ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

February 24, 2017

Mr. Thomas Wallace
Assessment Remediation Branch
Mississippi Department of Environmental Quality
515 East Amite Street
Jackson, Mississippi 39201

Re: Kuhlman Electric Corporation
Soil Vapor Extraction Semi-Annual Report
Crystal Springs, Mississippi

Dear Mr. Wallace:

Environmental Management Services, Inc. (EMS) has prepared the Second Semi-Annual Soil Vapor Extraction Report 2016 for the Kuhlman Electric Corporation in Crystal Springs, Mississippi. Please find the enclosed copy of the aforementioned report.

Please contact EMS at (601) 544-3674 if you should have any question or comments concerning the enclosure.

Sincerely,
Environmental Management Services, Inc.

Stephanie Kilgore, P.E.
Senior Engineer

Enclosure: Second Semi-Annual Soil Vapor Extraction Report 2016

cc:
Lorraine Stoer, KEC
Allen Gearhart, KEC
Melody Christopher, ABB, Inc.
Virginia Munford, CMS

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SOIL VAPOR EXTRACTION SYSTEM
SECOND SEMIANNUAL REPORT 2016

KUHLMAN ELECTRIC CORPORATION
CRYSTAL SPRINGS, MISSISSIPPI

Prepared by:

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

P.O. Box 15369
Hattiesburg, Mississippi 39404

February 24, 2017

EMS Project No: KUH0-17-012

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Executive Summary

This Soil Vapor Extraction (SVE) System Semiannual Report summarizes the performance of the SVE system installed by Environmental Management Services, Inc. (EMS) for 101 Kuhlman Drive, Crystal Springs, Mississippi (the Site) for the second semiannual period of 2016.

The system initially began operations April 21, 2014 with normal operation attained on May 2, 2014. Routine monitoring has been performed according to the schedule described in the *SVE Final Design and Quality Assurance Project Plan* submitted to Mississippi Department of Environmental Quality (MDEQ) on September 13, 2013.

Historical Information Summary

The Site is located at 101 Kuhlman Drive in Crystal Springs, Mississippi, as shown in Figure 1, and has operated as an electrical transformer manufacturing plant since its construction in the 1950's. In April of 2000, Polychlorinated Biphenyl (PCB)-contaminated soil was discovered on-site during subsurface construction activities. This discovery initiated several phases of environmental assessments and remediation projects, some of which are currently ongoing. During these investigations and remediation projects it was discovered that the groundwater on and off KEC property was impacted with Volatile Organic Compounds (VOCs); principally, 1,1-dichloroethene (DCE) and the semi-volatile constituent 1,4-dioxane.

An investigation was performed to determine the source of the groundwater impacts and was documented in the April 30, 2009 *Groundwater Assessment Report, Kuhlman Electric Corporation, Crystal Springs, Mississippi* prepared by Martin & Slagle Geoenvironmental Associates, LLC (Martin & Slagle) for BorgWarner (hereafter referred to as the April 2009 *Groundwater Assessment Report*). These efforts included a soil vapor study, which detected VOCs in the soil vapors from 3 to 12 feet below the plant floor. Soil samples were also collected from beneath the building from 0 to 62 feet below ground surface (bgs) and analyzed for VOCs. VOCs were detected in the onsite soils as depicted on Figure 2.

The source area for the VOCs and 1,4-dioxane constituents in groundwater was identified beneath the plant floor within subsurface soil. This area is near the western portion of the plant building beneath the Winding Department process area, the Break Room, and a former rail pit located west of the IT Test Department, as described in the April 2009 *Groundwater Assessment Report*.

These investigations beneath the building footprint confirmed that commingled plumes of DCE and 1,4-dioxane extend from upgradient of the source area, beneath the plant building, to the

southwest and offsite. The DCE plume extends offsite approximately 3,000 feet to the south and approximately 2,800 feet to the west from the property boundary based on the most recent groundwater sampling data collected in March of 2016.

DCE and 1,4-dioxane have been identified as the primary Constituents of Concern (COC) at this site. The presence of 1,4-dioxane is presumed to be related to its use as a stabilizer in 1,1,1-trichloroethane (TCA), a solvent used in the past at the KEC site. DCE is a breakdown product of TCA. Other COC include TCA and carbon tetrachloride (CT).

In connection with the environmental assessments at the site and in accordance with MDEQ requirements, groundwater monitoring has been performed on and off the KEC facility property since 2004, on a quarterly to semiannual schedule since 2005, and is presently ongoing. A total of forty-six permanent groundwater monitoring wells are used to monitor the groundwater plume.

As a result of the discovery of the groundwater contamination and subsequent investigations of soil and groundwater, Borg Warner submitted the Corrective Action Plan (CAP) dated March 2011 (Arcadis) to MDEQ. The CAP was approved by MDEQ on March 1, 2012. The CAP targeted an area beneath the building as the source area contributing to the groundwater impact by the COC as shown in Figure 1. It presented three objectives to mitigate impacts to the COC contaminant plume. The three objectives are listed below:

1. Ensure COC concentrations in soil and groundwater in the contaminant source area beneath the KEC manufacturing building are at levels protective of site workers.
2. Reduce COC concentrations in soil in the contaminant source area beneath the KEC manufacturing building to the extent that remaining concentrations no longer contribute to, or exacerbate COC concentrations in off-site groundwater.
3. Reduce COC concentrations in off-site groundwater to levels protective of downgradient groundwater receptors.

A pilot study was performed at the site May 12-13, 2012, to confirm the viability of soil vapor extraction as a remedial strategy. The *Soil Vapor Extraction Pilot Study Report* (revised May 1, 2013) detailing the outcome of the study and proposing the use of Soil Vapor Extraction (SVE) to reduce COC concentrations was approved by MDEQ July 12, 2013. The *Soil Vapor Extraction Final Design and Quality Assurance Project Plan* was approved by MDEQ October 4, 2013. The system was installed as described in the *SVE Installation Report* submitted to MDEQ September 18, 2014.

SVE Operations and Maintenance

Groundwater Results

Groundwater was sampled from monitoring wells MW-10A, MW-10B, MW-10C, MW-30, MW-31, and SVE-EXT-DEEP, as shown on Figure 1, on September 20-21, 2016, for the required semiannual sampling event. Analytical results for MW-10A, MW-30, and SVE-EXT-DEEP showed concentrations of constituents greater than the MDEQ groundwater target remediation goals (TRG). The constituents with exceedances were DCE, chloroform, and 1,1,2 trichloroethane. The concentrations of DCE measured in SVE-EXT-DEEP, which is located within the source area, have decreased from April 2014 to date. Additional data is necessary to confirm this trend and will be collected during future monitoring events. The analytical results from the September 2016 sampling event for the wells listed are presented in Table 1.

Soil Vapor Results

The observation wells, as shown on Figure 2, are monitored quarterly for relative VOC concentration in the soil vapor. Tubing is placed in the well to a depth within the screened interval, and a photoionization detection (PID) meter and a flame ionization detection (FID) meter are used to purge the wells and measure the relative VOC concentration in the soil vapor within the well. The measured relative concentrations ranged from 0.6 to 5.7 parts per million (ppm) with the PID and 0 to 28 ppm with the FID. The observation well soil vapor results from July through December are summarized in Table 2.

The observation well soil vapor was also sampled and analyzed for VOCs and 1,4-dioxane during the September and December sampling events using 1-liter SUMMA canisters. The vapor samples were collected by placing tubing within the middle of the screened interval depth and the well opening was covered. A PID meter and FID meter were then used to purge and measure the relative VOC concentration in the soil vapor. After obtaining the PID and FID measurements, the SUMMA canister was connected to the tubing to collect the soil vapors within the screened interval. The observation well soil vapor analytical results are summarized in Table 3, and the laboratory results are included in Appendix A.

The SVE system exhaust and the vapor exiting each stage of carbon treatment were monitored quarterly utilizing both PID and FID meters to evaluate relative VOC concentrations. The relative VOC concentrations measured by the PID meter and the FID meter in the discharge from the SVE system prior to carbon treatment are included in Table 4.

The SVE unit exhaust and the vapor exiting each stage of carbon treatment were also sampled and analyzed for VOCs and 1,4-dioxane. Samples were collected during August and November. The results are summarized in Table 5. The concentrations of TCA, DCE, and 1,4-dioxane are used to calculate the cumulative mass removed. Since startup of the SVE unit, approximately 3.2 pounds of TCA, 13.6 pounds of DCE, and 192.2 pounds of 1,4-dioxane have been removed

through the SVE system. Figures 3-5 show the cumulative mass removal of each constituent, and the calculations are included in Appendix B.

The flow rates from each individual well are also calculated and recorded during routine visits to the SVE system. The calculated flow rates from each well for the period from July to December are contained in Table 6.

Ambient Air Results

Ambient air sampling was performed quarterly utilizing 1-liter SUMMA canisters equipped with 8-hour flow valves. The air sampling locations are shown on Figure 2. The canisters are placed in the sampling location to collect samples to be analyzed for VOCs and 1,4-dioxane. No constituents related to the soil or groundwater plume were observed in the ambient air samples from to the September and December analytical results. Concentrations of all analytes detected were well below any published regulatory limit. The analytical results of the ambient air monitoring for the semiannual period are shown in Table 7. The analytical laboratory reports for the ambient air monitoring are contained in Appendix C.

Vacuum Measurements

The vacuum response at each observation well is measured quarterly. At 80 feet from the nearest extraction well, the vacuum response averaged 4.51 inches of water. The vacuum response measurements for the second semiannual period in 2016 are shown in Table 8.

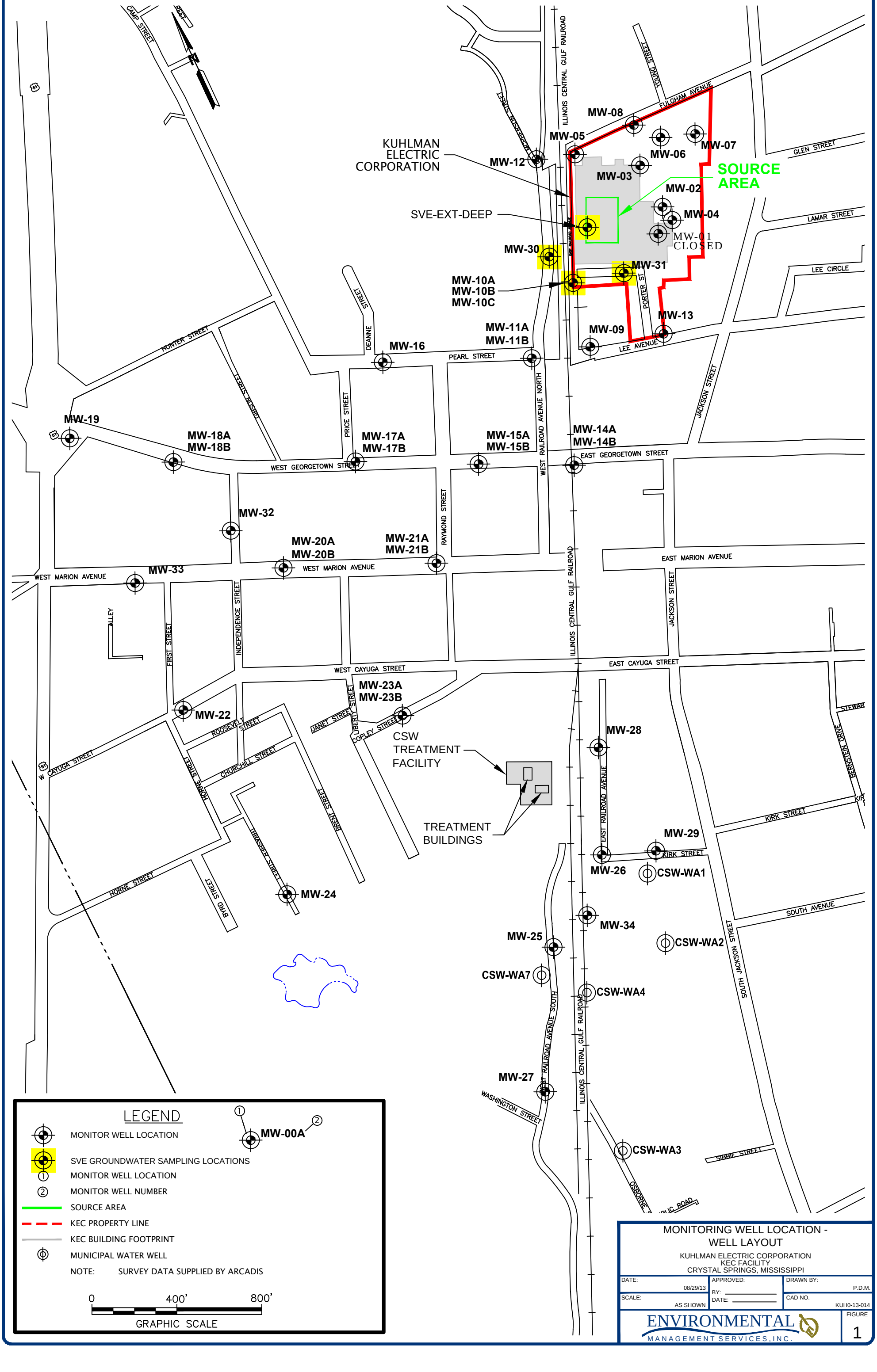
In addition, vacuum gauges were placed in the interstitial space on each dual-walled HDPE piping run near the extraction wells. The vacuum gauges are used to measure the vacuum or pressure of the interstitial space between the inner carrier pipe and the outer containment pipe during monthly site visits for leak detection. The gauges have shown no measureable vacuum or pressure within the interstitial space indicating no leaks within the carrier pipe.

Conclusion

The results from this monitoring period indicate that contaminants are being removed from the soil beneath the facility. The remediation activities will continue to remove contaminant mass from the soil through vapor extraction in order to remediate the defined source area.

Semiannual sampling at monitoring wells MW-10A, MW-10B, MW-10C, MW-30, MW-31, and SVE-EXT-DEEP will continue. The nine observation wells will be monitored for vacuum response and relative VOC concentrations in the soil vapor quarterly. The relative VOC concentrations will be monitored using both a PID and FID meter. The SVE system unit emissions and observation well soil vapor will also be sampled quarterly and analyzed for VOC and 1,4-dioxane. Monthly operations and maintenance visits to the SVE unit will also continue while the unit is in operation. Ambient air sampling will continue on a quarterly schedule. These SVE system monitoring events will be documented and reported semiannually. All monitoring and remediation objectives were met for this reporting period.

Figures



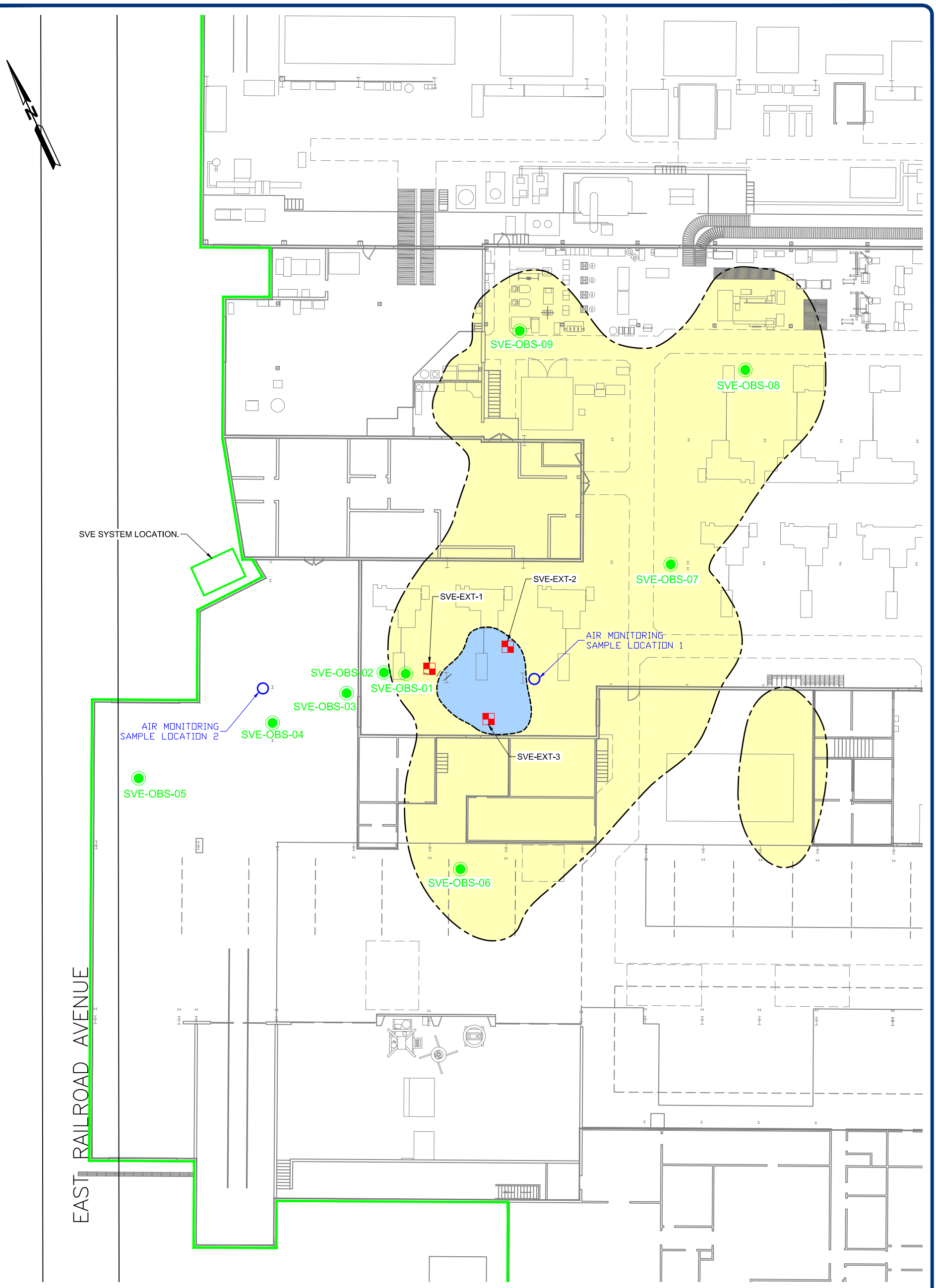
MONITORING WELL LOCATION - WELL LAYOUT

KUHLMAN ELECTRIC CORPORATION
KEC FACILITY
CRYSTAL SPRINGS, MISSISSIPPI

DATE:	APPROVED:	DRAWN BY:
08/29/13	BY:	P.D.M.
SCALE:	DATE:	CAD NO.
AS SHOWN		KUH0-13-014

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 1



LEGEND

- KEC BUILDING FOOTPRINT
- SVE OBSERVATION WELLS
- SVE EXTRACTION WELLS
- AMBIENT AIR SAMPLE LOCATIONS
- 1,1-DICHLOROETHENE IN SOIL EXCEEDING UNRESTRICTED TIER 1 TRG (0.0772 mg/kg)
- 1,4-DIOXANE IN SOIL EXCEEDING UNRESTRICTED TIER 1 TRG (58.1 mg/kg)

SCALE 1 INCH = 25 FEET

5 10 25

0 5 10 15 20 25 50

NOTES:

1) SOIL CONCENTRATIONS ARE BASED ON EXTENT AS DEFINED IN CORRECTIVE ACTION PLAN, ARCADIS, MARCH 2010.

SVE SYSTEM LAYOUT

KUHLMAN ELECTRIC CORPORATION
KEC FACILITY
CRYSTAL SPRINGS, MISSISSIPPI

DATE:	APPROVED:	DRAWN BY:
01/28/2015	BY: _____	P.D.M.
SCALE:	DATE: _____	CAD NO.
AS SHOWN		KUH0-15-002

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 2

Figure 3
1,1,1-Trichloroethane Cumulative Mass Removed

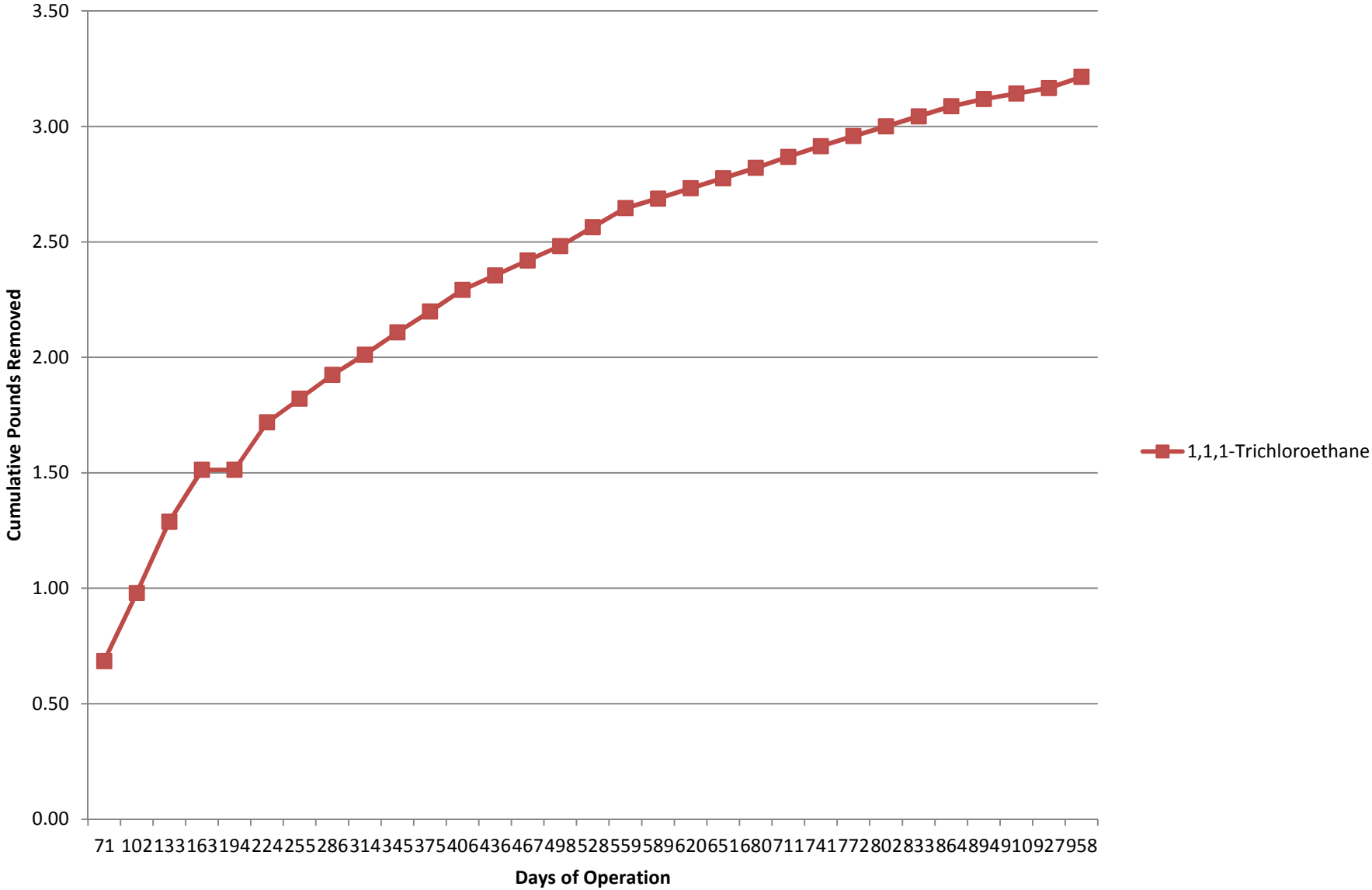


Figure 4
1,1-Dichloroethene Cumulative Mass Removed

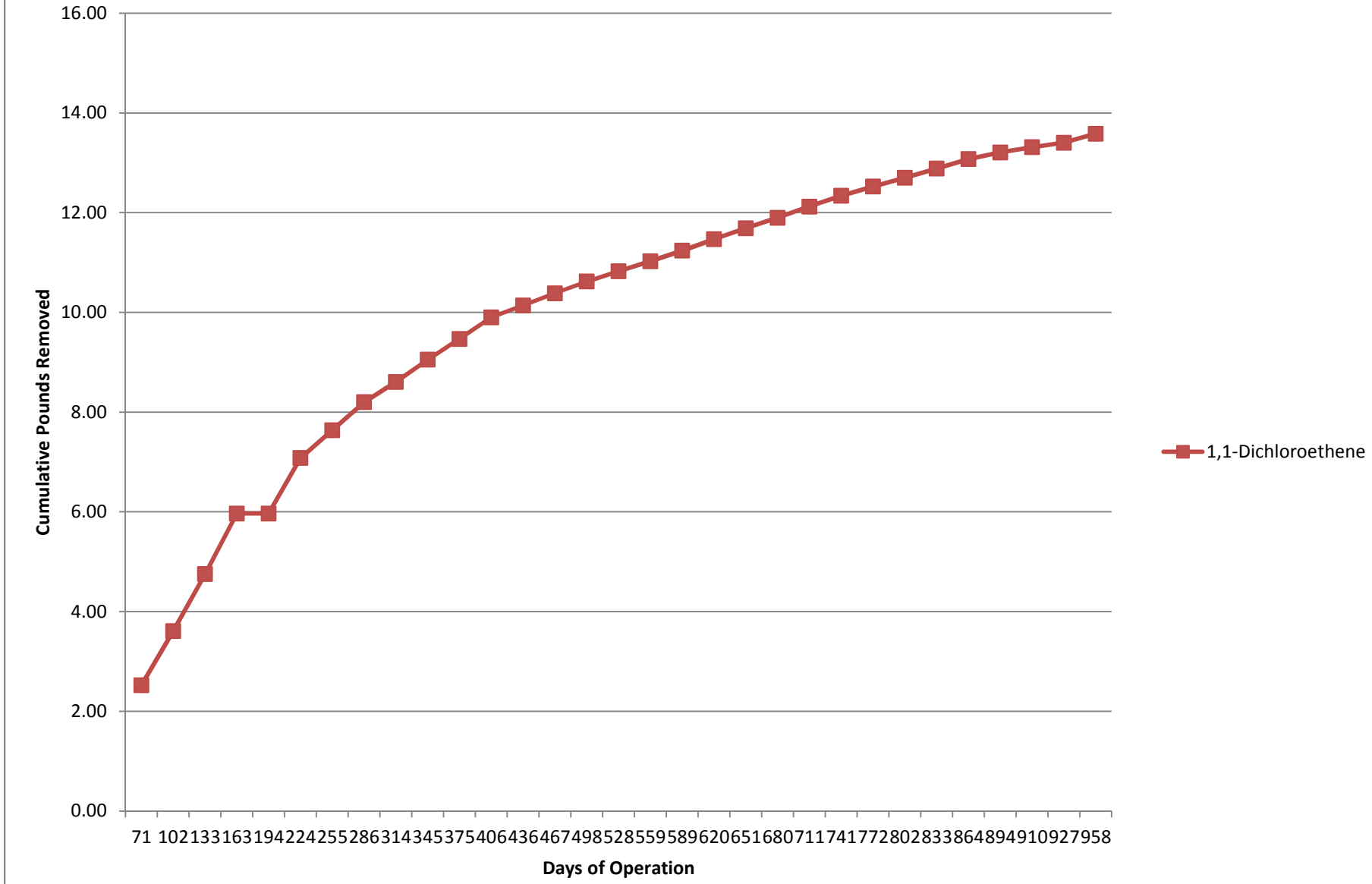
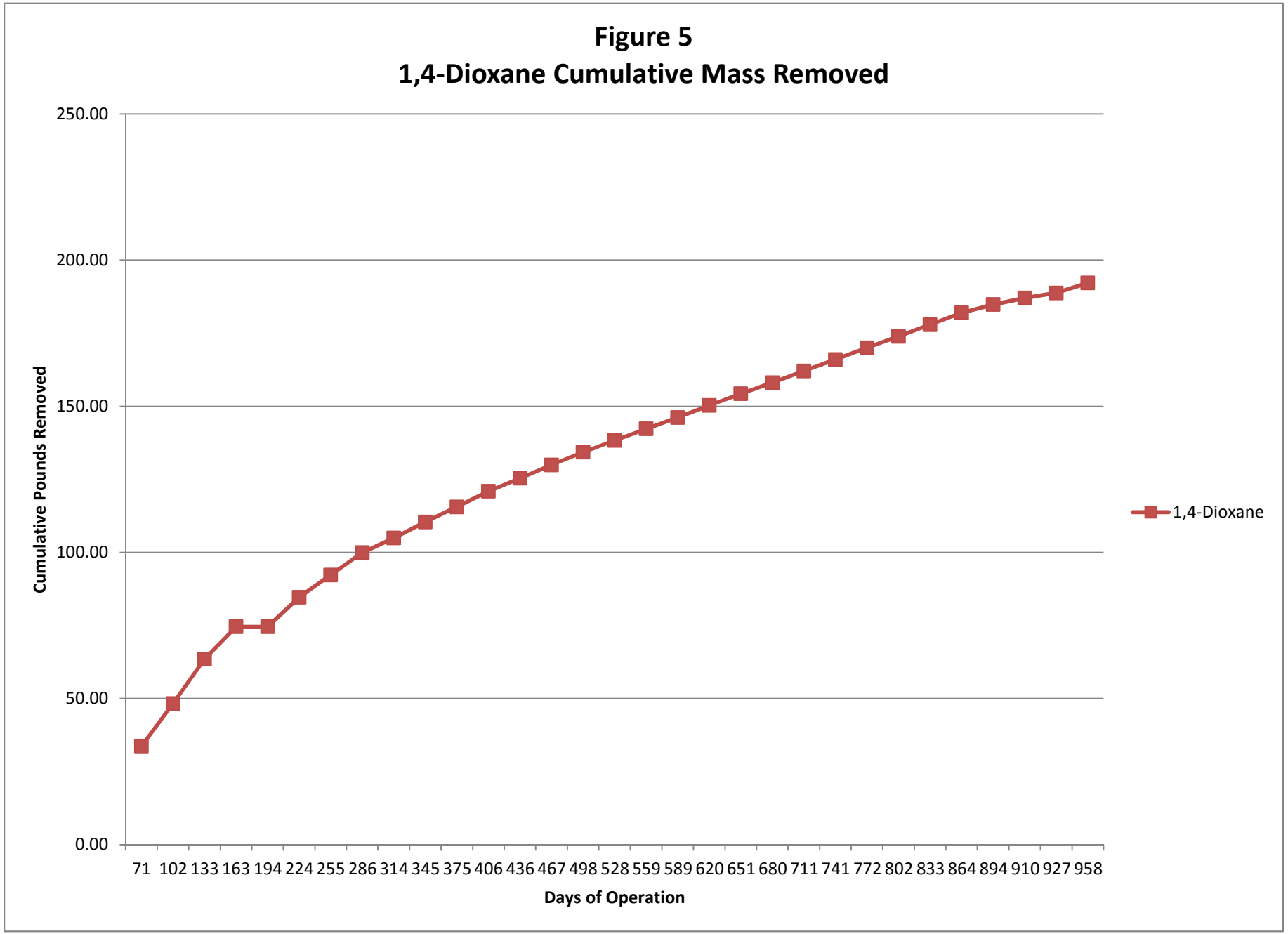


Figure 5
1,4-Dioxane Cumulative Mass Removed



Tables

TABLE 1
GROUNDWATER ANALYTICAL RESULTS SUMMARY

SVE Second Semiannual Sampling 2016
Kuhlman Electric Corporation
Crystal Springs, MS

		SVE-EXT-DEEP	MW-10A	MW-10B	MW-10C		MW-30	MW-31
Constituent	**MDEQ Tier I TRG ***	**KEP-GW-035-009**	**KEP-GW-010A-029**	**KEP-GW-010B-029**	**KEP-GW-010C-029**	**KEP-GW-DB5-916**	**KEP-GW-030-015**	**KEP-GW-031-015**
Sample Date		**9/20/2016**	**9/21/2016**	**9/22/2016**	**9/21/2016**	**9/21/2016**	**9/20/2016**	**9/21/2016**
1,1,1-Trichloroethane (TCA)	200	2.7	1.2	<0.5	<0.5	<0.5	2.0	<0.5
1,1,2-Trichloroethane	5.0	2.8	**8.6**	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	798	<0.5	2.0	<0.5	<0.5	<0.5	1.1	<0.5
1,1-Dichloroethene	7.0	**13**	**51.0**	6.9	<0.5	<0.5	**29.0**	7.0
1,2-Dichloroethane (EDC)	5.0	0.91	2.3	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dioxane	6.09	4.3	5.4	5	<0.4	<0.4	0.68	0.79
Chloroform	0.155	<0.5	**0.71**	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene (PCE)	5.0	0.62	<0.5	<0.5	0.96	0.82	<0.5	<0.5
Trichloroethene (TCE)	5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

All results/standards in units of: µg/l - micrograms per liter
Bold indicates an exceedance
** MDEQ Target Remediation Goals (TRG's) for Groundwater*

TABLE 2
OBSERVATION WELL RELATIVE VOC CONCENTRATIONS RESULTS SUMMARY

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

OBSERVATION WELL PID RESULTS SUMMARY

Sample Date	SVE-OBS-1	SVE-OBS-2	SVE-OBS-3	SVE-OBS-4	SVE-OBS-5	SVE-OBS-6	SVE-OBS-7	SVE-OBS-8	SVE-OBS-9
9/12/2016	2	3.5	2.2	4.1	5.3	5.3	2.6	5.6	5.7
12/6/2016	2.9	2.8	0.6	0.6	3.2	4.5	1.3	1.5	1.3

OBSERVATION WELL FID RESULTS SUMMARY

Sample Date	SVE-OBS-1	SVE-OBS-2	SVE-OBS-3	SVE-OBS-4	SVE-OBS-5	SVE-OBS-6	SVE-OBS-7	SVE-OBS-8	SVE-OBS-9
9/12/2016	0	0	0	0	0	0	12	28	25
12/6/2016	0	0	0	0	0	0	0	0	0

All results in units of ppm - parts per million

TABLE 3
OBSERVATION WELL SOIL VAPOR ANALYTICAL RESULTS SUMMARY

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

Compound	SVE-OBS-1		SVE-OBS-2		SVE-OBS-3		SVE-OBS-4		SVE-OBS-5		SVE-OBS-6		SVE-OBS-7		SVE-OBS-8		SVE-OBS-9	
Sample Date	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016	9/12/2016	12/6/2016
1,1,1-Trichloroethane	6.4	3.1	4.1	2.2	2	1.1	2.9	1.2	ND	0.14	12	16	1.5	1.1	10	11	1.3	1.4
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	0.33	0.53	ND	ND	ND	ND
1,1-Dichloroethane	1.4	0.8	ND	ND	ND	ND	ND	ND	ND	ND	0.93	0.8	1.5	1.6	6.7	6.8	ND	0.2
1,1-Dichloroethene	22.0	11.0	4.7	1.5	6	1.6	1.8	0.7	ND	ND	4.1	11.0	45.0	53.0	120.0	79.0	9.2	13.0
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.53	2.4	0.59	2.6	0.95	7.8	2.1	7.4	0.36	8.1	13.00	3.3	0.63	3.7	1.3	3.2	1.5	5.5
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.10	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.37	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.23	0.85	ND	1.00	ND	3.10	1.30	2.80	ND	3.70	4.20	1.20	0.28	1.50	0.56	1.10	0.78	2.20
1,3-Dichlorobenzene	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1.4	1.9	1.4	2.2	1	1.2	1.2	1.3	ND	ND	2.1	ND	1	ND	2.2	ND	2	ND
1,4-Dioxane	1.1	2	ND	0.66	0.79	3.8	ND	0.92	ND	0.18	ND	0.2	0.45	0.27	ND	0.16	ND	0.27
2-Butanone (MEK)	1.70	2.60	ND	1.20	2.2	4.50	1.4	1.20	5.70	1.80	2.3	1.50	2.00	1.50	2.10	2.50	3.20	3.60
2-Hexanone	ND	0.30	ND	0.18	ND	0.19	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND	ND	0.24
2-Propanol (Isopropyl Alcohol)	3.20	1.30	2.4	1.20	ND	4.50	3.10	ND	130.00	1.80	4.90	1.10	ND	3.60	ND	1.40	120.00	3.40
4-Ethyltoluene	ND	0.70	ND	0.93	0.46	3.10	1.20	2.70	ND	3.20	4.50	1.00	0.25	1.30	0.49	1.00	0.56	2.10
4-Methyl-2-pentanone	0.42	1.10	ND	1.30	ND	3.20	ND	1.10	0.55	4.40	0.59	1.70	0.31	2.50	0.34	0.66	ND	4.40
Acetone	24	26	13	16	21	25	17	6.9	46	12	44	12	16	8.9	22	15	33	20
Acetonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	1.00	1.30	ND	0.31	ND	0.44	ND	ND	3.60	0.31	ND	1.10	0.80	0.38	0.62	1.30	1.60	1.10
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Pinene	0.76	0.43	0.62	0.74	0.51	1.3	0.73	0.38	7.9	0.81	0.48	0.42	0.26	0.97	0.36	1	2.1	1.8
Benzene	ND	0.54	ND	0.34	ND	0.96	ND	ND	2.70	0.30	2.20	0.21	ND	0.32	ND	0.33	10.00	0.36
Carbon Disulfide	ND	0.41	ND	ND	0.76	5.70	ND	ND	1.8	ND	5.1	1.60	12.00	ND	2.60	0.88	1.50	0.90
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12	ND	ND	ND	ND
Chlorobenzene	ND	0.89	ND	0.28	ND	0.17	ND	ND	2.50	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.34	0.27	0.54	0.24	ND	ND	ND	ND	ND	ND	ND	0.16	0.43	0.48	0.36	0.33	ND	ND
Chloromethane	ND	0.56	ND	ND	ND	0.33	ND	ND	16.00	0.34	ND	ND	ND	ND	ND	ND	ND	0.27
cis-1,2-Dichloroethene	ND	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cumene	ND	0.15	ND	0.20	ND	0.77	ND	0.41	0.22	0.73	0.77	0.17	ND	0.29	ND	0.16	0.55	0.49
Cyclohexane	ND	0.42	ND	0.43	ND	0.65	ND	ND	3.80	0.67	ND	ND	ND	1.00	ND	ND	ND	0.77
Dichlorodifluoromethane (CFC 12)	0.59	0.66	0.49	0.49	ND	0.48	ND	0.48	0.43	0.48	0.49	0.51	0.45	0.47	0.45	0.6	ND	0.56
d-Limonene	0.8	0.8	0.76	1.1	0.72	1.2	0.82	1	1.5	ND	0.64	ND	0.42	ND	0.49	ND	1.1	ND
Ethanol	34	150	23	220	31	310	21.00	230	51.00	360	140.00	410	24	460	22	86	55	460
Ethyl Acetate	ND	1.00	ND	13.00	ND	2.80	ND	0.91	440.00	3.90	ND	6.60	ND	6.10	ND	15.00	18.00	2.60
Ethylbenzene	0.88	2.1	0.72	2.2	1.3	6.7	3.8	2.9	0.9	6.2	14.00	1.2	0.64	2.3	1.1	1.1	1.7	3.6
m,p-Xylenes	4.1	10	3.5	9.8	6.2	30	20	16	2	31	55	6.7	3.3	11	5.7	6.3	10	18
Methyl Methacrylate	ND	0.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	3.40	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.61	ND	0.44	ND	0.33	ND	1.50	ND
n-Butyl Acetate	ND	0.28	ND	0.15	ND	0.48	ND	0.23	1.10	0.51	ND	0.13	ND	ND	ND	ND	0.71	ND
n-Heptane	ND	0.51	ND	0.77	ND	1.40	ND	0.31	0.81	1.70	ND	0.60	ND	1.00	ND	0.33	ND	1.90
n-Hexane	ND	0.36	ND	0.53	ND	0.60	ND	ND	62.00	0.47	ND	ND	ND	0.58	ND	0.21	1.30	0.53

TABLE 3
OBSERVATION WELL SOIL VAPOR ANALYTICAL RESULTS SUMMARY

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

Compound	SVE-OBS-1		SVE-OBS-2		SVE-OBS-3		SVE-OBS-4		SVE-OBS-5		SVE-OBS-6		SVE-OBS-7		SVE-OBS-8		SVE-OBS-9	
Sample Date	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**	**9/12/2016**	**12/6/2016**
n-Nonane	ND	0.20	ND	0.89	ND	0.74	ND	0.28	0.86	0.57	0.42	0.85	ND	1.40	ND	4.60	ND	0.65
n-Octane	ND	0.15	ND	0.59	ND	0.70	ND	ND	2.10	0.43	ND	0.94	ND	1.20	ND	4.90	ND	0.46
n-Propylbenzene	ND	0.48	ND	0.65	ND	2.40	0.81	1.80	ND	2.30	3.60	0.62	ND	0.91	0.28	0.64	ND	1.40
o-Xylene	1.5	3.9	1.3	3.3	2.3	11	5.8	5.7	0.7	11	20	2.4	1.1	3.9	2	2.2	3.5	6.5
Propene	80	530	150.00	460	ND	110	7.60	29	9.10	120	54.00	22	41.00	360	40	28	41	270
Styrene	ND	ND	ND	ND	ND	0.17	ND	ND	3.20	0.13	ND	ND	ND	0.15	ND	0.21	0.66	0.29
Tetrachloroethene	1.0	0.6	ND	0.1	0.87	ND	ND	ND	0.39	ND	0.48	0.5	0.95	1.2	3.7	0.5	ND	0.2
Tetrahydrofuran (THF)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.30	ND	0.29	ND	2.20
Toluene	1.2	4.3	1.1	5.6	2.3	14	5.7	3.7	27	10	44	3.4	1.3	8.3	1.8	8.5	13	8.4
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.29	0.17	ND	ND	0.48	ND	ND	ND	ND	ND	ND	0.14	0.25	0.22	0.39	0.24	ND	0.19
Trichlorofluoromethane	0.39	0.33	ND	0.22	ND	0.22	ND	0.25	0.22	0.23	ND	0.22	0.31	0.33	ND	0.27	ND	0.28
Trichlorotrifluoroethane	1.2	0.7	0.36	0.2	0.64	0.7	1.40	1.8	ND	ND	ND	0.2	0.7	0.6	ND	ND	ND	ND
Vinyl Acetate	1.40	1.60	ND	0.80	ND	ND	ND	ND	11.00	ND	ND	3.00	2.30	ND	2.10	2.80	ND	2.70

All results in units of ppb - parts per billion

TABLE 4
SVE SYSTEM RELATIVE VOC CONCENTRATION MONITORING

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

Sample Date	Pre Carbon	Carbon Unit 1	Carbon Unit 2
	PID ppm		
8/24/2016	0.8	1.1	0.6
11/29/2016	0.5	1.7	0.5
	FID ppm		
8/24/2016	26	21	0
11/29/2016	0	0	0

Notes:

All results in units of ppm - parts per million

TABLE 5
SVE SYSTEM EXHAUST ANALYTICAL SUMMARY

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

Compound	Pre Carbon		Post Carbon 1		Post Carbon 2	
Sample Date	8/24/2016	11/29/2016	8/24/2016	11/29/2016	8/24/2016	11/29/2016
1,1,1-Trichloroethane	54	62	47	49	ND	11
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5.2	ND	ND	ND	16	24
1,1-Dichloroethene	240	230	140	150	420	280
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
1,4-Dioxane	4900	4400	3700	2900	20	27

Results are in µg/m ^{3}

TABLE 6
SVE SYSTEM WELL FLOW RATE SUMMARY

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

	SVE-EXT-1	SVE-EXT-2	SVE-EXT-3
Date	**Flow Rate SCFM**		
7/15/2016	94.0	75.0	128.4
8/24/2016	96.2	75.0	131.5
9/12/2016	98.2	80.2	131.5
11/16/2016	96.2	77.7	129.9
11/29/2016	98.2	77.7	131.5
12/6/2016	98.2	80.2	133.0
12/28/2016	96.2	77.7	133.0

TABLE 7
QUARTERLY AMBIENT AIR MONITORING

SVE SYSTEM
Kuhlman Electric Corporation
Crystal Springs, MS

Contaminant	OCCUPATIONAL STANDARDS			AIR MON 01-22	AIR MON 02-22	AIR MON 01-23	AIR MON 02-23
Sample Date	OSHA	ACGIH	NIOSH	9/12/2016	9/12/2016	12/6/2016	12/6/2016
1,1,1-Trichloroethane	435,000	435,000	435,000	<0.73	<0.58	<0.68	<0.71
1,1-Dichloroethene	450,000	60,000	--	<0.73	<0.58	<0.68	<0.71
1,2,4-Trimethylbenzene	--	860,000	--	32	5.9	74	14
1,3,5-Trimethylbenzene	426,000	85,200	215,000	18	3.4	29	8.8
1,3-Butadiene	2,210	4,400	Ca	<0.95	<0.75	<0.87	<0.92
1,3-Dichlorobenzene	--	--	--	<0.65	<0.51	<0.6	<0.63
1,4-Dichlorobenzene	--	--	125,000	75	4.5	48	2.3
1,4-Dioxane	360000	72000	--	<0.69	<0.55	3	1
2-Hexanone	410000	--	4000	1.2	<0.55	<0.64	1.3
4-Ethyltoluene	62,900	12,600	31,000	15	2.1	27	8.4
Acetone	2,400,000	1,187,000	590,000	650	340	140	130
Acrolein	250	--	250	3	5.2	1.7	2.8
alpha-Pinene	--	--	--	7.3	31	5.2	3.5
Benzene	3,200	1,600	320	<0.69	1.6	1.3	1.4
Bromoform	5,000	5,200	5,000	<0.65	<0.51	<0.6	<0.63
Carbon Disulfide	1,900,000	1,900,000	1,900,000	<0.65	0.78	<0.6	<0.63
Carbon Tetrachloride	--	Ca	19,800	<0.65	0.54	<0.6	<0.63
Chloromethane	207,000	103,000	Ca	1.3	1.1	1.2	1.3
cis-1,2-Dichloroethene	790,000	793,000	790,000	<0.69	<0.55	<0.64	<0.67
Cumene	245,000		245,000	3.8	0.86	5.4	3
Cyclohexane	--	125,000	--	<1.2	16	3.7	2.2
Dichlorodifluoromethane (CFC 12)	4,950,000		4,950,000	2.2	2.2	2.8	2.8

TABLE 7
QUARTERLY AMBIENT AIR MONITORING

SVE SYSTEM
Kuhlman Electric Corporation
Crystal Springs, MS

Contaminant	OCCUPATIONAL STANDARDS			AIR MON 01-22	AIR MON 02-22	AIR MON 01-23	AIR MON 02-23
Sample Date	OSHA	ACGIH	NIOSH	9/12/2016	9/12/2016	12/6/2016	12/6/2016
d-Limonene				3.9	34	8.1	2.2
Ethanol	1,900,000	--	1,900,000	930	520	2,000	1,700
Ethyl Acetate	1,400,000	--	1,400,000	9.1	190	60	41
Ethylbenzene	--	--	--	73	15	43	30
Isopropyl Alcohol	1,050,000	344,000	1,050,000	76	240	20	8.4
m,p-Xylene	750,000	75,360	375,000	320	64	210	130
Methyl Ethyl Ketone	435,000	435,000	435,000	29	15	30	23
Methyl Isobutyl Ketone	980,000	--	980,000	23	3.8	29	19
Methyl Methacrylate	410,000	--	410,000	<1.3	<1.1	<1.2	<1.3
Methylene Chloride	86,750	--	86,750	1.6	2.4	<0.68	<0.71
Naphthalene	50,000	--	50,000	<0.77	<0.62	<0.72	<0.75
n-Butyl Acetate	710,000	--	710,000	8.8	2.9	6.1	6
n-Heptane	2,000,000	1,638,000	350,000	2	1.6	10	6.3
n-Hexane	180,000	--	180,000	1.4	3.9	5.3	3.7
n-Nonane	--	1,050,000	1,050,000	2.2	1.9	5.7	2.1
n-Octane	2,350,000	1,400,000	350,000	1.2	3.3	3.4	2
n-Propylbenzene	--	--	--	10	1.7	18	6.4
o-Xylene	435000	435000	435000	110	19	73	41
Propylene	435,000	435,000	435,000	1,000	61	1,100	230
Styrene	590,000	590,000	590,000	2.3	2.3	3.6	1.1
Tetrachloroethene	678,000	169,500	Ca	1.3	0.53	1.2	0.66
Tetrahydrofuran (THF)	590,000	--	590,000	<0.86	<0.69	6	<0.84

TABLE 8
OBSERVATION WELL VACUUM RESPONSE SUMMARY

SVE System
Kuhlman Electric Corporation
Crystal Springs, MS

Date	SVE-OBS-1	SVE-OBS-2	SVE-OBS-3	SVE-OBS-4	SVE-OBS-5	SVE-OBS-6	SVE-OBS-7	SVE-OBS-8	SVE-OBS-9
Distance* (feet)	**5**	**10**	**20**	**40**	**80**	**40**	**50**	**95**	**80**
8/24/2016	34.8	25.9	14.5	5.2	2.3	2.5	8.2	0.38	3.8
12/6/2016	35.5	26	14.5	5.19	2.63	2.76	8.01	0.39	9.31

** Distance to the nearest extraction well*
Vacuum readings are in inches of water.

Appendix A
Observation Well Soil Vapor
Analytical Results

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Simi Valley, CA 93065
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F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

September 30, 2016

Stephanie Kilgore
Environmental Management Services, Inc.
P.O. Box 15369
Hattiesburg, MS 39404

RE: SVE Performance Monitoring / KUH0-16-010

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on September 19, 2016. For your reference, these analyses have been assigned our service request number P1604453.

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 Sue Anderson at 12:21 pm, Sep 30, 2016

Sue Anderson
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Environmental Management Services, Inc. Service Request No: P1604453
Project: SVE Performance Monitoring / KUH0-16-010

CASE NARRATIVE

The samples were received intact under chain of custody on September 19, 2016 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.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation, however it is not part of the AIHA-LAP, LLC accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA-LAP, LLC	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
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	977273
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	4068-003
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	T104704413-16-7
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272016-6
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: Environmental Management Services, Inc. Service Request: P1604453

Project ID: SVE Performance Monitoring / KUH0-16-010

Date Received: 9/19/2016

Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SVE-OBS-01	P1604453-001	Air	9/12/2016	09:24	1SC00984	-0.07	5.44	X
SVE-OBS-02	P1604453-002	Air	9/12/2016	09:35	1SS00203	-0.02	5.07	X
SVE-OBS-03	P1604453-003	Air	9/12/2016	09:46	1SC00590	-0.39	5.31	X
SVE-OBS-04	P1604453-004	Air	9/12/2016	09:57	1SC00806	-0.10	5.93	X
SVE-OBS-05	P1604453-005	Air	9/12/2016	10:08	1SC00273	0.05	5.88	X
SVE-OBS-06	P1604453-006	Air	9/12/2016	10:25	1SC00517	0.00	5.36	X
SVE-OBS-07	P1604453-007	Air	9/12/2016	10:42	1SC00442	-0.28	6.76	X
SVE-OBS-08	P1604453-008	Air	9/12/2016	10:54	1SC00510	-0.20	5.83	X
SVE-OBS-09	P1604453-009	Air	9/12/2016	11:05	1SC00482	-0.85	5.85	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No 1604453

Company Name & Address (Reporting Information)	Environmental Management Services, Inc. P.O. Box 15369 Hattiesburg, MS 39404
Project Name	SVE Performance Monitoring
Project Number	KUHO-16-010
Project Manager	Stephanie Kilgore
P.O. # / Billing Information	KUHO-16-010 Same as reporting
Phone	601-544-3674
Fax	601-544-0504
Email Address for Result Reporting	skilgore@env-mgt.com
Sampler (Print & Sign)	Stephanie Kilgore / Stephanie Kilgore
ALS Contact:	

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15		Comments e.g. Actual Preservative or specific instructions
SVE-OBS-01	1	9-12-16	9:24	ISC00984				1L	X		
SVE-OBS-02	2	9-12-16	9:35	ISC00203				1L	X		
SVE-OBS-03	3	9-12-16	9:46	ISC00590				1L	X		
SVE-OBS-04	4	9-12-16	9:57	ISC00806				1L	X		
SVE-OBS-05	5	9-12-16	10:08	ISC00273				1L	X		
SVE-OBS-06	6	9-12-16	10:25	ISC00517				1L	X		
SVE-OBS-07	7	9-12-16	10:42	ISC00442				1L	X		
SVE-OBS-08	8	9-12-16	10:54	ISC00510				1L	X		
SVE-OBS-09	9	9-12-16	11:05	ISC00482				1L	X		
								#			

Report Tier Levels - please select

Tier I - Results (Default in not specified) _____
Tier II (Results + QC Summaries) X
Tier III (Results + QC & Calibration Summaries) _____
Tier IV (Date Validation Package) 10% Surcharge _____

EDD required YES / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) Stephanie Kilgore	Date: 9/14/16	Time: 10:06	Received by: (Signature) FedEx	Date:	Time:		
Relinquished by: (Signature) FedEx	Date:	Time:	Received by: (Signature)	Date: 09/19/16	Time: 0930	Cooler / Blank Temperature ____°C	

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ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1604453

Project: SVE Performance Monitoring / KUHO-16-010

Sample(s) received on: 9/19/16 Date opened: 9/19/16 by: ADAVID

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	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	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?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**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
P1604453-001.01	1.0 L Source Can					
P1604453-002.01	1.0 L Source Silonite Canister					
P1604453-003.01	1.0 L Source Can					
P1604453-004.01	1.0 L Source Can					
P1604453-005.01	1.0 L Source Can					
P1604453-006.01	1.0 L Source Can					
P1604453-007.01	1.0 L Source Can					
P1604453-008.01	1.0 L Source Can					
P1604453-009.01	1.0 L Source Can					

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: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-001

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00984

Initial Pressure (psig): -0.07 Final Pressure (psig): 5.44

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**140**	3.5	0.97	**80**	2.0	0.56	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.9**	3.5	1.2	**0.59**	0.70	0.24	**J**
74-87-3	Chloromethane	ND	3.5	1.0	ND	1.7	0.50	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.5	1.3	ND	0.49	0.19	
75-01-4	Vinyl Chloride	ND	3.5	1.2	ND	1.4	0.46	
106-99-0	1,3-Butadiene	ND	3.5	1.5	ND	1.6	0.69	
74-83-9	Bromomethane	ND	3.5	1.3	ND	0.89	0.34	
75-00-3	Chloroethane	ND	3.5	1.2	ND	1.3	0.44	
64-17-5	Ethanol	**63**	35	5.5	**34**	18	2.9	
75-05-8	Acetonitrile	ND	3.5	1.2	ND	2.1	0.74	
107-02-8	Acrolein	**2.3**	14	1.2	**1.0**	6.0	0.51	**J**
67-64-1	Acetone	**56**	35	5.3	**24**	15	2.2	
75-69-4	Trichlorofluoromethane	**2.2**	3.5	1.2	**0.39**	0.61	0.21	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**7.8**	35	2.9	**3.2**	14	1.2	**J**
107-13-1	Acrylonitrile	ND	3.5	1.2	ND	1.6	0.54	
75-35-4	1,1-Dichloroethene	**87**	3.5	1.2	**22**	0.87	0.30	
75-09-2	Methylene Chloride	ND	3.5	1.2	ND	0.99	0.34	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.5	1.1	ND	1.1	0.35	
76-13-1	Trichlorotrifluoroethane	**8.9**	3.5	1.2	**1.2**	0.45	0.15	
75-15-0	Carbon Disulfide	ND	35	1.0	ND	11	0.33	
156-60-5	trans-1,2-Dichloroethene	ND	3.5	1.3	ND	0.87	0.33	
75-34-3	1,1-Dichloroethane	**5.6**	3.5	1.1	**1.4**	0.85	0.27	
1634-04-4	Methyl tert-Butyl Ether	ND	3.5	1.2	ND	0.96	0.33	
108-05-4	Vinyl Acetate	**5.0**	35	4.5	**1.4**	9.8	1.3	**J**
78-93-3	2-Butanone (MEK)	**5.0**	35	1.4	**1.7**	12	0.49	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-01** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-001

Test Code: EPA TO-15 Date Collected: 9/12/16

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16

Analyst: Wida Ang Date Analyzed: 9/22/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)

Test Notes:

Container ID: 1SC00984

Initial Pressure (psig): -0.07 Final Pressure (psig): 5.44

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.5	1.1	ND	0.87	0.28	
141-78-6	Ethyl Acetate	ND	6.9	2.4	ND	1.9	0.67	
110-54-3	n-Hexane	ND	3.5	1.0	ND	0.98	0.29	
67-66-3	Chloroform	**1.6**	3.5	1.2	**0.34**	0.71	0.24	**J**
109-99-9	Tetrahydrofuran (THF)	ND	3.5	1.4	ND	1.2	0.47	
107-06-2	1,2-Dichloroethane	ND	3.5	1.1	ND	0.85	0.27	
71-55-6	1,1,1-Trichloroethane	**35**	3.5	1.2	**6.4**	0.63	0.22	
71-43-2	Benzene	ND	3.5	1.1	ND	1.1	0.35	
56-23-5	Carbon Tetrachloride	ND	3.5	1.0	ND	0.55	0.16	
110-82-7	Cyclohexane	ND	6.9	2.0	ND	2.0	0.58	
78-87-5	1,2-Dichloropropane	ND	3.5	1.1	ND	0.75	0.24	
75-27-4	Bromodichloromethane	ND	3.5	1.0	ND	0.52	0.15	
79-01-6	Trichloroethene	**1.6**	3.5	0.97	**0.29**	0.64	0.18	**J**
123-91-1	1,4-Dioxane	**4.1**	3.5	1.1	**1.1**	0.96	0.31	
80-62-6	Methyl Methacrylate	ND	6.9	2.1	ND	1.7	0.52	
142-82-5	n-Heptane	ND	3.5	1.2	ND	0.84	0.29	
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.97	ND	0.76	0.21	
108-10-1	4-Methyl-2-pentanone	**1.7**	3.5	1.1	**0.42**	0.84	0.27	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	1.1	ND	0.76	0.24	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ND	0.63	0.20	
108-88-3	Toluene	**4.7**	3.5	1.2	**1.2**	0.92	0.31	
591-78-6	2-Hexanone	ND	3.5	1.1	ND	0.84	0.27	
124-48-1	Dibromochloromethane	ND	3.5	1.1	ND	0.41	0.13	
106-93-4	1,2-Dibromoethane	ND	3.5	1.1	ND	0.45	0.14	
123-86-4	n-Butyl Acetate	ND	3.5	1.1	ND	0.73	0.23	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-001

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00984

Initial Pressure (psig): -0.07 Final Pressure (psig): 5.44

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	3.5	1.2	ND	0.74	0.27	
127-18-4	Tetrachloroethene	**6.8**	3.5	0.97	**1.0**	0.51	0.14	
108-90-7	Chlorobenzene	ND	3.5	1.1	ND	0.75	0.24	
100-41-4	Ethylbenzene	**3.8**	3.5	1.1	**0.88**	0.79	0.25	
179601-23-1	m,p-Xylenes	**18**	6.9	2.1	**4.1**	1.6	0.48	
75-25-2	Bromoform	ND	3.5	1.0	ND	0.33	0.10	
100-42-5	Styrene	ND	3.5	1.0	ND	0.81	0.24	
95-47-6	o-Xylene	**6.7**	3.5	1.0	**1.5**	0.79	0.24	
111-84-2	n-Nonane	ND	3.5	1.0	ND	0.66	0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	1.0	ND	0.50	0.15	
98-82-8	Cumene	ND	3.5	1.0	ND	0.70	0.21	
80-56-8	alpha-Pinene	**4.2**	3.5	0.97	**0.76**	0.62	0.17	
103-65-1	n-Propylbenzene	ND	3.5	1.1	ND	0.70	0.22	
622-96-8	4-Ethyltoluene	ND	3.5	1.1	ND	0.70	0.22	
108-67-8	1,3,5-Trimethylbenzene	**1.1**	3.5	1.1	**0.23**	0.70	0.22	**J**
95-63-6	1,2,4-Trimethylbenzene	**2.6**	3.5	1.0	**0.53**	0.70	0.21	**J**
100-44-7	Benzyl Chloride	ND	3.5	0.76	ND	0.67	0.15	
541-73-1	1,3-Dichlorobenzene	ND	3.5	1.0	ND	0.57	0.17	
106-46-7	1,4-Dichlorobenzene	**8.2**	3.5	0.97	**1.4**	0.57	0.16	
95-50-1	1,2-Dichlorobenzene	ND	3.5	1.0	ND	0.57	0.17	
5989-27-5	d-Limonene	**4.5**	3.5	0.97	**0.80**	0.62	0.17	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.5	0.68	ND	0.36	0.071	
120-82-1	1,2,4-Trichlorobenzene	ND	3.5	1.1	ND	0.46	0.15	
91-20-3	Naphthalene	**2.3**	3.5	1.2	**0.43**	0.66	0.24	**J**
87-68-3	Hexachlorobutadiene	ND	3.5	0.97	ND	0.32	0.091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
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J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-002

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SS00203

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.07

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**270**	6.8	1.9	**150**	3.9	1.1	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	6.8	2.3	**0.49**	1.4	0.46	**J**
74-87-3	Chloromethane	ND	6.8	2.0	ND	3.3	0.98	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	6.8	2.6	ND	0.97	0.37	
75-01-4	Vinyl Chloride	ND	6.8	2.3	ND	2.6	0.90	
106-99-0	1,3-Butadiene	ND	6.8	3.0	ND	3.1	1.3	
74-83-9	Bromomethane	ND	6.8	2.6	ND	1.7	0.66	
75-00-3	Chloroethane	ND	6.8	2.3	ND	2.6	0.87	
64-17-5	Ethanol	**42**	68	11	**23**	36	5.7	**J**
75-05-8	Acetonitrile	ND	6.8	2.4	ND	4.0	1.4	
107-02-8	Acrolein	ND	27	2.3	ND	12	1.0	
67-64-1	Acetone	**30**	68	10	**13**	28	4.4	**J**
75-69-4	Trichlorofluoromethane	ND	6.8	2.3	ND	1.2	0.41	
67-63-0	2-Propanol (Isopropyl Alcohol)	**5.8**	68	5.7	**2.4**	27	2.3	**J**
107-13-1	Acrylonitrile	ND	6.8	2.3	ND	3.1	1.1	
75-35-4	1,1-Dichloroethene	**19**	6.8	2.3	**4.7**	1.7	0.58	
75-09-2	Methylene Chloride	ND	6.8	2.3	ND	1.9	0.66	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	6.8	2.2	ND	2.2	0.69	
76-13-1	Trichlorotrifluoroethane	**2.7**	6.8	2.3	**0.36**	0.88	0.30	**J**
75-15-0	Carbon Disulfide	ND	68	2.0	ND	22	0.65	
156-60-5	trans-1,2-Dichloroethene	ND	6.8	2.6	ND	1.7	0.65	
75-34-3	1,1-Dichloroethane	ND	6.8	2.2	ND	1.7	0.53	
1634-04-4	Methyl tert-Butyl Ether	ND	6.8	2.3	ND	1.9	0.64	
108-05-4	Vinyl Acetate	ND	68	8.8	ND	19	2.5	
78-93-3	2-Butanone (MEK)	ND	68	2.8	ND	23	0.96	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
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J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-002

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SS00203

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.07

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	6.8	2.2	ND	1.7	0.55	
141-78-6	Ethyl Acetate	ND	14	4.7	ND	3.7	1.3	
110-54-3	n-Hexane	ND	6.8	2.0	ND	1.9	0.57	
67-66-3	Chloroform	**2.6**	6.8	2.3	**0.54**	1.4	0.47	**J**
109-99-9	Tetrahydrofuran (THF)	ND	6.8	2.7	ND	2.3	0.92	
107-06-2	1,2-Dichloroethane	ND	6.8	2.2	ND	1.7	0.53	
71-55-6	1,1,1-Trichloroethane	**22**	6.8	2.3	**4.1**	1.2	0.42	
71-43-2	Benzene	ND	6.8	2.2	ND	2.1	0.68	
56-23-5	Carbon Tetrachloride	ND	6.8	2.0	ND	1.1	0.32	
110-82-7	Cyclohexane	ND	14	3.9	ND	3.9	1.1	
78-87-5	1,2-Dichloropropane	ND	6.8	2.2	ND	1.5	0.47	
75-27-4	Bromodichloromethane	ND	6.8	2.0	ND	1.0	0.30	
79-01-6	Trichloroethene	ND	6.8	1.9	ND	1.3	0.35	
123-91-1	1,4-Dioxane	ND	6.8	2.2	ND	1.9	0.60	
80-62-6	Methyl Methacrylate	ND	14	4.2	ND	3.3	1.0	
142-82-5	n-Heptane	ND	6.8	2.3	ND	1.6	0.56	
10061-01-5	cis-1,3-Dichloropropene	ND	6.8	1.9	ND	1.5	0.42	
108-10-1	4-Methyl-2-pentanone	ND	6.8	2.2	ND	1.6	0.53	
10061-02-6	trans-1,3-Dichloropropene	ND	6.8	2.2	ND	1.5	0.48	
79-00-5	1,1,2-Trichloroethane	ND	6.8	2.2	ND	1.2	0.40	
108-88-3	Toluene	**4.2**	6.8	2.3	**1.1**	1.8	0.61	**J**
591-78-6	2-Hexanone	ND	6.8	2.2	ND	1.6	0.53	
124-48-1	Dibromochloromethane	ND	6.8	2.2	ND	0.79	0.25	
106-93-4	1,2-Dibromoethane	ND	6.8	2.2	ND	0.88	0.28	
123-86-4	n-Butyl Acetate	ND	6.8	2.2	ND	1.4	0.45	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-02** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-002

Test Code: EPA TO-15 Date Collected: 9/12/16

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

Container ID: 1SS00203

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.07

Canister Dilution Factor: 1.35

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	6.8	2.4	ND	1.4	0.52	
127-18-4	Tetrachloroethene	ND	6.8	1.9	ND	1.0	0.28	
108-90-7	Chlorobenzene	ND	6.8	2.2	ND	1.5	0.47	
100-41-4	Ethylbenzene	**3.1**	6.8	2.2	**0.72**	1.6	0.50	**J**
179601-23-1	m,p-Xylenes	**15**	14	4.1	**3.5**	3.1	0.93	
75-25-2	Bromoform	ND	6.8	2.0	ND	0.65	0.20	
100-42-5	Styrene	ND	6.8	2.0	ND	1.6	0.48	
95-47-6	o-Xylene	**5.7**	6.8	2.0	**1.3**	1.6	0.47	**J**
111-84-2	n-Nonane	ND	6.8	2.0	ND	1.3	0.39	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.8	2.0	ND	0.98	0.30	
98-82-8	Cumene	ND	6.8	2.0	ND	1.4	0.41	
80-56-8	alpha-Pinene	**3.4**	6.8	1.9	**0.62**	1.2	0.34	**J**
103-65-1	n-Propylbenzene	ND	6.8	2.2	ND	1.4	0.44	
622-96-8	4-Ethyltoluene	ND	6.8	2.2	ND	1.4	0.44	
108-67-8	1,3,5-Trimethylbenzene	ND	6.8	2.2	ND	1.4	0.44	
95-63-6	1,2,4-Trimethylbenzene	**2.9**	6.8	2.0	**0.59**	1.4	0.41	**J**
100-44-7	Benzyl Chloride	ND	6.8	1.5	ND	1.3	0.29	
541-73-1	1,3-Dichlorobenzene	ND	6.8	2.0	ND	1.1	0.34	
106-46-7	1,4-Dichlorobenzene	**8.6**	6.8	1.9	**1.4**	1.1	0.31	
95-50-1	1,2-Dichlorobenzene	ND	6.8	2.0	ND	1.1	0.34	
5989-27-5	d-Limonene	**4.2**	6.8	1.9	**0.76**	1.2	0.34	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	6.8	1.3	ND	0.70	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	6.8	2.2	ND	0.91	0.29	
91-20-3	Naphthalene	ND	6.8	2.4	ND	1.3	0.46	
87-68-3	Hexachlorobutadiene	ND	6.8	1.9	ND	0.63	0.18	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-003

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00590

Initial Pressure (psig): -0.39 Final Pressure (psig): 5.31

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	7.0	2.0	ND	4.1	1.1	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	7.0	2.4	ND	1.4	0.48	
74-87-3	Chloromethane	ND	7.0	2.1	ND	3.4	1.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	7.0	2.7	ND	1.0	0.38	
75-01-4	Vinyl Chloride	ND	7.0	2.4	ND	2.7	0.93	
106-99-0	1,3-Butadiene	ND	7.0	3.1	ND	3.2	1.4	
74-83-9	Bromomethane	ND	7.0	2.7	ND	1.8	0.69	
75-00-3	Chloroethane	ND	7.0	2.4	ND	2.7	0.90	
64-17-5	Ethanol	**59**	70	11	**31**	37	5.9	**J**
75-05-8	Acetonitrile	ND	7.0	2.5	ND	4.2	1.5	
107-02-8	Acrolein	ND	28	2.4	ND	12	1.0	
67-64-1	Acetone	**51**	70	11	**21**	29	4.5	**J**
75-69-4	Trichlorofluoromethane	ND	7.0	2.4	ND	1.2	0.42	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	70	5.9	ND	28	2.4	
107-13-1	Acrylonitrile	ND	7.0	2.4	ND	3.2	1.1	
75-35-4	1,1-Dichloroethene	**24**	7.0	2.4	**6.0**	1.8	0.60	
75-09-2	Methylene Chloride	ND	7.0	2.4	ND	2.0	0.69	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	7.0	2.2	ND	2.2	0.72	
76-13-1	Trichlorotrifluoroethane	**4.9**	7.0	2.4	**0.64**	0.91	0.31	**J**
75-15-0	Carbon Disulfide	**2.4**	70	2.1	**0.76**	22	0.67	**J**
156-60-5	trans-1,2-Dichloroethene	ND	7.0	2.7	ND	1.8	0.67	
75-34-3	1,1-Dichloroethane	ND	7.0	2.2	ND	1.7	0.55	
1634-04-4	Methyl tert-Butyl Ether	ND	7.0	2.4	ND	1.9	0.66	
108-05-4	Vinyl Acetate	ND	70	9.1	ND	20	2.6	
78-93-3	2-Butanone (MEK)	**6.3**	70	2.9	**2.2**	24	1.0	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-003

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00590

Initial Pressure (psig): -0.39 Final Pressure (psig): 5.31

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	7.0	2.2	ND	1.8	0.57	
141-78-6	Ethyl Acetate	ND	14	4.9	ND	3.9	1.4	
110-54-3	n-Hexane	ND	7.0	2.1	ND	2.0	0.60	
67-66-3	Chloroform	ND	7.0	2.4	ND	1.4	0.49	
109-99-9	Tetrahydrofuran (THF)	ND	7.0	2.8	ND	2.4	0.95	
107-06-2	1,2-Dichloroethane	ND	7.0	2.2	ND	1.7	0.55	
71-55-6	1,1,1-Trichloroethane	**11**	7.0	2.4	**2.0**	1.3	0.44	
71-43-2	Benzene	ND	7.0	2.2	ND	2.2	0.70	
56-23-5	Carbon Tetrachloride	ND	7.0	2.1	ND	1.1	0.33	
110-82-7	Cyclohexane	ND	14	4.1	ND	4.1	1.2	
78-87-5	1,2-Dichloropropane	ND	7.0	2.2	ND	1.5	0.48	
75-27-4	Bromodichloromethane	ND	7.0	2.1	ND	1.0	0.31	
79-01-6	Trichloroethene	**2.6**	7.0	2.0	**0.48**	1.3	0.36	**J**
123-91-1	1,4-Dioxane	**2.8**	7.0	2.2	**0.79**	1.9	0.62	**J**
80-62-6	Methyl Methacrylate	ND	14	4.3	ND	3.4	1.1	
142-82-5	n-Heptane	ND	7.0	2.4	ND	1.7	0.58	
10061-01-5	cis-1,3-Dichloropropene	ND	7.0	2.0	ND	1.5	0.43	
108-10-1	4-Methyl-2-pentanone	ND	7.0	2.2	ND	1.7	0.55	
10061-02-6	trans-1,3-Dichloropropene	ND	7.0	2.2	ND	1.5	0.49	
79-00-5	1,1,2-Trichloroethane	ND	7.0	2.2	ND	1.3	0.41	
108-88-3	Toluene	**8.7**	7.0	2.4	**2.3**	1.9	0.63	
591-78-6	2-Hexanone	ND	7.0	2.2	ND	1.7	0.55	
124-48-1	Dibromochloromethane	ND	7.0	2.2	ND	0.82	0.26	
106-93-4	1,2-Dibromoethane	ND	7.0	2.2	ND	0.91	0.29	
123-86-4	n-Butyl Acetate	ND	7.0	2.2	ND	1.5	0.47	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-003

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00590

Initial Pressure (psig): -0.39 Final Pressure (psig): 5.31

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	7.0	2.5	ND	1.5	0.54	
127-18-4	Tetrachloroethene	**5.9**	7.0	2.0	**0.87**	1.0	0.29	**J**
108-90-7	Chlorobenzene	ND	7.0	2.2	ND	1.5	0.49	
100-41-4	Ethylbenzene	**5.5**	7.0	2.2	**1.3**	1.6	0.52	**J**
179601-23-1	m,p-Xylenes	**27**	14	4.2	**6.2**	3.2	0.97	
75-25-2	Bromoform	ND	7.0	2.1	ND	0.68	0.20	
100-42-5	Styrene	ND	7.0	2.1	ND	1.6	0.49	
95-47-6	o-Xylene	**10**	7.0	2.1	**2.3**	1.6	0.48	
111-84-2	n-Nonane	ND	7.0	2.1	ND	1.3	0.40	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.0	2.1	ND	1.0	0.31	
98-82-8	Cumene	ND	7.0	2.1	ND	1.4	0.43	
80-56-8	alpha-Pinene	**2.8**	7.0	2.0	**0.51**	1.3	0.35	**J**
103-65-1	n-Propylbenzene	ND	7.0	2.2	ND	1.4	0.46	
622-96-8	4-Ethyltoluene	**2.3**	7.0	2.2	**0.46**	1.4	0.46	**J**
108-67-8	1,3,5-Trimethylbenzene	ND	7.0	2.2	ND	1.4	0.46	
95-63-6	1,2,4-Trimethylbenzene	**4.7**	7.0	2.1	**0.95**	1.4	0.43	**J**
100-44-7	Benzyl Chloride	ND	7.0	1.5	ND	1.4	0.30	
541-73-1	1,3-Dichlorobenzene	ND	7.0	2.1	ND	1.2	0.35	
106-46-7	1,4-Dichlorobenzene	**6.2**	7.0	2.0	**1.0**	1.2	0.33	**J**
95-50-1	1,2-Dichlorobenzene	ND	7.0	2.1	ND	1.2	0.35	
5989-27-5	d-Limonene	**4.0**	7.0	2.0	**0.72**	1.3	0.35	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.0	1.4	ND	0.72	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	7.0	2.2	ND	0.94	0.30	
91-20-3	Naphthalene	ND	7.0	2.5	ND	1.3	0.48	
87-68-3	Hexachlorobutadiene	ND	7.0	2.0	ND	0.66	0.18	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-004

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00806

Initial Pressure (psig): -0.10 Final Pressure (psig): 5.93

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**13**	7.1	2.0	**7.6**	4.1	1.1	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	7.1	2.4	ND	1.4	0.48	
74-87-3	Chloromethane	ND	7.1	2.1	ND	3.4	1.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	7.1	2.7	ND	1.0	0.38	
75-01-4	Vinyl Chloride	ND	7.1	2.4	ND	2.8	0.94	
106-99-0	1,3-Butadiene	ND	7.1	3.1	ND	3.2	1.4	
74-83-9	Bromomethane	ND	7.1	2.7	ND	1.8	0.69	
75-00-3	Chloroethane	ND	7.1	2.4	ND	2.7	0.91	
64-17-5	Ethanol	**39**	71	11	**21**	37	6.0	**J**
75-05-8	Acetonitrile	ND	7.1	2.5	ND	4.2	1.5	
107-02-8	Acrolein	ND	28	2.4	ND	12	1.0	
67-64-1	Acetone	**40**	71	11	**17**	30	4.6	**J**
75-69-4	Trichlorofluoromethane	ND	7.1	2.4	ND	1.3	0.43	
67-63-0	2-Propanol (Isopropyl Alcohol)	**7.6**	71	5.9	**3.1**	29	2.4	**J**
107-13-1	Acrylonitrile	ND	7.1	2.4	ND	3.2	1.1	
75-35-4	1,1-Dichloroethene	**7.1**	7.1	2.4	**1.8**	1.8	0.60	
75-09-2	Methylene Chloride	ND	7.1	2.4	ND	2.0	0.69	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	7.1	2.3	ND	2.3	0.72	
76-13-1	Trichlorotrifluoroethane	**11**	7.1	2.4	**1.4**	0.92	0.31	
75-15-0	Carbon Disulfide	ND	71	2.1	ND	23	0.68	
156-60-5	trans-1,2-Dichloroethene	ND	7.1	2.7	ND	1.8	0.68	
75-34-3	1,1-Dichloroethane	ND	7.1	2.3	ND	1.7	0.56	
1634-04-4	Methyl tert-Butyl Ether	ND	7.1	2.4	ND	2.0	0.67	
108-05-4	Vinyl Acetate	ND	71	9.2	ND	20	2.6	
78-93-3	2-Butanone (MEK)	**4.2**	71	3.0	**1.4**	24	1.0	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-04** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-004

Test Code: EPA TO-15 Date Collected: 9/12/16

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

Container ID: 1SC00806

Initial Pressure (psig): -0.10 Final Pressure (psig): 5.93

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	7.1	2.3	ND	1.8	0.57	
141-78-6	Ethyl Acetate	ND	14	4.9	ND	3.9	1.4	
110-54-3	n-Hexane	ND	7.1	2.1	ND	2.0	0.60	
67-66-3	Chloroform	ND	7.1	2.4	ND	1.4	0.49	
109-99-9	Tetrahydrofuran (THF)	ND	7.1	2.8	ND	2.4	0.96	
107-06-2	1,2-Dichloroethane	ND	7.1	2.3	ND	1.7	0.56	
71-55-6	1,1,1-Trichloroethane	**16**	7.1	2.4	**2.9**	1.3	0.44	
71-43-2	Benzene	ND	7.1	2.3	ND	2.2	0.71	
56-23-5	Carbon Tetrachloride	ND	7.1	2.1	ND	1.1	0.34	
110-82-7	Cyclohexane	ND	14	4.1	ND	4.1	1.2	
78-87-5	1,2-Dichloropropane	ND	7.1	2.3	ND	1.5	0.49	
75-27-4	Bromodichloromethane	ND	7.1	2.1	ND	1.1	0.32	
79-01-6	Trichloroethene	ND	7.1	2.0	ND	1.3	0.37	
123-91-1	1,4-Dioxane	ND	7.1	2.3	ND	2.0	0.63	
80-62-6	Methyl Methacrylate	ND	14	4.4	ND	3.4	1.1	
142-82-5	n-Heptane	ND	7.1	2.4	ND	1.7	0.59	
10061-01-5	cis-1,3-Dichloropropene	ND	7.1	2.0	ND	1.6	0.43	
108-10-1	4-Methyl-2-pentanone	ND	7.1	2.3	ND	1.7	0.55	
10061-02-6	trans-1,3-Dichloropropene	ND	7.1	2.3	ND	1.6	0.50	
79-00-5	1,1,2-Trichloroethane	ND	7.1	2.3	ND	1.3	0.41	
108-88-3	Toluene	**21**	7.1	2.4	**5.7**	1.9	0.64	
591-78-6	2-Hexanone	ND	7.1	2.3	ND	1.7	0.55	
124-48-1	Dibromochloromethane	ND	7.1	2.3	ND	0.83	0.26	
106-93-4	1,2-Dibromoethane	ND	7.1	2.3	ND	0.92	0.29	
123-86-4	n-Butyl Acetate	ND	7.1	2.3	ND	1.5	0.48	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-004

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00806

Initial Pressure (psig): -0.10 Final Pressure (psig): 5.93

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	7.1	2.5	ND	1.5	0.54	
127-18-4	Tetrachloroethene	ND	7.1	2.0	ND	1.0	0.29	
108-90-7	Chlorobenzene	ND	7.1	2.3	ND	1.5	0.49	
100-41-4	Ethylbenzene	**17**	7.1	2.3	**3.8**	1.6	0.52	
179601-23-1	m,p-Xylenes	**85**	14	4.2	**20**	3.2	0.97	
75-25-2	Bromoform	ND	7.1	2.1	ND	0.68	0.20	
100-42-5	Styrene	ND	7.1	2.1	ND	1.7	0.50	
95-47-6	o-Xylene	**25**	7.1	2.1	**5.8**	1.6	0.49	
111-84-2	n-Nonane	ND	7.1	2.1	ND	1.3	0.40	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.1	2.1	ND	1.0	0.31	
98-82-8	Cumene	ND	7.1	2.1	ND	1.4	0.43	
80-56-8	alpha-Pinene	**4.1**	7.1	2.0	**0.73**	1.3	0.35	**J**
103-65-1	n-Propylbenzene	**4.0**	7.1	2.3	**0.81**	1.4	0.46	**J**
622-96-8	4-Ethyltoluene	**5.8**	7.1	2.3	**1.2**	1.4	0.46	**J**
108-67-8	1,3,5-Trimethylbenzene	**6.3**	7.1	2.3	**1.3**	1.4	0.46	**J**
95-63-6	1,2,4-Trimethylbenzene	**10**	7.1	2.1	**2.1**	1.4	0.43	
100-44-7	Benzyl Chloride	ND	7.1	1.6	ND	1.4	0.30	
541-73-1	1,3-Dichlorobenzene	ND	7.1	2.1	ND	1.2	0.35	
106-46-7	1,4-Dichlorobenzene	**7.2**	7.1	2.0	**1.2**	1.2	0.33	
95-50-1	1,2-Dichlorobenzene	ND	7.1	2.1	ND	1.2	0.35	
5989-27-5	d-Limonene	**4.6**	7.1	2.0	**0.82**	1.3	0.35	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.1	1.4	ND	0.73	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	7.1	2.3	ND	0.95	0.30	
91-20-3	Naphthalene	ND	7.1	2.5	ND	1.3	0.48	
87-68-3	Hexachlorobutadiene	ND	7.1	2.0	ND	0.66	0.19	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-005

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes: 0.025 Liter(s)
Container ID: 1SC00273

Initial Pressure (psig): 0.05 Final Pressure (psig): 5.88

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**16**	3.5	0.98	**9.1**	2.0	0.57	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	3.5	1.2	**0.43**	0.71	0.24	**J**
74-87-3	Chloromethane	**32**	3.5	1.1	**16**	1.7	0.51	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.5	1.3	ND	0.50	0.19	
75-01-4	Vinyl Chloride	ND	3.5	1.2	ND	1.4	0.47	
106-99-0	1,3-Butadiene	ND	3.5	1.5	ND	1.6	0.70	
74-83-9	Bromomethane	ND	3.5	1.3	ND	0.90	0.34	
75-00-3	Chloroethane	ND	3.5	1.2	ND	1.3	0.45	
64-17-5	Ethanol	**96**	35	5.6	**51**	19	3.0	
75-05-8	Acetonitrile	ND	3.5	1.3	ND	2.1	0.75	
107-02-8	Acrolein	**8.2**	14	1.2	**3.6**	6.1	0.52	**J**
67-64-1	Acetone	**110**	35	5.4	**46**	15	2.3	
75-69-4	Trichlorofluoromethane	**1.2**	3.5	1.2	**0.22**	0.62	0.21	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**320**	35	2.9	**130**	14	1.2	
107-13-1	Acrylonitrile	ND	3.5	1.2	ND	1.6	0.55	
75-35-4	1,1-Dichloroethene	ND	3.5	1.2	ND	0.88	0.30	
75-09-2	Methylene Chloride	**12**	3.5	1.2	**3.4**	1.0	0.34	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.5	1.1	ND	1.1	0.36	
76-13-1	Trichlorotrifluoroethane	ND	3.5	1.2	ND	0.46	0.16	
75-15-0	Carbon Disulfide	**5.5**	35	1.1	**1.8**	11	0.34	**J**
156-60-5	trans-1,2-Dichloroethene	ND	3.5	1.3	ND	0.88	0.34	
75-34-3	1,1-Dichloroethane	ND	3.5	1.1	ND	0.87	0.28	
1634-04-4	Methyl tert-Butyl Ether	ND	3.5	1.2	ND	0.97	0.33	
108-05-4	Vinyl Acetate	**38**	35	4.6	**11**	9.9	1.3	
78-93-3	2-Butanone (MEK)	**17**	35	1.5	**5.7**	12	0.50	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-005

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes: 0.025 Liter(s)
Container ID: 1SC00273

Initial Pressure (psig): 0.05 Final Pressure (psig): 5.88

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.5	1.1	ND	0.88	0.28	
141-78-6	Ethyl Acetate	**1,600**	56	20	**440**	16	5.4	**D**
110-54-3	n-Hexane	**220**	3.5	1.1	**62**	0.99	0.30	
67-66-3	Chloroform	ND	3.5	1.2	ND	0.72	0.24	
109-99-9	Tetrahydrofuran (THF)	ND	3.5	1.4	ND	1.2	0.47	
107-06-2	1,2-Dichloroethane	ND	3.5	1.1	ND	0.87	0.28	
71-55-6	1,1,1-Trichloroethane	ND	3.5	1.2	ND	0.64	0.22	
71-43-2	Benzene	**8.7**	3.5	1.1	**2.7**	1.1	0.35	
56-23-5	Carbon Tetrachloride	ND	3.5	1.1	ND	0.56	0.17	
110-82-7	Cyclohexane	**13**	7.0	2.0	**3.8**	2.0	0.59	
78-87-5	1,2-Dichloropropane	**1.1**	3.5	1.1	**0.24**	0.76	0.24	**J**
75-27-4	Bromodichloromethane	ND	3.5	1.1	ND	0.52	0.16	
79-01-6	Trichloroethene	ND	3.5	0.98	ND	0.65	0.18	
123-91-1	1,4-Dioxane	ND	3.5	1.1	ND	0.97	0.31	
80-62-6	Methyl Methacrylate	ND	7.0	2.2	ND	1.7	0.53	
142-82-5	n-Heptane	**3.3**	3.5	1.2	**0.81**	0.85	0.29	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	3.5	0.98	ND	0.77	0.22	
108-10-1	4-Methyl-2-pentanone	**2.2**	3.5	1.1	**0.55**	0.85	0.27	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	3.5	1.1	ND	0.77	0.25	
79-00-5	1,1,2-Trichloroethane	ND	3.5	1.1	ND	0.64	0.21	
108-88-3	Toluene	**100**	3.5	1.2	**27**	0.93	0.32	
591-78-6	2-Hexanone	ND	3.5	1.1	ND	0.85	0.27	
124-48-1	Dibromochloromethane	ND	3.5	1.1	ND	0.41	0.13	
106-93-4	1,2-Dibromoethane	ND	3.5	1.1	ND	0.46	0.15	
123-86-4	n-Butyl Acetate	**5.2**	3.5	1.1	**1.1**	0.74	0.24	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-005

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes: 0.025 Liter(s)
Container ID: 1SC00273

Initial Pressure (psig): 0.05 Final Pressure (psig): 5.88

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**9.9**	3.5	1.3	**2.1**	0.75	0.27	
127-18-4	Tetrachloroethene	**2.6**	3.5	0.98	**0.39**	0.52	0.14	**J**
108-90-7	Chlorobenzene	**12**	3.5	1.1	**2.5**	0.76	0.24	
100-41-4	Ethylbenzene	**3.9**	3.5	1.1	**0.90**	0.81	0.26	
179601-23-1	m,p-Xylenes	**8.5**	7.0	2.1	**2.0**	1.6	0.48	
75-25-2	Bromoform	ND	3.5	1.1	ND	0.34	0.10	
100-42-5	Styrene	**14**	3.5	1.1	**3.2**	0.82	0.25	
95-47-6	o-Xylene	**2.9**	3.5	1.1	**0.67**	0.81	0.24	**J**
111-84-2	n-Nonane	**4.5**	3.5	1.1	**0.86**	0.67	0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.5	1.1	ND	0.51	0.15	
98-82-8	Cumene	**1.1**	3.5	1.1	**0.22**	0.71	0.21	**J**
80-56-8	alpha-Pinene	**44**	3.5	0.98	**7.9**	0.63	0.18	
103-65-1	n-Propylbenzene	ND	3.5	1.1	ND	0.71	0.23	
622-96-8	4-Ethyltoluene	ND	3.5	1.1	ND	0.71	0.23	
108-67-8	1,3,5-Trimethylbenzene	ND	3.5	1.1	ND	0.71	0.23	
95-63-6	1,2,4-Trimethylbenzene	**1.8**	3.5	1.1	**0.36**	0.71	0.21	**J**
100-44-7	Benzyl Chloride	ND	3.5	0.77	ND	0.68	0.15	
541-73-1	1,3-Dichlorobenzene	ND	3.5	1.1	ND	0.58	0.17	
106-46-7	1,4-Dichlorobenzene	ND	3.5	0.98	ND	0.58	0.16	
95-50-1	1,2-Dichlorobenzene	ND	3.5	1.1	ND	0.58	0.17	
5989-27-5	d-Limonene	**8.3**	3.5	0.98	**1.5**	0.63	0.18	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.5	0.69	ND	0.36	0.072	
120-82-1	1,2,4-Trichlorobenzene	ND	3.5	1.1	ND	0.47	0.15	
91-20-3	Naphthalene	ND	3.5	1.3	ND	0.67	0.24	
87-68-3	Hexachlorobutadiene	ND	3.5	0.98	ND	0.33	0.092	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-06** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-006

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00517

Initial Pressure (psig): 0.0 Final Pressure (psig): 5.36

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**94**	6.8	1.9	**54**	4.0	1.1	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	6.8	2.3	**0.49**	1.4	0.47	**J**
74-87-3	Chloromethane	ND	6.8	2.0	ND	3.3	0.99	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	6.8	2.6	ND	0.97	0.37	
75-01-4	Vinyl Chloride	ND	6.8	2.3	ND	2.7	0.90	
106-99-0	1,3-Butadiene	ND	6.8	3.0	ND	3.1	1.4	
74-83-9	Bromomethane	ND	6.8	2.6	ND	1.8	0.67	
75-00-3	Chloroethane	ND	6.8	2.3	ND	2.6	0.88	
64-17-5	Ethanol	**260**	68	11	**140**	36	5.8	
75-05-8	Acetonitrile	ND	6.8	2.4	ND	4.1	1.5	
107-02-8	Acrolein	ND	27	2.3	ND	12	1.0	
67-64-1	Acetone	**100**	68	10	**44**	29	4.4	
75-69-4	Trichlorofluoromethane	ND	6.8	2.3	ND	1.2	0.41	
67-63-0	2-Propanol (Isopropyl Alcohol)	**12**	68	5.7	**4.9**	28	2.3	**J**
107-13-1	Acrylonitrile	ND	6.8	2.3	ND	3.1	1.1	
75-35-4	1,1-Dichloroethene	**16**	6.8	2.3	**4.1**	1.7	0.58	
75-09-2	Methylene Chloride	ND	6.8	2.3	ND	2.0	0.67	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	6.8	2.2	ND	2.2	0.70	
76-13-1	Trichlorotrifluoroethane	ND	6.8	2.3	ND	0.89	0.30	
75-15-0	Carbon Disulfide	**16**	68	2.0	**5.1**	22	0.66	**J**
156-60-5	trans-1,2-Dichloroethene	ND	6.8	2.6	ND	1.7	0.65	
75-34-3	1,1-Dichloroethane	**3.8**	6.8	2.2	**0.93**	1.7	0.54	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	6.8	2.3	ND	1.9	0.64	
108-05-4	Vinyl Acetate	ND	68	8.8	ND	19	2.5	
78-93-3	2-Butanone (MEK)	**6.8**	68	2.9	**2.3**	23	0.97	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-06** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-006

Test Code: EPA TO-15 Date Collected: 9/12/16

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)

Test Notes:

Container ID: 1SC00517

Initial Pressure (psig): 0.0 Final Pressure (psig): 5.36

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	6.8	2.2	ND	1.7	0.55	
141-78-6	Ethyl Acetate	ND	14	4.8	ND	3.8	1.3	
110-54-3	n-Hexane	ND	6.8	2.0	ND	1.9	0.58	
67-66-3	Chloroform	ND	6.8	2.3	ND	1.4	0.47	
109-99-9	Tetrahydrofuran (THF)	ND	6.8	2.7	ND	2.3	0.92	
107-06-2	1,2-Dichloroethane	ND	6.8	2.2	ND	1.7	0.54	
71-55-6	1,1,1-Trichloroethane	**68**	6.8	2.3	**12**	1.2	0.42	
71-43-2	Benzene	**7.1**	6.8	2.2	**2.2**	2.1	0.68	
56-23-5	Carbon Tetrachloride	ND	6.8	2.0	ND	1.1	0.32	
110-82-7	Cyclohexane	ND	14	3.9	ND	4.0	1.1	
78-87-5	1,2-Dichloropropane	ND	6.8	2.2	ND	1.5	0.47	
75-27-4	Bromodichloromethane	ND	6.8	2.0	ND	1.0	0.30	
79-01-6	Trichloroethene	ND	6.8	1.9	ND	1.3	0.35	
123-91-1	1,4-Dioxane	ND	6.8	2.2	ND	1.9	0.60	
80-62-6	Methyl Methacrylate	ND	14	4.2	ND	3.3	1.0	
142-82-5	n-Heptane	ND	6.8	2.3	ND	1.7	0.56	
10061-01-5	cis-1,3-Dichloropropene	ND	6.8	1.9	ND	1.5	0.42	
108-10-1	4-Methyl-2-pentanone	**2.4**	6.8	2.2	**0.59**	1.7	0.53	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	6.8	2.2	ND	1.5	0.48	
79-00-5	1,1,2-Trichloroethane	ND	6.8	2.2	ND	1.2	0.40	
108-88-3	Toluene	**170**	6.8	2.3	**44**	1.8	0.61	
591-78-6	2-Hexanone	ND	6.8	2.2	ND	1.7	0.53	
124-48-1	Dibromochloromethane	ND	6.8	2.2	ND	0.80	0.26	
106-93-4	1,2-Dibromoethane	ND	6.8	2.2	ND	0.89	0.28	
123-86-4	n-Butyl Acetate	ND	6.8	2.2	ND	1.4	0.46	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-06** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-006

Test Code:	EPA TO-15	Date Collected:	9/12/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8	Date Received:	9/19/16
Analyst:	Wida Ang	Date Analyzed:	9/21/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.10 Liter(s)
Test Notes:			
Container ID:	1SC00517		

Initial Pressure (psig): 0.0 Final Pressure (psig): 5.36

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	6.8	2.4	ND	1.5	0.52	
127-18-4	Tetrachloroethene	**3.2**	6.8	1.9	**0.48**	1.0	0.28	**J**
108-90-7	Chlorobenzene	ND	6.8	2.2	ND	1.5	0.47	
100-41-4	Ethylbenzene	**62**	6.8	2.2	**14**	1.6	0.50	
179601-23-1	m,p-Xylenes	**240**	14	4.1	**55**	3.1	0.94	
75-25-2	Bromoform	ND	6.8	2.0	ND	0.66	0.20	
100-42-5	Styrene	ND	6.8	2.0	ND	1.6	0.48	
95-47-6	o-Xylene	**88**	6.8	2.0	**20**	1.6	0.47	
111-84-2	n-Nonane	**2.2**	6.8	2.0	**0.42**	1.3	0.39	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.8	2.0	ND	0.99	0.30	
98-82-8	Cumene	**3.8**	6.8	2.0	**0.77**	1.4	0.42	**J**
80-56-8	alpha-Pinene	**2.7**	6.8	1.9	**0.48**	1.2	0.34	**J**
103-65-1	n-Propylbenzene	**18**	6.8	2.2	**3.6**	1.4	0.44	
622-96-8	4-Ethyltoluene	**22**	6.8	2.2	**4.5**	1.4	0.44	
108-67-8	1,3,5-Trimethylbenzene	**20**	6.8	2.2	**4.2**	1.4	0.44	
95-63-6	1,2,4-Trimethylbenzene	**63**	6.8	2.0	**13**	1.4	0.42	
100-44-7	Benzyl Chloride	ND	6.8	1.5	ND	1.3	0.29	
541-73-1	1,3-Dichlorobenzene	ND	6.8	2.0	ND	1.1	0.34	
106-46-7	1,4-Dichlorobenzene	**12**	6.8	1.9	**2.1**	1.1	0.32	
95-50-1	1,2-Dichlorobenzene	ND	6.8	2.0	ND	1.1	0.34	
5989-27-5	d-Limonene	**3.5**	6.8	1.9	**0.64**	1.2	0.34	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	6.8	1.3	ND	0.70	0.14	
120-82-1	1,2,4-Trichlorobenzene	ND	6.8	2.2	ND	0.92	0.29	
91-20-3	Naphthalene	**3.2**	6.8	2.4	**0.61**	1.3	0.47	**J**
87-68-3	Hexachlorobutadiene	ND	6.8	1.9	ND	0.64	0.18	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-007

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00442

Initial Pressure (psig): -0.28 Final Pressure (psig): 6.76

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**71**	3.7	1.0	**41**	2.2	0.61	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	3.7	1.3	**0.45**	0.75	0.26	**J**
74-87-3	Chloromethane	ND	3.7	1.1	ND	1.8	0.54	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.7	1.4	ND	0.53	0.20	
75-01-4	Vinyl Chloride	ND	3.7	1.3	ND	1.5	0.50	
106-99-0	1,3-Butadiene	ND	3.7	1.6	ND	1.7	0.74	
74-83-9	Bromomethane	ND	3.7	1.4	ND	0.96	0.36	
75-00-3	Chloroethane	ND	3.7	1.3	ND	1.4	0.48	
64-17-5	Ethanol	**45**	37	6.0	**24**	20	3.2	
75-05-8	Acetonitrile	ND	3.7	1.3	ND	2.2	0.80	
107-02-8	Acrolein	**1.8**	15	1.3	**0.80**	6.5	0.55	**J**
67-64-1	Acetone	**38**	37	5.7	**16**	16	2.4	
75-69-4	Trichlorofluoromethane	**1.8**	3.7	1.3	**0.31**	0.66	0.23	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	37	3.1	ND	15	1.3	
107-13-1	Acrylonitrile	ND	3.7	1.3	ND	1.7	0.58	
75-35-4	1,1-Dichloroethene	**180**	3.7	1.3	**45**	0.94	0.32	
75-09-2	Methylene Chloride	ND	3.7	1.3	ND	1.1	0.36	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.7	1.2	ND	1.2	0.38	
76-13-1	Trichlorotrifluoroethane	**5.4**	3.7	1.3	**0.70**	0.49	0.17	
75-15-0	Carbon Disulfide	**37**	37	1.1	**12**	12	0.36	**J**
156-60-5	trans-1,2-Dichloroethene	ND	3.7	1.4	ND	0.94	0.36	
75-34-3	1,1-Dichloroethane	**6.0**	3.7	1.2	**1.5**	0.92	0.29	
1634-04-4	Methyl tert-Butyl Ether	ND	3.7	1.3	ND	1.0	0.35	
108-05-4	Vinyl Acetate	**8.2**	37	4.8	**2.3**	11	1.4	**J**
78-93-3	2-Butanone (MEK)	**5.9**	37	1.6	**2.0**	13	0.53	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-007

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00442

Initial Pressure (psig): -0.28 Final Pressure (psig): 6.76

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.7	1.2	ND	0.94	0.30	
141-78-6	Ethyl Acetate	ND	7.5	2.6	ND	2.1	0.72	
110-54-3	n-Hexane	ND	3.7	1.1	ND	1.1	0.32	
67-66-3	Chloroform	**2.1**	3.7	1.3	**0.43**	0.76	0.26	**J**
109-99-9	Tetrahydrofuran (THF)	ND	3.7	1.5	ND	1.3	0.51	
107-06-2	1,2-Dichloroethane	ND	3.7	1.2	ND	0.92	0.29	
71-55-6	1,1,1-Trichloroethane	**8.4**	3.7	1.3	**1.5**	0.68	0.23	
71-43-2	Benzene	ND	3.7	1.2	ND	1.2	0.37	
56-23-5	Carbon Tetrachloride	ND	3.7	1.1	ND	0.59	0.18	
110-82-7	Cyclohexane	ND	7.5	2.2	ND	2.2	0.63	
78-87-5	1,2-Dichloropropane	ND	3.7	1.2	ND	0.81	0.26	
75-27-4	Bromodichloromethane	ND	3.7	1.1	ND	0.56	0.17	
79-01-6	Trichloroethene	**1.3**	3.7	1.0	**0.25**	0.69	0.19	**J**
123-91-1	1,4-Dioxane	**1.6**	3.7	1.2	**0.45**	1.0	0.33	**J**
80-62-6	Methyl Methacrylate	ND	7.5	2.3	ND	1.8	0.56	
142-82-5	n-Heptane	ND	3.7	1.3	ND	0.91	0.31	
10061-01-5	cis-1,3-Dichloropropene	ND	3.7	1.0	ND	0.82	0.23	
108-10-1	4-Methyl-2-pentanone	**1.3**	3.7	1.2	**0.31**	0.91	0.29	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	3.7	1.2	ND	0.82	0.26	
79-00-5	1,1,2-Trichloroethane	**1.8**	3.7	1.2	**0.33**	0.68	0.22	**J**
108-88-3	Toluene	**4.9**	3.7	1.3	**1.3**	0.99	0.34	
591-78-6	2-Hexanone	ND	3.7	1.2	ND	0.91	0.29	
124-48-1	Dibromochloromethane	ND	3.7	1.2	ND	0.44	0.14	
106-93-4	1,2-Dibromoethane	ND	3.7	1.2	ND	0.48	0.16	
123-86-4	n-Butyl Acetate	ND	3.7	1.2	ND	0.78	0.25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-007

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00442

Initial Pressure (psig): -0.28 Final Pressure (psig): 6.76

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	3.7	1.3	ND	0.80	0.29	
127-18-4	Tetrachloroethene	**6.4**	3.7	1.0	**0.95**	0.55	0.15	
108-90-7	Chlorobenzene	ND	3.7	1.2	ND	0.81	0.26	
100-41-4	Ethylbenzene	**2.8**	3.7	1.2	**0.64**	0.86	0.27	**J**
179601-23-1	m,p-Xylenes	**14**	7.5	2.2	**3.3**	1.7	0.51	
75-25-2	Bromoform	ND	3.7	1.1	ND	0.36	0.11	
100-42-5	Styrene	ND	3.7	1.1	ND	0.88	0.26	
95-47-6	o-Xylene	**4.9**	3.7	1.1	**1.1**	0.86	0.26	
111-84-2	n-Nonane	ND	3.7	1.1	ND	0.71	0.21	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.7	1.1	ND	0.54	0.16	
98-82-8	Cumene	ND	3.7	1.1	ND	0.76	0.23	
80-56-8	alpha-Pinene	**1.4**	3.7	1.0	**0.26**	0.67	0.19	**J**
103-65-1	n-Propylbenzene	ND	3.7	1.2	ND	0.76	0.24	
622-96-8	4-Ethyltoluene	**1.2**	3.7	1.2	**0.25**	0.76	0.24	**J**
108-67-8	1,3,5-Trimethylbenzene	**1.4**	3.7	1.2	**0.28**	0.76	0.24	**J**
95-63-6	1,2,4-Trimethylbenzene	**3.1**	3.7	1.1	**0.63**	0.76	0.23	**J**
100-44-7	Benzyl Chloride	ND	3.7	0.82	ND	0.72	0.16	
541-73-1	1,3-Dichlorobenzene	ND	3.7	1.1	ND	0.62	0.19	
106-46-7	1,4-Dichlorobenzene	**6.1**	3.7	1.0	**1.0**	0.62	0.17	
95-50-1	1,2-Dichlorobenzene	ND	3.7	1.1	ND	0.62	0.19	
5989-27-5	d-Limonene	**2.4**	3.7	1.0	**0.42**	0.67	0.19	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.7	0.74	ND	0.39	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	3.7	1.2	ND	0.50	0.16	
91-20-3	Naphthalene	**2.3**	3.7	1.3	**0.44**	0.71	0.26	**J**
87-68-3	Hexachlorobutadiene	ND	3.7	1.0	ND	0.35	0.098	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
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J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-008

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00510

Initial Pressure (psig): -0.20 Final Pressure (psig): 5.83

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**70**	3.6	0.99	**40**	2.1	0.58	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	3.6	1.2	**0.45**	0.72	0.24	**J**
74-87-3	Chloromethane	ND	3.6	1.1	ND	1.7	0.52	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.6	1.3	ND	0.51	0.19	
75-01-4	Vinyl Chloride	ND	3.6	1.2	ND	1.4	0.47	
106-99-0	1,3-Butadiene	ND	3.6	1.6	ND	1.6	0.71	
74-83-9	Bromomethane	ND	3.6	1.3	ND	0.91	0.35	
75-00-3	Chloroethane	ND	3.6	1.2	ND	1.3	0.46	
64-17-5	Ethanol	**42**	36	5.7	**22**	19	3.0	
75-05-8	Acetonitrile	ND	3.6	1.3	ND	2.1	0.76	
107-02-8	Acrolein	**1.4**	14	1.2	**0.62**	6.2	0.53	**J**
67-64-1	Acetone	**52**	36	5.5	**22**	15	2.3	
75-69-4	Trichlorofluoromethane	ND	3.6	1.2	ND	0.63	0.21	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	36	3.0	ND	14	1.2	
107-13-1	Acrylonitrile	ND	3.6	1.2	ND	1.6	0.56	
75-35-4	1,1-Dichloroethene	**480**	3.6	1.2	**120**	0.90	0.30	
75-09-2	Methylene Chloride	ND	3.6	1.2	ND	1.0	0.35	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	**2.4**	3.6	1.1	**0.76**	1.1	0.36	**J**
76-13-1	Trichlorotrifluoroethane	ND	3.6	1.2	ND	0.46	0.16	
75-15-0	Carbon Disulfide	**8.2**	36	1.1	**2.6**	11	0.34	**J**
156-60-5	trans-1,2-Dichloroethene	ND	3.6	1.3	ND	0.90	0.34	
75-34-3	1,1-Dichloroethane	**27**	3.6	1.1	**6.7**	0.88	0.28	
1634-04-4	Methyl tert-Butyl Ether	ND	3.6	1.2	ND	0.99	0.33	
108-05-4	Vinyl Acetate	**7.4**	36	4.6	**2.1**	10	1.3	**J**
78-93-3	2-Butanone (MEK)	**6.3**	36	1.5	**2.1**	12	0.51	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-008

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)
Test Notes:
Container ID: 1SC00510

Initial Pressure (psig): -0.20 Final Pressure (psig): 5.83

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.6	1.1	ND	0.90	0.29	
141-78-6	Ethyl Acetate	ND	7.1	2.5	ND	2.0	0.69	
110-54-3	n-Hexane	ND	3.6	1.1	ND	1.0	0.30	
67-66-3	Chloroform	**1.8**	3.6	1.2	**0.36**	0.73	0.25	**J**
109-99-9	Tetrahydrofuran (THF)	ND	3.6	1.4	ND	1.2	0.48	
107-06-2	1,2-Dichloroethane	ND	3.6	1.1	ND	0.88	0.28	
71-55-6	1,1,1-Trichloroethane	**56**	3.6	1.2	**10**	0.65	0.22	
71-43-2	Benzene	ND	3.6	1.1	ND	1.1	0.36	
56-23-5	Carbon Tetrachloride	ND	3.6	1.1	ND	0.56	0.17	
110-82-7	Cyclohexane	ND	7.1	2.1	ND	2.1	0.60	
78-87-5	1,2-Dichloropropane	ND	3.6	1.1	ND	0.77	0.25	
75-27-4	Bromodichloromethane	ND	3.6	1.1	ND	0.53	0.16	
79-01-6	Trichloroethene	**2.1**	3.6	0.99	**0.39**	0.66	0.19	**J**
123-91-1	1,4-Dioxane	ND	3.6	1.1	ND	0.99	0.32	
80-62-6	Methyl Methacrylate	ND	7.1	2.2	ND	1.7	0.54	
142-82-5	n-Heptane	ND	3.6	1.2	ND	0.87	0.29	
10061-01-5	cis-1,3-Dichloropropene	ND	3.6	0.99	ND	0.78	0.22	
108-10-1	4-Methyl-2-pentanone	**1.4**	3.6	1.1	**0.34**	0.87	0.28	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	3.6	1.1	ND	0.78	0.25	
79-00-5	1,1,2-Trichloroethane	ND	3.6	1.1	ND	0.65	0.21	
108-88-3	Toluene	**6.6**	3.6	1.2	**1.8**	0.94	0.32	
591-78-6	2-Hexanone	**1.2**	3.6	1.1	**0.28**	0.87	0.28	**J**
124-48-1	Dibromochloromethane	ND	3.6	1.1	ND	0.42	0.13	
106-93-4	1,2-Dibromoethane	ND	3.6	1.1	ND	0.46	0.15	
123-86-4	n-Butyl Acetate	ND	3.6	1.1	ND	0.75	0.24	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-08** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-008

Test Code: EPA TO-15 Date Collected: 9/12/16

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.20 Liter(s)

Test Notes:

Container ID: 1SC00510

Initial Pressure (psig): -0.20 Final Pressure (psig): 5.83

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	3.6	1.3	ND	0.76	0.27	
127-18-4	Tetrachloroethene	**25**	3.6	0.99	**3.7**	0.52	0.15	
108-90-7	Chlorobenzene	ND	3.6	1.1	ND	0.77	0.25	
100-41-4	Ethylbenzene	**4.6**	3.6	1.1	**1.1**	0.82	0.26	
179601-23-1	m,p-Xylenes	**25**	7.1	2.1	**5.7**	1.6	0.49	
75-25-2	Bromoform	ND	3.6	1.1	ND	0.34	0.10	
100-42-5	Styrene	ND	3.6	1.1	ND	0.83	0.25	
95-47-6	o-Xylene	**8.7**	3.6	1.1	**2.0**	0.82	0.25	
111-84-2	n-Nonane	ND	3.6	1.1	ND	0.68	0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.6	1.1	ND	0.52	0.16	
98-82-8	Cumene	ND	3.6	1.1	ND	0.72	0.22	
80-56-8	alpha-Pinene	**2.0**	3.6	0.99	**0.36**	0.64	0.18	**J**
103-65-1	n-Propylbenzene	**1.4**	3.6	1.1	**0.28**	0.72	0.23	**J**
622-96-8	4-Ethyltoluene	**2.4**	3.6	1.1	**0.49**	0.72	0.23	**J**
108-67-8	1,3,5-Trimethylbenzene	**2.7**	3.6	1.1	**0.56**	0.72	0.23	**J**
95-63-6	1,2,4-Trimethylbenzene	**6.2**	3.6	1.1	**1.3**	0.72	0.22	
100-44-7	Benzyl Chloride	ND	3.6	0.78	ND	0.69	0.15	
541-73-1	1,3-Dichlorobenzene	ND	3.6	1.1	ND	0.59	0.18	
106-46-7	1,4-Dichlorobenzene	**13**	3.6	0.99	**2.2**	0.59	0.17	
95-50-1	1,2-Dichlorobenzene	ND	3.6	1.1	ND	0.59	0.18	
5989-27-5	d-Limonene	**2.7**	3.6	0.99	**0.49**	0.64	0.18	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.6	0.70	ND	0.37	0.073	
120-82-1	1,2,4-Trichlorobenzene	ND	3.6	1.1	ND	0.48	0.15	
91-20-3	Naphthalene	**1.7**	3.6	1.3	**0.33**	0.68	0.24	**J**
87-68-3	Hexachlorobutadiene	ND	3.6	0.99	ND	0.33	0.093	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-009

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00482

Initial Pressure (psig): -0.85 Final Pressure (psig): 5.85

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**71**	7.4	2.1	**41**	4.3	1.2	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	7.4	2.5	ND	1.5	0.51	
74-87-3	Chloromethane	ND	7.4	2.2	ND	3.6	1.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	7.4	2.8	ND	1.1	0.40	
75-01-4	Vinyl Chloride	ND	7.4	2.5	ND	2.9	0.98	
106-99-0	1,3-Butadiene	ND	7.4	3.3	ND	3.3	1.5	
74-83-9	Bromomethane	ND	7.4	2.8	ND	1.9	0.72	
75-00-3	Chloroethane	ND	7.4	2.5	ND	2.8	0.95	
64-17-5	Ethanol	**100**	74	12	**55**	39	6.3	
75-05-8	Acetonitrile	ND	7.4	2.7	ND	4.4	1.6	
107-02-8	Acrolein	**3.7**	30	2.5	**1.6**	13	1.1	**J**
67-64-1	Acetone	**78**	74	11	**33**	31	4.8	
75-69-4	Trichlorofluoromethane	ND	7.4	2.5	ND	1.3	0.45	
67-63-0	2-Propanol (Isopropyl Alcohol)	**290**	74	6.2	**120**	30	2.5	
107-13-1	Acrylonitrile	ND	7.4	2.5	ND	3.4	1.2	
75-35-4	1,1-Dichloroethene	**36**	7.4	2.5	**9.2**	1.9	0.63	
75-09-2	Methylene Chloride	ND	7.4	2.5	ND	2.1	0.72	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	7.4	2.4	ND	2.4	0.76	
76-13-1	Trichlorotrifluoroethane	ND	7.4	2.5	ND	0.97	0.33	
75-15-0	Carbon Disulfide	**4.5**	74	2.2	**1.5**	24	0.71	**J**
156-60-5	trans-1,2-Dichloroethene	ND	7.4	2.8	ND	1.9	0.71	
75-34-3	1,1-Dichloroethane	ND	7.4	2.4	ND	1.8	0.59	
1634-04-4	Methyl tert-Butyl Ether	ND	7.4	2.5	ND	2.1	0.70	
108-05-4	Vinyl Acetate	ND	74	9.6	ND	21	2.7	
78-93-3	2-Butanone (MEK)	**9.4**	74	3.1	**3.2**	25	1.1	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-009

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00482

Initial Pressure (psig): -0.85 Final Pressure (psig): 5.85

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	7.4	2.4	ND	1.9	0.60	
141-78-6	Ethyl Acetate	**65**	15	5.2	**18**	4.1	1.4	
110-54-3	n-Hexane	**4.5**	7.4	2.2	**1.3**	2.1	0.63	**J**
67-66-3	Chloroform	ND	7.4	2.5	ND	1.5	0.52	
109-99-9	Tetrahydrofuran (THF)	ND	7.4	3.0	ND	2.5	1.0	
107-06-2	1,2-Dichloroethane	ND	7.4	2.4	ND	1.8	0.59	
71-55-6	1,1,1-Trichloroethane	**6.9**	7.4	2.5	**1.3**	1.4	0.46	**J**
71-43-2	Benzene	**33**	7.4	2.4	**10**	2.3	0.74	
56-23-5	Carbon Tetrachloride	ND	7.4	2.2	ND	1.2	0.35	
110-82-7	Cyclohexane	ND	15	4.3	ND	4.3	1.2	
78-87-5	1,2-Dichloropropane	ND	7.4	2.4	ND	1.6	0.51	
75-27-4	Bromodichloromethane	ND	7.4	2.2	ND	1.1	0.33	
79-01-6	Trichloroethene	ND	7.4	2.1	ND	1.4	0.39	
123-91-1	1,4-Dioxane	ND	7.4	2.4	ND	2.1	0.66	
80-62-6	Methyl Methacrylate	ND	15	4.6	ND	3.6	1.1	
142-82-5	n-Heptane	ND	7.4	2.5	ND	1.8	0.61	
10061-01-5	cis-1,3-Dichloropropene	ND	7.4	2.1	ND	1.6	0.46	
108-10-1	4-Methyl-2-pentanone	ND	7.4	2.4	ND	1.8	0.58	
10061-02-6	trans-1,3-Dichloropropene	ND	7.4	2.4	ND	1.6	0.52	
79-00-5	1,1,2-Trichloroethane	ND	7.4	2.4	ND	1.4	0.43	
108-88-3	Toluene	**50**	7.4	2.5	**13**	2.0	0.67	
591-78-6	2-Hexanone	ND	7.4	2.4	ND	1.8	0.58	
124-48-1	Dibromochloromethane	ND	7.4	2.4	ND	0.87	0.28	
106-93-4	1,2-Dibromoethane	ND	7.4	2.4	ND	0.96	0.31	
123-86-4	n-Butyl Acetate	**3.4**	7.4	2.4	**0.71**	1.6	0.50	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1604453-009

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/19/16
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes:
Container ID: 1SC00482

Initial Pressure (psig): -0.85 Final Pressure (psig): 5.85

Canister Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	7.4	2.7	ND	1.6	0.57	
127-18-4	Tetrachloroethene	ND	7.4	2.1	ND	1.1	0.31	
108-90-7	Chlorobenzene	ND	7.4	2.4	ND	1.6	0.51	
100-41-4	Ethylbenzene	**7.3**	7.4	2.4	**1.7**	1.7	0.55	**J**
179601-23-1	m,p-Xylenes	**44**	15	4.4	**10**	3.4	1.0	
75-25-2	Bromoform	ND	7.4	2.2	ND	0.72	0.21	
100-42-5	Styrene	**2.8**	7.4	2.2	**0.66**	1.7	0.52	**J**
95-47-6	o-Xylene	**15**	7.4	2.2	**3.5**	1.7	0.51	
111-84-2	n-Nonane	ND	7.4	2.2	ND	1.4	0.42	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.4	2.2	ND	1.1	0.32	
98-82-8	Cumene	**2.7**	7.4	2.2	**0.55**	1.5	0.45	**J**
80-56-8	alpha-Pinene	**12**	7.4	2.1	**2.1**	1.3	0.37	
103-65-1	n-Propylbenzene	ND	7.4	2.4	ND	1.5	0.48	
622-96-8	4-Ethyltoluene	**2.8**	7.4	2.4	**0.56**	1.5	0.48	**J**
108-67-8	1,3,5-Trimethylbenzene	**3.8**	7.4	2.4	**0.78**	1.5	0.48	**J**
95-63-6	1,2,4-Trimethylbenzene	**7.3**	7.4	2.2	**1.5**	1.5	0.45	**J**
100-44-7	Benzyl Chloride	ND	7.4	1.6	ND	1.4	0.31	
541-73-1	1,3-Dichlorobenzene	ND	7.4	2.2	ND	1.2	0.37	
106-46-7	1,4-Dichlorobenzene	**12**	7.4	2.1	**2.0**	1.2	0.34	
95-50-1	1,2-Dichlorobenzene	**6.5**	7.4	2.2	**1.1**	1.2	0.37	**J**
5989-27-5	d-Limonene	**6.3**	7.4	2.1	**1.1**	1.3	0.37	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.4	1.5	ND	0.77	0.15	
120-82-1	1,2,4-Trichlorobenzene	ND	7.4	2.4	ND	1.0	0.32	
91-20-3	Naphthalene	**8.1**	7.4	2.7	**1.5**	1.4	0.51	
87-68-3	Hexachlorobutadiene	ND	7.4	2.1	ND	0.69	0.19	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160921-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	ND	5.0	0.77	ND	2.1	0.32	
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160921-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160921-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Wida Ang Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160922-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	ND	5.0	0.77	ND	2.1	0.32	
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

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

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160922-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Wida Ang Date Analyzed: 9/22/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604453

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160922-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Wida Ang Date Analyzed: 9/22/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Environmental Management Services, Inc.**
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Project ID: P1604453

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 9/12/16
Analyst: Wida Ang Date(s) Received: 9/19/16
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 9/21 - 9/22/16
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P160921-MB	**106**	**96**	**99**	70-130	
Method Blank	P160922-MB	**105**	**99**	**99**	70-130	
Lab Control Sample	P160921-LCS	**104**	**95**	**101**	70-130	
Lab Control Sample	P160922-LCS	**104**	**96**	**98**	70-130	
SVE-OBS-01	P1604453-001	**108**	**96**	**99**	70-130	
SVE-OBS-02	P1604453-002	**107**	**95**	**100**	70-130	
SVE-OBS-03	P1604453-003	**105**	**96**	**100**	70-130	
SVE-OBS-04	P1604453-004	**105**	**97**	**101**	70-130	
SVE-OBS-05	P1604453-005	**105**	**97**	**98**	70-130	
SVE-OBS-06	P1604453-006	**104**	**95**	**101**	70-130	
SVE-OBS-07	P1604453-007	**106**	**96**	**99**	70-130	
SVE-OBS-08	P1604453-008	**105**	**94**	**103**	70-130	
SVE-OBS-09	P1604453-009	**105**	**94**	**102**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	196	**184**	**94**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**170**	**90**	65-117	
74-87-3	Chloromethane	200	**182**	**91**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**173**	**85**	65-122	
75-01-4	Vinyl Chloride	200	**195**	**98**	65-128	
106-99-0	1,3-Butadiene	206	**215**	**104**	62-143	
74-83-9	Bromomethane	202	**191**	**95**	65-130	
75-00-3	Chloroethane	200	**191**	**96**	69-126	
64-17-5	Ethanol	998	**975**	**98**	57-126	
75-05-8	Acetonitrile	212	**197**	**93**	51-134	
107-02-8	Acrolein	214	**192**	**90**	55-146	
67-64-1	Acetone	1,080	**943**	**87**	57-120	
75-69-4	Trichlorofluoromethane	216	**173**	**80**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**429**	**103**	59-129	
107-13-1	Acrylonitrile	212	**209**	**99**	64-136	
75-35-4	1,1-Dichloroethene	216	**205**	**95**	72-123	
75-09-2	Methylene Chloride	222	**208**	**94**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**235**	**108**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**197**	**90**	68-118	
75-15-0	Carbon Disulfide	210	**159**	**76**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**209**	**100**	69-129	
75-34-3	1,1-Dichloroethane	212	**196**	**92**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**199**	**92**	55-128	
108-05-4	Vinyl Acetate	1,040	**1050**	**101**	66-140	
78-93-3	2-Butanone (MEK)	220	**215**	**98**	62-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	218	**212**	**97**	65-125	
141-78-6	Ethyl Acetate	428	**409**	**96**	64-132	
110-54-3	n-Hexane	212	**174**	**82**	58-126	
67-66-3	Chloroform	224	**197**	**88**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**210**	**95**	64-123	
107-06-2	1,2-Dichloroethane	214	**204**	**95**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**196**	**93**	68-120	
71-43-2	Benzene	226	**191**	**85**	61-110	
56-23-5	Carbon Tetrachloride	230	**214**	**93**	65-137	
110-82-7	Cyclohexane	424	**366**	**86**	68-122	
78-87-5	1,2-Dichloropropane	216	**198**	**92**	67-122	
75-27-4	Bromodichloromethane	218	**209**	**96**	71-124	
79-01-6	Trichloroethene	216	**184**	**85**	71-121	
123-91-1	1,4-Dioxane	210	**211**	**100**	67-122	
80-62-6	Methyl Methacrylate	422	**400**	**95**	76-130	
142-82-5	n-Heptane	216	**187**	**87**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**214**	**103**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**216**	**98**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**216**	**103**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**199**	**92**	73-121	
108-88-3	Toluene	218	**172**	**79**	67-117	
591-78-6	2-Hexanone	220	**218**	**99**	59-128	
124-48-1	Dibromochloromethane	220	**211**	**96**	73-132	
106-93-4	1,2-Dibromoethane	218	**200**	**92**	73-128	
123-86-4	n-Butyl Acetate	226	**237**	**105**	61-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	210	**182**	**87**	67-124	
127-18-4	Tetrachloroethene	202	**165**	**82**	65-126	
108-90-7	Chlorobenzene	220	**181**	**82**	68-120	
100-41-4	Ethylbenzene	218	**184**	**84**	69-123	
179601-23-1	m,p-Xylenes	428	**359**	**84**	67-125	
75-25-2	Bromoform	228	**195**	**86**	68-153	
100-42-5	Styrene	222	**201**	**91**	68-132	
95-47-6	o-Xylene	210	**176**	**84**	67-124	
111-84-2	n-Nonane	204	**188**	**92**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**184**	**88**	72-128	
98-82-8	Cumene	208	**176**	**85**	67-124	
80-56-8	alpha-Pinene	212	**191**	**90**	67-129	
103-65-1	n-Propylbenzene	204	**177**	**87**	67-125	
622-96-8	4-Ethyltoluene	214	**191**	**89**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**180**	**84**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**190**	**87**	62-134	
100-44-7	Benzyl Chloride	220	**216**	**98**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**192**	**84**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**180**	**87**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**188**	**85**	62-134	
5989-27-5	d-Limonene	210	**211**	**100**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**195**	**89**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**199**	**87**	60-145	
91-20-3	Naphthalene	218	**195**	**89**	56-158	
87-68-3	Hexachlorobutadiene	230	**185**	**80**	56-139	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160922-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	196	**180**	**92**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**169**	**90**	65-117	
74-87-3	Chloromethane	200	**181**	**91**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**173**	**85**	65-122	
75-01-4	Vinyl Chloride	200	**194**	**97**	65-128	
106-99-0	1,3-Butadiene	206	**221**	**107**	62-143	
74-83-9	Bromomethane	202	**190**	**94**	65-130	
75-00-3	Chloroethane	200	**189**	**95**	69-126	
64-17-5	Ethanol	998	**965**	**97**	57-126	
75-05-8	Acetonitrile	212	**193**	**91**	51-134	
107-02-8	Acrolein	214	**194**	**91**	55-146	
67-64-1	Acetone	1,080	**934**	**86**	57-120	
75-69-4	Trichlorofluoromethane	216	**176**	**81**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**427**	**102**	59-129	
107-13-1	Acrylonitrile	212	**207**	**98**	64-136	
75-35-4	1,1-Dichloroethene	216	**206**	**95**	72-123	
75-09-2	Methylene Chloride	222	**206**	**93**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**234**	**107**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**196**	**89**	68-118	
75-15-0	Carbon Disulfide	210	**157**	**75**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**207**	**99**	69-129	
75-34-3	1,1-Dichloroethane	212	**197**	**93**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**200**	**93**	55-128	
108-05-4	Vinyl Acetate	1,040	**1060**	**102**	66-140	
78-93-3	2-Butanone (MEK)	220	**217**	**99**	62-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160922-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	218	**211**	**97**	65-125	
141-78-6	Ethyl Acetate	428	**419**	**98**	64-132	
110-54-3	n-Hexane	212	**184**	**87**	58-126	
67-66-3	Chloroform	224	**199**	**89**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**210**	**95**	64-123	
107-06-2	1,2-Dichloroethane	214	**205**	**96**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**194**	**92**	68-120	
71-43-2	Benzene	226	**193**	**85**	61-110	
56-23-5	Carbon Tetrachloride	230	**209**	**91**	65-137	
110-82-7	Cyclohexane	424	**364**	**86**	68-122	
78-87-5	1,2-Dichloropropane	216	**198**	**92**	67-122	
75-27-4	Bromodichloromethane	218	**210**	**96**	71-124	
79-01-6	Trichloroethene	216	**182**	**84**	71-121	
123-91-1	1,4-Dioxane	210	**210**	**100**	67-122	
80-62-6	Methyl Methacrylate	422	**405**	**96**	76-130	
142-82-5	n-Heptane	216	**193**	**89**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**212**	**102**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**216**	**98**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**214**	**102**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**200**	**93**	73-121	
108-88-3	Toluene	218	**179**	**82**	67-117	
591-78-6	2-Hexanone	220	**219**	**100**	59-128	
124-48-1	Dibromochloromethane	220	**214**	**97**	73-132	
106-93-4	1,2-Dibromoethane	218	**203**	**93**	73-128	
123-86-4	n-Butyl Acetate	226	**239**	**106**	61-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604453
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P160922-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Wida Ang Date Analyzed: 9/22/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	210	**187**	**89**	67-124	
127-18-4	Tetrachloroethene	202	**171**	**85**	65-126	
108-90-7	Chlorobenzene	220	**184**	**84**	68-120	
100-41-4	Ethylbenzene	218	**188**	**86**	69-123	
179601-23-1	m,p-Xylenes	428	**367**	**86**	67-125	
75-25-2	Bromoform	228	**197**	**86**	68-153	
100-42-5	Styrene	222	**206**	**93**	68-132	
95-47-6	o-Xylene	210	**180**	**86**	67-124	
111-84-2	n-Nonane	204	**191**	**94**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**185**	**88**	72-128	
98-82-8	Cumene	208	**179**	**86**	67-124	
80-56-8	alpha-Pinene	212	**194**	**92**	67-129	
103-65-1	n-Propylbenzene	204	**180**	**88**	67-125	
622-96-8	4-Ethyltoluene	214	**184**	**86**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**183**	**86**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**190**	**87**	62-134	
100-44-7	Benzyl Chloride	220	**216**	**98**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**195**	**86**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**183**	**88**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**191**	**87**	62-134	
5989-27-5	d-Limonene	210	**212**	**101**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**196**	**90**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**198**	**86**	60-145	
91-20-3	Naphthalene	218	**195**	**89**	56-158	
87-68-3	Hexachlorobutadiene	230	**187**	**81**	56-139	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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LABORATORY REPORT

December 28, 2016

Stephanie Kilgore
Environmental Management Services, Inc.
P.O. Box 15369
Hattiesburg, MS 39404

RE: SVE Performance Monitoring / KUH0-16-010

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on December 12, 2016. For your reference, these analyses have been assigned our service request number P1605784.

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 Sue Anderson at 8:59 am, Dec 28, 2016

Sue Anderson
Project Manager

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Client: Environmental Management Services, Inc. Service Request No: P1605784
Project: SVE Performance Monitoring / KUH0-16-010

CASE NARRATIVE

The samples were received intact under chain of custody on December 12, 2016 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.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The spike recoveries of various compounds in the Laboratory Control Samples (LCS) were outside the laboratory generated control criteria. The recovery errors equate to a potential high bias. However, the recoveries in question were within the method criteria, therefore, the data quality has not been significantly affected. No corrective action was taken.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
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	4068-003
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-16-7
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272016-6
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: Environmental Management Services, Inc. Service Request: P1605784

Project ID: SVE Performance Monitoring / KUH0-16-010

Date Received: 12/12/2016

Time Received: 11:45

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SVE-OBS-01	P1605784-001	Air	12/6/2016	10:01	1SC00200	-0.20	5.38	X
SVE-OBS-02	P1605784-002	Air	12/6/2016	10:11	1SC01337	-0.27	5.52	X
SVE-OBS-03	P1605784-003	Air	12/6/2016	10:21	1SS00054	-0.19	5.10	X
SVE-OBS-04	P1605784-004	Air	12/6/2016	10:30	1SC01165	-3.40	5.30	X
SVE-OBS-05	P1605784-005	Air	12/6/2016	10:40	1SC01195	-0.30	5.59	X
SVE-OBS-06	P1605784-006	Air	12/6/2016	10:55	1SC00832	-0.33	5.36	X
SVE-OBS-07	P1605784-007	Air	12/6/2016	11:10	1SC01350	-0.41	5.13	X
SVE-OBS-08	P1605784-008	Air	12/6/2016	11:19	1SC00787	-0.22	5.98	X
SVE-OBS-09	P1605784-009	Air	12/6/2016	11:27	1SC00960	-0.80	6.03	X
SVE-EXT-1-Well	P1605784-010	Air	12/6/2016	09:07	1SS00222	-0.24	5.89	X
SVE-EXT-2-Well	P1605784-011	Air	12/6/2016	09:27	1SC00927	-0.18	5.20	X
SVE-EXT-3-Well	P1605784-012	Air	12/6/2016	09:45	1SS00114	-0.28	5.21	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Phone (805) 526-7161
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Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. 160584

Company Name & Address (Reporting Information)
Environmental Management Services, Inc.
P.O.Box 15369
Hattiesburg, MS 39404

Project Name: SVE Performance Monitoring
Project Number: KUHO-16-010

Project Manager: Stephanie Kilgore

P.O. # / Billing Information: KUHO-16-010 Same as reporting

Phone: 601-544-3674 Fax: 601-544-0504

Email Address for Result Reporting: skilgore@env-mgt.com

Sampler (Print & Sign): Stephanie Kilgore | Stephanie K. Gore

ALS Contact:

Analysis Method: TO-15

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15		Comments e.g. Actual Preservative or specific instructions
SVE-OBS-01	1	12-6-16	10:01	ISC 00200				1L	X		
SVE-OBS-02	2	12-6-16	10:11	ISC 01337				1L	X		
SVE-OBS-03	3	12-6-16	10:21	ISS 00054				1L	X		
SVE-OBS-04	4	12-6-16	10:30	ISC 01165				1L	X		
SVE-OBS-05	5	12-6-16	10:40	ISC 01195				1L	X		
SVE-OBS-06	6	12-6-16	10:55	ISC 00832				1L	X		
SVE-OBS-07	7	12-6-16	11:10	ISC 01350				1L	X		
SVE-OBS-08	8	12-6-16	11:14	ISC 00787				1L	X		
SVE-OBS-09	9	12-6-16	11:27	ISC 00960				1L	X		
SVE-EXT-1-Well	10	12-6-16	9:07	ISS 00222				1L	X		
SVE-EXT-2-Well	11	12-6-16	9:27	ISC 00927				1L	X		
SVE-EXT-3-Well	12	12-6-16	9:45	ISS 00114				1L	X		

Report Tier Levels - please select

Tier I - Results (Default in not specified) ____
Tier II (Results + QC Summaries) X
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Stephanie K. Gore	12-6-16	8:50	Fed Ex		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 12/12/16	Time: 7145

Cooler / Blank Temperature ____ °C

5 of 67

ALS Environmental
Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1605784

Project: SVE Performance Monitoring / KUH0-16-010

Sample(s) received on: 12/12/16 Date opened: 12/12/16 by: ADAVID

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	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	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?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**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
P1605784-001.01	1.0 L Source Can					
P1605784-002.01	1.0 L Source Can					
P1605784-003.01	1.0 L Source Silonite Canister					
P1605784-004.01	1.0 L Source Can					
P1605784-005.01	1.0 L Source Can					
P1605784-006.01	1.0 L Source Can					
P1605784-007.01	1.0 L Source Can					
P1605784-008.01	1.0 L Source Can					
P1605784-009.01	1.0 L Source Can					
P1605784-010.01	1.0 L Source Silonite Canister					
P1605784-011.01	1.0 L Source Can					
P1605784-012.01	1.0 L Source Silonite Canister					

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: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-001

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00200

Initial Pressure (psig): -0.20 Final Pressure (psig): 5.38

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**910**	17	4.8	**530**	10	2.8	**D**
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.3**	1.7	0.59	**0.66**	0.35	0.12	
74-87-3	Chloromethane	**1.2**	1.7	0.52	**0.56**	0.84	0.25	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.7	0.66	ND	0.25	0.094	
75-01-4	Vinyl Chloride	ND	1.7	0.59	ND	0.68	0.23	
106-99-0	1,3-Butadiene	ND	1.7	0.76	ND	0.78	0.34	
74-83-9	Bromomethane	ND	1.7	0.66	ND	0.44	0.17	
75-00-3	Chloroethane	ND	1.7	0.59	ND	0.65	0.22	
64-17-5	Ethanol	**280**	17	2.8	**150**	9.2	1.5	
75-05-8	Acetonitrile	ND	1.7	0.62	ND	1.0	0.37	
107-02-8	Acrolein	**3.0**	6.9	0.59	**1.3**	3.0	0.26	**J**
67-64-1	Acetone	**62**	17	2.7	**26**	7.3	1.1	**B**
75-69-4	Trichlorofluoromethane	**1.8**	1.7	0.59	**0.33**	0.31	0.10	
67-63-0	2-Propanol (Isopropyl Alcohol)	**3.2**	17	1.4	**1.3**	7.0	0.59	**J**
107-13-1	Acrylonitrile	ND	1.7	0.59	ND	0.80	0.27	
75-35-4	1,1-Dichloroethene	**45**	1.7	0.59	**11**	0.44	0.15	
75-09-2	Methylene Chloride	ND	1.7	0.59	ND	0.50	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	0.55	ND	0.55	0.18	
76-13-1	Trichlorotrifluoroethane	**5.7**	1.7	0.59	**0.74**	0.23	0.077	
75-15-0	Carbon Disulfide	**1.3**	17	0.52	**0.41**	5.5	0.17	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.7	0.66	ND	0.44	0.17	
75-34-3	1,1-Dichloroethane	**3.4**	1.7	0.55	**0.83**	0.43	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.59	ND	0.48	0.16	
108-05-4	Vinyl Acetate	**5.7**	17	2.2	**1.6**	4.9	0.64	**J**
78-93-3	2-Butanone (MEK)	**7.8**	17	0.72	**2.6**	5.9	0.25	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-001

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00200

Initial Pressure (psig): -0.20 Final Pressure (psig): 5.38

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**0.72**	1.7	0.55	**0.18**	0.44	0.14	**J**
141-78-6	Ethyl Acetate	**3.7**	3.5	1.2	**1.0**	0.96	0.34	
110-54-3	n-Hexane	**1.3**	1.7	0.52	**0.36**	0.49	0.15	**J**
67-66-3	Chloroform	**1.3**	1.7	0.59	**0.27**	0.35	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.69	ND	0.59	0.23	
107-06-2	1,2-Dichloroethane	ND	1.7	0.55	ND	0.43	0.14	
71-55-6	1,1,1-Trichloroethane	**17**	1.7	0.59	**3.1**	0.32	0.11	
71-43-2	Benzene	**1.7**	1.7	0.55	**0.54**	0.54	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	ND	0.27	0.082	
110-82-7	Cyclohexane	**1.4**	3.5	1.0	**0.42**	1.0	0.29	**J**
78-87-5	1,2-Dichloropropane	ND	1.7	0.55	ND	0.37	0.12	
75-27-4	Bromodichloromethane	ND	1.7	0.52	ND	0.26	0.077	
79-01-6	Trichloroethene	**0.91**	1.7	0.48	**0.17**	0.32	0.090	**J**
123-91-1	1,4-Dioxane	**7.1**	1.7	0.55	**2.0**	0.48	0.15	
80-62-6	Methyl Methacrylate	**1.3**	3.5	1.1	**0.31**	0.84	0.26	**J**
142-82-5	n-Heptane	**2.1**	1.7	0.59	**0.51**	0.42	0.14	
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	0.48	ND	0.38	0.11	
108-10-1	4-Methyl-2-pentanone	**4.6**	1.7	0.55	**1.1**	0.42	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	0.55	ND	0.38	0.12	
79-00-5	1,1,2-Trichloroethane	ND	1.7	0.55	ND	0.32	0.10	
108-88-3	Toluene	**16**	1.7	0.59	**4.3**	0.46	0.16	
591-78-6	2-Hexanone	**1.2**	1.7	0.55	**0.30**	0.42	0.13	**J**
124-48-1	Dibromochloromethane	ND	1.7	0.55	ND	0.20	0.065	
106-93-4	1,2-Dibromoethane	ND	1.7	0.55	ND	0.22	0.072	
123-86-4	n-Butyl Acetate	**1.3**	1.7	0.55	**0.28**	0.36	0.12	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-001

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00200

Initial Pressure (psig): -0.20 Final Pressure (psig): 5.38

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**0.71**	1.7	0.62	**0.15**	0.37	0.13	**J**
127-18-4	Tetrachloroethene	**4.2**	1.7	0.48	**0.62**	0.25	0.071	
108-90-7	Chlorobenzene	**4.1**	1.7	0.55	**0.89**	0.37	0.12	
100-41-4	Ethylbenzene	**9.0**	1.7	0.55	**2.1**	0.40	0.13	
179601-23-1	m,p-Xylenes	**43**	3.5	1.0	**10**	0.79	0.24	
75-25-2	Bromoform	ND	1.7	0.52	ND	0.17	0.050	
100-42-5	Styrene	ND	1.7	0.52	ND	0.41	0.12	
95-47-6	o-Xylene	**17**	1.7	0.52	**3.9**	0.40	0.12	
111-84-2	n-Nonane	**1.0**	1.7	0.52	**0.20**	0.33	0.099	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.52	ND	0.25	0.075	
98-82-8	Cumene	**0.75**	1.7	0.52	**0.15**	0.35	0.11	**J**
80-56-8	alpha-Pinene	**2.4**	1.7	0.48	**0.43**	0.31	0.087	
103-65-1	n-Propylbenzene	**2.4**	1.7	0.55	**0.48**	0.35	0.11	
622-96-8	4-Ethyltoluene	**3.4**	1.7	0.55	**0.70**	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	**4.2**	1.7	0.55	**0.85**	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**12**	1.7	0.52	**2.4**	0.35	0.11	
100-44-7	Benzyl Chloride	ND	1.7	0.38	ND	0.33	0.073	
541-73-1	1,3-Dichlorobenzene	**0.98**	1.7	0.52	**0.16**	0.29	0.086	**J**
106-46-7	1,4-Dichlorobenzene	**11**	1.7	0.48	**1.9**	0.29	0.080	
95-50-1	1,2-Dichlorobenzene	ND	1.7	0.52	ND	0.29	0.086	
5989-27-5	d-Limonene	**4.5**	1.7	0.48	**0.80**	0.31	0.087	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	0.34	ND	0.18	0.035	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	0.55	ND	0.23	0.074	
91-20-3	Naphthalene	ND	1.7	0.62	ND	0.33	0.12	
87-68-3	Hexachlorobutadiene	ND	1.7	0.48	ND	0.16	0.045	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-002

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC01337

Initial Pressure (psig): -0.27 Final Pressure (psig): 5.52

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**790**	18	4.9	**460**	10	2.8	**D**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	1.8	0.60	**0.49**	0.35	0.12	
74-87-3	Chloromethane	ND	1.8	0.53	ND	0.85	0.25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.67	ND	0.25	0.095	
75-01-4	Vinyl Chloride	ND	1.8	0.60	ND	0.68	0.23	
106-99-0	1,3-Butadiene	ND	1.8	0.77	ND	0.79	0.35	
74-83-9	Bromomethane	ND	1.8	0.67	ND	0.45	0.17	
75-00-3	Chloroethane	ND	1.8	0.60	ND	0.66	0.23	
64-17-5	Ethanol	**420**	18	2.8	**220**	9.3	1.5	
75-05-8	Acetonitrile	ND	1.8	0.63	ND	1.0	0.38	
107-02-8	Acrolein	**0.71**	7.0	0.60	**0.31**	3.1	0.26	**J**
67-64-1	Acetone	**38**	18	2.7	**16**	7.4	1.1	**B**
75-69-4	Trichlorofluoromethane	**1.3**	1.8	0.60	**0.22**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**3.1**	18	1.5	**1.2**	7.1	0.60	**J**
107-13-1	Acrylonitrile	ND	1.8	0.60	ND	0.81	0.27	
75-35-4	1,1-Dichloroethene	**6.1**	1.8	0.60	**1.5**	0.44	0.15	
75-09-2	Methylene Chloride	ND	1.8	0.60	ND	0.50	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.56	ND	0.56	0.18	
76-13-1	Trichlorotrifluoroethane	**1.3**	1.8	0.60	**0.17**	0.23	0.078	**J**
75-15-0	Carbon Disulfide	ND	18	0.53	ND	5.6	0.17	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.67	ND	0.44	0.17	
75-34-3	1,1-Dichloroethane	ND	1.8	0.56	ND	0.43	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.8	0.60	ND	0.49	0.17	
108-05-4	Vinyl Acetate	**2.8**	18	2.3	**0.80**	5.0	0.65	**J**
78-93-3	2-Butanone (MEK)	**3.6**	18	0.74	**1.2**	5.9	0.25	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-002

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC01337

Initial Pressure (psig): -0.27 Final Pressure (psig): 5.52

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.8	0.56	ND	0.44	0.14	
141-78-6	Ethyl Acetate	**47**	3.5	1.2	**13**	0.97	0.34	
110-54-3	n-Hexane	**1.9**	1.8	0.53	**0.53**	0.50	0.15	
67-66-3	Chloroform	**1.2**	1.8	0.60	**0.24**	0.36	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.8	0.70	ND	0.59	0.24	
107-06-2	1,2-Dichloroethane	ND	1.8	0.56	ND	0.43	0.14	
71-55-6	1,1,1-Trichloroethane	**12**	1.8	0.60	**2.2**	0.32	0.11	
71-43-2	Benzene	**1.1**	1.8	0.56	**0.34**	0.55	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	ND	0.28	0.083	
110-82-7	Cyclohexane	**1.5**	3.5	1.0	**0.43**	1.0	0.29	**J**
78-87-5	1,2-Dichloropropane	ND	1.8	0.56	ND	0.38	0.12	
75-27-4	Bromodichloromethane	ND	1.8	0.53	ND	0.26	0.078	
79-01-6	Trichloroethene	ND	1.8	0.49	ND	0.33	0.091	
123-91-1	1,4-Dioxane	**2.4**	1.8	0.56	**0.66**	0.49	0.16	
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.86	0.27	
142-82-5	n-Heptane	**3.1**	1.8	0.60	**0.77**	0.43	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.49	ND	0.39	0.11	
108-10-1	4-Methyl-2-pentanone	**5.4**	1.8	0.56	**1.3**	0.43	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.56	ND	0.39	0.12	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.56	ND	0.32	0.10	
108-88-3	Toluene	**21**	1.8	0.60	**5.6**	0.46	0.16	
591-78-6	2-Hexanone	**0.73**	1.8	0.56	**0.18**	0.43	0.14	**J**
124-48-1	Dibromochloromethane	ND	1.8	0.56	ND	0.21	0.066	
106-93-4	1,2-Dibromoethane	ND	1.8	0.56	ND	0.23	0.073	
123-86-4	n-Butyl Acetate	**0.69**	1.8	0.56	**0.15**	0.37	0.12	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-002

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC01337

Initial Pressure (psig): -0.27 Final Pressure (psig): 5.52

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**2.7**	1.8	0.63	**0.59**	0.37	0.13	
127-18-4	Tetrachloroethene	**0.55**	1.8	0.49	**0.081**	0.26	0.072	**J**
108-90-7	Chlorobenzene	**1.3**	1.8	0.56	**0.28**	0.38	0.12	**J**
100-41-4	Ethylbenzene	**9.4**	1.8	0.56	**2.2**	0.40	0.13	
179601-23-1	m,p-Xylenes	**43**	3.5	1.1	**9.8**	0.81	0.24	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.051	
100-42-5	Styrene	ND	1.8	0.53	ND	0.41	0.12	
95-47-6	o-Xylene	**14**	1.8	0.53	**3.3**	0.40	0.12	
111-84-2	n-Nonane	**4.7**	1.8	0.53	**0.89**	0.33	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.53	ND	0.25	0.076	
98-82-8	Cumene	**0.98**	1.8	0.53	**0.20**	0.36	0.11	**J**
80-56-8	alpha-Pinene	**4.1**	1.8	0.49	**0.74**	0.31	0.088	
103-65-1	n-Propylbenzene	**3.2**	1.8	0.56	**0.65**	0.36	0.11	
622-96-8	4-Ethyltoluene	**4.6**	1.8	0.56	**0.93**	0.36	0.11	
108-67-8	1,3,5-Trimethylbenzene	**5.0**	1.8	0.56	**1.0**	0.36	0.11	
95-63-6	1,2,4-Trimethylbenzene	**13**	1.8	0.53	**2.6**	0.36	0.11	
100-44-7	Benzyl Chloride	ND	1.8	0.39	ND	0.34	0.074	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.53	ND	0.29	0.087	
106-46-7	1,4-Dichlorobenzene	**14**	1.8	0.49	**2.2**	0.29	0.082	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.53	ND	0.29	0.087	
5989-27-5	d-Limonene	**6.2**	1.8	0.49	**1.1**	0.31	0.088	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.8	0.35	ND	0.18	0.036	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.56	ND	0.24	0.075	
91-20-3	Naphthalene	ND	1.8	0.63	ND	0.33	0.12	
87-68-3	Hexachlorobutadiene	ND	1.8	0.49	ND	0.16	0.046	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-003

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00054

Initial Pressure (psig): -0.19 Final Pressure (psig): 5.10

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**180**	1.7	0.48	**110**	0.99	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	1.7	0.58	**0.48**	0.34	0.12	
74-87-3	Chloromethane	**0.67**	1.7	0.51	**0.33**	0.82	0.25	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.7	0.65	ND	0.24	0.092	
75-01-4	Vinyl Chloride	ND	1.7	0.58	ND	0.67	0.23	
106-99-0	1,3-Butadiene	ND	1.7	0.75	ND	0.77	0.34	
74-83-9	Bromomethane	ND	1.7	0.65	ND	0.44	0.17	
75-00-3	Chloroethane	ND	1.7	0.58	ND	0.64	0.22	
64-17-5	Ethanol	**590**	17	2.7	**310**	9.0	1.4	
75-05-8	Acetonitrile	ND	1.7	0.61	ND	1.0	0.36	
107-02-8	Acrolein	**1.0**	6.8	0.58	**0.44**	3.0	0.25	**J**
67-64-1	Acetone	**60**	17	2.6	**25**	7.2	1.1	**B**
75-69-4	Trichlorofluoromethane	**1.2**	1.7	0.58	**0.22**	0.30	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**11**	17	1.4	**4.5**	6.9	0.58	**J**
107-13-1	Acrylonitrile	ND	1.7	0.58	ND	0.78	0.27	
75-35-4	1,1-Dichloroethene	**6.3**	1.7	0.58	**1.6**	0.43	0.15	
75-09-2	Methylene Chloride	ND	1.7	0.58	ND	0.49	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	0.54	ND	0.54	0.17	
76-13-1	Trichlorotrifluoroethane	**5.1**	1.7	0.58	**0.67**	0.22	0.075	
75-15-0	Carbon Disulfide	**18**	17	0.51	**5.7**	5.5	0.16	
156-60-5	trans-1,2-Dichloroethene	ND	1.7	0.65	ND	0.43	0.16	
75-34-3	1,1-Dichloroethane	ND	1.7	0.54	ND	0.42	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.58	ND	0.47	0.16	
108-05-4	Vinyl Acetate	ND	17	2.2	ND	4.8	0.63	
78-93-3	2-Butanone (MEK)	**13**	17	0.71	**4.5**	5.8	0.24	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-003

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00054

Initial Pressure (psig): -0.19 Final Pressure (psig): 5.10

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.7	0.54	ND	0.43	0.14	
141-78-6	Ethyl Acetate	**10**	3.4	1.2	**2.8**	0.94	0.33	
110-54-3	n-Hexane	**2.1**	1.7	0.51	**0.60**	0.48	0.14	
67-66-3	Chloroform	ND	1.7	0.58	ND	0.35	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.68	ND	0.58	0.23	
107-06-2	1,2-Dichloroethane	ND	1.7	0.54	ND	0.42	0.13	
71-55-6	1,1,1-Trichloroethane	**6.1**	1.7	0.58	**1.1**	0.31	0.11	
71-43-2	Benzene	**3.1**	1.7	0.54	**0.96**	0.53	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.51	ND	0.27	0.081	
110-82-7	Cyclohexane	**2.2**	3.4	0.99	**0.65**	0.99	0.29	**J**
78-87-5	1,2-Dichloropropane	ND	1.7	0.54	ND	0.37	0.12	
75-27-4	Bromodichloromethane	ND	1.7	0.51	ND	0.25	0.076	
79-01-6	Trichloroethene	ND	1.7	0.48	ND	0.32	0.089	
123-91-1	1,4-Dioxane	**14**	1.7	0.54	**3.8**	0.47	0.15	
80-62-6	Methyl Methacrylate	ND	3.4	1.1	ND	0.83	0.26	
142-82-5	n-Heptane	**5.6**	1.7	0.58	**1.4**	0.41	0.14	
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	0.48	ND	0.37	0.10	
108-10-1	4-Methyl-2-pentanone	**13**	1.7	0.54	**3.2**	0.41	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	0.54	ND	0.37	0.12	
79-00-5	1,1,2-Trichloroethane	ND	1.7	0.54	ND	0.31	0.10	
108-88-3	Toluene	**51**	1.7	0.58	**14**	0.45	0.15	
591-78-6	2-Hexanone	**0.78**	1.7	0.54	**0.19**	0.42	0.13	**J**
124-48-1	Dibromochloromethane	ND	1.7	0.54	ND	0.20	0.064	
106-93-4	1,2-Dibromoethane	ND	1.7	0.54	ND	0.22	0.071	
123-86-4	n-Butyl Acetate	**2.3**	1.7	0.54	**0.48**	0.36	0.11	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-003

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00054

Initial Pressure (psig): -0.19 Final Pressure (psig): 5.10

Canister Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**3.3**	1.7	0.61	**0.70**	0.36	0.13	
127-18-4	Tetrachloroethene	ND	1.7	0.48	ND	0.25	0.070	
108-90-7	Chlorobenzene	**0.78**	1.7	0.54	**0.17**	0.37	0.12	**J**
100-41-4	Ethylbenzene	**29**	1.7	0.54	**6.7**	0.39	0.13	
179601-23-1	m,p-Xylenes	**130**	3.4	1.0	**30**	0.78	0.23	
75-25-2	Bromoform	ND	1.7	0.51	ND	0.16	0.049	
100-42-5	Styrene	**0.73**	1.7	0.51	**0.17**	0.40	0.12	**J**
95-47-6	o-Xylene	**46**	1.7	0.51	**11**	0.39	0.12	
111-84-2	n-Nonane	**3.9**	1.7	0.51	**0.74**	0.32	0.097	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.51	ND	0.25	0.074	
98-82-8	Cumene	**3.8**	1.7	0.51	**0.77**	0.35	0.10	
80-56-8	alpha-Pinene	**7.3**	1.7	0.48	**1.3**	0.31	0.085	
103-65-1	n-Propylbenzene	**12**	1.7	0.54	**2.4**	0.35	0.11	
622-96-8	4-Ethyltoluene	**15**	1.7	0.54	**3.1**	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	**15**	1.7	0.54	**3.1**	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**38**	1.7	0.51	**7.8**	0.35	0.10	
100-44-7	Benzyl Chloride	ND	1.7	0.37	ND	0.33	0.072	
541-73-1	1,3-Dichlorobenzene	ND	1.7	0.51	ND	0.28	0.085	
106-46-7	1,4-Dichlorobenzene	**7.4**	1.7	0.48	**1.2**	0.28	0.079	
95-50-1	1,2-Dichlorobenzene	ND	1.7	0.51	ND	0.28	0.085	
5989-27-5	d-Limonene	**6.5**	1.7	0.48	**1.2**	0.31	0.085	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	0.34	ND	0.18	0.035	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	0.54	ND	0.23	0.073	
91-20-3	Naphthalene	ND	1.7	0.61	ND	0.32	0.12	
87-68-3	Hexachlorobutadiene	ND	1.7	0.48	ND	0.16	0.045	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-004

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01165

Initial Pressure (psig): -3.40 Final Pressure (psig): 5.30

Canister Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**50**	2.2	0.62	**29**	1.3	0.36	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	2.2	0.75	**0.48**	0.45	0.15	
74-87-3	Chloromethane	ND	2.2	0.66	ND	1.1	0.32	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.2	0.84	ND	0.32	0.12	
75-01-4	Vinyl Chloride	ND	2.2	0.75	ND	0.87	0.29	
106-99-0	1,3-Butadiene	ND	2.2	0.97	ND	1.0	0.44	
74-83-9	Bromomethane	ND	2.2	0.84	ND	0.57	0.22	
75-00-3	Chloroethane	ND	2.2	0.75	ND	0.84	0.29	
64-17-5	Ethanol	**430**	22	3.5	**230**	12	1.9	
75-05-8	Acetonitrile	ND	2.2	0.80	ND	1.3	0.47	
107-02-8	Acrolein	ND	8.9	0.75	ND	3.9	0.33	
67-64-1	Acetone	**16**	22	3.4	**6.9**	9.3	1.4	**J, B**
75-69-4	Trichlorofluoromethane	**1.4**	2.2	0.75	**0.25**	0.39	0.13	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	22	1.9	ND	9.0	0.76	
107-13-1	Acrylonitrile	ND	2.2	0.75	ND	1.0	0.35	
75-35-4	1,1-Dichloroethene	**2.8**	2.2	0.75	**0.70**	0.56	0.19	
75-09-2	Methylene Chloride	ND	2.2	0.75	ND	0.64	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.2	0.71	ND	0.71	0.23	
76-13-1	Trichlorotrifluoroethane	**13**	2.2	0.75	**1.8**	0.29	0.098	
75-15-0	Carbon Disulfide	ND	22	0.66	ND	7.1	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.84	ND	0.56	0.21	
75-34-3	1,1-Dichloroethane	ND	2.2	0.71	ND	0.55	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	2.2	0.75	ND	0.61	0.21	
108-05-4	Vinyl Acetate	ND	22	2.9	ND	6.3	0.82	
78-93-3	2-Butanone (MEK)	**3.4**	22	0.93	**1.2**	7.5	0.32	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-004

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01165

Initial Pressure (psig): -3.40 Final Pressure (psig): 5.30

Canister Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.71	ND	0.56	0.18	
141-78-6	Ethyl Acetate	**3.3**	4.4	1.5	**0.91**	1.2	0.43	**J**
110-54-3	n-Hexane	ND	2.2	0.66	ND	0.63	0.19	
67-66-3	Chloroform	ND	2.2	0.75	ND	0.45	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	2.2	0.89	ND	0.75	0.30	
107-06-2	1,2-Dichloroethane	ND	2.2	0.71	ND	0.55	0.17	
71-55-6	1,1,1-Trichloroethane	**6.5**	2.2	0.75	**1.2**	0.41	0.14	
71-43-2	Benzene	ND	2.2	0.71	ND	0.69	0.22	
56-23-5	Carbon Tetrachloride	ND	2.2	0.66	ND	0.35	0.11	
110-82-7	Cyclohexane	ND	4.4	1.3	ND	1.3	0.37	
78-87-5	1,2-Dichloropropane	ND	2.2	0.71	ND	0.48	0.15	
75-27-4	Bromodichloromethane	ND	2.2	0.66	ND	0.33	0.099	
79-01-6	Trichloroethene	ND	2.2	0.62	ND	0.41	0.12	
123-91-1	1,4-Dioxane	**3.3**	2.2	0.71	**0.92**	0.61	0.20	
80-62-6	Methyl Methacrylate	ND	4.4	1.4	ND	1.1	0.34	
142-82-5	n-Heptane	**1.3**	2.2	0.75	**0.31**	0.54	0.18	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.62	ND	0.49	0.14	
108-10-1	4-Methyl-2-pentanone	**4.4**	2.2	0.71	**1.1**	0.54	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.71	ND	0.49	0.16	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.71	ND	0.41	0.13	
108-88-3	Toluene	**14**	2.2	0.75	**3.7**	0.59	0.20	
591-78-6	2-Hexanone	ND	2.2	0.71	ND	0.54	0.17	
124-48-1	Dibromochloromethane	ND	2.2	0.71	ND	0.26	0.083	
106-93-4	1,2-Dibromoethane	ND	2.2	0.71	ND	0.29	0.092	
123-86-4	n-Butyl Acetate	**1.1**	2.2	0.71	**0.23**	0.47	0.15	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-004

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01165

Initial Pressure (psig): -3.40 Final Pressure (psig): 5.30

Canister Dilution Factor: 1.77

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	2.2	0.80	ND	0.47	0.17	
127-18-4	Tetrachloroethene	ND	2.2	0.62	ND	0.33	0.091	
108-90-7	Chlorobenzene	ND	2.2	0.71	ND	0.48	0.15	
100-41-4	Ethylbenzene	**12**	2.2	0.71	**2.9**	0.51	0.16	
179601-23-1	m,p-Xylenes	**70**	4.4	1.3	**16**	1.0	0.31	
75-25-2	Bromoform	ND	2.2	0.66	ND	0.21	0.064	
100-42-5	Styrene	ND	2.2	0.66	ND	0.52	0.16	
95-47-6	o-Xylene	**25**	2.2	0.66	**5.7**	0.51	0.15	
111-84-2	n-Nonane	**1.5**	2.2	0.66	**0.28**	0.42	0.13	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.66	ND	0.32	0.097	
98-82-8	Cumene	**2.0**	2.2	0.66	**0.41**	0.45	0.14	**J**
80-56-8	alpha-Pinene	**2.1**	2.2	0.62	**0.38**	0.40	0.11	**J**
103-65-1	n-Propylbenzene	**8.7**	2.2	0.71	**1.8**	0.45	0.14	
622-96-8	4-Ethyltoluene	**13**	2.2	0.71	**2.7**	0.45	0.14	
108-67-8	1,3,5-Trimethylbenzene	**14**	2.2	0.71	**2.8**	0.45	0.14	
95-63-6	1,2,4-Trimethylbenzene	**36**	2.2	0.66	**7.4**	0.45	0.14	
100-44-7	Benzyl Chloride	ND	2.2	0.49	ND	0.43	0.094	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.66	ND	0.37	0.11	
106-46-7	1,4-Dichlorobenzene	**8.0**	2.2	0.62	**1.3**	0.37	0.10	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.66	ND	0.37	0.11	
5989-27-5	d-Limonene	**5.7**	2.2	0.62	**1.0**	0.40	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.2	0.44	ND	0.23	0.045	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.71	ND	0.30	0.095	
91-20-3	Naphthalene	ND	2.2	0.80	ND	0.42	0.15	
87-68-3	Hexachlorobutadiene	ND	2.2	0.62	ND	0.21	0.058	

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J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-005

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01195

Initial Pressure (psig): -0.30 Final Pressure (psig): 5.59

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**210**	1.8	0.49	**120**	1.0	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	1.8	0.60	**0.48**	0.36	0.12	
74-87-3	Chloromethane	**0.71**	1.8	0.53	**0.34**	0.85	0.26	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.67	ND	0.25	0.096	
75-01-4	Vinyl Chloride	ND	1.8	0.60	ND	0.69	0.23	
106-99-0	1,3-Butadiene	ND	1.8	0.78	ND	0.80	0.35	
74-83-9	Bromomethane	ND	1.8	0.67	ND	0.45	0.17	
75-00-3	Chloroethane	ND	1.8	0.60	ND	0.67	0.23	
64-17-5	Ethanol	**680**	18	2.8	**360**	9.4	1.5	
75-05-8	Acetonitrile	ND	1.8	0.63	ND	1.1	0.38	
107-02-8	Acrolein	**0.70**	7.1	0.60	**0.31**	3.1	0.26	**J**
67-64-1	Acetone	**29**	18	2.7	**12**	7.4	1.1	**B**
75-69-4	Trichlorofluoromethane	**1.3**	1.8	0.60	**0.23**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**4.5**	18	1.5	**1.8**	7.2	0.60	**J**
107-13-1	Acrylonitrile	ND	1.8	0.60	ND	0.81	0.28	
75-35-4	1,1-Dichloroethene	ND	1.8	0.60	ND	0.44	0.15	
75-09-2	Methylene Chloride	ND	1.8	0.60	ND	0.51	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.56	ND	0.56	0.18	
76-13-1	Trichlorotrifluoroethane	ND	1.8	0.60	ND	0.23	0.078	
75-15-0	Carbon Disulfide	ND	18	0.53	ND	5.7	0.17	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.67	ND	0.44	0.17	
75-34-3	1,1-Dichloroethane	ND	1.8	0.56	ND	0.44	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.8	0.60	ND	0.49	0.17	
108-05-4	Vinyl Acetate	ND	18	2.3	ND	5.0	0.65	
78-93-3	2-Butanone (MEK)	**5.3**	18	0.74	**1.8**	6.0	0.25	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-05** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-005

Test Code: EPA TO-15 Date Collected: 12/6/16

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16

Analyst: Simon Cao Date Analyzed: 12/14/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)

Test Notes:

Container ID: 1SC01195

Initial Pressure (psig): -0.30 Final Pressure (psig): 5.59

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.8	0.56	ND	0.44	0.14	
141-78-6	Ethyl Acetate	**14**	3.5	1.2	**3.9**	0.98	0.34	
110-54-3	n-Hexane	**1.6**	1.8	0.53	**0.47**	0.50	0.15	**J**
67-66-3	Chloroform	ND	1.8	0.60	ND	0.36	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	1.8	0.71	ND	0.60	0.24	
107-06-2	1,2-Dichloroethane	ND	1.8	0.56	ND	0.44	0.14	
71-55-6	1,1,1-Trichloroethane	**0.74**	1.8	0.60	**0.14**	0.32	0.11	**J**
71-43-2	Benzene	**0.97**	1.8	0.56	**0.30**	0.55	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	ND	0.28	0.084	
110-82-7	Cyclohexane	**2.3**	3.5	1.0	**0.67**	1.0	0.30	**J**
78-87-5	1,2-Dichloropropane	ND	1.8	0.56	ND	0.38	0.12	
75-27-4	Bromodichloromethane	ND	1.8	0.53	ND	0.26	0.079	
79-01-6	Trichloroethene	ND	1.8	0.49	ND	0.33	0.092	
123-91-1	1,4-Dioxane	**0.65**	1.8	0.56	**0.18**	0.49	0.16	**J**
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.86	0.27	
142-82-5	n-Heptane	**7.1**	1.8	0.60	**1.7**	0.43	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.49	ND	0.39	0.11	
108-10-1	4-Methyl-2-pentanone	**18**	1.8	0.56	**4.4**	0.43	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.56	ND	0.39	0.12	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.56	ND	0.32	0.10	
108-88-3	Toluene	**38**	1.8	0.60	**10**	0.47	0.16	
591-78-6	2-Hexanone	ND	1.8	0.56	ND	0.43	0.14	
124-48-1	Dibromochloromethane	ND	1.8	0.56	ND	0.21	0.066	
106-93-4	1,2-Dibromoethane	ND	1.8	0.56	ND	0.23	0.073	
123-86-4	n-Butyl Acetate	**2.4**	1.8	0.56	**0.51**	0.37	0.12	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-005

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01195

Initial Pressure (psig): -0.30 Final Pressure (psig): 5.59

Canister Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**2.0**	1.8	0.63	**0.43**	0.38	0.14	
127-18-4	Tetrachloroethene	ND	1.8	0.49	ND	0.26	0.073	
108-90-7	Chlorobenzene	ND	1.8	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**27**	1.8	0.56	**6.2**	0.41	0.13	
179601-23-1	m,p-Xylenes	**130**	3.5	1.1	**31**	0.81	0.24	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.051	
100-42-5	Styrene	**0.54**	1.8	0.53	**0.13**	0.41	0.12	**J**
95-47-6	o-Xylene	**48**	1.8	0.53	**11**	0.41	0.12	
111-84-2	n-Nonane	**3.0**	1.8	0.53	**0.57**	0.34	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.53	ND	0.26	0.077	
98-82-8	Cumene	**3.6**	1.8	0.53	**0.73**	0.36	0.11	
80-56-8	alpha-Pinene	**4.5**	1.8	0.49	**0.81**	0.32	0.089	
103-65-1	n-Propylbenzene	**11**	1.8	0.56	**2.3**	0.36	0.11	
622-96-8	4-Ethyltoluene	**16**	1.8	0.56	**3.2**	0.36	0.11	
108-67-8	1,3,5-Trimethylbenzene	**18**	1.8	0.56	**3.7**	0.36	0.11	
95-63-6	1,2,4-Trimethylbenzene	**40**	1.8	0.53	**8.1**	0.36	0.11	
100-44-7	Benzyl Chloride	ND	1.8	0.39	ND	0.34	0.075	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.53	ND	0.29	0.088	
106-46-7	1,4-Dichlorobenzene	ND	1.8	0.49	ND	0.29	0.082	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.53	ND	0.29	0.088	
5989-27-5	d-Limonene	ND	1.8	0.49	ND	0.32	0.089	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.8	0.35	ND	0.18	0.036	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.56	ND	0.24	0.076	
91-20-3	Naphthalene	ND	1.8	0.63	ND	0.34	0.12	
87-68-3	Hexachlorobutadiene	ND	1.8	0.49	ND	0.17	0.046	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-06** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-006

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00832

Initial Pressure (psig): -0.33 Final Pressure (psig): 5.36

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**38**	1.8	0.49	**22**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.5**	1.8	0.60	**0.51**	0.35	0.12	
74-87-3	Chloromethane	ND	1.8	0.53	ND	0.85	0.25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.67	ND	0.25	0.095	
75-01-4	Vinyl Chloride	ND	1.8	0.60	ND	0.68	0.23	
106-99-0	1,3-Butadiene	ND	1.8	0.77	ND	0.79	0.35	
74-83-9	Bromomethane	ND	1.8	0.67	ND	0.45	0.17	
75-00-3	Chloroethane	ND	1.8	0.60	ND	0.66	0.23	
64-17-5	Ethanol	**770**	18	2.8	**410**	9.3	1.5	
75-05-8	Acetonitrile	ND	1.8	0.63	ND	1.0	0.38	
107-02-8	Acrolein	**2.5**	7.0	0.60	**1.1**	3.1	0.26	**J**
67-64-1	Acetone	**28**	18	2.7	**12**	7.4	1.1	**B**
75-69-4	Trichlorofluoromethane	**1.3**	1.8	0.60	**0.22**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**2.7**	18	1.5	**1.1**	7.1	0.60	**J**
107-13-1	Acrylonitrile	ND	1.8	0.60	ND	0.81	0.27	
75-35-4	1,1-Dichloroethene	**43**	1.8	0.60	**11**	0.44	0.15	
75-09-2	Methylene Chloride	ND	1.8	0.60	ND	0.50	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.56	ND	0.56	0.18	
76-13-1	Trichlorotrifluoroethane	**1.6**	1.8	0.60	**0.21**	0.23	0.078	**J**
75-15-0	Carbon Disulfide	**5.1**	18	0.53	**1.6**	5.6	0.17	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.67	ND	0.44	0.17	
75-34-3	1,1-Dichloroethane	**3.0**	1.8	0.56	**0.75**	0.43	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.8	0.60	ND	0.49	0.17	
108-05-4	Vinyl Acetate	**10**	18	2.3	**3.0**	5.0	0.65	**J**
78-93-3	2-Butanone (MEK)	**4.4**	18	0.74	**1.5**	5.9	0.25	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-06** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-006

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00832

Initial Pressure (psig): -0.33 Final Pressure (psig): 5.36

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.8	0.56	ND	0.44	0.14	
141-78-6	Ethyl Acetate	**24**	3.5	1.2	**6.6**	0.97	0.34	
110-54-3	n-Hexane	ND	1.8	0.53	ND	0.50	0.15	
67-66-3	Chloroform	**0.78**	1.8	0.60	**0.16**	0.36	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.8	0.70	ND	0.59	0.24	
107-06-2	1,2-Dichloroethane	ND	1.8	0.56	ND	0.43	0.14	
71-55-6	1,1,1-Trichloroethane	**85**	1.8	0.60	**16**	0.32	0.11	
71-43-2	Benzene	**0.68**	1.8	0.56	**0.21**	0.55	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	ND	0.28	0.083	
110-82-7	Cyclohexane	ND	3.5	1.0	ND	1.0	0.29	
78-87-5	1,2-Dichloropropane	ND	1.8	0.56	ND	0.38	0.12	
75-27-4	Bromodichloromethane	ND	1.8	0.53	ND	0.26	0.078	
79-01-6	Trichloroethene	**0.73**	1.8	0.49	**0.14**	0.33	0.091	**J**
123-91-1	1,4-Dioxane	**0.74**	1.8	0.56	**0.20**	0.49	0.16	**J**
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.86	0.27	
142-82-5	n-Heptane	**2.4**	1.8	0.60	**0.60**	0.43	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.49	ND	0.39	0.11	
108-10-1	4-Methyl-2-pentanone	**7.0**	1.8	0.56	**1.7**	0.43	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.56	ND	0.39	0.12	
79-00-5	1,1,2-Trichloroethane	**0.63**	1.8	0.56	**0.11**	0.32	0.10	**J**
108-88-3	Toluene	**13**	1.8	0.60	**3.4**	0.46	0.16	
591-78-6	2-Hexanone	ND	1.8	0.56	ND	0.43	0.14	
124-48-1	Dibromochloromethane	ND	1.8	0.56	ND	0.21	0.066	
106-93-4	1,2-Dibromoethane	ND	1.8	0.56	ND	0.23	0.073	
123-86-4	n-Butyl Acetate	**0.61**	1.8	0.56	**0.13**	0.37	0.12	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-06** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-006

Test Code:	EPA TO-15	Date Collected:	12/6/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/12/16
Analyst:	Simon Cao	Date Analyzed:	12/14/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			
Container ID:	1SC00832		

Initial Pressure (psig): -0.33 Final Pressure (psig): 5.36

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**4.4**	1.8	0.63	**0.94**	0.37	0.13	
127-18-4	Tetrachloroethene	**3.4**	1.8	0.49	**0.50**	0.26	0.072	
108-90-7	Chlorobenzene	ND	1.8	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**5.2**	1.8	0.56	**1.2**	0.40	0.13	
179601-23-1	m,p-Xylenes	**29**	3.5	1.1	**6.7**	0.81	0.24	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.051	
100-42-5	Styrene	ND	1.8	0.53	ND	0.41	0.12	
95-47-6	o-Xylene	**11**	1.8	0.53	**2.4**	0.40	0.12	
111-84-2	n-Nonane	**4.5**	1.8	0.53	**0.85**	0.33	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.53	ND	0.25	0.076	
98-82-8	Cumene	**0.82**	1.8	0.53	**0.17**	0.36	0.11	**J**
80-56-8	alpha-Pinene	**2.3**	1.8	0.49	**0.42**	0.31	0.088	
103-65-1	n-Propylbenzene	**3.1**	1.8	0.56	**0.62**	0.36	0.11	
622-96-8	4-Ethyltoluene	**5.1**	1.8	0.56	**1.0**	0.36	0.11	
108-67-8	1,3,5-Trimethylbenzene	**5.9**	1.8	0.56	**1.2**	0.36	0.11	
95-63-6	1,2,4-Trimethylbenzene	**16**	1.8	0.53	**3.3**	0.36	0.11	
100-44-7	Benzyl Chloride	ND	1.8	0.39	ND	0.34	0.074	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.53	ND	0.29	0.087	
106-46-7	1,4-Dichlorobenzene	ND	1.8	0.49	ND	0.29	0.082	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.53	ND	0.29	0.087	
5989-27-5	d-Limonene	ND	1.8	0.49	ND	0.31	0.088	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.8	0.35	ND	0.18	0.036	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.56	ND	0.24	0.075	
91-20-3	Naphthalene	ND	1.8	0.63	ND	0.33	0.12	
87-68-3	Hexachlorobutadiene	ND	1.8	0.49	ND	0.16	0.046	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-007

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/14 - 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC01350

Initial Pressure (psig): -0.41 Final Pressure (psig): 5.13

Canister Dilution Factor: 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**620**	17	4.9	**360**	10	2.8	**D**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	1.7	0.59	**0.47**	0.35	0.12	
74-87-3	Chloromethane	ND	1.7	0.52	ND	0.84	0.25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.7	0.66	ND	0.25	0.094	
75-01-4	Vinyl Chloride	ND	1.7	0.59	ND	0.68	0.23	
106-99-0	1,3-Butadiene	ND	1.7	0.76	ND	0.79	0.35	
74-83-9	Bromomethane	ND	1.7	0.66	ND	0.45	0.17	
75-00-3	Chloroethane	ND	1.7	0.59	ND	0.66	0.22	
64-17-5	Ethanol	**870**	17	2.8	**460**	9.2	1.5	
75-05-8	Acetonitrile	ND	1.7	0.63	ND	1.0	0.37	
107-02-8	Acrolein	**0.88**	7.0	0.59	**0.38**	3.0	0.26	**J**
67-64-1	Acetone	**21**	17	2.7	**8.9**	7.3	1.1	**B**
75-69-4	Trichlorofluoromethane	**1.8**	1.7	0.59	**0.33**	0.31	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	**8.8**	17	1.5	**3.6**	7.1	0.59	**J**
107-13-1	Acrylonitrile	ND	1.7	0.59	ND	0.80	0.27	
75-35-4	1,1-Dichloroethene	**210**	1.7	0.59	**53**	0.44	0.15	
75-09-2	Methylene Chloride	ND	1.7	0.59	ND	0.50	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	0.56	ND	0.56	0.18	
76-13-1	Trichlorotrifluoroethane	**4.7**	1.7	0.59	**0.61**	0.23	0.077	
75-15-0	Carbon Disulfide	ND	17	0.52	ND	5.6	0.17	
156-60-5	trans-1,2-Dichloroethene	ND	1.7	0.66	ND	0.44	0.17	
75-34-3	1,1-Dichloroethane	**6.3**	1.7	0.56	**1.6**	0.43	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.59	ND	0.48	0.16	
108-05-4	Vinyl Acetate	ND	17	2.3	ND	4.9	0.64	
78-93-3	2-Butanone (MEK)	**4.6**	17	0.73	**1.5**	5.9	0.25	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
B = Analyte detected in both the sample and associated method blank.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-07** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-007

Test Code:	EPA TO-15	Date Collected:	12/6/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/12/16
Analyst:	Simon Cao	Date Analyzed:	12/14 - 12/15/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)
Container ID:	1SC01350		

Initial Pressure (psig): -0.41 Final Pressure (psig): 5.13

Canister Dilution Factor: 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.7	0.56	ND	0.44	0.14	
141-78-6	Ethyl Acetate	**22**	3.5	1.2	**6.1**	0.96	0.34	
110-54-3	n-Hexane	**2.0**	1.7	0.52	**0.58**	0.49	0.15	
67-66-3	Chloroform	**2.3**	1.7	0.59	**0.48**	0.36	0.12	
109-99-9	Tetrahydrofuran (THF)	**3.9**	1.7	0.70	**1.3**	0.59	0.24	
107-06-2	1,2-Dichloroethane	**1.5**	1.7	0.56	**0.37**	0.43	0.14	**J**
71-55-6	1,1,1-Trichloroethane	**5.7**	1.7	0.59	**1.1**	0.32	0.11	
71-43-2	Benzene	**1.0**	1.7	0.56	**0.32**	0.54	0.17	**J**
56-23-5	Carbon Tetrachloride	**0.74**	1.7	0.52	**0.12**	0.28	0.083	**J**
110-82-7	Cyclohexane	**3.5**	3.5	1.0	**1.0**	1.0	0.29	
78-87-5	1,2-Dichloropropane	ND	1.7	0.56	ND	0.38	0.12	
75-27-4	Bromodichloromethane	ND	1.7	0.52	ND	0.26	0.078	
79-01-6	Trichloroethene	**1.2**	1.7	0.49	**0.22**	0.32	0.091	**J**
123-91-1	1,4-Dioxane	**0.99**	1.7	0.56	**0.27**	0.48	0.15	**J**
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.85	0.26	
142-82-5	n-Heptane	**4.3**	1.7	0.59	**1.0**	0.42	0.14	
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	0.49	ND	0.38	0.11	
108-10-1	4-Methyl-2-pentanone	**10**	1.7	0.56	**2.5**	0.42	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	0.56	ND	0.38	0.12	
79-00-5	1,1,2-Trichloroethane	**2.9**	1.7	0.56	**0.53**	0.32	0.10	
108-88-3	Toluene	**31**	1.7	0.59	**8.3**	0.46	0.16	
591-78-6	2-Hexanone	ND	1.7	0.56	ND	0.42	0.14	
124-48-1	Dibromochloromethane	ND	1.7	0.56	ND	0.20	0.065	
106-93-4	1,2-Dibromoethane	ND	1.7	0.56	ND	0.23	0.072	
123-86-4	n-Butyl Acetate	ND	1.7	0.56	ND	0.37	0.12	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-07** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-007

Test Code:	EPA TO-15	Date Collected:	12/6/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/12/16
Analyst:	Simon Cao	Date Analyzed:	12/14 - 12/15/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)
Container ID:	1SC01350		

Initial Pressure (psig): -0.41 Final Pressure (psig): 5.13

Canister Dilution Factor: 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**5.6**	1.7	0.63	**1.2**	0.37	0.13	
127-18-4	Tetrachloroethene	**8.0**	1.7	0.49	**1.2**	0.26	0.072	
108-90-7	Chlorobenzene	ND	1.7	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**10**	1.7	0.56	**2.3**	0.40	0.13	
179601-23-1	m,p-Xylenes	**47**	3.5	1.0	**11**	0.80	0.24	
75-25-2	Bromoform	ND	1.7	0.52	ND	0.17	0.050	
100-42-5	Styrene	**0.66**	1.7	0.52	**0.15**	0.41	0.12	**J**
95-47-6	o-Xylene	**17**	1.7	0.52	**3.9**	0.40	0.12	
111-84-2	n-Nonane	**7.2**	1.7	0.52	**1.4**	0.33	0.099	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.52	ND	0.25	0.076	
98-82-8	Cumene	**1.4**	1.7	0.52	**0.29**	0.35	0.11	**J**
80-56-8	alpha-Pinene	**5.4**	1.7	0.49	**0.97**	0.31	0.087	
103-65-1	n-Propylbenzene	**4.5**	1.7	0.56	**0.91**	0.35	0.11	
622-96-8	4-Ethyltoluene	**6.6**	1.7	0.56	**1.3**	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	**7.2**	1.7	0.56	**1.5**	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**18**	1.7	0.52	**3.7**	0.35	0.11	
100-44-7	Benzyl Chloride	ND	1.7	0.38	ND	0.34	0.074	
541-73-1	1,3-Dichlorobenzene	ND	1.7	0.52	ND	0.29	0.087	
106-46-7	1,4-Dichlorobenzene	ND	1.7	0.49	ND	0.29	0.081	
95-50-1	1,2-Dichlorobenzene	ND	1.7	0.52	ND	0.29	0.087	
5989-27-5	d-Limonene	ND	1.7	0.49	ND	0.31	0.087	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	0.34	ND	0.18	0.036	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	0.56	ND	0.23	0.075	
91-20-3	Naphthalene	ND	1.7	0.63	ND	0.33	0.12	
87-68-3	Hexachlorobutadiene	ND	1.7	0.49	ND	0.16	0.046	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-008

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00787

Initial Pressure (psig): -0.22 Final Pressure (psig): 5.98

Canister Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**48**	1.8	0.50	**28**	1.0	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.0**	1.8	0.61	**0.60**	0.36	0.12	
74-87-3	Chloromethane	ND	1.8	0.54	ND	0.87	0.26	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.68	ND	0.26	0.097	
75-01-4	Vinyl Chloride	ND	1.8	0.61	ND	0.70	0.24	
106-99-0	1,3-Butadiene	ND	1.8	0.79	ND	0.81	0.36	
74-83-9	Bromomethane	ND	1.8	0.68	ND	0.46	0.17	
75-00-3	Chloroethane	ND	1.8	0.61	ND	0.68	0.23	
64-17-5	Ethanol	**160**	18	2.9	**86**	9.5	1.5	
75-05-8	Acetonitrile	ND	1.8	0.64	ND	1.1	0.38	
107-02-8	Acrolein	**3.0**	7.2	0.61	**1.3**	3.1	0.27	**J**
67-64-1	Acetone	**36**	18	2.8	**15**	7.5	1.2	**B**
75-69-4	Trichlorofluoromethane	**1.5**	1.8	0.61	**0.27**	0.32	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**3.3**	18	1.5	**1.4**	7.3	0.61	**J**
107-13-1	Acrylonitrile	ND	1.8	0.61	ND	0.82	0.28	
75-35-4	1,1-Dichloroethene	**310**	18	6.1	**79**	4.5	1.5	**D**
75-09-2	Methylene Chloride	ND	1.8	0.61	ND	0.51	0.18	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.57	ND	0.57	0.18	
76-13-1	Trichlorotrifluoroethane	ND	1.8	0.61	ND	0.23	0.079	
75-15-0	Carbon Disulfide	**2.7**	18	0.54	**0.88**	5.7	0.17	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.68	ND	0.45	0.17	
75-34-3	1,1-Dichloroethane	**28**	1.8	0.57	**6.8**	0.44	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.8	0.61	ND	0.50	0.17	
108-05-4	Vinyl Acetate	**9.8**	18	2.3	**2.8**	5.1	0.66	**J**
78-93-3	2-Butanone (MEK)	**7.4**	18	0.75	**2.5**	6.1	0.25	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
B = Analyte detected in both the sample and associated method blank.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-OBS-08** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-008

Test Code:	EPA TO-15	Date Collected:	12/6/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/12/16
Analyst:	Simon Cao	Date Analyzed:	12/16/16 & 12/20/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)
Container ID:	1SC00787		

Initial Pressure (psig): -0.22 Final Pressure (psig): 5.98

Canister Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.8	0.57	ND	0.45	0.14	
141-78-6	Ethyl Acetate	**55**	3.6	1.3	**15**	0.99	0.35	
110-54-3	n-Hexane	**0.75**	1.8	0.54	**0.21**	0.51	0.15	**J**
67-66-3	Chloroform	**1.6**	1.8	0.61	**0.33**	0.37	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	**0.87**	1.8	0.72	**0.29**	0.61	0.24	**J**
107-06-2	1,2-Dichloroethane	ND	1.8	0.57	ND	0.44	0.14	
71-55-6	1,1,1-Trichloroethane	**58**	1.8	0.61	**11**	0.33	0.11	
71-43-2	Benzene	**1.1**	1.8	0.57	**0.33**	0.56	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.54	ND	0.28	0.085	
110-82-7	Cyclohexane	ND	3.6	1.0	ND	1.0	0.30	
78-87-5	1,2-Dichloropropane	ND	1.8	0.57	ND	0.39	0.12	
75-27-4	Bromodichloromethane	ND	1.8	0.54	ND	0.27	0.080	
79-01-6	Trichloroethene	**1.3**	1.8	0.50	**0.24**	0.33	0.093	**J**
123-91-1	1,4-Dioxane	**0.58**	1.8	0.57	**0.16**	0.50	0.16	**J**
80-62-6	Methyl Methacrylate	ND	3.6	1.1	ND	0.87	0.27	
142-82-5	n-Heptane	**1.4**	1.8	0.61	**0.33**	0.44	0.15	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.50	ND	0.39	0.11	
108-10-1	4-Methyl-2-pentanone	**2.7**	1.8	0.57	**0.66**	0.44	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.57	ND	0.39	0.13	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.57	ND	0.33	0.10	
108-88-3	Toluene	**32**	1.8	0.61	**8.5**	0.47	0.16	
591-78-6	2-Hexanone	ND	1.8	0.57	ND	0.44	0.14	
124-48-1	Dibromochloromethane	ND	1.8	0.57	ND	0.21	0.067	
106-93-4	1,2-Dibromoethane	ND	1.8	0.57	ND	0.23	0.074	
123-86-4	n-Butyl Acetate	ND	1.8	0.57	ND	0.38	0.12	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-008

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00787

Initial Pressure (psig): -0.22 Final Pressure (psig): 5.98

Canister Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**23**	1.8	0.64	**4.9**	0.38	0.14	
127-18-4	Tetrachloroethene	**3.2**	1.8	0.50	**0.47**	0.26	0.074	
108-90-7	Chlorobenzene	ND	1.8	0.57	ND	0.39	0.12	
100-41-4	Ethylbenzene	**4.7**	1.8	0.57	**1.1**	0.41	0.13	
179601-23-1	m,p-Xylenes	**27**	3.6	1.1	**6.3**	0.82	0.25	
75-25-2	Bromoform	ND	1.8	0.54	ND	0.17	0.052	
100-42-5	Styrene	**0.91**	1.8	0.54	**0.21**	0.42	0.13	**J**
95-47-6	o-Xylene	**9.7**	1.8	0.54	**2.2**	0.41	0.12	
111-84-2	n-Nonane	**24**	1.8	0.54	**4.6**	0.34	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.54	ND	0.26	0.078	
98-82-8	Cumene	**0.81**	1.8	0.54	**0.16**	0.36	0.11	**J**
80-56-8	alpha-Pinene	**5.6**	1.8	0.50	**1.0**	0.32	0.090	
103-65-1	n-Propylbenzene	**3.1**	1.8	0.57	**0.64**	0.36	0.12	
622-96-8	4-Ethyltoluene	**5.2**	1.8	0.57	**1.0**	0.36	0.12	
108-67-8	1,3,5-Trimethylbenzene	**5.5**	1.8	0.57	**1.1**	0.36	0.12	
95-63-6	1,2,4-Trimethylbenzene	**16**	1.8	0.54	**3.2**	0.36	0.11	
100-44-7	Benzyl Chloride	ND	1.8	0.39	ND	0.35	0.076	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.54	ND	0.30	0.089	
106-46-7	1,4-Dichlorobenzene	ND	1.8	0.50	ND	0.30	0.083	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.54	ND	0.30	0.089	
5989-27-5	d-Limonene	ND	1.8	0.50	ND	0.32	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.8	0.35	ND	0.19	0.037	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.57	ND	0.24	0.077	
91-20-3	Naphthalene	ND	1.8	0.64	ND	0.34	0.12	
87-68-3	Hexachlorobutadiene	ND	1.8	0.50	ND	0.17	0.047	

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J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-009

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00960

Initial Pressure (psig): -0.80 Final Pressure (psig): 6.03

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**470**	19	5.2	**270**	11	3.0	**D**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.8**	1.9	0.63	**0.56**	0.38	0.13	
74-87-3	Chloromethane	**0.56**	1.9	0.56	**0.27**	0.90	0.27	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.9	0.71	ND	0.27	0.10	
75-01-4	Vinyl Chloride	ND	1.9	0.63	ND	0.73	0.25	
106-99-0	1,3-Butadiene	ND	1.9	0.82	ND	0.84	0.37	
74-83-9	Bromomethane	ND	1.9	0.71	ND	0.48	0.18	
75-00-3	Chloroethane	ND	1.9	0.63	ND	0.71	0.24	
64-17-5	Ethanol	**860**	19	3.0	**460**	9.9	1.6	
75-05-8	Acetonitrile	ND	1.9	0.67	ND	1.1	0.40	
107-02-8	Acrolein	**2.4**	7.5	0.63	**1.1**	3.3	0.28	**J**
67-64-1	Acetone	**47**	19	2.9	**20**	7.8	1.2	**B**
75-69-4	Trichlorofluoromethane	**1.6**	1.9	0.63	**0.28**	0.33	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**8.3**	19	1.6	**3.4**	7.6	0.64	**J**
107-13-1	Acrylonitrile	ND	1.9	0.63	ND	0.86	0.29	
75-35-4	1,1-Dichloroethene	**50**	1.9	0.63	**13**	0.47	0.16	
75-09-2	Methylene Chloride	ND	1.9	0.63	ND	0.54	0.18	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.9	0.60	ND	0.60	0.19	
76-13-1	Trichlorotrifluoroethane	ND	1.9	0.63	ND	0.24	0.083	
75-15-0	Carbon Disulfide	**2.8**	19	0.56	**0.90**	6.0	0.18	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.9	0.71	ND	0.47	0.18	
75-34-3	1,1-Dichloroethane	**0.98**	1.9	0.60	**0.24**	0.46	0.15	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	1.9	0.63	ND	0.52	0.18	
108-05-4	Vinyl Acetate	**9.6**	19	2.4	**2.7**	5.3	0.69	**J**
78-93-3	2-Butanone (MEK)	**11**	19	0.78	**3.6**	6.3	0.27	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-009

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00960

Initial Pressure (psig): -0.80 Final Pressure (psig): 6.03

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.9	0.60	ND	0.47	0.15	
141-78-6	Ethyl Acetate	**9.5**	3.7	1.3	**2.6**	1.0	0.36	
110-54-3	n-Hexane	**1.9**	1.9	0.56	**0.53**	0.53	0.16	
67-66-3	Chloroform	ND	1.9	0.63	ND	0.38	0.13	
109-99-9	Tetrahydrofuran (THF)	**6.4**	1.9	0.75	**2.2**	0.63	0.25	
107-06-2	1,2-Dichloroethane	ND	1.9	0.60	ND	0.46	0.15	
71-55-6	1,1,1-Trichloroethane	**7.7**	1.9	0.63	**1.4**	0.34	0.12	
71-43-2	Benzene	**1.2**	1.9	0.60	**0.36**	0.58	0.19	**J**
56-23-5	Carbon Tetrachloride	ND	1.9	0.56	ND	0.30	0.089	
110-82-7	Cyclohexane	**2.6**	3.7	1.1	**0.77**	1.1	0.31	**J**
78-87-5	1,2-Dichloropropane	ND	1.9	0.60	ND	0.40	0.13	
75-27-4	Bromodichloromethane	ND	1.9	0.56	ND	0.28	0.083	
79-01-6	Trichloroethene	**1.0**	1.9	0.52	**0.19**	0.35	0.097	**J**
123-91-1	1,4-Dioxane	**0.99**	1.9	0.60	**0.27**	0.52	0.17	**J**
80-62-6	Methyl Methacrylate	ND	3.7	1.2	ND	0.91	0.28	
142-82-5	n-Heptane	**7.6**	1.9	0.63	**1.9**	0.45	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.52	ND	0.41	0.11	
108-10-1	4-Methyl-2-pentanone	**18**	1.9	0.60	**4.4**	0.45	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.60	ND	0.41	0.13	
79-00-5	1,1,2-Trichloroethane	ND	1.9	0.60	ND	0.34	0.11	
108-88-3	Toluene	**32**	1.9	0.63	**8.4**	0.49	0.17	
591-78-6	2-Hexanone	**0.98**	1.9	0.60	**0.24**	0.45	0.15	**J**
124-48-1	Dibromochloromethane	ND	1.9	0.60	ND	0.22	0.070	
106-93-4	1,2-Dibromoethane	ND	1.9	0.60	ND	0.24	0.078	
123-86-4	n-Butyl Acetate	ND	1.9	0.60	ND	0.39	0.13	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-009

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00960

Initial Pressure (psig): -0.80 Final Pressure (psig): 6.03

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**2.1**	1.9	0.67	**0.46**	0.40	0.14	
127-18-4	Tetrachloroethene	**1.1**	1.9	0.52	**0.17**	0.27	0.077	**J**
108-90-7	Chlorobenzene	ND	1.9	0.60	ND	0.40	0.13	
100-41-4	Ethylbenzene	**15**	1.9	0.60	**3.6**	0.43	0.14	
179601-23-1	m,p-Xylenes	**77**	3.7	1.1	**18**	0.86	0.26	
75-25-2	Bromoform	ND	1.9	0.56	ND	0.18	0.054	
100-42-5	Styrene	**1.3**	1.9	0.56	**0.29**	0.44	0.13	**J**
95-47-6	o-Xylene	**28**	1.9	0.56	**6.5**	0.43	0.13	
111-84-2	n-Nonane	**3.4**	1.9	0.56	**0.65**	0.36	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.9	0.56	ND	0.27	0.081	
98-82-8	Cumene	**2.4**	1.9	0.56	**0.49**	0.38	0.11	
80-56-8	alpha-Pinene	**9.9**	1.9	0.52	**1.8**	0.33	0.094	
103-65-1	n-Propylbenzene	**7.0**	1.9	0.60	**1.4**	0.38	0.12	
622-96-8	4-Ethyltoluene	**10**	1.9	0.60	**2.1**	0.38	0.12	
108-67-8	1,3,5-Trimethylbenzene	**11**	1.9	0.60	**2.2**	0.38	0.12	
95-63-6	1,2,4-Trimethylbenzene	**27**	1.9	0.56	**5.5**	0.38	0.11	
100-44-7	Benzyl Chloride	ND	1.9	0.41	ND	0.36	0.079	
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.56	ND	0.31	0.093	
106-46-7	1,4-Dichlorobenzene	ND	1.9	0.52	ND	0.31	0.087	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.56	ND	0.31	0.093	
5989-27-5	d-Limonene	ND	1.9	0.52	ND	0.33	0.094	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.9	0.37	ND	0.19	0.038	
120-82-1	1,2,4-Trichlorobenzene	ND	1.9	0.60	ND	0.25	0.080	
91-20-3	Naphthalene	ND	1.9	0.67	ND	0.36	0.13	
87-68-3	Hexachlorobutadiene	ND	1.9	0.52	ND	0.17	0.049	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-1-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-010

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes: 0.020 Liter(s)
Container ID: 1SS00222

Initial Pressure (psig): -0.24 Final Pressure (psig): 5.89

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**350**	18	5.0	**200**	10	2.9	
75-71-8	Dichlorodifluoromethane (CFC 12)	**6.7**	18	6.0	**1.4**	3.6	1.2	**J**
74-87-3	Chloromethane	ND	18	5.3	ND	8.6	2.6	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	18	6.7	ND	2.5	0.97	
75-01-4	Vinyl Chloride	ND	18	6.0	ND	6.9	2.4	
106-99-0	1,3-Butadiene	ND	18	7.8	ND	8.0	3.5	
74-83-9	Bromomethane	ND	18	6.7	ND	4.6	1.7	
75-00-3	Chloroethane	ND	18	6.0	ND	6.7	2.3	
64-17-5	Ethanol	**460**	180	28	**250**	94	15	
75-05-8	Acetonitrile	ND	18	6.4	ND	11	3.8	
107-02-8	Acrolein	ND	71	6.0	ND	31	2.6	
67-64-1	Acetone	**72**	180	27	**30**	75	12	**J, B**
75-69-4	Trichlorofluoromethane	ND	18	6.0	ND	3.2	1.1	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	180	15	ND	72	6.1	
107-13-1	Acrylonitrile	ND	18	6.0	ND	8.2	2.8	
75-35-4	1,1-Dichloroethene	**190**	18	6.0	**48**	4.5	1.5	
75-09-2	Methylene Chloride	ND	18	6.0	ND	5.1	1.7	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	18	5.7	ND	5.7	1.8	
76-13-1	Trichlorotrifluoroethane	**26**	18	6.0	**3.4**	2.3	0.79	
75-15-0	Carbon Disulfide	ND	180	5.3	ND	57	1.7	
156-60-5	trans-1,2-Dichloroethene	ND	18	6.7	ND	4.5	1.7	
75-34-3	1,1-Dichloroethane	ND	18	5.7	ND	4.4	1.4	
1634-04-4	Methyl tert-Butyl Ether	ND	18	6.0	ND	4.9	1.7	
108-05-4	Vinyl Acetate	ND	180	23	ND	50	6.6	
78-93-3	2-Butanone (MEK)	**15**	180	7.5	**5.0**	60	2.5	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-1-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-010

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.040 Liter(s)
Test Notes: 0.020 Liter(s)
Container ID: 1SS00222

Initial Pressure (psig): -0.24 Final Pressure (psig): 5.89

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	18	5.7	ND	4.5	1.4	
141-78-6	Ethyl Acetate	ND	36	12	ND	9.9	3.4	
110-54-3	n-Hexane	ND	18	5.3	ND	5.0	1.5	
67-66-3	Chloroform	ND	18	6.0	ND	3.6	1.2	
109-99-9	Tetrahydrofuran (THF)	ND	18	7.1	ND	6.0	2.4	
107-06-2	1,2-Dichloroethane	ND	18	5.7	ND	4.4	1.4	
71-55-6	1,1,1-Trichloroethane	**43**	18	6.0	**7.8**	3.3	1.1	
71-43-2	Benzene	ND	18	5.7	ND	5.6	1.8	
56-23-5	Carbon Tetrachloride	ND	18	5.3	ND	2.8	0.85	
110-82-7	Cyclohexane	ND	36	10	ND	10	3.0	
78-87-5	1,2-Dichloropropane	ND	18	5.7	ND	3.8	1.2	
75-27-4	Bromodichloromethane	ND	18	5.3	ND	2.7	0.80	
79-01-6	Trichloroethene	ND	18	5.0	ND	3.3	0.93	
123-91-1	1,4-Dioxane	**4,000**	36	11	**1,100**	9.9	3.2	**D**
80-62-6	Methyl Methacrylate	ND	36	11	ND	8.7	2.7	
142-82-5	n-Heptane	ND	18	6.0	ND	4.3	1.5	
10061-01-5	cis-1,3-Dichloropropene	ND	18	5.0	ND	3.9	1.1	
108-10-1	4-Methyl-2-pentanone	**6.8**	18	5.7	**1.7**	4.3	1.4	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	18	5.7	ND	3.9	1.3	
79-00-5	1,1,2-Trichloroethane	ND	18	5.7	ND	3.3	1.0	
108-88-3	Toluene	**20**	18	6.0	**5.4**	4.7	1.6	
591-78-6	2-Hexanone	ND	18	5.7	ND	4.3	1.4	
124-48-1	Dibromochloromethane	ND	18	5.7	ND	2.1	0.67	
106-93-4	1,2-Dibromoethane	ND	18	5.7	ND	2.3	0.74	
123-86-4	n-Butyl Acetate	ND	18	5.7	ND	3.7	1.2	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
D = The reported result is from a dilution.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **SVE-EXT-1-Well** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-010

Test Code:	EPA TO-15	Date Collected:	12/6/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/12/16
Analyst:	Simon Cao	Date Analyzed:	12/16/16 & 12/20/16
Sample Type:	1.0 L Silonite Summa Canister	Volume(s) Analyzed:	0.040 Liter(s)
Test Notes:			0.020 Liter(s)
Container ID:	1SS00222		

Initial Pressure (psig): -0.24 Final Pressure (psig): 5.89

Canister Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	18	6.4	ND	3.8	1.4	
127-18-4	Tetrachloroethene	**35**	18	5.0	**5.2**	2.6	0.73	
108-90-7	Chlorobenzene	ND	18	5.7	ND	3.9	1.2	
100-41-4	Ethylbenzene	**14**	18	5.7	**3.1**	4.1	1.3	**J**
179601-23-1	m,p-Xylenes	**67**	36	11	**15**	8.2	2.5	
75-25-2	Bromoform	ND	18	5.3	ND	1.7	0.52	
100-42-5	Styrene	ND	18	5.3	ND	4.2	1.3	
95-47-6	o-Xylene	**25**	18	5.3	**5.8**	4.1	1.2	
111-84-2	n-Nonane	ND	18	5.3	ND	3.4	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	18	5.3	ND	2.6	0.78	
98-82-8	Cumene	ND	18	5.3	ND	3.6	1.1	
80-56-8	alpha-Pinene	ND	18	5.0	ND	3.2	0.89	
103-65-1	n-Propylbenzene	**7.8**	18	5.7	**1.6**	3.6	1.2	**J**
622-96-8	4-Ethyltoluene	**11**	18	5.7	**2.3**	3.6	1.2	**J**
108-67-8	1,3,5-Trimethylbenzene	**11**	18	5.7	**2.3**	3.6	1.2	**J**
95-63-6	1,2,4-Trimethylbenzene	**32**	18	5.3	**6.6**	3.6	1.1	
100-44-7	Benzyl Chloride	ND	18	3.9	ND	3.4	0.75	
541-73-1	1,3-Dichlorobenzene	ND	18	5.3	ND	3.0	0.89	
106-46-7	1,4-Dichlorobenzene	**19**	18	5.0	**3.2**	3.0	0.83	
95-50-1	1,2-Dichlorobenzene	ND	18	5.3	ND	3.0	0.89	
5989-27-5	d-Limonene	ND	18	5.0	ND	3.2	0.89	
96-12-8	1,2-Dibromo-3-chloropropane	ND	18	3.5	ND	1.8	0.36	
120-82-1	1,2,4-Trichlorobenzene	ND	18	5.7	ND	2.4	0.77	
91-20-3	Naphthalene	ND	18	6.4	ND	3.4	1.2	
87-68-3	Hexachlorobutadiene	ND	18	5.0	ND	1.7	0.47	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-2-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-011

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.030 Liter(s)
Test Notes:
Container ID: 1SC00927

Initial Pressure (psig): -0.18 Final Pressure (psig): 5.20

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**840**	23	6.4	**490**	13	3.7	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	23	7.8	ND	4.6	1.6	
74-87-3	Chloromethane	ND	23	6.9	ND	11	3.3	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	23	8.7	ND	3.3	1.2	
75-01-4	Vinyl Chloride	ND	23	7.8	ND	8.9	3.0	
106-99-0	1,3-Butadiene	ND	23	10	ND	10	4.5	
74-83-9	Bromomethane	ND	23	8.7	ND	5.9	2.2	
75-00-3	Chloroethane	ND	23	7.8	ND	8.7	2.9	
64-17-5	Ethanol	**760**	230	37	**400**	120	19	
75-05-8	Acetonitrile	ND	23	8.2	ND	14	4.9	
107-02-8	Acrolein	ND	91	7.8	ND	40	3.4	
67-64-1	Acetone	**97**	230	35	**41**	96	15	**J, B**
75-69-4	Trichlorofluoromethane	ND	23	7.8	ND	4.1	1.4	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	230	19	ND	93	7.8	
107-13-1	Acrylonitrile	ND	23	7.8	ND	11	3.6	
75-35-4	1,1-Dichloroethene	**260**	23	7.8	**66**	5.8	2.0	
75-09-2	Methylene Chloride	ND	23	7.8	ND	6.6	2.2	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	23	7.3	ND	7.3	2.3	
76-13-1	Trichlorotrifluoroethane	ND	23	7.8	ND	3.0	1.0	
75-15-0	Carbon Disulfide	ND	230	6.9	ND	73	2.2	
156-60-5	trans-1,2-Dichloroethene	ND	23	8.7	ND	5.8	2.2	
75-34-3	1,1-Dichloroethane	**7.6**	23	7.3	**1.9**	5.6	1.8	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	23	7.8	ND	6.3	2.2	
108-05-4	Vinyl Acetate	ND	230	30	ND	65	8.4	
78-93-3	2-Butanone (MEK)	**12**	230	9.6	**3.9**	77	3.3	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-2-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-011

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.030 Liter(s)
Test Notes:
Container ID: 1SC00927

Initial Pressure (psig): -0.18 Final Pressure (psig): 5.20

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	23	7.3	ND	5.8	1.8	
141-78-6	Ethyl Acetate	ND	46	16	ND	13	4.4	
110-54-3	n-Hexane	ND	23	6.9	ND	6.5	1.9	
67-66-3	Chloroform	ND	23	7.8	ND	4.7	1.6	
109-99-9	Tetrahydrofuran (THF)	ND	23	9.1	ND	7.7	3.1	
107-06-2	1,2-Dichloroethane	ND	23	7.3	ND	5.6	1.8	
71-55-6	1,1,1-Trichloroethane	**120**	23	7.8	**22**	4.2	1.4	
71-43-2	Benzene	ND	23	7.3	ND	7.2	2.3	
56-23-5	Carbon Tetrachloride	ND	23	6.9	ND	3.6	1.1	
110-82-7	Cyclohexane	ND	46	13	ND	13	3.8	
78-87-5	1,2-Dichloropropane	ND	23	7.3	ND	4.9	1.6	
75-27-4	Bromodichloromethane	ND	23	6.9	ND	3.4	1.0	
79-01-6	Trichloroethene	ND	23	6.4	ND	4.3	1.2	
123-91-1	1,4-Dioxane	**4,500**	23	7.3	**1,200**	6.3	2.0	
80-62-6	Methyl Methacrylate	ND	46	14	ND	11	3.5	
142-82-5	n-Heptane	ND	23	7.8	ND	5.6	1.9	
10061-01-5	cis-1,3-Dichloropropene	ND	23	6.4	ND	5.0	1.4	
108-10-1	4-Methyl-2-pentanone	**8.3**	23	7.3	**2.0**	5.6	1.8	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	23	7.3	ND	5.0	1.6	
79-00-5	1,1,2-Trichloroethane	ND	23	7.3	ND	4.2	1.3	
108-88-3	Toluene	**35**	23	7.8	**9.3**	6.1	2.1	
591-78-6	2-Hexanone	ND	23	7.3	ND	5.6	1.8	
124-48-1	Dibromochloromethane	ND	23	7.3	ND	2.7	0.86	
106-93-4	1,2-Dibromoethane	ND	23	7.3	ND	3.0	0.95	
123-86-4	n-Butyl Acetate	ND	23	7.3	ND	4.8	1.5	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-2-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-011

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.030 Liter(s)
Test Notes:
Container ID: 1SC00927

Initial Pressure (psig): -0.18 Final Pressure (psig): 5.20

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	23	8.2	ND	4.9	1.8	
127-18-4	Tetrachloroethene	**7.9**	23	6.4	**1.2**	3.4	0.94	**J**
108-90-7	Chlorobenzene	ND	23	7.3	ND	5.0	1.6	
100-41-4	Ethylbenzene	**20**	23	7.3	**4.6**	5.3	1.7	**J**
179601-23-1	m,p-Xylenes	**89**	46	14	**21**	11	3.2	
75-25-2	Bromoform	ND	23	6.9	ND	2.2	0.66	
100-42-5	Styrene	ND	23	6.9	ND	5.4	1.6	
95-47-6	o-Xylene	**29**	23	6.9	**6.6**	5.3	1.6	
111-84-2	n-Nonane	ND	23	6.9	ND	4.4	1.3	
79-34-5	1,1,2,2-Tetrachloroethane	ND	23	6.9	ND	3.3	1.0	
98-82-8	Cumene	ND	23	6.9	ND	4.6	1.4	
80-56-8	alpha-Pinene	ND	23	6.4	ND	4.1	1.1	
103-65-1	n-Propylbenzene	ND	23	7.3	ND	4.6	1.5	
622-96-8	4-Ethyltoluene	**9.3**	23	7.3	**1.9**	4.6	1.5	**J**
108-67-8	1,3,5-Trimethylbenzene	**9.4**	23	7.3	**1.9**	4.6	1.5	**J**
95-63-6	1,2,4-Trimethylbenzene	**16**	23	6.9	**3.3**	4.6	1.4	**J**
100-44-7	Benzyl Chloride	ND	23	5.0	ND	4.4	0.97	
541-73-1	1,3-Dichlorobenzene	ND	23	6.9	ND	3.8	1.1	
106-46-7	1,4-Dichlorobenzene	ND	23	6.4	ND	3.8	1.1	
95-50-1	1,2-Dichlorobenzene	ND	23	6.9	ND	3.8	1.1	
5989-27-5	d-Limonene	ND	23	6.4	ND	4.1	1.1	
96-12-8	1,2-Dibromo-3-chloropropane	ND	23	4.5	ND	2.4	0.47	
120-82-1	1,2,4-Trichlorobenzene	ND	23	7.3	ND	3.1	0.98	
91-20-3	Naphthalene	ND	23	8.2	ND	4.4	1.6	
87-68-3	Hexachlorobutadiene	ND	23	6.4	ND	2.1	0.60	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-3-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-012

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/21/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.015 Liter(s)
Test Notes:
Container ID: 1SS00114

Initial Pressure (psig): -0.28 Final Pressure (psig): 5.21

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**470**	46	13	**270**	27	7.5	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	46	16	ND	9.3	3.2	
74-87-3	Chloromethane	ND	46	14	ND	22	6.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	46	17	ND	6.6	2.5	
75-01-4	Vinyl Chloride	ND	46	16	ND	18	6.1	
106-99-0	1,3-Butadiene	ND	46	20	ND	21	9.2	
74-83-9	Bromomethane	ND	46	17	ND	12	4.5	
75-00-3	Chloroethane	ND	46	16	ND	17	5.9	
64-17-5	Ethanol	**420**	460	74	**220**	240	39	**J**
75-05-8	Acetonitrile	ND	46	17	ND	27	9.9	
107-02-8	Acrolein	ND	180	16	ND	80	6.8	
67-64-1	Acetone	**110**	460	71	**45**	190	30	**J, B**
75-69-4	Trichlorofluoromethane	ND	46	16	ND	8.2	2.8	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	460	39	ND	190	16	
107-13-1	Acrylonitrile	ND	46	16	ND	21	7.2	
75-35-4	1,1-Dichloroethene	**23**	46	16	**5.9**	12	3.9	**J**
75-09-2	Methylene Chloride	ND	46	16	ND	13	4.5	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	46	15	ND	15	4.7	
76-13-1	Trichlorotrifluoroethane	ND	46	16	ND	6.0	2.0	
75-15-0	Carbon Disulfide	ND	460	14	ND	150	4.4	
156-60-5	trans-1,2-Dichloroethene	ND	46	17	ND	12	4.4	
75-34-3	1,1-Dichloroethane	ND	46	15	ND	11	3.6	
1634-04-4	Methyl tert-Butyl Ether	ND	46	16	ND	13	4.3	
108-05-4	Vinyl Acetate	ND	460	60	ND	130	17	
78-93-3	2-Butanone (MEK)	ND	460	19	ND	160	6.6	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-3-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-012

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/21/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.015 Liter(s)
Test Notes:
Container ID: 1SS00114

Initial Pressure (psig): -0.28 Final Pressure (psig): 5.21

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	46	15	ND	12	3.7	
141-78-6	Ethyl Acetate	ND	92	32	ND	26	8.9	
110-54-3	n-Hexane	ND	46	14	ND	13	3.9	
67-66-3	Chloroform	ND	46	16	ND	9.4	3.2	
109-99-9	Tetrahydrofuran (THF)	ND	46	18	ND	16	6.2	
107-06-2	1,2-Dichloroethane	ND	46	15	ND	11	3.6	
71-55-6	1,1,1-Trichloroethane	**28**	46	16	**5.2**	8.4	2.9	**J**
71-43-2	Benzene	ND	46	15	ND	14	4.6	
56-23-5	Carbon Tetrachloride	ND	46	14	ND	7.3	2.2	
110-82-7	Cyclohexane	ND	92	27	ND	27	7.8	
78-87-5	1,2-Dichloropropane	ND	46	15	ND	10	3.2	
75-27-4	Bromodichloromethane	ND	46	14	ND	6.9	2.1	
79-01-6	Trichloroethene	ND	46	13	ND	8.6	2.4	
123-91-1	1,4-Dioxane	**6,700**	46	15	**1,900**	13	4.1	
80-62-6	Methyl Methacrylate	ND	92	29	ND	22	7.0	
142-82-5	n-Heptane	ND	46	16	ND	11	3.8	
10061-01-5	cis-1,3-Dichloropropene	ND	46	13	ND	10	2.8	
108-10-1	4-Methyl-2-pentanone	ND	46	15	ND	11	3.6	
10061-02-6	trans-1,3-Dichloropropene	ND	46	15	ND	10	3.2	
79-00-5	1,1,2-Trichloroethane	ND	46	15	ND	8.4	2.7	
108-88-3	Toluene	**21**	46	16	**5.7**	12	4.2	**J**
591-78-6	2-Hexanone	ND	46	15	ND	11	3.6	
124-48-1	Dibromochloromethane	ND	46	15	ND	5.4	1.7	
106-93-4	1,2-Dibromoethane	ND	46	15	ND	6.0	1.9	
123-86-4	n-Butyl Acetate	ND	46	15	ND	9.7	3.1	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-EXT-3-Well** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P1605784-012

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/21/16
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.015 Liter(s)
Test Notes:
Container ID: 1SS00114

Initial Pressure (psig): -0.28 Final Pressure (psig): 5.21

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	46	17	ND	9.8	3.5	
127-18-4	Tetrachloroethene	ND	46	13	ND	6.8	1.9	
108-90-7	Chlorobenzene	ND	46	15	ND	10	3.2	
100-41-4	Ethylbenzene	ND	46	15	ND	11	3.4	
179601-23-1	m,p-Xylenes	**58**	92	28	**13**	21	6.4	**J**
75-25-2	Bromoform	ND	46	14	ND	4.5	1.3	
100-42-5	Styrene	ND	46	14	ND	11	3.2	
95-47-6	o-Xylene	**20**	46	14	**4.6**	11	3.2	**J**
111-84-2	n-Nonane	ND	46	14	ND	8.8	2.6	
79-34-5	1,1,2,2-Tetrachloroethane	ND	46	14	ND	6.7	2.0	
98-82-8	Cumene	ND	46	14	ND	9.4	2.8	
80-56-8	alpha-Pinene	ND	46	13	ND	8.3	2.3	
103-65-1	n-Propylbenzene	ND	46	15	ND	9.4	3.0	
622-96-8	4-Ethyltoluene	ND	46	15	ND	9.4	3.0	
108-67-8	1,3,5-Trimethylbenzene	ND	46	15	ND	9.4	3.0	
95-63-6	1,2,4-Trimethylbenzene	ND	46	14	ND	9.4	2.8	
100-44-7	Benzyl Chloride	ND	46	10	ND	8.9	2.0	
541-73-1	1,3-Dichlorobenzene	ND	46	14	ND	7.7	2.3	
106-46-7	1,4-Dichlorobenzene	**17**	46	13	**2.8**	7.7	2.1	**J**
95-50-1	1,2-Dichlorobenzene	ND	46	14	ND	7.7	2.3	
5989-27-5	d-Limonene	ND	46	13	ND	8.3	2.3	
96-12-8	1,2-Dibromo-3-chloropropane	ND	46	9.1	ND	4.8	0.94	
120-82-1	1,2,4-Trichlorobenzene	ND	46	15	ND	6.2	2.0	
91-20-3	Naphthalene	ND	46	17	ND	8.8	3.2	
87-68-3	Hexachlorobutadiene	ND	46	13	ND	4.3	1.2	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161214-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/14/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	**0.82**	5.0	0.77	**0.34**	2.1	0.32	**J**
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161214-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/14/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161214-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/14/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161215-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	ND	5.0	0.77	ND	2.1	0.32	
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

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

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161215-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/15/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161215-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/15/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161216-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	**0.78**	5.0	0.77	**0.33**	2.1	0.32	**J**
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161216-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/16/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161216-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/16/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161220-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	**0.80**	5.0	0.77	**0.34**	2.1	0.32	**J**
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161220-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605784

Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161220-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Environmental Management Services, Inc.**
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Project ID: P1605784

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 12/6/16
Analyst: Simon Cao Date(s) Received: 12/12/16
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 12/14 - 12/21/16
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P161214-MB	**112**	**98**	**97**	70-130	
Method Blank	P161215-MB	**111**	**97**	**99**	70-130	
Method Blank	P161216-MB	**116**	**97**	**97**	70-130	
Method Blank	P161220-MB	**101**	**100**	**100**	70-130	
Lab Control Sample	P161214-LCS	**112**	**96**	**99**	70-130	
Lab Control Sample	P161215-LCS	**110**	**96**	**101**	70-130	
Lab Control Sample	P161216-LCS	**116**	**96**	**100**	70-130	
Lab Control Sample	P161220-LCS	**99**	**100**	**102**	70-130	
SVE-OBS-01	P1605784-001	**113**	**93**	**99**	70-130	
SVE-OBS-02	P1605784-002	**110**	**93**	**102**	70-130	
SVE-OBS-03	P1605784-003	**109**	**93**	**102**	70-130	
SVE-OBS-04	P1605784-004	**108**	**95**	**103**	70-130	
SVE-OBS-05	P1605784-005	**109**	**94**	**102**	70-130	
SVE-OBS-06	P1605784-006	**107**	**95**	**104**	70-130	
SVE-OBS-07	P1605784-007	**106**	**94**	**103**	70-130	
SVE-OBS-08	P1605784-008	**115**	**98**	**96**	70-130	
SVE-OBS-09	P1605784-009	**110**	**99**	**97**	70-130	
SVE-EXT-1-Well	P1605784-010	**111**	**101**	**99**	70-130	
SVE-EXT-2-Well	P1605784-011	**111**	**102**	**99**	70-130	
SVE-EXT-3-Well	P1605784-012	**104**	**101**	**97**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161214-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**205**	**98**	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**226**	**108**	68-109	
74-87-3	Chloromethane	210	**214**	**102**	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**207**	**98**	66-114	
75-01-4	Vinyl Chloride	210	**202**	**96**	61-125	
106-99-0	1,3-Butadiene	210	**217**	**103**	62-144	
74-83-9	Bromomethane	210	**221**	**105**	73-123	
75-00-3	Chloroethane	210	**222**	**106**	69-122	
64-17-5	Ethanol	1,060	**1230**	**116**	62-124	
75-05-8	Acetonitrile	213	**240**	**113**	57-114	
107-02-8	Acrolein	212	**233**	**110**	62-116	
67-64-1	Acetone	1,060	**994**	**94**	57-117	
75-69-4	Trichlorofluoromethane	210	**231**	**110**	63-98	**L**
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**524**	**124**	66-121	**L**
107-13-1	Acrylonitrile	213	**246**	**115**	68-123	
75-35-4	1,1-Dichloroethene	213	**216**	**101**	76-118	
75-09-2	Methylene Chloride	212	**211**	**100**	60-118	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**258**	**122**	65-126	
76-13-1	Trichlorotrifluoroethane	212	**223**	**105**	73-114	
75-15-0	Carbon Disulfide	213	**206**	**97**	57-102	
156-60-5	trans-1,2-Dichloroethene	213	**241**	**113**	74-123	
75-34-3	1,1-Dichloroethane	212	**228**	**108**	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	**234**	**110**	69-113	
108-05-4	Vinyl Acetate	1,060	**1190**	**112**	76-128	
78-93-3	2-Butanone (MEK)	212	**229**	**108**	63-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161214-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	212	**234**	**110**	72-117	
141-78-6	Ethyl Acetate	426	**465**	**109**	68-127	
110-54-3	n-Hexane	213	**215**	**101**	55-116	
67-66-3	Chloroform	212	**228**	**108**	70-109	
109-99-9	Tetrahydrofuran (THF)	213	**221**	**104**	72-113	
107-06-2	1,2-Dichloroethane	212	**245**	**116**	69-113	**L**
71-55-6	1,1,1-Trichloroethane	212	**234**	**110**	72-115	
71-43-2	Benzene	212	**209**	**99**	65-107	
56-23-5	Carbon Tetrachloride	213	**229**	**108**	71-113	
110-82-7	Cyclohexane	425	**435**	**102**	71-115	
78-87-5	1,2-Dichloropropane	212	**222**	**105**	71-115	
75-27-4	Bromodichloromethane	214	**241**	**113**	75-118	
79-01-6	Trichloroethene	212	**216**	**102**	68-114	
123-91-1	1,4-Dioxane	213	**235**	**110**	81-131	
80-62-6	Methyl Methacrylate	424	**463**	**109**	72-130	
142-82-5	n-Heptane	213	**220**	**103**	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	**230**	**110**	77-126	
108-10-1	4-Methyl-2-pentanone	213	**248**	**116**	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	**238**	**112**	79-125	
79-00-5	1,1,2-Trichloroethane	212	**223**	**105**	75-119	
108-88-3	Toluene	212	**204**	**96**	59-118	
591-78-6	2-Hexanone	213	**253**	**119**	69-129	
124-48-1	Dibromochloromethane	213	**231**	**108**	74-136	
106-93-4	1,2-Dibromoethane	212	**219**	**103**	73-131	
123-86-4	n-Butyl Acetate	216	**256**	**119**	69-130	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161214-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/14/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
111-65-9	n-Octane	212	**218**	**103**	66-120	
127-18-4	Tetrachloroethene	213	**213**	**100**	65-130	
108-90-7	Chlorobenzene	212	**208**	**98**	68-120	
100-41-4	Ethylbenzene	212	**216**	**102**	68-122	
179601-23-1	m,p-Xylenes	424	**437**	**103**	68-123	
75-25-2	Bromoform	212	**223**	**105**	69-130	
100-42-5	Styrene	212	**230**	**108**	71-133	
95-47-6	o-Xylene	212	**219**	**103**	68-122	
111-84-2	n-Nonane	212	**226**	**107**	65-120	
79-34-5	1,1,2,2-Tetrachloroethane	212	**215**	**101**	69-130	
98-82-8	Cumene	212	**215**	**101**	70-123	
80-56-8	alpha-Pinene	213	**222**	**104**	70-128	
103-65-1	n-Propylbenzene	214	**219**	**102**	69-125	
622-96-8	4-Ethyltoluene	212	**225**	**106**	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	**219**	**103**	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	**222**	**105**	67-129	
100-44-7	Benzyl Chloride	212	**240**	**113**	79-138	
541-73-1	1,3-Dichlorobenzene	212	**219**	**103**	65-136	
106-46-7	1,4-Dichlorobenzene	213	**215**	**101**	66-141	
95-50-1	1,2-Dichlorobenzene	212	**219**	**103**	67-136	
5989-27-5	d-Limonene	212	**238**	**112**	71-134	
96-12-8	1,2-Dibromo-3-chloropropane	212	**227**	**107**	73-136	
120-82-1	1,2,4-Trichlorobenzene	212	**215**	**101**	64-134	
91-20-3	Naphthalene	214	**227**	**106**	62-136	
87-68-3	Hexachlorobutadiene	213	**210**	**99**	60-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161215-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**198**	**94**	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**221**	**105**	68-109	
74-87-3	Chloromethane	210	**205**	**98**	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**205**	**97**	66-114	
75-01-4	Vinyl Chloride	210	**198**	**94**	61-125	
106-99-0	1,3-Butadiene	210	**210**	**100**	62-144	
74-83-9	Bromomethane	210	**217**	**103**	73-123	
75-00-3	Chloroethane	210	**216**	**103**	69-122	
64-17-5	Ethanol	1,060	**1180**	**111**	62-124	
75-05-8	Acetonitrile	213	**230**	**108**	57-114	
107-02-8	Acrolein	212	**225**	**106**	62-116	
67-64-1	Acetone	1,060	**955**	**90**	57-117	
75-69-4	Trichlorofluoromethane	210	**227**	**108**	63-98	**L**
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**500**	**118**	66-121	
107-13-1	Acrylonitrile	213	**238**	**112**	68-123	
75-35-4	1,1-Dichloroethene	213	**214**	**100**	76-118	
75-09-2	Methylene Chloride	212	**208**	**98**	60-118	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**245**	**116**	65-126	
76-13-1	Trichlorotrifluoroethane	212	**222**	**105**	73-114	
75-15-0	Carbon Disulfide	213	**201**	**94**	57-102	
156-60-5	trans-1,2-Dichloroethene	213	**234**	**110**	74-123	
75-34-3	1,1-Dichloroethane	212	**222**	**105**	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	**220**	**103**	69-113	
108-05-4	Vinyl Acetate	1,060	**1170**	**110**	76-128	
78-93-3	2-Butanone (MEK)	212	**224**	**106**	63-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161215-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	212	**228**	**108**	72-117	
141-78-6	Ethyl Acetate	426	**449**	**105**	68-127	
110-54-3	n-Hexane	213	**208**	**98**	55-116	
67-66-3	Chloroform	212	**224**	**106**	70-109	
109-99-9	Tetrahydrofuran (THF)	213	**216**	**101**	72-113	
107-06-2	1,2-Dichloroethane	212	**238**	**112**	69-113	
71-55-6	1,1,1-Trichloroethane	212	**229**	**108**	72-115	
71-43-2	Benzene	212	**206**	**97**	65-107	
56-23-5	Carbon Tetrachloride	213	**225**	**106**	71-113	
110-82-7	Cyclohexane	425	**427**	**100**	71-115	
78-87-5	1,2-Dichloropropane	212	**216**	**102**	71-115	
75-27-4	Bromodichloromethane	214	**237**	**111**	75-118	
79-01-6	Trichloroethene	212	**215**	**101**	68-114	
123-91-1	1,4-Dioxane	213	**230**	**108**	81-131	
80-62-6	Methyl Methacrylate	424	**460**	**108**	72-130	
142-82-5	n-Heptane	213	**215**	**101**	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	**225**	**107**	77-126	
108-10-1	4-Methyl-2-pentanone	213	**240**	**113**	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	**233**	**109**	79-125	
79-00-5	1,1,2-Trichloroethane	212	**220**	**104**	75-119	
108-88-3	Toluene	212	**201**	**95**	59-118	
591-78-6	2-Hexanone	213	**241**	**113**	69-129	
124-48-1	Dibromochloromethane	213	**228**	**107**	74-136	
106-93-4	1,2-Dibromoethane	212	**216**	**102**	73-131	
123-86-4	n-Butyl Acetate	216	**245**	**113**	69-130	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161215-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/15/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	212	**211**	**100**	66-120	
127-18-4	Tetrachloroethene	213	**212**	**100**	65-130	
108-90-7	Chlorobenzene	212	**204**	**96**	68-120	
100-41-4	Ethylbenzene	212	**211**	**100**	68-122	
179601-23-1	m,p-Xylenes	424	**429**	**101**	68-123	
75-25-2	Bromoform	212	**222**	**105**	69-130	
100-42-5	Styrene	212	**226**	**107**	71-133	
95-47-6	o-Xylene	212	**214**	**101**	68-122	
111-84-2	n-Nonane	212	**216**	**102**	65-120	
79-34-5	1,1,2,2-Tetrachloroethane	212	**211**	**100**	69-130	
98-82-8	Cumene	212	**211**	**100**	70-123	
80-56-8	alpha-Pinene	213	**218**	**102**	70-128	
103-65-1	n-Propylbenzene	214	**214**	**100**	69-125	
622-96-8	4-Ethyltoluene	212	**221**	**104**	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	**215**	**101**	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	**218**	**103**	67-129	
100-44-7	Benzyl Chloride	212	**233**	**110**	79-138	
541-73-1	1,3-Dichlorobenzene	212	**215**	**101**	65-136	
106-46-7	1,4-Dichlorobenzene	213	**213**	**100**	66-141	
95-50-1	1,2-Dichlorobenzene	212	**215**	**101**	67-136	
5989-27-5	d-Limonene	212	**230**	**108**	71-134	
96-12-8	1,2-Dibromo-3-chloropropane	212	**224**	**106**	73-136	
120-82-1	1,2,4-Trichlorobenzene	212	**213**	**100**	64-134	
91-20-3	Naphthalene	214	**224**	**105**	62-136	
87-68-3	Hexachlorobutadiene	213	**207**	**97**	60-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161216-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**214**	**102**	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**230**	**110**	68-109	**L**
74-87-3	Chloromethane	210	**215**	**102**	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**210**	**100**	66-114	
75-01-4	Vinyl Chloride	210	**208**	**99**	61-125	
106-99-0	1,3-Butadiene	210	**225**	**107**	62-144	
74-83-9	Bromomethane	210	**223**	**106**	73-123	
75-00-3	Chloroethane	210	**226**	**108**	69-122	
64-17-5	Ethanol	1,060	**1240**	**117**	62-124	
75-05-8	Acetonitrile	213	**239**	**112**	57-114	
107-02-8	Acrolein	212	**236**	**111**	62-116	
67-64-1	Acetone	1,060	**1000**	**94**	57-117	
75-69-4	Trichlorofluoromethane	210	**237**	**113**	63-98	**L**
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**517**	**122**	66-121	**L**
107-13-1	Acrylonitrile	213	**248**	**116**	68-123	
75-35-4	1,1-Dichloroethene	213	**220**	**103**	76-118	
75-09-2	Methylene Chloride	212	**212**	**100**	60-118	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**258**	**122**	65-126	
76-13-1	Trichlorotrifluoroethane	212	**227**	**107**	73-114	
75-15-0	Carbon Disulfide	213	**207**	**97**	57-102	
156-60-5	trans-1,2-Dichloroethene	213	**246**	**115**	74-123	
75-34-3	1,1-Dichloroethane	212	**232**	**109**	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	**202**	**95**	69-113	
108-05-4	Vinyl Acetate	1,060	**1200**	**113**	76-128	
78-93-3	2-Butanone (MEK)	212	**231**	**109**	63-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161216-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	212	**239**	**113**	72-117	
141-78-6	Ethyl Acetate	426	**471**	**111**	68-127	
110-54-3	n-Hexane	213	**217**	**102**	55-116	
67-66-3	Chloroform	212	**232**	**109**	70-109	
109-99-9	Tetrahydrofuran (THF)	213	**222**	**104**	72-113	
107-06-2	1,2-Dichloroethane	212	**253**	**119**	69-113	**L**
71-55-6	1,1,1-Trichloroethane	212	**230**	**108**	72-115	
71-43-2	Benzene	212	**206**	**97**	65-107	
56-23-5	Carbon Tetrachloride	213	**227**	**107**	71-113	
110-82-7	Cyclohexane	425	**433**	**102**	71-115	
78-87-5	1,2-Dichloropropane	212	**221**	**104**	71-115	
75-27-4	Bromodichloromethane	214	**241**	**113**	75-118	
79-01-6	Trichloroethene	212	**214**	**101**	68-114	
123-91-1	1,4-Dioxane	213	**230**	**108**	81-131	
80-62-6	Methyl Methacrylate	424	**457**	**108**	72-130	
142-82-5	n-Heptane	213	**218**	**102**	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	**229**	**109**	77-126	
108-10-1	4-Methyl-2-pentanone	213	**244**	**115**	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	**239**	**112**	79-125	
79-00-5	1,1,2-Trichloroethane	212	**220**	**104**	75-119	
108-88-3	Toluene	212	**200**	**94**	59-118	
591-78-6	2-Hexanone	213	**247**	**116**	69-129	
124-48-1	Dibromochloromethane	213	**225**	**106**	74-136	
106-93-4	1,2-Dibromoethane	212	**214**	**101**	73-131	
123-86-4	n-Butyl Acetate	216	**250**	**116**	69-130	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161216-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	212	**215**	**101**	66-120	
127-18-4	Tetrachloroethene	213	**206**	**97**	65-130	
108-90-7	Chlorobenzene	212	**204**	**96**	68-120	
100-41-4	Ethylbenzene	212	**212**	**100**	68-122	
179601-23-1	m,p-Xylenes	424	**431**	**102**	68-123	
75-25-2	Bromoform	212	**220**	**104**	69-130	
100-42-5	Styrene	212	**225**	**106**	71-133	
95-47-6	o-Xylene	212	**215**	**101**	68-122	
111-84-2	n-Nonane	212	**220**	**104**	65-120	
79-34-5	1,1,2,2-Tetrachloroethane	212	**212**	**100**	69-130	
98-82-8	Cumene	212	**210**	**99**	70-123	
80-56-8	alpha-Pinene	213	**216**	**101**	70-128	
103-65-1	n-Propylbenzene	214	**215**	**100**	69-125	
622-96-8	4-Ethyltoluene	212	**222**	**105**	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	**216**	**102**	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	**219**	**103**	67-129	
100-44-7	Benzyl Chloride	212	**234**	**110**	79-138	
541-73-1	1,3-Dichlorobenzene	212	**212**	**100**	65-136	
106-46-7	1,4-Dichlorobenzene	213	**209**	**98**	66-141	
95-50-1	1,2-Dichlorobenzene	212	**214**	**101**	67-136	
5989-27-5	d-Limonene	212	**232**	**109**	71-134	
96-12-8	1,2-Dibromo-3-chloropropane	212	**224**	**106**	73-136	
120-82-1	1,2,4-Trichlorobenzene	212	**213**	**100**	64-134	
91-20-3	Naphthalene	214	**223**	**104**	62-136	
87-68-3	Hexachlorobutadiene	213	**209**	**98**	60-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161220-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**192**	**91**	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**206**	**98**	68-109	
74-87-3	Chloromethane	210	**209**	**100**	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**206**	**98**	66-114	
75-01-4	Vinyl Chloride	210	**204**	**97**	61-125	
106-99-0	1,3-Butadiene	210	**226**	**108**	62-144	
74-83-9	Bromomethane	210	**216**	**103**	73-123	
75-00-3	Chloroethane	210	**219**	**104**	69-122	
64-17-5	Ethanol	1,060	**1020**	**96**	62-124	
75-05-8	Acetonitrile	213	**212**	**100**	57-114	
107-02-8	Acrolein	212	**216**	**102**	62-116	
67-64-1	Acetone	1,060	**952**	**90**	57-117	
75-69-4	Trichlorofluoromethane	210	**206**	**98**	63-98	
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**443**	**104**	66-121	
107-13-1	Acrylonitrile	213	**234**	**110**	68-123	
75-35-4	1,1-Dichloroethene	213	**215**	**101**	76-118	
75-09-2	Methylene Chloride	212	**207**	**98**	60-118	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**224**	**106**	65-126	
76-13-1	Trichlorotrifluoroethane	212	**220**	**104**	73-114	
75-15-0	Carbon Disulfide	213	**203**	**95**	57-102	
156-60-5	trans-1,2-Dichloroethene	213	**225**	**106**	74-123	
75-34-3	1,1-Dichloroethane	212	**211**	**100**	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	**213**	**100**	69-113	
108-05-4	Vinyl Acetate	1,060	**1190**	**112**	76-128	
78-93-3	2-Butanone (MEK)	212	**236**	**111**	63-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161220-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	212	**216**	**102**	72-117	
141-78-6	Ethyl Acetate	426	**432**	**101**	68-127	
110-54-3	n-Hexane	213	**193**	**91**	55-116	
67-66-3	Chloroform	212	**213**	**100**	70-109	
109-99-9	Tetrahydrofuran (THF)	213	**218**	**102**	72-113	
107-06-2	1,2-Dichloroethane	212	**213**	**100**	69-113	
71-55-6	1,1,1-Trichloroethane	212	**214**	**101**	72-115	
71-43-2	Benzene	212	**197**	**93**	65-107	
56-23-5	Carbon Tetrachloride	213	**214**	**100**	71-113	
110-82-7	Cyclohexane	425	**426**	**100**	71-115	
78-87-5	1,2-Dichloropropane	212	**215**	**101**	71-115	
75-27-4	Bromodichloromethane	214	**225**	**105**	75-118	
79-01-6	Trichloroethene	212	**223**	**105**	68-114	
123-91-1	1,4-Dioxane	213	**230**	**108**	81-131	
80-62-6	Methyl Methacrylate	424	**472**	**111**	72-130	
142-82-5	n-Heptane	213	**211**	**99**	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	**225**	**107**	77-126	
108-10-1	4-Methyl-2-pentanone	213	**226**	**106**	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	**228**	**107**	79-125	
79-00-5	1,1,2-Trichloroethane	212	**220**	**104**	75-119	
108-88-3	Toluene	212	**205**	**97**	59-118	
591-78-6	2-Hexanone	213	**226**	**106**	69-129	
124-48-1	Dibromochloromethane	213	**230**	**108**	74-136	
106-93-4	1,2-Dibromoethane	212	**229**	**108**	73-131	
123-86-4	n-Butyl Acetate	216	**227**	**105**	69-130	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605784
Client Project ID: **SVE Performance Monitoring / KUH0-16-010** ALS Sample ID: P161220-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	212	**212**	**100**	66-120	
127-18-4	Tetrachloroethene	213	**223**	**105**	65-130	
108-90-7	Chlorobenzene	212	**214**	**101**	68-120	
100-41-4	Ethylbenzene	212	**215**	**101**	68-122	
179601-23-1	m,p-Xylenes	424	**432**	**102**	68-123	
75-25-2	Bromoform	212	**242**	**114**	69-130	
100-42-5	Styrene	212	**229**	**108**	71-133	
95-47-6	o-Xylene	212	**219**	**103**	68-122	
111-84-2	n-Nonane	212	**211**	**100**	65-120	
79-34-5	1,1,2,2-Tetrachloroethane	212	**219**	**103**	69-130	
98-82-8	Cumene	212	**218**	**103**	70-123	
80-56-8	alpha-Pinene	213	**227**	**107**	70-128	
103-65-1	n-Propylbenzene	214	**220**	**103**	69-125	
622-96-8	4-Ethyltoluene	212	**221**	**104**	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	**217**	**102**	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	**223**	**105**	67-129	
100-44-7	Benzyl Chloride	212	**243**	**115**	79-138	
541-73-1	1,3-Dichlorobenzene	212	**225**	**106**	65-136	
106-46-7	1,4-Dichlorobenzene	213	**221**	**104**	66-141	
95-50-1	1,2-Dichlorobenzene	212	**227**	**107**	67-136	
5989-27-5	d-Limonene	212	**229**	**108**	71-134	
96-12-8	1,2-Dibromo-3-chloropropane	212	**263**	**124**	73-136	
120-82-1	1,2,4-Trichlorobenzene	212	**236**	**111**	64-134	
91-20-3	Naphthalene	214	**234**	**109**	62-136	
87-68-3	Hexachlorobutadiene	213	**228**	**107**	60-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Appendix B

Mass Removal Calculations

Calculation of Mass Recovery Per Day and Per Month
SVE system
Kuhlman Electric Corporation
Crystal Springs, MS

OPERATING PARAMETER	UNITS	1,1,1-Trichloroethane	1,1-Dichloroethene	1,4-Dioxane
Constituent concentration	ppmv	**0.010**	**0.058**	**1.40**
enter avg flow rate in ACFM air	cubic ft/min	**141.18**	141.18	141.18
ave flow rate in cubic ft per day	ft3/day	203297	203297	203297
enter avg vapor temperature	degrees F	70	70	70
enter nominal pressure in psig	lb/in2	14.70	14.70	14.70
temp in degrees rankin	degrees R	529.67	529.67	529.67
Ru = universal gas constant	psi ft3/(lbmol deg R)	10.73	10.73	10.73
R = specific gas constant air (R=Ru/mw)	(ft3 psi mol)/(R lbmol g)	0.37	0.37	0.37
molecular weight of air	lbm/lbmol	29	29	29
molecular weight of constituent	lbm/lbmol	133.4	96.94	88.11
density of air = P/(RT)= (psi R lbm)/(ft3 psi R) =lbm/ft3	lbm/ft3	0.1500	0.1500	0.1500
mass of air recovered per day= flow (ft3/day)*density (lb/ft3)	lbm/day	30498.0	30498.0	30498.0
moles of air recovered per day = mass air/day (lb/day) / mw (lbm/lbmol)	lbmol/ day	1051.66	1051.66	1051.66
moles of constituent recovered per day = ppmv/(10^6)* (lb mol/ day)	lbmol/day	1.05166E-05	6.09961E-05	0.00147232
mass of constituent recovered per day = (lbmol/day) * lbm/lbmol = lb/day	lbm/day	**0.00140**	**0.006**	**0.13**
July 2016 Recovery		**0.04**	**0.18**	**4.02**

Calculation of Mass Recovery Per Day and Per Month
SVE system
Kuhlman Electric Corporation
Crystal Springs, MS

OPERATING PARAMETER	UNITS	1,1,1-Trichloroethane	1,1-Dichloroethene	1,4-Dioxane
Constituent concentration	ppmv	**0.010**	**0.060**	**1.40**
enter avg flow rate in ACFM air	cubic ft/min	**141.42**	141.42	141.42
ave flow rate in cubic ft per day	ft3/day	203642	203642	203642
enter avg vapor temperature	degrees F	70	70	70
enter nominal pressure in psig	lb/in2	14.70	14.70	14.70
temp in degrees rankin	degrees R	529.67	529.67	529.67
Ru = universal gas constant	psi ft3/(lbmol deg R)	10.73	10.73	10.73
R = specific gas constant air (R=Ru/mw)	(ft3 psi mol)/(R lbmol g)	0.37	0.37	0.37
molecular weight of air	lbm/lbmol	29	29	29
molecular weight of constituent	lbm/lbmol	133.4	96.94	88.11
density of air = P/(RT)= (psi R lbm)/(ft3 psi R) =lbm/ft3	lbm/ft3	0.1500	0.1500	0.1500
mass of air recovered per day= flow (ft3/day)*density (lb/ft3)	lbm/day	30549.8	30549.8	30549.8
moles of air recovered per day = mass air/day (lb/day) / mw (lbm/lbmol)	lbmol/ day	1053.44	1053.44	1053.44
moles of constituent recovered per day = ppmv/(10^6)* (lb mol/ day)	lbmol/day	1.05344E-05	6.32065E-05	0.001474817
mass of constituent recovered per day = (lbmol/day) * lbm/lbmol = lb/day	lbm/day	**0.00141**	**0.006**	**0.13**
August 2016 Recovery		**0.04**	**0.19**	**4.03**

Calculation of Mass Recovery Per Day and Per Month
SVE system
Kuhlman Electric Corporation
Crystal Springs, MS

OPERATING PARAMETER	UNITS	1,1,1-Trichloroethane	1,1-Dichloroethene	1,4-Dioxane
Constituent concentration	ppmv	**0.010**	**0.060**	**1.40**
enter avg flow rate in ACFM air	cubic ft/min	**141.65**	141.65	141.65
ave flow rate in cubic ft per day	ft3/day	203973	203973	203973
enter avg vapor temperature	degrees F	70	70	70
enter nominal pressure in psig	lb/in2	14.70	14.70	14.70
temp in degrees rankin	degrees R	529.67	529.67	529.67
Ru = universal gas constant	psi ft3/(lbmol deg R)	10.73	10.73	10.73
R = specific gas constant air (R=Ru/mw)	(ft3 psi mol)/(R lbmol g)	0.37	0.37	0.37
molecular weight of air	lbm/lbmol	29	29	29
molecular weight of constituent	lbm/lbmol	133.4	96.94	88.11
density of air = P/(RT)= (psi R lbm)/(ft3 psi R) =lbm/ft3	lbm/ft3	0.1500	0.1500	0.1500
mass of air recovered per day= flow (ft3/day)*density (lb/ft3)	lbm/day	30599.3	30599.3	30599.3
moles of air recovered per day = mass air/day (lb/day) / mw (lbm/lbmol)	lbmol/ day	1055.15	1055.15	1055.15
moles of constituent recovered per day = ppmv/(10^6)* (lb mol/ day)	lbmol/day	1.05515E-05	6.3309E-05	0.001477209
mass of constituent recovered per day = (lbmol/day) * lbm/lbmol = lb/day	lbm/day	**0.00141**	**0.006**	**0.13**
September 2016 Recovery		**0.03**	**0.14**	**2.86**

Calculation of Mass Recovery Per Day and Per Month
SVE system
Kuhlman Electric Corporation
Crystal Springs, MS

OPERATING PARAMETER	UNITS	1,1,1-Trichloroethane	1,1-Dichloroethene	1,4-Dioxane
Constituent concentration	ppmv	**0.010**	**0.060**	**1.40**
enter avg flow rate in ACFM air	cubic ft/min	**141.65**	141.65	141.65
ave flow rate in cubic ft per day	ft3/day	203973	203973	203973
enter avg vapor temperature	degrees F	70	70	70
enter nominal pressure in psig	lb/in2	14.70	14.70	14.70
temp in degrees rankin	degrees R	529.67	529.67	529.67
Ru = universal gas constant	psi ft3/(lbmol deg R)	10.73	10.73	10.73
R = specific gas constant air (R=Ru/mw)	(ft3 psi mol)/(R lbmol g)	0.37	0.37	0.37
molecular weight of air	lbm/lbmol	29	29	29
molecular weight of constituent	lbm/lbmol	133.4	96.94	88.11
density of air = P/(RT)= (psi R lbm)/(ft3 psi R) =lbm/ft3	lbm/ft3	0.1500	0.1500	0.1500
mass of air recovered per day= flow (ft3/day)*density (lb/ft3)	lbm/day	30599.3	30599.3	30599.3
moles of air recovered per day = mass air/day (lb/day) / mw (lbm/lbmol)	lbmol/ day	1055.15	1055.15	1055.15
moles of constituent recovered per day = ppmv/(10^6)* (lb mol/ day)	lbmol/day	1.05515E-05	6.3309E-05	0.001477209
mass of constituent recovered per day = (lbmol/day) * lbm/lbmol = lb/day	lbm/day	**0.00141**	**0.006**	**0.13**
October 2016 Recovery		**0.02**	**0.10**	**2.21**

Calculation of Mass Recovery Per Day and Per Month
SVE system
Kuhlman Electric Corporation
Crystal Springs, MS

OPERATING PARAMETER	UNITS	1,1,1-Trichloroethane	1,1-Dichloroethene	1,4-Dioxane
Constituent concentration	ppmv	**0.011**	**0.057**	**1.20**
enter avg flow rate in ACFM air	cubic ft/min	**141.57**	141.57	141.57
ave flow rate in cubic ft per day	ft3/day	203862	203862	203862
enter avg vapor temperature	degrees F	70	70	70
enter nominal pressure in psig	lb/in2	14.70	14.70	14.70
temp in degrees rankin	degrees R	529.67	529.67	529.67
Ru = universal gas constant	psi ft3/(lbmol deg R)	10.73	10.73	10.73
R = specific gas constant air (R=Ru/mw)	(ft3 psi mol)/(R lbmol g)	0.37	0.37	0.37
molecular weight of air	lbm/lbmol	29	29	29
molecular weight of constituent	lbm/lbmol	133.4	96.94	88.11
density of air = P/(RT)= (psi R lbm)/(ft3 psi R) =lbm/ft3	lbm/ft3	0.1500	0.1500	0.1500
mass of air recovered per day= flow (ft3/day)*density (lb/ft3)	lbm/day	30582.8	30582.8	30582.8
moles of air recovered per day = mass air/day (lb/day) / mw (lbm/lbmol)	lbmol/ day	1054.58	1054.58	1054.58
moles of constituent recovered per day = ppmv/(10^6)* (lb mol/ day)	lbmol/day	1.16004E-05	6.01111E-05	0.001265496
mass of constituent recovered per day = (lbmol/day) * lbm/lbmol = lb/day	lbm/day	**0.00155**	**0.006**	**0.11**
November 2016 Recovery		**0.02**	**0.09**	**1.73**

Calculation of Mass Recovery Per Day and Per Month
SVE system
Kuhlman Electric Corporation
Crystal Springs, MS

OPERATING PARAMETER	UNITS	1,1,1-Trichloroethane	1,1-Dichloroethene	1,4-Dioxane
Constituent concentration	ppmv	**0.011**	**0.057**	**1.20**
enter avg flow rate in ACFM air	cubic ft/min	**141.52**	141.52	141.52
ave flow rate in cubic ft per day	ft3/day	203789	203789	203789
enter avg vapor temperature	degrees F	70	70	70
enter nominal pressure in psig	lb/in2	14.70	14.70	14.70
temp in degrees rankin	degrees R	529.67	529.67	529.67
Ru = universal gas constant	psi ft3/(lbmol deg R)	10.73	10.73	10.73
R = specific gas constant air (R=Ru/mw)	(ft3 psi mol)/(R lbmol g)	0.37	0.37	0.37
molecular weight of air	lbm/lbmol	29	29	29
molecular weight of constituent	lbm/lbmol	133.4	96.94	88.11
density of air = P/(RT)= (psi R lbm)/(ft3 psi R) =lbm/ft3	lbm/ft3	0.1500	0.1500	0.1500
mass of air recovered per day= flow (ft3/day)*density (lb/ft3)	lbm/day	30571.8	30571.8	30571.8
moles of air recovered per day = mass air/day (lb/day) / mw (lbm/lbmol)	lbmol/ day	1054.20	1054.20	1054.20
moles of constituent recovered per day = ppmv/(10^6)* (lb mol/ day)	lbmol/day	1.15962E-05	6.00894E-05	0.00126504
mass of constituent recovered per day = (lbmol/day) * lbm/lbmol = lb/day	lbm/day	**0.00155**	**0.006**	**0.11**
December 2016 Recovery		**0.05**	**0.18**	**3.46**

Appendix C

Ambient Air Sampling Laboratory

Analytical Results

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

September 30, 2016

Stephanie Kilgore
Environmental Management Services, Inc.
P.O. Box 15369
Hattiesburg, MS 39404

RE: SVE In Plant Monitoring / KUH0-16-011

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on September 19, 2016. For your reference, these analyses have been assigned our service request number P1604454.

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 Sue Anderson at 12:59 pm, Sep 30, 2016

Sue Anderson
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Environmental Management Services, Inc. Service Request No: P1604454
Project: SVE In Plant Monitoring / KUH0-16-011

CASE NARRATIVE

The samples were received intact under chain of custody on September 19, 2016 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.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation, however it is not part of the AIHA-LAP, LLC accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

Some compounds in the Continuing Calibration Verification (CCV) and Laboratory Control Sample (LCS) analyzed on September 21, 2016 exceeded the acceptance limits. However, the reported sample result associated with the CCV and LCS in question was for dilution of propene only, the acceptance limits for which were met, therefore, the results were not affected. No corrective action was necessary.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA-LAP, LLC	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
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	977273
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	4068-003
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	T104704413-16-7
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272016-6
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: Environmental Management Services, Inc. Service Request: P1604454

Project ID: SVE In Plant Monitoring / KUH0-16-011

Date Received: 9/19/2016

Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
Air Mon 01-22	P1604454-001	Air	9/12/2016	07:55	1SC00828	-1.80	7.44	X
Air Mon 02-22	P1604454-002	Air	9/12/2016	08:05	1SC01201	0.07	5.56	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No: F1604454

Company Name & Address (Reporting Information)
Environmental Management Services, Inc.
P.O. Box 15369
Hattiesburg, MS 39404

Project Name: SVE In Plant Monitoring

Project Number: KUHO-16-011

Project Manager: Stephanie Kilgore

P.O. # / Billing Information
KUHO-16-011
Same as reporting

Phone: 601-544-3674 Fax: 601-544-0504

Email Address for Result Reporting: skilgore@enil-mgt.com

Sampler (Print & Sign): Stephanie Kilgore / Stephanie Kilgore

ALS Contact:

Analysis Method: TO-15

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method		Comments e.g. Actual Preservative or specific instructions
Air Mon DI-22	1	9-12-16	7:55	ISC00828	DAD0979	30	6" Hg		X		
Air Mon DR-22	2	9-12-16	8:05	ISC01201	DAD1355	1.0	2" Hg		X		

5 of 25

Report Tier Levels - please select
Tier I - Results (Default in not specified) ____
Tier II (Results + QC Summaries) X
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: ____ Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Stephanie Kilgore	9/14/16	10:00	FedEx		
FedEx				9/19/16	0930

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1604454

Project: SVE In Plant Monitoring / KUH0-16-011

Sample(s) received on: 9/19/16 Date opened: 9/19/16 by: ADAVID

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	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	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?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**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
P1604454-001.01	1.0 L Source Can					
P1604454-002.01	1.0 L Source Can					

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: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 01-22** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1604454-001

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 9/19/16
Analyst: Evelyn Alvarez Date Analyzed: 9/20 - 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00828

Initial Pressure (psig): -1.80 Final Pressure (psig): 7.44

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**1,000**	22	6.0	**610**	12	3.5	**D**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	2.2	0.73	**0.44**	0.43	0.15	
74-87-3	Chloromethane	**1.3**	2.2	0.65	**0.65**	1.0	0.31	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.2	0.82	ND	0.31	0.12	
75-01-4	Vinyl Chloride	ND	2.2	0.73	ND	0.84	0.29	
106-99-0	1,3-Butadiene	ND	2.2	0.95	ND	0.97	0.43	
74-83-9	Bromomethane	ND	2.2	0.82	ND	0.55	0.21	
75-00-3	Chloroethane	ND	2.2	0.73	ND	0.82	0.28	
64-17-5	Ethanol	**930**	22	3.4	**500**	11	1.8	**B**
75-05-8	Acetonitrile	ND	2.2	0.77	ND	1.3	0.46	
107-02-8	Acrolein	**3.0**	8.6	0.73	**1.3**	3.8	0.32	**J**
67-64-1	Acetone	**650**	22	3.3	**280**	9.1	1.4	
75-69-4	Trichlorofluoromethane	**1.2**	2.2	0.73	**0.21**	0.38	0.13	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**76**	22	1.8	**31**	8.8	0.74	
107-13-1	Acrylonitrile	ND	2.2	0.73	ND	0.99	0.34	
75-35-4	1,1-Dichloroethene	ND	2.2	0.73	ND	0.54	0.18	
75-09-2	Methylene Chloride	**1.6**	2.2	0.73	**0.45**	0.62	0.21	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.2	0.69	ND	0.69	0.22	
76-13-1	Trichlorotrifluoroethane	ND	2.2	0.73	ND	0.28	0.095	
75-15-0	Carbon Disulfide	ND	22	0.65	ND	6.9	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	0.82	ND	0.54	0.21	
75-34-3	1,1-Dichloroethane	ND	2.2	0.69	ND	0.53	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	2.2	0.73	ND	0.60	0.20	
108-05-4	Vinyl Acetate	**8.1**	22	2.8	**2.3**	6.1	0.79	**J**
78-93-3	2-Butanone (MEK)	**29**	22	0.90	**9.8**	7.3	0.31	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
D = The reported result is from a dilution.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Air Mon 01-22** ALS Project ID: P1604454

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1604454-001

Test Code:	EPA TO-15	Date Collected:	9/12/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13	Date Received:	9/19/16
Analyst:	Evelyn Alvarez	Date Analyzed:	9/20 - 9/21/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)
Container ID:	1SC00828		

Initial Pressure (psig): -1.80 Final Pressure (psig): 7.44

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.2	0.69	ND	0.54	0.17	
141-78-6	Ethyl Acetate	**9.1**	4.3	1.5	**2.5**	1.2	0.42	
110-54-3	n-Hexane	**1.4**	2.2	0.65	**0.40**	0.61	0.18	**J**
67-66-3	Chloroform	ND	2.2	0.73	ND	0.44	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	2.2	0.86	ND	0.73	0.29	
107-06-2	1,2-Dichloroethane	ND	2.2	0.69	ND	0.53	0.17	
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.73	ND	0.39	0.13	
71-43-2	Benzene	ND	2.2	0.69	ND	0.67	0.22	
56-23-5	Carbon Tetrachloride	ND	2.2	0.65	ND	0.34	0.10	
110-82-7	Cyclohexane	ND	4.3	1.2	ND	1.2	0.36	
78-87-5	1,2-Dichloropropane	ND	2.2	0.69	ND	0.47	0.15	
75-27-4	Bromodichloromethane	ND	2.2	0.65	ND	0.32	0.096	
79-01-6	Trichloroethene	ND	2.2	0.60	ND	0.40	0.11	
123-91-1	1,4-Dioxane	ND	2.2	0.69	ND	0.60	0.19	
80-62-6	Methyl Methacrylate	ND	4.3	1.3	ND	1.1	0.33	
142-82-5	n-Heptane	**2.0**	2.2	0.73	**0.48**	0.52	0.18	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	0.60	ND	0.47	0.13	
108-10-1	4-Methyl-2-pentanone	**23**	2.2	0.69	**5.7**	0.52	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	0.69	ND	0.47	0.15	
79-00-5	1,1,2-Trichloroethane	ND	2.2	0.69	ND	0.39	0.13	
108-88-3	Toluene	**120**	2.2	0.73	**33**	0.57	0.19	
591-78-6	2-Hexanone	**1.2**	2.2	0.69	**0.30**	0.53	0.17	**J**
124-48-1	Dibromochloromethane	ND	2.2	0.69	ND	0.25	0.081	
106-93-4	1,2-Dibromoethane	ND	2.2	0.69	ND	0.28	0.090	
123-86-4	n-Butyl Acetate	**8.8**	2.2	0.69	**1.9**	0.45	0.14	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 01-22** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1604454-001

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 9/19/16
Analyst: Evelyn Alvarez Date Analyzed: 9/20 - 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00828

Initial Pressure (psig): -1.80 Final Pressure (psig): 7.44

Canister Dilution Factor: 1.72

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**1.2**	2.2	0.77	**0.26**	0.46	0.17	**J**
127-18-4	Tetrachloroethene	**1.3**	2.2	0.60	**0.19**	0.32	0.089	**J**
108-90-7	Chlorobenzene	ND	2.2	0.69	ND	0.47	0.15	
100-41-4	Ethylbenzene	**73**	2.2	0.69	**17**	0.50	0.16	
179601-23-1	m,p-Xylenes	**320**	4.3	1.3	**74**	0.99	0.30	
75-25-2	Bromoform	ND	2.2	0.65	ND	0.21	0.062	
100-42-5	Styrene	**2.3**	2.2	0.65	**0.54**	0.51	0.15	
95-47-6	o-Xylene	**110**	2.2	0.65	**25**	0.50	0.15	
111-84-2	n-Nonane	**2.2**	2.2	0.65	**0.42**	0.41	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	0.65	ND	0.31	0.094	
98-82-8	Cumene	**3.8**	2.2	0.65	**0.78**	0.44	0.13	
80-56-8	alpha-Pinene	**7.3**	2.2	0.60	**1.3**	0.39	0.11	
103-65-1	n-Propylbenzene	**10**	2.2	0.69	**2.1**	0.44	0.14	
622-96-8	4-Ethyltoluene	**15**	2.2	0.69	**3.0**	0.44	0.14	
108-67-8	1,3,5-Trimethylbenzene	**18**	2.2	0.69	**3.6**	0.44	0.14	
95-63-6	1,2,4-Trimethylbenzene	**32**	2.2	0.65	**6.5**	0.44	0.13	
100-44-7	Benzyl Chloride	ND	2.2	0.47	ND	0.42	0.091	
541-73-1	1,3-Dichlorobenzene	ND	2.2	0.65	ND	0.36	0.11	
106-46-7	1,4-Dichlorobenzene	**75**	2.2	0.60	**12**	0.36	0.10	
95-50-1	1,2-Dichlorobenzene	ND	2.2	0.65	ND	0.36	0.11	
5989-27-5	d-Limonene	**3.9**	2.2	0.60	**0.69**	0.39	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.2	0.43	ND	0.22	0.044	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	0.69	ND	0.29	0.093	
91-20-3	Naphthalene	ND	2.2	0.77	ND	0.41	0.15	
87-68-3	Hexachlorobutadiene	ND	2.2	0.60	ND	0.20	0.056	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-22** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1604454-002

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 9/19/16
Analyst: Evelyn Alvarez Date Analyzed: 9/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01201

Initial Pressure (psig): 0.07 Final Pressure (psig): 5.56

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**61**	1.7	0.48	**35**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.7	0.58	**0.44**	0.35	0.12	
74-87-3	Chloromethane	**1.1**	1.7	0.51	**0.55**	0.83	0.25	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.7	0.65	ND	0.25	0.093	
75-01-4	Vinyl Chloride	ND	1.7	0.58	ND	0.67	0.23	
106-99-0	1,3-Butadiene	ND	1.7	0.75	ND	0.77	0.34	
74-83-9	Bromomethane	ND	1.7	0.65	ND	0.44	0.17	
75-00-3	Chloroethane	ND	1.7	0.58	ND	0.65	0.22	
64-17-5	Ethanol	**520**	17	2.7	**280**	9.1	1.5	**B**
75-05-8	Acetonitrile	ND	1.7	0.62	ND	1.0	0.37	
107-02-8	Acrolein	**5.2**	6.9	0.58	**2.3**	3.0	0.25	**J**
67-64-1	Acetone	**340**	17	2.6	**140**	7.2	1.1	
75-69-4	Trichlorofluoromethane	**1.2**	1.7	0.58	**0.21**	0.30	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**240**	17	1.4	**99**	7.0	0.59	
107-13-1	Acrylonitrile	ND	1.7	0.58	ND	0.79	0.27	
75-35-4	1,1-Dichloroethene	ND	1.7	0.58	ND	0.43	0.15	
75-09-2	Methylene Chloride	**2.4**	1.7	0.58	**0.68**	0.49	0.17	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	0.55	ND	0.55	0.18	
76-13-1	Trichlorotrifluoroethane	**0.78**	1.7	0.58	**0.10**	0.22	0.076	**J**
75-15-0	Carbon Disulfide	**0.78**	17	0.51	**0.25**	5.5	0.17	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.7	0.65	ND	0.43	0.16	
75-34-3	1,1-Dichloroethane	ND	1.7	0.55	ND	0.42	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.58	ND	0.48	0.16	
108-05-4	Vinyl Acetate	ND	17	2.2	ND	4.9	0.63	
78-93-3	2-Butanone (MEK)	**15**	17	0.72	**5.0**	5.8	0.24	**J**

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-22** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1604454-002

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 9/19/16
Analyst: Evelyn Alvarez Date Analyzed: 9/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01201

Initial Pressure (psig): 0.07 Final Pressure (psig): 5.56

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.7	0.55	ND	0.43	0.14	
141-78-6	Ethyl Acetate	**190**	3.4	1.2	**54**	0.95	0.33	
110-54-3	n-Hexane	**3.9**	1.7	0.51	**1.1**	0.49	0.15	
67-66-3	Chloroform	ND	1.7	0.58	ND	0.35	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.69	ND	0.58	0.23	
107-06-2	1,2-Dichloroethane	**0.88**	1.7	0.55	**0.22**	0.42	0.14	**J**
71-55-6	1,1,1-Trichloroethane	ND	1.7	0.58	ND	0.31	0.11	
71-43-2	Benzene	**1.6**	1.7	0.55	**0.49**	0.54	0.17	**J**
56-23-5	Carbon Tetrachloride	**0.54**	1.7	0.51	**0.086**	0.27	0.082	**J**
110-82-7	Cyclohexane	**16**	3.4	0.99	**4.6**	1.0	0.29	
78-87-5	1,2-Dichloropropane	ND	1.7	0.55	ND	0.37	0.12	
75-27-4	Bromodichloromethane	ND	1.7	0.51	ND	0.26	0.077	
79-01-6	Trichloroethene	ND	1.7	0.48	ND	0.32	0.089	
123-91-1	1,4-Dioxane	ND	1.7	0.55	ND	0.48	0.15	
80-62-6	Methyl Methacrylate	ND	3.4	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	**1.6**	1.7	0.58	**0.38**	0.42	0.14	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	0.48	ND	0.38	0.11	
108-10-1	4-Methyl-2-pentanone	**3.8**	1.7	0.55	**0.92**	0.42	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	0.55	ND	0.38	0.12	
79-00-5	1,1,2-Trichloroethane	ND	1.7	0.55	ND	0.31	0.10	
108-88-3	Toluene	**42**	1.7	0.58	**11**	0.45	0.15	
591-78-6	2-Hexanone	ND	1.7	0.55	ND	0.42	0.13	
124-48-1	Dibromochloromethane	ND	1.7	0.55	ND	0.20	0.064	
106-93-4	1,2-Dibromoethane	ND	1.7	0.55	ND	0.22	0.071	
123-86-4	n-Butyl Acetate	**2.9**	1.7	0.55	**0.60**	0.36	0.12	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-22** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1604454-002

Test Code: EPA TO-15 Date Collected: 9/12/16
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 9/19/16
Analyst: Evelyn Alvarez Date Analyzed: 9/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01201

Initial Pressure (psig): 0.07 Final Pressure (psig): 5.56

Canister Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**3.3**	1.7	0.62	**0.71**	0.37	0.13	
127-18-4	Tetrachloroethene	**0.53**	1.7	0.48	**0.078**	0.25	0.071	**J**
108-90-7	Chlorobenzene	**1.3**	1.7	0.55	**0.27**	0.37	0.12	**J**
100-41-4	Ethylbenzene	**15**	1.7	0.55	**3.5**	0.39	0.13	
179601-23-1	m,p-Xylenes	**64**	3.4	1.0	**15**	0.79	0.24	
75-25-2	Bromoform	ND	1.7	0.51	ND	0.17	0.050	
100-42-5	Styrene	**2.3**	1.7	0.51	**0.54**	0.40	0.12	
95-47-6	o-Xylene	**19**	1.7	0.51	**4.5**	0.39	0.12	
111-84-2	n-Nonane	**1.9**	1.7	0.51	**0.36**	0.33	0.098	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.51	ND	0.25	0.075	
98-82-8	Cumene	**0.86**	1.7	0.51	**0.17**	0.35	0.10	**J**
80-56-8	alpha-Pinene	**31**	1.7	0.48	**5.7**	0.31	0.086	
103-65-1	n-Propylbenzene	**1.7**	1.7	0.55	**0.35**	0.35	0.11	**J**
622-96-8	4-Ethyltoluene	**2.1**	1.7	0.55	**0.44**	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	**3.4**	1.7	0.55	**0.68**	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**5.9**	1.7	0.51	**1.2**	0.35	0.10	
100-44-7	Benzyl Chloride	ND	1.7	0.38	ND	0.33	0.073	
541-73-1	1,3-Dichlorobenzene	ND	1.7	0.51	ND	0.28	0.085	
106-46-7	1,4-Dichlorobenzene	**4.5**	1.7	0.48	**0.74**	0.28	0.080	
95-50-1	1,2-Dichlorobenzene	ND	1.7	0.51	ND	0.28	0.085	
5989-27-5	d-Limonene	**34**	1.7	0.48	**6.1**	0.31	0.086	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	0.34	ND	0.18	0.035	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	0.55	ND	0.23	0.074	
91-20-3	Naphthalene	ND	1.7	0.62	ND	0.33	0.12	
87-68-3	Hexachlorobutadiene	ND	1.7	0.48	ND	0.16	0.045	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604454

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160920-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Evelyn Alvarez Date Analyzed: 9/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	**1.1**	5.0	0.80	**0.57**	2.7	0.42	**J**
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	ND	5.0	0.77	ND	2.1	0.32	
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604454

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160920-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Evelyn Alvarez Date Analyzed: 9/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604454

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160920-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Evelyn Alvarez Date Analyzed: 9/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160921-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	**0.90**	5.0	0.80	**0.48**	2.7	0.42	**J**
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	ND	5.0	0.77	ND	2.1	0.32	
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1604454

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160921-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Evelyn Alvarez Date Analyzed: 9/21/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160921-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

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

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Environmental Management Services, Inc.**
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Project ID: P1604454

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 9/12/16
Analyst: Evelyn Alvarez Date(s) Received: 9/19/16
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 9/20 - 9/21/16
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P160920-MB	**88**	**103**	**109**	70-130	
Method Blank	P160921-MB	**85**	**107**	**103**	70-130	
Lab Control Sample	P160920-LCS	**88**	**102**	**110**	70-130	
Lab Control Sample	P160921-LCS	**83**	**105**	**105**	70-130	
Air Mon 01-22	P1604454-001	**81**	**108**	**109**	70-130	
Air Mon 02-22	P1604454-002	**82**	**108**	**108**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160920-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	196	**167**	**85**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**186**	**99**	65-117	
74-87-3	Chloromethane	200	**190**	**95**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**218**	**107**	65-122	
75-01-4	Vinyl Chloride	200	**205**	**103**	65-128	
106-99-0	1,3-Butadiene	206	**260**	**126**	62-143	
74-83-9	Bromomethane	202	**227**	**112**	65-130	
75-00-3	Chloroethane	200	**199**	**100**	69-126	
64-17-5	Ethanol	998	**1030**	**103**	57-126	
75-05-8	Acetonitrile	212	**172**	**81**	51-134	
107-02-8	Acrolein	214	**169**	**79**	55-146	
67-64-1	Acetone	1,080	**992**	**92**	57-120	
75-69-4	Trichlorofluoromethane	216	**192**	**89**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**393**	**94**	59-129	
107-13-1	Acrylonitrile	212	**201**	**95**	64-136	
75-35-4	1,1-Dichloroethene	216	**232**	**107**	72-123	
75-09-2	Methylene Chloride	222	**224**	**101**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**187**	**86**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**232**	**105**	68-118	
75-15-0	Carbon Disulfide	210	**179**	**85**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**212**	**101**	69-129	
75-34-3	1,1-Dichloroethane	212	**201**	**95**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**209**	**97**	55-128	
108-05-4	Vinyl Acetate	1,040	**1100**	**106**	66-140	
78-93-3	2-Butanone (MEK)	220	**228**	**104**	62-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160920-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	218	**215**	**99**	65-125	
141-78-6	Ethyl Acetate	428	**436**	**102**	64-132	
110-54-3	n-Hexane	212	**175**	**83**	58-126	
67-66-3	Chloroform	224	**215**	**96**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**207**	**94**	64-123	
107-06-2	1,2-Dichloroethane	214	**205**	**96**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**221**	**105**	68-120	
71-43-2	Benzene	226	**228**	**101**	61-110	
56-23-5	Carbon Tetrachloride	230	**229**	**100**	65-137	
110-82-7	Cyclohexane	424	**445**	**105**	68-122	
78-87-5	1,2-Dichloropropane	216	**213**	**99**	67-122	
75-27-4	Bromodichloromethane	218	**233**	**107**	71-124	
79-01-6	Trichloroethene	216	**234**	**108**	71-121	
123-91-1	1,4-Dioxane	210	**252**	**120**	67-122	
80-62-6	Methyl Methacrylate	422	**462**	**109**	76-130	
142-82-5	n-Heptane	216	**217**	**100**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**225**	**108**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**222**	**101**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**233**	**111**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**238**	**110**	73-121	
108-88-3	Toluene	218	**223**	**102**	67-117	
591-78-6	2-Hexanone	220	**217**	**99**	59-128	
124-48-1	Dibromochloromethane	220	**267**	**121**	73-132	
106-93-4	1,2-Dibromoethane	218	**256**	**117**	73-128	
123-86-4	n-Butyl Acetate	226	**238**	**105**	61-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160920-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	210	**205**	**98**	67-124	
127-18-4	Tetrachloroethene	202	**229**	**113**	65-126	
108-90-7	Chlorobenzene	220	**239**	**109**	68-120	
100-41-4	Ethylbenzene	218	**236**	**108**	69-123	
179601-23-1	m,p-Xylenes	428	**474**	**111**	67-125	
75-25-2	Bromoform	228	**249**	**109**	68-153	
100-42-5	Styrene	222	**253**	**114**	68-132	
95-47-6	o-Xylene	210	**235**	**112**	67-124	
111-84-2	n-Nonane	204	**184**	**90**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**232**	**110**	72-128	
98-82-8	Cumene	208	**233**	**112**	67-124	
80-56-8	alpha-Pinene	212	**238**	**112**	67-129	
103-65-1	n-Propylbenzene	204	**227**	**111**	67-125	
622-96-8	4-Ethyltoluene	214	**247**	**115**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**240**	**112**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**256**	**117**	62-134	
100-44-7	Benzyl Chloride	220	**249**	**113**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**268**	**118**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**254**	**122**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**269**	**122**	62-134	
5989-27-5	d-Limonene	210	**242**	**115**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**235**	**108**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**243**	**106**	60-145	
91-20-3	Naphthalene	218	**243**	**111**	56-158	
87-68-3	Hexachlorobutadiene	230	**234**	**102**	56-139	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	196	**162**	**83**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**187**	**99**	65-117	
74-87-3	Chloromethane	200	**189**	**95**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**225**	**110**	65-122	
75-01-4	Vinyl Chloride	200	**206**	**103**	65-128	
106-99-0	1,3-Butadiene	206	**240**	**117**	62-143	
74-83-9	Bromomethane	202	**233**	**115**	65-130	
75-00-3	Chloroethane	200	**203**	**102**	69-126	
64-17-5	Ethanol	998	**996**	**100**	57-126	
75-05-8	Acetonitrile	212	**167**	**79**	51-134	
107-02-8	Acrolein	214	**169**	**79**	55-146	
67-64-1	Acetone	1,080	**986**	**91**	57-120	
75-69-4	Trichlorofluoromethane	216	**198**	**92**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**388**	**93**	59-129	
107-13-1	Acrylonitrile	212	**200**	**94**	64-136	
75-35-4	1,1-Dichloroethene	216	**240**	**111**	72-123	
75-09-2	Methylene Chloride	222	**230**	**104**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**183**	**84**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**239**	**109**	68-118	
75-15-0	Carbon Disulfide	210	**182**	**87**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**214**	**102**	69-129	
75-34-3	1,1-Dichloroethane	212	**203**	**96**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**179**	**83**	55-128	
108-05-4	Vinyl Acetate	1,040	**1120**	**108**	66-140	
78-93-3	2-Butanone (MEK)	220	**231**	**105**	62-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	218	**216**	**99**	65-125	
141-78-6	Ethyl Acetate	428	**434**	**101**	64-132	
110-54-3	n-Hexane	212	**177**	**83**	58-126	
67-66-3	Chloroform	224	**218**	**97**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**210**	**95**	64-123	
107-06-2	1,2-Dichloroethane	214	**205**	**96**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**229**	**109**	68-120	
71-43-2	Benzene	226	**237**	**105**	61-110	
56-23-5	Carbon Tetrachloride	230	**241**	**105**	65-137	
110-82-7	Cyclohexane	424	**461**	**109**	68-122	
78-87-5	1,2-Dichloropropane	216	**219**	**101**	67-122	
75-27-4	Bromodichloromethane	218	**242**	**111**	71-124	
79-01-6	Trichloroethene	216	**248**	**115**	71-121	
123-91-1	1,4-Dioxane	210	**262**	**125**	67-122	**L**
80-62-6	Methyl Methacrylate	422	**487**	**115**	76-130	
142-82-5	n-Heptane	216	**227**	**105**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**235**	**113**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**228**	**104**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**241**	**115**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**248**	**115**	73-121	
108-88-3	Toluene	218	**244**	**112**	67-117	
591-78-6	2-Hexanone	220	**227**	**103**	59-128	
124-48-1	Dibromochloromethane	220	**297**	**135**	73-132	**L**
106-93-4	1,2-Dibromoethane	218	**279**	**128**	73-128	
123-86-4	n-Butyl Acetate	226	**250**	**111**	61-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1604454
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P160921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Evelyn Alvarez Date Analyzed: 9/21/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
111-65-9	n-Octane	210	**220**	**105**	67-124	
127-18-4	Tetrachloroethene	202	**255**	**126**	65-126	
108-90-7	Chlorobenzene	220	**263**	**120**	68-120	
100-41-4	Ethylbenzene	218	**257**	**118**	69-123	
179601-23-1	m,p-Xylenes	428	**515**	**120**	67-125	
75-25-2	Bromoform	228	**277**	**121**	68-153	
100-42-5	Styrene	222	**275**	**124**	68-132	
95-47-6	o-Xylene	210	**254**	**121**	67-124	
111-84-2	n-Nonane	204	**191**	**94**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**249**	**119**	72-128	
98-82-8	Cumene	208	**251**	**121**	67-124	
80-56-8	alpha-Pinene	212	**257**	**121**	67-129	
103-65-1	n-Propylbenzene	204	**244**	**120**	67-125	
622-96-8	4-Ethyltoluene	214	**267**	**125**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**259**	**121**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**275**	**126**	62-134	
100-44-7	Benzyl Chloride	220	**266**	**121**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**291**	**128**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**274**	**132**	62-129	**L**
95-50-1	1,2-Dichlorobenzene	220	**291**	**132**	62-134	
5989-27-5	d-Limonene	210	**253**	**120**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**255**	**117**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**262**	**114**	60-145	
91-20-3	Naphthalene	218	**260**	**119**	56-158	
87-68-3	Hexachlorobutadiene	230	**253**	**110**	56-139	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

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LABORATORY REPORT

December 28, 2016

Stephanie Kilgore
Environmental Management Services, Inc.
P.O. Box 15369
Hattiesburg, MS 39404

RE: SVE In Plant Monitoring / KUH0-16-011

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on December 12, 2016. For your reference, these analyses have been assigned our service request number P1605767.

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 Sue Anderson at 11:17 am, Dec 28, 2016

Sue Anderson
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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F: +1 805 526 7270
www.alsglobal.com

Client: Environmental Management Services, Inc. Service Request No: P1605767
Project: SVE In Plant Monitoring / KUH0-16-011

CASE NARRATIVE

The samples were received intact under chain of custody on December 12, 2016 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.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The spike recoveries of dichlorodifluoromethane, trichlorofluoromethane, 2-propanol and 1,2-dichloroethane for the Laboratory Control Sample (LCS) analyzed on December 16, 2016 were outside the laboratory generated control criteria. The recovery errors equate to a potential high bias. However, the spike recovery of the analytes in question was within the method criteria; therefore, the data quality has not been significantly affected. No corrective action was taken.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
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	4068-003
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-16-7
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272016-6
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: Environmental Management Services, Inc. Service Request: P1605767

Project ID: SVE In Plant Monitoring / KUH0-16-011

Date Received: 12/12/2016

Time Received: 11:45

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
Air Mon 01-23	P1605767-001	Air	12/6/2016	08:05	1SC00456	-2.12	5.33	X
Air Mon 02-23	P1605767-002	Air	12/6/2016	08:10	1SC00313	-2.86	5.03	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. R1605767

Company Name & Address (Reporting Information)
Environmental Management Services Inc.
P.O. Box 15369
Hattiesburg, MS 39404

Project Name: SVE In Plant Monitoring

Project Number: ~~SVE~~ KUHO-16-011

Project Manager: Stephanie Kilgore

P.O. # / Billing Information: KUHO-16-011 same as reporting / ~~Stephanie Kilgore~~

Phone: 601-544-3674 Fax: 601-544-0504

Email Address for Result Reporting: SKilgore@env-mgt.com

Sampler (Print & Sign): Stephanie Kilgore

ALS Contact:

Analysis Method: TO-15

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15		Comments e.g. Actual Preservative or specific instructions
Air Mon D1-23	1	12-6-16	8:05	1SCD04576	DAD0218	30	6		X		
Air Mon D2-23	2	12-6-16	8:10	1SCD0313	DAD0617	29	5		X		

Report Tier Levels - please select

Tier I - Results (Default in not specified) ____
Tier II (Results + QC Summaries X
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: ____ Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Stephanie Kilgore	12-8-16	8:56	Fed Ex		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				12/12/16	1145

Cooler / Blank Temperature ____ °C

5 of 25

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1605767

Project: SVE In Plant Monitoring / KUH0-16-011

Sample(s) received on: 12/12/16 Date opened: 12/12/16 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	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	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?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**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
P1605767-001.01	1.0 L Source Can					
P1605767-002.01	1.0 L Source Can					

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: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 01-23** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1605767-001

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00456

Initial Pressure (psig): -2.12 Final Pressure (psig): 5.33

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**1,100**	20	5.6	**630**	12	3.2	**D**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.8**	2.0	0.68	**0.57**	0.40	0.14	
74-87-3	Chloromethane	**1.2**	2.0	0.60	**0.59**	0.96	0.29	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.0	0.76	ND	0.28	0.11	
75-01-4	Vinyl Chloride	ND	2.0	0.68	ND	0.78	0.26	
106-99-0	1,3-Butadiene	ND	2.0	0.87	ND	0.90	0.40	
74-83-9	Bromomethane	ND	2.0	0.76	ND	0.51	0.19	
75-00-3	Chloroethane	ND	2.0	0.68	ND	0.75	0.26	
64-17-5	Ethanol	**2,000**	200	32	**1,000**	110	17	**D**
75-05-8	Acetonitrile	ND	2.0	0.72	ND	1.2	0.43	
107-02-8	Acrolein	**1.7**	8.0	0.68	**0.72**	3.5	0.29	**J**
67-64-1	Acetone	**140**	20	3.1	**61**	8.4	1.3	**B**
75-69-4	Trichlorofluoromethane	**1.4**	2.0	0.68	**0.25**	0.35	0.12	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**20**	20	1.7	**8.0**	8.1	0.68	**J**
107-13-1	Acrylonitrile	ND	2.0	0.68	ND	0.92	0.31	
75-35-4	1,1-Dichloroethene	ND	2.0	0.68	ND	0.50	0.17	
75-09-2	Methylene Chloride	ND	2.0	0.68	ND	0.57	0.19	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.0	0.64	ND	0.64	0.20	
76-13-1	Trichlorotrifluoroethane	ND	2.0	0.68	ND	0.26	0.088	
75-15-0	Carbon Disulfide	ND	20	0.60	ND	6.4	0.19	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.76	ND	0.50	0.19	
75-34-3	1,1-Dichloroethane	ND	2.0	0.64	ND	0.49	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	2.0	0.68	ND	0.55	0.19	
108-05-4	Vinyl Acetate	ND	20	2.6	ND	5.6	0.73	
78-93-3	2-Butanone (MEK)	**30**	20	0.83	**10**	6.7	0.28	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
D = The reported result is from a dilution.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Air Mon 01-23** ALS Project ID: P1605767

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1605767-001

Test Code:	EPA TO-15	Date Collected:	12/6/16
Instrument ID:	Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9	Date Received:	12/12/16
Analyst:	Simon Cao	Date Analyzed:	12/16/16 & 12/20/16
Sample Type:	1.0 L Summa Canister	Volume(s) Analyzed:	0.40 Liter(s)
Test Notes:			0.040 Liter(s)
Container ID:	1SC00456		

Initial Pressure (psig): -2.12 Final Pressure (psig): 5.33

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.64	ND	0.50	0.16	
141-78-6	Ethyl Acetate	**60**	4.0	1.4	**17**	1.1	0.39	
110-54-3	n-Hexane	**5.3**	2.0	0.60	**1.5**	0.56	0.17	
67-66-3	Chloroform	ND	2.0	0.68	ND	0.41	0.14	
109-99-9	Tetrahydrofuran (THF)	**6.0**	2.0	0.80	**2.0**	0.67	0.27	
107-06-2	1,2-Dichloroethane	ND	2.0	0.64	ND	0.49	0.16	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.68	ND	0.36	0.12	
71-43-2	Benzene	**1.3**	2.0	0.64	**0.41**	0.62	0.20	**J**
56-23-5	Carbon Tetrachloride	ND	2.0	0.60	ND	0.32	0.095	
110-82-7	Cyclohexane	**3.7**	4.0	1.2	**1.1**	1.2	0.34	**J**
78-87-5	1,2-Dichloropropane	ND	2.0	0.64	ND	0.43	0.14	
75-27-4	Bromodichloromethane	ND	2.0	0.60	ND	0.30	0.089	
79-01-6	Trichloroethene	ND	2.0	0.56	ND	0.37	0.10	
123-91-1	1,4-Dioxane	**3.0**	2.0	0.64	**0.82**	0.55	0.18	
80-62-6	Methyl Methacrylate	ND	4.0	1.2	ND	0.97	0.30	
142-82-5	n-Heptane	**10**	2.0	0.68	**2.5**	0.49	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.56	ND	0.44	0.12	
108-10-1	4-Methyl-2-pentanone	**29**	2.0	0.64	**7.2**	0.49	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.64	ND	0.44	0.14	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.64	ND	0.36	0.12	
108-88-3	Toluene	**67**	2.0	0.68	**18**	0.53	0.18	
591-78-6	2-Hexanone	ND	2.0	0.64	ND	0.49	0.16	
124-48-1	Dibromochloromethane	ND	2.0	0.64	ND	0.23	0.075	
106-93-4	1,2-Dibromoethane	ND	2.0	0.64	ND	0.26	0.083	
123-86-4	n-Butyl Acetate	**6.1**	2.0	0.64	**1.3**	0.42	0.13	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 01-23** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1605767-001

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16 & 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00456

Initial Pressure (psig): -2.12 Final Pressure (psig): 5.33

Canister Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**3.4**	2.0	0.72	**0.73**	0.43	0.15	
127-18-4	Tetrachloroethene	**1.2**	2.0	0.56	**0.18**	0.29	0.082	**J**
108-90-7	Chlorobenzene	ND	2.0	0.64	ND	0.43	0.14	
100-41-4	Ethylbenzene	**43**	2.0	0.64	**9.9**	0.46	0.15	
179601-23-1	m,p-Xylenes	**210**	4.0	1.2	**49**	0.92	0.27	
75-25-2	Bromoform	ND	2.0	0.60	ND	0.19	0.058	
100-42-5	Styrene	**3.6**	2.0	0.60	**0.85**	0.47	0.14	
95-47-6	o-Xylene	**73**	2.0	0.60	**17**	0.46	0.14	
111-84-2	n-Nonane	**5.7**	2.0	0.60	**1.1**	0.38	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.60	ND	0.29	0.087	
98-82-8	Cumene	**5.4**	2.0	0.60	**1.1**	0.40	0.12	
80-56-8	alpha-Pinene	**5.2**	2.0	0.56	**0.93**	0.36	0.10	
103-65-1	n-Propylbenzene	**18**	2.0	0.64	**3.7**	0.40	0.13	
622-96-8	4-Ethyltoluene	**27**	2.0	0.64	**5.5**	0.40	0.13	
108-67-8	1,3,5-Trimethylbenzene	**29**	2.0	0.64	**5.8**	0.40	0.13	
95-63-6	1,2,4-Trimethylbenzene	**74**	2.0	0.60	**15**	0.40	0.12	
100-44-7	Benzyl Chloride	ND	2.0	0.44	ND	0.38	0.084	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.60	ND	0.33	0.099	
106-46-7	1,4-Dichlorobenzene	**48**	2.0	0.56	**8.0**	0.33	0.093	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.60	ND	0.33	0.099	
5989-27-5	d-Limonene	**8.1**	2.0	0.56	**1.5**	0.36	0.10	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.39	ND	0.21	0.041	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.64	ND	0.27	0.086	
91-20-3	Naphthalene	ND	2.0	0.72	ND	0.38	0.14	
87-68-3	Hexachlorobutadiene	ND	2.0	0.56	ND	0.19	0.052	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-23** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1605767-002

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00313

Initial Pressure (psig): -2.86 Final Pressure (psig): 5.03

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**230**	2.1	0.58	**130**	1.2	0.34	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.8**	2.1	0.71	**0.57**	0.42	0.14	
74-87-3	Chloromethane	**1.3**	2.1	0.63	**0.63**	1.0	0.30	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.1	0.79	ND	0.30	0.11	
75-01-4	Vinyl Chloride	ND	2.1	0.71	ND	0.82	0.28	
106-99-0	1,3-Butadiene	ND	2.1	0.92	ND	0.94	0.42	
74-83-9	Bromomethane	ND	2.1	0.79	ND	0.54	0.20	
75-00-3	Chloroethane	ND	2.1	0.71	ND	0.79	0.27	
64-17-5	Ethanol	**1,700**	21	3.3	**910**	11	1.8	
75-05-8	Acetonitrile	ND	2.1	0.75	ND	1.2	0.45	
107-02-8	Acrolein	**2.8**	8.4	0.71	**1.2**	3.6	0.31	**J**
67-64-1	Acetone	**130**	21	3.2	**53**	8.8	1.4	**B**
75-69-4	Trichlorofluoromethane	**1.5**	2.1	0.71	**0.27**	0.37	0.13	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**8.4**	21	1.8	**3.4**	8.5	0.71	**J**
107-13-1	Acrylonitrile	ND	2.1	0.71	ND	0.96	0.33	
75-35-4	1,1-Dichloroethene	ND	2.1	0.71	ND	0.53	0.18	
75-09-2	Methylene Chloride	ND	2.1	0.71	ND	0.60	0.20	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.1	0.67	ND	0.67	0.21	
76-13-1	Trichlorotrifluoroethane	ND	2.1	0.71	ND	0.27	0.093	
75-15-0	Carbon Disulfide	ND	21	0.63	ND	6.7	0.20	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.79	ND	0.53	0.20	
75-34-3	1,1-Dichloroethane	ND	2.1	0.67	ND	0.52	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	2.1	0.71	ND	0.58	0.20	
108-05-4	Vinyl Acetate	**13**	21	2.7	**3.6**	5.9	0.77	**J**
78-93-3	2-Butanone (MEK)	**23**	21	0.88	**7.9**	7.1	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-23** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1605767-002

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00313

Initial Pressure (psig): -2.86 Final Pressure (psig): 5.03

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.1	0.67	ND	0.53	0.17	
141-78-6	Ethyl Acetate	**41**	4.2	1.5	**11**	1.2	0.41	
110-54-3	n-Hexane	**3.7**	2.1	0.63	**1.0**	0.59	0.18	
67-66-3	Chloroform	ND	2.1	0.71	ND	0.43	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	2.1	0.84	ND	0.71	0.28	
107-06-2	1,2-Dichloroethane	ND	2.1	0.67	ND	0.52	0.17	
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.71	ND	0.38	0.13	
71-43-2	Benzene	**1.4**	2.1	0.67	**0.44**	0.65	0.21	**J**
56-23-5	Carbon Tetrachloride	ND	2.1	0.63	ND	0.33	0.10	
110-82-7	Cyclohexane	**2.2**	4.2	1.2	**0.65**	1.2	0.35	**J**
78-87-5	1,2-Dichloropropane	ND	2.1	0.67	ND	0.45	0.14	
75-27-4	Bromodichloromethane	ND	2.1	0.63	ND	0.31	0.094	
79-01-6	Trichloroethene	ND	2.1	0.58	ND	0.39	0.11	
123-91-1	1,4-Dioxane	**1.0**	2.1	0.67	**0.29**	0.58	0.19	**J**
80-62-6	Methyl Methacrylate	ND	4.2	1.3	ND	1.0	0.32	
142-82-5	n-Heptane	**6.3**	2.1	0.71	**1.5**	0.51	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.58	ND	0.46	0.13	
108-10-1	4-Methyl-2-pentanone	**19**	2.1	0.67	**4.6**	0.51	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.67	ND	0.46	0.15	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.67	ND	0.38	0.12	
108-88-3	Toluene	**43**	2.1	0.71	**11**	0.55	0.19	
591-78-6	2-Hexanone	**1.3**	2.1	0.67	**0.33**	0.51	0.16	**J**
124-48-1	Dibromochloromethane	ND	2.1	0.67	ND	0.25	0.078	
106-93-4	1,2-Dibromoethane	ND	2.1	0.67	ND	0.27	0.087	
123-86-4	n-Butyl Acetate	**6.0**	2.1	0.67	**1.3**	0.44	0.14	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-23** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P1605767-002

Test Code: EPA TO-15 Date Collected: 12/6/16
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 12/12/16
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00313

Initial Pressure (psig): -2.86 Final Pressure (psig): 5.03

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**2.0**	2.1	0.75	**0.42**	0.45	0.16	**J**
127-18-4	Tetrachloroethene	**0.66**	2.1	0.58	**0.097**	0.31	0.086	**J**
108-90-7	Chlorobenzene	ND	2.1	0.67	ND	0.45	0.15	
100-41-4	Ethylbenzene	**30**	2.1	0.67	**6.9**	0.48	0.15	
179601-23-1	m,p-Xylenes	**130**	4.2	1.3	**30**	0.96	0.29	
75-25-2	Bromoform	ND	2.1	0.63	ND	0.20	0.061	
100-42-5	Styrene	**1.1**	2.1	0.63	**0.26**	0.49	0.15	**J**
95-47-6	o-Xylene	**41**	2.1	0.63	**9.4**	0.48	0.14	
111-84-2	n-Nonane	**2.1**	2.1	0.63	**0.41**	0.40	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.63	ND	0.30	0.091	
98-82-8	Cumene	**3.0**	2.1	0.63	**0.60**	0.42	0.13	
80-56-8	alpha-Pinene	**3.5**	2.1	0.58	**0.63**	0.37	0.10	
103-65-1	n-Propylbenzene	**6.4**	2.1	0.67	**1.3**	0.42	0.14	
622-96-8	4-Ethyltoluene	**8.4**	2.1	0.67	**1.7**	0.42	0.14	
108-67-8	1,3,5-Trimethylbenzene	**8.8**	2.1	0.67	**1.8**	0.42	0.14	
95-63-6	1,2,4-Trimethylbenzene	**14**	2.1	0.63	**2.9**	0.42	0.13	
100-44-7	Benzyl Chloride	ND	2.1	0.46	ND	0.40	0.089	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.63	ND	0.35	0.10	
106-46-7	1,4-Dichlorobenzene	**2.3**	2.1	0.58	**0.38**	0.35	0.097	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.63	ND	0.35	0.10	
5989-27-5	d-Limonene	**2.2**	2.1	0.58	**0.39**	0.37	0.10	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.1	0.41	ND	0.22	0.043	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.67	ND	0.28	0.090	
91-20-3	Naphthalene	ND	2.1	0.75	ND	0.40	0.14	
87-68-3	Hexachlorobutadiene	ND	2.1	0.58	ND	0.20	0.055	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161216-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	**0.78**	5.0	0.77	**0.33**	2.1	0.32	**J**
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605767

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161216-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/16/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605767

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161216-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/16/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Method Blank** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161220-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	0.14	ND	0.29	0.081	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.17	ND	0.10	0.034	
74-87-3	Chloromethane	ND	0.50	0.15	ND	0.24	0.073	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.19	ND	0.072	0.027	
75-01-4	Vinyl Chloride	ND	0.50	0.17	ND	0.20	0.067	
106-99-0	1,3-Butadiene	ND	0.50	0.22	ND	0.23	0.099	
74-83-9	Bromomethane	ND	0.50	0.19	ND	0.13	0.049	
75-00-3	Chloroethane	ND	0.50	0.17	ND	0.19	0.064	
64-17-5	Ethanol	ND	5.0	0.80	ND	2.7	0.42	
75-05-8	Acetonitrile	ND	0.50	0.18	ND	0.30	0.11	
107-02-8	Acrolein	ND	2.0	0.17	ND	0.87	0.074	
67-64-1	Acetone	**0.80**	5.0	0.77	**0.34**	2.1	0.32	**J**
75-69-4	Trichlorofluoromethane	ND	0.50	0.17	ND	0.089	0.030	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	0.42	ND	2.0	0.17	
107-13-1	Acrylonitrile	ND	0.50	0.17	ND	0.23	0.078	
75-35-4	1,1-Dichloroethene	ND	0.50	0.17	ND	0.13	0.043	
75-09-2	Methylene Chloride	ND	0.50	0.17	ND	0.14	0.049	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	0.16	ND	0.16	0.051	
76-13-1	Trichlorotrifluoroethane	ND	0.50	0.17	ND	0.065	0.022	
75-15-0	Carbon Disulfide	ND	5.0	0.15	ND	1.6	0.048	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	0.19	ND	0.13	0.048	
75-34-3	1,1-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	0.17	ND	0.14	0.047	
108-05-4	Vinyl Acetate	ND	5.0	0.65	ND	1.4	0.18	
78-93-3	2-Butanone (MEK)	ND	5.0	0.21	ND	1.7	0.071	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605767

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161220-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	0.16	ND	0.13	0.040	
141-78-6	Ethyl Acetate	ND	1.0	0.35	ND	0.28	0.097	
110-54-3	n-Hexane	ND	0.50	0.15	ND	0.14	0.043	
67-66-3	Chloroform	ND	0.50	0.17	ND	0.10	0.035	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	0.20	ND	0.17	0.068	
107-06-2	1,2-Dichloroethane	ND	0.50	0.16	ND	0.12	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.50	0.17	ND	0.092	0.031	
71-43-2	Benzene	ND	0.50	0.16	ND	0.16	0.050	
56-23-5	Carbon Tetrachloride	ND	0.50	0.15	ND	0.080	0.024	
110-82-7	Cyclohexane	ND	1.0	0.29	ND	0.29	0.084	
78-87-5	1,2-Dichloropropane	ND	0.50	0.16	ND	0.11	0.035	
75-27-4	Bromodichloromethane	ND	0.50	0.15	ND	0.075	0.022	
79-01-6	Trichloroethene	ND	0.50	0.14	ND	0.093	0.026	
123-91-1	1,4-Dioxane	ND	0.50	0.16	ND	0.14	0.044	
80-62-6	Methyl Methacrylate	ND	1.0	0.31	ND	0.24	0.076	
142-82-5	n-Heptane	ND	0.50	0.17	ND	0.12	0.041	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	ND	0.11	0.031	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.16	ND	0.12	0.039	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	ND	0.11	0.035	
79-00-5	1,1,2-Trichloroethane	ND	0.50	0.16	ND	0.092	0.029	
108-88-3	Toluene	ND	0.50	0.17	ND	0.13	0.045	
591-78-6	2-Hexanone	ND	0.50	0.16	ND	0.12	0.039	
124-48-1	Dibromochloromethane	ND	0.50	0.16	ND	0.059	0.019	
106-93-4	1,2-Dibromoethane	ND	0.50	0.16	ND	0.065	0.021	
123-86-4	n-Butyl Acetate	ND	0.50	0.16	ND	0.11	0.034	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Client: **Environmental Management Services, Inc.**

Client Sample ID: **Method Blank** ALS Project ID: P1605767

Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161220-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA

Analyst: Simon Cao Date Analyzed: 12/20/16

Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	0.18	ND	0.11	0.039	
127-18-4	Tetrachloroethene	ND	0.50	0.14	ND	0.074	0.021	
108-90-7	Chlorobenzene	ND	0.50	0.16	ND	0.11	0.035	
100-41-4	Ethylbenzene	ND	0.50	0.16	ND	0.12	0.037	
179601-23-1	m,p-Xylenes	ND	1.0	0.30	ND	0.23	0.069	
75-25-2	Bromoform	ND	0.50	0.15	ND	0.048	0.015	
100-42-5	Styrene	ND	0.50	0.15	ND	0.12	0.035	
95-47-6	o-Xylene	ND	0.50	0.15	ND	0.12	0.035	
111-84-2	n-Nonane	ND	0.50	0.15	ND	0.095	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.15	ND	0.073	0.022	
98-82-8	Cumene	ND	0.50	0.15	ND	0.10	0.031	
80-56-8	alpha-Pinene	ND	0.50	0.14	ND	0.090	0.025	
103-65-1	n-Propylbenzene	ND	0.50	0.16	ND	0.10	0.033	
622-96-8	4-Ethyltoluene	ND	0.50	0.16	ND	0.10	0.033	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.16	ND	0.10	0.033	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.15	ND	0.10	0.031	
100-44-7	Benzyl Chloride	ND	0.50	0.11	ND	0.097	0.021	
541-73-1	1,3-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
106-46-7	1,4-Dichlorobenzene	ND	0.50	0.14	ND	0.083	0.023	
95-50-1	1,2-Dichlorobenzene	ND	0.50	0.15	ND	0.083	0.025	
5989-27-5	d-Limonene	ND	0.50	0.14	ND	0.090	0.025	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.099	ND	0.052	0.010	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	0.16	ND	0.067	0.022	
91-20-3	Naphthalene	ND	0.50	0.18	ND	0.095	0.034	
87-68-3	Hexachlorobutadiene	ND	0.50	0.14	ND	0.047	0.013	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **Environmental Management Services, Inc.**
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Project ID: P1605767

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 12/6/16
Analyst: Simon Cao Date(s) Received: 12/12/16
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 12/16 - 12/20/16
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P161216-MB	**116**	**97**	**97**	70-130	
Method Blank	P161220-MB	**101**	**100**	**100**	70-130	
Lab Control Sample	P161216-LCS	**116**	**96**	**100**	70-130	
Lab Control Sample	P161220-LCS	**99**	**100**	**102**	70-130	
Air Mon 01-23	P1605767-001	**109**	**100**	**98**	70-130	
Air Mon 02-23	P1605767-002	**109**	**100**	**99**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161216-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**214**	**102**	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**230**	**110**	68-109	**L**
74-87-3	Chloromethane	210	**215**	**102**	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**210**	**100**	66-114	
75-01-4	Vinyl Chloride	210	**208**	**99**	61-125	
106-99-0	1,3-Butadiene	210	**225**	**107**	62-144	
74-83-9	Bromomethane	210	**223**	**106**	73-123	
75-00-3	Chloroethane	210	**226**	**108**	69-122	
64-17-5	Ethanol	1,060	**1240**	**117**	62-124	
75-05-8	Acetonitrile	213	**239**	**112**	57-114	
107-02-8	Acrolein	212	**236**	**111**	62-116	
67-64-1	Acetone	1,060	**1000**	**94**	57-117	
75-69-4	Trichlorofluoromethane	210	**237**	**113**	63-98	**L**
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**517**	**122**	66-121	**L**
107-13-1	Acrylonitrile	213	**248**	**116**	68-123	
75-35-4	1,1-Dichloroethene	213	**220**	**103**	76-118	
75-09-2	Methylene Chloride	212	**212**	**100**	60-118	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**258**	**122**	65-126	
76-13-1	Trichlorotrifluoroethane	212	**227**	**107**	73-114	
75-15-0	Carbon Disulfide	213	**207**	**97**	57-102	
156-60-5	trans-1,2-Dichloroethene	213	**246**	**115**	74-123	
75-34-3	1,1-Dichloroethane	212	**232**	**109**	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	**202**	**95**	69-113	
108-05-4	Vinyl Acetate	1,060	**1200**	**113**	76-128	
78-93-3	2-Butanone (MEK)	212	**231**	**109**	63-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161216-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	212	**239**	**113**	72-117	
141-78-6	Ethyl Acetate	426	**471**	**111**	68-127	
110-54-3	n-Hexane	213	**217**	**102**	55-116	
67-66-3	Chloroform	212	**232**	**109**	70-109	
109-99-9	Tetrahydrofuran (THF)	213	**222**	**104**	72-113	
107-06-2	1,2-Dichloroethane	212	**253**	**119**	69-113	**L**
71-55-6	1,1,1-Trichloroethane	212	**230**	**108**	72-115	
71-43-2	Benzene	212	**206**	**97**	65-107	
56-23-5	Carbon Tetrachloride	213	**227**	**107**	71-113	
110-82-7	Cyclohexane	425	**433**	**102**	71-115	
78-87-5	1,2-Dichloropropane	212	**221**	**104**	71-115	
75-27-4	Bromodichloromethane	214	**241**	**113**	75-118	
79-01-6	Trichloroethene	212	**214**	**101**	68-114	
123-91-1	1,4-Dioxane	213	**230**	**108**	81-131	
80-62-6	Methyl Methacrylate	424	**457**	**108**	72-130	
142-82-5	n-Heptane	213	**218**	**102**	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	**229**	**109**	77-126	
108-10-1	4-Methyl-2-pentanone	213	**244**	**115**	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	**239**	**112**	79-125	
79-00-5	1,1,2-Trichloroethane	212	**220**	**104**	75-119	
108-88-3	Toluene	212	**200**	**94**	59-118	
591-78-6	2-Hexanone	213	**247**	**116**	69-129	
124-48-1	Dibromochloromethane	213	**225**	**106**	74-136	
106-93-4	1,2-Dibromoethane	212	**214**	**101**	73-131	
123-86-4	n-Butyl Acetate	216	**250**	**116**	69-130	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161216-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/16/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
111-65-9	n-Octane	212	**215**	**101**	66-120	
127-18-4	Tetrachloroethene	213	**206**	**97**	65-130	
108-90-7	Chlorobenzene	212	**204**	**96**	68-120	
100-41-4	Ethylbenzene	212	**212**	**100**	68-122	
179601-23-1	m,p-Xylenes	424	**431**	**102**	68-123	
75-25-2	Bromoform	212	**220**	**104**	69-130	
100-42-5	Styrene	212	**225**	**106**	71-133	
95-47-6	o-Xylene	212	**215**	**101**	68-122	
111-84-2	n-Nonane	212	**220**	**104**	65-120	
79-34-5	1,1,2,2-Tetrachloroethane	212	**212**	**100**	69-130	
98-82-8	Cumene	212	**210**	**99**	70-123	
80-56-8	alpha-Pinene	213	**216**	**101**	70-128	
103-65-1	n-Propylbenzene	214	**215**	**100**	69-125	
622-96-8	4-Ethyltoluene	212	**222**	**105**	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	**216**	**102**	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	**219**	**103**	67-129	
100-44-7	Benzyl Chloride	212	**234**	**110**	79-138	
541-73-1	1,3-Dichlorobenzene	212	**212**	**100**	65-136	
106-46-7	1,4-Dichlorobenzene	213	**209**	**98**	66-141	
95-50-1	1,2-Dichlorobenzene	212	**214**	**101**	67-136	
5989-27-5	d-Limonene	212	**232**	**109**	71-134	
96-12-8	1,2-Dibromo-3-chloropropane	212	**224**	**106**	73-136	
120-82-1	1,2,4-Trichlorobenzene	212	**213**	**100**	64-134	
91-20-3	Naphthalene	214	**223**	**104**	62-136	
87-68-3	Hexachlorobutadiene	213	**209**	**98**	60-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161220-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	210	**192**	**91**	52-127	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**206**	**98**	68-109	
74-87-3	Chloromethane	210	**209**	**100**	51-130	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**206**	**98**	66-114	
75-01-4	Vinyl Chloride	210	**204**	**97**	61-125	
106-99-0	1,3-Butadiene	210	**226**	**108**	62-144	
74-83-9	Bromomethane	210	**216**	**103**	73-123	
75-00-3	Chloroethane	210	**219**	**104**	69-122	
64-17-5	Ethanol	1,060	**1020**	**96**	62-124	
75-05-8	Acetonitrile	213	**212**	**100**	57-114	
107-02-8	Acrolein	212	**216**	**102**	62-116	
67-64-1	Acetone	1,060	**952**	**90**	57-117	
75-69-4	Trichlorofluoromethane	210	**206**	**98**	63-98	
67-63-0	2-Propanol (Isopropyl Alcohol)	424	**443**	**104**	66-121	
107-13-1	Acrylonitrile	213	**234**	**110**	68-123	
75-35-4	1,1-Dichloroethene	213	**215**	**101**	76-118	
75-09-2	Methylene Chloride	212	**207**	**98**	60-118	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**224**	**106**	65-126	
76-13-1	Trichlorotrifluoroethane	212	**220**	**104**	73-114	
75-15-0	Carbon Disulfide	213	**203**	**95**	57-102	
156-60-5	trans-1,2-Dichloroethene	213	**225**	**106**	74-123	
75-34-3	1,1-Dichloroethane	212	**211**	**100**	69-111	
1634-04-4	Methyl tert-Butyl Ether	213	**213**	**100**	69-113	
108-05-4	Vinyl Acetate	1,060	**1190**	**112**	76-128	
78-93-3	2-Butanone (MEK)	212	**236**	**111**	63-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161220-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	**Result µg/m³**	**% Recovery**	ALS Acceptance Limits	**Data Qualifier**
156-59-2	cis-1,2-Dichloroethene	212	**216**	**102**	72-117	
141-78-6	Ethyl Acetate	426	**432**	**101**	68-127	
110-54-3	n-Hexane	213	**193**	**91**	55-116	
67-66-3	Chloroform	212	**213**	**100**	70-109	
109-99-9	Tetrahydrofuran (THF)	213	**218**	**102**	72-113	
107-06-2	1,2-Dichloroethane	212	**213**	**100**	69-113	
71-55-6	1,1,1-Trichloroethane	212	**214**	**101**	72-115	
71-43-2	Benzene	212	**197**	**93**	65-107	
56-23-5	Carbon Tetrachloride	213	**214**	**100**	71-113	
110-82-7	Cyclohexane	425	**426**	**100**	71-115	
78-87-5	1,2-Dichloropropane	212	**215**	**101**	71-115	
75-27-4	Bromodichloromethane	214	**225**	**105**	75-118	
79-01-6	Trichloroethene	212	**223**	**105**	68-114	
123-91-1	1,4-Dioxane	213	**230**	**108**	81-131	
80-62-6	Methyl Methacrylate	424	**472**	**111**	72-130	
142-82-5	n-Heptane	213	**211**	**99**	68-116	
10061-01-5	cis-1,3-Dichloropropene	210	**225**	**107**	77-126	
108-10-1	4-Methyl-2-pentanone	213	**226**	**106**	69-126	
10061-02-6	trans-1,3-Dichloropropene	213	**228**	**107**	79-125	
79-00-5	1,1,2-Trichloroethane	212	**220**	**104**	75-119	
108-88-3	Toluene	212	**205**	**97**	59-118	
591-78-6	2-Hexanone	213	**226**	**106**	69-129	
124-48-1	Dibromochloromethane	213	**230**	**108**	74-136	
106-93-4	1,2-Dibromoethane	212	**229**	**108**	73-131	
123-86-4	n-Butyl Acetate	216	**227**	**105**	69-130	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
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ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1605767
Client Project ID: **SVE In Plant Monitoring / KUH0-16-011** ALS Sample ID: P161220-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/20/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	212	**212**	**100**	66-120	
127-18-4	Tetrachloroethene	213	**223**	**105**	65-130	
108-90-7	Chlorobenzene	212	**214**	**101**	68-120	
100-41-4	Ethylbenzene	212	**215**	**101**	68-122	
179601-23-1	m,p-Xylenes	424	**432**	**102**	68-123	
75-25-2	Bromoform	212	**242**	**114**	69-130	
100-42-5	Styrene	212	**229**	**108**	71-133	
95-47-6	o-Xylene	212	**219**	**103**	68-122	
111-84-2	n-Nonane	212	**211**	**100**	65-120	
79-34-5	1,1,2,2-Tetrachloroethane	212	**219**	**103**	69-130	
98-82-8	Cumene	212	**218**	**103**	70-123	
80-56-8	alpha-Pinene	213	**227**	**107**	70-128	
103-65-1	n-Propylbenzene	214	**220**	**103**	69-125	
622-96-8	4-Ethyltoluene	212	**221**	**104**	67-130	
108-67-8	1,3,5-Trimethylbenzene	212	**217**	**102**	67-124	
95-63-6	1,2,4-Trimethylbenzene	212	**223**	**105**	67-129	
100-44-7	Benzyl Chloride	212	**243**	**115**	79-138	
541-73-1	1,3-Dichlorobenzene	212	**225**	**106**	65-136	
106-46-7	1,4-Dichlorobenzene	213	**221**	**104**	66-141	
95-50-1	1,2-Dichlorobenzene	212	**227**	**107**	67-136	
5989-27-5	d-Limonene	212	**229**	**108**	71-134	
96-12-8	1,2-Dibromo-3-chloropropane	212	**263**	**124**	73-136	
120-82-1	1,2,4-Trichlorobenzene	212	**236**	**111**	64-134	
91-20-3	Naphthalene	214	**234**	**109**	62-136	
87-68-3	Hexachlorobutadiene	213	**228**	**107**	60-133	

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