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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-12 (cont.)	7/15/2014	2.0	1349.74	43	23-43	30.75	--	--	1318.99
	7/22/2014					30.72	--	--	1319.02
	7/31/2014					31.07	--	--	1318.67
	8/5/2014					31.15	--	--	1318.59
	8/14/2014					31.07	--	--	1318.67
	8/20/2014					31.01	--	--	1318.73
	8/26/2014					31.12	--	--	1318.62
	9/3/2014					31.12	--	--	1318.62
	9/10/2014					31.12	--	--	1318.62
	9/17/2014					31.12	--	--	1318.62
	9/24/2014					31.11	--	--	1318.63
	10/1/2014					31.05	--	--	1318.69
	10/8/2014					31.08	--	--	1318.66
	10/16/2014					31.05	--	--	1318.69
	10/21/2014					31.09	--	--	1318.65
	10/28/2014					31.09	--	--	1318.65
	11/4/2014					31.06	--	--	1318.68
	11/11/2014					31.12	--	--	1318.62
	11/25/2014					31.10	--	--	1318.64
	12/3/2014					31.05	--	--	1318.69
	12/9/2014					31.12	--	--	1318.62
	12/17/2014					31.11	--	--	1318.63
	12/23/2014					31.06	--	--	1318.68
	12/31/2014					31.11	--	--	1318.63
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					31.04	--	--	1318.70
	1/28/2015					31.05	--	--	1318.69
	2/4/2015					31.07	--	--	1318.67
	2/9/2015					31.06	--	--	1318.68
	3/18/2015					30.95	--	--	1318.79
	4/20/2015					31.09	--	--	1318.65
	5/22/2015					30.33	--	--	1319.41
	6/15/2015					30.86	--	--	1318.88
MW-13	9/30/2013	2.0	1354.58	45	25-45	31.25	--	--	1323.33
	10/10/2013					31.59	--	--	1322.99
	10/17/2013					31.74	--	--	1322.84
	10/23/2013					31.70	--	--	1322.88
	10/31/2013					31.72	--	--	1322.86
	11/6/2013					31.61	--	--	1322.97
	11/13/2013					31.70	--	--	1322.88
	11/20/2013					30.84	--	--	1323.74
	11/26/2013					31.30	--	--	1323.28
	12/3/2013					31.02	--	--	1323.56
	12/11/2013					31.26	--	--	1323.32
	12/19/2013					31.16	--	--	1323.42
	12/27/2013					31.48	--	--	1323.10
	1/3/2014					NM	--	--	NM
	1/10/2014					31.22	--	--	1323.36
	1/16/2014					32.70	--	--	1321.88
	1/21/2014					31.94	--	--	1322.64
	1/27/2014					31.98	--	--	1322.60
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.92	--	--	1322.66
	2/26/2014					32.10	--	--	1322.48

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	3/4/2014					32.05	--	--	1322.53
	3/13/2014					32.25	--	--	1322.33
	3/18/2014					32.05	--	--	1322.53
	3/27/2014					32.16	--	--	1322.42
	4/3/2014					32.41	--	--	1322.17
	4/7/2014					32.35	--	--	1322.23
	4/17/2014					32.38	--	--	1322.20
	4/22/2014					32.70	--	--	1321.88
	4/29/2014					32.91	--	--	1321.67
	5/8/2014					33.03	--	--	1321.55
	5/13/2014					32.95	--	--	1321.63
	5/20/2014					33.39	--	--	1321.19
	5/29/2014					33.34	--	--	1321.24
	6/3/2014					33.45	--	--	1321.13
	6/10/2014					33.50	--	--	1321.08
	6/18/2014					33.44	--	--	1321.14
	6/24/2014					33.16	--	--	1321.42
	7/1/2014					32.90	--	--	1321.68
	7/10/2014					32.75	--	--	1321.83
	7/15/2014					32.99	--	--	1321.59
	7/22/2014					32.46	--	--	1322.12
	7/31/2014					32.47	--	--	1322.11
	8/5/2014					32.40	--	--	1322.18
	8/14/2014					32.33	--	--	1322.25
	8/20/2014					32.35	--	--	1322.23
	8/26/2014					31.26	--	--	1323.32
MW-13 (cont.)	9/3/2014	2.0	1354.58	45	25-45	32.39	--	--	1322.19
	9/10/2014					32.46	--	--	1322.12
	9/17/2014					32.42	--	--	1322.16
	9/24/2014					32.51	--	--	1322.07
	10/1/2014					32.79	--	--	1321.79
	10/8/2014					32.77	--	--	1321.81
	10/16/2014					33.00	--	--	1321.58
	10/21/2014					32.70	--	--	1321.88
	10/28/2014					32.83	--	--	1321.75
	11/4/2014					32.71	--	--	1321.87
	11/11/2014					32.60	--	--	1321.98
	11/25/2014					32.65	--	--	1321.93
	12/3/2014					32.88	--	--	1321.70
	12/9/2014					32.76	--	--	1321.82
	12/17/2014					32.95	--	--	1321.63
	12/23/2014					32.94	--	--	1321.64
	12/31/2014					32.97	--	--	1321.61
	1/7/2015					NM	--	--	NM
	1/14/2015					33.06	--	--	1321.52
	1/20/2015					32.93	--	--	1321.65
	1/28/2015					32.85	--	--	1321.73
	2/4/2015					33.07	--	--	1321.51
	2/9/2015					32.81	--	--	1321.77
	3/18/2015					33.16	--	--	1321.42
	4/20/2015					33.34	--	--	1321.24
	5/22/2015					32.56	--	--	1322.02
	6/15/2015					31.94	--	--	1322.64

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-14	9/30/2013	2.0	1354.99	45	25-45	31.59	--	--	1323.40
	10/10/2013					31.53	--	--	1323.46
	10/17/2013					31.71	--	--	1323.28
	10/23/2013					31.74	--	--	1323.25
	10/31/2013					31.76	--	--	1323.23
	11/6/2013					NM	--	--	NM
	11/13/2013					31.48	--	--	1323.51
	11/20/2013					30.51	--	--	1324.48
	11/26/2013					31.47	--	--	1323.52
	12/3/2013					31.42	--	--	1323.57
	12/11/2013					31.73	--	--	1323.26
	12/19/2013					31.74	--	--	1323.25
	12/27/2013					31.95	--	--	1323.04
	1/3/2014					NM	--	--	NM
	1/10/2014					31.47	--	--	1323.52
	1/16/2014					32.23	--	--	1322.76
	1/21/2014					32.35	--	--	1322.64
	1/27/2014					32.40	--	--	1322.59
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					32.58	--	--	1322.41
	2/26/2014					32.71	--	--	1322.28
	3/4/2014					32.75	--	--	1322.24
	3/13/2014					32.83	--	--	1322.16
	3/18/2014					32.70	--	--	1322.29
	3/27/2014					32.79	--	--	1322.20
	4/3/2014					32.95	--	--	1322.04
	4/7/2014					33.11	--	--	1321.88
	4/17/2014					33.56	--	--	1321.43
	4/22/2014					33.82	--	--	1321.17
	4/29/2014					NM	--	--	NM
	5/8/2014					34.85	--	--	1320.14
	5/13/2014					35.20	--	--	1319.79
	5/20/2014					34.95	--	--	1320.04
	5/29/2014					34.50	--	--	1320.49
	6/3/2014					34.55	--	--	1320.44
	6/10/2014					33.69	--	--	1321.30
	6/18/2014					33.20	--	--	1321.79
	6/24/2014					32.07	--	--	1322.92
	7/1/2014					31.96	--	--	1323.03
	7/10/2014					31.84	--	--	1323.15
	7/15/2014					31.85	--	--	1323.14
	7/22/2014					31.88	--	--	1323.11
	7/31/2014					31.94	--	--	1323.05
	8/5/2014					32.01	--	--	1322.98
	8/14/2014					32.04	--	--	1322.95

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-14 (cont.)	8/20/2014	2.0	1354.99	45	25-45	32.01	--	--	1322.98
	8/26/2014					32.15	--	--	1322.84
	9/3/2014					32.19	--	--	1322.80
	9/10/2014					32.30	--	--	1322.69
	9/17/2014					32.38	--	--	1322.61
	9/24/2014					32.52	--	--	1322.47
	10/1/2014					32.49	--	--	1322.50
	10/8/2014					32.51	--	--	1322.48
	10/16/2014					32.40	--	--	1322.59
	10/21/2014					NM	--	--	--
	10/29/2014					32.28	--	--	1322.71
	11/4/2014					32.29	--	--	1322.70
	11/11/2014					32.36	--	--	1322.63
	11/25/2014					32.53	--	--	1322.46
	12/3/2014					32.84	--	--	1322.15
	12/9/2014					33.08	--	--	1321.91
	12/17/2014					33.33	--	--	1321.66
	12/23/2014					33.33	--	--	1321.66
	12/31/2014					33.51	--	--	1321.48
	1/7/2015					NM	--	--	NM
	1/14/2015					33.51	--	--	1321.48
	1/20/2015					33.59	--	--	1321.40
	1/28/2015					33.65	--	--	1321.34
	2/4/2015					33.88	--	--	1321.11
	2/9/2015					34.00	--	--	1320.99
	3/18/2015					33.94	--	--	1321.05
	4/20/2015					34.93	--	--	1320.06
	5/22/2015					33.53	--	--	1321.46
	6/15/2015					31.70	--	--	1323.29
MW-15	9/30/2013	2.0	1351.79	45	25-45	32.64	--	--	1319.15
	10/10/2013					32.75	--	--	1319.04
	10/17/2013					32.93	--	--	1318.86
	10/23/2013					32.84	--	--	1318.95
	10/31/2013					32.77	--	--	1319.02
	11/6/2013					32.23	--	--	1319.56
	11/13/2013					31.72	--	--	1320.07
	11/20/2013					30.80	--	--	1320.99
	11/26/2013					30.96	--	--	1320.83
	12/3/2013					30.63	--	--	1321.16
	12/11/2013					30.93	--	--	1320.86
	12/19/2013					31.75	--	--	1320.04
	12/27/2013					31.05	--	--	1320.74
	1/3/2014					NM	--	--	NM
	1/10/2014					31.10	--	--	1320.69
	1/16/2014					31.30	--	--	1320.49
	1/21/2014					31.61	--	--	1320.18
	1/27/2014					31.61	--	--	1320.18
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					31.82	--	--	1319.97
	2/26/2014					32.03	--	--	1319.76
	3/4/2014					32.10	--	--	1319.69
	3/13/2014					37.20	--	--	1314.59
	3/18/2014					37.00	--	--	1314.79
	3/27/2014					32.29	--	--	1319.50
	4/3/2014					32.60	--	--	1319.19
	4/7/2014					32.89	--	--	1318.90

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
	4/17/2014					33.69	--	--	1318.10
	4/22/2014					34.24	--	--	1317.55
	4/29/2014					34.95	--	--	1316.84
	5/8/2014					35.85	--	--	1315.94
	5/13/2014					35.89	--	--	1315.90
	5/20/2014					38.63	--	--	1313.16
	5/29/2014					36.85	--	--	1314.94
	6/3/2014					NM	--	--	NM
	6/10/2014					NM	--	--	NM
	6/18/2014					35.10	--	--	1316.69
	6/24/2014					34.65	--	--	1317.14
	7/1/2014					33.78	--	--	1318.01
	7/10/2014					33.35	--	--	1318.44
	7/15/2014					33.40	--	--	1318.39
	7/22/2014					33.29	--	--	1318.50
	7/31/2014					33.89	--	--	1317.90
	8/5/2014					34.04	--	--	1317.75
	8/14/2014					34.19	--	--	1317.60
	8/20/2014					34.28	--	--	1317.51
	8/26/2014					34.44	--	--	1317.35
	9/3/2014					34.65	--	--	1317.14
	9/10/2014					34.79	--	--	1317.00
	9/17/2014					34.98	--	--	1316.81
MW-15 (cont.)	9/24/2014	2.0	1351.79	45	25-45	35.29	--	--	1316.50
	10/1/2014					35.51	--	--	1316.28
	10/8/2014					35.53	--	--	1316.26
	10/16/2014					35.61	--	--	1316.18
	10/21/2014					35.41	--	--	1316.38
	10/28/2014					35.16	--	--	1316.63
	11/4/2014					35.07	--	--	1316.72
	11/11/2014					35.02	--	--	1316.77
	11/25/2014					30.11	--	--	1321.68
	12/3/2014					35.37	--	--	1316.42
	12/9/2014					35.42	--	--	1316.37
	12/17/2014					NM	--	--	NM
	12/23/2014					35.13	--	--	1316.66
	12/31/2014					30.59	--	--	1321.20
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					34.93	--	--	1316.86
	1/28/2015					34.98	--	--	1316.81
	2/4/2015					35.12	--	--	1316.67
	2/9/2015					35.02	--	--	1316.77
	3/18/2015					35.04	--	--	1316.75
	4/20/2015					36.50	--	--	1315.29
	5/22/2015					34.53	--	--	1317.26
	6/15/2015					32.34	--	--	1319.45
	9/30/2013					31.60	--	--	1320.53
	10/10/2013					30.76	--	--	1321.37
	10/17/2013					30.79	--	--	1321.34
	10/23/2013					30.78	--	--	1321.35
MW-16	10/31/2013	2.0	1352.13	45	25-45	30.80	--	--	1321.33
	11/6/2013					30.33	--	--	1321.80
	11/13/2013					30.01	--	--	1322.12
	11/20/2013					29.63	--	--	1322.50
	11/26/2013					29.71	--	--	1322.42

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-16 (cont.)	12/3/2013	2.0	1352.13	45	25-45	29.52	--	--	1322.61
	12/11/2013					29.71	--	--	1322.42
	12/19/2013					28.51	--	--	1323.62
	12/27/2013					29.97	--	--	1322.16
	1/3/2014					NM	--	--	NM
	1/10/2014					29.91	--	--	1322.22
	1/16/2014					29.70	--	--	1322.43
	1/21/2014					29.89	--	--	1322.24
	1/27/2014					29.60	--	--	1322.53
	2/5/2014					NM	--	--	NM
	2/12/2014					NM	--	--	NM
	2/19/2014					29.41	--	--	1322.72
	2/26/2014					29.68	--	--	1322.45
	3/4/2014					NM	--	--	NM
	3/13/2014					28.71	--	--	1323.42
	3/18/2014					29.50	--	--	1322.63
	3/27/2014					29.62	--	--	1322.51
	4/3/2014					29.86	--	--	1322.27
	4/7/2014					30.05	--	--	1322.08
	4/17/2014					30.84	--	--	1321.29
	4/22/2014					30.95	--	--	1321.18
	4/29/2014					31.30	--	--	1320.83
	5/8/2014					31.81	--	--	1320.32
	5/13/2014					31.84	--	--	1320.29
	5/20/2014					32.91	--	--	1319.22
	5/29/2014					32.81	--	--	1319.32
	6/3/2014					32.44	--	--	1319.69
	6/10/2014					NM	--	--	NM
	6/18/2014					31.31	--	--	1320.82
	6/24/2014					29.93	--	--	1322.20
	7/1/2014					29.65	--	--	1322.48
	7/10/2014					28.95	--	--	1323.18
	7/15/2014					28.82	--	--	1323.31
	7/22/2014					28.78	--	--	1323.35
	7/31/2014					29.19	--	--	1322.94
	8/5/2014					29.20	--	--	1322.93
	8/14/2014					29.09	--	--	1323.04
	8/20/2014					29.21	--	--	1322.92
	8/26/2014					29.23	--	--	1322.90
	9/3/2014					29.38	--	--	1322.75
	9/10/2014					29.58	--	--	1322.55
	9/17/2014					29.71	--	--	1322.42
	9/24/2014					29.95	--	--	1322.18
	10/1/2014					30.04	--	--	1322.09
	10/8/2014					30.08	--	--	1322.05
	10/16/2014					30.04	--	--	1322.09

Please refer to notes at end of table.

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

Well ID	Measurement Date	Casing Diameter (inches)	Top of Casing Elevation (feet)[1]	Total Depth (feet bgs)	Screen Interval (feet bgs)	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet MSL)
MW-16 (cont.)	10/21/2014	2.0	1352.13	45	25-45	29.69	--	--	1322.44
	10/28/2014					29.69	--	--	1322.44
	11/4/2014					30.06	--	--	1322.07
	11/11/2014					30.21	--	--	1321.92
	11/25/2014					NM	--	--	--
	12/3/2014					30.18	--	--	1321.95
	12/9/2014					30.30	--	--	1321.83
	12/17/2014					30.47	--	--	1321.66
	12/23/2014					30.38	--	--	1321.75
	12/31/2014					30.56	--	--	1321.57
	1/7/2015					NM	--	--	NM
	1/14/2015					NM	--	--	NM
	1/20/2015					30.71	--	--	1321.42
	1/28/2015					20.13	--	--	1332.00
	2/4/2015					30.76	--	--	1321.37
	2/9/2015					31.09	--	--	1321.04
	3/18/2015					31.80	--	--	1320.33
	4/20/2015					33.03	--	--	1319.10
	5/22/2015					31.56	--	--	1320.57
	6/15/2015					29.48	--	--	1322.65
MW-17	3/18/2015		1351.69			NM	--	--	NM
	4/20/2015					33.91	--	--	1317.78
	5/22/2015					32.55	--	--	1319.14
	6/10/2015					31.15	--	--	1320.54
	6/15/2015					31.28	--	--	1320.41
MW-18	3/18/2015		1351.11			27.93	--	--	1323.18
	4/20/2015					33.51	--	--	1317.60
	5/22/2015					31.54	--	--	1319.57
	6/10/2015					30.50	--	--	1320.61
	6/15/2015					30.64	--	--	1320.47
MW-19	3/18/2015		1351.13			35.19	--	--	1315.94
	4/20/2015					33.70	--	--	1317.43
	5/22/2015					31.67	--	--	1319.46
	6/10/2015					30.24	--	--	1320.89
	6/15/2015					30.60	--	--	1320.53
									Pond Stage (feet MSL)
Stormwater Pond	8/8/2013	NA	NA	NA	NA	NA	--	--	1344.75
	8/13/2013						--	--	1344.75
	8/21/2013						--	--	1344.50
	8/28/2013						--	--	1344.25
	9/5/2013						--	--	1344.25
	9/11/2013						--	--	1344.00
	9/17/2013						--	--	1344.00
	9/23/2013						--	--	1344.50
	10/3/2013						--	--	1344.50
	10/10/2013						--	--	1344.50
	10/17/2013						--	--	1344.00
	10/23/2013						--	--	1344.50
	10/31/2013						--	--	1345.00
	11/6/2013						--	--	1344.75
	11/13/2013						--	--	1344.50
	11/20/2013						--	--	1344.50
	11/26/2013						--	--	1344.25
	12/3/2013						--	--	1344.25
	12/11/2013						--	--	1344.75
	12/19/2013						--	--	1344.25
	12/27/2013						--	--	1344.25
	1/3/2014						--	--	NM
	1/10/2014						--	--	1344.00
	1/16/2014						--	--	1344.00
	1/21/2014						--	--	1344.00
	1/27/2014						--	--	NM
	2/5/2014						--	--	NM
	2/12/2014						--	--	NM
	2/19/2014						--	--	NM
	2/26/2014						--	--	1344.00
	3/4/2014						--	--	NM
	3/13/2014						--	--	1344.00
	3/18/2014						--	--	1344.00
	3/27/2014						--	--	1343.75

Please refer to notes at end of table.

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

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

Notes:

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

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

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

Notes:

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

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

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

Please refer to notes at end of table.

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

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
12/3/2013	39.44	sheen	0.00	0.0	NM	0.0	Mobile vacuum truck
12/11/2013	39.63	sheen	0.00	0.0	NM	0.0	Mobile vacuum truck
12/19/2013	39.23	--	0.00	0.0	NM	0.0	Mobile vacuum truck
12/27/2013	39.38	39.34	0.04	0.1	NM	0.0	Mobile vacuum truck
1/3/2014	NM	NM	NM	--	50.0	NM	Mobile vacuum truck
1/10/2014	39.89	--	0.00	0.0	50.0	0.0	Mobile vacuum truck
1/16/2014	39.83	--	0.00	0.0	50.0	0.0	Mobile vacuum truck
1/21/2014	39.34	--	0.00	0.0	75.0	0.0	Mobile vacuum truck
1/30/2014	38.85	--	0.00	0.0	50.0	0.0	Mobile vacuum truck
2/12/2014	39.44	39.43	0.01	0.0	100.0	0.0	Mobile vacuum truck
2/19/2014	39.37	39.36	0.01	0.0	75.0	0.0	Mobile vacuum truck
2/26/2014	39.64	39.60	0.04	0.1	100.0	0.0	Mobile vacuum truck
3/4/2014	39.76	39.73	0.03	0.1	75.0	0.0	Mobile vacuum truck
3/13/2014	39.89	39.86	0.03	0.1	100.0	0.0	Mobile vacuum truck
3/18/2014	39.65	39.61	0.04	0.1	50.0	0.0	Mobile vacuum truck
3/27/2014	39.73	39.69	0.04	0.1	100.0	0.0	Mobile vacuum truck
4/3/2014	40.46	40.42	0.04	0.1	50.0	0.0	Mobile vacuum truck
4/8/2014	41.14	41.11	0.03	0.1	50.0	0.0	Mobile vacuum truck
4/9/2014	41.47	41.43	0.04	0.1	50.0	0.0	Mobile vacuum truck
4/10/2014	41.82	41.76	0.06	0.2	50.0	0.0	Mobile vacuum truck
4/11/2014	43.25	43.21	0.04	0.1	50.0	0.0	Mobile vacuum truck
4/17/2014	43.17	43.13	0.04	0.1	25.0	0.0	Mobile vacuum truck
4/22/2014	44.95	44.90	0.05	0.1	25.0	0.0	Mobile vacuum truck
4/29/2014	46.43	46.36	0.07	0.2	25.0	0.0	Mobile vacuum truck

Please refer to notes at end of table.

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

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
5/8/2014	51.28	51.15	0.13	0.3	25.0	0.0	Mobile vacuum truck
5/13/2014	51.83	51.66	0.17	0.4	50.0	0.0	Mobile vacuum truck
5/20/2014	54.12	53.94	0.18	0.4	25.0	0.0	Mobile vacuum truck
5/21/2014	55.28	55.11	0.17	0.4	25.0	0.0	Mobile vacuum truck
5/29/2014	52.24	52.06	0.18	0.4	0.0	0.0	Mobile vacuum truck
5/30/2014	53.32	53.13	0.19	0.5	0.0	0.0	Mobile vacuum truck
6/2/2014	52.65	52.50	0.15	0.4	75.0	0.0	Mobile vacuum truck
6/3/2014	52.63	52.49	0.14	0.4	25.0	0.0	Mobile vacuum truck
6/10/2014	48.48	48.31	0.17	0.4	50.0	0.0	Mobile vacuum truck
6/11/2014	49.10	48.95	0.15	0.4	25.0	0.0	Mobile vacuum truck
6/18/2014	46.34	46.20	0.14	0.4	25.0	0.0	Mobile vacuum truck
6/19/2014	47.60	47.43	0.17	0.4	0.0	0.0	Mobile vacuum truck
6/24/2014	47.80	47.67	0.13	0.3	25.0	0.0	Mobile vacuum truck
6/25/2014	46.94	46.81	0.13	0.3	25.0	0.0	Mobile vacuum truck
7/1/2014	44.64	44.50	0.14	0.3	0.0	0.0	Mobile vacuum truck
7/2/2014	44.78	44.64	0.14	0.4	0.0	0.0	Mobile vacuum truck
7/10/2014	46.12	46.03	0.09	0.2	10.0	0.0	Mobile vacuum truck
7/11/2014	47.02	46.91	0.11	0.3	0.0	0.0	Mobile vacuum truck
7/15/2014	46.41	46.33	0.08	0.1	50.0	0.0	Mobile vacuum truck
7/16/2014	47.55	47.41	0.14	0.3	50.0	0.0	Mobile vacuum truck
7/22/2014	48.32	48.21	0.11	0.3	25.0	0.0	Mobile vacuum truck
7/23/2014	49.38	49.27	0.11	0.3	25.0	0.0	Mobile vacuum truck
7/31/2014	49.18	49.06	0.12	0.3	25.0	0.0	Mobile vacuum truck

Please refer to notes at end of table.

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

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
8/1/2014	51.04	--	0.00	0.0	25.0	0.0	Mobile vacuum truck
8/5/2014	52.05	51.92	0.13	0.1	25.0	0.1	Mobile vacuum truck
8/6/2014	52.92	52.79	0.13	0.3	25.0	sheen	Mobile vacuum truck
8/14/2015	52.94	52.79	0.15	0.2	25.0	0.1	Mobile vacuum truck
8/15/2014	51.40	51.31	0.09	0.2	25.0	0.0	Mobile vacuum truck
8/20/2014	54.23	54.09	0.14	0.3	25.0	0.0	Mobile vacuum truck
8/21/2014	55.02	54.98	0.04	0.1	0.0	0.0	Mobile vacuum truck
8/26/2014	58.27	58.20	0.07	0.1	25.0	0.0	Mobile vacuum truck
8/27/2014	58.57	58.39	0.18	0.4	25.0	0.0	Mobile vacuum truck
9/3/2014	57.48	57.29	0.19	0.4	25.0	0.0	Mobile vacuum truck
9/4/2014	58.28	58.22	0.06	0.2	25.0	0.0	Mobile vacuum truck
9/10/2014	58.12	57.94	0.18	0.4	0.0	0.0	Mobile vacuum truck
9/11/2014	59.15	58.96	0.19	0.4	0.0	0.0	Mobile vacuum truck
9/16/2014	58.14	57.98	0.16	0.4	0.0	0.0	Mobile vacuum truck
9/17/2014	58.95	58.75	0.20	0.5	25.0	0.0	Mobile vacuum truck
9/24/2014	59.17	58.95	0.22	0.5	0.0	sheen	Mobile vacuum truck
9/25/2014	60.58	60.35	0.23	0.6	0.0	0.0	Mobile vacuum truck
10/1/2014	60.51	60.30	0.21	0.4	25.0	0.1	Mobile vacuum truck
10/2/2014	60.53	60.47	0.06	0.2	25.0	0.0	Mobile vacuum truck
10/8/2014 (a.m.)	60.39	60.18	0.21	0.3	25.0	0.1	Mobile vacuum truck
10/8/2014 (p.m.)	60.24	60.12	0.12	0.2	25.0	0.1	Mobile vacuum truck
10/17/2014	--	--	--	--	25.0	--	Mobile vacuum truck

Please refer to notes at end of table.

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

Date	Depth to Groundwater (feet bgs)	Depth to SPH (feet)	Product Thickness (feet)	Minimum SPH Recovered (gallons)	Total Fluids Recovered (SPH and Water)	SPH Thickness After Removal Event	Fluid Removal Technology
10/18/2014	56.69	56.56	0.13	0.3	25.0	0.0	Mobile vacuum truck
10/21/2014	56.52	56.35	0.17	0.2	25.0	0.1	Mobile vacuum truck
10/22/2014	56.62	56.43	0.19	0.3	25.0	0.1	Mobile vacuum truck
10/30/2014	56.75	56.43	0.32	0.5	25.0	0.1	Mobile vacuum truck
11/4/2014	56.21	56.09	0.12	0.1	25.0	0.1	Mobile vacuum truck
11/11/2014	54.45	54.35	0.10	0.2	25.0	0.0	Mobile vacuum truck
11/18/2014	53.11	53.00	0.11	0.3	25.0	0.0	Mobile vacuum truck
11/25/2014	50.35	50.23	0.12	0.3	25.0	0.0	Mobile vacuum truck
12/3/2014	49.23	49.12	0.11	0.2	50.0	0.0	Mobile vacuum truck
12/3/2014	49.23	49.12	0.11	0.2	50.0	0.01	Mobile vacuum truck
12/9/2014	48.71	48.61	0.10	0.2	50.0	0.03	Mobile vacuum truck
12/17/2014	47.93	47.88	0.05	0.1	25.0	0.01	Mobile vacuum truck
12/23/2014	47.13	47.06	0.07	0.2	25.0	0.00	Mobile vacuum truck
12/31/2014	47.03	46.98	0.05	0.1	50.0	0.00	Mobile vacuum truck
1/7/2015	46.87	46.78	0.09	0.2	50.0	0.01	Mobile vacuum truck
1/14/2015	46.32	46.29	0.03	0.0	0.0	0.03	None
1/20/2015	46.27	–	0.00	0.0	0.0	0.00	None
1/28/2015	47.34	47.27	0.07	0.0	0.0	0.07	None
2/4/2015	45.92	45.84	0.08	0.0	0.0	0.08	None
2/9/2015	45.59	45.55	0.04	0.1	50.0	0.01	Mobile vacuum truck
3/18/2015	45.55	–	0.00	0.3	0.3	0.00	SPH Skimmer
4/20/2015	44.49	–	0.00	0.0	0.0	0.00	SPH Skimmer
5/22/2015	45.13	–	–	0.0	0.0	0.00	SPH Skimmer
6/10/2015	45.43	–	0.00	0.0	0.0	0.00	SPH Skimmer
6/16/2015	42.38	–	0.00	0.0	0.0	0.00	SPH Skimmer
			Total Fluids Recovered	32	2710		

Notes:

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

Appendix C

Well Survey

Garber Surveying Service, P.A.
2908 North Plum St.
Hutchinson, Kansas 67502
(620) 665-7032

2015-221

APEX COMPANIES, LLC

ANDOVER MONITOR WELLS

SEDGWICK COUNTY, KANSAS

July 15, 2015

GSS PT. NO.	SPC - Kansas South Zone (1502) NAD83(2011)(Epoch2010.0000) U.S. Survey Feet NORTHING	EASTING	Elevation NAVD88-Geoid 12a U.S. Survey Feet Top of PVC	Top of Lid	Top of Well cap	DESCRIPTION	ADDRESS	DISTANCE FROM SOUTHEAST SECTION CORNER NORTH (along section line)	WEST (perpendicular to Section Line)	Survey Date
13	1699364.60	1703667.23	1352.13	1352.62		MW-01		4796	3417	10/17/13
16	1699248.99	1703594.08	1353.17	1353.49		MW-02		4681	3492	10/17/13
10	1699359.16	1703747.78	1350.47	1351.05		MW-03		4789	3337	10/17/13
14	1699435.61	1703681.47	1350.73	1351.10		MW-04		4866	3402	10/17/13
15	1699429.23	1703543.08	1352.77	1353.26		MW-05		4862	3540	10/17/13
11	1699258.28	1703716.83	1349.76	1350.19		MW-06		4689	3369	10/17/13
12	1699169.01	1703715.82	1348.98	1349.53		MW-07		4599	3371	10/17/13
17	1699426.51	1703461.61	1353.38	1353.76		MW-08		4860	3622	10/17/13
9	1699338.64	1703810.61	1349.48	1349.75		MW-09		4768	3274	10/17/13
8	1699275.74	1703861.75	1348.79	1349.18		MW-10		4704	3224	10/17/13
1001	1699369.65	1703677.81	1351.69	1351.88		MW-17		4800	3406	04/17/15
1002	1699399.59	1703662.80	1351.11	1351.36		MW-18		4831	3421	04/17/15
1003	1699402.13	1703665.80	1351.13	1351.38		MW-19		4833	3418	04/17/15
1008	1699333.69	1703688.21			1353.06	Irrigation Well	2006 North Colt Court	4764	3396	04/17/15
1009	1699528.67	1703585.76			1353.80	Irrigation Well	2019 North Ruger Circle	4961	3496	04/17/15
1012	1699275.20	1703516.79			1355.73	Irrigation Well	2005 North Colt Court	4708	3569	04/17/15
1013	1699369.42	1703432.31			1355.60	Irrigation Well	2007 North Colt Court	4803	3652	04/17/15
1016	1699099.70	1703548.23			1353.35	Irrigation Well	2002 North Colt Court	4532	3540	04/17/15
1017	1699387.66	1703837.56			1352.51	Irrigation Well	2020 North Ruger Court	4816	3246	04/17/15
2	1698929.89	1704001.58	1344.64			FL OUTFLOW AT RCB		4356	3088	10/17/13
4	1698991.08	1703479.07	1335.52			POND BOTTOM		4424	3610	10/17/13
5	1699032.97	1703404.14	1335.73			POND BOTTOM		4467	3684	10/17/13
6	1698989.42	1703607.02	1335.78			POND BOTTOM		4421	3482	10/17/13
7	1698997.81	1703716.64	1335.60			POND BOTTOM		4428	3372	10/17/13
21	1694613.91	1707146.34	1352.87			SE SEC COR 5/8IN REBAR		0	0	10/17/13
22	1699918.26	1707077.40	1341.65			NE SEC COR 1/2IN PIPE		5304	0	10/17/13
24	1699117.06	1703720.40	1347.59			TOP OF T-POST@GAUGE		4547	3367	10/17/13
1	1699431.34	1703284.27	1355.27			BM1-OPUS1-SQR CUT		4887	3799	10/17/13

The water surface gauge consists of a PVC pipe marked in major (black) increments of one foot and minor (colored) increments of 0.25 foot. The PVC pipe is secured to a steel T-post driven into the pond bottom.

The elevation at the top of the T-post is 1347.59

SURVEYOR'S CERTIFICATE:

I hereby certify the above data to be a true and correct representation of the elevations and locations of said monitor and irrigation wells, as surveyed under my supervision this 15th day of July, 2015.

Don W. Jones RLS 1480

DON W. JONES REGISTERED LS-1480 7-15-2015 KANSAS LAND SURVEYOR

U:\LDD_GSSFILES\2015\20150221 C3d\Excel\20150221-APEX.xlsx

WATER WELL RECORD — Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: Butler

Fraction: SW ¼ NW ¼ NE ¼ NW ¼

Section Number: 7 | Township No.: T 27 S | Range Number: R 3 ☑E ☐W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☐.

2006 N Colt Court
Andover, KS 67002

Global Positioning System (GPS) information:
Latitude: 37.7217778° (in decimal degrees)
Longitude: -097.1470722° (in decimal degrees)
Elevation: .....
Datum: ☐ WGS 84, ☐ NAD 83, ☐ NAD 27
Collection Method:
☐ GPS unit (Make/Model: .....)
☑ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ <3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ >15 m

2 WATER WELL OWNER: NuStar Pipeline Operating Plant
RR#, Street Address, Box #: 19003 IH-10 West
City, State, ZIP Code : San Antonio, TX 78257

3 LOCATE WELL WITH AN "X" IN SECTION BOX:

N
W | E
S
|---------1 mile---------|

- - NW - -	- - NE - -
- - SW - -	- - SE - -

4 DEPTH OF COMPLETED WELL 42 ft.
Depth(s) Groundwater Encountered (1) n/a ft. (2) ..... ft. (3) ..... ft.
WELL'S STATIC WATER LEVEL ..... ft. below land surface measured on mo/day/yr .....
Pump test data: Well water was ..... ft. after ..... hours pumping ..... gpm
EST. YIELD ..... gpm. Well water was ..... ft. after ..... hours pumping ..... gpm
Bore Hole Diameter 6 in. to 45 ft., and ..... in. to ..... ft.
WELL WATER TO BE USED AS: ☐ Public water supply ☐ Geothermal ☐ Injection well
☐ Domestic ☐ Feedlot ☐ Oil field water supply ☐ Dewatering ☐ Other (Specify below)
☐ Irrigation ☐ Industrial ☐ Domestic-lawn & garden ☑ Monitoring well .....
Was a chemical/bacteriological sample submitted to Department? ☐ Yes ☐ No
If yes, mo/day/yr sample was submitted .....
Water well disinfected? ☐ Yes ☑ No

5 TYPE OF CASING USED: ☐ Steel ☑ PVC ☐ Other .....
CASING JOINTS: ☐ Glued ☐ Clamped ☐ Welded ☑ Threaded
Casing diameter 2 in. to 27 ft., Diameter ..... in. to ..... ft., Diameter ..... in. to ..... ft.
Casing height above land surface -0.25 in., Weight ..... lbs./ft., Wall thickness or gauge No. Sch 40
TYPE OF SCREEN OR PERFORATION MATERIAL:
☐ Steel ☐ Stainless Steel ☑ PVC ☐ Other (Specify) .....
☐ Brass ☐ Galvanized Steel ☐ None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
☐ Continuous slot ☑ Mill slot ☐ Gauze wrapped ☐ Torch cut ☐ Drilled holes ☐ None (open hole)
☐ Louvered shutter ☐ Key punched ☐ Wire wrapped ☐ Saw cut ☐ Other (specify) .....
SCREEN-PERFORATED INTERVALS: From 27 ft. to 42 ft., From ..... ft. to ..... ft.
From ..... ft. to ..... ft., From ..... ft. to ..... ft.
GRAVEL PACK INTERVALS: From 25 ft. to 44 ft., From ..... ft. to ..... ft.
From ..... ft. to ..... ft., From ..... ft. to ..... ft.

6 GROUT MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other .....
Grout Intervals: From 1 ft. to 25 ft., From 44 ft. to 45 ft., From ..... ft. to ..... ft.
What is the nearest source of possible contamination:
☐ Septic tank ☐ Lateral lines ☐ Pit privy ☐ Livestock pens ☐ Insecticide storage ☐ Other (specify below)
☐ Sewer lines ☐ Cesspool ☐ Sewage lagoon ☐ Fuel storage ☐ Abandoned water well
☐ Watertight sewer lines ☐ Seepage pit ☐ Feedyard ☐ Fertilizer storage ☐ Oil well/gas well .....
Direction from well ..... Distance from well .....

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	1	Grass/Topsoil			
1	5	Dark Brown Clay			
5	11	Light Brown Clay w/ fine sand			
11	19	Silty Light Brown Clay			
19	31	Light Brown Clay w/Gravel			
31	34	Silty Brown Clay			
34	36	Shale/Limestone			
36	41	Light Brown Clay			
41	43	Shale/Limstone			
43	45	Silty Light Brown Clay			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was ☑ constructed, ☐ reconstructed, or ☐ plugged under my jurisdiction and was completed on (mo/day/year) 3/17/15 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 102 This Water Well Record was completed on (mo/day/year) 5/21/15 under the business name of Layne Christen Company by (signature) Robert Knopf

INSTRUCTIONS: Use typewriter or ball point pen. *PLEASE PRESS FIRMLY* and *PRINT* clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell/index.html.

KSA 82a-1212

Check: ☐ White Copy, ☐ Blue Copy, ☐ Pink Copy

MW-18

WATER WELL RECORD — Form WWC-5

Division of Water Resources App. No. ____

1 LOCATION OF WATER WELL: County: Butler

Fraction: SW ¼ NW ¼ NE ¼ NW ¼

Section Number: 7 | Township No.: T 27 S | Range Number: R 3 ☑E ☐W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☐.

2006 N Colt Court
Andover, KS 67002

Global Positioning System (GPS) information:
Latitude: 37.7218778° (in decimal degrees)
Longitude: -097.1471389° (in decimal degrees)
Elevation: ____
Datum: ☐ WGS 84, ☐ NAD 83, ☐ NAD 27
Collection Method:
☐ GPS unit (Make/Model: ____)
☑ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ <3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ >15 m

2 WATER WELL OWNER: NuStar Pipeline Operating Plant
RR#, Street Address, Box #: 19003 IH-10 West
City, State, ZIP Code: San Antonio, TX 78257

3 LOCATE WELL WITH AN "X" IN SECTION BOX:

N
W: -- NW -- | -- NE -- (X) : E
-- SW -- | -- SE --
S
|---------1 mile---------|

4 DEPTH OF COMPLETED WELL 42 ft.
Depth(s) Groundwater Encountered (1) n/a ft. (2) ____ ft. (3) ____ ft.
WELL'S STATIC WATER LEVEL ____ ft. below land surface measured on mo/day/yr ____
Pump test data: Well water was ____ ft. after ____ hours pumping ____ gpm
EST. YIELD ____ gpm. Well water was ____ ft. after ____ hours pumping ____ gpm
Bore Hole Diameter 6 in. to 45 ft., and ____ in. to ____ ft.
WELL WATER TO BE USED AS: ☐ Public water supply ☐ Geothermal ☐ Injection well
☐ Domestic ☐ Feedlot ☐ Oil field water supply ☐ Dewatering ☐ Other (Specify below)
☐ Irrigation ☐ Industrial ☐ Domestic-lawn & garden ☑ Monitoring well ____
Was a chemical/bacteriological sample submitted to Department? ☐ Yes ☐ No
If yes, mo/day/yr sample was submitted ____
Water well disinfected? ☐ Yes ☑ No

5 TYPE OF CASING USED: ☐ Steel ☑ PVC ☐ Other ____
CASING JOINTS: ☐ Glued ☐ Clamped ☐ Welded ☑ Threaded
Casing diameter 2 in. to 27 ft., Diameter ____ in. to ____ ft., Diameter ____ in. to ____ ft.
Casing height above land surface -0.25 in., Weight ____ lbs./ft., Wall thickness or gauge No. Sch 40
TYPE OF SCREEN OR PERFORATION MATERIAL:
☐ Steel ☐ Stainless Steel ☑ PVC ☐ Other (Specify) ____
☐ Brass ☐ Galvanized Steel ☐ None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
☐ Continuous slot ☑ Mill slot ☐ Gauze wrapped ☐ Torch cut ☐ Drilled holes ☐ None (open hole)
☐ Louvered shutter ☐ Key punched ☐ Wire wrapped ☐ Saw cut ☐ Other (specify) ____
SCREEN-PERFORATED INTERVALS: From 27 ft. to 42 ft., From ____ ft. to ____ ft.
From ____ ft. to ____ ft., From ____ ft. to ____ ft.
GRAVEL PACK INTERVALS: From 23 ft. to 44 ft., From ____ ft. to ____ ft.
From ____ ft. to ____ ft., From ____ ft. to ____ ft.

6 GROUT MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other ____
Grout Intervals: From 1 ft. to 23 ft., From 44 ft. to 45 ft., From ____ ft. to ____ ft.
What is the nearest source of possible contamination:
☐ Septic tank ☐ Lateral lines ☐ Pit privy ☐ Livestock pens ☐ Insecticide storage ☐ Other (specify below)
☐ Sewer lines ☐ Cesspool ☐ Sewage lagoon ☐ Fuel storage ☐ Abandoned water well
☐ Watertight sewer lines ☐ Seepage pit ☐ Feedyard ☐ Fertilizer storage ☐ Oil well/gas well ____
Direction from well ____ Distance from well ____

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	1	Asphalt/Concrete/Road Base			
1	5	Dark Brown Clay			
5	7	Light Brown Clay w/ fine sand			
7	13	Silty Light Brown Clay			
13	19	Light Brown Silty Clay w/Gravel			
19	32	Silty Brown Clay			
32	39	Brown Silty Clay w/Gravel			
39	45	Brown Stiff Clay w/Shale			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was ☑ constructed, ☐ reconstructed, or ☐ plugged under my jurisdiction and was completed on (mo/day/year) 3/16/15 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 102 This Water Well Record was completed on (mo/day/year) 5/21/15 under the business name of Layne Christen Company by (signature) Robert Knopf

INSTRUCTIONS: Use typewriter or ball point pen. *PLEASE PRESS FIRMLY* and *PRINT* clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell/index.html.

KSA 82a-1212

Check: ☐ White Copy, ☐ Blue Copy, ☐ Pink Copy

MW-19

WATER WELL RECORD — Form WWC-5

Division of Water Resources App. No.

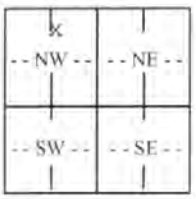
1 LOCATION OF WATER WELL: County: Butler | Fraction: SW ¼ NW ¼ NE ¼ NW ¼ | Section Number: 7 | Township No.: T 27 S | Range Number: R 3 ☑E ☐W

Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☐.
2006 N Colt Court
Andover, KS 67002

Global Positioning System (GPS) information:
Latitude: 37.7218944° (in decimal degrees)
Longitude: -097.1471111° (in decimal degrees)
Elevation: .....
Datum: ☐ WGS 84, ☐ NAD 83, ☐ NAD 27
Collection Method:
☐ GPS unit (Make/Model: .....)
☑ Digital Map/Photo, ☐ Topographic Map, ☐ Land Survey
Est. Accuracy: ☐ <3 m, ☐ 3-5 m, ☐ 5-15 m, ☐ >15 m

2 WATER WELL OWNER: NuStar Pipeline Operating Plant
RR#, Street Address, Box #: 19003 IH-10 West
City, State, ZIP Code: San Antonio, TX 78257

3 LOCATE WELL WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL 42 ft.
Depth(s) Groundwater Encountered (1) n/a ft. (2) ..... ft. (3) ..... ft.
WELL'S STATIC WATER LEVEL ..... ft. below land surface measured on mo/day/yr .....
Pump test data: Well water was ..... ft. after ..... hours pumping ..... gpm
EST. YIELD ..... gpm. Well water was ..... ft. after ..... hours pumping ..... gpm
Bore Hole Diameter 6 in. to 45 ft., and ..... in. to ..... ft.
WELL WATER TO BE USED AS: ☐ Public water supply ☐ Geothermal ☐ Injection well
☐ Domestic ☐ Feedlot ☐ Oil field water supply ☐ Dewatering ☐ Other (Specify below)
☐ Irrigation ☐ Industrial ☐ Domestic-lawn & garden ☑ Monitoring well .....
Was a chemical/bacteriological sample submitted to Department? ☐ Yes ☐ No
If yes, mo/day/yr sample was submitted .....
Water well disinfected? ☐ Yes ☑ No

5 TYPE OF CASING USED: ☐ Steel ☑ PVC ☐ Other .....
CASING JOINTS: ☐ Glued ☐ Clamped ☐ Welded ☑ Threaded
Casing diameter 2 in. to 27 ft., Diameter ..... in. to ..... ft., Diameter ..... in. to ..... ft.
Casing height above land surface -0.25 in., Weight ..... lbs./ft., Wall thickness or gauge No. Sch 40
TYPE OF SCREEN OR PERFORATION MATERIAL:
☐ Steel ☐ Stainless Steel ☑ PVC ☐ Other (Specify) .....
☐ Brass ☐ Galvanized Steel ☐ None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
☐ Continuous slot ☑ Mill slot ☐ Gauze wrapped ☐ Torch cut ☐ Drilled holes ☐ None (open hole)
☐ Louvered shutter ☐ Key punched ☐ Wire wrapped ☐ Saw cut ☐ Other (specify) .....
SCREEN-PERFORATED INTERVALS: From 27 ft. to 42 ft., From ..... ft. to ..... ft.
From ..... ft. to ..... ft., From ..... ft. to ..... ft.
GRAVEL PACK INTERVALS: From 23 ft. to 44 ft., From ..... ft. to ..... ft.
From ..... ft. to ..... ft., From ..... ft. to ..... ft.

6 GROUT MATERIAL: ☐ Neat cement ☐ Cement grout ☑ Bentonite ☐ Other .....
Grout Intervals: From 1 ft. to 23 ft., From 44 ft. to 45 ft., From ..... ft. to ..... ft.
What is the nearest source of possible contamination:
☐ Septic tank ☐ Lateral lines ☐ Pit privy ☐ Livestock pens ☐ Insecticide storage ☐ Other (specify below)
☐ Sewer lines ☐ Cesspool ☐ Sewage lagoon ☐ Fuel storage ☐ Abandoned water well
☐ Watertight sewer lines ☐ Seepage pit ☐ Feedyard ☐ Fertilizer storage ☐ Oil well/gas well .....
Direction from well ..... Distance from well .....

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	1	Asphalt/Concrete/Road Base			
1	5	Dark Brown Clay			
5	7	Light Brown Clay w/ fine sand			
7	13	Silty Light Brown Clay			
13	15	Light Brown Clay w/Shale			
15	23	Silty Brown Clay			
23	45	Greenish Grey Silty Clay w/Gravel			

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was ☑ constructed, ☐ reconstructed, or ☐ plugged under my jurisdiction and was completed on (mo/day/year) 3/16/15 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 102 This Water Well Record was completed on (mo/day/year) 5/21/15 under the business name of Layne Christen Company by (signature) Robert Knopf

INSTRUCTIONS: Use typewriter or ball point pen. *PLEASE PRESS FIRMLY* and *PRINT* clearly. Please fill in blanks and check the correct answers. Send three copies (white, blue, pink) to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one copy to WATER WELL OWNER and retain one for your records. Include fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell/index.html.

KSA 82a-1212 Check: ☐ White Copy, ☐ Blue Copy, ☐ Pink Copy

Appendix D

Laboratory Analytical Report and QA/QC Report

Appendix D — 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 June and July 2015 at the Quail Crossing neighborhood (the Neighborhood) in Andover, Kansas (Site).

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

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

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

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

2.0 Analytical Methods

2.1 Groundwater Analyses

Chemical analyses performed on groundwater samples consisted of the following:

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

Samples were also analyzed for a range of parameters that can be used to evaluate natural attenuation processes. These parameters include:

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

The natural attenuation parameters were presented in the *Interim Groundwater Pilot Test Implementation Report* and are not further discussed herein.

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 HS15060728

The data reviewed includes groundwater samples collected from monitoring wells on June 16, 2015. Samples were analyzed for GRO and volatile organic compounds (VOCs) using the methods listed in Section 2.1. These samples were also analyzed for MNA parameters (alkalinity, iron, methane, ammonia and nitrogen, total organic carbon, potassium, phosphorus, and sulfate); however, those data are not presented in this report and are not reviewed herein. As discussed in Section 2.0, the natural attenuation parameters are not evaluated herein.

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

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

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

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

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

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

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

Matrix Spike Analyses. The RPD for the MS and MS duplicate (MSD) were within control limits.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. A field duplicate was collected from monitoring well MW-19. Analytes detected were within RPD limits with the exceptions of GRO, 1,2,4 trimethylbenzene, and naphthalene. Accordingly, those data are flagged to indicate that the constituent concentrations are estimated.

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

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

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

4.2 Groundwater Lab Report HS15060918

The data reviewed includes groundwater samples collected on June 16 and 17, 2015. Samples were analyzed for GRO and VOCs using the methods listed in Section 2.1.

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

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

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

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

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

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

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

Matrix Spike Analyses. The MS/MSD recoveries were outside of control limits for 1,3,5-Trimethylbenzene, cyclohexane, methylcyclohexane, n-Butylbenzene, and n-Propylbenzene for MW-2.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicates. A field duplicate was collected from monitoring well MW-11. Detected constituents were within RPD limits.

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

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

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

4.3 Groundwater Lab Report HS15060869

The data reviewed includes groundwater samples collected on June 16 and 17. 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 RPD for naphthalene was outside of laboratory control limits.

Lab Duplicate. No lab duplicate was analyzed.

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

Field Duplicate. A field duplicates was analyzed from sample 2019 N Ruger Cir. Constituents were not detected in the primary and duplicate samples.

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

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

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

4.4 Groundwater Lab Report HS15070364

The data reviewed includes one groundwater sample collected on July 7, 2015. The sample was analyzed for GRO and VOCs using the methods listed in Section 2.1.

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

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

Holding Times. The sample was analyzed within all applicable holding times.

Custody Records and Sample Receipt. The sample was received within the required temperature limit of 4°C. The sample was 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 RPD for naphthalene was outside of laboratory control limits.

Lab Duplicate. No lab duplicate was analyzed.

Surrogate Recovery. Surrogate recoveries were within control limits for the sample.

Field Duplicate. Because only one sample was collected, a field duplicates was not collected. Constituents were not detected in the primary sample, which is consistent with historical results.

Trip Blank. No compounds were detected in the primary sample, which acted as a trip blank. No data are flagged.

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

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

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June 25, 2015

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

Work Order: **HS15060728**

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

Dear Samuel,

ALS Environmental received 9 sample(s) on Jun 17, 2015 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: Jumoke.Lawal
Ana L. Spencer

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS15060728

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15060728-01	MW-5	Water		16-Jun-2015 08:59	17-Jun-2015 09:15	☐
HS15060728-02	MW-17	Water		16-Jun-2015 09:40	17-Jun-2015 09:15	☐
HS15060728-03	MW-1	Water		16-Jun-2015 10:10	17-Jun-2015 09:15	☐
HS15060728-04	MW-18	Water		16-Jun-2015 10:45	17-Jun-2015 09:15	☐
HS15060728-05	MW-19	Water		16-Jun-2015 11:18	17-Jun-2015 09:15	☐
HS15060728-06	MW-4	Water		16-Jun-2015 12:10	17-Jun-2015 09:15	☐
HS15060728-07	DUP-1	Water		16-Jun-2015 00:00	17-Jun-2015 09:15	☐
HS15060728-08	TB-05515-72	Water		16-Jun-2015 00:00	17-Jun-2015 09:15	☐
HS15060728-09	TB-052215-71	Water		16-Jun-2015 00:00	17-Jun-2015 09:15	☐

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS15060728

CASE NARRATIVE

Work Order Comments

- The analysis for Carbon Dioxide was subcontracted to ALS Environmental in Simi Valley, CA.

GC Semivolatiles by Method RSK-175

Batch ID: R256692

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

GC Volatiles by Method IA OA-1

Batch ID: R256445

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

Batch ID: R256592

Sample ID: **MW-19 (HS15060728-05)**
- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS may be due to sample matrix interference.

Sample ID: **MW-19 (HS15060728-05)**
- The recovery of the Matrix Spike Duplicate (MSD) associated to this analyte was outside of the established control limits. However, the LCS was within control limits. The failed recovery of the MSD may be due to sample matrix interference.

GCMS Volatiles by Method SW8260

Batch ID: R256468

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

Batch ID: R256499

Sample ID: **VSTD050**
- 2-Butanone exceeded %D limits on CCV. Samples are non detect

Batch ID: R256524

Sample ID: **HS15060744-05**
- MS and MSD are for an unrelated sample

Batch ID: R256530

Sample ID: **VSTD050**
- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020

Batch ID: 94438

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

Batch ID: 94483

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

Batch ID: 94484

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS15060728

CASE NARRATIVE

WetChemistry by Method SM2320B

Batch ID: R256695

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

WetChemistry by Method SM4500 NH3-D

Batch ID: R256451

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

WetChemistry by Method E300

Batch ID: R256424

Sample ID: **HS15060729-01**
- MS and MSD are for an unrelated sample

Sample ID: **MW-5 (HS15060728-01)**
- The MS and/or MSD recovery was outside of the control, however, the result in the parent sample is greater than 4x the spike amount for Sulfate

Batch ID: R256495

Sample ID: **HS15060729-23**
- MS and MSD are for an unrelated sample

Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728	
Sample ID:	MW-5	Lab ID:HS15060728-01	
Collection Date:	16-Jun-2015 08:59	Matrix:Water	

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Jun-2015 19:27
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
2-Butanone	ND		0.0020	mg/L	1	18-Jun-2015 19:27
Benzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
Cyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 19:27
Ethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
Isopropylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
m,p-Xylene	ND		0.0020	mg/L	1	18-Jun-2015 19:27
Methylcyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 19:27
Naphthalene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
n-Butylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
n-Propylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
o-Xylene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
Toluene	ND		0.0010	mg/L	1	18-Jun-2015 19:27
Xylenes, Total	ND		0.0030	mg/L	1	18-Jun-2015 19:27
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*1*	*18-Jun-2015 19:27*
Surr: 4-Bromofluorobenzene	*98.6*		*70-125*	*%REC*	*1*	*18-Jun-2015 19:27*
Surr: Dibromofluoromethane	*107*		*74-125*	*%REC*	*1*	*18-Jun-2015 19:27*
Surr: Toluene-d8	*110*		*75-125*	*%REC*	*1*	*18-Jun-2015 19:27*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**491**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**491**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 13:54
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**1.59**		**0.500**	**ug/L**	1	23-Jun-2015 11:40
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: JDE
Potassium	**0.675**		**0.200**	**mg/L**	1	23-Jun-2015 21:16
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	17-Jun-2015 20:13
Surr: 4-Bromofluorobenzene	*122*		*70-130*	*%REC*	*1*	*17-Jun-2015 20:13*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-5	Lab ID:HS15060728-01
Collection Date:	16-Jun-2015 08:59	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**5.18**		**0.100**	**mg/L**	1	17-Jun-2015 15:28
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 15:28
Sulfate	**162**		**10.0**	**mg/L**	20	17-Jun-2015 17:28

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

Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728	
Sample ID:	MW-17	Lab ID:HS15060728-02	
Collection Date:	16-Jun-2015 09:40	Matrix:Water	

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.19**		**0.0010**	**mg/L**	1	18-Jun-2015 23:01
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Jun-2015 23:01
1,3,5-Trimethylbenzene	**0.31**		**0.010**	**mg/L**	10	18-Jun-2015 23:29
2-Butanone	**0.044**		**0.0020**	**mg/L**	1	18-Jun-2015 23:01
Benzene	**2.0**		**0.010**	**mg/L**	10	18-Jun-2015 23:29
Cyclohexane	**0.37**		**0.010**	**mg/L**	10	18-Jun-2015 23:29
Ethylbenzene	**1.5**		**0.010**	**mg/L**	10	18-Jun-2015 23:29
Isopropylbenzene	**0.044**		**0.0010**	**mg/L**	1	18-Jun-2015 23:01
m,p-Xylene	**3.4**		**0.20**	**mg/L**	100	19-Jun-2015 14:43
Methylcyclohexane	**0.038**		**0.0010**	**mg/L**	1	18-Jun-2015 23:01
Naphthalene	**0.14**		**0.0010**	**mg/L**	1	18-Jun-2015 23:01
n-Butylbenzene	**0.015**		**0.0010**	**mg/L**	1	18-Jun-2015 23:01
n-Propylbenzene	**0.10**		**0.0010**	**mg/L**	1	18-Jun-2015 23:01
o-Xylene	**1.8**		**0.10**	**mg/L**	100	19-Jun-2015 14:43
Toluene	**6.8**		**0.10**	**mg/L**	100	19-Jun-2015 14:43
Xylenes, Total	**5.2**		**0.30**	**mg/L**	100	19-Jun-2015 14:43
Surr: 1,2-Dichloroethane-d4	*80.9*		*71-125*	*%REC*	*1*	*18-Jun-2015 23:01*
Surr: 1,2-Dichloroethane-d4	*92.4*		*71-125*	*%REC*	*10*	*18-Jun-2015 23:29*
Surr: 1,2-Dichloroethane-d4	*82.9*		*71-125*	*%REC*	*100*	*19-Jun-2015 14:43*
Surr: 4-Bromofluorobenzene	*108*		*70-125*	*%REC*	*1*	*18-Jun-2015 23:01*
Surr: 4-Bromofluorobenzene	*107*		*70-125*	*%REC*	*10*	*18-Jun-2015 23:29*
Surr: 4-Bromofluorobenzene	*93.8*		*70-125*	*%REC*	*100*	*19-Jun-2015 14:43*
Surr: Dibromofluoromethane	*97.1*		*74-125*	*%REC*	*10*	*18-Jun-2015 23:29*
Surr: Dibromofluoromethane	*89.0*		*74-125*	*%REC*	*1*	*18-Jun-2015 23:01*
Surr: Dibromofluoromethane	*94.7*		*74-125*	*%REC*	*100*	*19-Jun-2015 14:43*
Surr: Toluene-d8	*97.8*		*75-125*	*%REC*	*10*	*18-Jun-2015 23:29*
Surr: Toluene-d8	*90.6*		*75-125*	*%REC*	*1*	*18-Jun-2015 23:01*
Surr: Toluene-d8	*93.6*		*75-125*	*%REC*	*100*	*19-Jun-2015 14:43*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**471**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**471**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 13:57
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**11.0**		**0.500**	**ug/L**	1	23-Jun-2015 11:54

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: MW-17
Collection Date: 16-Jun-2015 09:40

WorkOrder:HS15060728
Lab ID:HS15060728-02
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: JDE
Potassium	**2.21**		**0.200**	**mg/L**	1	23-Jun-2015 21:20
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**95**		**2.5**	**mg/L**	50	19-Jun-2015 17:06
Surr: 4-Bromofluorobenzene	*111*		*70-130*	*%REC*	*50*	*19-Jun-2015 17:06*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**0.258**		**0.100**	**mg/L**	1	17-Jun-2015 17:52
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 17:52
Sulfate	**32.8**		**0.500**	**mg/L**	1	17-Jun-2015 17:52

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-1	Lab ID:HS15060728-03
Collection Date:	16-Jun-2015 10:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.32**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
1,2-Dichloroethane	ND		0.010	mg/L	10	19-Jun-2015 17:44
1,3,5-Trimethylbenzene	**0.30**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
2-Butanone	ND		0.020	mg/L	10	19-Jun-2015 17:44
Benzene	**5.2**		**0.10**	**mg/L**	100	19-Jun-2015 18:10
Cyclohexane	**0.12**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
Ethylbenzene	**0.47**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
Isopropylbenzene	**0.011**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
m,p-Xylene	**5.3**		**0.20**	**mg/L**	100	19-Jun-2015 18:10
Methylcyclohexane	ND		0.010	mg/L	10	19-Jun-2015 17:44
Naphthalene	**0.11**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
n-Butylbenzene	ND		0.010	mg/L	10	19-Jun-2015 17:44
n-Propylbenzene	**0.012**		**0.010**	**mg/L**	10	19-Jun-2015 17:44
o-Xylene	**2.8**		**0.10**	**mg/L**	100	19-Jun-2015 18:10
Toluene	**11**		**0.10**	**mg/L**	100	19-Jun-2015 18:10
Xylenes, Total	**8.1**		**0.30**	**mg/L**	100	19-Jun-2015 18:10
Surr: 1,2-Dichloroethane-d4	*85.8*		*71-125*	*%REC*	*100*	*19-Jun-2015 18:10*
Surr: 1,2-Dichloroethane-d4	*83.9*		*71-125*	*%REC*	*10*	*19-Jun-2015 17:44*
Surr: 4-Bromofluorobenzene	*92.7*		*70-125*	*%REC*	*10*	*19-Jun-2015 17:44*
Surr: 4-Bromofluorobenzene	*94.4*		*70-125*	*%REC*	*100*	*19-Jun-2015 18:10*
Surr: Dibromofluoromethane	*93.2*		*74-125*	*%REC*	*100*	*19-Jun-2015 18:10*
Surr: Dibromofluoromethane	*95.1*		*74-125*	*%REC*	*10*	*19-Jun-2015 17:44*
Surr: Toluene-d8	*93.1*		*75-125*	*%REC*	*10*	*19-Jun-2015 17:44*
Surr: Toluene-d8	*94.6*		*75-125*	*%REC*	*100*	*19-Jun-2015 18:10*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**503**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**503**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 13:59
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**8.18**		**0.500**	**ug/L**	1	23-Jun-2015 12:10
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-1	Lab ID:HS15060728-03
Collection Date:	16-Jun-2015 10:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: JDE
Potassium	**0.935**		**0.200**	**mg/L**	1	23-Jun-2015 21:25
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**140**		**2.5**	**mg/L**	50	19-Jun-2015 17:24
Surr: 4-Bromofluorobenzene	*115*		*70-130*	*%REC*	*50*	*19-Jun-2015 17:24*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**0.257**		**0.100**	**mg/L**	1	17-Jun-2015 18:16
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 18:16
Sulfate	**36.0**		**0.500**	**mg/L**	1	17-Jun-2015 18:16

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

Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728	
Sample ID:	MW-18	Lab ID:HS15060728-04	
Collection Date:	16-Jun-2015 10:45	Matrix:Water	

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.021**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Jun-2015 23:54
1,3,5-Trimethylbenzene	**0.021**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
2-Butanone	ND		0.0020	mg/L	1	18-Jun-2015 23:54
Benzene	**0.26**		**0.010**	**mg/L**	10	19-Jun-2015 00:22
Cyclohexane	**0.036**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
Ethylbenzene	**0.12**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
Isopropylbenzene	**0.0041**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
m,p-Xylene	**0.24**		**0.0020**	**mg/L**	1	18-Jun-2015 23:54
Methylcyclohexane	**0.0035**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
Naphthalene	**0.015**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
n-Butylbenzene	**0.0016**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
n-Propylbenzene	**0.0089**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
o-Xylene	**0.17**		**0.0010**	**mg/L**	1	18-Jun-2015 23:54
Toluene	**0.59**		**0.010**	**mg/L**	10	19-Jun-2015 00:22
Xylenes, Total	**0.41**		**0.0030**	**mg/L**	1	18-Jun-2015 23:54
Surr: 1,2-Dichloroethane-d4	*84.9*		*71-125*	*%REC*	*10*	*19-Jun-2015 00:22*
Surr: 1,2-Dichloroethane-d4	*88.2*		*71-125*	*%REC*	*1*	*18-Jun-2015 23:54*
Surr: 4-Bromofluorobenzene	*94.0*		*70-125*	*%REC*	*10*	*19-Jun-2015 00:22*
Surr: 4-Bromofluorobenzene	*97.0*		*70-125*	*%REC*	*1*	*18-Jun-2015 23:54*
Surr: Dibromofluoromethane	*95.8*		*74-125*	*%REC*	*1*	*18-Jun-2015 23:54*
Surr: Dibromofluoromethane	*91.1*		*74-125*	*%REC*	*10*	*19-Jun-2015 00:22*
Surr: Toluene-d8	*95.1*		*75-125*	*%REC*	*1*	*18-Jun-2015 23:54*
Surr: Toluene-d8	*97.5*		*75-125*	*%REC*	*10*	*19-Jun-2015 00:22*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**406**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**406**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 14:02
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**3.85**		**0.500**	**ug/L**	1	23-Jun-2015 12:24
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-18	Lab ID:HS15060728-04
Collection Date:	16-Jun-2015 10:45	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 19-Jun-2015		Analyst: RPM
Potassium	**9.15**		**0.200**	**mg/L**	1	22-Jun-2015 15:11
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**6.3**		**0.050**	**mg/L**	1	19-Jun-2015 17:40
Surr: 4-Bromofluorobenzene	*127*		*70-130*	*%REC*	*1*	*19-Jun-2015 17:40*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**0.387**		**0.100**	**mg/L**	1	17-Jun-2015 18:40
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 18:40
Sulfate	**27.0**		**0.500**	**mg/L**	1	17-Jun-2015 18:40

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-19	Lab ID:HS15060728-05
Collection Date:	16-Jun-2015 11:18	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.024**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
1,2-Dichloroethane	ND		0.0010	mg/L	1	19-Jun-2015 11:14
1,3,5-Trimethylbenzene	**0.0074**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
2-Butanone	ND		0.0020	mg/L	1	19-Jun-2015 11:14
Benzene	**0.11**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
Cyclohexane	**0.013**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
Ethylbenzene	**0.045**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
Isopropylbenzene	**0.0015**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
m,p-Xylene	**0.16**		**0.0020**	**mg/L**	1	19-Jun-2015 11:14
Methylcyclohexane	ND		0.0010	mg/L	1	19-Jun-2015 11:14
Naphthalene	**0.0029**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
n-Butylbenzene	ND		0.0010	mg/L	1	19-Jun-2015 11:14
n-Propylbenzene	**0.0031**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
o-Xylene	**0.068**		**0.0010**	**mg/L**	1	19-Jun-2015 11:14
Toluene	**0.30**		**0.010**	**mg/L**	10	19-Jun-2015 11:41
Xylenes, Total	**0.23**		**0.0030**	**mg/L**	1	19-Jun-2015 11:14
Surr: 1,2-Dichloroethane-d4	*115*		*71-125*	*%REC*	*10*	*19-Jun-2015 11:41*
Surr: 1,2-Dichloroethane-d4	*114*		*71-125*	*%REC*	*1*	*19-Jun-2015 11:14*
Surr: 4-Bromofluorobenzene	*96.7*		*70-125*	*%REC*	*1*	*19-Jun-2015 11:14*
Surr: 4-Bromofluorobenzene	*99.0*		*70-125*	*%REC*	*10*	*19-Jun-2015 11:41*
Surr: Dibromofluoromethane	*114*		*74-125*	*%REC*	*10*	*19-Jun-2015 11:41*
Surr: Dibromofluoromethane	*111*		*74-125*	*%REC*	*1*	*19-Jun-2015 11:14*
Surr: Toluene-d8	*109*		*75-125*	*%REC*	*10*	*19-Jun-2015 11:41*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*19-Jun-2015 11:14*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**349**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**349**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 14:05
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**5.43**		**0.500**	**ug/L**	1	23-Jun-2015 12:40
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-19	Lab ID:HS15060728-05
Collection Date:	16-Jun-2015 11:18	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 19-Jun-2015		Analyst: RPM
Potassium	**7.75**		**0.200**	**mg/L**	1	22-Jun-2015 15:14
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.99**		**0.050**	**mg/L**	1	19-Jun-2015 16:15
Surr: 4-Bromofluorobenzene	*128*		*70-130*	*%REC*	*1*	*19-Jun-2015 16:15*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**0.222**		**0.100**	**mg/L**	1	17-Jun-2015 19:51
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 19:51
Sulfate	**40.6**		**0.500**	**mg/L**	1	17-Jun-2015 19:51

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-4	Lab ID:HS15060728-06
Collection Date:	16-Jun-2015 12:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Jun-2015 15:46
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
2-Butanone	ND		0.0020	mg/L	1	18-Jun-2015 15:46
Benzene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
Cyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 15:46
Ethylbenzene	**0.0013**		**0.0010**	**mg/L**	1	18-Jun-2015 15:46
Isopropylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
m,p-Xylene	**0.0046**		**0.0020**	**mg/L**	1	18-Jun-2015 15:46
Methylcyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 15:46
Naphthalene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
n-Butylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
n-Propylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 15:46
o-Xylene	**0.0030**		**0.0010**	**mg/L**	1	18-Jun-2015 15:46
Toluene	**0.0059**		**0.0010**	**mg/L**	1	18-Jun-2015 15:46
Xylenes, Total	**0.0077**		**0.0030**	**mg/L**	1	18-Jun-2015 15:46
Surr: 1,2-Dichloroethane-d4	*88.0*		*71-125*	*%REC*	*1*	*18-Jun-2015 15:46*
Surr: 4-Bromofluorobenzene	*93.5*		*70-125*	*%REC*	*1*	*18-Jun-2015 15:46*
Surr: Dibromofluoromethane	*96.1*		*74-125*	*%REC*	*1*	*18-Jun-2015 15:46*
Surr: Toluene-d8	*93.1*		*75-125*	*%REC*	*1*	*18-Jun-2015 15:46*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**419**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**419**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 14:07
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	ND		0.500	ug/L	1	23-Jun-2015 12:54
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 19-Jun-2015		Analyst: RPM
Potassium	**1.72**		**0.200**	**mg/L**	1	22-Jun-2015 15:16
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.14**		**0.050**	**mg/L**	1	17-Jun-2015 22:35
Surr: 4-Bromofluorobenzene	*125*		*70-130*	*%REC*	*1*	*17-Jun-2015 22:35*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	MW-4	Lab ID:HS15060728-06
Collection Date:	16-Jun-2015 12:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**1.96**		**0.100**	**mg/L**	1	17-Jun-2015 20:15
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 20:15
Sulfate	**117**		**2.50**	**mg/L**	5	18-Jun-2015 18:54

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	DUP-1	Lab ID:HS15060728-07
Collection Date:	16-Jun-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.0071**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
1,2-Dichloroethane	ND		0.0010	mg/L	1	19-Jun-2015 19:52
1,3,5-Trimethylbenzene	**0.0062**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
2-Butanone	ND		0.0020	mg/L	1	19-Jun-2015 19:52
Benzene	**0.11**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
Cyclohexane	**0.012**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
Ethylbenzene	**0.046**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
Isopropylbenzene	**0.0016**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
m,p-Xylene	**0.13**		**0.0020**	**mg/L**	1	19-Jun-2015 19:52
Methylcyclohexane	ND		0.0010	mg/L	1	19-Jun-2015 19:52
Naphthalene	**0.0051**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
n-Butylbenzene	ND		0.0010	mg/L	1	19-Jun-2015 19:52
n-Propylbenzene	**0.0027**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
o-Xylene	**0.067**		**0.0010**	**mg/L**	1	19-Jun-2015 19:52
Toluene	**0.30**		**0.010**	**mg/L**	10	19-Jun-2015 20:20
Xylenes, Total	**0.19**		**0.0030**	**mg/L**	1	19-Jun-2015 19:52
Surr: 1,2-Dichloroethane-d4	*84.7*		*71-125*	*%REC*	*10*	*19-Jun-2015 20:20*
Surr: 1,2-Dichloroethane-d4	*88.1*		*71-125*	*%REC*	*1*	*19-Jun-2015 19:52*
Surr: 4-Bromofluorobenzene	*94.8*		*70-125*	*%REC*	*1*	*19-Jun-2015 19:52*
Surr: 4-Bromofluorobenzene	*91.8*		*70-125*	*%REC*	*10*	*19-Jun-2015 20:20*
Surr: Dibromofluoromethane	*95.9*		*74-125*	*%REC*	*10*	*19-Jun-2015 20:20*
Surr: Dibromofluoromethane	*95.9*		*74-125*	*%REC*	*1*	*19-Jun-2015 19:52*
Surr: Toluene-d8	*95.2*		*75-125*	*%REC*	*1*	*19-Jun-2015 19:52*
Surr: Toluene-d8	*96.7*		*75-125*	*%REC*	*10*	*19-Jun-2015 20:20*
ALKALINITY BY SM2320B		**Method:SM2320B**				Analyst: MJC
Alkalinity, Bicarbonate (As CaCO3)	**351**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Hydroxide (As CaCO3)	ND		5.00	mg/L	1	23-Jun-2015 12:30
Alkalinity, Total (As CaCO3)	**351**		**5.00**	**mg/L**	1	23-Jun-2015 12:30
DISSOLVED METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 22-Jun-2015		Analyst: RPM
Iron	ND		0.200	mg/L	1	23-Jun-2015 14:10
DISSOLVED GASES BY RSK-175		**Method:RSK-175**				Analyst: NPI
Methane	**7.08**		**0.500**	**ug/L**	1	23-Jun-2015 13:09
SUBCONTRACT ANALYSIS		**Method:NA**				Analyst: SUB
Miscellaneous Analysis	See Attached				1	25-Jun-2015 07:25
AMMONIA AS N BY SM4500 NH3-D (ISE)		**Method:SM4500 NH3-D**				Analyst: AP
Nitrogen, Ammonia (as N)	ND		0.20	mg/L	1	18-Jun-2015 13:35

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: DUP-1
Collection Date: 16-Jun-2015 00:00

WorkOrder:HS15060728
Lab ID:HS15060728-07
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**		Prep:SW3010A / 19-Jun-2015		Analyst: RPM
Potassium	**8.17**		**0.200**	**mg/L**	1	22-Jun-2015 15:19
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**2.5**		**0.050**	**mg/L**	1	17-Jun-2015 22:51
Surr: 4-Bromofluorobenzene	*129*		*70-130*	*%REC*	*1*	*17-Jun-2015 22:51*
ANIONS BY E300.0		**Method:E300**				Analyst: JBA
Nitrogen, Nitrate (As N)	**0.216**		**0.100**	**mg/L**	1	17-Jun-2015 20:39
Phosphorus, Orthophosphate (As P)	ND		0.100	mg/L	1	17-Jun-2015 20:39
Sulfate	**40.0**		**0.500**	**mg/L**	1	17-Jun-2015 20:39

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Release Site E3CE-0065	WorkOrder:HS15060728
Sample ID:	TB-05515-72	Lab ID:HS15060728-08
Collection Date:	16-Jun-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Jun-2015 18:31
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
2-Butanone	ND		0.0020	mg/L	1	18-Jun-2015 18:31
Benzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
Cyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 18:31
Ethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
Isopropylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
m,p-Xylene	ND		0.0020	mg/L	1	18-Jun-2015 18:31
Methylcyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 18:31
Naphthalene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
n-Butylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
n-Propylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
o-Xylene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
Toluene	ND		0.0010	mg/L	1	18-Jun-2015 18:31
Xylenes, Total	ND		0.0030	mg/L	1	18-Jun-2015 18:31
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*18-Jun-2015 18:31*
Surr: 4-Bromofluorobenzene	*98.4*		*70-125*	*%REC*	*1*	*18-Jun-2015 18:31*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*1*	*18-Jun-2015 18:31*
Surr: Toluene-d8	*109*		*75-125*	*%REC*	*1*	*18-Jun-2015 18:31*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Sample ID: TB-052215-71
Collection Date: 16-Jun-2015 00:00

WorkOrder:HS15060728
Lab ID:HS15060728-09
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
1,2-Dichloroethane	ND		0.0010	mg/L	1	18-Jun-2015 18:59
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
2-Butanone	ND		0.0020	mg/L	1	18-Jun-2015 18:59
Benzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
Cyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 18:59
Ethylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
Isopropylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
m,p-Xylene	ND		0.0020	mg/L	1	18-Jun-2015 18:59
Methylcyclohexane	ND		0.0010	mg/L	1	18-Jun-2015 18:59
Naphthalene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
n-Butylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
n-Propylbenzene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
o-Xylene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
Toluene	ND		0.0010	mg/L	1	18-Jun-2015 18:59
Xylenes, Total	ND		0.0030	mg/L	1	18-Jun-2015 18:59
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*18-Jun-2015 18:59*
Surr: 4-Bromofluorobenzene	*99.1*		*70-125*	*%REC*	*1*	*18-Jun-2015 18:59*
Surr: Dibromofluoromethane	*111*		*74-125*	*%REC*	*1*	*18-Jun-2015 18:59*
Surr: Toluene-d8	*111*		*75-125*	*%REC*	*1*	*18-Jun-2015 18:59*

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 94438	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS15060728-04	MW-18	16 Jun 2015 10:45		19 Jun 2015 08:08	22 Jun 2015 15:11	1
HS15060728-05	MW-19	16 Jun 2015 11:18		19 Jun 2015 08:08	22 Jun 2015 15:14	1
HS15060728-06	MW-4	16 Jun 2015 12:10		19 Jun 2015 08:08	22 Jun 2015 15:16	1
HS15060728-07	DUP-1	16 Jun 2015 00:00		19 Jun 2015 08:08	22 Jun 2015 15:19	1
Batch ID 94483	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59		22 Jun 2015 10:06	23 Jun 2015 21:16	1
HS15060728-02	MW-17	16 Jun 2015 09:40		22 Jun 2015 10:06	23 Jun 2015 21:20	1
HS15060728-03	MW-1	16 Jun 2015 10:10		22 Jun 2015 10:06	23 Jun 2015 21:25	1
Batch ID 94484	**Test Name :** DISSOLVED METALS BY SW6020A			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59		22 Jun 2015 10:12	23 Jun 2015 13:54	1
HS15060728-02	MW-17	16 Jun 2015 09:40		22 Jun 2015 10:12	23 Jun 2015 13:57	1
HS15060728-03	MW-1	16 Jun 2015 10:10		22 Jun 2015 10:12	23 Jun 2015 13:59	1
HS15060728-04	MW-18	16 Jun 2015 10:45		22 Jun 2015 10:12	23 Jun 2015 14:02	1
HS15060728-05	MW-19	16 Jun 2015 11:18		22 Jun 2015 10:12	23 Jun 2015 14:05	1
HS15060728-06	MW-4	16 Jun 2015 12:10		22 Jun 2015 10:12	23 Jun 2015 14:07	1
HS15060728-07	DUP-1	16 Jun 2015 00:00		22 Jun 2015 10:12	23 Jun 2015 14:10	1
Batch ID R256424	**Test Name :** ANIONS BY E300.0			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59			17 Jun 2015 17:28	20
HS15060728-01	MW-5	16 Jun 2015 08:59			17 Jun 2015 15:28	1
HS15060728-02	MW-17	16 Jun 2015 09:40			17 Jun 2015 17:52	1
HS15060728-03	MW-1	16 Jun 2015 10:10			17 Jun 2015 18:16	1
HS15060728-04	MW-18	16 Jun 2015 10:45			17 Jun 2015 18:40	1
HS15060728-05	MW-19	16 Jun 2015 11:18			17 Jun 2015 19:51	1
HS15060728-06	MW-4	16 Jun 2015 12:10			17 Jun 2015 20:15	1
HS15060728-07	DUP-1	16 Jun 2015 00:00			17 Jun 2015 20:39	1
Batch ID R256445	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59			17 Jun 2015 20:13	1
HS15060728-06	MW-4	16 Jun 2015 12:10			17 Jun 2015 22:35	1
HS15060728-07	DUP-1	16 Jun 2015 00:00			17 Jun 2015 22:51	1
Batch ID R256451	**Test Name :** AMMONIA AS N BY SM4500 NH3-D (ISE)			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59			18 Jun 2015 13:35	1
HS15060728-02	MW-17	16 Jun 2015 09:40			18 Jun 2015 13:35	1
HS15060728-03	MW-1	16 Jun 2015 10:10			18 Jun 2015 13:35	1
HS15060728-04	MW-18	16 Jun 2015 10:45			18 Jun 2015 13:35	1
HS15060728-05	MW-19	16 Jun 2015 11:18			18 Jun 2015 13:35	1
HS15060728-06	MW-4	16 Jun 2015 12:10			18 Jun 2015 13:35	1
HS15060728-07	DUP-1	16 Jun 2015 00:00			18 Jun 2015 13:35	1

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256468		**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water	
HS15060728-01	MW-5	16 Jun 2015 08:59			18 Jun 2015 19:27	1
HS15060728-08	TB-05515-72	16 Jun 2015 00:00			18 Jun 2015 18:31	1
HS15060728-09	TB-052215-71	16 Jun 2015 00:00			18 Jun 2015 18:59	1
Batch ID R256495		**Test Name :** ANIONS BY E300.0			**Matrix:** Water	
HS15060728-06	MW-4	16 Jun 2015 12:10			18 Jun 2015 18:54	5
Batch ID R256499		**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water	
HS15060728-02	MW-17	16 Jun 2015 09:40			18 Jun 2015 23:29	10
HS15060728-02	MW-17	16 Jun 2015 09:40			18 Jun 2015 23:01	1
HS15060728-04	MW-18	16 Jun 2015 10:45			19 Jun 2015 00:22	10
HS15060728-04	MW-18	16 Jun 2015 10:45			18 Jun 2015 23:54	1
HS15060728-06	MW-4	16 Jun 2015 12:10			18 Jun 2015 15:46	1
Batch ID R256524		**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water	
HS15060728-05	MW-19	16 Jun 2015 11:18			19 Jun 2015 11:41	10
HS15060728-05	MW-19	16 Jun 2015 11:18			19 Jun 2015 11:14	1
Batch ID R256530		**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water	
HS15060728-02	MW-17	16 Jun 2015 09:40			19 Jun 2015 14:43	100
HS15060728-03	MW-1	16 Jun 2015 10:10			19 Jun 2015 18:10	100
HS15060728-03	MW-1	16 Jun 2015 10:10			19 Jun 2015 17:44	10
HS15060728-07	DUP-1	16 Jun 2015 00:00			19 Jun 2015 20:20	10
HS15060728-07	DUP-1	16 Jun 2015 00:00			19 Jun 2015 19:52	1
Batch ID R256592		**Test Name :** VPH - IOWA OA-1			**Matrix:** Water	
HS15060728-02	MW-17	16 Jun 2015 09:40			19 Jun 2015 17:06	50
HS15060728-03	MW-1	16 Jun 2015 10:10			19 Jun 2015 17:24	50
HS15060728-04	MW-18	16 Jun 2015 10:45			19 Jun 2015 17:40	1
HS15060728-05	MW-19	16 Jun 2015 11:18			19 Jun 2015 16:15	1
Batch ID R256692		**Test Name :** DISSOLVED GASES BY RSK-175			**Matrix:** Water	
HS15060728-01	MW-5	16 Jun 2015 08:59			23 Jun 2015 11:40	1
HS15060728-02	MW-17	16 Jun 2015 09:40			23 Jun 2015 11:54	1
HS15060728-03	MW-1	16 Jun 2015 10:10			23 Jun 2015 12:10	1
HS15060728-04	MW-18	16 Jun 2015 10:45			23 Jun 2015 12:24	1
HS15060728-05	MW-19	16 Jun 2015 11:18			23 Jun 2015 12:40	1
HS15060728-06	MW-4	16 Jun 2015 12:10			23 Jun 2015 12:54	1
HS15060728-07	DUP-1	16 Jun 2015 00:00			23 Jun 2015 13:09	1

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256695	**Test Name :** ALKALINITY BY SM2320B			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59			23 Jun 2015 12:30	1
HS15060728-02	MW-17	16 Jun 2015 09:40			23 Jun 2015 12:30	1
HS15060728-03	MW-1	16 Jun 2015 10:10			23 Jun 2015 12:30	1
HS15060728-04	MW-18	16 Jun 2015 10:45			23 Jun 2015 12:30	1
HS15060728-05	MW-19	16 Jun 2015 11:18			23 Jun 2015 12:30	1
HS15060728-06	MW-4	16 Jun 2015 12:10			23 Jun 2015 12:30	1
HS15060728-07	DUP-1	16 Jun 2015 00:00			23 Jun 2015 12:30	1
Batch ID R256804	**Test Name :** SUBCONTRACT ANALYSIS			**Matrix:** Water		
HS15060728-01	MW-5	16 Jun 2015 08:59			25 Jun 2015 07:25	1
HS15060728-02	MW-17	16 Jun 2015 09:40			25 Jun 2015 07:25	1
HS15060728-03	MW-1	16 Jun 2015 10:10			25 Jun 2015 07:25	1
HS15060728-04	MW-18	16 Jun 2015 10:45			25 Jun 2015 07:25	1
HS15060728-05	MW-19	16 Jun 2015 11:18			25 Jun 2015 07:25	1
HS15060728-06	MW-4	16 Jun 2015 12:10			25 Jun 2015 07:25	1
HS15060728-07	DUP-1	16 Jun 2015 00:00			25 Jun 2015 07:25	1

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256692 **Instrument: FID-4** **Method: RSK-175**

MBLK Sample ID: **GBLKW1-150611** Units: **ug/L** Analysis Date: **23-Jun-2015 11:01**
Client ID: Run ID: **FID-4_256692** SeqNo: **3330240** 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: **GLCSW1-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 09:55**
Client ID: Run ID: **FID-4_256692** SeqNo: **3330238** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	8.649	0.500	9.647	0	89.7	75 - 125				

LCSD Sample ID: **GLCSDW1-150611** Units: **ug/L** Analysis Date: **23-Jun-2015 10:43**
Client ID: Run ID: **FID-4_256692** SeqNo: **3330239** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	9.093	0.500	9.647	0	94.3	75 - 125	8.649	5.01	30	

DUP Sample ID: **HS15060728-07dup** Units: **ug/L** Analysis Date: **23-Jun-2015 13:24**
Client ID: **DUP-1** Run ID: **FID-4_256692** SeqNo: **3330249** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Methane	7.265	0.500					7.078	2.6	30	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-02 HS15060728-03 HS15060728-04 HS15060728-05 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256445 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150617** Units: **mg/L** Analysis Date: **17-Jun-2015 18:38**
Client ID: Run ID: **FID-14_256445** SeqNo: **3325066** 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	*0.1264*	*0.0050*	*0.1*	*0*	*126*	*70 - 130*				

LCS Sample ID: **GLCS-150617** Units: **mg/L** Analysis Date: **17-Jun-2015 18:07**
Client ID: Run ID: **FID-14_256445** SeqNo: **3325065** 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	1.099	0.050	1	0	110	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1165*	*0.0050*	*0.1*	*0*	*117*	*70 - 130*				

MS Sample ID: **HS15060578-05MS** Units: **mg/L** Analysis Date: **17-Jun-2015 19:10**
Client ID: Run ID: **FID-14_256445** SeqNo: **3325068** 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	1.149	0.050	1	0	115	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1158*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*				

MSD Sample ID: **HS15060578-05MSD** Units: **mg/L** Analysis Date: **17-Jun-2015 19:26**
Client ID: Run ID: **FID-14_256445** SeqNo: **3325069** 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	1.169	0.050	1	0	117	70 - 130	1.149	1.72	30	
Surr: 4-Bromofluorobenzene	*0.1149*	*0.0050*	*0.1*	*0*	*115*	*70 - 130*	*0.1158*	*0.795*	*30*	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256592 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150619** Units: **mg/L** Analysis Date: **19-Jun-2015 15:44**
Client ID: Run ID: **FID-14_256592** SeqNo: **3328172** 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	*0.1208*	*0.0050*	*0.1*	*0*	*121*	*70 - 130*				

LCS Sample ID: **GLCS-150619** Units: **mg/L** Analysis Date: **19-Jun-2015 15:28**
Client ID: Run ID: **FID-14_256592** SeqNo: **3328171** 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	1.067	0.050	1	0	107	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1162*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*				

MS Sample ID: **HS15060728-05MS** Units: **mg/L** Analysis Date: **19-Jun-2015 16:31**
Client ID: **MW-19** Run ID: **FID-14_256592** SeqNo: **3328175** 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	2.917	0.050	1	0.9891	193	70 - 130				S
Surr: 4-Bromofluorobenzene	*0.118*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MSD Sample ID: **HS15060728-05MSD** Units: **mg/L** Analysis Date: **19-Jun-2015 16:47**
Client ID: **MW-19** Run ID: **FID-14_256592** SeqNo: **3328176** 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	3.051	0.050	1	0.9891	206	70 - 130	2.917	4.47	30	S
Surr: 4-Bromofluorobenzene	*0.1162*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*	*0.118*	*1.6*	*30*	

The following samples were anayzed in this batch: HS15060728-02 HS15060728-03 HS15060728-04 HS15060728-05

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: 94438 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-94438** Units: **mg/L** Analysis Date: **22-Jun-2015 13:09**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328638** PrepDate: **19-Jun-2015** DF: **1**

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

LCS Sample ID: **MLCS-94438** Units: **mg/L** Analysis Date: **22-Jun-2015 13:11**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328639** PrepDate: **19-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	5.047	0.200	5	0	101	80 - 120				

MS Sample ID: **HS15060729-17MS** Units: **mg/L** Analysis Date: **22-Jun-2015 13:32**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328647** PrepDate: **19-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	15.7	0.200	5	11.43	85.4	80 - 120				

MSD Sample ID: **HS15060729-17MSD** Units: **mg/L** Analysis Date: **22-Jun-2015 13:40**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328650** PrepDate: **19-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	15.95	0.200	5	11.43	90.4	80 - 120	15.7	1.56	20	

DUP Sample ID: **HS15060729-17DUP** Units: **mg/L** Analysis Date: **22-Jun-2015 13:27**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328645** PrepDate: **19-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	11.54	0.200					11.43	0.931	20	

PDS Sample ID: **HS15060729-17BS** Units: **mg/L** Analysis Date: **22-Jun-2015 13:43**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328651** PrepDate: **19-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	20.59	0.200	10	11.43	91.6	75 - 125				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: 94438 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS15060729-17 DIL SX** Units: **mg/L** Analysis Date: **22-Jun-2015 13:30**
Client ID: Run ID: **ICPMS05_256584** SeqNo: **3328646** PrepDate: **19-Jun-2015** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Potassium	11.57	1.00					11.43	1.24	10	

The following samples were anayzed in this batch: HS15060728-04 HS15060728-05 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: 94483 **Instrument: ICPMS04** **Method: SW6020**

MBLK Sample ID: **MBLK-94483** Units: **mg/L** Analysis Date: **23-Jun-2015 21:07**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330881** PrepDate: **22-Jun-2015** DF: **1**

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

LCS Sample ID: **MLCS-94483** Units: **mg/L** Analysis Date: **23-Jun-2015 21:11**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330882** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	4.895	0.200	5	0	97.9	80 - 120				

MS Sample ID: **HS15060844-09MS** Units: **mg/L** Analysis Date: **23-Jun-2015 23:25**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330911** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	13.47	0.200	5	7.923	111	80 - 120				

MSD Sample ID: **HS15060844-09MSD** Units: **mg/L** Analysis Date: **23-Jun-2015 23:30**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330912** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	13.5	0.200	5	7.923	112	80 - 120	13.47	0.196	20	

DUP Sample ID: **HS15060844-09DUP** Units: **mg/L** Analysis Date: **23-Jun-2015 23:16**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330909** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	8.253	0.200					7.923	4.08	20	

PDS Sample ID: **HS15060844-09BS** Units: **mg/L** Analysis Date: **23-Jun-2015 23:35**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330913** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Potassium	17.45	0.200	10	7.923	95.2	75 - 125				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: 94483 **Instrument: ICPMS04** **Method: SW6020**

SD Sample ID: **HS15060844-09 DIL SX** Units: **mg/L** Analysis Date: **23-Jun-2015 23:21**
Client ID: Run ID: **ICPMS04_256663** SeqNo: **3330910** PrepDate: **22-Jun-2015** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Potassium	8.006	1.00					7.923	1.04	10	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-02 HS15060728-03

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: 94484 **Instrument: ICPMS05** **Method: SW6020 (DISSOLVED)**

MBLK Sample ID: **MBLKF2-94484** Units: **mg/L** Analysis Date: **23-Jun-2015 13:02**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330184** PrepDate: **22-Jun-2015** DF: **1**

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

MBLK Sample ID: **MBLKF1-94484** Units: **mg/L** Analysis Date: **23-Jun-2015 12:59**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330183** PrepDate: **22-Jun-2015** DF: **1**

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

MBLK Sample ID: **MBLK-94484** Units: **mg/L** Analysis Date: **23-Jun-2015 13:04**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330185** PrepDate: **22-Jun-2015** DF: **1**

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

LCS Sample ID: **MLCS-94484** Units: **mg/L** Analysis Date: **23-Jun-2015 13:12**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330188** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.665	0.200	5	0	93.3	80 - 120				

MS Sample ID: **HS15060571-09MS** Units: **mg/L** Analysis Date: **23-Jun-2015 13:46**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330201** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.758	0.200	5	0.0386	94.4	75 - 125				

MSD Sample ID: **HS15060571-09MSD** Units: **mg/L** Analysis Date: **23-Jun-2015 13:49**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330202** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.618	0.200	5	0.0386	91.6	75 - 125	4.758	2.99	20	

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: 94484 **Instrument: ICPMS05** **Method: SW6020 (DISSOLVED)**

DUP Sample ID: **HS15060571-09DUP** Units: **mg/L** Analysis Date: **23-Jun-2015 13:33**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330196** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	ND	0.200					0.0386	0	20	

PDS Sample ID: **HS15060571-09BS** Units: **mg/L** Analysis Date: **23-Jun-2015 13:52**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330203** PrepDate: **22-Jun-2015** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	8.57	0.200	10	0.0386	85.3	75 - 125				

SD Sample ID: **HS15060571-09 DIL SX** Units: **mg/L** Analysis Date: **23-Jun-2015 13:36**
Client ID: Run ID: **ICPMS05_256665** SeqNo: **3330197** PrepDate: **22-Jun-2015** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	ND	1.00					0.0386	0	10	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-02 HS15060728-03 HS15060728-04 HS15060728-05 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256468 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150618** Units: **ug/L** Analysis Date: **18-Jun-2015 10:39**
Client ID: Run ID: **VOA4_256468** SeqNo: **3325398** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*57.58*	*1.0*	*50*	*0*	*115*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.31*	*1.0*	*50*	*0*	*96.6*	*70 - 125*				
Surr: Dibromofluoromethane	*56.84*	*1.0*	*50*	*0*	*114*	*74 - 125*				
Surr: Toluene-d8	*54.54*	*1.0*	*50*	*0*	*109*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256468 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150618** Units: **ug/L** Analysis Date: **18-Jun-2015 09:47**
Client ID: Run ID: **VOA4_256468** SeqNo: **3325397** 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	1.0	50	0	106	70 - 125				
1,2-Dichloroethane	50.79	1.0	50	0	102	76 - 120				
1,3,5-Trimethylbenzene	53.24	1.0	50	0	106	80 - 123				
2-Butanone	105.2	2.0	100	0	105	60 - 140				
Benzene	51.19	1.0	50	0	102	80 - 120				
Cyclohexane	51.61	1.0	50	0	103	70 - 130				
Ethylbenzene	50.89	1.0	50	0	102	80 - 120				
Isopropylbenzene	54.16	1.0	50	0	108	75 - 130				
m,p-Xylene	102.5	2.0	100	0	103	80 - 120				
Methylcyclohexane	57.62	1.0	50	0	115	70 - 126				
Naphthalene	57.73	1.0	50	0	115	65 - 135				
n-Butylbenzene	57.22	1.0	50	0	114	75 - 128				
n-Propylbenzene	54.99	1.0	50	0	110	75 - 130				
o-Xylene	51.82	1.0	50	0	104	80 - 120				
Toluene	50.68	1.0	50	0	101	75 - 121				
Xylenes, Total	154.4	3.0	150	0	103	79 - 124				
Surr: 1,2-Dichloroethane-d4	*51.87*	*1.0*	*50*	*0*	*104*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.4*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*55.19*	*1.0*	*50*	*0*	*110*	*74 - 125*				
Surr: Toluene-d8	*54.51*	*1.0*	*50*	*0*	*109*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256468 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15060532-04MS** Units: **ug/L** Analysis Date: **18-Jun-2015 12:50**
Client ID: Run ID: **VOA4_256468** SeqNo: **3325403** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.82	1.0	50	0	104	70 - 125				
1,2-Dichloroethane	48.49	1.0	50	0	97.0	76 - 120				
1,3,5-Trimethylbenzene	52.26	1.0	50	0	105	80 - 123				
2-Butanone	99.08	2.0	100	0	99.1	60 - 140				
Benzene	51.02	1.0	50	0	102	80 - 120				
Cyclohexane	55.5	1.0	50	0	111	70 - 130				
Ethylbenzene	49.64	1.0	50	0	99.3	80 - 120				
Isopropylbenzene	53.92	1.0	50	0	108	75 - 130				
m,p-Xylene	101.6	2.0	100	0	102	80 - 120				
Methylcyclohexane	58.29	1.0	50	0	117	70 - 126				
Naphthalene	50.36	1.0	50	0	101	65 - 135				
n-Butylbenzene	55.27	1.0	50	0	111	75 - 128				
n-Propylbenzene	54.75	1.0	50	0	109	75 - 130				
o-Xylene	50.88	1.0	50	0	102	80 - 120				
Toluene	50.17	1.0	50	0	100	75 - 121				
Xylenes, Total	152.5	3.0	150	0	102	80 - 124				
Surr: 1,2-Dichloroethane-d4	*51.14*	*1.0*	*50*	*0*	*102*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.92*	*1.0*	*50*	*0*	*99.8*	*70 - 125*				
Surr: Dibromofluoromethane	*53.37*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*53.58*	*1.0*	*50*	*0*	*107*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256468 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060532-04MSD** Units: **ug/L** Analysis Date: **18-Jun-2015 13:17**
Client ID: Run ID: **VOA4_256468** SeqNo: **3325404** 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	53.92	1.0	50	0	108	70 - 125	51.82	3.98	20	
1,2-Dichloroethane	50.54	1.0	50	0	101	76 - 120	48.49	4.15	20	
1,3,5-Trimethylbenzene	55.63	1.0	50	0	111	80 - 123	52.26	6.23	20	
2-Butanone	108.2	2.0	100	0	108	60 - 140	99.08	8.81	20	
Benzene	52.02	1.0	50	0	104	80 - 120	51.02	1.94	20	
Cyclohexane	55.17	1.0	50	0	110	70 - 130	55.5	0.586	20	
Ethylbenzene	52.37	1.0	50	0	105	80 - 120	49.64	5.35	20	
Isopropylbenzene	55.05	1.0	50	0	110	75 - 130	53.92	2.07	20	
m,p-Xylene	104.5	2.0	100	0	105	80 - 120	101.6	2.82	20	
Methylcyclohexane	59.35	1.0	50	0	119	70 - 126	58.29	1.8	20	
Naphthalene	58.94	1.0	50	0	118	65 - 135	50.36	15.7	20	
n-Butylbenzene	59.35	1.0	50	0	119	75 - 128	55.27	7.12	20	
n-Propylbenzene	56.74	1.0	50	0	113	75 - 130	54.75	3.57	20	
o-Xylene	51.62	1.0	50	0	103	80 - 120	50.88	1.44	20	
Toluene	51.03	1.0	50	0	102	75 - 121	50.17	1.71	20	
Xylenes, Total	156.1	3.0	150	0	104	80 - 124	152.5	2.36	20	
Surr: 1,2-Dichloroethane-d4	*51.18*	*1.0*	*50*	*0*	*102*	*71 - 125*	*51.14*	*0.0785*	*20*	
Surr: 4-Bromofluorobenzene	*50.03*	*1.0*	*50*	*0*	*100*	*70 - 125*	*49.92*	*0.219*	*20*	
Surr: Dibromofluoromethane	*55.85*	*1.0*	*50*	*0*	*112*	*74 - 125*	*53.37*	*4.54*	*20*	
Surr: Toluene-d8	*53.7*	*1.0*	*50*	*0*	*107*	*75 - 125*	*53.58*	*0.226*	*20*	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-08 HS15060728-09

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256499 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150618** Units: **ug/L** Analysis Date: **18-Jun-2015 15:21**
Client ID: Run ID: **VOA2_256499** SeqNo: **3326027** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*44.25*	*1.0*	*50*	*0*	*88.5*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.36*	*1.0*	*50*	*0*	*94.7*	*70 - 125*				
Surr: Dibromofluoromethane	*47.69*	*1.0*	*50*	*0*	*95.4*	*74 - 125*				
Surr: Toluene-d8	*47.67*	*1.0*	*50*	*0*	*95.3*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256499 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-150618** Units: **ug/L** Analysis Date: **18-Jun-2015 14:30**
Client ID: Run ID: **VOA2_256499** SeqNo: **3326026** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.87	1.0	50	0	91.7	70 - 125				
1,2-Dichloroethane	42.19	1.0	50	0	84.4	76 - 120				
1,3,5-Trimethylbenzene	48.01	1.0	50	0	96.0	80 - 123				
2-Butanone	122.1	2.0	100	0	122	60 - 140				
Benzene	44.75	1.0	50	0	89.5	80 - 120				
Cyclohexane	45.9	1.0	50	0	91.8	70 - 130				
Ethylbenzene	47.56	1.0	50	0	95.1	80 - 120				
Isopropylbenzene	49.89	1.0	50	0	99.8	75 - 130				
m,p-Xylene	91.75	2.0	100	0	91.7	80 - 120				
Methylcyclohexane	48.99	1.0	50	0	98.0	70 - 126				
Naphthalene	52.41	1.0	50	0	105	65 - 135				
n-Butylbenzene	51.21	1.0	50	0	102	75 - 128				
n-Propylbenzene	48.82	1.0	50	0	97.6	75 - 130				
o-Xylene	47.54	1.0	50	0	95.1	80 - 120				
Toluene	44.34	1.0	50	0	88.7	75 - 121				
Xylenes, Total	139.3	3.0	150	0	92.9	79 - 124				
Surr: 1,2-Dichloroethane-d4	*43.81*	*1.0*	*50*	*0*	*87.6*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.04*	*1.0*	*50*	*0*	*96.1*	*70 - 125*				
Surr: Dibromofluoromethane	*48.68*	*1.0*	*50*	*0*	*97.4*	*74 - 125*				
Surr: Toluene-d8	*46.67*	*1.0*	*50*	*0*	*93.3*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256499 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS15060490-04MS** Units: **ug/L** Analysis Date: **18-Jun-2015 20:02**
Client ID: Run ID: **VOA2_256499** SeqNo: **3326038** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	44.52	1.0	50	0	89.0	70 - 125				
1,2-Dichloroethane	38.75	1.0	50	0	77.5	76 - 120				
1,3,5-Trimethylbenzene	47.55	1.0	50	0	95.1	80 - 123				
2-Butanone	112.2	2.0	100	0	112	60 - 140				
Benzene	42.09	1.0	50	0	84.2	80 - 120				
Cyclohexane	49.95	1.0	50	0	99.9	70 - 130				
Ethylbenzene	46.22	1.0	50	0	92.4	80 - 120				
Isopropylbenzene	49.43	1.0	50	0	98.9	75 - 130				
m,p-Xylene	88.84	2.0	100	0	88.8	80 - 120				
Methylcyclohexane	53.41	1.0	50	1.902	103	70 - 126				
Naphthalene	51.08	1.0	50	0	102	65 - 135				
n-Butylbenzene	50.88	1.0	50	0	102	75 - 128				
n-Propylbenzene	48.66	1.0	50	0	97.3	75 - 130				
o-Xylene	46.11	1.0	50	0.529	91.2	80 - 120				
Toluene	40.61	1.0	50	0	81.2	75 - 121				
Xylenes, Total	134.9	3.0	150	0.529	89.6	80 - 124				
Surr: 1,2-Dichloroethane-d4	*43.44*	*1.0*	*50*	*0*	*86.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.66*	*1.0*	*50*	*0*	*95.3*	*70 - 125*				
Surr: Dibromofluoromethane	*48.34*	*1.0*	*50*	*0*	*96.7*	*74 - 125*				
Surr: Toluene-d8	*45.15*	*1.0*	*50*	*0*	*90.3*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256499 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15060490-04MSD** Units: **ug/L** Analysis Date: **18-Jun-2015 20:28**
Client ID: Run ID: **VOA2_256499** SeqNo: **3326039** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.25	1.0	50	0	86.5	70 - 125	44.52	2.9	20	
1,2-Dichloroethane	38.66	1.0	50	0	77.3	76 - 120	38.75	0.228	20	
1,3,5-Trimethylbenzene	45.25	1.0	50	0	90.5	80 - 123	47.55	4.94	20	
2-Butanone	107.4	2.0	100	0	107	60 - 140	112.2	4.4	20	
Benzene	41.98	1.0	50	0	84.0	80 - 120	42.09	0.248	20	
Cyclohexane	49.19	1.0	50	0	98.4	70 - 130	49.95	1.53	20	
Ethylbenzene	45.35	1.0	50	0	90.7	80 - 120	46.22	1.9	20	
Isopropylbenzene	49.07	1.0	50	0	98.1	75 - 130	49.43	0.719	20	
m,p-Xylene	88.34	2.0	100	0	88.3	80 - 120	88.84	0.563	20	
Methylcyclohexane	51.75	1.0	50	1.902	99.7	70 - 126	53.41	3.16	20	
Naphthalene	51.46	1.0	50	0	103	65 - 135	51.08	0.735	20	
n-Butylbenzene	49.49	1.0	50	0	99.0	75 - 128	50.88	2.78	20	
n-Propylbenzene	46.19	1.0	50	0	92.4	75 - 130	48.66	5.2	20	
o-Xylene	44.97	1.0	50	0.529	88.9	80 - 120	46.11	2.5	20	
Toluene	41.85	1.0	50	0	83.7	75 - 121	40.61	2.99	20	
Xylenes, Total	133.3	3.0	150	0.529	88.5	80 - 124	134.9	1.22	20	
Surr: 1,2-Dichloroethane-d4	*44.14*	*1.0*	*50*	*0*	*88.3*	*71 - 125*	*43.44*	*1.62*	*20*	
Surr: 4-Bromofluorobenzene	*49.08*	*1.0*	*50*	*0*	*98.2*	*70 - 125*	*47.66*	*2.95*	*20*	
Surr: Dibromofluoromethane	*48.5*	*1.0*	*50*	*0*	*97.0*	*74 - 125*	*48.34*	*0.34*	*20*	
Surr: Toluene-d8	*47.05*	*1.0*	*50*	*0*	*94.1*	*75 - 125*	*45.15*	*4.12*	*20*	

The following samples were anayzed in this batch: HS15060728-02 HS15060728-04 HS15060728-06

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256524 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150619** Units: **ug/L** Analysis Date: **19-Jun-2015 10:48**
Client ID: Run ID: **VOA4_256524** SeqNo: **3326922** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*59.27*	*1.0*	*50*	*0*	*119*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.35*	*1.0*	*50*	*0*	*98.7*	*70 - 125*				
Surr: Dibromofluoromethane	*57.41*	*1.0*	*50*	*0*	*115*	*74 - 125*				
Surr: Toluene-d8	*45.33*	*1.0*	*50*	*0*	*90.7*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256524 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150619** Units: **ug/L** Analysis Date: **19-Jun-2015 09:54**
Client ID: Run ID: **VOA4_256524** SeqNo: **3326940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.89	1.0	50	0	104	70 - 125				
1,2-Dichloroethane	55.93	1.0	50	0	112	76 - 120				
1,3,5-Trimethylbenzene	52.11	1.0	50	0	104	80 - 123				
2-Butanone	105.6	2.0	100	0	106	60 - 140				
Benzene	49.45	1.0	50	0	98.9	80 - 120				
Cyclohexane	46.87	1.0	50	0	93.7	70 - 130				
Ethylbenzene	48.32	1.0	50	0	96.6	80 - 120				
Isopropylbenzene	55.77	1.0	50	0	112	75 - 130				
m,p-Xylene	97.43	2.0	100	0	97.4	80 - 120				
Methylcyclohexane	55.08	1.0	50	0	110	70 - 126				
Naphthalene	56.97	1.0	50	0	114	65 - 135				
n-Butylbenzene	59.87	1.0	50	0	120	75 - 128				
n-Propylbenzene	53.1	1.0	50	0	106	75 - 130				
o-Xylene	49.22	1.0	50	0	98.4	80 - 120				
Toluene	48.9	1.0	50	0	97.8	75 - 121				
Xylenes, Total	146.7	3.0	150	0	97.8	79 - 124				
Surr: 1,2-Dichloroethane-d4	*58.61*	*1.0*	*50*	*0*	*117*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.17*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*56.82*	*1.0*	*50*	*0*	*114*	*74 - 125*				
Surr: Toluene-d8	*52.98*	*1.0*	*50*	*0*	*106*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256524 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15060744-05MS** Units: **ug/L** Analysis Date: **19-Jun-2015 14:19**
Client ID: Run ID: **VOA4_256524** SeqNo: **3328052** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.18	1.0	50	0	102	70 - 125				
1,2-Dichloroethane	53.27	1.0	50	0	107	76 - 120				
1,3,5-Trimethylbenzene	51.51	1.0	50	0	103	80 - 123				
2-Butanone	104.9	2.0	100	0	105	60 - 140				
Benzene	67.84	1.0	50	18.37	98.9	80 - 120				
Cyclohexane	52.62	1.0	50	1.216	103	70 - 130				
Ethylbenzene	49.38	1.0	50	0	98.8	80 - 120				
Isopropylbenzene	53.93	1.0	50	0	108	75 - 130				
m,p-Xylene	99.79	2.0	100	0	99.8	80 - 120				
Methylcyclohexane	53.78	1.0	50	0	108	70 - 126				
Naphthalene	53.77	1.0	50	0	108	65 - 135				
n-Butylbenzene	54.03	1.0	50	0	108	75 - 128				
n-Propylbenzene	52.95	1.0	50	0	106	75 - 130				
o-Xylene	50.29	1.0	50	0	101	80 - 120				
Toluene	50.6	1.0	50	0.6196	100.0	75 - 121				
Xylenes, Total	150.1	3.0	150	0	100	80 - 124				
Surr: 1,2-Dichloroethane-d4	*59.55*	*1.0*	*50*	*0*	*119*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*52.01*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*59.63*	*1.0*	*50*	*0*	*119*	*74 - 125*				
Surr: Toluene-d8	*52.73*	*1.0*	*50*	*0*	*105*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256524 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060744-05MSD** Units: **ug/L** Analysis Date: **19-Jun-2015 14:45**
Client ID: Run ID: **VOA4_256524** SeqNo: **3328053** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	51.33	1.0	50	0	103	70 - 125	51.18	0.278	20	
1,2-Dichloroethane	55.19	1.0	50	0	110	76 - 120	53.27	3.54	20	
1,3,5-Trimethylbenzene	52.92	1.0	50	0	106	80 - 123	51.51	2.68	20	
2-Butanone	100.9	2.0	100	0	101	60 - 140	104.9	3.88	20	
Benzene	69.16	1.0	50	18.37	102	80 - 120	67.84	1.92	20	
Cyclohexane	51.2	1.0	50	1.216	100.0	70 - 130	52.62	2.74	20	
Ethylbenzene	50.41	1.0	50	0	101	80 - 120	49.38	2.05	20	
Isopropylbenzene	54.98	1.0	50	0	110	75 - 130	53.93	1.92	20	
m,p-Xylene	102.9	2.0	100	0	103	80 - 120	99.79	3.1	20	
Methylcyclohexane	54.35	1.0	50	0	109	70 - 126	53.78	1.06	20	
Naphthalene	69.51	1.0	50	0	139	65 - 135	53.77	25.5	20	SR
n-Butylbenzene	55.03	1.0	50	0	110	75 - 128	54.03	1.83	20	
n-Propylbenzene	53.88	1.0	50	0	108	75 - 130	52.95	1.75	20	
o-Xylene	50.19	1.0	50	0	100	80 - 120	50.29	0.198	20	
Toluene	51.17	1.0	50	0.6196	101	75 - 121	50.6	1.11	20	
Xylenes, Total	153.1	3.0	150	0	102	80 - 124	150.1	2.01	20	
Surr: 1,2-Dichloroethane-d4	*56.85*	*1.0*	*50*	*0*	*114*	*71 - 125*	*59.55*	*4.63*	*20*	
Surr: 4-Bromofluorobenzene	*52.14*	*1.0*	*50*	*0*	*104*	*70 - 125*	*52.01*	*0.236*	*20*	
Surr: Dibromofluoromethane	*57.98*	*1.0*	*50*	*0*	*116*	*74 - 125*	*59.63*	*2.81*	*20*	
Surr: Toluene-d8	*53.35*	*1.0*	*50*	*0*	*107*	*75 - 125*	*52.73*	*1.16*	*20*	

The following samples were anayzed in this batch: HS15060728-05

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256530 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150619** Units: **ug/L** Analysis Date: **19-Jun-2015 11:44**
Client ID: Run ID: **VOA2_256530** SeqNo: **3326965** 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	5.0								
1,2-Dichloroethane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
2-Butanone	ND	10								
Benzene	ND	5.0								
Cyclohexane	ND	5.0								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
m,p-Xylene	ND	10								
Methylcyclohexane	ND	5.0								
Naphthalene	ND	5.0								
n-Butylbenzene	ND	5.0								
n-Propylbenzene	ND	5.0								
o-Xylene	ND	5.0								
Toluene	ND	5.0								
Xylenes, Total	ND	15								
Surr: 1,2-Dichloroethane-d4	*41.42*	*0*	*50*	*0*	*82.8*	*70 - 125*				
Surr: 4-Bromofluorobenzene	*46.6*	*0*	*50*	*0*	*93.2*	*72 - 125*				
Surr: Dibromofluoromethane	*48.08*	*0*	*50*	*0*	*96.2*	*71 - 125*				
Surr: Toluene-d8	*47.32*	*0*	*50*	*0*	*94.6*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256530 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-150619** Units: **ug/L** Analysis Date: **19-Jun-2015 10:53**
Client ID: Run ID: **VOA2_256530** SeqNo: **3326964** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	46.23	5.0	50	0	92.5	70 - 125				
1,2-Dichloroethane	42.41	5.0	50	0	84.8	76 - 120				
1,3,5-Trimethylbenzene	49.29	5.0	50	0	98.6	80 - 123				
2-Butanone	115.4	10	100	0	115	58 - 132				
Benzene	43.4	5.0	50	0	86.8	73 - 121				
Cyclohexane	47.86	5.0	50	0	95.7	66 - 125				
Ethylbenzene	49.27	5.0	50	0	98.5	80 - 120				
Isopropylbenzene	51.49	5.0	50	0	103	75 - 130				
m,p-Xylene	94.43	10	100	0	94.4	78 - 121				
Methylcyclohexane	51.53	5.0	50	0	103	70 - 122				
Naphthalene	52.03	5.0	50	0	104	65 - 135				
n-Butylbenzene	53.77	5.0	50	0	108	77 - 120				
n-Propylbenzene	49.67	5.0	50	0	99.3	78 - 120				
o-Xylene	48.63	5.0	50	0	97.3	80 - 120				
Toluene	43.91	5.0	50	0	87.8	80 - 120				
Xylenes, Total	143.1	15	150	0	95.4	80 - 120				
Surr: 1,2-Dichloroethane-d4	*42.19*	*0*	*50*	*0*	*84.4*	*70 - 125*				
Surr: 4-Bromofluorobenzene	*47.59*	*0*	*50*	*0*	*95.2*	*72 - 125*				
Surr: Dibromofluoromethane	*47.14*	*0*	*50*	*0*	*94.3*	*71 - 125*				
Surr: Toluene-d8	*46.26*	*0*	*50*	*0*	*92.5*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256530 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS15060574-12MS** Units: **ug/L** Analysis Date: **19-Jun-2015 13:51**
Client ID: Run ID: **VOA2_256530** SeqNo: **3326970** PrepDate: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	11250	1200	12500	0	90.0	70 - 125				
1,2-Dichloroethane	10040	1200	12500	0	80.3	76 - 120				
1,3,5-Trimethylbenzene	12280	1200	12500	0	98.2	80 - 120				
2-Butanone	28050	2500	25000	0	112	58 - 132				
Benzene	10920	1200	12500	0	87.3	73 - 121				
Cyclohexane	12580	1200	12500	0	101	66 - 125				
Ethylbenzene	12520	1200	12500	0	100	80 - 120				
Isopropylbenzene	12930	1200	12500	0	103	75 - 130				
m,p-Xylene	23990	2500	25000	0	95.9	78 - 121				
Methylcyclohexane	13550	1200	12500	0	108	70 - 122				
Naphthalene	12010	1200	12500	0	96.0	65 - 135				
n-Butylbenzene	12980	1200	12500	0	104	77 - 120				
n-Propylbenzene	12400	1200	12500	0	99.2	78 - 120				
o-Xylene	12230	1200	12500	0	97.9	80 - 120				
Toluene	11280	1200	12500	0	90.3	80 - 120				
Xylenes, Total	36220	3800	37500	0	96.6	80 - 120				
Surr: 1,2-Dichloroethane-d4	*10440*	*0*	*12500*	*0*	*83.5*	*70 - 125*				
Surr: 4-Bromofluorobenzene	*11950*	*0*	*12500*	*0*	*95.6*	*72 - 125*				
Surr: Dibromofluoromethane	*11920*	*0*	*12500*	*0*	*95.3*	*71 - 125*				
Surr: Toluene-d8	*11880*	*0*	*12500*	*0*	*95.1*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256530 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15060574-12MSD** Units: **ug/L** Analysis Date: **19-Jun-2015 14:17**
Client ID: Run ID: **VOA2_256530** SeqNo: **3326971** PrepDate: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	11330	1200	12500	0	90.7	70 - 125	11250	0.708	20	
1,2-Dichloroethane	10370	1200	12500	0	83.0	76 - 120	10040	3.28	20	
1,3,5-Trimethylbenzene	12210	1200	12500	0	97.7	80 - 123	12280	0.552	20	
2-Butanone	28380	2500	25000	0	114	58 - 132	28050	1.16	20	
Benzene	10840	1200	12500	0	86.7	73 - 121	10920	0.745	20	
Cyclohexane	12670	1200	12500	0	101	66 - 125	12580	0.772	20	
Ethylbenzene	12480	1200	12500	0	99.8	80 - 120	12520	0.352	20	
Isopropylbenzene	12910	1200	12500	0	103	75 - 130	12930	0.121	20	
m,p-Xylene	23970	2500	25000	0	95.9	78 - 121	23990	0.0606	20	
Methylcyclohexane	12830	1200	12500	0	103	70 - 122	13550	5.42	20	
Naphthalene	12550	1200	12500	0	100	65 - 135	12010	4.43	20	
n-Butylbenzene	13260	1200	12500	0	106	77 - 120	12980	2.15	20	
n-Propylbenzene	12300	1200	12500	0	98.4	78 - 120	12400	0.813	20	
o-Xylene	12210	1200	12500	0	97.6	80 - 120	12230	0.231	20	
Toluene	11240	1200	12500	0	89.9	80 - 120	11280	0.407	20	
Xylenes, Total	36180	3800	37500	0	96.5	78 - 121	36220	0.118	20	
Surr: 1,2-Dichloroethane-d4	*10830*	*0*	*12500*	*0*	*86.6*	*70 - 125*	*10440*	*3.68*	*20*	
Surr: 4-Bromofluorobenzene	*12110*	*0*	*12500*	*0*	*96.8*	*72 - 125*	*11950*	*1.32*	*20*	
Surr: Dibromofluoromethane	*11870*	*0*	*12500*	*0*	*94.9*	*71 - 125*	*11920*	*0.437*	*20*	
Surr: Toluene-d8	*11870*	*0*	*12500*	*0*	*95.0*	*75 - 125*	*11880*	*0.104*	*20*	

The following samples were anayzed in this batch: HS15060728-02 HS15060728-03 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256424 **Instrument: ICS3000** **Method: E300**

MBLK Sample ID: **WBLKW1-061715** Units: **mg/L** Analysis Date: **17-Jun-2015 12:15**
Client ID: Run ID: **ICS3000_256424** SeqNo: **3324702** 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, Orthophosphate (As P)	ND	0.100								
Sulfate	ND	0.500								

LCS Sample ID: **WLCSW1-061715** Units: **mg/L** Analysis Date: **17-Jun-2015 12:39**
Client ID: Run ID: **ICS3000_256424** SeqNo: **3324703** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.944	0.100	4	0	98.6	90 - 110				
Phosphorus, Orthophosphate (As P)	3.801	0.100	4	0	95.0	90 - 110				
Sulfate	19.69	0.500	20	0	98.5	90 - 110				

LCSD Sample ID: **WLCSDW1-061715** Units: **mg/L** Analysis Date: **17-Jun-2015 13:02**
Client ID: Run ID: **ICS3000_256424** SeqNo: **3324704** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.979	0.100	4	0	99.5	90 - 110	3.944	0.884	20	
Phosphorus, Orthophosphate (As P)	3.869	0.100	4	0	96.7	90 - 110	3.801	1.77	20	
Sulfate	19.97	0.500	20	0	99.9	90 - 110	19.69	1.42	20	

MS Sample ID: **HS15060729-01MS** Units: **mg/L** Analysis Date: **17-Jun-2015 22:14**
Client ID: Run ID: **ICS3000_256424** SeqNo: **3324720** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.339	0.100	2	1.41	96.4	80 - 120				
Phosphorus, Orthophosphate (As P)	1.607	0.100	2	0	80.4	80 - 120				
Sulfate	226.9	0.500	10	223.7	32.7	80 - 120				SEO

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256424 **Instrument: ICS3000** **Method: E300**

MS Sample ID: **HS15060728-01MS** Units: **mg/L** Analysis Date: **17-Jun-2015 15:52**
Client ID: **MW-5** Run ID: **ICS3000_256424** SeqNo: **3324706** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	7.178	0.100	2	5.181	99.8	80 - 120				
Phosphorus, Orthophosphate (As P)	1.601	0.100	2	0	80.0	80 - 120				
Sulfate	170.1	0.500	10	162.3	77.5	80 - 120				SEO

MSD Sample ID: **HS15060729-01MSD** Units: **mg/L** Analysis Date: **17-Jun-2015 22:38**
Client ID: Run ID: **ICS3000_256424** SeqNo: **3324721** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	3.361	0.100	2	1.41	97.6	80 - 120	3.339	0.657	20	
Phosphorus, Orthophosphate (As P)	1.643	0.100	2	0	82.2	80 - 120	1.607	2.22	20	
Sulfate	229	0.500	10	223.7	52.9	80 - 120	226.9	0.886	20	SEO

MSD Sample ID: **HS15060728-01MSD** Units: **mg/L** Analysis Date: **17-Jun-2015 16:15**
Client ID: **MW-5** Run ID: **ICS3000_256424** SeqNo: **3324707** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Nitrate (As N)	7.335	0.100	2	5.181	108	80 - 120	7.178	2.16	20	
Phosphorus, Orthophosphate (As P)	1.631	0.100	2	0	81.6	80 - 120	1.601	1.86	20	
Sulfate	173.6	0.500	10	162.3	113	80 - 120	170.1	2.08	20	EO

The following samples were anayzed in this batch: HS15060728-01 HS15060728-02 HS15060728-03 HS15060728-04 HS15060728-05 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256451 **Instrument: WetChem_HS** **Method: SM4500 NH3-D**

MBLK Sample ID: **MBLK-256451** Units: **mg/L** Analysis Date: **18-Jun-2015 13:35**
Client ID: Run ID: **WetChem_HS_256451** SeqNo: **3325159** 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-256451** Units: **mg/L** Analysis Date: **18-Jun-2015 13:35**
Client ID: Run ID: **WetChem_HS_256451** SeqNo: **3325160** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Nitrogen, Ammonia (as N)	10.2	0.20	10	0	102	80 - 120				

MS Sample ID: **HS15060717-02MS** Units: **mg/L** Analysis Date: **18-Jun-2015 13:35**
Client ID: Run ID: **WetChem_HS_256451** SeqNo: **3325161** 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)	12.5	0.20	10	1.64	109	80 - 120				

MSD Sample ID: **HS15060717-02MSD** Units: **mg/L** Analysis Date: **18-Jun-2015 13:35**
Client ID: Run ID: **WetChem_HS_256451** SeqNo: **3325162** 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)	12.6	0.20	10	1.64	110	80 - 120	12.5	0.797	20	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-02 HS15060728-03 HS15060728-04 HS15060728-05 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256495 **Instrument: ICS3K2** **Method: E300**

MBLK Sample ID: **WBLKW3-061715** Units: **mg/L** Analysis Date: **18-Jun-2015 05:36**
Client ID: Run ID: **ICS3K2_256495** SeqNo: **3325971** PrepDate: DF: **1**

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

LCS Sample ID: **WLCSW3-061715** Units: **mg/L** Analysis Date: **18-Jun-2015 05:58**
Client ID: Run ID: **ICS3K2_256495** SeqNo: **3325972** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.66	0.500	20	0	98.3	90 - 110				

LCSD Sample ID: **WLCSDW3-061715** Units: **mg/L** Analysis Date: **18-Jun-2015 06:19**
Client ID: Run ID: **ICS3K2_256495** SeqNo: **3325973** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.61	0.500	20	0	98.1	90 - 110	19.66	0.25	20	

MS Sample ID: **HS15060729-23MS** Units: **mg/L** Analysis Date: **17-Jun-2015 22:00**
Client ID: Run ID: **ICS3K2_256495** SeqNo: **3325959** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	168.8	0.500	10	161.1	76.8	80 - 120				SEO

MSD Sample ID: **HS15060729-23MSD** Units: **mg/L** Analysis Date: **17-Jun-2015 22:22**
Client ID: Run ID: **ICS3K2_256495** SeqNo: **3325960** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	168.6	0.500	10	161.1	75.2	80 - 120	168.8	0.0925	20	SEO

The following samples were anayzed in this batch: HS15060728-06

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QC BATCH REPORT

Batch ID: R256695 **Instrument: ManTech01** **Method: SM2320B**

MBLK Sample ID: **MBLK-256695** Units: **mg/L** Analysis Date: **23-Jun-2015 12:30**
Client ID: Run ID: **ManTech01_256695** SeqNo: **3330293** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.00								
Alkalinity, Carbonate (As CaCO3)	ND	5.00								
Alkalinity, Hydroxide (As CaCO3)	ND	5.00								
Alkalinity, Total (As CaCO3)	ND	5.00								

LCS Sample ID: **LCS-256695** Units: **mg/L** Analysis Date: **23-Jun-2015 12:30**
Client ID: Run ID: **ManTech01_256695** SeqNo: **3330294** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1039	5.00	1000	0	104	80 - 120				

LCSD Sample ID: **LCSD-256695** Units: **mg/L** Analysis Date: **23-Jun-2015 12:30**
Client ID: Run ID: **ManTech01_256695** SeqNo: **3330295** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1037	5.00	1000	0	104	80 - 120	1039	0.133	20	

DUP Sample ID: **HS15060728-01DUP** Units: **mg/L** Analysis Date: **23-Jun-2015 12:30**
Client ID: **MW-5** Run ID: **ManTech01_256695** SeqNo: **3330296** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	490.1	5.00					491.1	0.21	20	
Alkalinity, Carbonate (As CaCO3)	ND	5.00					0	0	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	490.1	5.00					491.1	0.209	20	

The following samples were anayzed in this batch: HS15060728-01 HS15060728-02 HS15060728-03 HS15060728-04 HS15060728-05 HS15060728-06 HS15060728-07

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

Client: Apex Companies
Project: Andover Release Site E3CE-0065
WorkOrder: HS15060728

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jul-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-15-15	30-Apr-2016

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS15060728

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	VW-3
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-01	MW-5	Login	6/17/2015 1:28:05 PM	CGG	Sub
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	VW-3
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-02	MW-17	Login	6/17/2015 1:28:05 PM	CGG	Sub
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	VW-3
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-03	MW-1	Login	6/17/2015 1:28:05 PM	CGG	Sub
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	VW-3
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-04	MW-18	Login	6/17/2015 1:28:05 PM	CGG	Sub
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	24C

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS15060728

SAMPLE TRACKING

HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	VW-3
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-05	MW-19	Login	6/17/2015 1:28:05 PM	CGG	Sub
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	24C
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	VW-3
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	TPH C2
HS15060728-06	MW-4	Login	6/17/2015 1:28:05 PM	CGG	Sub
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	11B
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	11B
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	11B
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	11B
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	11B
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	VW-3
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	VW-3
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	TPH C2
HS15060728-07	DUP-1	Login	6/17/2015 1:36:07 PM	CGG	Sub
HS15060728-08	TB-05515-72	Login	6/17/2015 1:36:07 PM	CGG	VW-3
HS15060728-09	TB-052215-71	Login	6/17/2015 1:36:07 PM	CGG	VW-3
HS15060728-01	MW-5	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-02	MW-17	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-03	MW-1	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-04	MW-18	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-05	MW-19	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-06	MW-4	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-07	DUP-1	Out	6/18/2015 8:53:03 AM	AAP	METPREP
HS15060728-01	MW-5	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-02	MW-17	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-03	MW-1	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-04	MW-18	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-05	MW-19	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-06	MW-4	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-07	DUP-1	Return	6/18/2015 9:22:36 AM	AAP	11B
HS15060728-01	MW-5	Out	6/19/2015 8:13:46 AM	AAP	METPREP
HS15060728-02	MW-17	Out	6/19/2015 8:13:46 AM	AAP	METPREP
HS15060728-03	MW-1	Out	6/19/2015 8:13:46 AM	AAP	METPREP

Client: Apex Companies
Project: Andover Release Site E3CE-0065
Work Order: HS15060728

SAMPLE TRACKING

HS15060728-04	MW-18	Out	6/19/2015 8:13:46 AM	AAP	METPREP
HS15060728-05	MW-19	Out	6/19/2015 8:13:46 AM	AAP	METPREP
HS15060728-06	MW-4	Out	6/19/2015 8:13:46 AM	AAP	METPREP
HS15060728-07	DUP-1	Out	6/19/2015 8:13:46 AM	AAP	METPREP
HS15060728-01	MW-5	Return	6/19/2015 12:41:51 PM	AAP	11B
HS15060728-01	MW-5	Return	6/19/2015 12:41:51 PM	AAP	11B
HS15060728-02	MW-17	Return	6/19/2015 12:41:51 PM	AAP	11B
HS15060728-02	MW-17	Return	6/19/2015 12:41:51 PM	AAP	11B
HS15060728-03	MW-1	Return	6/19/2015 12:41:51 PM	AAP	11B
HS15060728-03	MW-1	Return	6/19/2015 12:41:51 PM	AAP	11B
HS15060728-04	MW-18	Return	6/19/2015 1:06:35 PM	AAP	11B
HS15060728-05	MW-19	Return	6/19/2015 1:06:35 PM	AAP	11B
HS15060728-06	MW-4	Return	6/19/2015 1:06:35 PM	AAP	11B
HS15060728-07	DUP-1	Return	6/19/2015 1:06:35 PM	AAP	11B
HS15060728-01	MW-5	Out	6/22/2015 10:11:42 AM	AAP	METPREP
HS15060728-02	MW-17	Out	6/22/2015 10:11:42 AM	AAP	METPREP
HS15060728-03	MW-1	Out	6/22/2015 10:11:42 AM	AAP	METPREP
HS15060728-01	MW-5	Return	6/22/2015 4:11:47 PM	AAP	11B
HS15060728-02	MW-17	Return	6/22/2015 4:11:47 PM	AAP	11B
HS15060728-03	MW-1	Return	6/22/2015 4:11:47 PM	AAP	11B

Sample Receipt Checklist

Client Name: APEX-PORTLAND

Work Order: HS15060728

Date/Time Received: **17-Jun-2015 09:15**

Received by: **NDR**

Checklist completed by: *Corey Grandits* (eSignature) 17-Jun-2015 (Date)

Reviewed by: *Ana L. Spencer* (eSignature) 17-Jun-2015 (Date)

Matrices: **Water**

Carrier name: **FedEx Priority Overnight**

	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):	2.5c / 3.1c , 2.4c / 2.9c c/uc	IR5
Cooler(s)/Kit(s):	24188 , 24353	
Date/Time sample(s) sent to storage:	06/17/2015 14:05	

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

pH adjusted by:

Login Notes: No TOC received
Received two trip blanks not on chain placed on hold

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

ALS Environmental

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

Chain of Custody Form

Page 1 of 1

COC ID: 128189

HS15060728

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

A 300-Sulfate, ortho-phos, and Nitrate (short hold)
B RSK175-methane
C 6020-Potassium only
D Ammonia-4500
E 6020-Dissolved Iron-Lab filtered
F TOC
G Alkalinity by SM2320B
H Sub RSK - CO_2
I Volatiles - SW8260C
J VPH - Iowa OA-1

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-5	6-16-15	0859	W	1,2,3 + Neat	17	X	X	X	X	X	X	X	X	X	X	
2	MW-17	6-16-15	0940	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
3	MW-1	↓	1010	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
4	MW-18	↓	1045	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
5	MW-19	↓	1118	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
6	MW-4	↓	1210	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
7	DUP-1	6-16-15	—	W	1,2,3 + Neat	17	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	6-16-15	1800	
Relinquished by:	6/17/15	9:15	Received by (Laboratory): NR
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Andover 3Q GWM-MNA

Cooler ID	Cooler Temp.
	4/c
24353	2/4
24185	2/5

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

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

IR # 5 C/F 0.5

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

Copyright 2011 by ALS Environmental.

2 of 2
7808 3144 7040
Mstr# 8071 0710 5502
0215

WED – 17 JUN 10:30A
PRIORITY OVERNIGHT

AB SGRA 24188

77099
TX-US IAH

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

CUSTODY SEAL
Date: 6-16-13 Time: 1800
Name: Ted Alfred
Company: APEX

Seal Broken By: CG
Date: 6/17

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

CUSTODY SEAL
Date: 6-16-13 Time: 1800
Name: Ted Alfred
Company: APEX

Seal Broken By: CG
Date: 6/17

1 of 2

TRK# 0215 8071 0710 5502

MASTER

AB SGRA 24353

WED - 17 Ju

PRIORITY OV

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

CUSTODY SEAL

Date: 6-16-19 Time: 1800

Name: Ted Arnold

Company: ALS

Seal Broken By:

Date: 6/17

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

CUSTODY SEAL

Date: 6-16-19 Time: 1800

Name: Ted Arnold

Company: ALS

Seal Broken By:

Date: 6/17

LABORATORY REPORT

June 24, 2015

Ana Spencer
ALS Group USA, Corp.
10450 Stancliff Road Suite 210
Houston, TX 77099-4338

RE: HS15060728

Dear Ana:

Enclosed are the results of the samples submitted to our laboratory on June 18, 2015. For your reference, these analyses have been assigned our service request number P1502454.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Kelly Horiuchi at 5:43 pm, Jun 24, 2015

Kelly Horiuchi
Laboratory Director

CASE NARRATIVE

The samples were received intact under chain of custody on June 18, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Carbon Dioxide Analysis

The samples were analyzed for carbon dioxide using a gas chromatograph equipped with a thermal conductivity detector (TCD). A known amount of liquid was displaced by injecting 8.0 milliliters of helium creating a headspace in the sample vial. Each sample vial was agitated using a sonic disrupter for fifteen minutes and then allowed to equilibrate for at least four hours. A volume of the headspace was withdrawn using a gas-tight syringe and analyzed using a manual injection technique. The amount of dissolved gas (carbon dioxide) in the original sample was calculated using Henry's Law. This method was performed with guidance from RSK 175 as described in laboratory SOP VOA-DISGAS. This analyte is included on the laboratory's DoD-ELAP scope of accreditation, however it is not part of the NELAP or AIHA-LAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

ALS Environmental - Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	876241
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-14-5
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272014-4
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: ALS Group USA, Corp.
Project ID: HS15060728

Service Request: P1502454

Date Received: 6/18/2015
Time Received: 09:45

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	RSK 175 - CO2
HS15060728-01	P1502454-001	Water	6/16/2015	08:59	X
HS15060728-02	P1502454-002	Water	6/16/2015	09:40	X
HS15060728-03	P1502454-003	Water	6/16/2015	10:10	X
HS15060728-04	P1502454-004	Water	6/16/2015	10:45	X
HS15060728-05	P1502454-005	Water	6/16/2015	11:18	X
HS15060728-06	P1502454-006	Water	6/16/2015	12:10	X
HS15060728-07	P1502454-007	Water	6/16/2015	12:00	X

CHAIN OF CUSTODY RECORD

ALS Environmental

Date	17 Jun 2015
COC ID	2982
Due date	26 JUN 15

Subcontractor

ALS Environmental
2655 Park Center Drive, Suite A
Simi Valley, CA 93065

Phone
8055267161
Fax

Customer Information		Project Information	
PO	HS15060728	Project Name	HS15060728

Company Name	ALS Houston	Company Name	ALS Houston
		Inv Attn	Accounts Payable
Address	10450 Stancliff Rd, Ste 210	Address	10450 Stancliff Rd, Ste 210
	Houston, TX 77099		Houston, TX 77099
Phone	281-530-5656	Phone	281-530-5656
Email1	ana.spencer@alsglobal.com	Email2	jumoke.lawal@alsglobal.com

P150245H

Lab ID	Client Samp ID	Collection Date	Matrix	Analysis Requested
HS15060728-01	MW-5	16-Jun-15 08:59 am	Water	XXX SUB
HS15060728-02	MW-17	16-Jun-15 09:40 am	Water	XXX SUB
HS15060728-03	MW-1	16-Jun-15 10:10 am	Water	XXX SUB
HS15060728-04	MW-18	16-Jun-15 10:45 am	Water	XXX SUB
HS15060728-05	MW-19	16-Jun-15 11:18 am	Water	XXX SUB
HS15060728-06	MW-4	16-Jun-15 12:10 pm	Water	XXX SUB
HS15060728-07	DUP-1	16-Jun-15 12:00 am	Water	XXX SUB

Comments Please analyze for the analysis listed above. Send report to the emails shown above.

0° wet ice
blank

Relinquished by:	Date/Time:	Received by:	Date/Time:	Cooler IDs:	Report/QC Level
FED X		K Kluge	6/19/15 0945		STD

ALS Environmental
Sample Acceptance Check Form

Client: ALS Group USA, Corp. Work order: P1502454

Project: HS15060728

Sample(s) received on: 6/18/15 Date opened: 6/18/15 by: KKELPE

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Container(s) **supplied by ALS**?	☐	☒	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature: ° C Blank Temperature: 0° C **Wet Ice**			
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☒	☐	☐
	Location of seal(s)? SEALING COOLER Sealing Lid?	☒	☐	☐
	Were signature and date included?	☒	☐	☐
	Were seals intact?	☒	☐	☐
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☒	☐	☐
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☒	☐	☐
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☒	☐
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1502454-001.01	40mL VOA NP		7		A	MC 6/23/2015
P1502454-001.02	40mL VOA NP				A	
P1502454-001.03	40mL VOA NP				A	
P1502454-002.01	40mL VOA NP		7		A	MC 6/23/2015
P1502454-002.02	40mL VOA NP				A	
P1502454-002.03	40mL VOA NP				A	
P1502454-003.01	40mL VOA NP		7		A	MC 6/23/2015
P1502454-003.02	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS Environmental
Sample Acceptance Check Form

Client: ALS Group USA, Corp. Work order: P1502454

Project: HS15060728

Sample(s) received on: 6/18/15 Date opened: 6/18/15 by: KKELPE

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1502454-003.03	40mL VOA NP				A	
P1502454-004.01	40mL VOA NP		7		A	MC 6/23/2015
P1502454-004.02	40mL VOA NP				A	
P1502454-004.03	40mL VOA NP				A	
P1502454-005.01	40mL VOA NP		7		A	MC 6/23/2015
P1502454-005.02	40mL VOA NP				A	
P1502454-005.03	40mL VOA NP				A	
P1502454-006.01	40mL VOA NP				A	
P1502454-006.02	40mL VOA NP		7		A	MC 6/23/2015
P1502454-006.03	40mL VOA NP				A	
P1502454-007.01	40mL VOA NP		7		A	MC 6/23/2015
P1502454-007.02	40mL VOA NP				A	
P1502454-007.03	40mL VOA NP				A	

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **ALS Group USA, Corp.**
Client Project ID: **HS15060728**

ALS Project ID: P1502454

Carbon Dioxide

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Mike Conejo
Matrix: Water
Test Notes:

Date(s) Collected: 6/16/15
Date Received: 6/18/15
Date Analyzed: 6/23/15

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Result µg/L	MRL µg/L	Data Qualifier
HS15060728-01	P1502454-001	0.10	**60,000**	1,000	
HS15060728-02	P1502454-002	0.10	**72,000**	1,000	
HS15060728-03	P1502454-003	0.10	**81,000**	1,000	
HS15060728-04	P1502454-004	0.10	**42,000**	1,000	
HS15060728-05	P1502454-005	0.10	**22,000**	1,000	
HS15060728-06	P1502454-006	0.10	**30,000**	1,000	
HS15060728-07	P1502454-007	0.10	**21,000**	1,000	
Method Control Sample	P150623-MB	0.10	ND	1,000	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **ALS Group USA, Corp.**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **HS15060728**

ALS Project ID: P1502454
ALS Sample ID: P150623-DLCS

Test Code: RSK 175
Instrument ID: HP5890A/GC10/TCD
Analyst: Mike Conejo
Matrix: Water
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 6/23/15
Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount LCS / DLCS ug/L	Result, LCS ug/L	Result, DLCS ug/L	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
124-38-9	Carbon Dioxide	22,900	19,900	18,000	**87**	**79**	62-139	10	24	

, = The concentration shown includes a subtraction of the Method Control Sample value, even if the result is less than the MRL.

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

June 30, 2015

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

Work Order: **HS15060869**

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

Dear Samuel,

ALS Environmental received 20 sample(s) on Jun 19, 2015 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: Ana.Spencer
Ana L. Spencer

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15060869

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15060869-02	2002 N Colt Ct	Water		16-Jun-2015 14:10	19-Jun-2015 09:50	☐
HS15060869-03	2004 N Colt Ct	Water		16-Jun-2015 13:55	19-Jun-2015 09:50	☐
HS15060869-04	2001 N Colt Ct	Water		16-Jun-2015 14:36	19-Jun-2015 09:50	☐
HS15060869-05	2005 N Colt Ct	Water		16-Jun-2015 14:33	19-Jun-2015 09:50	☐
HS15060869-06	2007 N Colt Ct	Water		16-Jun-2015 14:43	19-Jun-2015 09:50	☐
HS15060869-07	2007 N Mountain Ct	Water		16-Jun-2015 15:08	19-Jun-2015 09:50	☐
HS15060869-08	2009 N Mountain Ct	Water		16-Jun-2015 15:30	19-Jun-2015 09:50	☐
HS15060869-10	1009 W Mountain	Water		16-Jun-2015 15:45	19-Jun-2015 09:50	☐
HS15060869-12	2020 N Ruger Cir	Water		16-Jun-2015 16:40	19-Jun-2015 09:50	☐
HS15060869-14	2006 N Colt Ct	Water		16-Jun-2015 16:55	19-Jun-2015 09:50	☐
HS15060869-15	2028 N Ruger Ct	Water		17-Jun-2015 09:00	19-Jun-2015 09:50	☐
HS15060869-17	2032 N Ruger Cir	Water		17-Jun-2015 09:14	19-Jun-2015 09:50	☐
HS15060869-18	2021 N Ruger Ct	Water		17-Jun-2015 09:33	19-Jun-2015 09:50	☐
HS15060869-20	2019 N Ruger Cir	Water		17-Jun-2015 10:14	19-Jun-2015 09:50	☐
HS15060869-23	HOA-1	Water		17-Jun-2015 11:16	19-Jun-2015 09:50	☐
HS15060869-25	1211 W Quail Crossing Ct	Water		17-Jun-2015 11:47	19-Jun-2015 09:50	☐
HS15060869-31	Dup-3	Water		17-Jun-2015 00:00	19-Jun-2015 09:50	☐
HS15060869-34	TB-061115-34	Water		16-Jun-2015 00:00	19-Jun-2015 09:50	☐
HS15060869-35	TB-061115-40	Water		16-Jun-2015 00:00	19-Jun-2015 09:50	☐
HS15060869-36	2025 N Ruger Ct	Water		17-Jun-2015 09:40	19-Jun-2015 09:50	☐

Client: Apex Companies

Project: E3CE-0065 Andover Release Site

Work Order: HS15060869

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R256657,R256726

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

GCMS Volatiles by Method SW8260

Batch ID: R256725

Sample ID: **HS15060853-01**
- MSD is for an unrelated sample.

Batch ID: R256733,R256740,R256842

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

Batch ID: R256765

Sample ID: **2028 N Ruger Ct (HS15060869-15)**
- Some compounds outside recovery/RPD limits on MS/MSD.

Sample ID: **VSTD050**
- n-Butylbenzene exceeded %D limits on CCV. Samples ND.

Batch ID: R256947

Sample ID: **HS15060874-03**
- MS and MSD are for an unrelated sample

Sample ID: **VSTD050**
- n-Butylbenzene exceeded %D limits on CCV. Samples ND.

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2002 N Colt Ct	Lab ID:HS15060869-02
Collection Date:	16-Jun-2015 14:10	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 19:58
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 19:58
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 19:58
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 19:58
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 19:58
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 19:58
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 19:58
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*23-Jun-2015 19:58*
Surr: 4-Bromofluorobenzene	*95.9*		*70-125*	*%REC*	*1*	*23-Jun-2015 19:58*
Surr: Dibromofluoromethane	*110*		*74-125*	*%REC*	*1*	*23-Jun-2015 19:58*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*23-Jun-2015 19:58*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 18:34
Surr: 4-Bromofluorobenzene	*94.4*		*70-130*	*%REC*	*1*	*22-Jun-2015 18:34*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2004 N Colt Ct	Lab ID:HS15060869-03
Collection Date:	16-Jun-2015 13:55	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 20:25
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 20:25
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 20:25
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 20:25
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 20:25
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 20:25
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 20:25
Surr: 1,2-Dichloroethane-d4	*110*		*71-125*	*%REC*	*1*	*23-Jun-2015 20:25*
Surr: 4-Bromofluorobenzene	*103*		*70-125*	*%REC*	*1*	*23-Jun-2015 20:25*
Surr: Dibromofluoromethane	*112*		*74-125*	*%REC*	*1*	*23-Jun-2015 20:25*
Surr: Toluene-d8	*112*		*75-125*	*%REC*	*1*	*23-Jun-2015 20:25*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.056**		**0.050**	**mg/L**	1	22-Jun-2015 18:49
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*22-Jun-2015 18:49*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2001 N Colt Ct	Lab ID:HS15060869-04
Collection Date:	16-Jun-2015 14:36	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 20:53
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 20:53
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 20:53
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 20:53
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 20:53
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 20:53
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 20:53
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*23-Jun-2015 20:53*
Surr: 4-Bromofluorobenzene	*99.8*		*70-125*	*%REC*	*1*	*23-Jun-2015 20:53*
Surr: Dibromofluoromethane	*109*		*74-125*	*%REC*	*1*	*23-Jun-2015 20:53*
Surr: Toluene-d8	*112*		*75-125*	*%REC*	*1*	*23-Jun-2015 20:53*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 19:05
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*22-Jun-2015 19:05*

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

Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site		WorkOrder:HS15060869
Sample ID:	2005 N Colt Ct		Lab ID:HS15060869-05
Collection Date:	16-Jun-2015 14:33		Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.012**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 17:21
1,3,5-Trimethylbenzene	**0.013**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 17:21
Benzene	**0.066**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
Cyclohexane	**0.027**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
Ethylbenzene	**0.066**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
Isopropylbenzene	**0.0027**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
m,p-Xylene	**0.081**		**0.0020**	**mg/L**	1	23-Jun-2015 17:21
Methylcyclohexane	**0.0039**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
Naphthalene	**0.0095**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:21
n-Propylbenzene	**0.0069**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
o-Xylene	**0.087**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
Toluene	**0.18**		**0.0010**	**mg/L**	1	23-Jun-2015 17:21
Xylenes, Total	**0.17**		**0.0030**	**mg/L**	1	23-Jun-2015 17:21
Surr: 1,2-Dichloroethane-d4	*83.8*		*71-125*	*%REC*	*1*	*23-Jun-2015 17:21*
Surr: 4-Bromofluorobenzene	*93.4*		*70-125*	*%REC*	*1*	*23-Jun-2015 17:21*
Surr: Dibromofluoromethane	*98.5*		*74-125*	*%REC*	*1*	*23-Jun-2015 17:21*
Surr: Toluene-d8	*91.8*		*75-125*	*%REC*	*1*	*23-Jun-2015 17:21*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**2.3**		**0.050**	**mg/L**	1	22-Jun-2015 19:21
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*22-Jun-2015 19:21*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2007 N Colt Ct	Lab ID:HS15060869-06
Collection Date:	16-Jun-2015 14:43	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 15:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 15:38
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 15:38
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 15:38
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 15:38
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 15:38
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 15:38
Surr: 1,2-Dichloroethane-d4	*88.1*		*71-125*	*%REC*	*1*	*23-Jun-2015 15:38*
Surr: 4-Bromofluorobenzene	*97.4*		*70-125*	*%REC*	*1*	*23-Jun-2015 15:38*
Surr: Dibromofluoromethane	*100*		*74-125*	*%REC*	*1*	*23-Jun-2015 15:38*
Surr: Toluene-d8	*93.7*		*75-125*	*%REC*	*1*	*23-Jun-2015 15:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 20:24
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*22-Jun-2015 20:24*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2007 N Mountain Ct	Lab ID:HS15060869-07
Collection Date:	16-Jun-2015 15:08	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 17:47
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 17:47
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 17:47
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 17:47
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 17:47
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 17:47
o-Xylene	**0.0012**		**0.0010**	**mg/L**	1	23-Jun-2015 17:47
Toluene	**0.0013**		**0.0010**	**mg/L**	1	23-Jun-2015 17:47
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 17:47
Surr: 1,2-Dichloroethane-d4	*83.5*		*71-125*	*%REC*	*1*	*23-Jun-2015 17:47*
Surr: 4-Bromofluorobenzene	*93.5*		*70-125*	*%REC*	*1*	*23-Jun-2015 17:47*
Surr: Dibromofluoromethane	*98.2*		*74-125*	*%REC*	*1*	*23-Jun-2015 17:47*
Surr: Toluene-d8	*91.0*		*75-125*	*%REC*	*1*	*23-Jun-2015 17:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 20:40
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	*1*	*22-Jun-2015 20:40*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2009 N Mountain Ct	Lab ID:HS15060869-08
Collection Date:	16-Jun-2015 15:30	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 18:13
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 18:13
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 18:13
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 18:13
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 18:13
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 18:13
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 18:13
Surr: 1,2-Dichloroethane-d4	*87.1*		*71-125*	*%REC*	*1*	*23-Jun-2015 18:13*
Surr: 4-Bromofluorobenzene	*97.1*		*70-125*	*%REC*	*1*	*23-Jun-2015 18:13*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*23-Jun-2015 18:13*
Surr: Toluene-d8	*96.4*		*75-125*	*%REC*	*1*	*23-Jun-2015 18:13*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 20:56
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*22-Jun-2015 20:56*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	1009 W Mountain	Lab ID:HS15060869-10
Collection Date:	16-Jun-2015 15:45	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 18:39
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 18:39
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 18:39
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 18:39
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 18:39
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 18:39
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 18:39
Surr: 1,2-Dichloroethane-d4	*87.4*		*71-125*	*%REC*	*1*	*23-Jun-2015 18:39*
Surr: 4-Bromofluorobenzene	*96.0*		*70-125*	*%REC*	*1*	*23-Jun-2015 18:39*
Surr: Dibromofluoromethane	*99.2*		*74-125*	*%REC*	*1*	*23-Jun-2015 18:39*
Surr: Toluene-d8	*93.6*		*75-125*	*%REC*	*1*	*23-Jun-2015 18:39*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 21:27
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*22-Jun-2015 21:27*

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

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Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2020 N Ruger Cir	Lab ID:HS15060869-12
Collection Date:	16-Jun-2015 16:40	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
1,2-Dichloroethane	ND		0.0010	mg/L	1	23-Jun-2015 19:06
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
2-Butanone	ND		0.0020	mg/L	1	23-Jun-2015 19:06
Benzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
Cyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 19:06
Ethylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
Isopropylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
m,p-Xylene	ND		0.0020	mg/L	1	23-Jun-2015 19:06
Methylcyclohexane	ND		0.0010	mg/L	1	23-Jun-2015 19:06
Naphthalene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
n-Butylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
n-Propylbenzene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
o-Xylene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
Toluene	ND		0.0010	mg/L	1	23-Jun-2015 19:06
Xylenes, Total	ND		0.0030	mg/L	1	23-Jun-2015 19:06
Surr: 1,2-Dichloroethane-d4	*88.7*		*71-125*	*%REC*	*1*	*23-Jun-2015 19:06*
Surr: 4-Bromofluorobenzene	*94.7*		*70-125*	*%REC*	*1*	*23-Jun-2015 19:06*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*1*	*23-Jun-2015 19:06*
Surr: Toluene-d8	*94.7*		*75-125*	*%REC*	*1*	*23-Jun-2015 19:06*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 21:59
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*22-Jun-2015 21:59*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2006 N Colt Ct	Lab ID:HS15060869-14
Collection Date:	16-Jun-2015 16:55	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**1.8**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
1,2-Dichloroethane	ND		0.025	mg/L	25	25-Jun-2015 12:46
1,3,5-Trimethylbenzene	**0.55**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
2-Butanone	ND		0.050	mg/L	25	25-Jun-2015 12:46
Benzene	**2.1**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
Cyclohexane	**0.42**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
Ethylbenzene	**2.2**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
Isopropylbenzene	**0.073**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
m,p-Xylene	**6.0**		**0.050**	**mg/L**	25	25-Jun-2015 12:46
Methylcyclohexane	**0.063**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
Naphthalene	**0.19**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
n-Butylbenzene	**0.046**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
n-Propylbenzene	**0.24**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
o-Xylene	**3.0**		**0.025**	**mg/L**	25	25-Jun-2015 12:46
Toluene	**9.9**		**0.25**	**mg/L**	250	25-Jun-2015 14:06
Xylenes, Total	**9.0**		**0.075**	**mg/L**	25	25-Jun-2015 12:46
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*250*	*25-Jun-2015 14:06*
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*25*	*25-Jun-2015 12:46*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*25*	*25-Jun-2015 12:46*
Surr: 4-Bromofluorobenzene	*102*		*70-125*	*%REC*	*250*	*25-Jun-2015 14:06*
Surr: Dibromofluoromethane	*114*		*74-125*	*%REC*	*250*	*25-Jun-2015 14:06*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*25*	*25-Jun-2015 12:46*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*250*	*25-Jun-2015 14:06*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*25*	*25-Jun-2015 12:46*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**140**		**2.5**	**mg/L**	50	23-Jun-2015 16:34
Surr: 4-Bromofluorobenzene	*120*		*70-130*	*%REC*	*50*	*23-Jun-2015 16:34*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2028 N Ruger Ct	Lab ID:HS15060869-15
Collection Date:	17-Jun-2015 09:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 13:11
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 13:11
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 13:11
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 13:11
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 13:11
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 13:11
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 13:11
Surr: 1,2-Dichloroethane-d4	*107*		*71-125*	*%REC*	*1*	*24-Jun-2015 13:11*
Surr: 4-Bromofluorobenzene	*98.7*		*70-125*	*%REC*	*1*	*24-Jun-2015 13:11*
Surr: Dibromofluoromethane	*109*		*74-125*	*%REC*	*1*	*24-Jun-2015 13:11*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*24-Jun-2015 13:11*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 23:33
Surr: 4-Bromofluorobenzene	*109*		*70-130*	*%REC*	*1*	*22-Jun-2015 23:33*

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

Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site		WorkOrder:HS15060869
Sample ID:	2032 N Ruger Cir		Lab ID:HS15060869-17
Collection Date:	17-Jun-2015 09:14		Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 14:59
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 14:59
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 14:59
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 14:59
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 14:59
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 14:59
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 14:59
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*1*	*24-Jun-2015 14:59*
Surr: 4-Bromofluorobenzene	*99.2*		*70-125*	*%REC*	*1*	*24-Jun-2015 14:59*
Surr: Dibromofluoromethane	*111*		*74-125*	*%REC*	*1*	*24-Jun-2015 14:59*
Surr: Toluene-d8	*105*		*75-125*	*%REC*	*1*	*24-Jun-2015 14:59*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 00:05
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*23-Jun-2015 00:05*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2021 N Ruger Ct	Lab ID:HS15060869-18
Collection Date:	17-Jun-2015 09:33	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 15:25
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 15:25
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 15:25
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 15:25
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 15:25
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 15:25
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 15:25
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*24-Jun-2015 15:25*
Surr: 4-Bromofluorobenzene	*101*		*70-125*	*%REC*	*1*	*24-Jun-2015 15:25*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*24-Jun-2015 15:25*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*24-Jun-2015 15:25*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 00:21
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*23-Jun-2015 00:21*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	2019 N Ruger Cir	Lab ID:HS15060869-20
Collection Date:	17-Jun-2015 10:14	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 22:14
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 22:14
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 22:14
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 22:14
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 22:14
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 22:14
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 22:14
Surr: 1,2-Dichloroethane-d4	*115*		*71-125*	*%REC*	*1*	*24-Jun-2015 22:14*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*1*	*24-Jun-2015 22:14*
Surr: Dibromofluoromethane	*115*		*74-125*	*%REC*	*1*	*24-Jun-2015 22:14*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*24-Jun-2015 22:14*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 00:52
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*23-Jun-2015 00:52*

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

TOTAL SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	HOA-1	Lab ID:HS15060869-23
Collection Date:	17-Jun-2015 11:16	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	**0.0018**		**0.0010**	**mg/L**	1	26-Jun-2015 12:24
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 12:24
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 12:24
Benzene	**0.011**		**0.0010**	**mg/L**	1	26-Jun-2015 12:24
Cyclohexane	**0.0019**		**0.0010**	**mg/L**	1	26-Jun-2015 12:24
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 12:24
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 12:24
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
o-Xylene	**0.0067**		**0.0010**	**mg/L**	1	26-Jun-2015 12:24
Toluene	ND		0.0010	mg/L	1	26-Jun-2015 12:24
Xylenes, Total	**0.0067**		**0.0030**	**mg/L**	1	26-Jun-2015 12:24
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*26-Jun-2015 12:24*
Surr: 4-Bromofluorobenzene	*98.6*		*70-125*	*%REC*	*1*	*26-Jun-2015 12:24*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*1*	*26-Jun-2015 12:24*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*26-Jun-2015 12:24*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.076**		**0.050**	**mg/L**	1	23-Jun-2015 12:02
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*23-Jun-2015 12:02*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	1211 W Quail Crossing Ct	Lab ID:HS15060869-25
Collection Date:	17-Jun-2015 11:47	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 12:51
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 12:51
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 12:51
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 12:51
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 12:51
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
Toluene	ND		0.0010	mg/L	1	26-Jun-2015 12:51
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 12:51
Surr: 1,2-Dichloroethane-d4	*112*		*71-125*	*%REC*	*1*	*26-Jun-2015 12:51*
Surr: 4-Bromofluorobenzene	*96.4*		*70-125*	*%REC*	*1*	*26-Jun-2015 12:51*
Surr: Dibromofluoromethane	*108*		*74-125*	*%REC*	*1*	*26-Jun-2015 12:51*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*26-Jun-2015 12:51*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 12:49
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Jun-2015 12:49*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	Dup-3	Lab ID:HS15060869-31
Collection Date:	17-Jun-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 03:21
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 03:21
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 03:21
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 03:21
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 03:21
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 03:21
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 03:21
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*24-Jun-2015 03:21*
Surr: 4-Bromofluorobenzene	*98.4*		*70-125*	*%REC*	*1*	*24-Jun-2015 03:21*
Surr: Dibromofluoromethane	*109*		*74-125*	*%REC*	*1*	*24-Jun-2015 03:21*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*24-Jun-2015 03:21*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 13:05
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*23-Jun-2015 13:05*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	TB-061115-34	Lab ID:HS15060869-34
Collection Date:	16-Jun-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 00:20
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 00:20
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 00:20
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 00:20
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 00:20
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 00:20
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 00:20
Surr: 1,2-Dichloroethane-d4	*108*		*71-125*	*%REC*	*1*	*24-Jun-2015 00:20*
Surr: 4-Bromofluorobenzene	*96.8*		*70-125*	*%REC*	*1*	*24-Jun-2015 00:20*
Surr: Dibromofluoromethane	*113*		*74-125*	*%REC*	*1*	*24-Jun-2015 00:20*
Surr: Toluene-d8	*108*		*75-125*	*%REC*	*1*	*24-Jun-2015 00:20*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869
Sample ID:	TB-061115-40	Lab ID:HS15060869-35
Collection Date:	16-Jun-2015 00:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 00:46
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 00:46
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 00:46
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 00:46
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 00:46
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 00:46
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 00:46
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*24-Jun-2015 00:46*
Surr: 4-Bromofluorobenzene	*96.9*		*70-125*	*%REC*	*1*	*24-Jun-2015 00:46*
Surr: Dibromofluoromethane	*110*		*74-125*	*%REC*	*1*	*24-Jun-2015 00:46*
Surr: Toluene-d8	*107*		*75-125*	*%REC*	*1*	*24-Jun-2015 00:46*

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

Client:	Apex Companies	**ANALYTICAL REPORT**	
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060869	
Sample ID:	2025 N Ruger Ct	Lab ID:HS15060869-36	
Collection Date:	17-Jun-2015 09:40	Matrix:Water	

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: AKP
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
1,2-Dichloroethane	ND		0.0010	mg/L	1	24-Jun-2015 03:47
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
2-Butanone	ND		0.0020	mg/L	1	24-Jun-2015 03:47
Benzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
Cyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 03:47
Ethylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
Isopropylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
m,p-Xylene	ND		0.0020	mg/L	1	24-Jun-2015 03:47
Methylcyclohexane	ND		0.0010	mg/L	1	24-Jun-2015 03:47
Naphthalene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
n-Butylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
n-Propylbenzene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
o-Xylene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
Toluene	ND		0.0010	mg/L	1	24-Jun-2015 03:47
Xylenes, Total	ND		0.0030	mg/L	1	24-Jun-2015 03:47
Surr: 1,2-Dichloroethane-d4	*109*		*71-125*	*%REC*	*1*	*24-Jun-2015 03:47*
Surr: 4-Bromofluorobenzene	*95.9*		*70-125*	*%REC*	*1*	*24-Jun-2015 03:47*
Surr: Dibromofluoromethane	*110*		*74-125*	*%REC*	*1*	*24-Jun-2015 03:47*
Surr: Toluene-d8	*106*		*75-125*	*%REC*	*1*	*24-Jun-2015 03:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 13:21
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*23-Jun-2015 13:21*

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256657	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15060869-02	2002 N Colt Ct	16 Jun 2015 14:10			22 Jun 2015 18:34	1
HS15060869-03	2004 N Colt Ct	16 Jun 2015 13:55			22 Jun 2015 18:49	1
HS15060869-04	2001 N Colt Ct	16 Jun 2015 14:36			22 Jun 2015 19:05	1
HS15060869-05	2005 N Colt Ct	16 Jun 2015 14:33			22 Jun 2015 19:21	1
HS15060869-06	2007 N Colt Ct	16 Jun 2015 14:43			22 Jun 2015 20:24	1
HS15060869-07	2007 N Mountain Ct	16 Jun 2015 15:08			22 Jun 2015 20:40	1
HS15060869-08	2009 N Mountain Ct	16 Jun 2015 15:30			22 Jun 2015 20:56	1
HS15060869-10	1009 W Mountain	16 Jun 2015 15:45			22 Jun 2015 21:27	1
HS15060869-12	2020 N Ruger Cir	16 Jun 2015 16:40			22 Jun 2015 21:59	1
HS15060869-15	2028 N Ruger Ct	17 Jun 2015 09:00			22 Jun 2015 23:33	1
HS15060869-17	2032 N Ruger Cir	17 Jun 2015 09:14			23 Jun 2015 00:05	1
HS15060869-18	2021 N Ruger Ct	17 Jun 2015 09:33			23 Jun 2015 00:21	1
HS15060869-20	2019 N Ruger Cir	17 Jun 2015 10:14			23 Jun 2015 00:52	1
Batch ID R256725	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060869-02	2002 N Colt Ct	16 Jun 2015 14:10			23 Jun 2015 19:58	1
HS15060869-03	2004 N Colt Ct	16 Jun 2015 13:55			23 Jun 2015 20:25	1
HS15060869-04	2001 N Colt Ct	16 Jun 2015 14:36			23 Jun 2015 20:53	1
Batch ID R256726	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15060869-14	2006 N Colt Ct	16 Jun 2015 16:55			23 Jun 2015 16:34	50
HS15060869-23	HOA-1	17 Jun 2015 11:16			23 Jun 2015 12:02	1
HS15060869-25	1211 W Quail Crossing Ct	17 Jun 2015 11:47			23 Jun 2015 12:49	1
HS15060869-31	Dup-3	17 Jun 2015 00:00			23 Jun 2015 13:05	1
HS15060869-36	2025 N Ruger Ct	17 Jun 2015 09:40			23 Jun 2015 13:21	1
Batch ID R256733	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060869-05	2005 N Colt Ct	16 Jun 2015 14:33			23 Jun 2015 17:21	1
HS15060869-06	2007 N Colt Ct	16 Jun 2015 14:43			23 Jun 2015 15:38	1
HS15060869-07	2007 N Mountain Ct	16 Jun 2015 15:08			23 Jun 2015 17:47	1
HS15060869-08	2009 N Mountain Ct	16 Jun 2015 15:30			23 Jun 2015 18:13	1
HS15060869-10	1009 W Mountain	16 Jun 2015 15:45			23 Jun 2015 18:39	1
HS15060869-12	2020 N Ruger Cir	16 Jun 2015 16:40			23 Jun 2015 19:06	1
Batch ID R256740	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060869-31	Dup-3	17 Jun 2015 00:00			24 Jun 2015 03:21	1
HS15060869-34	TB-061115-34	16 Jun 2015 00:00			24 Jun 2015 00:20	1
HS15060869-35	TB-061115-40	16 Jun 2015 00:00			24 Jun 2015 00:46	1
HS15060869-36	2025 N Ruger Ct	17 Jun 2015 09:40			24 Jun 2015 03:47	1

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256765	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060869-15	2028 N Ruger Ct	17 Jun 2015 09:00			24 Jun 2015 13:11	1
HS15060869-17	2032 N Ruger Cir	17 Jun 2015 09:14			24 Jun 2015 14:59	1
HS15060869-18	2021 N Ruger Ct	17 Jun 2015 09:33			24 Jun 2015 15:25	1
HS15060869-20	2019 N Ruger Cir	17 Jun 2015 10:14			24 Jun 2015 22:14	1
Batch ID R256842	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060869-14	2006 N Colt Ct	16 Jun 2015 16:55			25 Jun 2015 14:06	250
HS15060869-14	2006 N Colt Ct	16 Jun 2015 16:55			25 Jun 2015 12:46	25
Batch ID R256947	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060869-23	HOA-1	17 Jun 2015 11:16			26 Jun 2015 12:24	1
HS15060869-25	1211 W Quail Crossing Ct	17 Jun 2015 11:47			26 Jun 2015 12:51	1

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256657 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150622** Units: **mg/L** Analysis Date: **22-Jun-2015 16:44**
Client ID: Run ID: **FID-14_256657** SeqNo: **3329494** 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	*0.101*	*0.0050*	*0.1*	*0*	*101*	*70 - 130*				

LCS Sample ID: **GLCS-150622** Units: **mg/L** Analysis Date: **22-Jun-2015 20:08**
Client ID: Run ID: **FID-14_256657** SeqNo: **3329504** 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	1.111	0.050	1	0	111	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1176*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MS Sample ID: **HS15060918-01MS** Units: **mg/L** Analysis Date: **22-Jun-2015 18:02**
Client ID: Run ID: **FID-14_256657** SeqNo: **3329496** 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	1.026	0.050	1	0.08889	93.7	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1137*	*0.0050*	*0.1*	*0*	*114*	*70 - 130*				

MSD Sample ID: **HS15060918-01MSD** Units: **mg/L** Analysis Date: **22-Jun-2015 18:18**
Client ID: Run ID: **FID-14_256657** SeqNo: **3329497** 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	1.277	0.050	1	0.08889	119	70 - 130	1.026	21.8	30	
Surr: 4-Bromofluorobenzene	*0.1212*	*0.0050*	*0.1*	*0*	*121*	*70 - 130*	*0.1137*	*6.34*	*30*	

The following samples were anayzed in this batch: HS15060869-02 HS15060869-03 HS15060869-04 HS15060869-05 HS15060869-06 HS15060869-07 HS15060869-08 HS15060869-10 HS15060869-12 HS15060869-15 HS15060869-17 HS15060869-18 HS15060869-20

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256726 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150623** Units: **mg/L** Analysis Date: **23-Jun-2015 10:51**
Client ID: Run ID: **FID-14_256726** SeqNo: **3330968** 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	*0.1032*	*0.0050*	*0.1*	*0*	*103*	*70 - 130*				

LCS Sample ID: **GLCS-150623** Units: **mg/L** Analysis Date: **23-Jun-2015 10:20**
Client ID: Run ID: **FID-14_256726** SeqNo: **3330966** 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	1.171	0.050	1	0	117	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1176*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MS Sample ID: **HS15060869-23MS** Units: **mg/L** Analysis Date: **23-Jun-2015 12:18**
Client ID: **HOA-1** Run ID: **FID-14_256726** SeqNo: **3330970** 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	1.321	0.050	1	0.0765	124	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1243*	*0.0050*	*0.1*	*0*	*124*	*70 - 130*				

MSD Sample ID: **HS15060869-23MSD** Units: **mg/L** Analysis Date: **23-Jun-2015 12:34**
Client ID: **HOA-1** Run ID: **FID-14_256726** SeqNo: **3330971** 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	1.288	0.050	1	0.0765	121	70 - 130	1.321	2.54	30	
Surr: 4-Bromofluorobenzene	*0.1158*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*	*0.1243*	*7.12*	*30*	

The following samples were anayzed in this batch: HS15060869-14 HS15060869-23 HS15060869-25 HS15060869-31 HS15060869-36

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256725 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 11:37**
Client ID: Run ID: **VOA4_256725** SeqNo: **3330933** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*53.49*	*1.0*	*50*	*0*	*107*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.25*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*53.73*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*53.28*	*1.0*	*50*	*0*	*107*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256725 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 10:44**
Client ID: Run ID: **VOA4_256725** SeqNo: **3330932** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	49.68	1.0	50	0	99.4	70 - 125				
1,2-Dichloroethane	46.17	1.0	50	0	92.3	76 - 120				
1,3,5-Trimethylbenzene	49.81	1.0	50	0	99.6	80 - 123				
2-Butanone	89.97	2.0	100	0	90.0	60 - 140				
Benzene	46.39	1.0	50	0	92.8	80 - 120				
Cyclohexane	43.17	1.0	50	0	86.3	70 - 130				
Ethylbenzene	44.31	1.0	50	0	88.6	80 - 120				
Isopropylbenzene	48.94	1.0	50	0	97.9	75 - 130				
m,p-Xylene	91.22	2.0	100	0	91.2	80 - 120				
Methylcyclohexane	49.17	1.0	50	0	98.3	70 - 126				
Naphthalene	53.33	1.0	50	0	107	65 - 135				
n-Butylbenzene	52.7	1.0	50	0	105	75 - 128				
n-Propylbenzene	50.71	1.0	50	0	101	75 - 130				
o-Xylene	45.3	1.0	50	0	90.6	80 - 120				
Toluene	46.2	1.0	50	0	92.4	75 - 121				
Xylenes, Total	136.5	3.0	150	0	91.0	79 - 124				
Surr: 1,2-Dichloroethane-d4	*50.71*	*1.0*	*50*	*0*	*101*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.57*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*51.82*	*1.0*	*50*	*0*	*104*	*74 - 125*				
Surr: Toluene-d8	*52.71*	*1.0*	*50*	*0*	*105*	*75 - 125*				

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

RIGHT SOLUTIONS / RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256725 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15060853-01MS** Units: **ug/L** Analysis Date: **23-Jun-2015 14:15**
Client ID: Run ID: **VOA4_256725** SeqNo: **3330939** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.22	1.0	50	0	90.4	70 - 125				
1,2-Dichloroethane	45.92	1.0	50	0	91.8	76 - 120				
1,3,5-Trimethylbenzene	46.38	1.0	50	0	92.8	80 - 123				
2-Butanone	94.12	2.0	100	0	94.1	60 - 140				
Benzene	47.02	1.0	50	0	94.0	80 - 120				
Cyclohexane	46.81	1.0	50	0	93.6	70 - 130				
Ethylbenzene	44.57	1.0	50	0	89.1	80 - 120				
Isopropylbenzene	47.2	1.0	50	0	94.4	75 - 130				
m,p-Xylene	88.38	2.0	100	0	88.4	80 - 120				
Methylcyclohexane	47.3	1.0	50	0	94.6	70 - 126				
Naphthalene	50.72	1.0	50	0	101	65 - 135				
n-Butylbenzene	44.55	1.0	50	0	89.1	75 - 128				
n-Propylbenzene	48.44	1.0	50	0	96.9	75 - 130				
o-Xylene	44.84	1.0	50	0	89.7	80 - 120				
Toluene	45.83	1.0	50	0	91.7	75 - 121				
Xylenes, Total	133.2	3.0	150	0	88.8	80 - 124				
Surr: 1,2-Dichloroethane-d4	*52.44*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*52.15*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*54.38*	*1.0*	*50*	*0*	*109*	*74 - 125*				
Surr: Toluene-d8	*52.87*	*1.0*	*50*	*0*	*106*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256725 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060853-01MSD** Units: **ug/L** Analysis Date: **23-Jun-2015 14:41**
Client ID: Run ID: **VOA4_256725** SeqNo: **3330940** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.09	1.0	50	0	90.2	70 - 125	45.22	0.291	20	
1,2-Dichloroethane	45.84	1.0	50	0	91.7	76 - 120	45.92	0.169	20	
1,3,5-Trimethylbenzene	46.74	1.0	50	0	93.5	80 - 123	46.38	0.769	20	
2-Butanone	97.63	2.0	100	0	97.6	60 - 140	94.12	3.66	20	
Benzene	45.76	1.0	50	0	91.5	80 - 120	47.02	2.71	20	
Cyclohexane	47.34	1.0	50	0	94.7	70 - 130	46.81	1.12	20	
Ethylbenzene	44.28	1.0	50	0	88.6	80 - 120	44.57	0.664	20	
Isopropylbenzene	47.98	1.0	50	0	96.0	75 - 130	47.2	1.64	20	
m,p-Xylene	89.26	2.0	100	0	89.3	80 - 120	88.38	0.986	20	
Methylcyclohexane	42.52	1.0	50	0	85.0	70 - 126	47.3	10.6	20	
Naphthalene	65.7	1.0	50	0	131	65 - 135	50.72	25.7	20	R
n-Butylbenzene	42.56	1.0	50	0	85.1	75 - 128	44.55	4.57	20	
n-Propylbenzene	47.68	1.0	50	0	95.4	75 - 130	48.44	1.58	20	
o-Xylene	44.39	1.0	50	0	88.8	80 - 120	44.84	1.01	20	
Toluene	45.48	1.0	50	0	91.0	75 - 121	45.83	0.779	20	
Xylenes, Total	133.6	3.0	150	0	89.1	80 - 124	133.2	0.317	20	
Surr: 1,2-Dichloroethane-d4	*53.14*	*1.0*	*50*	*0*	*106*	*71 - 125*	*52.44*	*1.31*	*20*	
Surr: 4-Bromofluorobenzene	*53.64*	*1.0*	*50*	*0*	*107*	*70 - 125*	*52.15*	*2.81*	*20*	
Surr: Dibromofluoromethane	*55.72*	*1.0*	*50*	*0*	*111*	*74 - 125*	*54.38*	*2.43*	*20*	
Surr: Toluene-d8	*54.68*	*1.0*	*50*	*0*	*109*	*75 - 125*	*52.87*	*3.38*	*20*	

The following samples were anayzed in this batch: HS15060869-02 HS15060869-03 HS15060869-04

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: HS15060869

QC BATCH REPORT

Batch ID: R256733 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 12:35**
Client ID: Run ID: **VOA2_256733** SeqNo: **3331051** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*42.77*	*1.0*	*50*	*0*	*85.5*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*45.69*	*1.0*	*50*	*0*	*91.4*	*70 - 125*				
Surr: Dibromofluoromethane	*48.75*	*1.0*	*50*	*0*	*97.5*	*74 - 125*				
Surr: Toluene-d8	*46.83*	*1.0*	*50*	*0*	*93.7*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256733 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 11:44**
Client ID: Run ID: **VOA2_256733** SeqNo: **3331050** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	44.31	1.0	50	0	88.6	70 - 125				
1,2-Dichloroethane	40.06	1.0	50	0	80.1	76 - 120				
1,3,5-Trimethylbenzene	46.54	1.0	50	0	93.1	80 - 123				
2-Butanone	122.9	2.0	100	0	123	60 - 140				
Benzene	40.43	1.0	50	0	80.9	80 - 120				
Cyclohexane	44.53	1.0	50	0	89.1	70 - 130				
Ethylbenzene	44.46	1.0	50	0	88.9	80 - 120				
Isopropylbenzene	46.72	1.0	50	0	93.4	75 - 130				
m,p-Xylene	86.32	2.0	100	0	86.3	80 - 120				
Methylcyclohexane	44.67	1.0	50	0	89.3	70 - 126				
Naphthalene	51.82	1.0	50	0	104	65 - 135				
n-Butylbenzene	50.51	1.0	50	0	101	75 - 128				
n-Propylbenzene	47.5	1.0	50	0	95.0	75 - 130				
o-Xylene	44.15	1.0	50	0	88.3	80 - 120				
Toluene	40.32	1.0	50	0	80.6	75 - 121				
Xylenes, Total	130.5	3.0	150	0	87.0	79 - 124				
Surr: 1,2-Dichloroethane-d4	*42.24*	*1.0*	*50*	*0*	*84.5*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*46.9*	*1.0*	*50*	*0*	*93.8*	*70 - 125*				
Surr: Dibromofluoromethane	*48.53*	*1.0*	*50*	*0*	*97.1*	*74 - 125*				
Surr: Toluene-d8	*45.88*	*1.0*	*50*	*0*	*91.8*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256733 **Instrument:** VOA2 **Method:** SW8260

MS Sample ID: **HS15060869-06MS** Units: **ug/L** Analysis Date: **23-Jun-2015 16:04**
Client ID: **2007 N Colt Ct** Run ID: **VOA2_256733** SeqNo: **3331059** 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	39.81	1.0	50	0	79.6	70 - 125				
1,2-Dichloroethane	39.23	1.0	50	0	78.5	76 - 120				
1,3,5-Trimethylbenzene	43.11	1.0	50	0	86.2	80 - 123				
2-Butanone	129	2.0	100	0	129	60 - 140				
Benzene	42.64	1.0	50	0.6056	84.1	80 - 120				
Cyclohexane	46.03	1.0	50	0	92.1	70 - 130				
Ethylbenzene	44.58	1.0	50	0.5998	88.0	80 - 120				
Isopropylbenzene	45.11	1.0	50	0	90.2	75 - 130				
m,p-Xylene	84.31	2.0	100	0.6394	83.7	80 - 120				
Methylcyclohexane	45.48	1.0	50	0	91.0	70 - 126				
Naphthalene	42.53	1.0	50	0	85.1	65 - 135				
n-Butylbenzene	45.59	1.0	50	0	91.2	75 - 128				
n-Propylbenzene	44.19	1.0	50	0	88.4	75 - 130				
o-Xylene	43.75	1.0	50	0	87.5	80 - 120				
Toluene	41.55	1.0	50	0	83.1	75 - 121				
Xylenes, Total	128.1	3.0	150	0.6394	84.9	80 - 124				
Surr: 1,2-Dichloroethane-d4	*43.79*	*1.0*	*50*	*0*	*87.6*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.48*	*1.0*	*50*	*0*	*97.0*	*70 - 125*				
Surr: Dibromofluoromethane	*50.76*	*1.0*	*50*	*0*	*102*	*74 - 125*				
Surr: Toluene-d8	*47.53*	*1.0*	*50*	*0*	*95.1*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256733 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS15060869-06MSD** Units: **ug/L** Analysis Date: **23-Jun-2015 16:30**
Client ID: **2007 N Colt Ct** Run ID: **VOA2_256733** SeqNo: **3331060** 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	41.32	1.0	50	0	82.6	70 - 125	39.81	3.72	20	
1,2-Dichloroethane	38.47	1.0	50	0	76.9	76 - 120	39.23	1.95	20	
1,3,5-Trimethylbenzene	42.94	1.0	50	0	85.9	80 - 123	43.11	0.388	20	
2-Butanone	120.7	2.0	100	0	121	60 - 140	129	6.6	20	
Benzene	42.09	1.0	50	0.6056	83.0	80 - 120	42.64	1.28	20	
Cyclohexane	43.33	1.0	50	0	86.7	70 - 130	46.03	6.05	20	
Ethylbenzene	43.85	1.0	50	0.5998	86.5	80 - 120	44.58	1.65	20	
Isopropylbenzene	51.3	1.0	50	0	103	75 - 130	45.11	12.9	20	
m,p-Xylene	83.73	2.0	100	0.6394	83.1	80 - 120	84.31	0.688	20	
Methylcyclohexane	43.38	1.0	50	0	86.8	70 - 126	45.48	4.73	20	
Naphthalene	38.6	1.0	50	0	77.2	65 - 135	42.53	9.67	20	
n-Butylbenzene	46.69	1.0	50	0	93.4	75 - 128	45.59	2.37	20	
n-Propylbenzene	46.61	1.0	50	0	93.2	75 - 130	44.19	5.31	20	
o-Xylene	43.86	1.0	50	0	87.7	80 - 120	43.75	0.233	20	
Toluene	40.14	1.0	50	0	80.3	75 - 121	41.55	3.45	20	
Xylenes, Total	127.6	3.0	150	0.6394	84.6	80 - 124	128.1	0.372	20	
Surr: 1,2-Dichloroethane-d4	*43.51*	*1.0*	*50*	*0*	*87.0*	*71 - 125*	*43.79*	*0.632*	*20*	
Surr: 4-Bromofluorobenzene	*54.59*	*1.0*	*50*	*0*	*109*	*70 - 125*	*48.48*	*11.9*	*20*	
Surr: Dibromofluoromethane	*49.01*	*1.0*	*50*	*0*	*98.0*	*74 - 125*	*50.76*	*3.51*	*20*	
Surr: Toluene-d8	*45.69*	*1.0*	*50*	*0*	*91.4*	*75 - 125*	*47.53*	*3.95*	*20*	

The following samples were anayzed in this batch: HS15060869-05 HS15060869-06 HS15060869-07 HS15060869-08 HS15060869-10 HS15060869-12

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: HS15060869

QC BATCH REPORT

Batch ID: R256740 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 23:54**
Client ID: Run ID: **VOA4_256740** SeqNo: **3331123** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*54.88*	*1.0*	*50*	*0*	*110*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*48.56*	*1.0*	*50*	*0*	*97.1*	*70 - 125*				
Surr: Dibromofluoromethane	*54.78*	*1.0*	*50*	*0*	*110*	*74 - 125*				
Surr: Toluene-d8	*54.46*	*1.0*	*50*	*0*	*109*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256740 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150623** Units: **ug/L** Analysis Date: **23-Jun-2015 23:03**
Client ID: Run ID: **VOA4_256740** SeqNo: **3331122** 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	54.57	1.0	50	0	109	70 - 125				
1,2-Dichloroethane	50.85	1.0	50	0	102	76 - 120				
1,3,5-Trimethylbenzene	55.08	1.0	50	0	110	80 - 123				
2-Butanone	103.8	2.0	100	0	104	60 - 140				
Benzene	50.55	1.0	50	0	101	80 - 120				
Cyclohexane	50.96	1.0	50	0	102	70 - 130				
Ethylbenzene	49.9	1.0	50	0	99.8	80 - 120				
Isopropylbenzene	54.22	1.0	50	0	108	75 - 130				
m,p-Xylene	101.7	2.0	100	0	102	80 - 120				
Methylcyclohexane	53.52	1.0	50	0	107	70 - 126				
Naphthalene	61.31	1.0	50	0	123	65 - 135				
n-Butylbenzene	57.5	1.0	50	0	115	75 - 128				
n-Propylbenzene	55.34	1.0	50	0	111	75 - 130				
o-Xylene	50.24	1.0	50	0	100	80 - 120				
Toluene	50.26	1.0	50	0	101	75 - 121				
Xylenes, Total	151.9	3.0	150	0	101	79 - 124				
Surr: 1,2-Dichloroethane-d4	*52.63*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.33*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*55.34*	*1.0*	*50*	*0*	*111*	*74 - 125*				
Surr: Toluene-d8	*52.54*	*1.0*	*50*	*0*	*105*	*75 - 125*				

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

RIGHT SOLUTIONS / RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256740 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15060870-02MS** Units: **ug/L** Analysis Date: **24-Jun-2015 02:04**
Client ID: Run ID: **VOA4_256740** SeqNo: **3331128** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	49.47	1.0	50	0	98.9	70 - 125				
1,2-Dichloroethane	46.23	1.0	50	0	92.5	76 - 120				
1,3,5-Trimethylbenzene	51.41	1.0	50	0	103	80 - 123				
2-Butanone	85.5	2.0	100	0	85.5	60 - 140				
Benzene	46.52	1.0	50	0	93.0	80 - 120				
Cyclohexane	47.52	1.0	50	0	95.0	70 - 130				
Ethylbenzene	46.19	1.0	50	0	92.4	80 - 120				
Isopropylbenzene	50.79	1.0	50	0	102	75 - 130				
m,p-Xylene	94.38	2.0	100	0	94.4	80 - 120				
Methylcyclohexane	50.88	1.0	50	0	102	70 - 126				
Naphthalene	45.91	1.0	50	0	91.8	65 - 135				
n-Butylbenzene	52.81	1.0	50	0	106	75 - 128				
n-Propylbenzene	53.15	1.0	50	0	106	75 - 130				
o-Xylene	46.11	1.0	50	0	92.2	80 - 120				
Toluene	47.64	1.0	50	0	95.3	75 - 121				
Xylenes, Total	140.5	3.0	150	0	93.7	80 - 124				
Surr: 1,2-Dichloroethane-d4	*52.01*	*1.0*	*50*	*0*	*104*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.81*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*53.15*	*1.0*	*50*	*0*	*106*	*74 - 125*				
Surr: Toluene-d8	*53.3*	*1.0*	*50*	*0*	*107*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256740 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060870-02MSD** Units: **ug/L** Analysis Date: **24-Jun-2015 02:30**
Client ID: Run ID: **VOA4_256740** SeqNo: **3331129** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	49.3	1.0	50	0	98.6	70 - 125	49.47	0.347	20	
1,2-Dichloroethane	47.1	1.0	50	0	94.2	76 - 120	46.23	1.86	20	
1,3,5-Trimethylbenzene	50.51	1.0	50	0	101	80 - 123	51.41	1.76	20	
2-Butanone	88.53	2.0	100	0	88.5	60 - 140	85.5	3.48	20	
Benzene	47.36	1.0	50	0	94.7	80 - 120	46.52	1.78	20	
Cyclohexane	48.93	1.0	50	0	97.9	70 - 130	47.52	2.93	20	
Ethylbenzene	46.22	1.0	50	0	92.4	80 - 120	46.19	0.0479	20	
Isopropylbenzene	51.29	1.0	50	0	103	75 - 130	50.79	0.987	20	
m,p-Xylene	93.66	2.0	100	0	93.7	80 - 120	94.38	0.766	20	
Methylcyclohexane	52.11	1.0	50	0	104	70 - 126	50.88	2.37	20	
Naphthalene	50.68	1.0	50	0	101	65 - 135	45.91	9.88	20	
n-Butylbenzene	52.44	1.0	50	0	105	75 - 128	52.81	0.693	20	
n-Propylbenzene	51.76	1.0	50	0	104	75 - 130	53.15	2.65	20	
o-Xylene	46.94	1.0	50	0	93.9	80 - 120	46.11	1.79	20	
Toluene	47.07	1.0	50	0	94.1	75 - 121	47.64	1.2	20	
Xylenes, Total	140.6	3.0	150	0	93.7	80 - 124	140.5	0.0788	20	
Surr: 1,2-Dichloroethane-d4	*53.85*	*1.0*	*50*	*0*	*108*	*71 - 125*	*52.01*	*3.47*	*20*	
Surr: 4-Bromofluorobenzene	*50.54*	*1.0*	*50*	*0*	*101*	*70 - 125*	*51.81*	*2.49*	*20*	
Surr: Dibromofluoromethane	*55.02*	*1.0*	*50*	*0*	*110*	*74 - 125*	*53.15*	*3.46*	*20*	
Surr: Toluene-d8	*53.92*	*1.0*	*50*	*0*	*108*	*75 - 125*	*53.3*	*1.16*	*20*	

The following samples were anayzed in this batch: HS15060869-31 HS15060869-34 HS15060869-35 HS15060869-36

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256765 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150624** Units: **ug/L** Analysis Date: **24-Jun-2015 12:18**
Client ID: Run ID: **VOA4_256765** SeqNo: **3331565** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*53.25*	*1.0*	*50*	*0*	*106*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.74*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*53.93*	*1.0*	*50*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*54.24*	*1.0*	*50*	*0*	*108*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256765 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150624** Units: **ug/L** Analysis Date: **24-Jun-2015 11:25**
Client ID: Run ID: **VOA4_256765** SeqNo: **3331564** 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	53.08	1.0	50	0	106	70 - 125				
1,2-Dichloroethane	52.22	1.0	50	0	104	76 - 120				
1,3,5-Trimethylbenzene	53.54	1.0	50	0	107	80 - 123				
2-Butanone	104.9	2.0	100	0	105	60 - 140				
Benzene	49.22	1.0	50	0	98.4	80 - 120				
Cyclohexane	48.66	1.0	50	0	97.3	70 - 130				
Ethylbenzene	49.24	1.0	50	0	98.5	80 - 120				
Isopropylbenzene	53.15	1.0	50	0	106	75 - 130				
m,p-Xylene	99.84	2.0	100	0	99.8	80 - 120				
Methylcyclohexane	54.21	1.0	50	0	108	70 - 126				
Naphthalene	64.44	1.0	50	0	129	65 - 135				
n-Butylbenzene	59.73	1.0	50	0	119	75 - 128				
n-Propylbenzene	54.9	1.0	50	0	110	75 - 130				
o-Xylene	50.01	1.0	50	0	100	80 - 120				
Toluene	49.49	1.0	50	0	99.0	75 - 121				
Xylenes, Total	149.8	3.0	150	0	99.9	79 - 124				
Surr: 1,2-Dichloroethane-d4	*52.51*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.65*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*54.03*	*1.0*	*50*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*52.84*	*1.0*	*50*	*0*	*106*	*75 - 125*				

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

RIGHT SOLUTIONS / RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256765 **Instrument:** VOA4 **Method:** SW8260

MS Sample ID: **HS15060869-15MS** Units: **ug/L** Analysis Date: **24-Jun-2015 13:38**
Client ID: **2028 N Ruger Ct** Run ID: **VOA4_256765** SeqNo: **3331568** 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	28.94	1.0	50	0	57.9	70 - 125				S
1,2-Dichloroethane	50.04	1.0	50	0	100	76 - 120				
1,3,5-Trimethylbenzene	2.831	1.0	50	0	5.66	80 - 123				S
2-Butanone	90.8	2.0	100	0	90.8	60 - 140				
Benzene	50.21	1.0	50	0	100	80 - 120				
Cyclohexane	45.58	1.0	50	0	91.2	70 - 130				
Ethylbenzene	47.99	1.0	50	0	96.0	80 - 120				
Isopropylbenzene	51.45	1.0	50	0	103	75 - 130				
m,p-Xylene	84.78	2.0	100	0	84.8	80 - 120				
Methylcyclohexane	52.38	1.0	50	0	105	70 - 126				
Naphthalene	51.57	1.0	50	0	103	65 - 135				
n-Butylbenzene	54.66	1.0	50	0	109	75 - 128				
n-Propylbenzene	52.81	1.0	50	0	106	75 - 130				
o-Xylene	46.09	1.0	50	0	92.2	80 - 120				
Toluene	48.37	1.0	50	0	96.7	75 - 121				
Xylenes, Total	130.9	3.0	150	0	87.2	80 - 124				
Surr: 1,2-Dichloroethane-d4	*51.08*	*1.0*	*50*	*0*	*102*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.01*	*1.0*	*50*	*0*	*98.0*	*70 - 125*				
Surr: Dibromofluoromethane	*53.48*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*50.85*	*1.0*	*50*	*0*	*102*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256765 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060869-15MSD** Units: **ug/L** Analysis Date: **24-Jun-2015 14:05**
Client ID: **2028 N Ruger Ct** Run ID: **VOA4_256765** SeqNo: **3331834** 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	23.23	1.0	50	0	46.5	70 - 125	28.94	21.9	20	SR
1,2-Dichloroethane	50.43	1.0	50	0	101	76 - 120	50.04	0.784	20	
1,3,5-Trimethylbenzene	2.701	1.0	50	0	5.40	80 - 123	2.831	4.7	20	S
2-Butanone	101	2.0	100	0	101	60 - 140	90.8	10.7	20	
Benzene	50.53	1.0	50	0	101	80 - 120	50.21	0.642	20	
Cyclohexane	46.9	1.0	50	0	93.8	70 - 130	45.58	2.85	20	
Ethylbenzene	47.63	1.0	50	0	95.3	80 - 120	47.99	0.757	20	
Isopropylbenzene	52.11	1.0	50	0	104	75 - 130	51.45	1.27	20	
m,p-Xylene	81.5	2.0	100	0	81.5	80 - 120	84.78	3.94	20	
Methylcyclohexane	50.68	1.0	50	0	101	70 - 126	52.38	3.31	20	
Naphthalene	55.68	1.0	50	0	111	65 - 135	51.57	7.65	20	
n-Butylbenzene	52.62	1.0	50	0	105	75 - 128	54.66	3.81	20	
n-Propylbenzene	51.59	1.0	50	0	103	75 - 130	52.81	2.33	20	
o-Xylene	48.49	1.0	50	0	97.0	80 - 120	46.09	5.08	20	
Toluene	48.88	1.0	50	0	97.8	75 - 121	48.37	1.05	20	
Xylenes, Total	130	3.0	150	0	86.7	80 - 124	130.9	0.673	20	
Surr: 1,2-Dichloroethane-d4	*53.06*	*1.0*	*50*	*0*	*106*	*71 - 125*	*51.08*	*3.8*	*20*	
Surr: 4-Bromofluorobenzene	*50.76*	*1.0*	*50*	*0*	*102*	*70 - 125*	*49.01*	*3.51*	*20*	
Surr: Dibromofluoromethane	*54.87*	*1.0*	*50*	*0*	*110*	*74 - 125*	*53.48*	*2.56*	*20*	
Surr: Toluene-d8	*53.08*	*1.0*	*50*	*0*	*106*	*75 - 125*	*50.85*	*4.3*	*20*	

The following samples were anayzed in this batch: HS15060869-15 HS15060869-17 HS15060869-18 HS15060869-20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256842 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150625** Units: **ug/L** Analysis Date: **25-Jun-2015 11:01**
Client ID: Run ID: **VOA4_256842** SeqNo: **3333142** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*52.63*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*49.71*	*1.0*	*50*	*0*	*99.4*	*70 - 125*				
Surr: Dibromofluoromethane	*53.59*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*53.19*	*1.0*	*50*	*0*	*106*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256842 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150625** Units: **ug/L** Analysis Date: **25-Jun-2015 10:09**
Client ID: Run ID: **VOA4_256842** SeqNo: **3333141** 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	52.13	1.0	50	0	104	70 - 125				
1,2-Dichloroethane	52.17	1.0	50	0	104	76 - 120				
1,3,5-Trimethylbenzene	52.02	1.0	50	0	104	80 - 123				
2-Butanone	99.98	2.0	100	0	100.0	60 - 140				
Benzene	49	1.0	50	0	98.0	80 - 120				
Cyclohexane	45.24	1.0	50	0	90.5	70 - 130				
Ethylbenzene	48.58	1.0	50	0	97.2	80 - 120				
Isopropylbenzene	51.5	1.0	50	0	103	75 - 130				
m,p-Xylene	97.77	2.0	100	0	97.8	80 - 120				
Methylcyclohexane	51.15	1.0	50	0	102	70 - 126				
Naphthalene	59.14	1.0	50	0	118	65 - 135				
n-Butylbenzene	55.21	1.0	50	0	110	75 - 128				
n-Propylbenzene	52.75	1.0	50	0	106	75 - 130				
o-Xylene	49.31	1.0	50	0	98.6	80 - 120				
Toluene	48.41	1.0	50	0	96.8	75 - 121				
Xylenes, Total	147.1	3.0	150	0	98.1	79 - 124				
Surr: 1,2-Dichloroethane-d4	*55.19*	*1.0*	*50*	*0*	*110*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.09*	*1.0*	*50*	*0*	*100*	*70 - 125*				
Surr: Dibromofluoromethane	*55.22*	*1.0*	*50*	*0*	*110*	*74 - 125*				
Surr: Toluene-d8	*53.45*	*1.0*	*50*	*0*	*107*	*75 - 125*				

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256842 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15060869-14MS** Units: **ug/L** Analysis Date: **25-Jun-2015 13:12**
Client ID: **2006 N Colt Ct** Run ID: **VOA4_256842** SeqNo: **3333285** PrepDate: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	15270	250	12500	2068	106	70 - 125				
1,2-Dichloroethane	13190	250	12500	0	106	76 - 120				
1,3,5-Trimethylbenzene	13800	250	12500	754.3	104	80 - 123				
2-Butanone	24550	500	25000	0	98.2	60 - 140				
Benzene	15260	250	12500	2315	104	80 - 120				
Cyclohexane	13100	250	12500	424	101	70 - 130				
Ethylbenzene	14550	250	12500	2530	96.1	80 - 120				
Isopropylbenzene	13800	250	12500	223.6	109	75 - 130				
m,p-Xylene	31470	500	25000	6670	99.2	80 - 120				
Methylcyclohexane	14100	250	12500	129.1	112	70 - 126				
Naphthalene	13870	250	12500	914.5	104	65 - 135				
n-Butylbenzene	14500	250	12500	368.3	113	75 - 128				
n-Propylbenzene	13600	250	12500	352.6	106	75 - 130				
o-Xylene	15550	250	12500	3349	97.6	80 - 120				
Toluene	21640	250	12500	9942	93.6	75 - 121				
Xylenes, Total	47020	750	37500	10020	98.7	80 - 124				
Surr: 1,2-Dichloroethane-d4	*13290*	*250*	*12500*	*0*	*106*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*12300*	*250*	*12500*	*0*	*98.4*	*70 - 125*				
Surr: Dibromofluoromethane	*13170*	*250*	*12500*	*0*	*105*	*74 - 125*				
Surr: Toluene-d8	*12740*	*250*	*12500*	*0*	*102*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256842 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060869-14MSD** Units: **ug/L** Analysis Date: **25-Jun-2015 13:39**
Client ID: **2006 N Colt Ct** Run ID: **VOA4_256842** SeqNo: **3333286** PrepDate: DF: **250**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	14960	250	12500	2068	103	70 - 125	15270	2.07	20	
1,2-Dichloroethane	13350	250	12500	0	107	76 - 120	13190	1.16	20	
1,3,5-Trimethylbenzene	13840	250	12500	754.3	105	80 - 123	13800	0.323	20	
2-Butanone	25250	500	25000	0	101	60 - 140	24550	2.81	20	
Benzene	14700	250	12500	2315	99.1	80 - 120	15260	3.72	20	
Cyclohexane	12400	250	12500	424	95.8	70 - 130	13100	5.53	20	
Ethylbenzene	14600	250	12500	2530	96.5	80 - 120	14550	0.346	20	
Isopropylbenzene	13790	250	12500	223.6	109	75 - 130	13800	0.0837	20	
m,p-Xylene	31110	500	25000	6670	97.8	80 - 120	31470	1.16	20	
Methylcyclohexane	13530	250	12500	129.1	107	70 - 126	14100	4.12	20	
Naphthalene	15060	250	12500	914.5	113	65 - 135	13870	8.25	20	
n-Butylbenzene	14380	250	12500	368.3	112	75 - 128	14500	0.831	20	
n-Propylbenzene	13840	250	12500	352.6	108	75 - 130	13600	1.73	20	
o-Xylene	15930	250	12500	3349	101	80 - 120	15550	2.39	20	
Toluene	21000	250	12500	9942	88.4	75 - 121	21640	3.02	20	
Xylenes, Total	47040	750	37500	10020	98.7	80 - 124	47020	0.028	20	
Surr: 1,2-Dichloroethane-d4	*12990*	*250*	*12500*	*0*	*104*	*71 - 125*	*13290*	*2.32*	*20*	
Surr: 4-Bromofluorobenzene	*12860*	*250*	*12500*	*0*	*103*	*70 - 125*	*12300*	*4.51*	*20*	
Surr: Dibromofluoromethane	*13290*	*250*	*12500*	*0*	*106*	*74 - 125*	*13170*	*0.932*	*20*	
Surr: Toluene-d8	*13310*	*250*	*12500*	*0*	*106*	*75 - 125*	*12740*	*4.35*	*20*	

The following samples were anayzed in this batch: HS15060869-14

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: HS15060869

QC BATCH REPORT

Batch ID: R256947 **Instrument: VOA4** **Method: SW8260**

MBLK Sample ID: **VBLKW-150626** Units: **ug/L** Analysis Date: **26-Jun-2015 11:53**
Client ID: Run ID: **VOA4_256947** SeqNo: **3335279** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*55.48*	*1.0*	*50*	*0*	*111*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.12*	*1.0*	*50*	*0*	*102*	*70 - 125*				
Surr: Dibromofluoromethane	*53.76*	*1.0*	*50*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*54.6*	*1.0*	*50*	*0*	*109*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256947 **Instrument: VOA4** **Method: SW8260**

LCS Sample ID: **VLCSW-150626** Units: **ug/L** Analysis Date: **26-Jun-2015 10:55**
Client ID: Run ID: **VOA4_256947** SeqNo: **3335278** 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	52.98	1.0	50	0	106	70 - 125				
1,2-Dichloroethane	55.89	1.0	50	0	112	76 - 120				
1,3,5-Trimethylbenzene	53.99	1.0	50	0	108	80 - 123				
2-Butanone	101.5	2.0	100	0	102	60 - 140				
Benzene	48.73	1.0	50	0	97.5	80 - 120				
Cyclohexane	45.09	1.0	50	0	90.2	70 - 130				
Ethylbenzene	48.61	1.0	50	0	97.2	80 - 120				
Isopropylbenzene	54.24	1.0	50	0	108	75 - 130				
m,p-Xylene	98.34	2.0	100	0	98.3	80 - 120				
Methylcyclohexane	51.36	1.0	50	0	103	70 - 126				
Naphthalene	59.87	1.0	50	0	120	65 - 135				
n-Butylbenzene	57.09	1.0	50	0	114	75 - 128				
n-Propylbenzene	53.5	1.0	50	0	107	75 - 130				
o-Xylene	50.76	1.0	50	0	102	80 - 120				
Toluene	48.82	1.0	50	0	97.6	75 - 121				
Xylenes, Total	149.1	3.0	150	0	99.4	79 - 124				
Surr: 1,2-Dichloroethane-d4	*55.57*	*1.0*	*50*	*0*	*111*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.87*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*55.95*	*1.0*	*50*	*0*	*112*	*74 - 125*				
Surr: Toluene-d8	*53.73*	*1.0*	*50*	*0*	*107*	*75 - 125*				

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

RIGHT SOLUTION | RIGHT PARTNER

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256947 **Instrument: VOA4** **Method: SW8260**

MS Sample ID: **HS15060874-03MS** Units: **ug/L** Analysis Date: **26-Jun-2015 13:46**
Client ID: Run ID: **VOA4_256947** SeqNo: **3335283** 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	1009	10	500	448.6	112	70 - 125				
1,2-Dichloroethane	607.9	10	500	26.04	116	76 - 120				
1,3,5-Trimethylbenzene	674.6	10	500	115.3	112	80 - 123				
2-Butanone	981.9	20	1000	0	98.2	60 - 140				
Benzene	1462	10	500	908.4	111	80 - 120				
Cyclohexane	542.2	10	500	66.82	95.1	70 - 130				
Ethylbenzene	842.3	10	500	340.4	100	80 - 120				
Isopropylbenzene	591.3	10	500	36.61	111	75 - 130				
m,p-Xylene	1367	20	1000	347.3	102	80 - 120				
Methylcyclohexane	599.8	10	500	26.25	115	70 - 126				
Naphthalene	766.5	10	500	95.56	134	65 - 135				
n-Butylbenzene	620.1	10	500	15.43	121	75 - 128				
n-Propylbenzene	633.3	10	500	75.81	111	75 - 130				
o-Xylene	587.2	10	500	85.86	100	80 - 120				
Toluene	663.2	10	500	169.2	98.8	75 - 121				
Xylenes, Total	1954	30	1500	433.1	101	80 - 124				
Surr: 1,2-Dichloroethane-d4	*562.4*	*10*	*500*	*0*	*112*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*513.1*	*10*	*500*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*540.7*	*10*	*500*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*520*	*10*	*500*	*0*	*104*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060869

QC BATCH REPORT

Batch ID: R256947 **Instrument: VOA4** **Method: SW8260**

MSD Sample ID: **HS15060874-03MSD** Units: **ug/L** Analysis Date: **26-Jun-2015 14:13**
Client ID: Run ID: **VOA4_256947** SeqNo: **3335284** 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	942	10	500	448.6	98.7	70 - 125	1009	6.86	20	
1,2-Dichloroethane	582.2	10	500	26.04	111	76 - 120	607.9	4.32	20	
1,3,5-Trimethylbenzene	636.5	10	500	115.3	104	80 - 123	674.6	5.81	20	
2-Butanone	1017	20	1000	0	102	60 - 140	981.9	3.54	20	
Benzene	1358	10	500	908.4	89.8	80 - 120	1462	7.38	20	
Cyclohexane	530.3	10	500	66.82	92.7	70 - 130	542.2	2.22	20	
Ethylbenzene	832	10	500	340.4	98.3	80 - 120	842.3	1.22	20	
Isopropylbenzene	587.9	10	500	36.61	110	75 - 130	591.3	0.579	20	
m,p-Xylene	1373	20	1000	347.3	103	80 - 120	1367	0.486	20	
Methylcyclohexane	552.1	10	500	26.25	105	70 - 126	599.8	8.28	20	
Naphthalene	793.3	10	500	95.56	140	65 - 135	766.5	3.45	20	S
n-Butylbenzene	594.4	10	500	15.43	116	75 - 128	620.1	4.24	20	
n-Propylbenzene	597.6	10	500	75.81	104	75 - 130	633.3	5.79	20	
o-Xylene	596	10	500	85.86	102	80 - 120	587.2	1.49	20	
Toluene	662.3	10	500	169.2	98.6	75 - 121	663.2	0.141	20	
Xylenes, Total	1969	30	1500	433.1	102	80 - 124	1954	0.789	20	
Surr: 1,2-Dichloroethane-d4	*570.1*	*10*	*500*	*0*	*114*	*71 - 125*	*562.4*	*1.35*	*20*	
Surr: 4-Bromofluorobenzene	*515*	*10*	*500*	*0*	*103*	*70 - 125*	*513.1*	*0.36*	*20*	
Surr: Dibromofluoromethane	*566.4*	*10*	*500*	*0*	*113*	*74 - 125*	*540.7*	*4.64*	*20*	
Surr: Toluene-d8	*542.7*	*10*	*500*	*0*	*109*	*75 - 125*	*520*	*4.27*	*20*	

The following samples were anayzed in this batch: HS15060869-23 HS15060869-25

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: **HS15060869**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jul-2015
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-15-15	30-Apr-2016

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Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15060869

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15060869-02	2002 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-02	2002 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-03	2004 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-03	2004 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-04	2001 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-04	2001 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-05	2005 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-05	2005 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-06	2007 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-06	2007 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-07	2007 N Mountain Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-07	2007 N Mountain Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-08	2009 N Mountain Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-08	2009 N Mountain Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-10	1009 W Mountain	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-10	1009 W Mountain	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-12	2020 N Ruger Cir	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-12	2020 N Ruger Cir	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-14	2006 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-14	2006 N Colt Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-15	2028 N Ruger Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-15	2028 N Ruger Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-17	2032 N Ruger Cir	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-17	2032 N Ruger Cir	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-18	2021 N Ruger Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-18	2021 N Ruger Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-20	2019 N Ruger Cir	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-20	2019 N Ruger Cir	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-23	HOA-1	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-23	HOA-1	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-25	1211 W Quail Crossing Ct	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-25	1211 W Quail Crossing Ct	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-31	Dup-3	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-31	Dup-3	Login	6/20/2015 10:33:10 AM	CGG	BTEX A1
HS15060869-34	TB-061115-34	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-35	TB-061115-40	Login	6/20/2015 10:33:10 AM	CGG	VW-3
HS15060869-36	2025 N Ruger Ct	Login	6/20/2015 10:34:09 AM	CGG	VW-3
HS15060869-36	2025 N Ruger Ct	Login	6/20/2015 10:34:09 AM	CGG	BTEX A1

Sample Receipt Checklist

Client Name: APEX-PORTLAND

Work Order: HS15060869

Date/Time Received: **19-Jun-2015 09:50**

Received by: **PMG**

Checklist completed by: *Corey Grandits* (eSignature) 20-Jun-2015 (Date)

Reviewed by: *Ana L. Spencer* (eSignature) 22-Jun-2015 (Date)

Matrices: **Water**

Carrier name: **FedEx**

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

Temperature(s)/Thermometer(s):	1.9c/2.2c , 2.1c/2.4c , 1.3c/1.6c uc/c	IR4
Cooler(s)/Kit(s):	Lg Navy , 3088 , 24110	
Date/Time sample(s) sent to storage:	06/20/2015 10:50	

	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: Extra set 2025 N Ruger Court 6/17/2015 @ 09:40 received, logged in for all analysis

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

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ALS Environmental

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Chain of Custody Form

Page 1 of 4

COC ID: 125222

HS15060869

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-2	6-16-15	1402	W	1	6	X	X									
2	2002 N Colt Ct		1410														
3	2004 N Colt Ct		1355														
4	2001 N Colt Ct		1436														
5	2005 N Colt Ct		1433														
6	2007 N Colt Ct		1443														
7	2007 N Mountain Ct		1508														
8	2009 N Mountain Ct		1530														
9	MW-12		1522														
10	1009 W Mountain		1545														

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by:	Date: 6-18-15	Time: 16:50	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory): 6-19-15 09:30
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.
	VIC
NAVY	1.7°
3533	2.1°
24110	1.3°

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

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

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Chain of Custody For HS15060869

Page 2 of 4

COC ID: 126221

Apex Companies
E3CE-0065 Andover Release Site

on, WV
58
30

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-10	6-16-15	1617	W	1	6	X	X									
2	2020 N Ruger Cir	↓	1640	↓	↓	↓	↓	↓									
3	MW-9		1649														
4	2006 N Colt Ct		1655														
5	2028 N Ruger Cir	6-17-15	0900														
6	MW-15		0910														
7	2032 N Ruger Cir		0914														
8	2021 N Ruger Ct		0933														
9	MW-16		0945														
10	2019 N Ruger Cir		1014														

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by: Date: 6-18-15 Time: 1650 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 6-18-15

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

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.

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

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

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

Page 3 of 4

COC ID: 120220

HS15060869

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-11	6-17-15	1019	W	1	6	X	X									
2	MW-8		1100														
3	HOA-1		1116														
4	MW-13		1130														
5	1211 W Quail Crossing Ct		1147														
6	MW-14		1157														
7	MW-3		1345														
8	MW-7		1414														
9	MW-6		1434														
10																	

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	6-18-15	1650	
Relinquished by:	Date:	Time:	Received by (Laboratory): 6-17-15 0750
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.

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

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

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Chain of Custody Form

Page 4 of 4

COC ID: 126223

HS15060869

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Andover Release Site	A	VOCs (8260) Colt Court GW List
Work Order		Project Number	E3CE-0065	B	GRO - VPH QA-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	DUP-2	6-17-15	—	W	1	6	X	X									
2	DUP-3	6-17-15	—	W	1	6	X	X									
3	Trip Blank																
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by: Date: 6-18-15 Time: 1650 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 6-18-15 0950

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

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.

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

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

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL
Date: 6-18-15 Time: 1650
Name: ZED ALFRED
Company: ALEX

Seal Broken By:
Date:

MPS# 0581 7808 4549 7188 FRI - 19 JUN 10:30A
PRIORITY OVERNIGHT
XH SGRA LG BLVE 77099
TX-US
COLEMAN IAH

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

CUSTODY SEAL
Date: 6-18-15 Time: 1650
Name: ZED ALFRED
Company: ALEX

Seal Broken By:
6726

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

CUSTODY SEAL
Date: 6-18-13 Time: 1650
Name: TED ALFERS
Company: APEX

Seal Broken By:
Date:

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

CUSTODY SEAL
Date: 6-18-13 Time: 1650
Name: TED ALFERS
Company: APEX

Seal Broken By:
Date: 6/20

TRK# 0200 8075 3159 3261
FRI - 19 JUN 10:30A
PRIORITY OVERNIGHT

AB SGRA 24110
77099
TX-US IAH

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www.alsglobal.com

June 26, 2015

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

Work Order: **HS15060918**

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

Dear Samuel,

ALS Environmental received 16 sample(s) on Jun 19, 2015 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: Dayna.Fisher
Ana L. Spencer

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15060918

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15060918-01	MW-2	Water		16-Jun-2015 14:02	19-Jun-2015 09:50	☐
HS15060918-09	MW-12	Water		16-Jun-2015 15:22	19-Jun-2015 09:50	☐
HS15060918-11	MW-10	Water		16-Jun-2015 16:17	19-Jun-2015 09:50	☐
HS15060918-13	MW-9	Water		16-Jun-2015 16:49	19-Jun-2015 09:50	☐
HS15060918-16	MW-15	Water		17-Jun-2015 09:10	19-Jun-2015 09:50	☐
HS15060918-19	MW-16	Water		17-Jun-2015 09:45	19-Jun-2015 09:50	☐
HS15060918-21	MW-11	Water		17-Jun-2015 10:19	19-Jun-2015 09:50	☐
HS15060918-22	MW-8	Water		17-Jun-2015 11:00	19-Jun-2015 09:50	☐
HS15060918-24	MW-13	Water		17-Jun-2015 11:30	19-Jun-2015 09:50	☐
HS15060918-26	MW-14	Water		17-Jun-2015 11:57	19-Jun-2015 09:50	☐
HS15060918-27	MW-3	Water		17-Jun-2015 13:45	19-Jun-2015 09:50	☐
HS15060918-28	MW-7	Water		17-Jun-2015 14:14	19-Jun-2015 09:50	☐
HS15060918-29	MW-6	Water		17-Jun-2015 14:34	19-Jun-2015 09:50	☐
HS15060918-30	DUP-2	Water		17-Jun-2015 12:00	19-Jun-2015 09:50	☐
HS15060918-31	TB-061115-38	Trip Blank		16-Jun-2015 12:00	22-Jun-2015 17:46	☐
HS15060918-32	TB-061115-26	Trip Blank		16-Jun-2015 00:00	19-Jun-2015 09:50	☐

Client: Apex Companies

Project: E3CE-0065 Andover Release Site

Work Order: HS15060918

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R256657,R256726

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

GCMS Volatiles by Method SW8260

Batch ID: R256951

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

Batch ID: R256900

Sample ID: **MW-2 (HS15060918-01)**

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

Client:	Apex Companies		**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:	HS15060918
Sample ID:	MW-2	Lab ID:	HS15060918-01
Collection Date:	16-Jun-2015 14:02	Matrix:	Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 01:39
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 01:39
Benzene	**0.0013**		**0.0010**	**mg/L**	1	26-Jun-2015 01:39
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 01:39
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
m,p-Xylene	**0.0052**		**0.0020**	**mg/L**	1	26-Jun-2015 01:39
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 01:39
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:39
o-Xylene	**0.0026**		**0.0010**	**mg/L**	1	26-Jun-2015 01:39
Toluene	**0.0089**		**0.0010**	**mg/L**	1	26-Jun-2015 01:39
Xylenes, Total	**0.0078**		**0.0030**	**mg/L**	1	26-Jun-2015 01:39
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*1*	*26-Jun-2015 01:39*
Surr: 4-Bromofluorobenzene	*96.1*		*70-125*	*%REC*	*1*	*26-Jun-2015 01:39*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*26-Jun-2015 01:39*
Surr: Toluene-d8	*99.7*		*75-125*	*%REC*	*1*	*26-Jun-2015 01:39*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.089**		**0.050**	**mg/L**	1	22-Jun-2015 17:47
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*22-Jun-2015 17:47*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-12	Lab ID:HS15060918-09
Collection Date:	16-Jun-2015 15:22	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 03:47
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 03:47
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 03:47
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 03:47
Benzene	**0.0014**		**0.0010**	**mg/L**	1	26-Jun-2015 03:47
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 03:47
Ethylbenzene	**0.0013**		**0.0010**	**mg/L**	1	26-Jun-2015 03:47
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 03:47
m,p-Xylene	**0.0058**		**0.0020**	**mg/L**	1	26-Jun-2015 03:47
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 03:47
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 03:47
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 03:47
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 03:47
o-Xylene	**0.0028**		**0.0010**	**mg/L**	1	26-Jun-2015 03:47
Toluene	**0.011**		**0.0010**	**mg/L**	1	26-Jun-2015 03:47
Xylenes, Total	**0.0086**		**0.0030**	**mg/L**	1	26-Jun-2015 03:47
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*26-Jun-2015 03:47*
Surr: 4-Bromofluorobenzene	*96.5*		*70-125*	*%REC*	*1*	*26-Jun-2015 03:47*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*26-Jun-2015 03:47*
Surr: Toluene-d8	*99.6*		*75-125*	*%REC*	*1*	*26-Jun-2015 03:47*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.061**		**0.050**	**mg/L**	1	22-Jun-2015 21:11
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*22-Jun-2015 21:11*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-10
Collection Date: 16-Jun-2015 16:17

WorkOrder:HS15060918
Lab ID:HS15060918-11
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 04:13
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
2-Butanone	**0.0029**		**0.0020**	**mg/L**	1	26-Jun-2015 04:13
Benzene	**0.0024**		**0.0010**	**mg/L**	1	26-Jun-2015 04:13
Cyclohexane	**0.0032**		**0.0010**	**mg/L**	1	26-Jun-2015 04:13
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
m,p-Xylene	**0.0040**		**0.0020**	**mg/L**	1	26-Jun-2015 04:13
Methylcyclohexane	**0.0045**		**0.0010**	**mg/L**	1	26-Jun-2015 04:13
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:13
o-Xylene	**0.0021**		**0.0010**	**mg/L**	1	26-Jun-2015 04:13
Toluene	**0.0068**		**0.0010**	**mg/L**	1	26-Jun-2015 04:13
Xylenes, Total	**0.0062**		**0.0030**	**mg/L**	1	26-Jun-2015 04:13
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*26-Jun-2015 04:13*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*1*	*26-Jun-2015 04:13*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*26-Jun-2015 04:13*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*26-Jun-2015 04:13*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.35**		**0.050**	**mg/L**	1	22-Jun-2015 21:43
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*22-Jun-2015 21:43*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-9	Lab ID:HS15060918-13
Collection Date:	16-Jun-2015 16:49	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 04:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 04:38
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 04:38
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 04:38
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 04:38
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 04:38
Toluene	**0.0053**		**0.0010**	**mg/L**	1	26-Jun-2015 04:38
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 04:38
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*26-Jun-2015 04:38*
Surr: 4-Bromofluorobenzene	*96.4*		*70-125*	*%REC*	*1*	*26-Jun-2015 04:38*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*26-Jun-2015 04:38*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*26-Jun-2015 04:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 22:14
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*22-Jun-2015 22:14*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-15
Collection Date: 17-Jun-2015 09:10

WorkOrder:HS15060918
Lab ID:HS15060918-16
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 05:04
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 05:04
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 05:04
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 05:04
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 05:04
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 05:04
Toluene	**0.0043**		**0.0010**	**mg/L**	1	26-Jun-2015 05:04
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 05:04
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*26-Jun-2015 05:04*
Surr: 4-Bromofluorobenzene	*95.5*		*70-125*	*%REC*	*1*	*26-Jun-2015 05:04*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*26-Jun-2015 05:04*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*26-Jun-2015 05:04*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	22-Jun-2015 23:49
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*22-Jun-2015 23:49*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-16	Lab ID:HS15060918-19
Collection Date:	17-Jun-2015 09:45	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 05:30
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 05:30
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 05:30
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 05:30
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 05:30
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 05:30
Toluene	**0.0029**		**0.0010**	**mg/L**	1	26-Jun-2015 05:30
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 05:30
Surr: 1,2-Dichloroethane-d4	*102*		*71-125*	*%REC*	*1*	*26-Jun-2015 05:30*
Surr: 4-Bromofluorobenzene	*96.1*		*70-125*	*%REC*	*1*	*26-Jun-2015 05:30*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*26-Jun-2015 05:30*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*26-Jun-2015 05:30*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 00:36
Surr: 4-Bromofluorobenzene	*106*		*70-130*	*%REC*	*1*	*23-Jun-2015 00:36*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-11
Collection Date: 17-Jun-2015 10:19

WorkOrder:HS15060918
Lab ID:HS15060918-21
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 05:55
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 05:55
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 05:55
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 05:55
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 05:55
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 05:55
Toluene	**0.0032**		**0.0010**	**mg/L**	1	26-Jun-2015 05:55
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 05:55
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*26-Jun-2015 05:55*
Surr: 4-Bromofluorobenzene	*95.1*		*70-125*	*%REC*	*1*	*26-Jun-2015 05:55*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*26-Jun-2015 05:55*
Surr: Toluene-d8	*100.0*		*75-125*	*%REC*	*1*	*26-Jun-2015 05:55*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 13:37
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*23-Jun-2015 13:37*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-8	Lab ID:HS15060918-22
Collection Date:	17-Jun-2015 11:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 06:21
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 06:21
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 06:21
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 06:21
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 06:21
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 06:21
Toluene	**0.0017**		**0.0010**	**mg/L**	1	26-Jun-2015 06:21
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 06:21
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*26-Jun-2015 06:21*
Surr: 4-Bromofluorobenzene	*94.8*		*70-125*	*%REC*	*1*	*26-Jun-2015 06:21*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*26-Jun-2015 06:21*
Surr: Toluene-d8	*100.0*		*75-125*	*%REC*	*1*	*26-Jun-2015 06:21*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 14:40
Surr: 4-Bromofluorobenzene	*107*		*70-130*	*%REC*	*1*	*23-Jun-2015 14:40*

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

ANALYTICAL REPORT

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-13
Collection Date: 17-Jun-2015 11:30

WorkOrder:HS15060918
Lab ID:HS15060918-24
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 06:46
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 06:46
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 06:46
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 06:46
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 06:46
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 06:46
Toluene	**0.0019**		**0.0010**	**mg/L**	1	26-Jun-2015 06:46
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 06:46
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*26-Jun-2015 06:46*
Surr: 4-Bromofluorobenzene	*95.5*		*70-125*	*%REC*	*1*	*26-Jun-2015 06:46*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*26-Jun-2015 06:46*
Surr: Toluene-d8	*100*		*75-125*	*%REC*	*1*	*26-Jun-2015 06:46*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 14:56
Surr: 4-Bromofluorobenzene	*105*		*70-130*	*%REC*	*1*	*23-Jun-2015 14:56*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-14	Lab ID:HS15060918-26
Collection Date:	17-Jun-2015 11:57	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 07:12
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 07:12
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 07:12
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 07:12
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 07:12
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 07:12
Toluene	**0.0016**		**0.0010**	**mg/L**	1	26-Jun-2015 07:12
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 07:12
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*26-Jun-2015 07:12*
Surr: 4-Bromofluorobenzene	*95.1*		*70-125*	*%REC*	*1*	*26-Jun-2015 07:12*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*26-Jun-2015 07:12*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*1*	*26-Jun-2015 07:12*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 15:12
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*23-Jun-2015 15:12*

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Sample ID: MW-3
Collection Date: 17-Jun-2015 13:45

ANALYTICAL REPORT
WorkOrder:HS15060918
Lab ID:HS15060918-27
Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	**0.46**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
1,2-Dichloroethane	ND		0.0050	mg/L	5	26-Jun-2015 08:57
1,3,5-Trimethylbenzene	**0.11**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
2-Butanone	ND		0.010	mg/L	5	26-Jun-2015 08:57
Benzene	**1.6**		**0.025**	**mg/L**	25	26-Jun-2015 15:54
Cyclohexane	**0.016**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
Ethylbenzene	**0.95**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
Isopropylbenzene	**0.030**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
m,p-Xylene	**0.92**		**0.010**	**mg/L**	5	26-Jun-2015 08:57
Methylcyclohexane	**0.029**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
Naphthalene	**0.10**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
n-Butylbenzene	**0.031**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
n-Propylbenzene	**0.078**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
o-Xylene	**0.57**		**0.0050**	**mg/L**	5	26-Jun-2015 08:57
Toluene	**1.5**		**0.025**	**mg/L**	25	26-Jun-2015 15:54
Xylenes, Total	**1.5**		**0.015**	**mg/L**	5	26-Jun-2015 08:57
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*5*	*26-Jun-2015 08:57*
Surr: 1,2-Dichloroethane-d4	*106*		*71-125*	*%REC*	*25*	*26-Jun-2015 15:54*
Surr: 4-Bromofluorobenzene	*96.1*		*70-125*	*%REC*	*5*	*26-Jun-2015 08:57*
Surr: 4-Bromofluorobenzene	*96.3*		*70-125*	*%REC*	*25*	*26-Jun-2015 15:54*
Surr: Dibromofluoromethane	*102*		*74-125*	*%REC*	*5*	*26-Jun-2015 08:57*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*25*	*26-Jun-2015 15:54*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*5*	*26-Jun-2015 08:57*
Surr: Toluene-d8	*101*		*75-125*	*%REC*	*25*	*26-Jun-2015 15:54*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**21**		**0.050**	**mg/L**	1	23-Jun-2015 15:28
Surr: 4-Bromofluorobenzene	*111*		*70-130*	*%REC*	*1*	*23-Jun-2015 15:28*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-7	Lab ID:HS15060918-28
Collection Date:	17-Jun-2015 14:14	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 07:38
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 07:38
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 07:38
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 07:38
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 07:38
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
Toluene	ND		0.0010	mg/L	1	26-Jun-2015 07:38
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 07:38
Surr: 1,2-Dichloroethane-d4	*104*		*71-125*	*%REC*	*1*	*26-Jun-2015 07:38*
Surr: 4-Bromofluorobenzene	*94.8*		*70-125*	*%REC*	*1*	*26-Jun-2015 07:38*
Surr: Dibromofluoromethane	*105*		*74-125*	*%REC*	*1*	*26-Jun-2015 07:38*
Surr: Toluene-d8	*99.7*		*75-125*	*%REC*	*1*	*26-Jun-2015 07:38*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	**0.089**		**0.050**	**mg/L**	1	23-Jun-2015 15:44
Surr: 4-Bromofluorobenzene	*108*		*70-130*	*%REC*	*1*	*23-Jun-2015 15:44*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	MW-6	Lab ID:HS15060918-29
Collection Date:	17-Jun-2015 14:34	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 08:03
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 08:03
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 08:03
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 08:03
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 08:03
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
Toluene	ND		0.0010	mg/L	1	26-Jun-2015 08:03
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 08:03
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*26-Jun-2015 08:03*
Surr: 4-Bromofluorobenzene	*94.4*		*70-125*	*%REC*	*1*	*26-Jun-2015 08:03*
Surr: Dibromofluoromethane	*103*		*74-125*	*%REC*	*1*	*26-Jun-2015 08:03*
Surr: Toluene-d8	*99.9*		*75-125*	*%REC*	*1*	*26-Jun-2015 08:03*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 15:59
Surr: 4-Bromofluorobenzene	*104*		*70-130*	*%REC*	*1*	*23-Jun-2015 15:59*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	DUP-2	Lab ID:HS15060918-30
Collection Date:	17-Jun-2015 12:00	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 08:29
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 08:29
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 08:29
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 08:29
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 08:29
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 08:29
Toluene	**0.0035**		**0.0010**	**mg/L**	1	26-Jun-2015 08:29
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 08:29
Surr: 1,2-Dichloroethane-d4	*103*		*71-125*	*%REC*	*1*	*26-Jun-2015 08:29*
Surr: 4-Bromofluorobenzene	*94.4*		*70-125*	*%REC*	*1*	*26-Jun-2015 08:29*
Surr: Dibromofluoromethane	*104*		*74-125*	*%REC*	*1*	*26-Jun-2015 08:29*
Surr: Toluene-d8	*99.9*		*75-125*	*%REC*	*1*	*26-Jun-2015 08:29*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	23-Jun-2015 16:15
Surr: 4-Bromofluorobenzene	*103*		*70-130*	*%REC*	*1*	*23-Jun-2015 16:15*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	TB-061115-38	Lab ID:HS15060918-31
Collection Date:	16-Jun-2015 12:00	Matrix:Trip Blank

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 00:48
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 00:48
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 00:48
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 00:48
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 00:48
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
Toluene	ND		0.0010	mg/L	1	26-Jun-2015 00:48
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 00:48
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*26-Jun-2015 00:48*
Surr: 4-Bromofluorobenzene	*94.1*		*70-125*	*%REC*	*1*	*26-Jun-2015 00:48*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*26-Jun-2015 00:48*
Surr: Toluene-d8	*99.5*		*75-125*	*%REC*	*1*	*26-Jun-2015 00:48*

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

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	E3CE-0065 Andover Release Site	WorkOrder:HS15060918
Sample ID:	TB-061115-26	Lab ID:HS15060918-32
Collection Date:	16-Jun-2015 00:00	Matrix:Trip Blank

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
1,2-Dichloroethane	ND		0.0010	mg/L	1	26-Jun-2015 01:14
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
2-Butanone	ND		0.0020	mg/L	1	26-Jun-2015 01:14
Benzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
Cyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 01:14
Ethylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
Isopropylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
m,p-Xylene	ND		0.0020	mg/L	1	26-Jun-2015 01:14
Methylcyclohexane	ND		0.0010	mg/L	1	26-Jun-2015 01:14
Naphthalene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
n-Butylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
n-Propylbenzene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
o-Xylene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
Toluene	ND		0.0010	mg/L	1	26-Jun-2015 01:14
Xylenes, Total	ND		0.0030	mg/L	1	26-Jun-2015 01:14
Surr: 1,2-Dichloroethane-d4	*105*		*71-125*	*%REC*	*1*	*26-Jun-2015 01:14*
Surr: 4-Bromofluorobenzene	*94.2*		*70-125*	*%REC*	*1*	*26-Jun-2015 01:14*
Surr: Dibromofluoromethane	*106*		*74-125*	*%REC*	*1*	*26-Jun-2015 01:14*
Surr: Toluene-d8	*99.3*		*75-125*	*%REC*	*1*	*26-Jun-2015 01:14*

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256657	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15060918-01	MW-2	16 Jun 2015 14:02			22 Jun 2015 17:47	1
HS15060918-09	MW-12	16 Jun 2015 15:22			22 Jun 2015 21:11	1
HS15060918-11	MW-10	16 Jun 2015 16:17			22 Jun 2015 21:43	1
HS15060918-13	MW-9	16 Jun 2015 16:49			22 Jun 2015 22:14	1
HS15060918-16	MW-15	17 Jun 2015 09:10			22 Jun 2015 23:49	1
HS15060918-19	MW-16	17 Jun 2015 09:45			23 Jun 2015 00:36	1
Batch ID R256726	**Test Name :** VPH - IOWA OA-1			**Matrix:** Water		
HS15060918-21	MW-11	17 Jun 2015 10:19			23 Jun 2015 13:37	1
HS15060918-22	MW-8	17 Jun 2015 11:00			23 Jun 2015 14:40	1
HS15060918-24	MW-13	17 Jun 2015 11:30			23 Jun 2015 14:56	1
HS15060918-26	MW-14	17 Jun 2015 11:57			23 Jun 2015 15:12	1
HS15060918-27	MW-3	17 Jun 2015 13:45			23 Jun 2015 15:28	1
HS15060918-28	MW-7	17 Jun 2015 14:14			23 Jun 2015 15:44	1
HS15060918-29	MW-6	17 Jun 2015 14:34			23 Jun 2015 15:59	1
HS15060918-30	DUP-2	17 Jun 2015 12:00			23 Jun 2015 16:15	1
Batch ID R256900	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Trip Blank		
HS15060918-31	TB-061115-38	16 Jun 2015 12:00			26 Jun 2015 00:48	1
HS15060918-32	TB-061115-26	16 Jun 2015 00:00			26 Jun 2015 01:14	1
Batch ID R256900	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060918-01	MW-2	16 Jun 2015 14:02			26 Jun 2015 01:39	1
HS15060918-09	MW-12	16 Jun 2015 15:22			26 Jun 2015 03:47	1
HS15060918-11	MW-10	16 Jun 2015 16:17			26 Jun 2015 04:13	1
HS15060918-13	MW-9	16 Jun 2015 16:49			26 Jun 2015 04:38	1
HS15060918-16	MW-15	17 Jun 2015 09:10			26 Jun 2015 05:04	1
HS15060918-19	MW-16	17 Jun 2015 09:45			26 Jun 2015 05:30	1
HS15060918-21	MW-11	17 Jun 2015 10:19			26 Jun 2015 05:55	1
HS15060918-22	MW-8	17 Jun 2015 11:00			26 Jun 2015 06:21	1
HS15060918-24	MW-13	17 Jun 2015 11:30			26 Jun 2015 06:46	1
HS15060918-26	MW-14	17 Jun 2015 11:57			26 Jun 2015 07:12	1
HS15060918-27	MW-3	17 Jun 2015 13:45			26 Jun 2015 08:57	5
HS15060918-28	MW-7	17 Jun 2015 14:14			26 Jun 2015 07:38	1
HS15060918-29	MW-6	17 Jun 2015 14:34			26 Jun 2015 08:03	1
HS15060918-30	DUP-2	17 Jun 2015 12:00			26 Jun 2015 08:29	1
Batch ID R256951	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS15060918-27	MW-3	17 Jun 2015 13:45			26 Jun 2015 15:54	25

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256657 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150622** Units: **mg/L** Analysis Date: **22-Jun-2015 16:44**
Client ID: Run ID: **FID-14_256657** SeqNo: **3329494** 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	*0.101*	*0.0050*	*0.1*	*0*	*101*	*70 - 130*				

LCS Sample ID: **GLCS-150622** Units: **mg/L** Analysis Date: **22-Jun-2015 20:08**
Client ID: Run ID: **FID-14_256657** SeqNo: **3329504** 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	1.111	0.050	1	0	111	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1176*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MS Sample ID: **HS15060918-01MS** Units: **mg/L** Analysis Date: **22-Jun-2015 18:02**
Client ID: **MW-2** Run ID: **FID-14_256657** SeqNo: **3329496** 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	1.026	0.050	1	0.08889	93.7	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1137*	*0.0050*	*0.1*	*0*	*114*	*70 - 130*				

MSD Sample ID: **HS15060918-01MSD** Units: **mg/L** Analysis Date: **22-Jun-2015 18:18**
Client ID: **MW-2** Run ID: **FID-14_256657** SeqNo: **3329497** 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	1.277	0.050	1	0.08889	119	70 - 130	1.026	21.8	30	
Surr: 4-Bromofluorobenzene	*0.1212*	*0.0050*	*0.1*	*0*	*121*	*70 - 130*	*0.1137*	*6.34*	*30*	

The following samples were anayzed in this batch: HS15060918-01 HS15060918-09 HS15060918-11 HS15060918-13 HS15060918-16 HS15060918-19

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256726 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150623** Units: **mg/L** Analysis Date: **23-Jun-2015 10:51**
Client ID: Run ID: **FID-14_256726** SeqNo: **3330968** 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	*0.1032*	*0.0050*	*0.1*	*0*	*103*	*70 - 130*				

LCS Sample ID: **GLCS-150623** Units: **mg/L** Analysis Date: **23-Jun-2015 10:20**
Client ID: Run ID: **FID-14_256726** SeqNo: **3330966** 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	1.171	0.050	1	0	117	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1176*	*0.0050*	*0.1*	*0*	*118*	*70 - 130*				

MS Sample ID: **HS15060869-23MS** Units: **mg/L** Analysis Date: **23-Jun-2015 12:18**
Client ID: Run ID: **FID-14_256726** SeqNo: **3330970** 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	1.321	0.050	1	0.0765	124	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1243*	*0.0050*	*0.1*	*0*	*124*	*70 - 130*				

MSD Sample ID: **HS15060869-23MSD** Units: **mg/L** Analysis Date: **23-Jun-2015 12:34**
Client ID: Run ID: **FID-14_256726** SeqNo: **3330971** 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	1.288	0.050	1	0.0765	121	70 - 130	1.321	2.54	30	
Surr: 4-Bromofluorobenzene	*0.1158*	*0.0050*	*0.1*	*0*	*116*	*70 - 130*	*0.1243*	*7.12*	*30*	

The following samples were anayzed in this batch: HS15060918-21 HS15060918-22 HS15060918-24 HS15060918-26 HS15060918-27 HS15060918-28 HS15060918-29 HS15060918-30

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256900 **Instrument: VOA7** **Method: SW8260**

MBLK Sample ID: **VBLKW-150625** Units: **ug/L** Analysis Date: **26-Jun-2015 00:23**
Client ID: Run ID: **VOA7_256900** SeqNo: **3334452** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*52.32*	*1.0*	*50*	*0*	*105*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.94*	*1.0*	*50*	*0*	*95.9*	*70 - 125*				
Surr: Dibromofluoromethane	*52.61*	*1.0*	*50*	*0*	*105*	*74 - 125*				
Surr: Toluene-d8	*50.29*	*1.0*	*50*	*0*	*101*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256900 **Instrument: VOA7** **Method: SW8260**

LCS Sample ID: **VLCSW-150625** Units: **ug/L** Analysis Date: **25-Jun-2015 23:06**
Client ID: Run ID: **VOA7_256900** SeqNo: **3334451** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.46	1.0	50	0	86.9	70 - 125				
1,2-Dichloroethane	50.43	1.0	50	0	101	76 - 120				
1,3,5-Trimethylbenzene	42.19	1.0	50	0	84.4	80 - 123				
2-Butanone	124.3	2.0	100	0	124	60 - 140				
Benzene	49.44	1.0	50	0	98.9	80 - 120				
Cyclohexane	38.68	1.0	50	0	77.4	70 - 130				
Ethylbenzene	46.16	1.0	50	0	92.3	80 - 120				
Isopropylbenzene	43.35	1.0	50	0	86.7	75 - 130				
m,p-Xylene	92.99	2.0	100	0	93.0	80 - 120				
Methylcyclohexane	40.84	1.0	50	0	81.7	70 - 126				
Naphthalene	52.39	1.0	50	0	105	65 - 135				
n-Butylbenzene	40.71	1.0	50	0	81.4	75 - 128				
n-Propylbenzene	41.99	1.0	50	0	84.0	75 - 130				
o-Xylene	46.9	1.0	50	0	93.8	80 - 120				
Toluene	47.67	1.0	50	0	95.3	75 - 121				
Xylenes, Total	139.9	3.0	150	0	93.3	79 - 124				
Surr: 1,2-Dichloroethane-d4	*55.24*	*1.0*	*50*	*0*	*110*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*52.1*	*1.0*	*50*	*0*	*104*	*70 - 125*				
Surr: Dibromofluoromethane	*53.86*	*1.0*	*50*	*0*	*108*	*74 - 125*				
Surr: Toluene-d8	*49.95*	*1.0*	*50*	*0*	*99.9*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256900 **Instrument:** VOA7 **Method:** SW8260

MS Sample ID: **HS15060918-01MS** Units: **ug/L** Analysis Date: **26-Jun-2015 02:05**
Client ID: **MW-2** Run ID: **VOA7_256900** SeqNo: **3334456** 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	38.61	1.0	50	0.6666	75.9	70 - 125				
1,2-Dichloroethane	51.94	1.0	50	0	104	76 - 120				
1,3,5-Trimethylbenzene	35.85	1.0	50	0.3051	71.1	80 - 123				S
2-Butanone	107.7	2.0	100	0	108	60 - 140				
Benzene	49.12	1.0	50	1.289	95.7	80 - 120				
Cyclohexane	27.19	1.0	50	0	54.4	70 - 130				S
Ethylbenzene	42.67	1.0	50	0.9941	83.3	80 - 120				
Isopropylbenzene	37.54	1.0	50	0	75.1	75 - 130				
m,p-Xylene	89.67	2.0	100	5.229	84.4	80 - 120				
Methylcyclohexane	32.78	1.0	50	0	65.6	70 - 126				S
Naphthalene	50.14	1.0	50	0	100	65 - 135				
n-Butylbenzene	29.16	1.0	50	0	58.3	75 - 128				S
n-Propylbenzene	34.95	1.0	50	0	69.9	75 - 130				S
o-Xylene	46.55	1.0	50	2.56	88.0	80 - 120				
Toluene	52.63	1.0	50	8.943	87.4	75 - 121				
Xylenes, Total	136.2	3.0	150	7.789	85.6	80 - 124				
Surr: 1,2-Dichloroethane-d4	*54.61*	*1.0*	*50*	*0*	*109*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.43*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*54.3*	*1.0*	*50*	*0*	*109*	*74 - 125*				
Surr: Toluene-d8	*49.69*	*1.0*	*50*	*0*	*99.4*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256900 **Instrument: VOA7** **Method: SW8260**

MSD Sample ID: **HS15060918-01MSD** Units: **ug/L** Analysis Date: **26-Jun-2015 02:30**
Client ID: **MW-2** Run ID: **VOA7_256900** SeqNo: **3334457** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.01	1.0	50	0.6666	84.7	70 - 125	38.61	10.8	20	
1,2-Dichloroethane	50.12	1.0	50	0	100	76 - 120	51.94	3.56	20	
1,3,5-Trimethylbenzene	40.93	1.0	50	0.3051	81.3	80 - 123	35.85	13.2	20	
2-Butanone	106.8	2.0	100	0	107	60 - 140	107.7	0.831	20	
Benzene	49.89	1.0	50	1.289	97.2	80 - 120	49.12	1.54	20	
Cyclohexane	35.11	1.0	50	0	70.2	70 - 130	27.19	25.4	20	R
Ethylbenzene	46.44	1.0	50	0.9941	90.9	80 - 120	42.67	8.48	20	
Isopropylbenzene	42.09	1.0	50	0	84.2	75 - 130	37.54	11.4	20	
m,p-Xylene	96.16	2.0	100	5.229	90.9	80 - 120	89.67	6.99	20	
Methylcyclohexane	31.89	1.0	50	0	63.8	70 - 126	32.78	2.77	20	S
Naphthalene	51.88	1.0	50	0	104	65 - 135	50.14	3.41	20	
n-Butylbenzene	36.99	1.0	50	0	74.0	75 - 128	29.16	23.7	20	SR
n-Propylbenzene	40.25	1.0	50	0	80.5	75 - 130	34.95	14.1	20	
o-Xylene	48.52	1.0	50	2.56	91.9	80 - 120	46.55	4.15	20	
Toluene	56.59	1.0	50	8.943	95.3	75 - 121	52.63	7.24	20	
Xylenes, Total	144.7	3.0	150	7.789	91.3	80 - 124	136.2	6.03	20	
Surr: 1,2-Dichloroethane-d4	*55.6*	*1.0*	*50*	*0*	*111*	*71 - 125*	*54.61*	*1.79*	*20*	
Surr: 4-Bromofluorobenzene	*51.19*	*1.0*	*50*	*0*	*102*	*70 - 125*	*51.43*	*0.473*	*20*	
Surr: Dibromofluoromethane	*54.3*	*1.0*	*50*	*0*	*109*	*74 - 125*	*54.3*	*0.0119*	*20*	
Surr: Toluene-d8	*49.49*	*1.0*	*50*	*0*	*99.0*	*75 - 125*	*49.69*	*0.402*	*20*	

The following samples were anayzed in this batch:

HS15060918-01	HS15060918-09	HS15060918-11	HS15060918-13
HS15060918-16	HS15060918-19	HS15060918-21	HS15060918-22
HS15060918-24	HS15060918-26	HS15060918-27	HS15060918-28
HS15060918-29	HS15060918-30	HS15060918-31	HS15060918-32

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256951 **Instrument: VOA7** **Method: SW8260**

MBLK Sample ID: **VBLKW-150626** Units: **ug/L** Analysis Date: **26-Jun-2015 12:01**
Client ID: Run ID: **VOA7_256951** SeqNo: **3335364** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	*51.04*	*1.0*	*50*	*0*	*102*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.42*	*1.0*	*50*	*0*	*94.8*	*70 - 125*				
Surr: Dibromofluoromethane	*51.67*	*1.0*	*50*	*0*	*103*	*74 - 125*				
Surr: Toluene-d8	*50.31*	*1.0*	*50*	*0*	*101*	*75 - 125*				

LCS Sample ID: **VLCSW-150626** Units: **ug/L** Analysis Date: **26-Jun-2015 16:20**
Client ID: Run ID: **VOA7_256951** SeqNo: **3335369** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	52.08	1.0	50	0	104	80 - 120				
Toluene	50.73	1.0	50	0	101	75 - 121				
Surr: 1,2-Dichloroethane-d4	*54.06*	*1.0*	*50*	*0*	*108*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*51.32*	*1.0*	*50*	*0*	*103*	*70 - 125*				
Surr: Dibromofluoromethane	*52.88*	*1.0*	*50*	*0*	*106*	*74 - 125*				
Surr: Toluene-d8	*49.97*	*1.0*	*50*	*0*	*99.9*	*75 - 125*				

MS Sample ID: **HS15060864-02MS** Units: **ug/L** Analysis Date: **26-Jun-2015 14:34**
Client ID: Run ID: **VOA7_256951** SeqNo: **3335366** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	56.22	1.0	50	6.086	100	80 - 120				
Toluene	48.18	1.0	50	0	96.4	75 - 121				
Surr: 1,2-Dichloroethane-d4	*54.22*	*1.0*	*50*	*0*	*108*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.71*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*53.52*	*1.0*	*50*	*0*	*107*	*74 - 125*				
Surr: Toluene-d8	*49.91*	*1.0*	*50*	*0*	*99.8*	*75 - 125*				

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: HS15060918

QC BATCH REPORT

Batch ID: R256951 **Instrument: VOA7** **Method: SW8260**

MSD Sample ID: **HS15060864-02MSD** Units: **ug/L** Analysis Date: **26-Jun-2015 15:00**
Client ID: Run ID: **VOA7_256951** SeqNo: **3335367** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	53.87	1.0	50	6.086	95.6	80 - 120	56.22	4.27	20	
Toluene	46.82	1.0	50	0	93.6	75 - 121	48.18	2.86	20	
Surr: 1,2-Dichloroethane-d4	*54.63*	*1.0*	*50*	*0*	*109*	*71 - 125*	*54.22*	*0.754*	*20*	
Surr: 4-Bromofluorobenzene	*51.2*	*1.0*	*50*	*0*	*102*	*70 - 125*	*50.71*	*0.949*	*20*	
Surr: Dibromofluoromethane	*53.13*	*1.0*	*50*	*0*	*106*	*74 - 125*	*53.52*	*0.744*	*20*	
Surr: Toluene-d8	*50.12*	*1.0*	*50*	*0*	*100*	*75 - 125*	*49.91*	*0.414*	*20*	

The following samples were anayzed in this batch: HS15060918-27

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

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
WorkOrder: **HS15060918**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jul-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-15-15	30-Apr-2016

Client: Apex Companies
Project: E3CE-0065 Andover Release Site
Work Order: HS15060918

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15060918-01	MW-2	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-01	MW-2	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-09	MW-12	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-09	MW-12	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-11	MW-10	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-11	MW-10	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-13	MW-9	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-13	MW-9	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-16	MW-15	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-16	MW-15	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-19	MW-16	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-19	MW-16	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-21	MW-11	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-21	MW-11	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-22	MW-8	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-22	MW-8	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-24	MW-13	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-24	MW-13	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-26	MW-14	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-26	MW-14	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-27	MW-3	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-27	MW-3	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-28	MW-7	Login	6/22/2015 5:46:13 PM	LFH	VW-3
HS15060918-28	MW-7	Login	6/22/2015 5:46:13 PM	LFH	BTEX A1
HS15060918-29	MW-6	Login	6/22/2015 5:56:06 PM	ALS	VW-3
HS15060918-29	MW-6	Login	6/22/2015 5:56:06 PM	ALS	BTEX A1
HS15060918-30	DUP-2	Login	6/22/2015 5:56:06 PM	ALS	VW-3
HS15060918-30	DUP-2	Login	6/22/2015 5:56:06 PM	ALS	BTEX A1
HS15060918-31	TB-061115-38	Login	6/22/2015 6:01:45 PM	ALS	VW-3
HS15060918-32	TB-061115-26	Login	6/22/2015 6:03:56 PM	ALS	VW-3

Sample Receipt Checklist

Client Name: APEX-PORTLAND

Work Order: HS15060918

Date/Time Received: **19-Jun-2015 09:50**

Received by: **PMG**

Checklist completed by: *Ana L. Spencer* (eSignature) 22-Jun-2015 (Date)

Reviewed by: *Ana L. Spencer* (eSignature) 22-Jun-2015 (Date)

Matrices: **Water**

Carrier name: **FedEx**

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

Temperature(s)/Thermometer(s): 1.9c/2.2c , 2.1c/2.4c , 1.3c/1.6c uc/c IR4

Cooler(s)/Kit(s): Lg Navy , 3088 , 24110

Date/Time sample(s) sent to storage: 06/20/2015 10:50

	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: MW-7 VPH vial missing label

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

ALS Environmental

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

Chain of Custody Form

Page 1 of 4

COC ID: 126222

HS15060918

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-2	6-16-15	1402	W	1	6	X	X									
2	2002 N Colt Ct		1410														
3	2004 N Colt Ct		1355														
4	2001 N Colt Ct		1436														
5	2005 N Colt Ct		1433														
6	2007 N Colt Ct		1443														
7	2007 N Mountain Ct		1508														
8	2009 N Mountain Ct		1530														
9	MW-12		1522														
10	1009 W Mountain		1545														

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by: | Date: 6-18-15 | Time: 16:50 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory): 6.19.15 09:50

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

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.
	ulc.
NAUY	1.9°
3088	2.1°
24110	1.3°
#4	C.F. 0.3°

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

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

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

Page 2 of 4

COC ID: 126221

HS15060918

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-10	6-16-15	1617	W	1	6	X	X									
2	2020 N Ruger Cir		1640														
3	MW-9		1649														
4	2006 N Colt Ct		1655														
5	2028 N Ruger Cir	6-17-15	0900														
6	MW-15		0910														
7	2032 N Ruger Cir		0914														
8	2021 N Ruger Ct		0933														
9	MW-16		0945														
10	2019 N Ruger Cir		1014														

Sampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	6-18-15	1650	
Relinquished by:	Date:	Time:	Received by (Laboratory): 6.19.15 09:50
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.

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

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

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Chain of Custody Fo

Page 3 of 4

COC ID: 126221

HS15060918

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-11	6-17-15	1019	W	1	6	X	X									
2	MW-8		1100														
3	HOA-1		1116														
4	MW-13		1130														
5	1211 W Quail Crossing Ct		1147														
6	MW-14		1157														
7	MW-3		1345														
8	MW-7		1414														
9	MW-6		1434														
0																	

ampler(s) Please Print & Sign: Ted Alfred

Shipment Method

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

Results Due Date:

elinquished by: Date: 6-18-15 Time: 1650 Received by:

elinquished by: Date: Time: Received by (Laboratory): 6.19.15 09:50

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

Notes: Colt Court 3Q2014 GW Mon Wells

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☒ Level 2 Std QC ☐ TRRP ChkList
☐ Level 3 Std QC/Row da ☐ TRRP Level 4
☐ Level 4 SW846/CLP
☐ Other/EDD

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

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Chain of Custody For

Page 4 of 4

COC ID: 126223

HS15060918

Apex Companies
E3CE-0065 Andover Release Site

ALS Project Manager:

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

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	DUP-2	6-17-15	—	W	1	6	X	X									
2	DUP-3	6-17-15	—	W	1	6	X	X									
3	Trip Blank																
4																	
5																	
6																	
7																	
8																	
9																	
0																	

ampler(s) Please Print & Sign: Ted Alfred

Shipment Method:

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

Results Due Date:

elinquished by: Date: 6-18-15 Time: 1650 Received by:

elinquished by: Date: Time: Received by (Laboratory): 6.19.15 09:50.

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

Notes: Colt Court 3Q2014 GW Mon Wells

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

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

te: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Houston, Texas 77099
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Fax. +1 281 530 5887

CUSTODY SEAL

Date: 6-18-15 Time: 1650
Name: TED ALFRED
Company: ALEX

Seal Broken By: CG
Date: 6-20

MPS# 0681 7808 4549 7188

FRI - 19 JUN 10:30A
PRIORITY OVERNIGHT

XH SGRA

LG BLUE
COLEMAN

77099
TX-US
IAH

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

CUSTODY SEAL

Date: 6-18-15 Time: 1650
Name: TED ALFRED
Company: ALEX

Seal Broken By: CG
Date: 6/26

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

CUSTODY SEAL

Date: 6-18-12 Time: 1650
Name: TED ALFERS
Company: APEX

Seal Broken By:
Date:

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

CUSTODY SEAL

Date: 6-18-12 Time: 1650
Name: TED ALFERS
Company: APEX

Seal Broken By:
Date: 6/20

FRI – 19 JUN 10:30A
PRIORITY OVERNIGHT

TRK# 0200 8075 3159 3261

AB SGRA 24110

77099
TX-US IAH

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Houston, TX 77099
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F: +1 281 530 5887
www.alsglobal.com

July 13, 2015

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

Work Order: **HS15070364**

Laboratory Results for: **Andover Colt Court 320001641-08**

Dear Samuel,

ALS Environmental received 1 sample(s) on Jul 08, 2015 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: Erica.Padilla
Ana L. Spencer

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Colt Court 320001641-08
Work Order: HS15070364

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15070364-01	HOA-1	Water		07-Jul-2015 15:50	08-Jul-2015 08:45	☐

Client: Apex Companies
Project: Andover Colt Court 320001641-08
Work Order: HS15070364

CASE NARRATIVE

GC Volatiles by Method IA OA-1

Batch ID: R257661

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

GCMS Volatiles by Method SW8260

Batch ID: R257665

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client:	Apex Companies	**ANALYTICAL REPORT**
Project:	Andover Colt Court 320001641-08	WorkOrder:HS15070364
Sample ID:	HOA-1	Lab ID:HS15070364-01
Collection Date:	07-Jul-2015 15:50	Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**				Analyst: PC
1,2,4-Trimethylbenzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
1,2-Dichloroethane	ND		0.0010	mg/L	1	10-Jul-2015 12:08
1,3,5-Trimethylbenzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
2-Butanone	ND		0.0020	mg/L	1	10-Jul-2015 12:08
Benzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
Cyclohexane	ND		0.0010	mg/L	1	10-Jul-2015 12:08
Ethylbenzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
Isopropylbenzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
m,p-Xylene	ND		0.0020	mg/L	1	10-Jul-2015 12:08
Methylcyclohexane	ND		0.0010	mg/L	1	10-Jul-2015 12:08
Naphthalene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
n-Butylbenzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
n-Propylbenzene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
o-Xylene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
Toluene	ND		0.0010	mg/L	1	10-Jul-2015 12:08
Xylenes, Total	ND		0.0030	mg/L	1	10-Jul-2015 12:08
Surr: 1,2-Dichloroethane-d4	*90.6*		*71-125*	*%REC*	*1*	*10-Jul-2015 12:08*
Surr: 4-Bromofluorobenzene	*95.2*		*70-125*	*%REC*	*1*	*10-Jul-2015 12:08*
Surr: Dibromofluoromethane	*97.5*		*74-125*	*%REC*	*1*	*10-Jul-2015 12:08*
Surr: Toluene-d8	*97.4*		*75-125*	*%REC*	*1*	*10-Jul-2015 12:08*
VPH - IOWA OA-1		**Method:IA OA-1**				Analyst: SFE
VPH - Gasoline Range Organics	ND		0.050	mg/L	1	09-Jul-2015 17:01
Surr: 4-Bromofluorobenzene	*114*		*70-130*	*%REC*	*1*	*09-Jul-2015 17:01*

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

Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: HS15070364

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R257661		**Test Name :** VPH - IOWA OA-1		**Matrix:** Water		
HS15070364-01	HOA-1	07 Jul 2015 15:50			09 Jul 2015 17:01	1
Batch ID R257665		**Test Name :** LOW LEVEL VOLATILES BY SW8260C		**Matrix:** Water		
HS15070364-01	HOA-1	07 Jul 2015 15:50			10 Jul 2015 12:08	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: HS15070364

QC BATCH REPORT

Batch ID: R257661 **Instrument: FID-14** **Method: IA OA-1**

MBLK Sample ID: **GBLKW-150708** Units: **mg/L** Analysis Date: **09-Jul-2015 16:02**
Client ID: Run ID: **FID-14_257661** SeqNo: **3350487** 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	*0.123*	*0.0050*	*0.1*	*0*	*123*	*70 - 130*				

LCS Sample ID: **GLCS-150708** Units: **mg/L** Analysis Date: **09-Jul-2015 15:30**
Client ID: Run ID: **FID-14_257661** SeqNo: **3350485** 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	1.004	0.050	1	0	100	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1068*	*0.0050*	*0.1*	*0*	*107*	*70 - 130*				

MS Sample ID: **HS15070364-01MS** Units: **mg/L** Analysis Date: **09-Jul-2015 17:16**
Client ID: **HOA-1** Run ID: **FID-14_257661** SeqNo: **3350490** 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	1.062	0.050	1	0	106	70 - 130				
Surr: 4-Bromofluorobenzene	*0.1105*	*0.0050*	*0.1*	*0*	*110*	*70 - 130*				

MSD Sample ID: **HS15070364-01MSD** Units: **mg/L** Analysis Date: **09-Jul-2015 17:32**
Client ID: **HOA-1** Run ID: **FID-14_257661** SeqNo: **3350491** 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	1.063	0.050	1	0	106	70 - 130	1.062	0.121	30	
Surr: 4-Bromofluorobenzene	*0.1067*	*0.0050*	*0.1*	*0*	*107*	*70 - 130*	*0.1105*	*3.45*	*30*	

The following samples were anayzed in this batch: HS15070364-01

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

Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: HS15070364

QC BATCH REPORT

Batch ID: R257665 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-150710** Units: **ug/L** Analysis Date: **10-Jul-2015 10:56**
Client ID: Run ID: **VOA6_257665** SeqNo: **3350588** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
2-Butanone	ND	2.0								
Benzene	ND	1.0								
Cyclohexane	ND	1.0								
Ethylbenzene	ND	1.0								
Isopropylbenzene	ND	1.0								
m,p-Xylene	ND	2.0								
Methylcyclohexane	ND	1.0								
Naphthalene	ND	1.0								
n-Butylbenzene	ND	1.0								
n-Propylbenzene	ND	1.0								
o-Xylene	ND	1.0								
Toluene	ND	1.0								
Xylenes, Total	ND	3.0								
Surr: 1,2-Dichloroethane-d4	*45.44*	*1.0*	*50*	*0*	*90.9*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*47.79*	*1.0*	*50*	*0*	*95.6*	*70 - 125*				
Surr: Dibromofluoromethane	*48.47*	*1.0*	*50*	*0*	*96.9*	*74 - 125*				
Surr: Toluene-d8	*49.06*	*1.0*	*50*	*0*	*98.1*	*75 - 125*				

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

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Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: HS15070364

QC BATCH REPORT

Batch ID: R257665 **Instrument: VOA6** **Method: SW8260**

LCS Sample ID: **VLCSW-150710** Units: **ug/L** Analysis Date: **10-Jul-2015 09:43**
Client ID: Run ID: **VOA6_257665** SeqNo: **3350587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	45.08	1.0	50	0	90.2	70 - 125				
1,2-Dichloroethane	41.81	1.0	50	0	83.6	76 - 120				
1,3,5-Trimethylbenzene	44.7	1.0	50	0	89.4	80 - 123				
2-Butanone	107	2.0	100	0	107	60 - 140				
Benzene	48.79	1.0	50	0	97.6	80 - 120				
Cyclohexane	52.14	1.0	50	0	104	70 - 130				
Ethylbenzene	47.76	1.0	50	0	95.5	80 - 120				
Isopropylbenzene	46.78	1.0	50	0	93.6	75 - 130				
m,p-Xylene	92.07	2.0	100	0	92.1	80 - 120				
Methylcyclohexane	50.33	1.0	50	0	101	70 - 126				
Naphthalene	48.97	1.0	50	0	97.9	65 - 135				
n-Butylbenzene	47.75	1.0	50	0	95.5	75 - 128				
n-Propylbenzene	44.92	1.0	50	0	89.8	75 - 130				
o-Xylene	46.67	1.0	50	0	93.3	80 - 120				
Toluene	45.51	1.0	50	0	91.0	75 - 121				
Xylenes, Total	138.7	3.0	150	0	92.5	79 - 124				
Surr: 1,2-Dichloroethane-d4	*45.02*	*1.0*	*50*	*0*	*90.0*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.34*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*48.64*	*1.0*	*50*	*0*	*97.3*	*74 - 125*				
Surr: Toluene-d8	*47.69*	*1.0*	*50*	*0*	*95.4*	*75 - 125*				

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

Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: HS15070364

QC BATCH REPORT

Batch ID: R257665 **Instrument: VOA6** **Method: SW8260**

MS Sample ID: **HS15070203-12MS** Units: **ug/L** Analysis Date: **10-Jul-2015 13:21**
Client ID: Run ID: **VOA6_257665** SeqNo: **3350749** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	43.84	1.0	50	0	87.7	70 - 125				
1,2-Dichloroethane	45.45	1.0	50	0	90.9	76 - 120				
1,3,5-Trimethylbenzene	42.84	1.0	50	0	85.7	80 - 123				
2-Butanone	113.4	2.0	100	0	113	60 - 140				
Benzene	49	1.0	50	0	98.0	80 - 120				
Cyclohexane	47.29	1.0	50	0	94.6	70 - 130				
Ethylbenzene	46.49	1.0	50	0	93.0	80 - 120				
Isopropylbenzene	45.53	1.0	50	0	91.1	75 - 130				
m,p-Xylene	92.6	2.0	100	0	92.6	80 - 120				
Methylcyclohexane	51.15	1.0	50	0	102	70 - 126				
Naphthalene	46.55	1.0	50	0	93.1	65 - 135				
n-Butylbenzene	44.69	1.0	50	0	89.4	75 - 128				
n-Propylbenzene	42.8	1.0	50	0	85.6	75 - 130				
o-Xylene	47.2	1.0	50	0	94.4	80 - 120				
Toluene	46.35	1.0	50	0	92.7	75 - 121				
Xylenes, Total	139.8	3.0	150	0	93.2	80 - 124				
Surr: 1,2-Dichloroethane-d4	*44.73*	*1.0*	*50*	*0*	*89.5*	*71 - 125*				
Surr: 4-Bromofluorobenzene	*50.54*	*1.0*	*50*	*0*	*101*	*70 - 125*				
Surr: Dibromofluoromethane	*47.51*	*1.0*	*50*	*0*	*95.0*	*74 - 125*				
Surr: Toluene-d8	*47.69*	*1.0*	*50*	*0*	*95.4*	*75 - 125*				

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

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Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: HS15070364

QC BATCH REPORT

Batch ID: R257665 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS15070203-12MSD** Units: **ug/L** Analysis Date: **10-Jul-2015 13:45**
Client ID: Run ID: **VOA6_257665** SeqNo: **3350750** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	46.7	1.0	50	0	93.4	70 - 125	43.84	6.32	20	
1,2-Dichloroethane	44.49	1.0	50	0	89.0	76 - 120	45.45	2.13	20	
1,3,5-Trimethylbenzene	46.1	1.0	50	0	92.2	80 - 123	42.84	7.32	20	
2-Butanone	112.3	2.0	100	0	112	60 - 140	113.4	0.99	20	
Benzene	51.08	1.0	50	0	102	80 - 120	49	4.17	20	
Cyclohexane	55.8	1.0	50	0	112	70 - 130	47.29	16.5	20	
Ethylbenzene	49.81	1.0	50	0	99.6	80 - 120	46.49	6.89	20	
Isopropylbenzene	49.19	1.0	50	0	98.4	75 - 130	45.53	7.71	20	
m,p-Xylene	97.72	2.0	100	0	97.7	80 - 120	92.6	5.38	20	
Methylcyclohexane	49.63	1.0	50	0	99.3	70 - 126	51.15	3.02	20	
Naphthalene	53.16	1.0	50	0	106	65 - 135	46.55	13.3	20	
n-Butylbenzene	48.25	1.0	50	0	96.5	75 - 128	44.69	7.68	20	
n-Propylbenzene	45.67	1.0	50	0	91.3	75 - 130	42.8	6.48	20	
o-Xylene	49.61	1.0	50	0	99.2	80 - 120	47.2	4.98	20	
Toluene	47.87	1.0	50	0	95.7	75 - 121	46.35	3.24	20	
Xylenes, Total	147.3	3.0	150	0	98.2	80 - 124	139.8	5.25	20	
Surr: 1,2-Dichloroethane-d4	*44.89*	*1.0*	*50*	*0*	*89.8*	*71 - 125*	*44.73*	*0.354*	*20*	
Surr: 4-Bromofluorobenzene	*51.17*	*1.0*	*50*	*0*	*102*	*70 - 125*	*50.54*	*1.25*	*20*	
Surr: Dibromofluoromethane	*48.3*	*1.0*	*50*	*0*	*96.6*	*74 - 125*	*47.51*	*1.64*	*20*	
Surr: Toluene-d8	*48.36*	*1.0*	*50*	*0*	*96.7*	*75 - 125*	*47.69*	*1.41*	*20*	

The following samples were anayzed in this batch: HS15070364-01

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

Client: Apex Companies
Project: Andover Colt Court 320001641-08
WorkOrder: **HS15070364**

QUALIFIERS, ACRONYMS, UNITS

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

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CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jul-2015
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-15-15	30-Apr-2016

Client: Apex Companies
Project: Andover Colt Court 320001641-08
Work Order: HS15070364

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15070364-01	HOA-1	Login	7/9/2015 11:19:26 AM	BHH	VW-3
HS15070364-01	HOA-1	Login	7/9/2015 11:19:26 AM	BHH	BTEX A1

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Sample Receipt Checklist

Client Name: APEX-PORTLAND

Work Order: HS15070364

Date/Time Received: **08-Jul-2015 08:45**

Received by: **LOT**

Checklist completed by: *Baudelio Hernandez* (eSignature) 9-Jul-2015 (Date)

Reviewed by: *Kristin M Brown* (eSignature) 9-Jul-2015 (Date)

Matrices: **Water**

Carrier name: **FedEx**

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

Temperature(s)/Thermometer(s):	1.0c / 1.5c u/c	IR#5
Cooler(s)/Kit(s):	Med. Blue	
Date/Time sample(s) sent to storage:	07/09/2015 11:30	

	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: All vials have no label on them. 1 Vial missing, COC states that we should receive 6 vials but only received 5.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: 0 Regarding:

Comments:

Corrective Action:

ALS Laboratory Group
10450 Stancliff Rd. #210
Houston, Texas 77099
(Tel) 281.530.5656
(Fax) 281.530.5887

Chain of Custody Form

Page 1 of 1

HS15070364

Apex Companies
Andover Colt Court

ALS Project Manager:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Andover Colt Court	A	BTEX by 8260b
Work Order		Project Number	320001641-08	B	GRO by OA-1
Company Name	Apex Companies, LLC	Bill To Company	Apex Companies	C	
Send Report To	Sam Jackson	Invoice Attn.	Sam 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	HOA-1	07/07/15	~~[illegible]~~ 15:50	W	1	6	X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Brudly Van Cleve

Shipment Method: Fex Ex

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
Brudly Van Cleve	7/7/15	19:25		Cooler ID: ~~Red~~ Blue CF=0.5 IR#5
Relinquished by:	7/8/15	8:45	Received by (Laboratory):	Cooler Temp. UC
Logged by (Laboratory):			Checked by (Laboratory):	1.0/1.5

QC Package: (Check Box Below)

X	Level II: Standard QC	TRRP-Checklist
	Level III: Std QC + Raw Data	TRRP Level IV
	Level IV: SW846 CLP-Like	
	Other: _____	

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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TRK# 0200 8081 8865 6150

WED - 08 JUL 10:30A
PRIORITY OVERNIGHT

AB SGRA

Med Blue

77099
TX-US IAH