
Surr: 1,2-Dichloroethane-d4	*97.4*		*71-125*	*%REC*	*1*	*17-Apr-2014 19:07*
Surr: 4-Bromofluorobenzene	*108*		*70-125*	*%REC*	*1*	*17-Apr-2014 19:07*
Surr: Dibromofluoromethane	*99.2*		*74-125*	*%REC*	*1*	*17-Apr-2014 19:07*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*17-Apr-2014 19:07*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**0.52**		**0.050**	**mg/L**	1	22-Apr-2014 18:22
Surr: 4-Bromofluorobenzene	*101*		*70-130*	*%REC*	*1*	*22-Apr-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-Colt Court 2Q2014 GW
Sample ID: Dup-2
Collection Date: 08-Apr-2014 00:00

WorkOrder:HS14040529
Lab ID:HS14040529-15
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
1,2-Dichloroethane	ND		0.0010	mg/L	1	17-Apr-2014 19:30
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
2-Butanone	ND		0.0020	mg/L	1	17-Apr-2014 19:30
Benzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Cyclohexane	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Ethylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Isopropylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Methylcyclohexane	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Naphthalene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
n-Butylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
n-Propylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Toluene	ND		0.0010	mg/L	1	17-Apr-2014 19:30
Xylenes, Total	ND		0.0030	mg/L	1	17-Apr-2014 19:30
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*17-Apr-2014 19:30*
Surr: 4-Bromofluorobenzene	*108*		*70-125*	*%REC*	*1*	*17-Apr-2014 19:30*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*17-Apr-2014 19:30*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*17-Apr-2014 19:30*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Apr-2014 19:25
Surr: 4-Bromofluorobenzene	*99.4*		*70-130*	*%REC*	*1*	*22-Apr-2014 19:25*

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-Colt Court 2Q2014 GW
Sample ID: MW-12
Collection Date: 09-Apr-2014 15:05

WorkOrder:HS14040529
Lab ID:HS14040529-18
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Apr-2014 13:04
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
2-Butanone	ND		0.0020	mg/L	1	18-Apr-2014 13:04
Benzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Cyclohexane	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Ethylbenzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Isopropylbenzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Methylcyclohexane	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Naphthalene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
n-Butylbenzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
n-Propylbenzene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Toluene	ND		0.0010	mg/L	1	18-Apr-2014 13:04
Xylenes, Total	ND		0.0030	mg/L	1	18-Apr-2014 13:04
Surr: 1,2-Dichloroethane-d4	*85.2*		*71-125*	*%REC*	*1*	*18-Apr-2014 13:04*
Surr: 4-Bromofluorobenzene	*98.0*		*70-125*	*%REC*	*1*	*18-Apr-2014 13:04*
Surr: Dibromofluoromethane	*93.0*		*74-125*	*%REC*	*1*	*18-Apr-2014 13:04*
Surr: Toluene-d8	*93.8*		*75-125*	*%REC*	*1*	*18-Apr-2014 13:04*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**0.081**		**0.050**	**mg/L**	1	22-Apr-2014 23:23
Surr: 4-Bromofluorobenzene	*98.8*		*70-130*	*%REC*	*1*	*22-Apr-2014 23:23*

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-Colt Court 2Q2014 GW
Sample ID: MW-14
Collection Date: 09-Apr-2014 15:40

WorkOrder:HS14040529
Lab ID:HS14040529-19
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
1,2-Dichloroethane	ND		0.0010	mg/L	1	17-Apr-2014 18:44
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
2-Butanone	ND		0.0020	mg/L	1	17-Apr-2014 18:44
Benzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Cyclohexane	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Ethylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Isopropylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Methylcyclohexane	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Naphthalene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
n-Butylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
n-Propylbenzene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Toluene	ND		0.0010	mg/L	1	17-Apr-2014 18:44
Xylenes, Total	ND		0.0030	mg/L	1	17-Apr-2014 18:44
Surr: 1,2-Dichloroethane-d4	*99.6*		*71-125*	*%REC*	*1*	*17-Apr-2014 18:44*
Surr: 4-Bromofluorobenzene	*107*		*70-125*	*%REC*	*1*	*17-Apr-2014 18:44*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*17-Apr-2014 18:44*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*17-Apr-2014 18:44*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 00:11
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*23-Apr-2014 00:11*

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-Colt Court 2Q2014 GW
Sample ID: MW-1
Collection Date: 09-Apr-2014 16:37

WorkOrder:HS14040529
Lab ID:HS14040529-20
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.49**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
1,2-Dichloroethane	ND		0.010	mg/L	10	17-Apr-2014 12:56
1,3,5-Trimethylbenzene	**0.18**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
2-Butanone	ND		0.020	mg/L	10	17-Apr-2014 12:56
Benzene	**1.1**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
Cyclohexane	ND		0.010	mg/L	10	17-Apr-2014 12:56
Ethylbenzene	**0.20**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
Isopropylbenzene	**0.011**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
Methylcyclohexane	**0.023**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
Naphthalene	**0.069**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
n-Butylbenzene	**0.018**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
n-Propylbenzene	**0.016**		**0.010**	**mg/L**	10	17-Apr-2014 12:56
Toluene	**3.1**		**0.10**	**mg/L**	100	17-Apr-2014 14:05
Xylenes, Total	**2.5**		**0.030**	**mg/L**	10	17-Apr-2014 12:56
Surr: 1,2-Dichloroethane-d4	*95.5*		*71-125*	*%REC*	*100*	*17-Apr-2014 14:05*
Surr: 1,2-Dichloroethane-d4	*97.5*		*71-125*	*%REC*	*10*	*17-Apr-2014 12:56*
Surr: 4-Bromofluorobenzene	*111*		*70-125*	*%REC*	*10*	*17-Apr-2014 12:56*
Surr: 4-Bromofluorobenzene	*105*		*70-125*	*%REC*	*100*	*17-Apr-2014 14:05*
Surr: Dibromofluoromethane	*99.7*		*74-125*	*%REC*	*100*	*17-Apr-2014 14:05*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*10*	*17-Apr-2014 12:56*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*10*	*17-Apr-2014 12:56*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*100*	*17-Apr-2014 14:05*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**20**		**0.050**	**mg/L**	1	23-Apr-2014 00:27
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*23-Apr-2014 00:27*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW
WorkOrder: HS14040529

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R231946	**Test Name :** LOW LEVEL VOLATILES - SW8260C			**Matrix:** Water		
HS14040529-01	MW-2	08 Apr 2014 09:39			16 Apr 2014 04:32	1
HS14040529-02	MW-13	08 Apr 2014 10:24			16 Apr 2014 04:55	1
HS14040529-03	MW-8	08 Apr 2014 10:57			16 Apr 2014 07:19	1
HS14040529-04	MW-5	08 Apr 2014 11:45			16 Apr 2014 07:42	1
HS14040529-05	MW-16	08 Apr 2014 12:24			16 Apr 2014 08:05	1
HS14040529-06	MW-15	08 Apr 2014 12:55			16 Apr 2014 08:28	1
HS14040529-07	MW-11	08 Apr 2014 14:19			16 Apr 2014 08:52	1
HS14040529-08	MW-9	08 Apr 2014 15:02			16 Apr 2014 09:15	1
HS14040529-09	MW-10	08 Apr 2014 15:44			16 Apr 2014 10:27	5
HS14040529-10	MW-3	08 Apr 2014 16:34			16 Apr 2014 11:19	5
HS14040529-11	MW-4	09 Apr 2014 09:59			16 Apr 2014 03:46	10
HS14040529-11	MW-4	09 Apr 2014 09:59			16 Apr 2014 02:36	1
HS14040529-12	MW-6	09 Apr 2014 11:16			16 Apr 2014 09:38	1
HS14040529-13	MW-7	09 Apr 2014 11:44			16 Apr 2014 10:01	1
Batch ID R232107	**Test Name :** LOW LEVEL VOLATILES - SW8260C			**Matrix:** Water		
HS14040529-14	Dup-1	08 Apr 2014 00:00			17 Apr 2014 19:07	1
HS14040529-15	Dup-2	08 Apr 2014 00:00			17 Apr 2014 19:30	1
HS14040529-19	MW-14	09 Apr 2014 15:40			17 Apr 2014 18:44	1
HS14040529-20	MW-1	09 Apr 2014 16:37			17 Apr 2014 14:05	100
HS14040529-20	MW-1	09 Apr 2014 16:37			17 Apr 2014 12:56	10
Batch ID R232135	**Test Name :** LOW LEVEL VOLATILES - SW8260C			**Matrix:** Water		
HS14040529-18	MW-12	09 Apr 2014 15:05			18 Apr 2014 13:04	1
Batch ID R232297	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14040529-01	MW-2	08 Apr 2014 09:39			22 Apr 2014 02:02	1
HS14040529-02	MW-13	08 Apr 2014 10:24			22 Apr 2014 02:22	1
HS14040529-03	MW-8	08 Apr 2014 10:57			22 Apr 2014 02:40	1
HS14040529-04	MW-5	08 Apr 2014 11:45			22 Apr 2014 02:58	1
HS14040529-05	MW-16	08 Apr 2014 12:24			22 Apr 2014 09:22	1
HS14040529-06	MW-15	08 Apr 2014 12:55			22 Apr 2014 10:00	1
HS14040529-07	MW-11	08 Apr 2014 14:19			22 Apr 2014 10:18	1
HS14040529-08	MW-9	08 Apr 2014 15:02			22 Apr 2014 10:54	1
HS14040529-09	MW-10	08 Apr 2014 15:44			22 Apr 2014 10:36	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW
WorkOrder: HS14040529

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R232365	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14040529-10	MW-3	08 Apr 2014 16:34			22 Apr 2014 17:18	1
HS14040529-11	MW-4	09 Apr 2014 09:59			22 Apr 2014 17:34	1
HS14040529-12	MW-6	09 Apr 2014 11:16			22 Apr 2014 17:50	1
HS14040529-13	MW-7	09 Apr 2014 11:44			22 Apr 2014 18:06	1
HS14040529-14	Dup-1	08 Apr 2014 00:00			22 Apr 2014 18:22	1
HS14040529-15	Dup-2	08 Apr 2014 00:00			22 Apr 2014 19:25	1
Batch ID R232380	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14040529-18	MW-12	09 Apr 2014 15:05			22 Apr 2014 23:23	1
HS14040529-19	MW-14	09 Apr 2014 15:40			23 Apr 2014 00:11	1
HS14040529-20	MW-1	09 Apr 2014 16:37			23 Apr 2014 00:27	1
Batch ID R232577	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14040529-08	MW-9	08 Apr 2014 15:02			25 Apr 2014 12:25	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232297 **Instrument: FID-9** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-140421** Units: **mg/L** Analysis Date: **21-Apr-2014 21:48**
Client ID: Run ID: **FID-9_232297** SeqNo: **2802789** 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	*0.1129*	*0.0050*	*0.1*	*0*	*113*	*70 - 130*				

LCS Sample ID: **GLCSW-140421** Units: **mg/L** Analysis Date: **21-Apr-2014 21:12**
Client ID: Run ID: **FID-9_232297** SeqNo: **2802788** 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	1.075	0.050	1	0	107	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1145*	*0.0050*	*0.1*	*0*	*114*	*70 - 130*				

LCSD Sample ID: **GLCSDW1-140421** Units: **mg/L** Analysis Date: **22-Apr-2014 12:46**
Client ID: Run ID: **FID-9_232297** SeqNo: **2803841** 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	1.044	0.050	1	0	104	70 - 130	1.075	2.91	30	
Surr: 4-Bromofluorobenzene	*0.1195*	*0.0050*	*0.1*	*0*	*120*	*70 - 130*	*0.1145*	*4.31*	*30*	

MS Sample ID: **HS14040529-08MS** Units: **mg/L** Analysis Date: **22-Apr-2014 11:12**
Client ID: **MW-9** Run ID: **FID-9_232297** SeqNo: **2803839** 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	0.9625	0.050	1	0.03092	93.2	70 - 130				
Surr: 4-Bromofluorobenzene	*0.01187*	*0.0050*	*0.1*	*0*	*11.9*	*70 - 130*				S

MSD Sample ID: **HS14040529-08MSD** Units: **mg/L** Analysis Date: **22-Apr-2014 11:31**
Client ID: **MW-9** Run ID: **FID-9_232297** SeqNo: **2803840** 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	0.9129	0.050	1	0.03092	88.2	70 - 130	0.9625	5.3	30	
Surr: 4-Bromofluorobenzene	*0.01185*	*0.0050*	*0.1*	*0*	*11.9*	*70 - 130*	*0.01187*	*0.177*	*30*	S

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232297 **Instrument: FID-9** **Method: IA OA-1**

The following samples were anayzed in this batch:

HS14040529-01	HS14040529-02	HS14040529-03	HS14040529-04
HS14040529-05	HS14040529-06	HS14040529-07	HS14040529-08
HS14040529-09			

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232365 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140422** Units: **mg/L** Analysis Date: **22-Apr-2014 13:36**
Client ID: Run ID: **FID-14_232365** SeqNo: **2804600** 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	*0.0956*	*0.0050*	*0.1*	*0*	*95.6*	*70 - 130*				

LCS Sample ID: **GLCSW1-140422** Units: **mg/L** Analysis Date: **22-Apr-2014 13:20**
Client ID: Run ID: **FID-14_232365** SeqNo: **2804599** 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	0.9021	0.050	1	0	90.2	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1018*	*0.0050*	*0.1*	*0*	*102*	*70 - 130*				

MS Sample ID: **HS14040557-13MS** Units: **mg/L** Analysis Date: **22-Apr-2014 14:39**
Client ID: Run ID: **FID-14_232365** SeqNo: **2804602** 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	0.8987	0.050	1	0	89.9	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1028*	*0.0050*	*0.1*	*0*	*103*	*70 - 130*				

MSD Sample ID: **HS14040557-13MSD** Units: **mg/L** Analysis Date: **22-Apr-2014 14:55**
Client ID: Run ID: **FID-14_232365** SeqNo: **2804603** 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	0.8124	0.050	1	0	81.2	70 - 130	0.8987	10.1	30	
Surr: 4-Bromofluorobenzene	*0.1054*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*	*0.1028*	*2.56*	*30*	

The following samples were anayzed in this batch: HS14040529-10 HS14040529-11 HS14040529-12 HS14040529-13 HS14040529-14 HS14040529-15

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232380 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140411** Units: **mg/L** Analysis Date: **22-Apr-2014 21:00**
Client ID: Run ID: **FID-14_232380** SeqNo: **2805059** 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	*0.09757*	*0.0050*	*0.1*	*0*	*97.6*	*70 - 130*				

LCS Sample ID: **GLCSW1-140411** Units: **mg/L** Analysis Date: **22-Apr-2014 20:29**
Client ID: Run ID: **FID-14_232380** SeqNo: **2805058** 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	0.8884	0.050	1	0	88.8	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1046*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

MS Sample ID: **HS14040529-18MS** Units: **mg/L** Analysis Date: **22-Apr-2014 23:39**
Client ID: **MW-12** Run ID: **FID-14_232380** SeqNo: **2805061** 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	0.9225	0.050	1	0.08094	84.2	70 - 130				
Surr: 4-Bromofluorobenzene	*0.105*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

MSD Sample ID: **HS14040529-18MSD** Units: **mg/L** Analysis Date: **22-Apr-2014 23:55**
Client ID: **MW-12** Run ID: **FID-14_232380** SeqNo: **2805062** 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	0.8612	0.050	1	0.08094	78.0	70 - 130	0.9225	6.87	30	
Surr: 4-Bromofluorobenzene	*0.1043*	*0.0050*	*0.1*	*0*	*104*	*70 - 130*	*0.105*	*0.617*	*30*	

The following samples were anayzed in this batch: HS14040529-18 HS14040529-19 HS14040529-20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232577 **Instrument: FID-9** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-140425** Units: **mg/L** Analysis Date: **25-Apr-2014 12:00**
Client ID: Run ID: **FID-9_232577** SeqNo: **2809693** 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	*0.1137*	*0.0050*	*0.1*	*0*	*114*	*70 - 130*				

LCS Sample ID: **GLCSW-140425** Units: **mg/L** Analysis Date: **25-Apr-2014 11:24**
Client ID: Run ID: **FID-9_232577** SeqNo: **2809692** 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	1.027	0.050	1	0	103	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1197*	*0.0050*	*0.1*	*0*	*120*	*70 - 130*				

MS Sample ID: **HS14040801-01MS** Units: **mg/L** Analysis Date: **25-Apr-2014 13:02**
Client ID: Run ID: **FID-9_232577** SeqNo: **2809696** 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	1.199	0.050	1	0.1417	106	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1174*	*0.0050*	*0.1*	*0*	*117*	*70 - 130*				

MSD Sample ID: **HS14040801-01MSD** Units: **mg/L** Analysis Date: **25-Apr-2014 13:20**
Client ID: Run ID: **FID-9_232577** SeqNo: **2809697** 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	1.182	0.050	1	0.1417	104	70 - 130	1.199	1.4	30	
Surr: 4-Bromofluorobenzene	*0.1156*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*	*0.1174*	*1.57*	*30*	

The following samples were anayzed in this batch: HS14040529-08

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R231946 **Instrument: VOA7** **Method: SW8260**

MBLK Sample ID: **VBLKW-140415** Units: **ug/L** Analysis Date: **16-Apr-2014 00:40**
Client ID: Run ID: **VOA7_231946** SeqNo: **2794000** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*48.08*	*1.0*	*50*	*0*	*96.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*52.95*	*1.0*	*50*	*0*	*106*	*70 - 125*				
Surr: Dibromofluoromethane	*51.06*	*1.0*	*50*	*0*	*102*	*74 - 125*				
Surr: Toluene-d8	*54.07*	*1.0*	*50*	*0*	*108*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R231946 **Instrument: VOA7** **Method: SW8260**

LCS Sample ID: **VLCSW-140415** Units: **ug/L** Analysis Date: **15-Apr-2014 23:31**
Client ID: Run ID: **VOA7_231946** SeqNo: **2793999** 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	50.99	1.0	50	0	102	80 - 120				
1,2-Dichloroethane	47.38	1.0	50	0	94.8	79 - 120				
1,3,5-Trimethylbenzene	51.68	1.0	50	0	103	80 - 120				
2-Butanone	92.85	2.0	100	0	92.9	60 - 140				
Benzene	46.78	1.0	50	0	93.6	80 - 120				
Cyclohexane	48.84	1.0	50	0	97.7	75 - 125				
Ethylbenzene	50.5	1.0	50	0	101	80 - 120				
Isopropylbenzene	51.96	1.0	50	0	104	80 - 120				
Methylcyclohexane	50.9	1.0	50	0	102	70 - 122				
Naphthalene	49.97	1.0	50	0	99.9	70 - 130				
n-Butylbenzene	50.9	1.0	50	0	102	75 - 125				
n-Propylbenzene	50.9	1.0	50	0	102	75 - 130				
Toluene	49.7	1.0	50	0	99.4	80 - 121				
Xylenes, Total	153.2	3.0	150	0	102	80 - 124				
Surr: 1,2-Dichloroethane-d4	*45.55*	*1.0*	*50*	*0*	*91.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*56.43*	*1.0*	*50*	*0*	*113*	*70 - 125*				
Surr: Dibromofluoromethane	*50.22*	*1.0*	*50*	*0*	*100*	*74 - 125*				
Surr: Toluene-d8	*53.97*	*1.0*	*50*	*0*	*108*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R231946 **Instrument: VOA7** **Method: SW8260**

MS Sample ID: **HS14040529-11MS** Units: **ug/L** Analysis Date: **16-Apr-2014 03:00**
Client ID: **MW-4** Run ID: **VOA7_231946** SeqNo: **2794006** 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	556.3	10	500	55.25	100	80 - 120				
1,2-Dichloroethane	479.7	10	500	0	95.9	79 - 120				
1,3,5-Trimethylbenzene	540.4	10	500	30.47	102	80 - 120				
2-Butanone	929.4	20	1000	0	92.9	60 - 140				
Benzene	714.7	10	500	233.8	96.2	80 - 120				
Cyclohexane	540.7	10	500	61.16	95.9	75 - 125				
Ethylbenzene	652.4	10	500	138.1	103	80 - 120				
Isopropylbenzene	518.1	10	500	6.835	102	80 - 120				
Methylcyclohexane	483.5	10	500	8.973	94.9	70 - 122				
Naphthalene	512.8	10	500	33.17	95.9	70 - 130				
n-Butylbenzene	480.9	10	500	21.26	91.9	75 - 125				
n-Propylbenzene	516.7	10	500	13.83	101	75 - 130				
Toluene	703.6	10	500	196.3	101	80 - 121				
Xylenes, Total	1660	30	1500	128.4	102	80 - 124				
Surr: 1,2-Dichloroethane-d4	*466.2*	*10*	*500*	*0*	*93.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*560.2*	*10*	*500*	*0*	*112*	*70 - 125*				
Surr: Dibromofluoromethane	*502.2*	*10*	*500*	*0*	*100*	*74 - 125*				
Surr: Toluene-d8	*538.6*	*10*	*500*	*0*	*108*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R231946 **Instrument: VOA7** **Method: SW8260**

MSD Sample ID: **HS14040529-11MSD** Units: **ug/L** Analysis Date: **16-Apr-2014 03:23**
Client ID: **MW-4** Run ID: **VOA7_231946** SeqNo: **2794007** 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	539	10	500	55.25	96.7	80 - 120	556.3	3.16	20	
1,2-Dichloroethane	474.4	10	500	0	94.9	79 - 120	479.7	1.12	20	
1,3,5-Trimethylbenzene	518.5	10	500	30.47	97.6	80 - 120	540.4	4.13	20	
2-Butanone	914.3	20	1000	0	91.4	60 - 140	929.4	1.63	20	
Benzene	691.3	10	500	233.8	91.5	80 - 120	714.7	3.33	20	
Cyclohexane	512.4	10	500	61.16	90.3	75 - 125	540.7	5.37	20	
Ethylbenzene	623.5	10	500	138.1	97.1	80 - 120	652.4	4.54	20	
Isopropylbenzene	498.8	10	500	6.835	98.4	80 - 120	518.1	3.79	20	
Methylcyclohexane	459.9	10	500	8.973	90.2	70 - 122	483.5	5	20	
Naphthalene	501.8	10	500	33.17	93.7	70 - 130	512.8	2.18	20	
n-Butylbenzene	468.8	10	500	21.26	89.5	75 - 125	480.9	2.54	20	
n-Propylbenzene	495.3	10	500	13.83	96.3	75 - 130	516.7	4.23	20	
Toluene	670.8	10	500	196.3	94.9	80 - 121	703.6	4.76	20	
Xylenes, Total	1579	30	1500	128.4	96.7	80 - 124	1660	5	20	
Surr: 1,2-Dichloroethane-d4	*454.6*	*10*	*500*	*0*	*90.9*	*71 - 125*	*466.2*	*2.51*	*20*	
Surr: 4-Bromofluorobenzene	*551*	*10*	*500*	*0*	*110*	*70 - 125*	*560.2*	*1.65*	*20*	
Surr: Dibromofluoromethane	*497*	*10*	*500*	*0*	*99.4*	*74 - 125*	*502.2*	*1.04*	*20*	
Surr: Toluene-d8	*524.4*	*10*	*500*	*0*	*105*	*75 - 125*	*538.6*	*2.67*	*20*	

The following samples were anayzed in this batch:

HS14040529-01	HS14040529-02	HS14040529-03	HS14040529-04
HS14040529-05	HS14040529-06	HS14040529-07	HS14040529-08
HS14040529-09	HS14040529-10	HS14040529-11	HS14040529-12
HS14040529-13			

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232107 **Instrument: VOA7** **Method: SW8260**

MBLK Sample ID: **VBLKW-140417** Units: **ug/L** Analysis Date: **17-Apr-2014 12:31**
Client ID: Run ID: **VOA7_232107** SeqNo: **2797943** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*46.86*	*1.0*	*50*	*0*	*93.7*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.88*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*48.24*	*1.0*	*50*	*0*	*96.5*	*74 - 125*				
Surr: Toluene-d8	*51.61*	*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: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232107 **Instrument: VOA7** **Method: SW8260**

LCS Sample ID: **VLCSW-140417** Units: **ug/L** Analysis Date: **17-Apr-2014 11:21**
Client ID: Run ID: **VOA7_232107** SeqNo: **2797942** 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	50.08	1.0	50	0	100	80 - 120				
1,2-Dichloroethane	46.36	1.0	50	0	92.7	79 - 120				
1,3,5-Trimethylbenzene	50.96	1.0	50	0	102	80 - 120				
2-Butanone	95.89	2.0	100	0	95.9	60 - 140				
Benzene	45.37	1.0	50	0	90.7	80 - 120				
Cyclohexane	50.29	1.0	50	0	101	75 - 125				
Ethylbenzene	48.72	1.0	50	0	97.4	80 - 120				
Isopropylbenzene	50.54	1.0	50	0	101	80 - 120				
Methylcyclohexane	51.54	1.0	50	0	103	70 - 122				
Naphthalene	48.55	1.0	50	0	97.1	70 - 130				
n-Butylbenzene	51.49	1.0	50	0	103	75 - 125				
n-Propylbenzene	50.96	1.0	50	0	102	75 - 130				
Toluene	47.74	1.0	50	0	95.5	80 - 121				
Xylenes, Total	146.1	3.0	150	0	97.4	80 - 124				
Surr: 1,2-Dichloroethane-d4	*46.52*	*1.0*	*50*	*0*	*93.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*55.59*	*1.0*	*50*	*0*	*111*	*70 - 125*				
Surr: Dibromofluoromethane	*48.79*	*1.0*	*50*	*0*	*97.6*	*74 - 125*				
Surr: Toluene-d8	*52.29*	*1.0*	*50*	*0*	*105*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232107 **Instrument: VOA7** **Method: SW8260**

MS Sample ID: **HS14040529-20MS** Units: **ug/L** Analysis Date: **17-Apr-2014 13:19**
Client ID: **MW-1** Run ID: **VOA7_232107** SeqNo: **2797945** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	5616	100	5000	572.8	101	80 - 120				
1,2-Dichloroethane	4788	100	5000	0	95.8	79 - 120				
1,3,5-Trimethylbenzene	5329	100	5000	243.9	102	80 - 120				
2-Butanone	9734	200	10000	0	97.3	60 - 140				
Benzene	5933	100	5000	1194	94.8	80 - 120				
Cyclohexane	5183	100	5000	176.9	100	75 - 125				
Ethylbenzene	5211	100	5000	221	99.8	80 - 120				
Isopropylbenzene	5176	100	5000	39.02	103	80 - 120				
Methylcyclohexane	5018	100	5000	53.99	99.3	70 - 122				
Naphthalene	4956	100	5000	273.3	93.7	70 - 130				
n-Butylbenzene	4915	100	5000	198.4	94.3	75 - 125				
n-Propylbenzene	5100	100	5000	75.14	100	75 - 130				
Toluene	8182	100	5000	3109	101	80 - 121				
Xylenes, Total	17940	300	15000	2646	102	80 - 124				
Surr: 1,2-Dichloroethane-d4	*4658*	*100*	*5000*	*0*	*93.2*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*5640*	*100*	*5000*	*0*	*113*	*70 - 125*				
Surr: Dibromofluoromethane	*4924*	*100*	*5000*	*0*	*98.5*	*74 - 125*				
Surr: Toluene-d8	*5370*	*100*	*5000*	*0*	*107*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232107 **Instrument: VOA7** **Method: SW8260**

MSD Sample ID: **HS14040529-20MSD** Units: **ug/L** Analysis Date: **17-Apr-2014 13:42**
Client ID: **MW-1** Run ID: **VOA7_232107** SeqNo: **2797946** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	5253	100	5000	572.8	93.6	80 - 120	5616	6.69	20	
1,2-Dichloroethane	4601	100	5000	0	92.0	79 - 120	4788	3.98	20	
1,3,5-Trimethylbenzene	4990	100	5000	243.9	94.9	80 - 120	5329	6.58	20	
2-Butanone	9328	200	10000	0	93.3	60 - 140	9734	4.26	20	
Benzene	5554	100	5000	1194	87.2	80 - 120	5933	6.6	20	
Cyclohexane	4717	100	5000	176.9	90.8	75 - 125	5183	9.42	20	
Ethylbenzene	4878	100	5000	221	93.1	80 - 120	5211	6.6	20	
Isopropylbenzene	4752	100	5000	39.02	94.3	80 - 120	5176	8.54	20	
Methylcyclohexane	4583	100	5000	53.99	90.6	70 - 122	5018	9.07	20	
Naphthalene	4871	100	5000	273.3	92.0	70 - 130	4956	1.73	20	
n-Butylbenzene	4698	100	5000	198.4	90.0	75 - 125	4915	4.51	20	
n-Propylbenzene	4815	100	5000	75.14	94.8	75 - 130	5100	5.75	20	
Toluene	7642	100	5000	3109	90.7	80 - 121	8182	6.82	20	
Xylenes, Total	16740	300	15000	2646	93.9	80 - 124	17940	6.97	20	
Surr: 1,2-Dichloroethane-d4	*4700*	*100*	*5000*	*0*	*94.0*	*71 - 125*	*4658*	*0.898*	*20*	
Surr: 4-Bromofluorobenzene	*5705*	*100*	*5000*	*0*	*114*	*70 - 125*	*5640*	*1.15*	*20*	
Surr: Dibromofluoromethane	*4922*	*100*	*5000*	*0*	*98.4*	*74 - 125*	*4924*	*0.0524*	*20*	
Surr: Toluene-d8	*5350*	*100*	*5000*	*0*	*107*	*75 - 125*	*5370*	*0.37*	*20*	

The following samples were anayzed in this batch: HS14040529-14 HS14040529-15 HS14040529-18 HS14040529-19 HS14040529-20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232135 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-140418** Units: **ug/L** Analysis Date: **18-Apr-2014 11:01**
Client ID: Run ID: **VOA4_232135** SeqNo: **2798823** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*45.43*	*1.0*	*50*	*0*	*90.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*45.97*	*1.0*	*50*	*0*	*91.9*	*70 - 125*				
Surr: Dibromofluoromethane	*44.7*	*1.0*	*50*	*0*	*89.4*	*74 - 125*				
Surr: Toluene-d8	*44.11*	*1.0*	*50*	*0*	*88.2*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232135 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-140418** Units: **ug/L** Analysis Date: **18-Apr-2014 10:11**
Client ID: Run ID: **VOA4_232135** SeqNo: **2798822** 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	52.28	1.0	50	0	105	80 - 120				
1,2-Dichloroethane	47.69	1.0	50	0	95.4	79 - 120				
1,3,5-Trimethylbenzene	52.69	1.0	50	0	105	80 - 120				
2-Butanone	107.9	2.0	100	0	108	60 - 140				
Benzene	48.69	1.0	50	0	97.4	80 - 120				
Cyclohexane	50.11	1.0	50	0	100	75 - 125				
Ethylbenzene	49.59	1.0	50	0	99.2	80 - 120				
Isopropylbenzene	52.38	1.0	50	0	105	80 - 120				
Methylcyclohexane	50.2	1.0	50	0	100	70 - 122				
Naphthalene	48.06	1.0	50	0	96.1	70 - 130				
n-Butylbenzene	55.97	1.0	50	0	112	75 - 125				
n-Propylbenzene	54.12	1.0	50	0	108	75 - 130				
Toluene	49.26	1.0	50	0	98.5	80 - 121				
Xylenes, Total	148.2	3.0	150	0	98.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*43.49*	*1.0*	*50*	*0*	*87.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.2*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*46.03*	*1.0*	*50*	*0*	*92.1*	*74 - 125*				
Surr: Toluene-d8	*47.8*	*1.0*	*50*	*0*	*95.6*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232135 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS14040704-01MS** Units: **ug/L** Analysis Date: **18-Apr-2014 11:50**
Client ID: Run ID: **VOA4_232135** SeqNo: **2798825** 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	53.93	1.0	50	0	108	80 - 120				
1,2-Dichloroethane	48.3	1.0	50	0	96.6	79 - 120				
1,3,5-Trimethylbenzene	57.6	1.0	50	0	115	80 - 120				
2-Butanone	98.81	2.0	100	0	98.8	60 - 140				
Benzene	51.84	1.0	50	0	104	80 - 120				
Cyclohexane	57.33	1.0	50	0	115	75 - 125				
Ethylbenzene	52.4	1.0	50	0	105	80 - 120				
Isopropylbenzene	54.51	1.0	50	0	109	80 - 120				
Methylcyclohexane	53.3	1.0	50	0	107	70 - 122				
Naphthalene	48.73	1.0	50	0	97.5	70 - 130				
n-Butylbenzene	58.34	1.0	50	0	117	75 - 125				
n-Propylbenzene	60.71	1.0	50	0	121	75 - 130				
Toluene	53.44	1.0	50	1.307	104	80 - 121				
Xylenes, Total	153	3.0	150	0	102	80 - 124				
Surr: 1,2-Dichloroethane-d4	*44.03*	*1.0*	*50*	*0*	*88.1*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.3*	*1.0*	*50*	*0*	*98.6*	*70 - 125*				
Surr: Dibromofluoromethane	*47.11*	*1.0*	*50*	*0*	*94.2*	*74 - 125*				
Surr: Toluene-d8	*48.68*	*1.0*	*50*	*0*	*97.4*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040529
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW

QC BATCH REPORT

Batch ID: R232135 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS14040704-01MSD** Units: **ug/L** Analysis Date: **18-Apr-2014 12:15**
Client ID: Run ID: **VOA4_232135** SeqNo: **2798826** 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	54.8	1.0	50	0	110	80 - 120	53.93	1.6	20	
1,2-Dichloroethane	49.1	1.0	50	0	98.2	79 - 120	48.3	1.64	20	
1,3,5-Trimethylbenzene	55.07	1.0	50	0	110	80 - 120	57.6	4.49	20	
2-Butanone	103.9	2.0	100	0	104	60 - 140	98.81	5.01	20	
Benzene	54.18	1.0	50	0	108	80 - 120	51.84	4.42	20	
Cyclohexane	58.88	1.0	50	0	118	75 - 125	57.33	2.67	20	
Ethylbenzene	53.37	1.0	50	0	107	80 - 120	52.4	1.84	20	
Isopropylbenzene	54.54	1.0	50	0	109	80 - 120	54.51	0.0702	20	
Methylcyclohexane	59	1.0	50	0	118	70 - 122	53.3	10.2	20	
Naphthalene	47.04	1.0	50	0	94.1	70 - 130	48.73	3.53	20	
n-Butylbenzene	61.81	1.0	50	0	124	75 - 125	58.34	5.77	20	
n-Propylbenzene	55.48	1.0	50	0	111	75 - 130	60.71	9.01	20	
Toluene	53.4	1.0	50	1.307	104	80 - 121	53.44	0.0808	20	
Xylenes, Total	156.3	3.0	150	0	104	80 - 124	153	2.14	20	
Surr: 1,2-Dichloroethane-d4	*44.63*	*1.0*	*50*	*0*	*89.3*	*71 - 125*	*44.03*	*1.35*	*20*	
Surr: 4-Bromofluorobenzene	*50.18*	*1.0*	*50*	*0*	*100*	*70 - 125*	*49.3*	*1.78*	*20*	
Surr: Dibromofluoromethane	*48.01*	*1.0*	*50*	*0*	*96.0*	*74 - 125*	*47.11*	*1.89*	*20*	
Surr: Toluene-d8	*47.65*	*1.0*	*50*	*0*	*95.3*	*75 - 125*	*48.68*	*2.14*	*20*	

The following samples were anayzed in this batch: HS14040529-18

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

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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

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

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
California	06248CA 2013-2014	31-Jul-2014
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003180	09-May-2014
Kansas	E-10352 8/15/2013-2014	31-Jul-2014
Kentucky	95 Year- 2013	30-Apr-2014
Louisiana	03087 2013/2014	30-Jun-2014
North Carolina	624 - 2014	31-Dec-2014
Oklahoma	2013-024	31-Aug-2014
Texas	T104704231-13-12	30-Apr-2014

Client: Apex Companies
Project: E3CE-0065 Andover-Colt Court 2Q2014 GW
Work Order: HS14040529

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14040529-01	MW-2	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-01	MW-2	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-02	MW-13	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-02	MW-13	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-03	MW-8	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-03	MW-8	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-04	MW-5	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-04	MW-5	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-05	MW-16	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-05	MW-16	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-06	MW-15	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-06	MW-15	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-07	MW-11	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-07	MW-11	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-08	MW-9	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-08	MW-9	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-09	MW-10	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-09	MW-10	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-10	MW-3	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-10	MW-3	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-11	MW-4	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-11	MW-4	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-12	MW-6	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-12	MW-6	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-13	MW-7	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-13	MW-7	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-14	Dup-1	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-14	Dup-1	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-15	Dup-2	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-15	Dup-2	Login	12-Apr-14 02:41	DRC	BTEX A1
HS14040529-16	Trip Blank 040714-72	Login	12-Apr-14 02:41	DRC	VW-1
HS14040529-17	Trip Blank 032714-27	Login	12-Apr-14 02:46	DRC	VW-1

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Sample Receipt Checklist

Client Name: Apex-Portland
Work Order: HS14040529

Date/Time Received: **09-Apr-2014 09:25**
Received by: **ECD**

Checklist completed by: *Dana.Capps* eSignature | 12-Apr-2014 Date

Reviewed by: *Bethany McDaniel* eSignature | 15-Apr-2014 Date

Matrices: **Water**

Carrier name: **FedEx**

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shipping container/cooler?	☑	☐	☐
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	

Temperature(s)/Thermometer(s):	3.2/3.2 0.4/0.4 C/U	IR1
Cooler(s)/Kit(s):	5965 5569	
Date/Time sample(s) sent to storage:	04/12/2014	

	Yes	No	
Water - VOA vials have zero headspace?	☑	☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	☐	☐	N/A ☑
pH adjusted?	☐	☐	N/A ☑

pH adjusted by:

Login Notes: Trips blanks not listed on COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

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1 of 2

TRK# 0215 8052 9842 3066

MASTER

AB SGRA

THU – 10 APR 10:30A
PRIORITY OVERNIGHT

77099
TX-US IAH

CUSTODY SEAL
Date: 4-9-14 Time: 18:00
Name: [illegible]
Company: APEX

Seal Broken By: ED
Date: 4-10-14

CUSTODY SEAL
Date: 4-9-14 Time: 18:00
Name: [illegible]
Company: APEX

Seal Broken By: ED
Date: 4-10-14

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

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2 of 2

MPS# 0681 7949 3834 7085

Mstr# 8052 9842 3068 0215

THU – 10 APR 10:30A

PRIORITY OVERNIGHT

AB SGRA

77099

TX-US IAH

CUSTODY SEAL	Seal Broken By:
Date: 4-9-14 Time: 1830	
Name:	Date: 4-10-14
Company:	

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

RIGHT SOLUTIONS | RIGHT PARTNER

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www.alsglobal.com

April 25, 2014

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

Work Order: **HS14040705**

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

Dear Samuel,

ALS Environmental received 18 sample(s) on Apr 10, 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: HS14040705

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS14040705-01	1009 W Mountain	Water		10-Apr-2014 10:10	10-Apr-2014 09:26	☐
HS14040705-02	2009 N Mountain Ct	Water		10-Apr-2014 10:32	10-Apr-2014 09:26	☐
HS14040705-03	2007 N Mountain Ct	Water		10-Apr-2014 10:41	10-Apr-2014 09:26	☐
HS14040705-04	2020 N Ruger Cir	Water		10-Apr-2014 11:25	10-Apr-2014 09:26	☐
HS14040705-05	2019 N Ruger Cir	Water		10-Apr-2014 11:37	10-Apr-2014 09:26	☐
HS14040705-06	2028 N Ruger Cir	Water		10-Apr-2014 11:55	10-Apr-2014 09:26	☐
HS14040705-07	2032 N Ruger Cir	Water		10-Apr-2014 12:07	10-Apr-2014 09:26	☐
HS14040705-08	2021 N Ruger Ct	Water		10-Apr-2014 12:27	10-Apr-2014 09:26	☐
HS14040705-09	2025 N Ruger Ct	Water		10-Apr-2014 12:45	10-Apr-2014 09:26	☐
HS14040705-10	HOA 1	Water		10-Apr-2014 13:43	10-Apr-2014 09:26	☐
HS14040705-11	1910 N Quail Crossing St.	Water		10-Apr-2014 14:06	10-Apr-2014 09:26	☐
HS14040705-12	HOA 2	Water		10-Apr-2014 14:20	10-Apr-2014 09:26	☐
HS14040705-13	2002 N Colt Ct	Water		10-Apr-2014 14:43	10-Apr-2014 09:26	☐
HS14040705-14	1211 W Quail Crossing Ct	Water		10-Apr-2014 15:30	10-Apr-2014 09:26	☐
HS14040705-15	2006 N Colt Ct	Water		10-Apr-2014 15:50	10-Apr-2014 09:26	☐
HS14040705-16	DUP 1	Water		10-Apr-2014 00:00	10-Apr-2014 09:26	☐
HS14040705-17	DUP 2	Water		10-Apr-2014 00:00	10-Apr-2014 09:26	☐
HS14040705-18	TB032714-25	Water		10-Apr-2014 00:00	10-Apr-2014 09:26	☑

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14040705

CASE NARRATIVE

Batch R232179, Volatile Organics, Sample HS14040708-01: MS/MSD performed on an unrelated sample.

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ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: 1009 W Mountain
Collection Date: 10-Apr-2014 10:10

WorkOrder:HS14040705
Lab ID:HS14040705-01
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 03:25
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 03:25
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 03:25
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 03:25
Surr: 1,2-Dichloroethane-d4	*99.7*		*71-125*	*%REC*	*1*	*20-Apr-2014 03:25*
Surr: 4-Bromofluorobenzene	*98.4*		*70-125*	*%REC*	*1*	*20-Apr-2014 03:25*
Surr: Dibromofluoromethane	*99.1*		*74-125*	*%REC*	*1*	*20-Apr-2014 03:25*
Surr: Toluene-d8	*97.3*		*75-125*	*%REC*	*1*	*20-Apr-2014 03:25*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 19:31
Surr: 4-Bromofluorobenzene	*117*		*70-130*	*%REC*	*1*	*23-Apr-2014 19:31*

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: 2009 N Mountain Ct
Collection Date: 10-Apr-2014 10:32

WorkOrder:HS14040705
Lab ID:HS14040705-02
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 03:49
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 03:49
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 03:49
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 03:49
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*20-Apr-2014 03:49*
Surr: 4-Bromofluorobenzene	*98.0*		*70-125*	*%REC*	*1*	*20-Apr-2014 03:49*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*20-Apr-2014 03:49*
Surr: Toluene-d8	*97.1*		*75-125*	*%REC*	*1*	*20-Apr-2014 03:49*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 19:49
Surr: 4-Bromofluorobenzene	*115*		*70-130*	*%REC*	*1*	*23-Apr-2014 19:49*

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 Mountain Ct
Collection Date: 10-Apr-2014 10:41

WorkOrder:HS14040705
Lab ID:HS14040705-03
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 04:13
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 04:13
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 04:13
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 04:13
Surr: 1,2-Dichloroethane-d4	*101*		*71-125*	*%REC*	*1*	*20-Apr-2014 04:13*
Surr: 4-Bromofluorobenzene	*98.9*		*70-125*	*%REC*	*1*	*20-Apr-2014 04:13*
Surr: Dibromofluoromethane	*97.5*		*74-125*	*%REC*	*1*	*20-Apr-2014 04:13*
Surr: Toluene-d8	*96.8*		*75-125*	*%REC*	*1*	*20-Apr-2014 04:13*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 01:46
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*23-Apr-2014 01:46*

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: 2020 N Ruger Cir
Collection Date: 10-Apr-2014 11:25

WorkOrder:HS14040705
Lab ID:HS14040705-04
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 04:37
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
2-Butanone	**0.16**		**0.0020**	**mg/L**	1	20-Apr-2014 04:37
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 04:37
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 04:37
Surr: 1,2-Dichloroethane-d4	*99.9*		*71-125*	*%REC*	*1*	*20-Apr-2014 04:37*
Surr: 4-Bromofluorobenzene	*98.1*		*70-125*	*%REC*	*1*	*20-Apr-2014 04:37*
Surr: Dibromofluoromethane	*101*		*74-125*	*%REC*	*1*	*20-Apr-2014 04:37*
Surr: Toluene-d8	*96.4*		*75-125*	*%REC*	*1*	*20-Apr-2014 04:37*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**0.38**		**0.050**	**mg/L**	1	23-Apr-2014 02:02
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Apr-2014 02:02*

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: 2019 N Ruger Cir
Collection Date: 10-Apr-2014 11:37

WorkOrder:HS14040705
Lab ID:HS14040705-05
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 05:01
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
2-Butanone	**0.0032**		**0.0020**	**mg/L**	1	20-Apr-2014 05:01
Benzene	**0.0048**		**0.0010**	**mg/L**	1	20-Apr-2014 05:01
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 05:01
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 05:01
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 05:01
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 05:01
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*20-Apr-2014 05:01*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*1*	*20-Apr-2014 05:01*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*1*	*20-Apr-2014 05:01*
Surr: Toluene-d8	*96.4*		*75-125*	*%REC*	*1*	*20-Apr-2014 05:01*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 02:17
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Apr-2014 02:17*

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: 10-Apr-2014 11:55

WorkOrder:HS14040705
Lab ID:HS14040705-06
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 05:25
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 05:25
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 05:25
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 05:25
Surr: 1,2-Dichloroethane-d4	*99.8*		*71-125*	*%REC*	*1*	*20-Apr-2014 05:25*
Surr: 4-Bromofluorobenzene	*98.9*		*70-125*	*%REC*	*1*	*20-Apr-2014 05:25*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*1*	*20-Apr-2014 05:25*
Surr: Toluene-d8	*96.0*		*75-125*	*%REC*	*1*	*20-Apr-2014 05:25*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 02:33
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Apr-2014 02:33*

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: 2032 N Ruger Cir
Collection Date: 10-Apr-2014 12:07

WorkOrder:HS14040705
Lab ID:HS14040705-07
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 05:49
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 05:49
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 05:49
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 05:49
Surr: 1,2-Dichloroethane-d4	*99.8*		*71-125*	*%REC*	*1*	*20-Apr-2014 05:49*
Surr: 4-Bromofluorobenzene	*98.8*		*70-125*	*%REC*	*1*	*20-Apr-2014 05:49*
Surr: Dibromofluoromethane	*99.3*		*74-125*	*%REC*	*1*	*20-Apr-2014 05:49*
Surr: Toluene-d8	*96.7*		*75-125*	*%REC*	*1*	*20-Apr-2014 05:49*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 02:49
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Apr-2014 02:49*

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: 2021 N Ruger Ct
Collection Date: 10-Apr-2014 12:27

WorkOrder:HS14040705
Lab ID:HS14040705-08
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 06:13
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 06:13
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 06:13
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 06:13
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*20-Apr-2014 06:13*
Surr: 4-Bromofluorobenzene	*98.5*		*70-125*	*%REC*	*1*	*20-Apr-2014 06:13*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*20-Apr-2014 06:13*
Surr: Toluene-d8	*96.1*		*75-125*	*%REC*	*1*	*20-Apr-2014 06:13*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 16:09
Surr: 4-Bromofluorobenzene	*120*		*70-130*	*%REC*	*1*	*23-Apr-2014 16:09*

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: 2025 N Ruger Ct
Collection Date: 10-Apr-2014 12:45

WorkOrder:HS14040705
Lab ID:HS14040705-09
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 06:37
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 06:37
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 06:37
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 06:37
Surr: 1,2-Dichloroethane-d4	*99.2*		*71-125*	*%REC*	*1*	*20-Apr-2014 06:37*
Surr: 4-Bromofluorobenzene	*98.1*		*70-125*	*%REC*	*1*	*20-Apr-2014 06:37*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*20-Apr-2014 06:37*
Surr: Toluene-d8	*96.6*		*75-125*	*%REC*	*1*	*20-Apr-2014 06:37*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 16:29
Surr: 4-Bromofluorobenzene	*118*		*70-130*	*%REC*	*1*	*23-Apr-2014 16:29*

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: 10-Apr-2014 13:43

WorkOrder:HS14040705
Lab ID:HS14040705-10
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 07:00
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 07:00
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 07:00
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 07:00
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*20-Apr-2014 07:00*
Surr: 4-Bromofluorobenzene	*98.2*		*70-125*	*%REC*	*1*	*20-Apr-2014 07:00*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*20-Apr-2014 07:00*
Surr: Toluene-d8	*96.4*		*75-125*	*%REC*	*1*	*20-Apr-2014 07:00*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 16:47
Surr: 4-Bromofluorobenzene	*117*		*70-130*	*%REC*	*1*	*23-Apr-2014 16:47*

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: 1910 N Quail Crossing St.
Collection Date: 10-Apr-2014 14:06

WorkOrder:HS14040705
Lab ID:HS14040705-11
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 07:24
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 07:24
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 07:24
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 07:24
Surr: 1,2-Dichloroethane-d4	*100.0*		*71-125*	*%REC*	*1*	*20-Apr-2014 07:24*
Surr: 4-Bromofluorobenzene	*97.1*		*70-125*	*%REC*	*1*	*20-Apr-2014 07:24*
Surr: Dibromofluoromethane	*93.6*		*74-125*	*%REC*	*1*	*20-Apr-2014 07:24*
Surr: Toluene-d8	*97.1*		*75-125*	*%REC*	*1*	*20-Apr-2014 07:24*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 17:05
Surr: 4-Bromofluorobenzene	*118*		*70-130*	*%REC*	*1*	*23-Apr-2014 17:05*

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: HOA 2
Collection Date: 10-Apr-2014 14:20

WorkOrder:HS14040705
Lab ID:HS14040705-12
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 07:48
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 07:48
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 07:48
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 07:48
Surr: 1,2-Dichloroethane-d4	*99.7*		*71-125*	*%REC*	*1*	*20-Apr-2014 07:48*
Surr: 4-Bromofluorobenzene	*98.3*		*70-125*	*%REC*	*1*	*20-Apr-2014 07:48*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*20-Apr-2014 07:48*
Surr: Toluene-d8	*96.8*		*75-125*	*%REC*	*1*	*20-Apr-2014 07:48*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 17:24
Surr: 4-Bromofluorobenzene	*117*		*70-130*	*%REC*	*1*	*23-Apr-2014 17:24*

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: 2002 N Colt Ct
Collection Date: 10-Apr-2014 14:43

WorkOrder:HS14040705
Lab ID:HS14040705-13
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 08:12
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 08:12
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 08:12
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 08:12
Surr: 1,2-Dichloroethane-d4	*100*		*71-125*	*%REC*	*1*	*20-Apr-2014 08:12*
Surr: 4-Bromofluorobenzene	*98.6*		*70-125*	*%REC*	*1*	*20-Apr-2014 08:12*
Surr: Dibromofluoromethane	*99.6*		*74-125*	*%REC*	*1*	*20-Apr-2014 08:12*
Surr: Toluene-d8	*96.8*		*75-125*	*%REC*	*1*	*20-Apr-2014 08:12*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 17:42
Surr: 4-Bromofluorobenzene	*117*		*70-130*	*%REC*	*1*	*23-Apr-2014 17:42*

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: 1211 W Quail Crossing Ct
Collection Date: 10-Apr-2014 15:30

WorkOrder:HS14040705
Lab ID:HS14040705-14
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 08:36
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 08:36
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 08:36
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 08:36
Surr: 1,2-Dichloroethane-d4	*92.2*		*71-125*	*%REC*	*1*	*20-Apr-2014 08:36*
Surr: 4-Bromofluorobenzene	*96.6*		*70-125*	*%REC*	*1*	*20-Apr-2014 08:36*
Surr: Dibromofluoromethane	*95.2*		*74-125*	*%REC*	*1*	*20-Apr-2014 08:36*
Surr: Toluene-d8	*96.5*		*75-125*	*%REC*	*1*	*20-Apr-2014 08:36*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 18:00
Surr: 4-Bromofluorobenzene	*118*		*70-130*	*%REC*	*1*	*23-Apr-2014 18:00*

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: 2006 N Colt Ct
Collection Date: 10-Apr-2014 15:50

WorkOrder:HS14040705
Lab ID:HS14040705-15
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	**0.75**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
1,2-Dichloroethane	ND		0.0050	mg/L	5	20-Apr-2014 09:47
1,3,5-Trimethylbenzene	**0.28**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
2-Butanone	**0.026**		**0.010**	**mg/L**	5	20-Apr-2014 09:47
Benzene	**0.98**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
Cyclohexane	**0.16**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
Ethylbenzene	**0.36**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
Isopropylbenzene	**0.016**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
Methylcyclohexane	**0.038**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
Naphthalene	**0.076**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
n-Butylbenzene	ND		0.0050	mg/L	5	20-Apr-2014 09:47
n-Propylbenzene	**0.048**		**0.0050**	**mg/L**	5	20-Apr-2014 09:47
Toluene	**2.0**		**0.050**	**mg/L**	50	20-Apr-2014 01:50
Xylenes, Total	**2.1**		**0.015**	**mg/L**	5	20-Apr-2014 09:47
Surr: 1,2-Dichloroethane-d4	*97.9*		*71-125*	*%REC*	*5*	*20-Apr-2014 09:47*
Surr: 1,2-Dichloroethane-d4	*99.6*		*71-125*	*%REC*	*50*	*20-Apr-2014 01:50*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*50*	*20-Apr-2014 01:50*
Surr: 4-Bromofluorobenzene	*100*		*70-125*	*%REC*	*5*	*20-Apr-2014 09:47*
Surr: Dibromofluoromethane	*97.0*		*74-125*	*%REC*	*5*	*20-Apr-2014 09:47*
Surr: Dibromofluoromethane	*98.8*		*74-125*	*%REC*	*50*	*20-Apr-2014 01:50*
Surr: Toluene-d8	*99.0*		*75-125*	*%REC*	*50*	*20-Apr-2014 01:50*
Surr: Toluene-d8	*99.8*		*75-125*	*%REC*	*5*	*20-Apr-2014 09:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**23**		**0.050**	**mg/L**	1	23-Apr-2014 18:37
Surr: 4-Bromofluorobenzene	*128*		*70-130*	*%REC*	*1*	*23-Apr-2014 18:37*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: DUP 1
Collection Date: 10-Apr-2014 00:00

WorkOrder:HS14040705
Lab ID:HS14040705-16
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 09:00
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 09:00
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 09:00
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 09:00
Surr: 1,2-Dichloroethane-d4	*98.9*		*71-125*	*%REC*	*1*	*20-Apr-2014 09:00*
Surr: 4-Bromofluorobenzene	*97.7*		*70-125*	*%REC*	*1*	*20-Apr-2014 09:00*
Surr: Dibromofluoromethane	*99.5*		*74-125*	*%REC*	*1*	*20-Apr-2014 09:00*
Surr: Toluene-d8	*96.4*		*75-125*	*%REC*	*1*	*20-Apr-2014 09:00*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	**0.066**		**0.050**	**mg/L**	1	23-Apr-2014 18:55
Surr: 4-Bromofluorobenzene	*118*		*70-130*	*%REC*	*1*	*23-Apr-2014 18:55*

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

RIGHT SOLUTIONS | RIGHT PARTNER

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: DUP 2
Collection Date: 10-Apr-2014 00:00

WorkOrder:HS14040705
Lab ID:HS14040705-17
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES - SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
1,2-Dichloroethane	ND		0.0010	mg/L	1	20-Apr-2014 09:24
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
2-Butanone	ND		0.0020	mg/L	1	20-Apr-2014 09:24
Benzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Cyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Ethylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Isopropylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Methylcyclohexane	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Naphthalene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
n-Butylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
n-Propylbenzene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Toluene	ND		0.0010	mg/L	1	20-Apr-2014 09:24
Xylenes, Total	ND		0.0030	mg/L	1	20-Apr-2014 09:24
Surr: 1,2-Dichloroethane-d4	*99.6*		*71-125*	*%REC*	*1*	*20-Apr-2014 09:24*
Surr: 4-Bromofluorobenzene	*98.7*		*70-125*	*%REC*	*1*	*20-Apr-2014 09:24*
Surr: Dibromofluoromethane	*96.4*		*74-125*	*%REC*	*1*	*20-Apr-2014 09:24*
Surr: Toluene-d8	*96.9*		*75-125*	*%REC*	*1*	*20-Apr-2014 09:24*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: DNR
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Apr-2014 19:13
Surr: 4-Bromofluorobenzene	*118*		*70-130*	*%REC*	*1*	*23-Apr-2014 19:13*

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: HS14040705

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R232179	**Test Name :** LOW LEVEL VOLATILES - SW8260C			**Matrix:** Water		
HS14040705-01	1009 W Mountain	10 Apr 2014 10:10			20 Apr 2014 03:25	1
HS14040705-02	2009 N Mountain Ct	10 Apr 2014 10:32			20 Apr 2014 03:49	1
HS14040705-03	2007 N Mountain Ct	10 Apr 2014 10:41			20 Apr 2014 04:13	1
HS14040705-04	2020 N Ruger Cir	10 Apr 2014 11:25			20 Apr 2014 04:37	1
HS14040705-05	2019 N Ruger Cir	10 Apr 2014 11:37			20 Apr 2014 05:01	1
HS14040705-06	2028 N Ruger Cir	10 Apr 2014 11:55			20 Apr 2014 05:25	1
HS14040705-07	2032 N Ruger Cir	10 Apr 2014 12:07			20 Apr 2014 05:49	1
HS14040705-08	2021 N Ruger Ct	10 Apr 2014 12:27			20 Apr 2014 06:13	1
HS14040705-09	2025 N Ruger Ct	10 Apr 2014 12:45			20 Apr 2014 06:37	1
HS14040705-10	HOA 1	10 Apr 2014 13:43			20 Apr 2014 07:00	1
HS14040705-11	1910 N Quail Crossing St.	10 Apr 2014 14:06			20 Apr 2014 07:24	1
HS14040705-12	HOA 2	10 Apr 2014 14:20			20 Apr 2014 07:48	1
HS14040705-13	2002 N Colt Ct	10 Apr 2014 14:43			20 Apr 2014 08:12	1
HS14040705-14	1211 W Quail Crossing Ct	10 Apr 2014 15:30			20 Apr 2014 08:36	1
HS14040705-15	2006 N Colt Ct	10 Apr 2014 15:50			20 Apr 2014 09:47	5
HS14040705-15	2006 N Colt Ct	10 Apr 2014 15:50			20 Apr 2014 01:50	50
HS14040705-16	DUP 1	10 Apr 2014 00:00			20 Apr 2014 09:00	1
HS14040705-17	DUP 2	10 Apr 2014 00:00			20 Apr 2014 09:24	1
Batch ID R232380	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14040705-03	2007 N Mountain Ct	10 Apr 2014 10:41			23 Apr 2014 01:46	1
HS14040705-04	2020 N Ruger Cir	10 Apr 2014 11:25			23 Apr 2014 02:02	1
HS14040705-05	2019 N Ruger Cir	10 Apr 2014 11:37			23 Apr 2014 02:17	1
HS14040705-06	2028 N Ruger Cir	10 Apr 2014 11:55			23 Apr 2014 02:33	1
HS14040705-07	2032 N Ruger Cir	10 Apr 2014 12:07			23 Apr 2014 02:49	1
Batch ID R232419	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS14040705-01	1009 W Mountain	10 Apr 2014 10:10			23 Apr 2014 19:31	1
HS14040705-02	2009 N Mountain Ct	10 Apr 2014 10:32			23 Apr 2014 19:49	1
HS14040705-08	2021 N Ruger Ct	10 Apr 2014 12:27			23 Apr 2014 16:09	1
HS14040705-09	2025 N Ruger Ct	10 Apr 2014 12:45			23 Apr 2014 16:29	1
HS14040705-10	HOA 1	10 Apr 2014 13:43			23 Apr 2014 16:47	1
HS14040705-11	1910 N Quail Crossing St.	10 Apr 2014 14:06			23 Apr 2014 17:05	1
HS14040705-12	HOA 2	10 Apr 2014 14:20			23 Apr 2014 17:24	1
HS14040705-13	2002 N Colt Ct	10 Apr 2014 14:43			23 Apr 2014 17:42	1
HS14040705-14	1211 W Quail Crossing Ct	10 Apr 2014 15:30			23 Apr 2014 18:00	1
HS14040705-15	2006 N Colt Ct	10 Apr 2014 15:50			23 Apr 2014 18:37	1
HS14040705-16	DUP 1	10 Apr 2014 00:00			23 Apr 2014 18:55	1
HS14040705-17	DUP 2	10 Apr 2014 00:00			23 Apr 2014 19:13	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040705
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R232380 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW1-140411** Units: **mg/L** Analysis Date: **22-Apr-2014 21:00**
Client ID: Run ID: **FID-14_232380** SeqNo: **2805059** 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	*0.09757*	*0.0050*	*0.1*	*0*	*97.6*	*70 - 130*				

LCS Sample ID: **GLCSW1-140411** Units: **mg/L** Analysis Date: **22-Apr-2014 20:29**
Client ID: Run ID: **FID-14_232380** SeqNo: **2805058** 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	0.8884	0.050	1	0	88.8	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1046*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

MS Sample ID: **HS14040529-18MS** Units: **mg/L** Analysis Date: **22-Apr-2014 23:39**
Client ID: Run ID: **FID-14_232380** SeqNo: **2805061** 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	0.9225	0.050	1	0.08094	84.2	70 - 130				
Surr: 4-Bromofluorobenzene	*0.105*	*0.0050*	*0.1*	*0*	*105*	*70 - 130*				

MSD Sample ID: **HS14040529-18MSD** Units: **mg/L** Analysis Date: **22-Apr-2014 23:55**
Client ID: Run ID: **FID-14_232380** SeqNo: **2805062** 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	0.8612	0.050	1	0.08094	78.0	70 - 130	0.9225	6.87	30	
Surr: 4-Bromofluorobenzene	*0.1043*	*0.0050*	*0.1*	*0*	*104*	*70 - 130*	*0.105*	*0.617*	*30*	

The following samples were anayzed in this batch: HS14040705-03 HS14040705-04 HS14040705-05 HS14040705-06 HS14040705-07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040705
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R232419 **Instrument: FID-9** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-140423** Units: **mg/L** Analysis Date: **23-Apr-2014 12:45**
Client ID: Run ID: **FID-9_232419** SeqNo: **2806777** 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	*0.1076*	*0.0050*	*0.1*	*0*	*108*	*70 - 130*				

LCS Sample ID: **GLCSW-140423** Units: **mg/L** Analysis Date: **23-Apr-2014 12:08**
Client ID: Run ID: **FID-9_232419** SeqNo: **2806776** 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	1.126	0.050	1	0	113	70 - 130				
Surr: 4-Bromofluorobenzene	*0.08463*	*0.0050*	*0.1*	*0*	*84.6*	*70 - 130*				

MS Sample ID: **HS14040510-03MS** Units: **mg/L** Analysis Date: **23-Apr-2014 14:35**
Client ID: Run ID: **FID-9_232419** SeqNo: **2806779** 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	1.055	0.050	1	0	106	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1175*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MSD Sample ID: **HS14040510-03MSD** Units: **mg/L** Analysis Date: **23-Apr-2014 14:53**
Client ID: Run ID: **FID-9_232419** SeqNo: **2806780** 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	1.061	0.050	1	0	106	70 - 130	1.055	0.541	30	
Surr: 4-Bromofluorobenzene	*0.1195*	*0.0050*	*0.1*	*0*	*120*	*70 - 130*	*0.1175*	*1.69*	*30*	

The following samples were anayzed in this batch:

HS14040705-01	HS14040705-02	HS14040705-08	HS14040705-09
HS14040705-10	HS14040705-11	HS14040705-12	HS14040705-13
HS14040705-14	HS14040705-15	HS14040705-16	HS14040705-17

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040705
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R232179 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-140419** Units: **ug/L** Analysis Date: **20-Apr-2014 00:38**
Client ID: Run ID: **VOA6_232179** SeqNo: **2799818** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*50.23*	*1.0*	*50*	*0*	*100*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.37*	*1.0*	*50*	*0*	*98.7*	*70 - 125*				
Surr: Dibromofluoromethane	*50.2*	*1.0*	*50*	*0*	*100*	*74 - 125*				
Surr: Toluene-d8	*48.6*	*1.0*	*50*	*0*	*97.2*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040705
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R232179 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-140419** Units: **ug/L** Analysis Date: **19-Apr-2014 23:03**
Client ID: Run ID: **VOA6_232179** SeqNo: **2799817** 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	47.82	1.0	50	0	95.6	80 - 120				
1,2-Dichloroethane	45.39	1.0	50	0	90.8	79 - 120				
1,3,5-Trimethylbenzene	48.23	1.0	50	0	96.5	80 - 120				
2-Butanone	95.17	2.0	100	0	95.2	60 - 140				
Benzene	47.76	1.0	50	0	95.5	80 - 120				
Cyclohexane	48.97	1.0	50	0	97.9	75 - 125				
Ethylbenzene	48.71	1.0	50	0	97.4	80 - 120				
Isopropylbenzene	48.89	1.0	50	0	97.8	80 - 120				
Methylcyclohexane	38.11	1.0	50	0	76.2	70 - 122				
Naphthalene	48.27	1.0	50	0	96.5	70 - 130				
n-Butylbenzene	45.67	1.0	50	0	91.3	75 - 125				
n-Propylbenzene	48.86	1.0	50	0	97.7	75 - 130				
Toluene	47.44	1.0	50	0	94.9	80 - 121				
Xylenes, Total	146	3.0	150	0	97.4	80 - 124				
Surr: 1,2-Dichloroethane-d4	*48.47*	*1.0*	*50*	*0*	*96.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.24*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*49.34*	*1.0*	*50*	*0*	*98.7*	*74 - 125*				
Surr: Toluene-d8	*49.76*	*1.0*	*50*	*0*	*99.5*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
WorkOrder: HS14040705
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R232179 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS14040708-01MS** Units: **ug/L** Analysis Date: **20-Apr-2014 01:02**
Client ID: Run ID: **VOA6_232179** SeqNo: **2799819** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	41.78	1.0	50	0	83.6	80 - 120				
1,2-Dichloroethane	43.95	1.0	50	0	87.9	79 - 120				
1,3,5-Trimethylbenzene	42.1	1.0	50	0	84.2	80 - 120				
2-Butanone	96.15	2.0	100	0	96.2	60 - 140				
Benzene	45.08	1.0	50	0	90.2	80 - 120				
Cyclohexane	38.56	1.0	50	0	77.1	75 - 125				
Ethylbenzene	44.64	1.0	50	0	89.3	80 - 120				
Isopropylbenzene	43.48	1.0	50	0	87.0	80 - 120				
Methylcyclohexane	40.96	1.0	50	0	81.9	70 - 122				
Naphthalene	45.68	1.0	50	0	91.4	70 - 130				
n-Butylbenzene	37.13	1.0	50	0	74.3	75 - 125				S
n-Propylbenzene	41.14	1.0	50	0	82.3	75 - 130				
Toluene	44.36	1.0	50	0	88.7	80 - 121				
Xylenes, Total	134.7	3.0	150	0	89.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*45.31*	*1.0*	*50*	*0*	*90.6*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.02*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*47.78*	*1.0*	*50*	*0*	*95.6*	*74 - 125*				
Surr: Toluene-d8	*48.9*	*1.0*	*50*	*0*	*97.8*	*75 - 125*				

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

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Client: Apex Companies
WorkOrder: HS14040705
Project: E3CE-0065 Andover Release Site

QC BATCH REPORT

Batch ID: R232179 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS14040708-01MSD** Units: **ug/L** Analysis Date: **20-Apr-2014 01:26**
Client ID: Run ID: **VOA6_232179** SeqNo: **2799820** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	42.71	1.0	50	0	85.4	80 - 120	41.78	2.2	20	
1,2-Dichloroethane	47.02	1.0	50	0	94.0	79 - 120	43.95	6.75	20	
1,3,5-Trimethylbenzene	42.61	1.0	50	0	85.2	80 - 120	42.1	1.2	20	
2-Butanone	109.5	2.0	100	0	110	60 - 140	96.15	13	20	
Benzene	45.56	1.0	50	0	91.1	80 - 120	45.08	1.06	20	
Cyclohexane	35.98	1.0	50	0	72.0	75 - 125	38.56	6.93	20	S
Ethylbenzene	43.78	1.0	50	0	87.6	80 - 120	44.64	1.94	20	
Isopropylbenzene	42.31	1.0	50	0	84.6	80 - 120	43.48	2.72	20	
Methylcyclohexane	36.78	1.0	50	0	73.6	70 - 122	40.96	10.8	20	
Naphthalene	52.13	1.0	50	0	104	70 - 130	45.68	13.2	20	
n-Butylbenzene	36.94	1.0	50	0	73.9	75 - 125	37.13	0.506	20	S
n-Propylbenzene	40.95	1.0	50	0	81.9	75 - 130	41.14	0.445	20	
Toluene	44.24	1.0	50	0	88.5	80 - 121	44.36	0.281	20	
Xylenes, Total	134	3.0	150	0	89.3	80 - 124	134.7	0.579	20	
Surr: 1,2-Dichloroethane-d4	*48.61*	*1.0*	*50*	*0*	*97.2*	*71 - 125*	*45.31*	*7.04*	*20*	
Surr: 4-Bromofluorobenzene	*50.71*	*1.0*	*50*	*0*	*101*	*70 - 125*	*50.02*	*1.36*	*20*	
Surr: Dibromofluoromethane	*49*	*1.0*	*50*	*0*	*98.0*	*74 - 125*	*47.78*	*2.51*	*20*	
Surr: Toluene-d8	*49.43*	*1.0*	*50*	*0*	*98.9*	*75 - 125*	*48.9*	*1.08*	*20*	

The following samples were anayzed in this batch:

HS14040705-01	HS14040705-02	HS14040705-03	HS14040705-04
HS14040705-05	HS14040705-06	HS14040705-07	HS14040705-08
HS14040705-09	HS14040705-10	HS14040705-11	HS14040705-12
HS14040705-13	HS14040705-14	HS14040705-15	HS14040705-16
HS14040705-17			

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: **HS14040705**

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

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

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
California	06248CA 2013-2014	31-Jul-2014
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003180	09-May-2014
Kansas	E-10352 8/15/2013-2014	31-Jul-2014
Kentucky	95 Year- 2013	30-Apr-2014
Louisiana	03087 2013/2014	30-Jun-2014
North Carolina	624 - 2014	31-Dec-2014
Oklahoma	2013-024	31-Aug-2014
Texas	T104704231-13-12	30-Apr-2014

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS14040705

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS14040705-01	1009 W Mountain	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-01	1009 W Mountain	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-02	2009 N Mountain Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-02	2009 N Mountain Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-03	2007 N Mountain Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-03	2007 N Mountain Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-04	2020 N Ruger Cir	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-04	2020 N Ruger Cir	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-05	2019 N Ruger Cir	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-05	2019 N Ruger Cir	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-06	2028 N Ruger Cir	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-06	2028 N Ruger Cir	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-07	2032 N Ruger Cir	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-07	2032 N Ruger Cir	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-08	2021 N Ruger Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-08	2021 N Ruger Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-09	2025 N Ruger Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-09	2025 N Ruger Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-10	HOA 1	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-10	HOA 1	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-11	1910 N Quail Crossing St.	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-11	1910 N Quail Crossing St.	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-12	HOA 2	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-12	HOA 2	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-13	2002 N Colt Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-13	2002 N Colt Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-14	1211 W Quail Crossing Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-14	1211 W Quail Crossing Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-15	2006 N Colt Ct	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-15	2006 N Colt Ct	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-16	DUP 1	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-16	DUP 1	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-17	DUP 2	Login	16-Apr-14 02:11	NAB	BTEX A1
HS14040705-17	DUP 2	Login	16-Apr-14 02:11	NAB	VW-1
HS14040705-18	TB032714-25	Login	17-Apr-14 07:09	DRC	VW-1

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Sample Receipt Checklist

Client Name: Apex-Portland
Work Order: HS14040705

Date/Time Received: **10-Apr-2014 09:26**
Received by: **ECD**

Checklist completed by: *Nicole Brown* eSignature | 16-Apr-2014 Date

Reviewed by: *Bethany McDaniel* eSignature | 17-Apr-2014 Date

Matrices: **Water**

Carrier name: **FedEx**

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shipping container/cooler?	☑	☐	☐
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	

Temperature(s)/Thermometer(s):	2.3/2.3 C/U	IR1
Cooler(s)/Kit(s):	5670	
Date/Time sample(s) sent to storage:	04/16/2014 14:46	

	Yes	No	
Water - VOA vials have zero headspace?	☐	☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	☐	☐	N/A ☑
pH adjusted?	☐	☐	N/A ☑

pH adjusted by:

Login Notes: TB not on COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

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TRK# 0215 8052 9842 3055
MASTER
AB SGRA

FRI – 11 APR 10:30A
PRIORITY OVERNIGHT
77 09
TX-US TAR

CUSTODY SEAL
Time: 7:30
Paul Ward
Apex

Seal Broken By: ED
Date: 4-11-14

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date:
Name:
Comp

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