SOIL VAPOR EXTRACTION SYSTEM SEMIANNUAL REPORT

KUHLMAN ELECTRIC CORPORATION
CRYSTAL SPRINGS, MISSISSIPPI

Prepared by:

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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 semi-annual period of 2015.

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 sub-surface 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.

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 semi-annual schedule since 2005, and is presently ongoing. A total of forty-six permanent groundwater monitoring wells are used to monitor the groundwater plume.

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. The soil vapor study 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, throughout the previously defined source area at varying depths, in the onsite soils.

A source area for the VOCs and 1,4-dioxane constituents in groundwater has been 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 2015.

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).

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 22, 2015, for the required semi-annual sampling event. Analytical results for MW-10A, MW-30, MW-31, and SVE-EXT-DEEP showed concentrations of constituents greater than the MDEQ groundwater target remediation goals (TRG). The constituents with exceedances were DCE, 1,4-dioxane, chloroform, 1,1,2 trichloroethane, and 1,2 dichloroethane. The concentrations of DCE measured in SVE-EXT-DEEP 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 2015 sampling event 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 measure the relative VOC concentration in the soil vapor within the well. The measured relative concentrations ranged from 0.1 to 3,515 ppm with the PID and 0.2 to 200 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 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 concentration measured by the PID meter in the discharge from the SVE system prior to carbon treatment ranged from 0 to 7.4 ppm during the monitoring period. The relative VOC concentration measured with the FID meter in the discharge of the SVE system prior to carbon treatment ranged from 0 to 5.6 ppm. The monitoring results 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 September and November. The results are summarized in Table 5. The Post Carbon 1 and 2 samples from

September and November indicated concentrations of COCs in each carbon treatment unit. The levels were still below any published regulatory limit; however, as a precaution, the carbon in the units was replaced December 10, 2015.

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 semi-annual period are shown in Table 7. The analytical laboratory reports for the ambient air monitoring are contained in Appendix B.

Vacuum Measurements

The vacuum response at each observation well is measured quarterly. At 80 feet from the nearest extraction well, the vacuum response averaged 3.30 inches of water. The vacuum response measurements for the second semi-annual period in 2015 are shown in Table 8.

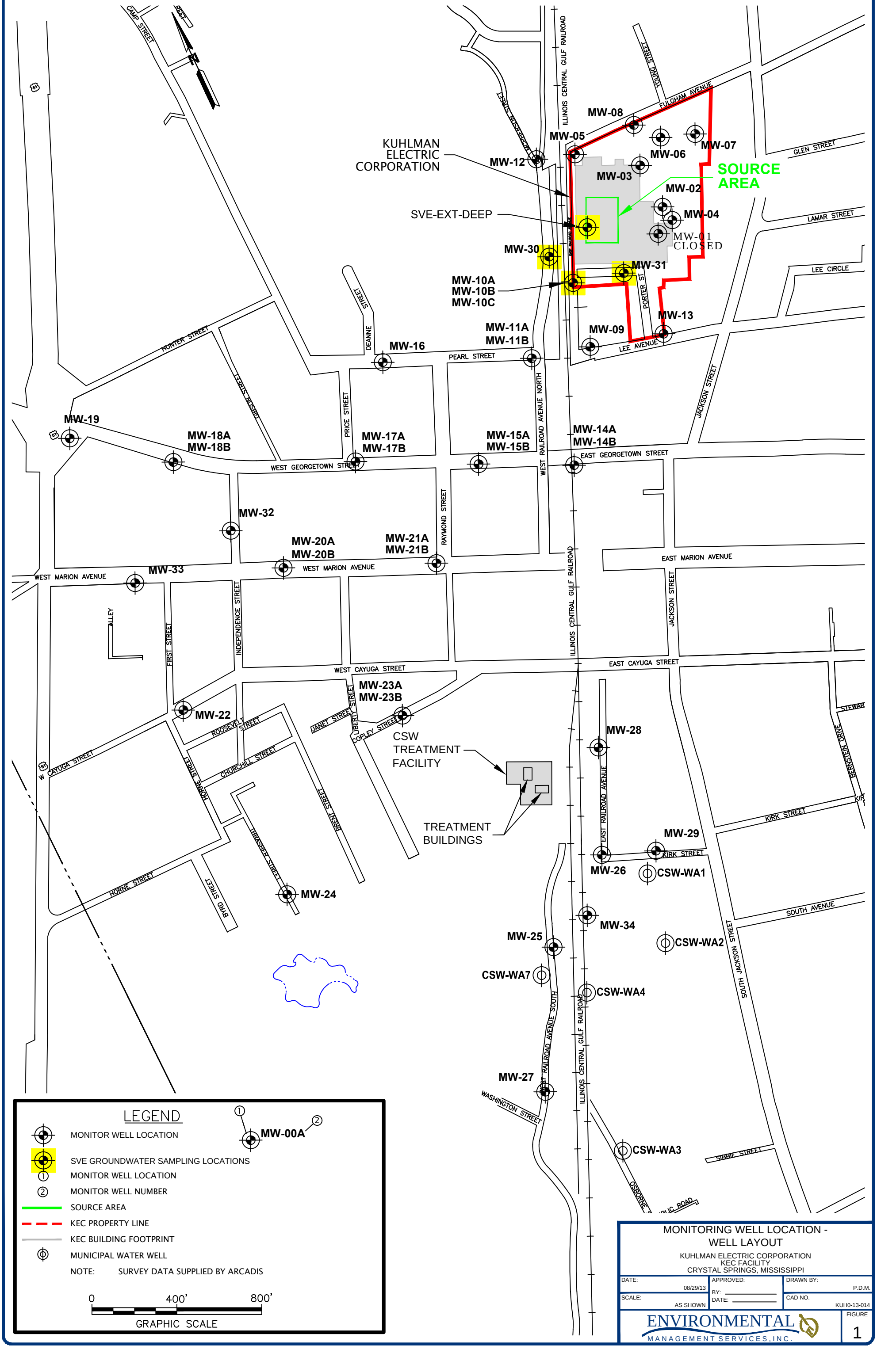
In addition, vacuum gauges were placed in the interstitial space on each dual-walled HDPE piping run near the extraction wells. The vacuum gauges are used to measure the vacuum or pressure of the interstitial space between the inner carrier pipe and the outer containment pipe during monthly site visits 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.

Semi-annual 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 semi-annually. All monitoring and remediation objectives were met for this reporting period.

Figures



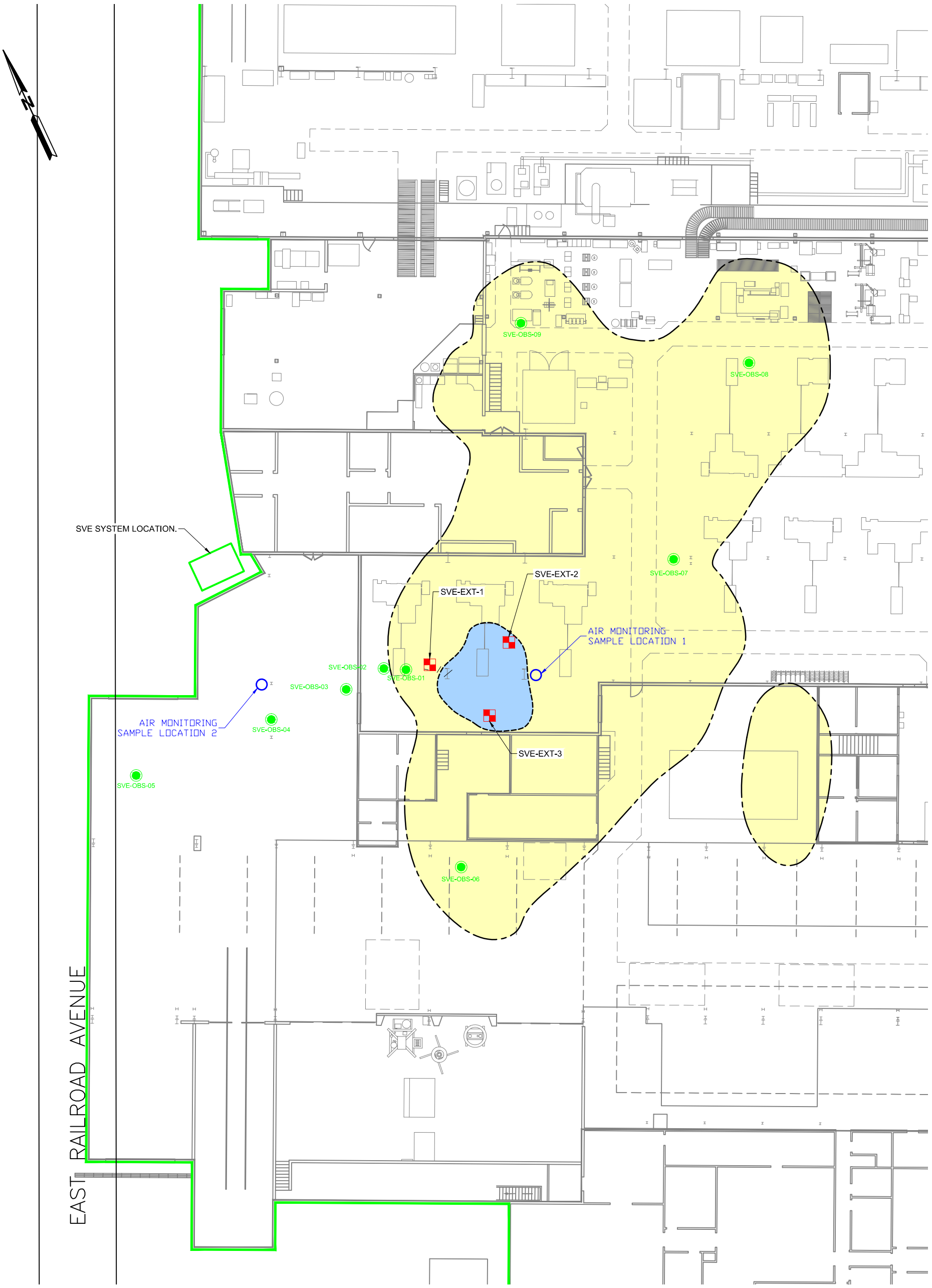
MONITORING WELL LOCATION - WELL LAYOUT

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: _____ DATE: _____	P.D.M.
SCALE:		CAD NO.
AS SHOWN		KUH0-15-002

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 2

Tables

TABLE 1
GROUNDWATER ANALYTICAL RESULTS SUMMARY

SVE Second Semi-Annual Sampling 2015
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-035-007**	**KEP-GW-010A-027**	**KEP-GW-010B-027**	**KEP-GW-010C-027**	**KEP-GW-030-013**	**KEP-GW-031-013**
Sample Date		**9/22/2015**	**9/21/2015**	**9/21/2015**	**9/21/2015**	**9/22/2015**	**9/21/2015**
1,1,1-Trichloroethane (TCA)	200	51	1.1	<0.5	<0.5	2.9	<0.5
1,1,2-Trichloroethane	5.0	**27**	**7.5**	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	798	3.4	2.6	<0.5	<0.5	1.3	<0.5
1,1-Dichloroethene	7.0	**78**	**72**	6.1	<0.5	**42**	**7.7**
1,2-Dichloroethane (EDC)	5.0	**7.3**	2.7	<0.5	<0.5	<0.5	<0.5
1,4-Dioxane	6.09	4.8	**8.4**	1.3	<0.4	1.3	0.74
Chloroform	0.155	**1.1**	**0.98**	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene (PCE)	5.0	<0.5	<0.5	<0.5	1.1	<0.5	<0.5
Trichloroethene (TCE)	5.0	1.0	<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

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
9/22/2015	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.3
12/21/2015	0	0	0	0	0	0	0.4	0	3515

OBSERVATION WELL FID RESULTS SUMMARY

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
9/22/2015	0	1	0	0	0	0	0	0	0
12/21/2015	1	0	0.2	1.6	1	200	2	6.2	5.8

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	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015
1,1,1-Trichloroethane	7.9	0.97	4	0.62	3.1	0.66	0.73	0.64	0.2	0.48	ND	4.4	3.7	3.7	6.1	5.3	2.8	1.4
1,1,2-Trichloroethane	0.2	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND	0.14	ND	1.7	ND	ND	ND	ND
1,1-Dichloroethane	0.5	ND	ND	ND	ND	ND	ND	0.14	ND	ND	ND	0.41	ND	10.0	4.6	2.5	ND	0.1
1,1-Dichloroethene	5.7	16.0	1.5	20	4.9	36	0.83	3.8	ND	0.36	ND	27	0.99	460.0	67	67	2.1	12
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	0.46	0.34	0.7	0.29	0.84	0.32	1.5	0.31	1.5	0.16	6.9	0.24	1.2	0.52	0.89	1.5	0.78	0.45
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	2.0	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.2	0.14	0.31	ND	0.45	0.13	0.88	0.15	0.84	ND	2.2	ND	0.69	0.22	0.53	0.67	0.32	0.17
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.51	0.53	1.4	0.56	0.72	0.53	1.1	0.47	1.5	0.23	6	0.3	1.8	0.99	2.1	2.5	2.2	1
1,4-Dioxane	4	2	0.34	0.48	ND	0.53	ND	0.25	0.3	0.41	ND	0.3	6.1	0.3	ND	0.2	1.4	0.2
2-Butanone (MEK)	1.6	1.1	4.6	0.99	3.7	0.47	1.2	2.4	1.5	1.2	4.5	4.1	18	2.1	2.1	2	7.1	0.43
2-Hexanone	0.2	0.1	0.3	ND	ND	ND	ND	0.15	0.3	0.24	ND	0.2	0.7	0.26	0.4	0.29	0.73	ND
2-Propanol (Isopropyl Alcohol)	ND	0.61	ND	ND	ND	ND	2	ND	3.3	ND	23	0.97	ND	1.1	ND	ND	ND	0.78
4-Ethyltoluene	0.22	0.18	0.35	0.16	0.32	0.15	0.8	0.16	0.84	ND	2	ND	0.54	0.28	0.48	0.8	0.38	0.24
4-Methyl-2-pentanone	0.64	0.54	1.5	0.44	0.42	ND	2.5	0.25	2.5	ND	3.4	0.33	ND	0.81	1.1	2.2	1.1	0.4
Acetone	13	9.3	34	6.7	17	3.3	10	9	13	8	47	44	130	16	14	14	40	4.1
Acetonitrile	ND	0.7	0.6	ND	ND	ND	ND	0.4	0.6	ND	ND	ND	40.0	0.42	ND	ND	1.1	ND
Acrolein	0.48	0.64	0.99	ND	1.4	0.25	0.45	0.43	0.58	ND	0.92	1.1	16	ND	1.1	0.63	2.5	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND
alpha-Pinene	0.18	0.095	0.32	ND	0.15	ND	0.41	ND	0.38	ND	1.5	ND	0.29	0.15	0.29	0.44	ND	0.096
Benzene	ND	ND		ND	4.0	ND	0.2	ND	0.9	ND	0.32	0.2	15	0.34	0.27	0.22	0.2	0.25
Carbon Disulfide	4.1	0.2	53.0	1.8	0.5	0.24	0.98	0.67	0.27	4.4	0.65	43	8.8	11	5.9	1.4	230	0.29
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	0.09	ND	ND	ND	ND	ND	0.4	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.15	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.1	0.2	ND	0.24	0.2	0.20	ND	0.13	ND	ND	ND	0.21	ND	2.7	0.23	0.22	ND	ND
Chloromethane	ND	0.3	ND	ND	0.4	ND	ND	ND	0.3	ND	ND	ND	0.26	ND	0.29	ND	ND	ND
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	0.27	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND
Cumene	ND	ND	ND	ND	0.67	ND	0.15	ND	0.2	ND	0.33	ND	0.44	ND	ND	0.12	0.11	ND
Cyclohexane	ND	ND	ND	ND	15.0	ND	ND	0.38	0.7	ND	ND	1.1	0.41	ND	ND	0.53	ND	ND
Dichlorodifluoromethane (CFC 12)	0.45	0.5	0.38	0.42	0.39	0.43	0.4	0.45	0.42	0.39	0.36	0.49	0.36	0.41	0.38	0.38	0.41	0.4
d-Limonene	0.13	0.16	0.21	0.25	0.16	0.11	0.27	0.11	0.21	0.094	1	ND	ND	ND	0.27	0.33	ND	0.092
Ethanol	10	6.8	19	5.1	16	3.3	22	2.1	12	ND	210	11	56	11	28	6.3	24	ND
Ethyl Acetate	ND	ND	ND	ND	ND	ND	0.35	ND	ND	0.53	5.5	1.3	ND	5.7	0.65	ND	0.6	0.75
Ethylbenzene	0.54	0.3	0.62	0.27	5	0.27	1.3	0.74	1.3	0.19	3.1	1.2	6.7	0.57	0.8	2.3	0.49	0.46
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.092	ND
m,p-Xylenes	2	1.6	2.7	1.4	4.5	1.3	5.8	3.4	5.4	1	16	5.4	7	2.9	3.6	11	2.2	2.5
Methyl Methacrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND
Methylene Chloride	ND	0.19	ND	0.29	ND	4.4	0.2	14	0.2	4.3	0.4	42	ND	5.9	ND	15	0.2	3.2
Naphthalene	0.17	0.12	0.31	ND	ND	ND	ND	0.12	ND	0.15	ND	ND	ND	0.2	ND	ND	0.18	ND

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	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015	9/22/2015	12/21/2015
n-Butyl Acetate	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	0.22	0.13	ND	ND	ND	0.13	ND	ND
n-Heptane	ND	ND	0.3	ND	8.3	0.16	0.2	ND	0.9	ND	0.4	0.8	2.1	ND	0.3	0.21	0.3	ND
n-Hexane	ND	ND	0.31	0.33	6.6	0.16	0.21	ND	0.7	ND	1.2	ND	2.7	0.26	0.17	0.46	0.31	ND
n-Nonane	0.12	ND	ND	ND	3.4	ND	0.18	0.17	1	ND	0.61	ND	0.34	ND	ND	0.11	0.17	ND
n-Octane	ND	ND	ND	ND	7.4	ND	ND	ND	0.8	ND	0.2	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	0.12	ND	0.18	ND	0.5	ND	0.42	0.11	0.43	ND	0.91	ND	0.29	0.15	0.21	0.4	0.18	ND
o-Xylene	0.76	0.56	1.1	0.5	0.94	0.42	2.5	0.92	1.9	0.3	6.4	1.5	3.9	0.93	1.7	3.7	1.1	0.78
Propene	ND	0.83	ND	ND	ND	ND	ND	ND	2.2	ND	ND	1.1	5.5	2.7	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND	0.56	ND	ND	ND	ND	ND
Tetrachloroethene	0.2	0.1	0.1	ND	0.2	0.094	0.2	0.21	ND	ND	ND	0.5	0.27	4	1	0.59	0.63	0.28
Tetrahydrofuran (THF)	ND	ND	ND	ND	0.38	ND	ND	ND	ND	ND	ND	ND	4.4	ND	ND	ND	2.3	ND
Toluene	1.5	1.5	3.7	2.2	0.72	0.87	2.1	0.64	2	0.25	12	0.97	23	2.1	2.1	5.5	1.5	1.1
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	0.3	ND	0.2	ND	0.2	ND	0.1	0.27	ND	ND	ND	0.09	0.1	4	0.19	0.24	0.3	0.12
Trichlorofluoromethane	0.21	0.4	0.17	0.23	0.18	0.25	0.19	0.28	0.19	0.21	0.18	0.21	0.17	1.5	0.18	0.23	0.21	0.24
Trichlorotrifluoroethane	0.2	1.0	ND	0.13	0.7	0.087	1.3	0.17	ND	ND	ND	ND	ND	6.9	ND	ND	ND	ND
Vinyl Acetate	3	1.7	5.9	ND	ND	ND	1.4	1.00	8.9	1.10	2.1	2.4	110	3.7	4.3	1.3	5.1	ND

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		
8/13/2015	1.5	2.1	1.0
9/22/2015	7.4	7.6	6.8
10/22/2015	1.8	3.5	0.9
11/23/2015	0	0	0
	FID ppm		
8/13/2015	2	0.8	0.8
9/22/2015	2.1	2.8	1.2
10/22/2015	5.6	5.4	5
11/23/2015	0	7.5	6

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	**9/22/2015**	**11/23/2015**	**9/22/2015**	**11/23/2015**	**9/22/2015**	**11/23/2015**
1,1,1-Trichloroethane	100	56	65	34	ND	2.10
1,1,2-Trichloroethane	4.9	ND	ND	ND	ND	ND
1,1-Dichloroethane	6.9	ND	5.4	ND	ND	12
1,1-Dichloroethene	260	280	190	130	410	190
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
1,4-Dioxane	5,100	5,200	4,100	2,400	22	77

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
Sample Date	**Flow Rate SCFM**		
1/26/2015	82.7	63.4	126.8
2/3/2015	89.7	80.2	125.2
2/10/2015	85.1	69.5	123.6
2/17/2015	87.4	63.4	122.0
3/31/2015	85.1	72.3	122.0
4/29/2015	80.2	69.5	120.3
5/28/2015	82.7	69.5	118.6
6/24/2015	85.1	72.3	120.3
7/7/2015	87.4	75.0	120.3
8/13/2015	85.1	69.5	118.6
9/15/2015	87.4	75.0	122.0
10/22/2015	85.1	69.5	120.3
11/23/2015	82.7	69.5	120.3
12/21/2015	87.4	75.0	123.6

TABLE 7
QUARTERLY AMBIENT AIR MONITORING

SVE SYSTEM
Kuhlman Electric Corporation
Crystal Springs, MS

Contaminant	OCCUPATIONAL STANDARDS			AIR MON 01-18	AIR MON 02-18	AIR MON 01-19	AIR MON 02-19
Sampling Date	OSHA PEL (TWA)	ACGIH (TLV)	NIOSH REL (TWA)	9/15/2015	9/15/2015	11/23/2015	11/23/2015
1,1,1-Trichloroethane	435,000	435,000	435,000	<0.67	<0.6	<0.62	<0.63
1,1-Dichloroethene	450,000	60,000	--	<0.67	<0.6	<0.62	<0.63
1,2,4-Trimethylbenzene	--	860,000	--	22	23	13	3.1
1,2-Dichloropropane	350,000	347,000	Ca	<0.63	0.81	<0.58	<0.6
1,3,5-Trimethylbenzene	426,000	85,200	215,000	7.6	7.3	5.3	1.9
1,3-Butadiene	2,210	4,400	Ca	<0.86	<0.77	<0.8	<0.82
1,3-Dichlorobenzene	--	--	--	<0.59	<0.53	<0.54	<0.56
1,4-Dichlorobenzene	--	--	125,000	63	15	75	1.2
1,4-Dioxane	360000	72,000	--	<0.63	<0.56	<0.58	<0.6
2-Hexanone	410,000	--	4,000	0.64	1.4	<0.58	<0.6
4-Ethyltoluene	62,900	12,600	31,000	8.3	6.9	5.4	1.5
Acetone	2,400,000	1,187,000	590,000	120	160	300	190
Acetonitrile	70,000	34,000	34,000	<0.71	0.73	<0.65	<0.67
Acrolein	250	--	250	2.2	16	0.79	1.4
alpha-Pinene	--	--	--	8.8	12	4.3	2.5
Benzene	3,200	1,600	320	1.1	3.8	0.81	0.69
Bromoform	5,000	5,200	5,000	<0.59	<0.53	<0.54	<0.56
Carbon Disulfide	1,900,000	1,900,000	1,900,000	0.97	1.9	<0.54	<0.56
Carbon Tetrachloride	--	Ca	19,800	<0.59	<0.53	<0.54	<0.56
Chloroform	240,000	49,000	9,780	<0.67	7.5	<0.62	<0.63
Chloromethane	207,000	103,000	Ca	<0.59	<0.53	0.69	0.88
cis-1,2-Dichloroethene	790,000	793,000	790,000	<0.63	<0.56	<0.58	<0.6

TABLE 7
QUARTERLY AMBIENT AIR MONITORING

SVE SYSTEM
Kuhlman Electric Corporation
Crystal Springs, MS

Contaminant	OCCUPATIONAL STANDARDS			AIR MON 01-18	AIR MON 02-18	AIR MON 01-19	AIR MON 02-19
Sampling Date	OSHA PEL (TWA)	ACGIH (TLV)	NIOSH REL (TWA)	9/15/2015	9/15/2015	11/23/2015	11/23/2015
Cumene	245,000		245,000	1.8	4.9	1.1	0.57
Cyclohexane	--	125,000	--	<1.1	4.5	1.1	1.1
Dichlorodifluoromethane (CFC 12)	4,950,000		4,950,000	1.9	1.9	2.2	2.2
d-Limonene	--	--	--	5.7	6.3	49	14
Ethanol	1,900,000	--	1,900,000	980	330	630	150
Ethyl Acetate	1,400,000	--	1,400,000	17	580	2.3	4.5
Ethylbenzene	--	--	--	18	9.7	37	17
Isopropyl Alcohol	1,050,000	344,000	1,050,000	69	48	32	9.6
m,p-Xylene	750,000	75,360	375,000	89	37	210	93
Methyl Ethyl Ketone	435,000	435,000	435,000	14	29	28	17
Methyl Isobutyl Ketone	980,000	--	980,000	25	14	6	2.8
Methyl Methacrylate	410,000	--	410,000	<1.2	1.7	<1.1	<1.2
Methylene Chloride	86,750	--	86,750	1.2	19	0.92	0.89
Naphthalene	50,000	--	50,000	1	0.82	2.5	<0.67
n-Butyl Acetate	710,000	--	710,000	4.3	13	4.5	1.6
n-Heptane	2,000,000	1,638,000	350,000	2.6	6.2	1	0.66
n-Hexane	180,000	--	180,000	1.9	11	1.7	1.2
n-Nonane	--	1050000	1050000	2	2.4	2.1	1.1
n-Octane	2,350,000	1,400,000	350,000	1.5	5.4	1.3	0.89
n-Propylbenzene	--	--	--	4.6	5.7	3.2	1
o-Xylene	435,000	435,000	435,000	31	15	57	26
Propylene	435,000	435,000	435,000	15	16	9.2	4

TABLE 7
QUARTERLY AMBIENT AIR MONITORING

SVE SYSTEM
Kuhlman Electric Corporation
Crystal Springs, MS

Contaminant	OCCUPATIONAL STANDARDS			AIR MON 01-18	AIR MON 02-18	AIR MON 01-19	AIR MON 02-19
Sampling Date	OSHA PEL (TWA)	ACGIH (TLV)	NIOSH REL (TWA)	9/15/2015	9/15/2015	11/23/2015	11/23/2015
Styrene	590,000	590,000	590,000	3.6	8.9	0.76	<0.56
Tetrachloroethene	678,000	169,500	Ca	<0.55	1.4	<0.51	<0.52
Tetrahydrofuran (THF)	590,000	--	590,000	8.2	20	1	2.5
Toluene	410,000	--	205,000	70	110	51	16
Trichlorofluoromethane	5,600,000	--	5,600,000	1	1.1	1.1	1.1
Vinyl Acetate	--	35,000	15,000	6	<2.3	<2.4	<2.4

All results/standards are in $\mu g/m^3$

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**
8/13/2015	34.0	25.0	14.1	4.6	2.46	2.74	7.93	0.37	3.68
11/23/2015	35.8	26.4	14.4	5.98	3.09	3.21	8.46	0.43	3.98

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

Appendix A
Observation Well Soil Vapor
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

October 8, 2015

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

RE: SVE Performance Monitoring / KUHO-15-010

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on September 28, 2015. For your reference, these analyses have been assigned our service request number P1504036.

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 10:36 am, Oct 08, 2015

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: P1504036
Project: SVE Performance Monitoring / KUHO-15-010

CASE NARRATIVE

The samples were received intact under chain of custody on September 28, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

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 accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The canisters 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	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2-R1
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	876241
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
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: P1504036

Project ID: SVE Performance Monitoring / KUHO-15-010

Date Received: 9/28/2015

Time Received: 08:45

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SVE-OBS-01	P1504036-001	Air	9/22/2015	09:45	1SC00084	0.00	5.69	X
SVE-OBS-02	P1504036-002	Air	9/22/2015	09:54	1SC00480	0.13	6.42	X
SVE-OBS-03	P1504036-003	Air	9/22/2015	10:03	1SC00250	-0.18	9.30	X
SVE-OBS-04	P1504036-004	Air	9/22/2015	10:14	1SC00841	-0.05	6.04	X
SVE-OBS-05	P1504036-005	Air	9/22/2015	10:27	1SC01033	-0.15	5.51	X
SVE-OBS-06	P1504036-006	Air	9/22/2015	10:40	1SC00857	0.18	6.28	X
SVE-OBS-07	P1504036-007	Air	9/22/2015	10:56	1SS00099	-0.50	5.14	X
SVE-OBS-08	P1504036-008	Air	9/22/2015	11:07	1SC00492	-0.16	7.30	X
SVE-OBS-09	P1504036-009	Air	9/22/2015	11:20	1SC00281	-0.10	6.63	X
SVE Exhaust	P1504036-010	Air	9/22/2015	13:51	1SC00619	0.04	6.62	X
Post Carbon 1	P1504036-011	Air	9/22/2015	14:02	1SC00484	-0.07	5.65	X
Post Carbon 2	P1504036-012	Air	9/22/2015	14:12	1SC00546	-0.35	7.37	X

Air - Chain of Custody Record & Analytical Service Request

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: P151404336

Company Name & Address (Reporting Information): Environmental Management Services, Inc.

Project Name: SVE Performance Monitoring

Project Number: KUHO-15-010

Project Manager: Stephanie Kilgore

P.O. # / Billing Information: KUHO-15-010 / 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:

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	9-22-15	9:45	SC00084	AVG03508				X		
SVE-OBS-02	2	9-22-15	9:54	SC00480	AVG02120				X		
SVE-OBS-03	3	9-22-15	10:03	SC00230	AVG03902				X		
SVE-OBS-04	4	9-22-15	10:14	SC00841	AVG01129				X		
SVE-OBS-05	5	9-22-15	10:27	SC01033	AVG03218				X		
SVE-OBS-06	6	9-22-15	10:40	SC00857	AVG03978				X		
SVE-OBS-07	7	9-22-15	10:56	SC00099	AVG03452				X		
SVE-OBS-08	8	9-22-15	11:07	SC00492	AVG01893				X		
SVE-OBS-09	9	9-22-15	11:20	SC00281	AVG04263				X		
SVE Exhaust	10	9-22-15	13:51	SC00619	AVG04380				X		
Post Carbon 1	11	9-22-15	14:02	SC00484	AVG04192				X		
Post Carbon 2	12	9-22-15	14:12	SC00546	AVG04159				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	9-22-15	18:00			
Relinquished by: (Signature) FEDEX	Date:	Time:	Received by: (Signature) K. KELPE	9/23/15	0845

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1504036

Project: SVE Performance Monitoring / KUHO-15-010

Sample(s) received on: 9/28/15 Date opened: 9/28/15 by: KKELPE

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

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

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1504036-001.01	1.0 L Source Can					
P1504036-002.01	1.0 L Source Can					
P1504036-003.01	1.0 L Source Can					
P1504036-004.01	1.0 L Source Can					
P1504036-005.01	1.0 L Source Can					
P1504036-006.01	1.0 L Source Can					
P1504036-007.01	1.0 L Source Silonite Canister					
P1504036-008.01	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
Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1504036

Project: SVE Performance Monitoring / KUHO-15-010

Sample(s) received on: 9/28/15 Date opened: 9/28/15 by: KKELPE

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1504036-009.01	1.0 L Source Can					
P1504036-010.01	1.0 L Source Can					
P1504036-011.01	1.0 L Source Can					
P1504036-012.01	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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-001

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00084

Initial Pressure (psig): 0.00 Final Pressure (psig): 5.69

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	ND	1.7	0.49	ND	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.7	0.59	**0.45**	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	**19**	17	2.8	**10**	9.2	1.5	
75-05-8	Acetonitrile	ND	1.7	0.63	ND	1.0	0.37	
107-02-8	Acrolein	**1.1**	7.0	0.59	**0.48**	3.0	0.26	**J**
67-64-1	Acetone	**32**	17	2.7	**13**	7.3	1.1	
75-69-4	Trichlorofluoromethane	**1.2**	1.7	0.59	**0.21**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	1.5	ND	7.1	0.59	
107-13-1	Acrylonitrile	ND	1.7	0.59	ND	0.80	0.27	
75-35-4	1,1-Dichloroethene	**23**	1.7	0.59	**5.7**	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	**1.8**	1.7	0.59	**0.23**	0.23	0.077	
75-15-0	Carbon Disulfide	**13**	17	0.52	**4.1**	5.6	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	**1.8**	1.7	0.56	**0.45**	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	**10**	17	2.3	**3.0**	4.9	0.64	**J**
78-93-3	2-Butanone (MEK)	**4.8**	17	0.73	**1.6**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-001

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00084

Initial Pressure (psig): 0.00 Final Pressure (psig): 5.69

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	ND	3.5	1.2	ND	0.96	0.34	
110-54-3	n-Hexane	ND	1.7	0.52	ND	0.49	0.15	
67-66-3	Chloroform	**0.65**	1.7	0.59	**0.13**	0.36	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.70	ND	0.59	0.24	
107-06-2	1,2-Dichloroethane	**0.61**	1.7	0.56	**0.15**	0.43	0.14	**J**
71-55-6	1,1,1-Trichloroethane	**43**	1.7	0.59	**7.9**	0.32	0.11	
71-43-2	Benzene	ND	1.7	0.56	ND	0.54	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	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	1.7	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	**1.6**	1.7	0.49	**0.29**	0.32	0.091	**J**
123-91-1	1,4-Dioxane	**14**	1.7	0.56	**4.0**	0.48	0.15	
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.85	0.26	
142-82-5	n-Heptane	ND	1.7	0.59	ND	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	**2.6**	1.7	0.56	**0.64**	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	**1.2**	1.7	0.56	**0.22**	0.32	0.10	**J**
108-88-3	Toluene	**5.6**	1.7	0.59	**1.5**	0.46	0.16	
591-78-6	2-Hexanone	**0.79**	1.7	0.56	**0.19**	0.42	0.14	**J**
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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-001

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00084

Initial Pressure (psig): 0.00 Final Pressure (psig): 5.69

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	ND	1.7	0.63	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**1.7**	1.7	0.49	**0.24**	0.26	0.072	**J**
108-90-7	Chlorobenzene	ND	1.7	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**2.3**	1.7	0.56	**0.54**	0.40	0.13	
179601-23-1	m,p-Xylenes	**8.5**	3.5	1.0	**2.0**	0.80	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	**3.3**	1.7	0.52	**0.76**	0.40	0.12	
111-84-2	n-Nonane	**0.61**	1.7	0.52	**0.12**	0.33	0.099	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.52	ND	0.25	0.076	
98-82-8	Cumene	ND	1.7	0.52	ND	0.35	0.11	
80-56-8	alpha-Pinene	**1.0**	1.7	0.49	**0.18**	0.31	0.087	**J**
103-65-1	n-Propylbenzene	**0.58**	1.7	0.56	**0.12**	0.35	0.11	**J**
622-96-8	4-Ethyltoluene	**1.1**	1.7	0.56	**0.22**	0.35	0.11	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.98**	1.7	0.56	**0.20**	0.35	0.11	**J**
95-63-6	1,2,4-Trimethylbenzene	**2.3**	1.7	0.52	**0.46**	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	**3.0**	1.7	0.49	**0.51**	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	**0.72**	1.7	0.49	**0.13**	0.31	0.087	**J**
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	**0.88**	1.7	0.63	**0.17**	0.33	0.12	**J**
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.
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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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-002

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00480

Initial Pressure (psig): 0.13 Final Pressure (psig): 6.42

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	ND	1.8	0.50	ND	1.0	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	1.8	0.60	**0.38**	0.36	0.12	
74-87-3	Chloromethane	ND	1.8	0.53	ND	0.86	0.26	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.67	ND	0.25	0.097	
75-01-4	Vinyl Chloride	ND	1.8	0.60	ND	0.69	0.24	
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	0.46	0.17	
75-00-3	Chloroethane	ND	1.8	0.60	ND	0.67	0.23	
64-17-5	Ethanol	**36**	18	2.8	**19**	9.4	1.5	
75-05-8	Acetonitrile	**0.98**	1.8	0.64	**0.59**	1.1	0.38	**J**
107-02-8	Acrolein	**2.3**	7.1	0.60	**0.99**	3.1	0.26	**J**
67-64-1	Acetone	**82**	18	2.7	**34**	7.5	1.2	
75-69-4	Trichlorofluoromethane	**0.98**	1.8	0.60	**0.17**	0.32	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	18	1.5	ND	7.2	0.61	
107-13-1	Acrylonitrile	ND	1.8	0.60	ND	0.82	0.28	
75-35-4	1,1-Dichloroethene	**6.0**	1.8	0.60	**1.5**	0.45	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	0.57	ND	0.57	0.18	
76-13-1	Trichlorotrifluoroethane	ND	1.8	0.60	ND	0.23	0.079	
75-15-0	Carbon Disulfide	**160**	18	0.53	**53**	5.7	0.17	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.67	ND	0.45	0.17	
75-34-3	1,1-Dichloroethane	ND	1.8	0.57	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	**21**	18	2.3	**5.9**	5.0	0.66	
78-93-3	2-Butanone (MEK)	**14**	18	0.75	**4.6**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-002

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00480

Initial Pressure (psig): 0.13 Final Pressure (psig): 6.42

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	1.8	0.57	ND	0.45	0.14	
141-78-6	Ethyl Acetate	ND	3.6	1.2	ND	0.99	0.34	
110-54-3	n-Hexane	**1.1**	1.8	0.53	**0.31**	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	0.57	ND	0.44	0.14	
71-55-6	1,1,1-Trichloroethane	**22**	1.8	0.60	**4.0**	0.33	0.11	
71-43-2	Benzene	ND	1.8	0.57	ND	0.56	0.18	
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	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	0.38	0.12	
75-27-4	Bromodichloromethane	ND	1.8	0.53	ND	0.27	0.080	
79-01-6	Trichloroethene	**0.82**	1.8	0.50	**0.15**	0.33	0.093	**J**
123-91-1	1,4-Dioxane	**1.2**	1.8	0.57	**0.34**	0.49	0.16	**J**
80-62-6	Methyl Methacrylate	ND	3.6	1.1	ND	0.87	0.27	
142-82-5	n-Heptane	**1.2**	1.8	0.60	**0.30**	0.43	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	**6.1**	1.8	0.57	**1.5**	0.43	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	**0.82**	1.8	0.57	**0.15**	0.33	0.10	**J**
108-88-3	Toluene	**14**	1.8	0.60	**3.7**	0.47	0.16	
591-78-6	2-Hexanone	**1.2**	1.8	0.57	**0.29**	0.43	0.14	**J**
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	0.37	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-02** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-002

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00480

Initial Pressure (psig): 0.13 Final Pressure (psig): 6.42

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	1.8	0.64	ND	0.38	0.14	
127-18-4	Tetrachloroethene	**0.68**	1.8	0.50	**0.10**	0.26	0.073	**J**
108-90-7	Chlorobenzene	ND	1.8	0.57	ND	0.39	0.12	
100-41-4	Ethylbenzene	**2.7**	1.8	0.57	**0.62**	0.41	0.13	
179601-23-1	m,p-Xylenes	**12**	3.6	1.1	**2.7**	0.82	0.25	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.052	
100-42-5	Styrene	ND	1.8	0.53	ND	0.42	0.13	
95-47-6	o-Xylene	**4.6**	1.8	0.53	**1.1**	0.41	0.12	
111-84-2	n-Nonane	ND	1.8	0.53	ND	0.34	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.53	ND	0.26	0.078	
98-82-8	Cumene	ND	1.8	0.53	ND	0.36	0.11	
80-56-8	alpha-Pinene	**1.8**	1.8	0.50	**0.32**	0.32	0.089	
103-65-1	n-Propylbenzene	**0.91**	1.8	0.57	**0.18**	0.36	0.12	**J**
622-96-8	4-Ethyltoluene	**1.7**	1.8	0.57	**0.35**	0.36	0.12	**J**
108-67-8	1,3,5-Trimethylbenzene	**1.5**	1.8	0.57	**0.31**	0.36	0.12	**J**
95-63-6	1,2,4-Trimethylbenzene	**3.5**	1.8	0.53	**0.70**	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	0.30	0.089	
106-46-7	1,4-Dichlorobenzene	**8.7**	1.8	0.50	**1.4**	0.30	0.083	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.53	ND	0.30	0.089	
5989-27-5	d-Limonene	**1.2**	1.8	0.50	**0.21**	0.32	0.089	**J**
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	0.57	ND	0.24	0.077	
91-20-3	Naphthalene	**1.6**	1.8	0.64	**0.31**	0.34	0.12	**J**
87-68-3	Hexachlorobutadiene	ND	1.8	0.50	ND	0.17	0.047	

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-003

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00250

Initial Pressure (psig): -0.18 Final Pressure (psig): 9.30

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	2.1	0.58	ND	1.2	0.34	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	2.1	0.70	**0.39**	0.42	0.14	**J**
74-87-3	Chloromethane	**0.77**	2.1	0.62	**0.37**	1.0	0.30	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.1	0.78	ND	0.30	0.11	
75-01-4	Vinyl Chloride	ND	2.1	0.70	ND	0.81	0.27	
106-99-0	1,3-Butadiene	ND	2.1	0.91	ND	0.93	0.41	
74-83-9	Bromomethane	ND	2.1	0.78	ND	0.53	0.20	
75-00-3	Chloroethane	ND	2.1	0.70	ND	0.78	0.27	
64-17-5	Ethanol	**31**	21	3.3	**16**	11	1.8	
75-05-8	Acetonitrile	ND	2.1	0.74	ND	1.2	0.44	
107-02-8	Acrolein	**3.3**	8.3	0.70	**1.4**	3.6	0.31	**J**
67-64-1	Acetone	**41**	21	3.2	**17**	8.7	1.3	
75-69-4	Trichlorofluoromethane	**1.0**	2.1	0.70	**0.18**	0.37	0.12	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	21	1.7	ND	8.4	0.71	
107-13-1	Acrylonitrile	ND	2.1	0.70	ND	0.95	0.32	
75-35-4	1,1-Dichloroethene	**19**	2.1	0.70	**4.9**	0.52	0.18	
75-09-2	Methylene Chloride	ND	2.1	0.70	ND	0.59	0.20	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.1	0.66	ND	0.66	0.21	
76-13-1	Trichlorotrifluoroethane	**5.2**	2.1	0.70	**0.67**	0.27	0.092	
75-15-0	Carbon Disulfide	**1.4**	21	0.62	**0.45**	6.6	0.20	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.1	0.78	ND	0.52	0.20	
75-34-3	1,1-Dichloroethane	ND	2.1	0.66	ND	0.51	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	2.1	0.70	ND	0.57	0.19	
108-05-4	Vinyl Acetate	ND	21	2.7	ND	5.9	0.76	
78-93-3	2-Butanone (MEK)	**11**	21	0.87	**3.7**	7.0	0.29	**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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-003

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00250

Initial Pressure (psig): -0.18 Final Pressure (psig): 9.30

Canister Dilution Factor: 1.65

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	0.66	ND	0.52	0.17	
141-78-6	Ethyl Acetate	ND	4.1	1.4	ND	1.1	0.40	
110-54-3	n-Hexane	**23**	2.1	0.62	**6.6**	0.59	0.18	
67-66-3	Chloroform	**0.75**	2.1	0.70	**0.15**	0.42	0.14	**J**
109-99-9	Tetrahydrofuran (THF)	**1.1**	2.1	0.83	**0.38**	0.70	0.28	**J**
107-06-2	1,2-Dichloroethane	ND	2.1	0.66	ND	0.51	0.16	
71-55-6	1,1,1-Trichloroethane	**17**	2.1	0.70	**3.1**	0.38	0.13	
71-43-2	Benzene	**13**	2.1	0.66	**4.0**	0.65	0.21	
56-23-5	Carbon Tetrachloride	ND	2.1	0.62	ND	0.33	0.098	
110-82-7	Cyclohexane	**50**	4.1	1.2	**15**	1.2	0.35	
78-87-5	1,2-Dichloropropane	ND	2.1	0.66	ND	0.45	0.14	
75-27-4	Bromodichloromethane	ND	2.1	0.62	ND	0.31	0.092	
79-01-6	Trichloroethene	**0.82**	2.1	0.58	**0.15**	0.38	0.11	**J**
123-91-1	1,4-Dioxane	ND	2.1	0.66	ND	0.57	0.18	
80-62-6	Methyl Methacrylate	ND	4.1	1.3	ND	1.0	0.31	
142-82-5	n-Heptane	**34**	2.1	0.70	**8.3**	0.50	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	2.1	0.58	ND	0.45	0.13	
108-10-1	4-Methyl-2-pentanone	**1.7**	2.1	0.66	**0.42**	0.50	0.16	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	0.66	ND	0.45	0.15	
79-00-5	1,1,2-Trichloroethane	ND	2.1	0.66	ND	0.38	0.12	
108-88-3	Toluene	**2.7**	2.1	0.70	**0.72**	0.55	0.19	
591-78-6	2-Hexanone	ND	2.1	0.66	ND	0.50	0.16	
124-48-1	Dibromochloromethane	ND	2.1	0.66	ND	0.24	0.078	
106-93-4	1,2-Dibromoethane	ND	2.1	0.66	ND	0.27	0.086	
123-86-4	n-Butyl Acetate	ND	2.1	0.66	ND	0.43	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: **SVE-OBS-03** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-003

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00250

Initial Pressure (psig): -0.18 Final Pressure (psig): 9.30

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**34**	2.1	0.74	**7.4**	0.44	0.16	
127-18-4	Tetrachloroethene	**1.5**	2.1	0.58	**0.22**	0.30	0.085	**J**
108-90-7	Chlorobenzene	ND	2.1	0.66	ND	0.45	0.14	
100-41-4	Ethylbenzene	**22**	2.1	0.66	**5.0**	0.48	0.15	
179601-23-1	m,p-Xylenes	**20**	4.1	1.2	**4.5**	0.95	0.29	
75-25-2	Bromoform	ND	2.1	0.62	ND	0.20	0.060	
100-42-5	Styrene	ND	2.1	0.62	ND	0.48	0.15	
95-47-6	o-Xylene	**4.1**	2.1	0.62	**0.94**	0.48	0.14	
111-84-2	n-Nonane	**18**	2.1	0.62	**3.4**	0.39	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	0.62	ND	0.30	0.090	
98-82-8	Cumene	**3.3**	2.1	0.62	**0.67**	0.42	0.13	
80-56-8	alpha-Pinene	**0.83**	2.1	0.58	**0.15**	0.37	0.10	**J**
103-65-1	n-Propylbenzene	**2.5**	2.1	0.66	**0.50**	0.42	0.13	
622-96-8	4-Ethyltoluene	**1.6**	2.1	0.66	**0.32**	0.42	0.13	**J**
108-67-8	1,3,5-Trimethylbenzene	**2.2**	2.1	0.66	**0.45**	0.42	0.13	
95-63-6	1,2,4-Trimethylbenzene	**4.1**	2.1	0.62	**0.84**	0.42	0.13	
100-44-7	Benzyl Chloride	ND	2.1	0.45	ND	0.40	0.088	
541-73-1	1,3-Dichlorobenzene	ND	2.1	0.62	ND	0.34	0.10	
106-46-7	1,4-Dichlorobenzene	**4.4**	2.1	0.58	**0.72**	0.34	0.096	
95-50-1	1,2-Dichlorobenzene	ND	2.1	0.62	ND	0.34	0.10	
5989-27-5	d-Limonene	**0.92**	2.1	0.58	**0.16**	0.37	0.10	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.1	0.41	ND	0.21	0.042	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	0.66	ND	0.28	0.089	
91-20-3	Naphthalene	ND	2.1	0.74	ND	0.39	0.14	
87-68-3	Hexachlorobutadiene	ND	2.1	0.58	ND	0.19	0.054	

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

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-004

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00841

Initial Pressure (psig): -0.05 Final Pressure (psig): 6.04

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	ND	1.8	0.50	ND	1.0	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	1.8	0.60	**0.40**	0.36	0.12	
74-87-3	Chloromethane	ND	1.8	0.53	ND	0.86	0.26	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.67	ND	0.25	0.097	
75-01-4	Vinyl Chloride	ND	1.8	0.60	ND	0.69	0.24	
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	0.46	0.17	
75-00-3	Chloroethane	ND	1.8	0.60	ND	0.67	0.23	
64-17-5	Ethanol	**42**	18	2.8	**22**	9.4	1.5	
75-05-8	Acetonitrile	ND	1.8	0.64	ND	1.1	0.38	
107-02-8	Acrolein	**1.0**	7.1	0.60	**0.45**	3.1	0.26	**J**
67-64-1	Acetone	**24**	18	2.7	**10**	7.5	1.2	
75-69-4	Trichlorofluoromethane	**1.1**	1.8	0.60	**0.19**	0.32	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**4.8**	18	1.5	**2.0**	7.2	0.61	**J**
107-13-1	Acrylonitrile	ND	1.8	0.60	ND	0.82	0.28	
75-35-4	1,1-Dichloroethene	**3.3**	1.8	0.60	**0.83**	0.45	0.15	
75-09-2	Methylene Chloride	**0.71**	1.8	0.60	**0.20**	0.51	0.17	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.57	ND	0.57	0.18	
76-13-1	Trichlorotrifluoroethane	**9.8**	1.8	0.60	**1.3**	0.23	0.079	
75-15-0	Carbon Disulfide	**3.0**	18	0.53	**0.98**	5.7	0.17	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.67	ND	0.45	0.17	
75-34-3	1,1-Dichloroethane	ND	1.8	0.57	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	**4.8**	18	2.3	**1.4**	5.0	0.66	**J**
78-93-3	2-Butanone (MEK)	**3.7**	18	0.75	**1.2**	6.0	0.25	**J**

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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-004

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00841

Initial Pressure (psig): -0.05 Final Pressure (psig): 6.04

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	1.8	0.57	ND	0.45	0.14	
141-78-6	Ethyl Acetate	**1.3**	3.6	1.2	**0.35**	0.99	0.34	**J**
110-54-3	n-Hexane	**0.74**	1.8	0.53	**0.21**	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	0.57	ND	0.44	0.14	
71-55-6	1,1,1-Trichloroethane	**4.0**	1.8	0.60	**0.73**	0.33	0.11	
71-43-2	Benzene	**0.65**	1.8	0.57	**0.20**	0.56	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	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	0.38	0.12	
75-27-4	Bromodichloromethane	ND	1.8	0.53	ND	0.27	0.080	
79-01-6	Trichloroethene	**0.78**	1.8	0.50	**0.14**	0.33	0.093	**J**
123-91-1	1,4-Dioxane	ND	1.8	0.57	ND	0.49	0.16	
80-62-6	Methyl Methacrylate	ND	3.6	1.1	ND	0.87	0.27	
142-82-5	n-Heptane	**0.70**	1.8	0.60	**0.17**	0.43	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	**10**	1.8	0.57	**2.5**	0.43	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	**7.9**	1.8	0.60	**2.1**	0.47	0.16	
591-78-6	2-Hexanone	ND	1.8	0.57	ND	0.43	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	0.37	0.12	

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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-04** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-004

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00841

Initial Pressure (psig): -0.05 Final Pressure (psig): 6.04

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	1.8	0.64	ND	0.38	0.14	
127-18-4	Tetrachloroethene	**1.4**	1.8	0.50	**0.20**	0.26	0.073	**J**
108-90-7	Chlorobenzene	ND	1.8	0.57	ND	0.39	0.12	
100-41-4	Ethylbenzene	**5.5**	1.8	0.57	**1.3**	0.41	0.13	
179601-23-1	m,p-Xylenes	**25**	3.6	1.1	**5.8**	0.82	0.25	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.052	
100-42-5	Styrene	ND	1.8	0.53	ND	0.42	0.13	
95-47-6	o-Xylene	**11**	1.8	0.53	**2.5**	0.41	0.12	
111-84-2	n-Nonane	**0.95**	1.8	0.53	**0.18**	0.34	0.10	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.53	ND	0.26	0.078	
98-82-8	Cumene	**0.72**	1.8	0.53	**0.15**	0.36	0.11	**J**
80-56-8	alpha-Pinene	**2.3**	1.8	0.50	**0.41**	0.32	0.089	
103-65-1	n-Propylbenzene	**2.1**	1.8	0.57	**0.42**	0.36	0.12	
622-96-8	4-Ethyltoluene	**3.9**	1.8	0.57	**0.80**	0.36	0.12	
108-67-8	1,3,5-Trimethylbenzene	**4.3**	1.8	0.57	**0.88**	0.36	0.12	
95-63-6	1,2,4-Trimethylbenzene	**7.6**	1.8	0.53	**1.5**	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	0.30	0.089	
106-46-7	1,4-Dichlorobenzene	**6.9**	1.8	0.50	**1.1**	0.30	0.083	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.53	ND	0.30	0.089	
5989-27-5	d-Limonene	**1.5**	1.8	0.50	**0.27**	0.32	0.089	**J**
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	0.57	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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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-005

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01033

Initial Pressure (psig): -0.15 Final Pressure (psig): 5.51

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	**3.7**	1.7	0.49	**2.2**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	1.7	0.59	**0.42**	0.35	0.12	
74-87-3	Chloromethane	**0.60**	1.7	0.52	**0.29**	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	0.79	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	**23**	17	2.8	**12**	9.2	1.5	
75-05-8	Acetonitrile	**0.99**	1.7	0.63	**0.59**	1.0	0.37	**J**
107-02-8	Acrolein	**1.3**	7.0	0.59	**0.58**	3.0	0.26	**J**
67-64-1	Acetone	**31**	17	2.7	**13**	7.3	1.1	
75-69-4	Trichlorofluoromethane	**1.1**	1.7	0.59	**0.19**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**8.2**	17	1.5	**3.3**	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	ND	1.7	0.59	ND	0.44	0.15	
75-09-2	Methylene Chloride	**0.63**	1.7	0.59	**0.18**	0.50	0.17	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	0.56	ND	0.56	0.18	
76-13-1	Trichlorotrifluoroethane	ND	1.7	0.59	ND	0.23	0.077	
75-15-0	Carbon Disulfide	**0.85**	17	0.52	**0.27**	5.6	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	ND	1.7	0.56	ND	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	**31**	17	2.3	**8.9**	4.9	0.64	
78-93-3	2-Butanone (MEK)	**4.4**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-005

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01033

Initial Pressure (psig): -0.15 Final Pressure (psig): 5.51

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	ND	3.5	1.2	ND	0.96	0.34	
110-54-3	n-Hexane	**2.5**	1.7	0.52	**0.72**	0.49	0.15	
67-66-3	Chloroform	ND	1.7	0.59	ND	0.36	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.70	ND	0.59	0.24	
107-06-2	1,2-Dichloroethane	ND	1.7	0.56	ND	0.43	0.14	
71-55-6	1,1,1-Trichloroethane	**1.0**	1.7	0.59	**0.19**	0.32	0.11	**J**
71-43-2	Benzene	**2.7**	1.7	0.56	**0.85**	0.54	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	ND	0.28	0.083	
110-82-7	Cyclohexane	**2.4**	3.5	1.0	**0.70**	1.0	0.29	**J**
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	ND	1.7	0.49	ND	0.32	0.091	
123-91-1	1,4-Dioxane	**1.2**	1.7	0.56	**0.32**	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	**3.5**	1.7	0.59	**0.85**	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	ND	1.7	0.56	ND	0.32	0.10	
108-88-3	Toluene	**7.7**	1.7	0.59	**2.0**	0.46	0.16	
591-78-6	2-Hexanone	**1.0**	1.7	0.56	**0.26**	0.42	0.14	**J**
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	**0.65**	1.7	0.56	**0.14**	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-05** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-005

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01033

Initial Pressure (psig): -0.15 Final Pressure (psig): 5.51

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	**3.8**	1.7	0.63	**0.82**	0.37	0.13	
127-18-4	Tetrachloroethene	ND	1.7	0.49	ND	0.26	0.072	
108-90-7	Chlorobenzene	ND	1.7	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**5.7**	1.7	0.56	**1.3**	0.40	0.13	
179601-23-1	m,p-Xylenes	**23**	3.5	1.0	**5.4**	0.80	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	**8.4**	1.7	0.52	**1.9**	0.40	0.12	
111-84-2	n-Nonane	**5.3**	1.7	0.52	**1.0**	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	**0.81**	1.7	0.52	**0.17**	0.35	0.11	**J**
80-56-8	alpha-Pinene	**2.1**	1.7	0.49	**0.38**	0.31	0.087	
103-65-1	n-Propylbenzene	**2.1**	1.7	0.56	**0.43**	0.35	0.11	
622-96-8	4-Ethyltoluene	**4.1**	1.7	0.56	**0.84**	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	**4.1**	1.7	0.56	**0.84**	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**7.5**	1.7	0.52	**1.5**	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	**8.8**	1.7	0.49	**1.5**	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	**1.2**	1.7	0.49	**0.21**	0.31	0.087	**J**
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.
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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-06** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-006

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00857

Initial Pressure (psig): 0.18 Final Pressure (psig): 6.28

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	ND	1.8	0.49	ND	1.0	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.8**	1.8	0.60	**0.36**	0.36	0.12	
74-87-3	Chloromethane	ND	1.8	0.53	ND	0.85	0.26	
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	**400**	18	2.8	**210**	9.4	1.5	
75-05-8	Acetonitrile	ND	1.8	0.63	ND	1.1	0.38	
107-02-8	Acrolein	**2.1**	7.1	0.60	**0.92**	3.1	0.26	**J**
67-64-1	Acetone	**110**	18	2.7	**47**	7.4	1.1	
75-69-4	Trichlorofluoromethane	**1.0**	1.8	0.60	**0.18**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**56**	18	1.5	**23**	7.2	0.60	
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	**1.2**	1.8	0.60	**0.35**	0.51	0.17	**J**
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	**2.0**	18	0.53	**0.65**	5.7	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	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	**7.5**	18	2.3	**2.1**	5.0	0.65	**J**
78-93-3	2-Butanone (MEK)	**13**	18	0.74	**4.5**	6.0	0.25	**J**

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-06** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-006

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00857

Initial Pressure (psig): 0.18 Final Pressure (psig): 6.28

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	**20**	3.5	1.2	**5.5**	0.98	0.34	
110-54-3	n-Hexane	**4.3**	1.8	0.53	**1.2**	0.50	0.15	
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	ND	1.8	0.60	ND	0.32	0.11	
71-43-2	Benzene	**1.0**	1.8	0.56	**0.32**	0.55	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	ND	0.28	0.084	
110-82-7	Cyclohexane	ND	3.5	1.0	ND	1.0	0.30	
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	ND	1.8	0.56	ND	0.49	0.16	
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.86	0.27	
142-82-5	n-Heptane	**1.5**	1.8	0.60	**0.38**	0.43	0.15	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.49	ND	0.39	0.11	
108-10-1	4-Methyl-2-pentanone	**14**	1.8	0.56	**3.4**	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	**43**	1.8	0.60	**12**	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	**1.0**	1.8	0.56	**0.22**	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-06** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-006

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00857

Initial Pressure (psig): 0.18 Final Pressure (psig): 6.28

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	**1.0**	1.8	0.63	**0.22**	0.38	0.14	**J**
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	**13**	1.8	0.56	**3.1**	0.41	0.13	
179601-23-1	m,p-Xylenes	**70**	3.5	1.1	**16**	0.81	0.24	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.051	
100-42-5	Styrene	**1.0**	1.8	0.53	**0.24**	0.41	0.12	**J**
95-47-6	o-Xylene	**28**	1.8	0.53	**6.4**	0.41	0.12	
111-84-2	n-Nonane	**3.2**	1.8	0.53	**0.61**	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	**1.6**	1.8	0.53	**0.33**	0.36	0.11	**J**
80-56-8	alpha-Pinene	**8.6**	1.8	0.49	**1.5**	0.32	0.089	
103-65-1	n-Propylbenzene	**4.5**	1.8	0.56	**0.91**	0.36	0.11	
622-96-8	4-Ethyltoluene	**9.8**	1.8	0.56	**2.0**	0.36	0.11	
108-67-8	1,3,5-Trimethylbenzene	**11**	1.8	0.56	**2.2**	0.36	0.11	
95-63-6	1,2,4-Trimethylbenzene	**34**	1.8	0.53	**6.9**	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	**36**	1.8	0.49	**6.0**	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	**5.6**	1.8	0.49	**1.0**	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.
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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-007

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00099

Initial Pressure (psig): -0.50 Final Pressure (psig): 5.14

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	**9.5**	1.8	0.49	**5.5**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.8**	1.8	0.60	**0.36**	0.35	0.12	
74-87-3	Chloromethane	**0.54**	1.8	0.53	**0.26**	0.85	0.25	**J**
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	**100**	18	2.8	**56**	9.3	1.5	
75-05-8	Acetonitrile	**67**	1.8	0.63	**40**	1.0	0.38	
107-02-8	Acrolein	**38**	7.0	0.60	**16**	3.1	0.26	
67-64-1	Acetone	**300**	18	2.7	**130**	7.4	1.1	
75-69-4	Trichlorofluoromethane	**0.98**	1.8	0.60	**0.17**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	18	1.5	ND	7.1	0.60	
107-13-1	Acrylonitrile	**4.0**	1.8	0.60	**1.9**	0.81	0.27	
75-35-4	1,1-Dichloroethene	**3.9**	1.8	0.60	**0.99**	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	ND	1.8	0.60	ND	0.23	0.078	
75-15-0	Carbon Disulfide	**27**	18	0.53	**8.8**	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	**380**	18	2.3	**110**	5.0	0.65	
78-93-3	2-Butanone (MEK)	**54**	18	0.74	**18**	5.9	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-007

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00099

Initial Pressure (psig): -0.50 Final Pressure (psig): 5.14

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	ND	3.5	1.2	ND	0.97	0.34	
110-54-3	n-Hexane	**9.6**	1.8	0.53	**2.7**	0.50	0.15	
67-66-3	Chloroform	ND	1.8	0.60	ND	0.36	0.12	
109-99-9	Tetrahydrofuran (THF)	**13**	1.8	0.70	**4.4**	0.59	0.24	
107-06-2	1,2-Dichloroethane	**0.71**	1.8	0.56	**0.17**	0.43	0.14	**J**
71-55-6	1,1,1-Trichloroethane	**20**	1.8	0.60	**3.7**	0.32	0.11	
71-43-2	Benzene	**48**	1.8	0.56	**15**	0.55	0.18	
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	ND	0.28	0.083	
110-82-7	Cyclohexane	**1.4**	3.5	1.0	**0.41**	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	**0.58**	1.8	0.49	**0.11**	0.33	0.091	**J**
123-91-1	1,4-Dioxane	**22**	1.8	0.56	**6.1**	0.49	0.16	
80-62-6	Methyl Methacrylate	**1.9**	3.5	1.1	**0.45**	0.86	0.27	**J**
142-82-5	n-Heptane	**8.6**	1.8	0.60	**2.1**	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	ND	1.8	0.56	ND	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	**88**	1.8	0.60	**23**	0.46	0.16	
591-78-6	2-Hexanone	**2.9**	1.8	0.56	**0.71**	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	ND	1.8	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-007

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00099

Initial Pressure (psig): -0.50 Final Pressure (psig): 5.14

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	1.8	0.63	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**1.8**	1.8	0.49	**0.27**	0.26	0.072	
108-90-7	Chlorobenzene	ND	1.8	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**29**	1.8	0.56	**6.7**	0.40	0.13	
179601-23-1	m,p-Xylenes	**30**	3.5	1.1	**7.0**	0.81	0.24	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.051	
100-42-5	Styrene	**2.4**	1.8	0.53	**0.56**	0.41	0.12	
95-47-6	o-Xylene	**17**	1.8	0.53	**3.9**	0.40	0.12	
111-84-2	n-Nonane	**1.8**	1.8	0.53	**0.34**	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	**2.1**	1.8	0.53	**0.44**	0.36	0.11	
80-56-8	alpha-Pinene	**1.6**	1.8	0.49	**0.29**	0.31	0.088	**J**
103-65-1	n-Propylbenzene	**1.4**	1.8	0.56	**0.29**	0.36	0.11	**J**
622-96-8	4-Ethyltoluene	**2.7**	1.8	0.56	**0.54**	0.36	0.11	
108-67-8	1,3,5-Trimethylbenzene	**3.4**	1.8	0.56	**0.69**	0.36	0.11	
95-63-6	1,2,4-Trimethylbenzene	**6.0**	1.8	0.53	**1.2**	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	**11**	1.8	0.49	**1.8**	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.
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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-008

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00492

Initial Pressure (psig): -0.16 Final Pressure (psig): 7.30

Canister Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	1.9	0.53	ND	1.1	0.31	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	1.9	0.64	**0.38**	0.38	0.13	
74-87-3	Chloromethane	**0.59**	1.9	0.57	**0.29**	0.91	0.27	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.9	0.72	ND	0.27	0.10	
75-01-4	Vinyl Chloride	ND	1.9	0.64	ND	0.74	0.25	
106-99-0	1,3-Butadiene	ND	1.9	0.83	ND	0.85	0.38	
74-83-9	Bromomethane	ND	1.9	0.72	ND	0.49	0.18	
75-00-3	Chloroethane	ND	1.9	0.64	ND	0.72	0.24	
64-17-5	Ethanol	**53**	19	3.0	**28**	10	1.6	
75-05-8	Acetonitrile	ND	1.9	0.68	ND	1.1	0.40	
107-02-8	Acrolein	**2.6**	7.6	0.64	**1.1**	3.3	0.28	**J**
67-64-1	Acetone	**32**	19	2.9	**14**	7.9	1.2	
75-69-4	Trichlorofluoromethane	**1.0**	1.9	0.64	**0.18**	0.34	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	19	1.6	ND	7.7	0.65	
107-13-1	Acrylonitrile	ND	1.9	0.64	ND	0.87	0.30	
75-35-4	1,1-Dichloroethene	**270**	1.9	0.64	**67**	0.48	0.16	
75-09-2	Methylene Chloride	ND	1.9	0.64	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	0.64	ND	0.25	0.084	
75-15-0	Carbon Disulfide	**18**	19	0.57	**5.9**	6.1	0.18	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.9	0.72	ND	0.48	0.18	
75-34-3	1,1-Dichloroethane	**19**	1.9	0.60	**4.6**	0.47	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	1.9	0.64	ND	0.52	0.18	
108-05-4	Vinyl Acetate	**15**	19	2.5	**4.3**	5.4	0.70	**J**
78-93-3	2-Butanone (MEK)	**6.1**	19	0.79	**2.1**	6.4	0.27	**J**

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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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-008

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00492

Initial Pressure (psig): -0.16 Final Pressure (psig): 7.30

Canister Dilution Factor: 1.51

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	0.48	0.15	
141-78-6	Ethyl Acetate	**2.4**	3.8	1.3	**0.65**	1.0	0.37	**J**
110-54-3	n-Hexane	**0.62**	1.9	0.57	**0.17**	0.54	0.16	**J**
67-66-3	Chloroform	**1.1**	1.9	0.64	**0.23**	0.39	0.13	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.9	0.76	ND	0.64	0.26	
107-06-2	1,2-Dichloroethane	ND	1.9	0.60	ND	0.47	0.15	
71-55-6	1,1,1-Trichloroethane	**34**	1.9	0.64	**6.1**	0.35	0.12	
71-43-2	Benzene	**0.86**	1.9	0.60	**0.27**	0.59	0.19	**J**
56-23-5	Carbon Tetrachloride	ND	1.9	0.57	ND	0.30	0.090	
110-82-7	Cyclohexane	ND	3.8	1.1	ND	1.1	0.32	
78-87-5	1,2-Dichloropropane	ND	1.9	0.60	ND	0.41	0.13	
75-27-4	Bromodichloromethane	ND	1.9	0.57	ND	0.28	0.085	
79-01-6	Trichloroethene	**1.0**	1.9	0.53	**0.19**	0.35	0.098	**J**
123-91-1	1,4-Dioxane	ND	1.9	0.60	ND	0.52	0.17	
80-62-6	Methyl Methacrylate	ND	3.8	1.2	ND	0.92	0.29	
142-82-5	n-Heptane	**1.1**	1.9	0.64	**0.28**	0.46	0.16	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.53	ND	0.42	0.12	
108-10-1	4-Methyl-2-pentanone	**4.7**	1.9	0.60	**1.1**	0.46	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.60	ND	0.42	0.13	
79-00-5	1,1,2-Trichloroethane	ND	1.9	0.60	ND	0.35	0.11	
108-88-3	Toluene	**7.8**	1.9	0.64	**2.1**	0.50	0.17	
591-78-6	2-Hexanone	**1.6**	1.9	0.60	**0.38**	0.46	0.15	**J**
124-48-1	Dibromochloromethane	ND	1.9	0.60	ND	0.22	0.071	
106-93-4	1,2-Dibromoethane	ND	1.9	0.60	ND	0.25	0.079	
123-86-4	n-Butyl Acetate	ND	1.9	0.60	ND	0.40	0.13	

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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-008

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00492

Initial Pressure (psig): -0.16 Final Pressure (psig): 7.30

Canister Dilution Factor: 1.51

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	1.9	0.68	ND	0.40	0.15	
127-18-4	Tetrachloroethene	**6.9**	1.9	0.53	**1.0**	0.28	0.078	
108-90-7	Chlorobenzene	ND	1.9	0.60	ND	0.41	0.13	
100-41-4	Ethylbenzene	**3.5**	1.9	0.60	**0.80**	0.43	0.14	
179601-23-1	m,p-Xylenes	**16**	3.8	1.1	**3.6**	0.87	0.26	
75-25-2	Bromoform	ND	1.9	0.57	ND	0.18	0.055	
100-42-5	Styrene	ND	1.9	0.57	ND	0.44	0.13	
95-47-6	o-Xylene	**7.3**	1.9	0.57	**1.7**	0.43	0.13	
111-84-2	n-Nonane	ND	1.9	0.57	ND	0.36	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.9	0.57	ND	0.27	0.082	
98-82-8	Cumene	ND	1.9	0.57	ND	0.38	0.12	
80-56-8	alpha-Pinene	**1.6**	1.9	0.53	**0.29**	0.34	0.095	**J**
103-65-1	n-Propylbenzene	**1.0**	1.9	0.60	**0.21**	0.38	0.12	**J**
622-96-8	4-Ethyltoluene	**2.3**	1.9	0.60	**0.48**	0.38	0.12	
108-67-8	1,3,5-Trimethylbenzene	**2.6**	1.9	0.60	**0.53**	0.38	0.12	
95-63-6	1,2,4-Trimethylbenzene	**4.4**	1.9	0.57	**0.89**	0.38	0.12	
100-44-7	Benzyl Chloride	ND	1.9	0.42	ND	0.36	0.080	
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.57	ND	0.31	0.094	
106-46-7	1,4-Dichlorobenzene	**13**	1.9	0.53	**2.1**	0.31	0.088	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.57	ND	0.31	0.094	
5989-27-5	d-Limonene	**1.5**	1.9	0.53	**0.27**	0.34	0.095	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.9	0.37	ND	0.20	0.039	
120-82-1	1,2,4-Trichlorobenzene	ND	1.9	0.60	ND	0.25	0.081	
91-20-3	Naphthalene	ND	1.9	0.68	ND	0.36	0.13	
87-68-3	Hexachlorobutadiene	ND	1.9	0.53	ND	0.18	0.050	

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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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-009

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/5/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: 1SC00281

Initial Pressure (psig): -0.10 Final Pressure (psig): 6.63

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	1.8	0.51	ND	1.1	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	1.8	0.62	**0.41**	0.37	0.13	
74-87-3	Chloromethane	ND	1.8	0.55	ND	0.88	0.27	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.69	ND	0.26	0.099	
75-01-4	Vinyl Chloride	ND	1.8	0.62	ND	0.71	0.24	
106-99-0	1,3-Butadiene	ND	1.8	0.80	ND	0.83	0.36	
74-83-9	Bromomethane	ND	1.8	0.69	ND	0.47	0.18	
75-00-3	Chloroethane	ND	1.8	0.62	ND	0.69	0.24	
64-17-5	Ethanol	**46**	18	2.9	**24**	9.7	1.6	
75-05-8	Acetonitrile	**1.8**	1.8	0.66	**1.1**	1.1	0.39	**J**
107-02-8	Acrolein	**5.6**	7.3	0.62	**2.5**	3.2	0.27	**J**
67-64-1	Acetone	**94**	18	2.8	**40**	7.7	1.2	
75-69-4	Trichlorofluoromethane	**1.2**	1.8	0.62	**0.21**	0.32	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	18	1.5	ND	7.4	0.62	
107-13-1	Acrylonitrile	ND	1.8	0.62	ND	0.84	0.29	
75-35-4	1,1-Dichloroethene	**8.4**	1.8	0.62	**2.1**	0.46	0.16	
75-09-2	Methylene Chloride	**0.75**	1.8	0.62	**0.22**	0.53	0.18	**J, B**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.58	ND	0.58	0.19	
76-13-1	Trichlorotrifluoroethane	ND	1.8	0.62	ND	0.24	0.081	
75-15-0	Carbon Disulfide	**720**	150	4.4	**230**	47	1.4	**D**
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.69	ND	0.46	0.17	
75-34-3	1,1-Dichloroethane	ND	1.8	0.58	ND	0.45	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.8	0.62	ND	0.51	0.17	
108-05-4	Vinyl Acetate	**18**	18	2.4	**5.1**	5.2	0.67	**J**
78-93-3	2-Butanone (MEK)	**21**	18	0.77	**7.1**	6.2	0.26	

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: **SVE-OBS-09** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-009

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/5/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: 1SC00281

Initial Pressure (psig): -0.10 Final Pressure (psig): 6.63

Canister Dilution Factor: 1.46

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	0.58	ND	0.46	0.15	
141-78-6	Ethyl Acetate	**2.2**	3.7	1.3	**0.60**	1.0	0.35	**J**
110-54-3	n-Hexane	**1.1**	1.8	0.55	**0.31**	0.52	0.16	**J**
67-66-3	Chloroform	ND	1.8	0.62	ND	0.37	0.13	
109-99-9	Tetrahydrofuran (THF)	**6.7**	1.8	0.73	**2.3**	0.62	0.25	
107-06-2	1,2-Dichloroethane	ND	1.8	0.58	ND	0.45	0.14	
71-55-6	1,1,1-Trichloroethane	**15**	1.8	0.62	**2.8**	0.33	0.11	
71-43-2	Benzene	**0.65**	1.8	0.58	**0.20**	0.57	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.55	ND	0.29	0.087	
110-82-7	Cyclohexane	ND	3.7	1.1	ND	1.1	0.31	
78-87-5	1,2-Dichloropropane	ND	1.8	0.58	ND	0.40	0.13	
75-27-4	Bromodichloromethane	ND	1.8	0.55	ND	0.27	0.082	
79-01-6	Trichloroethene	**1.3**	1.8	0.51	**0.25**	0.34	0.095	**J**
123-91-1	1,4-Dioxane	**5.2**	1.8	0.58	**1.4**	0.51	0.16	
80-62-6	Methyl Methacrylate	ND	3.7	1.1	ND	0.89	0.28	
142-82-5	n-Heptane	**1.1**	1.8	0.62	**0.28**	0.45	0.15	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.51	ND	0.40	0.11	
108-10-1	4-Methyl-2-pentanone	**4.4**	1.8	0.58	**1.1**	0.45	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.58	ND	0.40	0.13	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.58	ND	0.33	0.11	
108-88-3	Toluene	**5.6**	1.8	0.62	**1.5**	0.48	0.16	
591-78-6	2-Hexanone	**3.0**	1.8	0.58	**0.73**	0.45	0.14	
124-48-1	Dibromochloromethane	ND	1.8	0.58	ND	0.21	0.069	
106-93-4	1,2-Dibromoethane	ND	1.8	0.58	ND	0.24	0.076	
123-86-4	n-Butyl Acetate	ND	1.8	0.58	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-009

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/5/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.050 Liter(s)
Container ID: 1SC00281

Initial Pressure (psig): -0.10 Final Pressure (psig): 6.63

Canister Dilution Factor: 1.46

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	1.8	0.66	ND	0.39	0.14	
127-18-4	Tetrachloroethene	**4.3**	1.8	0.51	**0.63**	0.27	0.075	
108-90-7	Chlorobenzene	ND	1.8	0.58	ND	0.40	0.13	
100-41-4	Ethylbenzene	**2.1**	1.8	0.58	**0.49**	0.42	0.13	
179601-23-1	m,p-Xylenes	**9.6**	3.7	1.1	**2.2**	0.84	0.25	
75-25-2	Bromoform	ND	1.8	0.55	ND	0.18	0.053	
100-42-5	Styrene	ND	1.8	0.55	ND	0.43	0.13	
95-47-6	o-Xylene	**4.6**	1.8	0.55	**1.1**	0.42	0.13	
111-84-2	n-Nonane	**0.88**	1.8	0.55	**0.17**	0.35	0.10	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.55	ND	0.27	0.080	
98-82-8	Cumene	**0.55**	1.8	0.55	**0.11**	0.37	0.11	**J**
80-56-8	alpha-Pinene	ND	1.8	0.51	ND	0.33	0.092	
103-65-1	n-Propylbenzene	**0.88**	1.8	0.58	**0.18**	0.37	0.12	**J**
622-96-8	4-Ethyltoluene	**1.9**	1.8	0.58	**0.38**	0.37	0.12	
108-67-8	1,3,5-Trimethylbenzene	**1.6**	1.8	0.58	**0.32**	0.37	0.12	**J**
95-63-6	1,2,4-Trimethylbenzene	**3.9**	1.8	0.55	**0.78**	0.37	0.11	
100-44-7	Benzyl Chloride	ND	1.8	0.40	ND	0.35	0.078	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.55	ND	0.30	0.091	
106-46-7	1,4-Dichlorobenzene	**13**	1.8	0.51	**2.2**	0.30	0.085	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.55	ND	0.30	0.091	
5989-27-5	d-Limonene	ND	1.8	0.51	ND	0.33	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.8	0.36	ND	0.19	0.037	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.58	ND	0.25	0.079	
91-20-3	Naphthalene	**0.96**	1.8	0.66	**0.18**	0.35	0.13	**J**
87-68-3	Hexachlorobutadiene	**0.99**	1.8	0.51	**0.092**	0.17	0.048	**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 Exhaust** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-010

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.075 Liter(s)
Test Notes: 0.015 Liter(s)
Container ID: 1SC00619

Initial Pressure (psig): 0.04 Final Pressure (psig): 6.62

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	9.7	2.7	ND	5.6	1.6	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	9.7	3.3	ND	2.0	0.66	
74-87-3	Chloromethane	ND	9.7	2.9	ND	4.7	1.4	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	9.7	3.7	ND	1.4	0.53	
75-01-4	Vinyl Chloride	ND	9.7	3.3	ND	3.8	1.3	
106-99-0	1,3-Butadiene	ND	9.7	4.3	ND	4.4	1.9	
74-83-9	Bromomethane	ND	9.7	3.7	ND	2.5	0.95	
75-00-3	Chloroethane	ND	9.7	3.3	ND	3.7	1.2	
64-17-5	Ethanol	**29**	97	15	**15**	51	8.2	**J**
75-05-8	Acetonitrile	ND	9.7	3.5	ND	5.8	2.1	
107-02-8	Acrolein	ND	39	3.3	ND	17	1.4	
67-64-1	Acetone	**90**	97	15	**38**	41	6.3	**J**
75-69-4	Trichlorofluoromethane	ND	9.7	3.3	ND	1.7	0.59	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	97	8.1	ND	39	3.3	
107-13-1	Acrylonitrile	ND	9.7	3.3	ND	4.5	1.5	
75-35-4	1,1-Dichloroethene	**260**	9.7	3.3	**65**	2.4	0.83	
75-09-2	Methylene Chloride	ND	9.7	3.3	ND	2.8	0.95	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	9.7	3.1	ND	3.1	0.99	
76-13-1	Trichlorotrifluoroethane	**15**	9.7	3.3	**2.0**	1.3	0.43	
75-15-0	Carbon Disulfide	ND	97	2.9	ND	31	0.93	
156-60-5	trans-1,2-Dichloroethene	ND	9.7	3.7	ND	2.4	0.93	
75-34-3	1,1-Dichloroethane	**6.9**	9.7	3.1	**1.7**	2.4	0.76	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	9.7	3.3	ND	2.7	0.91	
108-05-4	Vinyl Acetate	ND	97	13	ND	27	3.6	
78-93-3	2-Butanone (MEK)	**12**	97	4.1	**4.1**	33	1.4	**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 Exhaust** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-010

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.075 Liter(s)
Test Notes: 0.015 Liter(s)
Container ID: 1SC00619

Initial Pressure (psig): 0.04 Final Pressure (psig): 6.62

Canister Dilution Factor: 1.45

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	9.7	3.1	ND	2.4	0.78	
141-78-6	Ethyl Acetate	ND	19	6.8	ND	5.4	1.9	
110-54-3	n-Hexane	**3.3**	9.7	2.9	**0.93**	2.7	0.82	**J**
67-66-3	Chloroform	**6.3**	9.7	3.3	**1.3**	2.0	0.67	**J**
109-99-9	Tetrahydrofuran (THF)	ND	9.7	3.9	ND	3.3	1.3	
107-06-2	1,2-Dichloroethane	ND	9.7	3.1	ND	2.4	0.76	
71-55-6	1,1,1-Trichloroethane	**100**	9.7	3.3	**19**	1.8	0.60	
71-43-2	Benzene	**3.9**	9.7	3.1	**1.2**	3.0	0.97	**J**
56-23-5	Carbon Tetrachloride	ND	9.7	2.9	ND	1.5	0.46	
110-82-7	Cyclohexane	**6.5**	19	5.6	**1.9**	5.6	1.6	**J**
78-87-5	1,2-Dichloropropane	ND	9.7	3.1	ND	2.1	0.67	
75-27-4	Bromodichloromethane	ND	9.7	2.9	ND	1.4	0.43	
79-01-6	Trichloroethene	ND	9.7	2.7	ND	1.8	0.50	
123-91-1	1,4-Dioxane	**5,100**	48	15	**1,400**	13	4.3	**D**
80-62-6	Methyl Methacrylate	ND	19	6.0	ND	4.7	1.5	
142-82-5	n-Heptane	**4.1**	9.7	3.3	**1.0**	2.4	0.80	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	9.7	2.7	ND	2.1	0.60	
108-10-1	4-Methyl-2-pentanone	**3.2**	9.7	3.1	**0.77**	2.4	0.76	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	9.7	3.1	ND	2.1	0.68	
79-00-5	1,1,2-Trichloroethane	**4.9**	9.7	3.1	**0.89**	1.8	0.57	**J**
108-88-3	Toluene	**15**	9.7	3.3	**4.1**	2.6	0.87	
591-78-6	2-Hexanone	**11**	9.7	3.1	**2.8**	2.4	0.76	
124-48-1	Dibromochloromethane	ND	9.7	3.1	ND	1.1	0.36	
106-93-4	1,2-Dibromoethane	ND	9.7	3.1	ND	1.3	0.40	
123-86-4	n-Butyl Acetate	ND	9.7	3.1	ND	2.0	0.65	

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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE Exhaust** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-010

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.075 Liter(s)
Test Notes: 0.015 Liter(s)
Container ID: 1SC00619

Initial Pressure (psig): 0.04 Final Pressure (psig): 6.62

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**4.8**	9.7	3.5	**1.0**	2.1	0.75	**J**
127-18-4	Tetrachloroethene	**20**	9.7	2.7	**3.0**	1.4	0.40	
108-90-7	Chlorobenzene	ND	9.7	3.1	ND	2.1	0.67	
100-41-4	Ethylbenzene	**10**	9.7	3.1	**2.3**	2.2	0.71	
179601-23-1	m,p-Xylenes	**32**	19	5.8	**7.4**	4.5	1.3	
75-25-2	Bromoform	ND	9.7	2.9	ND	0.94	0.28	
100-42-5	Styrene	ND	9.7	2.9	ND	2.3	0.68	
95-47-6	o-Xylene	**12**	9.7	2.9	**2.9**	2.2	0.67	
111-84-2	n-Nonane	**13**	9.7	2.9	**2.6**	1.8	0.55	
79-34-5	1,1,2,2-Tetrachloroethane	ND	9.7	2.9	ND	1.4	0.42	
98-82-8	Cumene	ND	9.7	2.9	ND	2.0	0.59	
80-56-8	alpha-Pinene	ND	9.7	2.7	ND	1.7	0.49	
103-65-1	n-Propylbenzene	ND	9.7	3.1	ND	2.0	0.63	
622-96-8	4-Ethyltoluene	ND	9.7	3.1	ND	2.0	0.63	
108-67-8	1,3,5-Trimethylbenzene	ND	9.7	3.1	ND	2.0	0.63	
95-63-6	1,2,4-Trimethylbenzene	**3.4**	9.7	2.9	**0.68**	2.0	0.59	**J**
100-44-7	Benzyl Chloride	ND	9.7	2.1	ND	1.9	0.41	
541-73-1	1,3-Dichlorobenzene	ND	9.7	2.9	ND	1.6	0.48	
106-46-7	1,4-Dichlorobenzene	**27**	9.7	2.7	**4.5**	1.6	0.45	
95-50-1	1,2-Dichlorobenzene	ND	9.7	2.9	ND	1.6	0.48	
5989-27-5	d-Limonene	**5.0**	9.7	2.7	**0.90**	1.7	0.49	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	9.7	1.9	ND	1.0	0.20	
120-82-1	1,2,4-Trichlorobenzene	ND	9.7	3.1	ND	1.3	0.42	
91-20-3	Naphthalene	ND	9.7	3.5	ND	1.8	0.66	
87-68-3	Hexachlorobutadiene	ND	9.7	2.7	ND	0.91	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Post Carbon 1** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-011

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.020 Liter(s)
Container ID: 1SC00484

Initial Pressure (psig): -0.07 Final Pressure (psig): 5.65

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	ND	7.0	1.9	ND	4.0	1.1	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	7.0	2.4	**0.49**	1.4	0.48	**J**
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	2.6	ND	0.99	0.38	
75-01-4	Vinyl Chloride	ND	7.0	2.4	ND	2.7	0.92	
106-99-0	1,3-Butadiene	ND	7.0	3.1	ND	3.1	1.4	
74-83-9	Bromomethane	ND	7.0	2.6	ND	1.8	0.68	
75-00-3	Chloroethane	ND	7.0	2.4	ND	2.6	0.90	
64-17-5	Ethanol	**29**	70	11	**15**	37	5.9	**J**
75-05-8	Acetonitrile	ND	7.0	2.5	ND	4.1	1.5	
107-02-8	Acrolein	ND	28	2.4	ND	12	1.0	
67-64-1	Acetone	**43**	70	11	**18**	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	5.8	ND	28	2.4	
107-13-1	Acrylonitrile	ND	7.0	2.4	ND	3.2	1.1	
75-35-4	1,1-Dichloroethene	**190**	7.0	2.4	**48**	1.8	0.60	
75-09-2	Methylene Chloride	ND	7.0	2.4	ND	2.0	0.68	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	7.0	2.2	ND	2.2	0.71	
76-13-1	Trichlorotrifluoroethane	**16**	7.0	2.4	**2.1**	0.91	0.31	
75-15-0	Carbon Disulfide	**52**	70	2.1	**17**	22	0.67	**J**
156-60-5	trans-1,2-Dichloroethene	ND	7.0	2.6	ND	1.8	0.67	
75-34-3	1,1-Dichloroethane	**5.4**	7.0	2.2	**1.3**	1.7	0.55	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	7.0	2.4	ND	1.9	0.66	
108-05-4	Vinyl Acetate	ND	70	9.0	ND	20	2.6	
78-93-3	2-Butanone (MEK)	**4.4**	70	2.9	**1.5**	24	0.99	**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: **Post Carbon 1** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-011

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.020 Liter(s)
Container ID: 1SC00484

Initial Pressure (psig): -0.07 Final Pressure (psig): 5.65

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	7.0	2.2	ND	1.8	0.56	
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	0.59	
67-66-3	Chloroform	ND	7.0	2.4	ND	1.4	0.48	
109-99-9	Tetrahydrofuran (THF)	ND	7.0	2.8	ND	2.4	0.94	
107-06-2	1,2-Dichloroethane	ND	7.0	2.2	ND	1.7	0.55	
71-55-6	1,1,1-Trichloroethane	**65**	7.0	2.4	**12**	1.3	0.43	
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	4.0	ND	4.0	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	ND	7.0	1.9	ND	1.3	0.36	
123-91-1	1,4-Dioxane	**4,100**	35	11	**1,200**	9.6	3.1	**D**
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	1.9	ND	1.5	0.43	
108-10-1	4-Methyl-2-pentanone	ND	7.0	2.2	ND	1.7	0.54	
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	**3.2**	7.0	2.4	**0.86**	1.8	0.63	**J**
591-78-6	2-Hexanone	ND	7.0	2.2	ND	1.7	0.54	
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	0.90	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.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Post Carbon 1** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-011

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.10 Liter(s)
Test Notes: 0.020 Liter(s)
Container ID: 1SC00484

Initial Pressure (psig): -0.07 Final Pressure (psig): 5.65

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	ND	7.0	2.5	ND	1.5	0.54	
127-18-4	Tetrachloroethene	ND	7.0	1.9	ND	1.0	0.29	
108-90-7	Chlorobenzene	ND	7.0	2.2	ND	1.5	0.48	
100-41-4	Ethylbenzene	**3.2**	7.0	2.2	**0.73**	1.6	0.51	**J**
179601-23-1	m,p-Xylenes	**13**	14	4.2	**3.0**	3.2	0.96	**J**
75-25-2	Bromoform	ND	7.0	2.1	ND	0.67	0.20	
100-42-5	Styrene	ND	7.0	2.1	ND	1.6	0.49	
95-47-6	o-Xylene	**5.3**	7.0	2.1	**1.2**	1.6	0.48	**J**
111-84-2	n-Nonane	**10**	7.0	2.1	**1.9**	1.3	0.40	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.0	2.1	ND	1.0	0.30	
98-82-8	Cumene	ND	7.0	2.1	ND	1.4	0.42	
80-56-8	alpha-Pinene	ND	7.0	1.9	ND	1.2	0.35	
103-65-1	n-Propylbenzene	ND	7.0	2.2	ND	1.4	0.45	
622-96-8	4-Ethyltoluene	ND	7.0	2.2	ND	1.4	0.45	
108-67-8	1,3,5-Trimethylbenzene	ND	7.0	2.2	ND	1.4	0.45	
95-63-6	1,2,4-Trimethylbenzene	ND	7.0	2.1	ND	1.4	0.42	
100-44-7	Benzyl Chloride	ND	7.0	1.5	ND	1.3	0.30	
541-73-1	1,3-Dichlorobenzene	ND	7.0	2.1	ND	1.2	0.35	
106-46-7	1,4-Dichlorobenzene	ND	7.0	1.9	ND	1.2	0.32	
95-50-1	1,2-Dichlorobenzene	ND	7.0	2.1	ND	1.2	0.35	
5989-27-5	d-Limonene	**2.2**	7.0	1.9	**0.40**	1.2	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	1.9	ND	0.65	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: **Post Carbon 2** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-012

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/5/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00546

Initial Pressure (psig): -0.35 Final Pressure (psig): 7.37

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**10**	1.9	0.54	**6.0**	1.1	0.31	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.9	0.65	**0.45**	0.39	0.13	
74-87-3	Chloromethane	**7.1**	1.9	0.58	**3.4**	0.93	0.28	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.9	0.73	ND	0.28	0.10	
75-01-4	Vinyl Chloride	ND	1.9	0.65	ND	0.75	0.26	
106-99-0	1,3-Butadiene	ND	1.9	0.85	ND	0.87	0.38	
74-83-9	Bromomethane	**3.2**	1.9	0.73	**0.83**	0.50	0.19	
75-00-3	Chloroethane	**1.3**	1.9	0.65	**0.49**	0.73	0.25	**J**
64-17-5	Ethanol	**21**	19	3.1	**11**	10	1.6	
75-05-8	Acetonitrile	**2.7**	1.9	0.69	**1.6**	1.1	0.41	
107-02-8	Acrolein	**5.1**	7.7	0.65	**2.2**	3.4	0.29	**J**
67-64-1	Acetone	**150**	19	3.0	**63**	8.1	1.2	
75-69-4	Trichlorofluoromethane	**2.9**	1.9	0.65	**0.51**	0.34	0.12	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	19	1.6	ND	7.8	0.66	
107-13-1	Acrylonitrile	ND	1.9	0.65	ND	0.89	0.30	
75-35-4	1,1-Dichloroethene	**410**	1.9	0.65	**100**	0.49	0.17	
75-09-2	Methylene Chloride	**2.0**	1.9	0.65	**0.59**	0.55	0.19	**B**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.9	0.62	ND	0.62	0.20	
76-13-1	Trichlorotrifluoroethane	ND	1.9	0.65	ND	0.25	0.085	
75-15-0	Carbon Disulfide	**15**	19	0.58	**4.7**	6.2	0.19	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.9	0.73	ND	0.49	0.18	
75-34-3	1,1-Dichloroethane	ND	1.9	0.62	ND	0.48	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	1.9	0.65	ND	0.53	0.18	
108-05-4	Vinyl Acetate	**20**	19	2.5	**5.6**	5.5	0.71	
78-93-3	2-Butanone (MEK)	**9.9**	19	0.81	**3.4**	6.5	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.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Post Carbon 2** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-012

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/5/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00546

Initial Pressure (psig): -0.35 Final Pressure (psig): 7.37

Canister Dilution Factor: 1.54

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	0.62	ND	0.49	0.16	
141-78-6	Ethyl Acetate	ND	3.9	1.3	ND	1.1	0.37	
110-54-3	n-Hexane	ND	1.9	0.58	ND	0.55	0.16	
67-66-3	Chloroform	**2.7**	1.9	0.65	**0.56**	0.39	0.13	
109-99-9	Tetrahydrofuran (THF)	ND	1.9	0.77	ND	0.65	0.26	
107-06-2	1,2-Dichloroethane	ND	1.9	0.62	ND	0.48	0.15	
71-55-6	1,1,1-Trichloroethane	ND	1.9	0.65	ND	0.35	0.12	
71-43-2	Benzene	**1.1**	1.9	0.62	**0.35**	0.60	0.19	**J**
56-23-5	Carbon Tetrachloride	ND	1.9	0.58	ND	0.31	0.092	
110-82-7	Cyclohexane	ND	3.9	1.1	ND	1.1	0.32	
78-87-5	1,2-Dichloropropane	ND	1.9	0.62	ND	0.42	0.13	
75-27-4	Bromodichloromethane	ND	1.9	0.58	ND	0.29	0.086	
79-01-6	Trichloroethene	ND	1.9	0.54	ND	0.36	0.10	
123-91-1	1,4-Dioxane	**22**	1.9	0.62	**6.1**	0.53	0.17	
80-62-6	Methyl Methacrylate	ND	3.9	1.2	ND	0.94	0.29	
142-82-5	n-Heptane	ND	1.9	0.65	ND	0.47	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.54	ND	0.42	0.12	
108-10-1	4-Methyl-2-pentanone	**0.94**	1.9	0.62	**0.23**	0.47	0.15	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.62	ND	0.42	0.14	
79-00-5	1,1,2-Trichloroethane	ND	1.9	0.62	ND	0.35	0.11	
108-88-3	Toluene	**3.4**	1.9	0.65	**0.90**	0.51	0.17	
591-78-6	2-Hexanone	**1.5**	1.9	0.62	**0.36**	0.47	0.15	**J**
124-48-1	Dibromochloromethane	ND	1.9	0.62	ND	0.23	0.072	
106-93-4	1,2-Dibromoethane	ND	1.9	0.62	ND	0.25	0.080	
123-86-4	n-Butyl Acetate	ND	1.9	0.62	ND	0.41	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: **Post Carbon 2** ALS Project ID: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1504036-012

Test Code: EPA TO-15 Date Collected: 9/22/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 9/28/15
Analyst: Wida Ang Date Analyzed: 10/5/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00546

Initial Pressure (psig): -0.35 Final Pressure (psig): 7.37

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**0.84**	1.9	0.69	**0.18**	0.41	0.15	**J**
127-18-4	Tetrachloroethene	ND	1.9	0.54	ND	0.28	0.080	
108-90-7	Chlorobenzene	ND	1.9	0.62	ND	0.42	0.13	
100-41-4	Ethylbenzene	**2.2**	1.9	0.62	**0.52**	0.44	0.14	
179601-23-1	m,p-Xylenes	**9.3**	3.9	1.2	**2.1**	0.89	0.27	
75-25-2	Bromoform	ND	1.9	0.58	ND	0.19	0.056	
100-42-5	Styrene	ND	1.9	0.58	ND	0.45	0.14	
95-47-6	o-Xylene	**3.9**	1.9	0.58	**0.90**	0.44	0.13	
111-84-2	n-Nonane	**6.7**	1.9	0.58	**1.3**	0.37	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.9	0.58	ND	0.28	0.084	
98-82-8	Cumene	**0.72**	1.9	0.58	**0.15**	0.39	0.12	**J**
80-56-8	alpha-Pinene	**1.1**	1.9	0.54	**0.20**	0.35	0.097	**J**
103-65-1	n-Propylbenzene	ND	1.9	0.62	ND	0.39	0.13	
622-96-8	4-Ethyltoluene	ND	1.9	0.62	ND	0.39	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	1.9	0.62	ND	0.39	0.13	
95-63-6	1,2,4-Trimethylbenzene	**0.59**	1.9	0.58	**0.12**	0.39	0.12	**J**
100-44-7	Benzyl Chloride	**0.45**	1.9	0.42	**0.087**	0.37	0.082	**J**
541-73-1	1,3-Dichlorobenzene	ND	1.9	0.58	ND	0.32	0.096	
106-46-7	1,4-Dichlorobenzene	ND	1.9	0.54	ND	0.32	0.090	
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.58	ND	0.32	0.096	
5989-27-5	d-Limonene	**2.0**	1.9	0.54	**0.36**	0.35	0.097	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.9	0.38	ND	0.20	0.039	
120-82-1	1,2,4-Trichlorobenzene	ND	1.9	0.62	ND	0.26	0.083	
91-20-3	Naphthalene	ND	1.9	0.69	ND	0.37	0.13	
87-68-3	Hexachlorobutadiene	ND	1.9	0.54	ND	0.18	0.051	

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: P1504036

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151002-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: 10/2/15

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: P1504036

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151002-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: 10/2/15

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: P1504036

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151002-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: 10/2/15

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151005-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: 10/5/15
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	**0.22**	0.50	0.17	**0.064**	0.14	0.049	**J**
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: P1504036

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151005-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: 10/5/15

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: P1504036

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151005-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: 10/5/15

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 / KUHO-15-010** ALS Project ID: P1504036

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 9/22/15
Analyst: Wida Ang Date(s) Received: 9/28/15
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 10/2 - 10/5/15
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	P151002-MB	**102**	**100**	**97**	70-130	
Method Blank	P151005-MB	**108**	**104**	**92**	70-130	
Lab Control Sample	P151002-LCS	**99**	**98**	**100**	70-130	
Lab Control Sample	P151005-LCS	**106**	**101**	**96**	70-130	
SVE-OBS-01	P1504036-001	**102**	**101**	**94**	70-130	
SVE-OBS-02	P1504036-002	**100**	**101**	**95**	70-130	
SVE-OBS-03	P1504036-003	**99**	**100**	**93**	70-130	
SVE-OBS-04	P1504036-004	**100**	**101**	**94**	70-130	
SVE-OBS-05	P1504036-005	**102**	**101**	**94**	70-130	
SVE-OBS-06	P1504036-006	**101**	**101**	**94**	70-130	
SVE-OBS-07	P1504036-007	**97**	**99**	**93**	70-130	
SVE-OBS-08	P1504036-008	**98**	**103**	**93**	70-130	
SVE-OBS-09	P1504036-009	**102**	**101**	**93**	70-130	
SVE Exhaust	P1504036-010	**100**	**101**	**98**	70-130	
Post Carbon 1	P1504036-011	**103**	**102**	**95**	70-130	
Post Carbon 2	P1504036-012	**101**	**102**	**94**	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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151002-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: 10/2/15
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	**186**	**95**	50-128	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**163**	**87**	66-117	
74-87-3	Chloromethane	200	**158**	**79**	51-133	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**180**	**88**	65-117	
75-01-4	Vinyl Chloride	200	**186**	**93**	61-127	
106-99-0	1,3-Butadiene	206	**193**	**94**	65-132	
74-83-9	Bromomethane	202	**225**	**111**	62-114	
75-00-3	Chloroethane	200	**172**	**86**	64-122	
64-17-5	Ethanol	998	**790**	**79**	57-131	
75-05-8	Acetonitrile	212	**163**	**77**	52-135	
107-02-8	Acrolein	214	**166**	**78**	64-124	
67-64-1	Acetone	1,080	**914**	**85**	60-113	
75-69-4	Trichlorofluoromethane	216	**166**	**77**	64-112	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**381**	**91**	62-129	
107-13-1	Acrylonitrile	212	**194**	**92**	69-133	
75-35-4	1,1-Dichloroethene	216	**184**	**85**	70-114	
75-09-2	Methylene Chloride	222	**192**	**86**	63-103	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**199**	**91**	57-135	
76-13-1	Trichlorotrifluoroethane	220	**185**	**84**	69-116	
75-15-0	Carbon Disulfide	210	**167**	**80**	66-118	
156-60-5	trans-1,2-Dichloroethene	210	**194**	**92**	69-123	
75-34-3	1,1-Dichloroethane	212	**185**	**87**	65-118	
1634-04-4	Methyl tert-Butyl Ether	216	**191**	**88**	57-125	
108-05-4	Vinyl Acetate	1,040	**1120**	**108**	69-131	
78-93-3	2-Butanone (MEK)	220	**202**	**92**	63-121	

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151002-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: 10/2/15
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	**195**	**89**	69-119	
141-78-6	Ethyl Acetate	428	**370**	**86**	65-129	
110-54-3	n-Hexane	212	**178**	**84**	55-116	
67-66-3	Chloroform	224	**188**	**84**	68-111	
109-99-9	Tetrahydrofuran (THF)	220	**208**	**95**	69-120	
107-06-2	1,2-Dichloroethane	214	**192**	**90**	67-117	
71-55-6	1,1,1-Trichloroethane	210	**191**	**91**	74-116	
71-43-2	Benzene	226	**205**	**91**	61-109	
56-23-5	Carbon Tetrachloride	230	**210**	**91**	76-120	
110-82-7	Cyclohexane	424	**387**	**91**	72-115	
78-87-5	1,2-Dichloropropane	216	**194**	**90**	67-119	
75-27-4	Bromodichloromethane	218	**202**	**93**	78-124	
79-01-6	Trichloroethene	216	**173**	**80**	69-115	
123-91-1	1,4-Dioxane	210	**199**	**95**	69-127	
80-62-6	Methyl Methacrylate	422	**412**	**98**	76-128	
142-82-5	n-Heptane	216	**194**	**90**	66-118	
10061-01-5	cis-1,3-Dichloropropene	208	**197**	**95**	77-124	
108-10-1	4-Methyl-2-pentanone	220	**209**	**95**	66-134	
10061-02-6	trans-1,3-Dichloropropene	210	**238**	**113**	80-130	
79-00-5	1,1,2-Trichloroethane	216	**199**	**92**	75-119	
108-88-3	Toluene	218	**198**	**91**	68-114	
591-78-6	2-Hexanone	220	**220**	**100**	60-136	
124-48-1	Dibromochloromethane	220	**208**	**95**	75-132	
106-93-4	1,2-Dibromoethane	218	**202**	**93**	72-122	
123-86-4	n-Butyl Acetate	226	**214**	**95**	60-137	

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151002-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: 10/2/15
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	**186**	**89**	66-120	
127-18-4	Tetrachloroethene	202	**172**	**85**	67-120	
108-90-7	Chlorobenzene	220	**185**	**84**	69-114	
100-41-4	Ethylbenzene	218	**194**	**89**	71-117	
179601-23-1	m,p-Xylenes	428	**378**	**88**	71-118	
75-25-2	Bromoform	228	**208**	**91**	76-149	
100-42-5	Styrene	222	**208**	**94**	71-128	
95-47-6	o-Xylene	210	**185**	**88**	72-118	
111-84-2	n-Nonane	204	**185**	**91**	63-123	
79-34-5	1,1,2,2-Tetrachloroethane	210	**194**	**92**	73-124	
98-82-8	Cumene	208	**182**	**88**	71-118	
80-56-8	alpha-Pinene	212	**195**	**92**	71-123	
103-65-1	n-Propylbenzene	204	**178**	**87**	71-120	
622-96-8	4-Ethyltoluene	214	**198**	**93**	71-121	
108-67-8	1,3,5-Trimethylbenzene	214	**193**	**90**	72-121	
95-63-6	1,2,4-Trimethylbenzene	218	**189**	**87**	71-122	
100-44-7	Benzyl Chloride	220	**291**	**132**	79-143	
541-73-1	1,3-Dichlorobenzene	228	**196**	**86**	67-121	
106-46-7	1,4-Dichlorobenzene	208	**188**	**90**	68-121	
95-50-1	1,2-Dichlorobenzene	220	**185**	**84**	68-121	
5989-27-5	d-Limonene	210	**205**	**98**	69-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**220**	**101**	73-145	
120-82-1	1,2,4-Trichlorobenzene	230	**177**	**77**	60-135	
91-20-3	Naphthalene	218	**166**	**76**	63-142	
87-68-3	Hexachlorobutadiene	230	**176**	**77**	65-127	

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151005-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: 10/5/15
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	**174**	**89**	50-128	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**167**	**89**	66-117	
74-87-3	Chloromethane	200	**157**	**79**	51-133	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**187**	**92**	65-117	
75-01-4	Vinyl Chloride	200	**187**	**94**	61-127	
106-99-0	1,3-Butadiene	206	**192**	**93**	65-132	
74-83-9	Bromomethane	202	**227**	**112**	62-114	
75-00-3	Chloroethane	200	**171**	**86**	64-122	
64-17-5	Ethanol	998	**792**	**79**	57-131	
75-05-8	Acetonitrile	212	**160**	**75**	52-135	
107-02-8	Acrolein	214	**168**	**79**	64-124	
67-64-1	Acetone	1,080	**926**	**86**	60-113	
75-69-4	Trichlorofluoromethane	216	**182**	**84**	64-112	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**392**	**94**	62-129	
107-13-1	Acrylonitrile	212	**194**	**92**	69-133	
75-35-4	1,1-Dichloroethene	216	**191**	**88**	70-114	
75-09-2	Methylene Chloride	222	**198**	**89**	63-103	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**202**	**93**	57-135	
76-13-1	Trichlorotrifluoroethane	220	**194**	**88**	69-116	
75-15-0	Carbon Disulfide	210	**170**	**81**	66-118	
156-60-5	trans-1,2-Dichloroethene	210	**198**	**94**	69-123	
75-34-3	1,1-Dichloroethane	212	**193**	**91**	65-118	
1634-04-4	Methyl tert-Butyl Ether	216	**201**	**93**	57-125	
108-05-4	Vinyl Acetate	1,040	**1190**	**114**	69-131	
78-93-3	2-Butanone (MEK)	220	**210**	**95**	63-121	

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151005-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: 10/5/15
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	**203**	**93**	69-119	
141-78-6	Ethyl Acetate	428	**388**	**91**	65-129	
110-54-3	n-Hexane	212	**193**	**91**	55-116	
67-66-3	Chloroform	224	**200**	**89**	68-111	
109-99-9	Tetrahydrofuran (THF)	220	**214**	**97**	69-120	
107-06-2	1,2-Dichloroethane	214	**210**	**98**	67-117	
71-55-6	1,1,1-Trichloroethane	210	**198**	**94**	74-116	
71-43-2	Benzene	226	**207**	**92**	61-109	
56-23-5	Carbon Tetrachloride	230	**218**	**95**	76-120	
110-82-7	Cyclohexane	424	**388**	**92**	72-115	
78-87-5	1,2-Dichloropropane	216	**191**	**88**	67-119	
75-27-4	Bromodichloromethane	218	**212**	**97**	78-124	
79-01-6	Trichloroethene	216	**176**	**81**	69-115	
123-91-1	1,4-Dioxane	210	**198**	**94**	69-127	
80-62-6	Methyl Methacrylate	422	**411**	**97**	76-128	
142-82-5	n-Heptane	216	**198**	**92**	66-118	
10061-01-5	cis-1,3-Dichloropropene	208	**200**	**96**	77-124	
108-10-1	4-Methyl-2-pentanone	220	**209**	**95**	66-134	
10061-02-6	trans-1,3-Dichloropropene	210	**241**	**115**	80-130	
79-00-5	1,1,2-Trichloroethane	216	**200**	**93**	75-119	
108-88-3	Toluene	218	**210**	**96**	68-114	
591-78-6	2-Hexanone	220	**230**	**105**	60-136	
124-48-1	Dibromochloromethane	220	**224**	**102**	75-132	
106-93-4	1,2-Dibromoethane	218	**214**	**98**	72-122	
123-86-4	n-Butyl Acetate	226	**223**	**99**	60-137	

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: P1504036
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P151005-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: 10/5/15
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	**194**	**92**	66-120	
127-18-4	Tetrachloroethene	202	**183**	**91**	67-120	
108-90-7	Chlorobenzene	220	**193**	**88**	69-114	
100-41-4	Ethylbenzene	218	**206**	**94**	71-117	
179601-23-1	m,p-Xylenes	428	**404**	**94**	71-118	
75-25-2	Bromoform	228	**221**	**97**	76-149	
100-42-5	Styrene	222	**217**	**98**	71-128	
95-47-6	o-Xylene	210	**196**	**93**	72-118	
111-84-2	n-Nonane	204	**191**	**94**	63-123	
79-34-5	1,1,2,2-Tetrachloroethane	210	**203**	**97**	73-124	
98-82-8	Cumene	208	**192**	**92**	71-118	
80-56-8	alpha-Pinene	212	**207**	**98**	71-123	
103-65-1	n-Propylbenzene	204	**190**	**93**	71-120	
622-96-8	4-Ethyltoluene	214	**208**	**97**	71-121	
108-67-8	1,3,5-Trimethylbenzene	214	**205**	**96**	72-121	
95-63-6	1,2,4-Trimethylbenzene	218	**202**	**93**	71-122	
100-44-7	Benzyl Chloride	220	**309**	**140**	79-143	
541-73-1	1,3-Dichlorobenzene	228	**207**	**91**	67-121	
106-46-7	1,4-Dichlorobenzene	208	**197**	**95**	68-121	
95-50-1	1,2-Dichlorobenzene	220	**194**	**88**	68-121	
5989-27-5	d-Limonene	210	**216**	**103**	69-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**229**	**105**	73-145	
120-82-1	1,2,4-Trichlorobenzene	230	**186**	**81**	60-135	
91-20-3	Naphthalene	218	**173**	**79**	63-142	
87-68-3	Hexachlorobutadiene	230	**187**	**81**	65-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
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LABORATORY REPORT

December 10, 2015

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

RE: SVE Performance Monitoring / KUH0-15-010

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on November 30, 2015. For your reference, these analyses have been assigned our service request number P1505150.

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 10:11 am, Dec 10, 2015

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: P1505150
Project: SVE Performance Monitoring / KUH0-15-010

CASE NARRATIVE

The samples were received intact under chain of custody on November 30, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

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 accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The canisters 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	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2-R1
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	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
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: P1505150

Project ID: SVE Performance Monitoring / KUH0-15-010

Date Received: 11/30/2015

Time Received: 09:25

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SVE Exhaust	P1505150-001	Air	11/23/2015	08:29	1SC01227	1.30	5.91	X
Carbon 1	P1505150-002	Air	11/23/2015	08:32	1SC01007	1.06	5.99	X
Carbon 2	P1505150-003	Air	11/23/2015	08:35	1SC00780	0.93	5.73	X

Air - Chain of Custody Record & Analytical Service Request

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: P150150

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

Project Name: SVE Performance Monitoring

Project Number: KUHO-15-010

Project Manager: Stephanie Kilgore

P.O. # / Billing Information: KUHO-15-010 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:

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 Exhaust	1	11-23-15	08:29	ISC01227	AVB04601			1L	X		
Carbon 1	2	11-23-15	08:32	ISC01007	AVG01147			1L	X		
Carbon 2	3	11-23-15	08:35	ISC00780	AVG03055			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 Kilgore	11-23-15	18:20	Fed Ex		
FEDEX				11/30/15	0925

Cooler / Blank Temperature ____ °C

5 of 22

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1505150

Project: SVE Performance Monitoring / KUH0-15-010

Sample(s) received on: 11/30/15 Date opened: 11/30/15 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
P1505150-001.01	1.0 L Source Can					
P1505150-002.01	1.0 L Source Can					
P1505150-003.01	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 Exhaust** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-001

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes:
Container ID: 1SC01227

Initial Pressure (psig): 1.30 Final Pressure (psig): 5.91

Canister Dilution Factor: 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	32	9.0	ND	19	5.2	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	32	11	ND	6.5	2.2	
74-87-3	Chloromethane	ND	32	9.7	ND	16	4.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	32	12	ND	4.6	1.8	
75-01-4	Vinyl Chloride	ND	32	11	ND	13	4.3	
106-99-0	1,3-Butadiene	ND	32	14	ND	15	6.4	
74-83-9	Bromomethane	ND	32	12	ND	8.3	3.2	
75-00-3	Chloroethane	ND	32	11	ND	12	4.2	
64-17-5	Ethanol	ND	320	52	ND	170	27	
75-05-8	Acetonitrile	ND	32	12	ND	19	6.9	
107-02-8	Acrolein	ND	130	11	ND	56	4.8	
67-64-1	Acetone	ND	320	50	ND	140	21	
75-69-4	Trichlorofluoromethane	ND	32	11	ND	5.7	2.0	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	320	27	ND	130	11	
107-13-1	Acrylonitrile	ND	32	11	ND	15	5.1	
75-35-4	1,1-Dichloroethene	**280**	32	11	**70**	8.1	2.8	
75-09-2	Methylene Chloride	ND	32	11	ND	9.3	3.2	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	10	ND	10	3.3	
76-13-1	Trichlorotrifluoroethane	**16**	32	11	**2.1**	4.2	1.4	**J**
75-15-0	Carbon Disulfide	ND	320	9.7	ND	100	3.1	
156-60-5	trans-1,2-Dichloroethene	ND	32	12	ND	8.1	3.1	
75-34-3	1,1-Dichloroethane	ND	32	10	ND	8.0	2.6	
1634-04-4	Methyl tert-Butyl Ether	ND	32	11	ND	8.9	3.0	
108-05-4	Vinyl Acetate	ND	320	42	ND	92	12	
78-93-3	2-Butanone (MEK)	ND	320	14	ND	110	4.6	

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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE Exhaust** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-001

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes:
Container ID: 1SC01227

Initial Pressure (psig): 1.30 Final Pressure (psig): 5.91

Canister Dilution Factor: 1.29

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	32	10	ND	8.1	2.6	
141-78-6	Ethyl Acetate	ND	65	23	ND	18	6.3	
110-54-3	n-Hexane	ND	32	9.7	ND	9.2	2.7	
67-66-3	Chloroform	ND	32	11	ND	6.6	2.2	
109-99-9	Tetrahydrofuran (THF)	ND	32	13	ND	11	4.4	
107-06-2	1,2-Dichloroethane	ND	32	10	ND	8.0	2.6	
71-55-6	1,1,1-Trichloroethane	**56**	32	11	**10**	5.9	2.0	
71-43-2	Benzene	ND	32	10	ND	10	3.2	
56-23-5	Carbon Tetrachloride	ND	32	9.7	ND	5.1	1.5	
110-82-7	Cyclohexane	ND	65	19	ND	19	5.4	
78-87-5	1,2-Dichloropropane	ND	32	10	ND	7.0	2.2	
75-27-4	Bromodichloromethane	ND	32	9.7	ND	4.8	1.4	
79-01-6	Trichloroethene	ND	32	9.0	ND	6.0	1.7	
123-91-1	1,4-Dioxane	**5,200**	32	10	**1,400**	9.0	2.9	
80-62-6	Methyl Methacrylate	ND	65	20	ND	16	4.9	
142-82-5	n-Heptane	ND	32	11	ND	7.9	2.7	
10061-01-5	cis-1,3-Dichloropropene	ND	32	9.0	ND	7.1	2.0	
108-10-1	4-Methyl-2-pentanone	ND	32	10	ND	7.9	2.5	
10061-02-6	trans-1,3-Dichloropropene	ND	32	10	ND	7.1	2.3	
79-00-5	1,1,2-Trichloroethane	ND	32	10	ND	5.9	1.9	
108-88-3	Toluene	ND	32	11	ND	8.6	2.9	
591-78-6	2-Hexanone	ND	32	10	ND	7.9	2.5	
124-48-1	Dibromochloromethane	ND	32	10	ND	3.8	1.2	
106-93-4	1,2-Dibromoethane	ND	32	10	ND	4.2	1.3	
123-86-4	n-Butyl Acetate	ND	32	10	ND	6.8	2.2	

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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE Exhaust** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-001

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.020 Liter(s)
Test Notes:
Container ID: 1SC01227

Initial Pressure (psig): 1.30 Final Pressure (psig): 5.91

Canister Dilution Factor: 1.29

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	32	12	ND	6.9	2.5	
127-18-4	Tetrachloroethene	**18**	32	9.0	**2.7**	4.8	1.3	**J**
108-90-7	Chlorobenzene	ND	32	10	ND	7.0	2.2	
100-41-4	Ethylbenzene	ND	32	10	ND	7.4	2.4	
179601-23-1	m,p-Xylenes	ND	65	19	ND	15	4.5	
75-25-2	Bromoform	ND	32	9.7	ND	3.1	0.94	
100-42-5	Styrene	ND	32	9.7	ND	7.6	2.3	
95-47-6	o-Xylene	ND	32	9.7	ND	7.4	2.2	
111-84-2	n-Nonane	ND	32	9.7	ND	6.2	1.8	
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	9.7	ND	4.7	1.4	
98-82-8	Cumene	ND	32	9.7	ND	6.6	2.0	
80-56-8	alpha-Pinene	ND	32	9.0	ND	5.8	1.6	
103-65-1	n-Propylbenzene	ND	32	10	ND	6.6	2.1	
622-96-8	4-Ethyltoluene	ND	32	10	ND	6.6	2.1	
108-67-8	1,3,5-Trimethylbenzene	ND	32	10	ND	6.6	2.1	
95-63-6	1,2,4-Trimethylbenzene	ND	32	9.7	ND	6.6	2.0	
100-44-7	Benzyl Chloride	ND	32	7.1	ND	6.2	1.4	
541-73-1	1,3-Dichlorobenzene	ND	32	9.7	ND	5.4	1.6	
106-46-7	1,4-Dichlorobenzene	ND	32	9.0	ND	5.4	1.5	
95-50-1	1,2-Dichlorobenzene	ND	32	9.7	ND	5.4	1.6	
5989-27-5	d-Limonene	ND	32	9.0	ND	5.8	1.6	
96-12-8	1,2-Dibromo-3-chloropropane	ND	32	6.4	ND	3.3	0.66	
120-82-1	1,2,4-Trichlorobenzene	ND	32	10	ND	4.3	1.4	
91-20-3	Naphthalene	ND	32	12	ND	6.2	2.2	
87-68-3	Hexachlorobutadiene	ND	32	9.0	ND	3.0	0.85	

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: **Carbon 1** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-002

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.045 Liter(s)
Test Notes:
Container ID: 1SC01007

Initial Pressure (psig): 1.06 Final Pressure (psig): 5.99

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	15	4.1	ND	8.5	2.4	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	15	4.9	ND	2.9	1.0	
74-87-3	Chloromethane	ND	15	4.4	ND	7.1	2.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	15	5.5	ND	2.1	0.79	
75-01-4	Vinyl Chloride	ND	15	4.9	ND	5.7	1.9	
106-99-0	1,3-Butadiene	ND	15	6.4	ND	6.6	2.9	
74-83-9	Bromomethane	ND	15	5.5	ND	3.8	1.4	
75-00-3	Chloroethane	ND	15	4.9	ND	5.5	1.9	
64-17-5	Ethanol	ND	150	23	ND	77	12	
75-05-8	Acetonitrile	ND	15	5.2	ND	8.7	3.1	
107-02-8	Acrolein	ND	58	4.9	ND	25	2.2	
67-64-1	Acetone	**31**	150	22	**13**	61	9.4	**J**
75-69-4	Trichlorofluoromethane	ND	15	4.9	ND	2.6	0.88	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	150	12	ND	59	5.0	
107-13-1	Acrylonitrile	ND	15	4.9	ND	6.7	2.3	
75-35-4	1,1-Dichloroethene	**130**	15	4.9	**32**	3.7	1.2	
75-09-2	Methylene Chloride	ND	15	4.9	ND	4.2	1.4	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	15	4.7	ND	4.7	1.5	
76-13-1	Trichlorotrifluoroethane	**11**	15	4.9	**1.4**	1.9	0.65	**J**
75-15-0	Carbon Disulfide	ND	150	4.4	ND	47	1.4	
156-60-5	trans-1,2-Dichloroethene	ND	15	5.5	ND	3.7	1.4	
75-34-3	1,1-Dichloroethane	ND	15	4.7	ND	3.6	1.2	
1634-04-4	Methyl tert-Butyl Ether	ND	15	4.9	ND	4.0	1.4	
108-05-4	Vinyl Acetate	ND	150	19	ND	41	5.4	
78-93-3	2-Butanone (MEK)	ND	150	6.1	ND	49	2.1	

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: **Carbon 1** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-002

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.045 Liter(s)
Test Notes:
Container ID: 1SC01007

Initial Pressure (psig): 1.06 Final Pressure (psig): 5.99

Canister Dilution Factor: 1.31

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	15	4.7	ND	3.7	1.2	
141-78-6	Ethyl Acetate	ND	29	10	ND	8.1	2.8	
110-54-3	n-Hexane	ND	15	4.4	ND	4.1	1.2	
67-66-3	Chloroform	ND	15	4.9	ND	3.0	1.0	
109-99-9	Tetrahydrofuran (THF)	ND	15	5.8	ND	4.9	2.0	
107-06-2	1,2-Dichloroethane	ND	15	4.7	ND	3.6	1.2	
71-55-6	1,1,1-Trichloroethane	**34**	15	4.9	**6.2**	2.7	0.91	
71-43-2	Benzene	ND	15	4.7	ND	4.6	1.5	
56-23-5	Carbon Tetrachloride	ND	15	4.4	ND	2.3	0.69	
110-82-7	Cyclohexane	ND	29	8.4	ND	8.5	2.5	
78-87-5	1,2-Dichloropropane	ND	15	4.7	ND	3.2	1.0	
75-27-4	Bromodichloromethane	ND	15	4.4	ND	2.2	0.65	
79-01-6	Trichloroethene	ND	15	4.1	ND	2.7	0.76	
123-91-1	1,4-Dioxane	**2,400**	15	4.7	**660**	4.0	1.3	
80-62-6	Methyl Methacrylate	ND	29	9.0	ND	7.1	2.2	
142-82-5	n-Heptane	ND	15	4.9	ND	3.6	1.2	
10061-01-5	cis-1,3-Dichloropropene	ND	15	4.1	ND	3.2	0.90	
108-10-1	4-Methyl-2-pentanone	ND	15	4.7	ND	3.6	1.1	
10061-02-6	trans-1,3-Dichloropropene	ND	15	4.7	ND	3.2	1.0	
79-00-5	1,1,2-Trichloroethane	ND	15	4.7	ND	2.7	0.85	
108-88-3	Toluene	ND	15	4.9	ND	3.9	1.3	
591-78-6	2-Hexanone	ND	15	4.7	ND	3.6	1.1	
124-48-1	Dibromochloromethane	ND	15	4.7	ND	1.7	0.55	
106-93-4	1,2-Dibromoethane	ND	15	4.7	ND	1.9	0.61	
123-86-4	n-Butyl Acetate	ND	15	4.7	ND	3.1	0.98	

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: **Carbon 1** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-002

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.045 Liter(s)
Test Notes:
Container ID: 1SC01007

Initial Pressure (psig): 1.06 Final Pressure (psig): 5.99

Canister Dilution Factor: 1.31

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	15	5.2	ND	3.1	1.1	
127-18-4	Tetrachloroethene	ND	15	4.1	ND	2.1	0.60	
108-90-7	Chlorobenzene	ND	15	4.7	ND	3.2	1.0	
100-41-4	Ethylbenzene	ND	15	4.7	ND	3.4	1.1	
179601-23-1	m,p-Xylenes	ND	29	8.7	ND	6.7	2.0	
75-25-2	Bromoform	ND	15	4.4	ND	1.4	0.42	
100-42-5	Styrene	ND	15	4.4	ND	3.4	1.0	
95-47-6	o-Xylene	ND	15	4.4	ND	3.4	1.0	
111-84-2	n-Nonane	ND	15	4.4	ND	2.8	0.83	
79-34-5	1,1,2,2-Tetrachloroethane	ND	15	4.4	ND	2.1	0.64	
98-82-8	Cumene	ND	15	4.4	ND	3.0	0.89	
80-56-8	alpha-Pinene	ND	15	4.1	ND	2.6	0.73	
103-65-1	n-Propylbenzene	ND	15	4.7	ND	3.0	0.95	
622-96-8	4-Ethyltoluene	ND	15	4.7	ND	3.0	0.95	
108-67-8	1,3,5-Trimethylbenzene	ND	15	4.7	ND	3.0	0.95	
95-63-6	1,2,4-Trimethylbenzene	ND	15	4.4	ND	3.0	0.89	
100-44-7	Benzyl Chloride	ND	15	3.2	ND	2.8	0.62	
541-73-1	1,3-Dichlorobenzene	ND	15	4.4	ND	2.4	0.73	
106-46-7	1,4-Dichlorobenzene	ND	15	4.1	ND	2.4	0.68	
95-50-1	1,2-Dichlorobenzene	ND	15	4.4	ND	2.4	0.73	
5989-27-5	d-Limonene	**5.4**	15	4.1	**0.97**	2.6	0.73	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	15	2.9	ND	1.5	0.30	
120-82-1	1,2,4-Trichlorobenzene	ND	15	4.7	ND	2.0	0.63	
91-20-3	Naphthalene	ND	15	5.2	ND	2.8	1.0	
87-68-3	Hexachlorobutadiene	ND	15	4.1	ND	1.4	0.38	

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: **Carbon 2** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-003

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00780

Initial Pressure (psig): 0.93 Final Pressure (psig): 5.73

Canister Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**3.2**	1.6	0.46	**1.9**	0.95	0.27	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	1.6	0.56	**0.49**	0.33	0.11	
74-87-3	Chloromethane	ND	1.6	0.49	ND	0.79	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.6	0.62	ND	0.23	0.089	
75-01-4	Vinyl Chloride	ND	1.6	0.56	ND	0.64	0.22	
106-99-0	1,3-Butadiene	ND	1.6	0.72	ND	0.74	0.33	
74-83-9	Bromomethane	ND	1.6	0.62	ND	0.42	0.16	
75-00-3	Chloroethane	ND	1.6	0.56	ND	0.62	0.21	
64-17-5	Ethanol	**13**	16	2.6	**7.1**	8.7	1.4	**J**
75-05-8	Acetonitrile	ND	1.6	0.59	ND	0.98	0.35	
107-02-8	Acrolein	**1.4**	6.6	0.56	**0.61**	2.9	0.24	**J**
67-64-1	Acetone	**34**	16	2.5	**14**	6.9	1.1	
75-69-4	Trichlorofluoromethane	**1.8**	1.6	0.56	**0.33**	0.29	0.099	
67-63-0	2-Propanol (Isopropyl Alcohol)	**2.8**	16	1.4	**1.1**	6.7	0.56	**J**
107-13-1	Acrylonitrile	ND	1.6	0.56	ND	0.75	0.26	
75-35-4	1,1-Dichloroethene	**190**	1.6	0.56	**47**	0.41	0.14	
75-09-2	Methylene Chloride	**0.86**	1.6	0.56	**0.25**	0.47	0.16	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.6	0.52	ND	0.52	0.17	
76-13-1	Trichlorotrifluoroethane	**10**	1.6	0.56	**1.4**	0.21	0.073	
75-15-0	Carbon Disulfide	**11**	16	0.49	**3.4**	5.3	0.16	**J**
156-60-5	trans-1,2-Dichloroethene	ND	1.6	0.62	ND	0.41	0.16	
75-34-3	1,1-Dichloroethane	**12**	1.6	0.52	**3.1**	0.40	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	1.6	0.56	ND	0.45	0.15	
108-05-4	Vinyl Acetate	**5.5**	16	2.1	**1.6**	4.7	0.60	**J**
78-93-3	2-Butanone (MEK)	**5.0**	16	0.69	**1.7**	5.6	0.23	**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: **Carbon 2** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-003

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00780

Initial Pressure (psig): 0.93 Final Pressure (psig): 5.73

Canister Dilution Factor: 1.31

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	1.6	0.52	ND	0.41	0.13	
141-78-6	Ethyl Acetate	**2.0**	3.3	1.1	**0.55**	0.91	0.32	**J**
110-54-3	n-Hexane	ND	1.6	0.49	ND	0.46	0.14	
67-66-3	Chloroform	**1.1**	1.6	0.56	**0.23**	0.34	0.11	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.6	0.66	ND	0.56	0.22	
107-06-2	1,2-Dichloroethane	ND	1.6	0.52	ND	0.40	0.13	
71-55-6	1,1,1-Trichloroethane	**2.1**	1.6	0.56	**0.39**	0.30	0.10	
71-43-2	Benzene	ND	1.6	0.52	ND	0.51	0.16	
56-23-5	Carbon Tetrachloride	ND	1.6	0.49	ND	0.26	0.078	
110-82-7	Cyclohexane	ND	3.3	0.95	ND	0.95	0.28	
78-87-5	1,2-Dichloropropane	ND	1.6	0.52	ND	0.35	0.11	
75-27-4	Bromodichloromethane	ND	1.6	0.49	ND	0.24	0.073	
79-01-6	Trichloroethene	ND	1.6	0.46	ND	0.30	0.085	
123-91-1	1,4-Dioxane	**77**	1.6	0.52	**21**	0.45	0.15	
80-62-6	Methyl Methacrylate	ND	3.3	1.0	ND	0.80	0.25	
142-82-5	n-Heptane	ND	1.6	0.56	ND	0.40	0.14	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.46	ND	0.36	0.10	
108-10-1	4-Methyl-2-pentanone	ND	1.6	0.52	ND	0.40	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.52	ND	0.36	0.12	
79-00-5	1,1,2-Trichloroethane	ND	1.6	0.52	ND	0.30	0.096	
108-88-3	Toluene	**0.71**	1.6	0.56	**0.19**	0.43	0.15	**J**
591-78-6	2-Hexanone	**0.66**	1.6	0.52	**0.16**	0.40	0.13	**J**
124-48-1	Dibromochloromethane	ND	1.6	0.52	ND	0.19	0.062	
106-93-4	1,2-Dibromoethane	ND	1.6	0.52	ND	0.21	0.068	
123-86-4	n-Butyl Acetate	ND	1.6	0.52	ND	0.34	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: **Carbon 2** ALS Project ID: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P1505150-003

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00780

Initial Pressure (psig): 0.93 Final Pressure (psig): 5.73

Canister Dilution Factor: 1.31

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	1.6	0.59	ND	0.35	0.13	
127-18-4	Tetrachloroethene	ND	1.6	0.46	ND	0.24	0.068	
108-90-7	Chlorobenzene	ND	1.6	0.52	ND	0.36	0.11	
100-41-4	Ethylbenzene	ND	1.6	0.52	ND	0.38	0.12	
179601-23-1	m,p-Xylenes	**1.4**	3.3	0.98	**0.31**	0.75	0.23	**J**
75-25-2	Bromoform	ND	1.6	0.49	ND	0.16	0.048	
100-42-5	Styrene	ND	1.6	0.49	ND	0.38	0.12	
95-47-6	o-Xylene	**0.51**	1.6	0.49	**0.12**	0.38	0.11	**J**
111-84-2	n-Nonane	ND	1.6	0.49	ND	0.31	0.094	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.6	0.49	ND	0.24	0.072	
98-82-8	Cumene	ND	1.6	0.49	ND	0.33	0.10	
80-56-8	alpha-Pinene	ND	1.6	0.46	ND	0.29	0.082	
103-65-1	n-Propylbenzene	ND	1.6	0.52	ND	0.33	0.11	
622-96-8	4-Ethyltoluene	ND	1.6	0.52	ND	0.33	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	1.6	0.52	ND	0.33	0.11	
95-63-6	1,2,4-Trimethylbenzene	**0.69**	1.6	0.49	**0.14**	0.33	0.10	**J**
100-44-7	Benzyl Chloride	ND	1.6	0.36	ND	0.32	0.070	
541-73-1	1,3-Dichlorobenzene	ND	1.6	0.49	ND	0.27	0.082	
106-46-7	1,4-Dichlorobenzene	**0.60**	1.6	0.46	**0.099**	0.27	0.076	**J**
95-50-1	1,2-Dichlorobenzene	ND	1.6	0.49	ND	0.27	0.082	
5989-27-5	d-Limonene	**7.0**	1.6	0.46	**1.3**	0.29	0.082	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.32	ND	0.17	0.034	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	0.52	ND	0.22	0.071	
91-20-3	Naphthalene	**0.99**	1.6	0.59	**0.19**	0.31	0.11	**J**
87-68-3	Hexachlorobutadiene	ND	1.6	0.46	ND	0.15	0.043	

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: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P151202-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: 12/2/15
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: P1505150

Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P151202-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: 12/2/15

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: P1505150

Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P151202-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: 12/2/15

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 / KUH0-15-010** ALS Project ID: P1505150

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 11/23/15
Analyst: Evelyn Alvarez Date(s) Received: 11/30/15
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 12/2/15
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	P151202-MB	**99**	**100**	**99**	70-130	
Lab Control Sample	P151202-LCS	**100**	**99**	**100**	70-130	
SVE Exhaust	P1505150-001	**103**	**98**	**99**	70-130	
Carbon 1	P1505150-002	**103**	**98**	**98**	70-130	
Carbon 2	P1505150-003	**103**	**97**	**96**	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: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P151202-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: 12/2/15
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	**186**	**95**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**156**	**83**	65-117	
74-87-3	Chloromethane	200	**148**	**74**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**162**	**79**	65-122	
75-01-4	Vinyl Chloride	200	**168**	**84**	65-128	
106-99-0	1,3-Butadiene	206	**199**	**97**	62-143	
74-83-9	Bromomethane	202	**178**	**88**	65-130	
75-00-3	Chloroethane	200	**168**	**84**	69-126	
64-17-5	Ethanol	998	**958**	**96**	57-126	
75-05-8	Acetonitrile	212	**165**	**78**	51-134	
107-02-8	Acrolein	214	**180**	**84**	55-146	
67-64-1	Acetone	1,080	**922**	**85**	57-120	
75-69-4	Trichlorofluoromethane	216	**168**	**78**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**387**	**93**	59-129	
107-13-1	Acrylonitrile	212	**198**	**93**	64-136	
75-35-4	1,1-Dichloroethene	216	**192**	**89**	72-123	
75-09-2	Methylene Chloride	222	**177**	**80**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**197**	**90**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**195**	**89**	68-118	
75-15-0	Carbon Disulfide	210	**139**	**66**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**189**	**90**	69-129	
75-34-3	1,1-Dichloroethane	212	**181**	**85**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**196**	**91**	55-128	
108-05-4	Vinyl Acetate	1,040	**1040**	**100**	66-140	
78-93-3	2-Butanone (MEK)	220	**205**	**93**	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: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P151202-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: 12/2/15
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	**196**	**90**	65-125	
141-78-6	Ethyl Acetate	428	**423**	**99**	64-132	
110-54-3	n-Hexane	212	**189**	**89**	58-126	
67-66-3	Chloroform	224	**190**	**85**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**202**	**92**	64-123	
107-06-2	1,2-Dichloroethane	214	**192**	**90**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**180**	**86**	68-120	
71-43-2	Benzene	226	**200**	**88**	61-110	
56-23-5	Carbon Tetrachloride	230	**193**	**84**	65-137	
110-82-7	Cyclohexane	424	**385**	**91**	68-122	
78-87-5	1,2-Dichloropropane	216	**192**	**89**	67-122	
75-27-4	Bromodichloromethane	218	**197**	**90**	71-124	
79-01-6	Trichloroethene	216	**188**	**87**	71-121	
123-91-1	1,4-Dioxane	210	**235**	**112**	67-122	
80-62-6	Methyl Methacrylate	422	**406**	**96**	76-130	
142-82-5	n-Heptane	216	**200**	**93**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**202**	**97**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**215**	**98**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**211**	**100**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**197**	**91**	73-121	
108-88-3	Toluene	218	**195**	**89**	67-117	
591-78-6	2-Hexanone	220	**257**	**117**	59-128	
124-48-1	Dibromochloromethane	220	**215**	**98**	73-132	
106-93-4	1,2-Dibromoethane	218	**211**	**97**	73-128	
123-86-4	n-Butyl Acetate	226	**258**	**114**	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: P1505150
Client Project ID: **SVE Performance Monitoring / KUH0-15-010** ALS Sample ID: P151202-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: 12/2/15
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	**202**	**96**	67-124	
127-18-4	Tetrachloroethene	202	**184**	**91**	65-126	
108-90-7	Chlorobenzene	220	**198**	**90**	68-120	
100-41-4	Ethylbenzene	218	**205**	**94**	69-123	
179601-23-1	m,p-Xylenes	428	**413**	**96**	67-125	
75-25-2	Bromoform	228	**194**	**85**	68-153	
100-42-5	Styrene	222	**212**	**95**	68-132	
95-47-6	o-Xylene	210	**204**	**97**	67-124	
111-84-2	n-Nonane	204	**207**	**101**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**207**	**99**	72-128	
98-82-8	Cumene	208	**196**	**94**	67-124	
80-56-8	alpha-Pinene	212	**211**	**100**	67-129	
103-65-1	n-Propylbenzene	204	**200**	**98**	67-125	
622-96-8	4-Ethyltoluene	214	**221**	**103**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**211**	**99**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**223**	**102**	62-134	
100-44-7	Benzyl Chloride	220	**221**	**100**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**221**	**97**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**196**	**94**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**222**	**101**	62-134	
5989-27-5	d-Limonene	210	**226**	**108**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**203**	**93**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**195**	**85**	60-145	
91-20-3	Naphthalene	218	**214**	**98**	56-158	
87-68-3	Hexachlorobutadiene	230	**183**	**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.

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LABORATORY REPORT

January 12, 2016

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

RE: SVE Performance Monitoring / KUHO-15-010

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on December 28, 2015. For your reference, these analyses have been assigned our service request number P1505600.

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 11:12 am, Jan 12, 2016

Sue Anderson
Project Manager

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

Client: Environmental Management Services, Inc. Service Request No: P1505600
Project: SVE Performance Monitoring / KUHO-15-010

CASE NARRATIVE

The samples were received intact under chain of custody on December 28, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

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 accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

Canister 1SC00527 for sample SVE-OBS-02 (P1505600-002) was found to have a leaking valve. The canister was re-pressurized and the sample was analyzed. However, the results from this sample should be considered estimated and utilized accordingly.

The canisters 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	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L15-398
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	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
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: P1505600

Project ID: SVE Performance Monitoring / KUHO-15-010

Date Received: 12/28/2015

Time Received: 10:20

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	2nd Pi (psig)	2nd Pf (psig)	TO-15 - VOC Cans
SVE-OBS-01	P1505600-001	Air	12/21/2015	08:35	1SC00920	-0.02	5.77			X
SVE-OBS-02	P1505600-002	Air	12/21/2015	08:45	1SC00527	-0.15	5.51	0.03	5.42	X
SVE-OBS-03	P1505600-003	Air	12/21/2015	08:55	1SC01055	-0.25	5.05			X
SVE-OBS-04	P1505600-004	Air	12/21/2015	09:11	1SC00887	-0.23	5.12			X
SVE-OBS-05	P1505600-005	Air	12/21/2015	09:22	1SC01009	-0.12	5.55			X
SVE-OBS-06	P1505600-006	Air	12/21/2015	09:38	1SC00173	-0.19	5.26			X
SVE-OBS-07	P1505600-007	Air	12/21/2015	09:49	1SC00411	-0.31	5.06			X
SVE-OBS-08	P1505600-008	Air	12/21/2015	10:00	1SC00474	-0.18	5.20			X
SVE-OBS-09	P1505600-009	Air	12/21/2015	10:09	1SC01125	-0.30	5.15			X

Air - Chain of Custody Record & Analytical Service Request

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: 1505600

Company Name & Address (Reporting Information)	Environmental Management Services, Inc. P.O.Box 15369 Hattiesburg, MS 39404
Project Name	SVE Performance Monitoring
Project Number	KUHO-15-010
Project Manager	Stephanie Kilgore
P.O. # / Billing Information	KUHO-15-010 / 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	12-21-15	8:35	ISC00920	AVG 04139				X		
SVE-OBS-02	2	12-21-15	8:45	ISC00527	AVG 04346				X		
SVE-OBS-03	3	12-21-15	8:55	ISC01055	AVG 04603				X		
SVE-OBS-04	4	12-21-15	9:11	ISC00887	AVG 04219				X		
SVE-OBS-05	5	12-21-15	9:22	ISC01009	AVG 04218				X		
SVE-OBS-06	6	12-21-15	9:38	ISC00173	AVG 02850				X		
SVE-OBS-07	7	12-21-15	9:49	ISC00411	AVG 04182				X		
SVE-OBS-08	8	12-21-15	10:00	ISC00474	AVG 04391				X		
SVE-OBS-09	9	12-21-15	10:09	ISC01125	AVG 03058				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: 12-21-15	Time: 15:20	Received by: (Signature)	Date:	Time:	
Relinquished by: (Signature) FedEx	Date:	Time:	Received by: (Signature)	Date: 12/22/15	Time:	Cooler / Blank Temperature ____°C

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1505600

Project: SVE Performance Monitoring / KUHO-15-010

Sample(s) received on: 12/28/15 Date opened: 12/28/15 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
P1505600-001.01	1.0 L Source Can					
P1505600-002.01	1.0 L Source Can					
P1505600-003.01	1.0 L Source Can					
P1505600-004.01	1.0 L Source Can					
P1505600-005.01	1.0 L Source Can					
P1505600-006.01	1.0 L Source Can					
P1505600-007.01	1.0 L Source Can					
P1505600-008.01	1.0 L Source Can					
P1505600-009.01	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-001

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00920

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.77

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	**1.4**	1.7	0.49	**0.83**	1.0	0.28	**J**
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.5**	1.7	0.59	**0.50**	0.35	0.12	
74-87-3	Chloromethane	**0.63**	1.7	0.52	**0.30**	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	0.79	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	**13**	17	2.8	**6.8**	9.2	1.5	**J**
75-05-8	Acetonitrile	**1.2**	1.7	0.63	**0.70**	1.0	0.37	**J**
107-02-8	Acrolein	**1.5**	7.0	0.59	**0.64**	3.0	0.26	**J**
67-64-1	Acetone	**22**	17	2.7	**9.3**	7.3	1.1	
75-69-4	Trichlorofluoromethane	**2.2**	1.7	0.59	**0.40**	0.31	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	**1.5**	17	1.5	**0.61**	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	**65**	1.7	0.59	**16**	0.44	0.15	
75-09-2	Methylene Chloride	**0.65**	1.7	0.59	**0.19**	0.50	0.17	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	0.56	ND	0.56	0.18	
76-13-1	Trichlorotrifluoroethane	**8.0**	1.7	0.59	**1.0**	0.23	0.077	
75-15-0	Carbon Disulfide	**0.60**	17	0.52	**0.19**	5.6	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	ND	1.7	0.56	ND	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	**6.1**	17	2.3	**1.7**	4.9	0.64	**J**
78-93-3	2-Butanone (MEK)	**3.2**	17	0.73	**1.1**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-001

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00920

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.77

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	ND	3.5	1.2	ND	0.96	0.34	
110-54-3	n-Hexane	ND	1.7	0.52	ND	0.49	0.15	
67-66-3	Chloroform	**1.0**	1.7	0.59	**0.21**	0.36	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.70	ND	0.59	0.24	
107-06-2	1,2-Dichloroethane	ND	1.7	0.56	ND	0.43	0.14	
71-55-6	1,1,1-Trichloroethane	**5.3**	1.7	0.59	**0.97**	0.32	0.11	
71-43-2	Benzene	ND	1.7	0.56	ND	0.54	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	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	1.7	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	ND	1.7	0.49	ND	0.32	0.091	
123-91-1	1,4-Dioxane	**7.2**	1.7	0.56	**2.0**	0.48	0.15	
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.85	0.26	
142-82-5	n-Heptane	ND	1.7	0.59	ND	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	**2.2**	1.7	0.56	**0.54**	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	ND	1.7	0.56	ND	0.32	0.10	
108-88-3	Toluene	**5.5**	1.7	0.59	**1.5**	0.46	0.16	
591-78-6	2-Hexanone	**0.59**	1.7	0.56	**0.14**	0.42	0.14	**J**
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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-01** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-001

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00920

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.77

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	ND	1.7	0.63	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**0.85**	1.7	0.49	**0.13**	0.26	0.072	**J**
108-90-7	Chlorobenzene	ND	1.7	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**1.3**	1.7	0.56	**0.30**	0.40	0.13	**J**
179601-23-1	m,p-Xylenes	**6.8**	3.5	1.0	**1.6**	0.80	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	**2.4**	1.7	0.52	**0.56**	0.40	0.12	
111-84-2	n-Nonane	ND	1.7	0.52	ND	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	ND	1.7	0.52	ND	0.35	0.11	
80-56-8	alpha-Pinene	**0.53**	1.7	0.49	**0.095**	0.31	0.087	**J**
103-65-1	n-Propylbenzene	ND	1.7	0.56	ND	0.35	0.11	
622-96-8	4-Ethyltoluene	**0.89**	1.7	0.56	**0.18**	0.35	0.11	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.71**	1.7	0.56	**0.14**	0.35	0.11	**J**
95-63-6	1,2,4-Trimethylbenzene	**1.7**	1.7	0.52	**0.34**	0.35	0.11	**J**
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	**3.2**	1.7	0.49	**0.53**	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	**0.91**	1.7	0.49	**0.16**	0.31	0.087	**J**
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	**0.64**	1.7	0.63	**0.12**	0.33	0.12	**J**
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-02** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-002

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: **!**
Container ID: 1SC00527

Initial Pressure (psig): -0.15 Final Pressure (psig): 5.51
Initial Pressure 2 (psig): 0.03 Final Pressure 2 (psig): 5.42
Canister Dilution Factor: 1.90

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	2.4	0.67	ND	1.4	0.39	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	2.4	0.81	**0.42**	0.48	0.16	**J**
74-87-3	Chloromethane	ND	2.4	0.71	ND	1.2	0.35	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.4	0.90	ND	0.34	0.13	
75-01-4	Vinyl Chloride	ND	2.4	0.81	ND	0.93	0.32	
106-99-0	1,3-Butadiene	ND	2.4	1.0	ND	1.1	0.47	
74-83-9	Bromomethane	ND	2.4	0.90	ND	0.61	0.23	
75-00-3	Chloroethane	ND	2.4	0.81	ND	0.90	0.31	
64-17-5	Ethanol	**9.7**	24	3.8	**5.1**	13	2.0	**J**
75-05-8	Acetonitrile	ND	2.4	0.86	ND	1.4	0.51	
107-02-8	Acrolein	ND	9.5	0.81	ND	4.1	0.35	
67-64-1	Acetone	**16**	24	3.7	**6.7**	10	1.5	**J**
75-69-4	Trichlorofluoromethane	**1.3**	2.4	0.81	**0.23**	0.42	0.14	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	24	2.0	ND	9.7	0.81	
107-13-1	Acrylonitrile	ND	2.4	0.81	ND	1.1	0.37	
75-35-4	1,1-Dichloroethene	**78**	2.4	0.81	**20**	0.60	0.20	
75-09-2	Methylene Chloride	**1.0**	2.4	0.81	**0.29**	0.68	0.23	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.4	0.76	ND	0.76	0.24	
76-13-1	Trichlorotrifluoroethane	**0.98**	2.4	0.81	**0.13**	0.31	0.11	**J**
75-15-0	Carbon Disulfide	**5.7**	24	0.71	**1.8**	7.6	0.23	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.4	0.90	ND	0.60	0.23	
75-34-3	1,1-Dichloroethane	ND	2.4	0.76	ND	0.59	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	2.4	0.81	ND	0.66	0.22	
108-05-4	Vinyl Acetate	ND	24	3.1	ND	6.7	0.88	
78-93-3	2-Butanone (MEK)	**2.9**	24	1.0	**0.99**	8.1	0.34	**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.
! = See Case Narrative

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-002

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: **!**
Container ID: 1SC00527

Initial Pressure (psig): -0.15 Final Pressure (psig): 5.51
Initial Pressure 2 (psig): 0.03 Final Pressure 2 (psig): 5.42

Canister Dilution Factor: 1.90

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	2.4	0.76	ND	0.60	0.19	
141-78-6	Ethyl Acetate	ND	4.8	1.7	ND	1.3	0.46	
110-54-3	n-Hexane	**1.2**	2.4	0.71	**0.33**	0.67	0.20	**J**
67-66-3	Chloroform	**1.2**	2.4	0.81	**0.24**	0.49	0.17	**J**
109-99-9	Tetrahydrofuran (THF)	ND	2.4	0.95	ND	0.81	0.32	
107-06-2	1,2-Dichloroethane	ND	2.4	0.76	ND	0.59	0.19	
71-55-6	1,1,1-Trichloroethane	**3.4**	2.4	0.81	**0.62**	0.44	0.15	
71-43-2	Benzene	ND	2.4	0.76	ND	0.74	0.24	
56-23-5	Carbon Tetrachloride	ND	2.4	0.71	ND	0.38	0.11	
110-82-7	Cyclohexane	ND	4.8	1.4	ND	1.4	0.40	
78-87-5	1,2-Dichloropropane	ND	2.4	0.76	ND	0.51	0.16	
75-27-4	Bromodichloromethane	ND	2.4	0.71	ND	0.35	0.11	
79-01-6	Trichloroethene	ND	2.4	0.67	ND	0.44	0.12	
123-91-1	1,4-Dioxane	**1.7**	2.4	0.76	**0.48**	0.66	0.21	**J**
80-62-6	Methyl Methacrylate	ND	4.8	1.5	ND	1.2	0.36	
142-82-5	n-Heptane	ND	2.4	0.81	ND	0.58	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	2.4	0.67	ND	0.52	0.15	
108-10-1	4-Methyl-2-pentanone	**1.8**	2.4	0.76	**0.44**	0.58	0.19	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	2.4	0.76	ND	0.52	0.17	
79-00-5	1,1,2-Trichloroethane	ND	2.4	0.76	ND	0.44	0.14	
108-88-3	Toluene	**8.3**	2.4	0.81	**2.2**	0.63	0.21	
591-78-6	2-Hexanone	ND	2.4	0.76	ND	0.58	0.19	
124-48-1	Dibromochloromethane	ND	2.4	0.76	ND	0.28	0.089	
106-93-4	1,2-Dibromoethane	ND	2.4	0.76	ND	0.31	0.099	
123-86-4	n-Butyl Acetate	ND	2.4	0.76	ND	0.50	0.16	

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.
! = See Case Narrative

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-02** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-002

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: **!**
Container ID: 1SC00527

Initial Pressure (psig): -0.15 Final Pressure (psig): 5.51
Initial Pressure 2 (psig): 0.03 Final Pressure 2 (psig): 5.42

Canister Dilution Factor: 1.90

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	2.4	0.86	ND	0.51	0.18	
127-18-4	Tetrachloroethene	ND	2.4	0.67	ND	0.35	0.098	
108-90-7	Chlorobenzene	ND	2.4	0.76	ND	0.52	0.17	
100-41-4	Ethylbenzene	**1.2**	2.4	0.76	**0.27**	0.55	0.18	**J**
179601-23-1	m,p-Xylenes	**5.9**	4.8	1.4	**1.4**	1.1	0.33	
75-25-2	Bromoform	ND	2.4	0.71	ND	0.23	0.069	
100-42-5	Styrene	ND	2.4	0.71	ND	0.56	0.17	
95-47-6	o-Xylene	**2.2**	2.4	0.71	**0.50**	0.55	0.16	**J**
111-84-2	n-Nonane	ND	2.4	0.71	ND	0.45	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.4	0.71	ND	0.35	0.10	
98-82-8	Cumene	ND	2.4	0.71	ND	0.48	0.14	
80-56-8	alpha-Pinene	ND	2.4	0.67	ND	0.43	0.12	
103-65-1	n-Propylbenzene	ND	2.4	0.76	ND	0.48	0.15	
622-96-8	4-Ethyltoluene	**0.76**	2.4	0.76	**0.16**	0.48	0.15	**J**
108-67-8	1,3,5-Trimethylbenzene	ND	2.4	0.76	ND	0.48	0.15	
95-63-6	1,2,4-Trimethylbenzene	**1.4**	2.4	0.71	**0.29**	0.48	0.14	**J**
100-44-7	Benzyl Chloride	ND	2.4	0.52	ND	0.46	0.10	
541-73-1	1,3-Dichlorobenzene	ND	2.4	0.71	ND	0.40	0.12	
106-46-7	1,4-Dichlorobenzene	**3.4**	2.4	0.67	**0.56**	0.40	0.11	
95-50-1	1,2-Dichlorobenzene	ND	2.4	0.71	ND	0.40	0.12	
5989-27-5	d-Limonene	**1.4**	2.4	0.67	**0.25**	0.43	0.12	**J**
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.4	0.47	ND	0.25	0.049	
120-82-1	1,2,4-Trichlorobenzene	ND	2.4	0.76	ND	0.32	0.10	
91-20-3	Naphthalene	ND	2.4	0.86	ND	0.45	0.16	
87-68-3	Hexachlorobutadiene	ND	2.4	0.67	ND	0.22	0.062	

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.
! = See Case Narrative

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-003

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01055

Initial Pressure (psig): -0.25 Final Pressure (psig): 5.05

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	ND	1.7	0.48	ND	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	1.7	0.58	**0.43**	0.35	0.12	
74-87-3	Chloromethane	ND	1.7	0.51	ND	0.83	0.25	
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	**6.3**	17	2.7	**3.3**	9.1	1.5	**J**
75-05-8	Acetonitrile	ND	1.7	0.62	ND	1.0	0.37	
107-02-8	Acrolein	**0.58**	6.9	0.58	**0.25**	3.0	0.25	**J**
67-64-1	Acetone	**7.8**	17	2.6	**3.3**	7.2	1.1	**J**
75-69-4	Trichlorofluoromethane	**1.4**	1.7	0.58	**0.25**	0.30	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	1.4	ND	7.0	0.59	
107-13-1	Acrylonitrile	ND	1.7	0.58	ND	0.79	0.27	
75-35-4	1,1-Dichloroethene	**140**	1.7	0.58	**36**	0.43	0.15	
75-09-2	Methylene Chloride	**15**	1.7	0.58	**4.4**	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	**0.66**	1.7	0.58	**0.087**	0.22	0.076	**J**
75-15-0	Carbon Disulfide	**0.74**	17	0.51	**0.24**	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)	**1.4**	17	0.72	**0.47**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-03** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-003

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01055

Initial Pressure (psig): -0.25 Final Pressure (psig): 5.05

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	ND	3.4	1.2	ND	0.95	0.33	
110-54-3	n-Hexane	**0.55**	1.7	0.51	**0.16**	0.49	0.15	**J**
67-66-3	Chloroform	**0.97**	1.7	0.58	**0.20**	0.35	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.69	ND	0.58	0.23	
107-06-2	1,2-Dichloroethane	ND	1.7	0.55	ND	0.42	0.14	
71-55-6	1,1,1-Trichloroethane	**3.6**	1.7	0.58	**0.66**	0.31	0.11	
71-43-2	Benzene	ND	1.7	0.55	ND	0.54	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.51	ND	0.27	0.082	
110-82-7	Cyclohexane	ND	3.4	0.99	ND	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	**1.9**	1.7	0.55	**0.53**	0.48	0.15	
80-62-6	Methyl Methacrylate	ND	3.4	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	**0.64**	1.7	0.58	**0.16**	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	ND	1.7	0.55	ND	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	**3.3**	1.7	0.58	**0.87**	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	ND	1.7	0.55	ND	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: **SVE-OBS-03** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-003

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01055

Initial Pressure (psig): -0.25 Final Pressure (psig): 5.05

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	1.7	0.62	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**0.64**	1.7	0.48	**0.094**	0.25	0.071	**J**
108-90-7	Chlorobenzene	ND	1.7	0.55	ND	0.37	0.12	
100-41-4	Ethylbenzene	**1.2**	1.7	0.55	**0.27**	0.39	0.13	**J**
179601-23-1	m,p-Xylenes	**5.7**	3.4	1.0	**1.3**	0.79	0.24	
75-25-2	Bromoform	ND	1.7	0.51	ND	0.17	0.050	
100-42-5	Styrene	ND	1.7	0.51	ND	0.40	0.12	
95-47-6	o-Xylene	**1.8**	1.7	0.51	**0.42**	0.39	0.12	
111-84-2	n-Nonane	ND	1.7	0.51	ND	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	ND	1.7	0.51	ND	0.35	0.10	
80-56-8	alpha-Pinene	ND	1.7	0.48	ND	0.31	0.086	
103-65-1	n-Propylbenzene	ND	1.7	0.55	ND	0.35	0.11	
622-96-8	4-Ethyltoluene	**0.74**	1.7	0.55	**0.15**	0.35	0.11	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.64**	1.7	0.55	**0.13**	0.35	0.11	**J**
95-63-6	1,2,4-Trimethylbenzene	**1.6**	1.7	0.51	**0.32**	0.35	0.10	**J**
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	**3.2**	1.7	0.48	**0.53**	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	**0.61**	1.7	0.48	**0.11**	0.31	0.086	**J**
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-04** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-004

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00887

Initial Pressure (psig): -0.23 Final Pressure (psig): 5.12

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	ND	1.7	0.48	ND	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.7	0.58	**0.45**	0.35	0.12	
74-87-3	Chloromethane	ND	1.7	0.51	ND	0.83	0.25	
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	**4.0**	17	2.7	**2.1**	9.1	1.5	**J**
75-05-8	Acetonitrile	**0.67**	1.7	0.62	**0.40**	1.0	0.37	**J**
107-02-8	Acrolein	**0.99**	6.9	0.58	**0.43**	3.0	0.25	**J**
67-64-1	Acetone	**22**	17	2.6	**9.1**	7.2	1.1	
75-69-4	Trichlorofluoromethane	**1.5**	1.7	0.58	**0.28**	0.30	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	1.4	ND	7.0	0.59	
107-13-1	Acrylonitrile	ND	1.7	0.58	ND	0.79	0.27	
75-35-4	1,1-Dichloroethene	**15**	1.7	0.58	**3.8**	0.43	0.15	
75-09-2	Methylene Chloride	**49**	1.7	0.58	**14**	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	**1.3**	1.7	0.58	**0.17**	0.22	0.076	**J**
75-15-0	Carbon Disulfide	**2.1**	17	0.51	**0.67**	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	**0.58**	1.7	0.55	**0.14**	0.42	0.14	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.58	ND	0.48	0.16	
108-05-4	Vinyl Acetate	**3.5**	17	2.2	**1.0**	4.9	0.63	**J**
78-93-3	2-Butanone (MEK)	**7.0**	17	0.72	**2.4**	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.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-04** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-004

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00887

Initial Pressure (psig): -0.23 Final Pressure (psig): 5.12

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	**1.1**	1.7	0.55	**0.27**	0.43	0.14	**J**
141-78-6	Ethyl Acetate	ND	3.4	1.2	ND	0.95	0.33	
110-54-3	n-Hexane	ND	1.7	0.51	ND	0.49	0.15	
67-66-3	Chloroform	**0.65**	1.7	0.58	**0.13**	0.35	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.69	ND	0.58	0.23	
107-06-2	1,2-Dichloroethane	ND	1.7	0.55	ND	0.42	0.14	
71-55-6	1,1,1-Trichloroethane	**3.5**	1.7	0.58	**0.64**	0.31	0.11	
71-43-2	Benzene	ND	1.7	0.55	ND	0.54	0.17	
56-23-5	Carbon Tetrachloride	**0.54**	1.7	0.51	**0.087**	0.27	0.082	**J**
110-82-7	Cyclohexane	**1.3**	3.4	0.99	**0.38**	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	0.51	ND	0.26	0.077	
79-01-6	Trichloroethene	**1.5**	1.7	0.48	**0.27**	0.32	0.089	**J**
123-91-1	1,4-Dioxane	**0.92**	1.7	0.55	**0.25**	0.48	0.15	**J**
80-62-6	Methyl Methacrylate	ND	3.4	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	ND	1.7	0.58	ND	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	**1.0**	1.7	0.55	**0.25**	0.42	0.13	**J**
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	**2.4**	1.7	0.58	**0.64**	0.45	0.15	
591-78-6	2-Hexanone	**0.62**	1.7	0.55	**0.15**	0.42	0.13	**J**
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	ND	1.7	0.55	ND	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: **SVE-OBS-04** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-004

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00887

Initial Pressure (psig): -0.23 Final Pressure (psig): 5.12

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	1.7	0.62	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**1.4**	1.7	0.48	**0.21**	0.25	0.071	**J**
108-90-7	Chlorobenzene	**0.70**	1.7	0.55	**0.15**	0.37	0.12	**J**
100-41-4	Ethylbenzene	**3.2**	1.7	0.55	**0.74**	0.39	0.13	
179601-23-1	m,p-Xylenes	**15**	3.4	1.0	**3.4**	0.79	0.24	
75-25-2	Bromoform	ND	1.7	0.51	ND	0.17	0.050	
100-42-5	Styrene	ND	1.7	0.51	ND	0.40	0.12	
95-47-6	o-Xylene	**4.0**	1.7	0.51	**0.92**	0.39	0.12	
111-84-2	n-Nonane	**0.87**	1.7	0.51	**0.17**	0.33	0.098	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.51	ND	0.25	0.075	
98-82-8	Cumene	ND	1.7	0.51	ND	0.35	0.10	
80-56-8	alpha-Pinene	ND	1.7	0.48	ND	0.31	0.086	
103-65-1	n-Propylbenzene	**0.55**	1.7	0.55	**0.11**	0.35	0.11	**J**
622-96-8	4-Ethyltoluene	**0.80**	1.7	0.55	**0.16**	0.35	0.11	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.73**	1.7	0.55	**0.15**	0.35	0.11	**J**
95-63-6	1,2,4-Trimethylbenzene	**1.5**	1.7	0.51	**0.31**	0.35	0.10	**J**
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	**2.8**	1.7	0.48	**0.47**	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	**0.61**	1.7	0.48	**0.11**	0.31	0.086	**J**
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	**0.65**	1.7	0.62	**0.12**	0.33	0.12	**J**
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-05** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-005

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01009

Initial Pressure (psig): -0.12 Final Pressure (psig): 5.55

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	ND	1.7	0.49	ND	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	1.7	0.59	**0.39**	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	ND	17	2.8	ND	9.2	1.5	
75-05-8	Acetonitrile	ND	1.7	0.63	ND	1.0	0.37	
107-02-8	Acrolein	ND	7.0	0.59	ND	3.0	0.26	
67-64-1	Acetone	**19**	17	2.7	**8.0**	7.3	1.1	
75-69-4	Trichlorofluoromethane	**1.2**	1.7	0.59	**0.21**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	1.5	ND	7.1	0.59	
107-13-1	Acrylonitrile	ND	1.7	0.59	ND	0.80	0.27	
75-35-4	1,1-Dichloroethene	**1.4**	1.7	0.59	**0.36**	0.44	0.15	**J**
75-09-2	Methylene Chloride	**15**	1.7	0.59	**4.3**	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	ND	1.7	0.59	ND	0.23	0.077	
75-15-0	Carbon Disulfide	**14**	17	0.52	**4.4**	5.6	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	ND	1.7	0.56	ND	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	**4.0**	17	2.3	**1.1**	4.9	0.64	**J**
78-93-3	2-Butanone (MEK)	**3.5**	17	0.73	**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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-05** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-005

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01009

Initial Pressure (psig): -0.12 Final Pressure (psig): 5.55

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	**1.9**	3.5	1.2	**0.53**	0.96	0.34	**J**
110-54-3	n-Hexane	ND	1.7	0.52	ND	0.49	0.15	
67-66-3	Chloroform	ND	1.7	0.59	ND	0.36	0.12	
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.70	ND	0.59	0.24	
107-06-2	1,2-Dichloroethane	ND	1.7	0.56	ND	0.43	0.14	
71-55-6	1,1,1-Trichloroethane	**2.6**	1.7	0.59	**0.48**	0.32	0.11	
71-43-2	Benzene	ND	1.7	0.56	ND	0.54	0.17	
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	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	1.7	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	ND	1.7	0.49	ND	0.32	0.091	
123-91-1	1,4-Dioxane	**1.5**	1.7	0.56	**0.41**	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	ND	1.7	0.59	ND	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	ND	1.7	0.56	ND	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	ND	1.7	0.56	ND	0.32	0.10	
108-88-3	Toluene	**0.94**	1.7	0.59	**0.25**	0.46	0.16	**J**
591-78-6	2-Hexanone	**0.98**	1.7	0.56	**0.24**	0.42	0.14	**J**
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-05** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-005

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01009

Initial Pressure (psig): -0.12 Final Pressure (psig): 5.55

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	ND	1.7	0.63	ND	0.37	0.13	
127-18-4	Tetrachloroethene	ND	1.7	0.49	ND	0.26	0.072	
108-90-7	Chlorobenzene	ND	1.7	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**0.83**	1.7	0.56	**0.19**	0.40	0.13	**J**
179601-23-1	m,p-Xylenes	**4.4**	3.5	1.0	**1.0**	0.80	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	**1.3**	1.7	0.52	**0.30**	0.40	0.12	**J**
111-84-2	n-Nonane	ND	1.7	0.52	ND	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	ND	1.7	0.52	ND	0.35	0.11	
80-56-8	alpha-Pinene	ND	1.7	0.49	ND	0.31	0.087	
103-65-1	n-Propylbenzene	ND	1.7	0.56	ND	0.35	0.11	
622-96-8	4-Ethyltoluene	ND	1.7	0.56	ND	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	0.56	ND	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**0.79**	1.7	0.52	**0.16**	0.35	0.11	**J**
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	**1.4**	1.7	0.49	**0.23**	0.29	0.081	**J**
95-50-1	1,2-Dichlorobenzene	**1.7**	1.7	0.52	**0.28**	0.29	0.087	**J**
5989-27-5	d-Limonene	**0.52**	1.7	0.49	**0.094**	0.31	0.087	**J**
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	**0.77**	1.7	0.63	**0.15**	0.33	0.12	**J**
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-06** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-006

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00173

Initial Pressure (psig): -0.19 Final Pressure (psig): 5.26

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	**2.0**	1.7	0.48	**1.1**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.4**	1.7	0.59	**0.49**	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	0.78	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	**21**	17	2.8	**11**	9.2	1.5	
75-05-8	Acetonitrile	ND	1.7	0.62	ND	1.0	0.37	
107-02-8	Acrolein	**2.4**	6.9	0.59	**1.1**	3.0	0.26	**J**
67-64-1	Acetone	**100**	17	2.7	**44**	7.3	1.1	
75-69-4	Trichlorofluoromethane	**1.2**	1.7	0.59	**0.21**	0.31	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**2.4**	17	1.4	**0.97**	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	**110**	1.7	0.59	**27**	0.44	0.15	
75-09-2	Methylene Chloride	**150**	1.7	0.59	**42**	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	ND	1.7	0.59	ND	0.23	0.077	
75-15-0	Carbon Disulfide	**140**	17	0.52	**43**	5.5	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	**1.7**	1.7	0.55	**0.41**	0.43	0.14	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.59	ND	0.48	0.16	
108-05-4	Vinyl Acetate	**8.4**	17	2.2	**2.4**	4.9	0.64	**J**
78-93-3	2-Butanone (MEK)	**12**	17	0.72	**4.1**	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.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-06** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-006

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00173

Initial Pressure (psig): -0.19 Final Pressure (psig): 5.26

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	1.7	0.55	ND	0.44	0.14	
141-78-6	Ethyl Acetate	**4.8**	3.5	1.2	**1.3**	0.96	0.34	
110-54-3	n-Hexane	ND	1.7	0.52	ND	0.49	0.15	
67-66-3	Chloroform	**1.0**	1.7	0.59	**0.21**	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	**24**	1.7	0.59	**4.4**	0.32	0.11	
71-43-2	Benzene	**0.64**	1.7	0.55	**0.20**	0.54	0.17	**J**
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	ND	0.27	0.082	
110-82-7	Cyclohexane	**3.8**	3.5	1.0	**1.1**	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	0.52	ND	0.26	0.077	
79-01-6	Trichloroethene	**0.48**	1.7	0.48	**0.090**	0.32	0.090	**J**
123-91-1	1,4-Dioxane	**0.93**	1.7	0.55	**0.26**	0.48	0.15	**J**
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	**3.3**	1.7	0.59	**0.80**	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	**1.3**	1.7	0.55	**0.33**	0.42	0.13	**J**
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	0.55	ND	0.38	0.12	
79-00-5	1,1,2-Trichloroethane	**0.77**	1.7	0.55	**0.14**	0.32	0.10	**J**
108-88-3	Toluene	**3.7**	1.7	0.59	**0.97**	0.46	0.16	
591-78-6	2-Hexanone	**0.83**	1.7	0.55	**0.20**	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	**0.63**	1.7	0.55	**0.13**	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-06** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-006

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/5/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00173

Initial Pressure (psig): -0.19 Final Pressure (psig): 5.26

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	1.7	0.62	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**3.4**	1.7	0.48	**0.50**	0.25	0.071	
108-90-7	Chlorobenzene	ND	1.7	0.55	ND	0.37	0.12	
100-41-4	Ethylbenzene	**5.1**	1.7	0.55	**1.2**	0.40	0.13	
179601-23-1	m,p-Xylenes	**24**	3.5	1.0	**5.4**	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	**6.6**	1.7	0.52	**1.5**	0.40	0.12	
111-84-2	n-Nonane	ND	1.7	0.52	ND	0.33	0.099	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.52	ND	0.25	0.075	
98-82-8	Cumene	ND	1.7	0.52	ND	0.35	0.11	
80-56-8	alpha-Pinene	ND	1.7	0.48	ND	0.31	0.087	
103-65-1	n-Propylbenzene	ND	1.7	0.55	ND	0.35	0.11	
622-96-8	4-Ethyltoluene	ND	1.7	0.55	ND	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	0.55	ND	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**1.2**	1.7	0.52	**0.24**	0.35	0.11	**J**
100-44-7	Benzyl Chloride	ND	1.7	0.38	ND	0.33	0.073	
541-73-1	1,3-Dichlorobenzene	ND	1.7	0.52	ND	0.29	0.086	
106-46-7	1,4-Dichlorobenzene	**1.8**	1.7	0.48	**0.30**	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	ND	1.7	0.48	ND	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-07** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-007

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00411

Initial Pressure (psig): -0.31 Final Pressure (psig): 5.06

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	**4.7**	1.7	0.48	**2.7**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	1.7	0.58	**0.41**	0.35	0.12	
74-87-3	Chloromethane	ND	1.7	0.51	ND	0.83	0.25	
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	**20**	17	2.7	**11**	9.1	1.5	
75-05-8	Acetonitrile	**0.71**	1.7	0.62	**0.42**	1.0	0.37	**J**
107-02-8	Acrolein	ND	6.9	0.58	ND	3.0	0.25	
67-64-1	Acetone	**38**	17	2.6	**16**	7.2	1.1	
75-69-4	Trichlorofluoromethane	**8.3**	1.7	0.58	**1.5**	0.30	0.10	
67-63-0	2-Propanol (Isopropyl Alcohol)	**2.7**	17	1.4	**1.1**	7.0	0.59	**J**
107-13-1	Acrylonitrile	ND	1.7	0.58	ND	0.79	0.27	
75-35-4	1,1-Dichloroethene	**1,800**	17	5.8	**460**	4.3	1.5	**D**
75-09-2	Methylene Chloride	**21**	1.7	0.58	**5.9**	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	**53**	1.7	0.58	**6.9**	0.22	0.076	
75-15-0	Carbon Disulfide	**35**	17	0.51	**11**	5.5	0.17	
156-60-5	trans-1,2-Dichloroethene	ND	1.7	0.65	ND	0.43	0.16	
75-34-3	1,1-Dichloroethane	**40**	1.7	0.55	**10**	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	**13**	17	2.2	**3.7**	4.9	0.63	**J**
78-93-3	2-Butanone (MEK)	**6.3**	17	0.72	**2.1**	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.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-07** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-007

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00411

Initial Pressure (psig): -0.31 Final Pressure (psig): 5.06

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	**0.83**	1.7	0.55	**0.21**	0.43	0.14	**J**
141-78-6	Ethyl Acetate	**21**	3.4	1.2	**5.7**	0.95	0.33	
110-54-3	n-Hexane	**0.90**	1.7	0.51	**0.26**	0.49	0.15	**J**
67-66-3	Chloroform	**13**	1.7	0.58	**2.7**	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	**8.0**	1.7	0.55	**2.0**	0.42	0.14	
71-55-6	1,1,1-Trichloroethane	**20**	1.7	0.58	**3.7**	0.31	0.11	
71-43-2	Benzene	**1.1**	1.7	0.55	**0.34**	0.54	0.17	**J**
56-23-5	Carbon Tetrachloride	**2.7**	1.7	0.51	**0.43**	0.27	0.082	
110-82-7	Cyclohexane	ND	3.4	0.99	ND	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	**21**	1.7	0.48	**4.0**	0.32	0.089	
123-91-1	1,4-Dioxane	**0.89**	1.7	0.55	**0.25**	0.48	0.15	**J**
80-62-6	Methyl Methacrylate	ND	3.4	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	ND	1.7	0.58	ND	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	**3.3**	1.7	0.55	**0.81**	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	**9.3**	1.7	0.55	**1.7**	0.31	0.10	
108-88-3	Toluene	**7.9**	1.7	0.58	**2.1**	0.45	0.15	
591-78-6	2-Hexanone	**1.1**	1.7	0.55	**0.26**	0.42	0.13	**J**
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	ND	1.7	0.55	ND	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: **SVE-OBS-07** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-007

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes: 0.040 Liter(s)
Container ID: 1SC00411

Initial Pressure (psig): -0.31 Final Pressure (psig): 5.06

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	1.7	0.62	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**27**	1.7	0.48	**4.0**	0.25	0.071	
108-90-7	Chlorobenzene	**0.57**	1.7	0.55	**0.12**	0.37	0.12	**J**
100-41-4	Ethylbenzene	**2.5**	1.7	0.55	**0.57**	0.39	0.13	
179601-23-1	m,p-Xylenes	**12**	3.4	1.0	**2.9**	0.79	0.24	
75-25-2	Bromoform	ND	1.7	0.51	ND	0.17	0.050	
100-42-5	Styrene	ND	1.7	0.51	ND	0.40	0.12	
95-47-6	o-Xylene	**4.1**	1.7	0.51	**0.93**	0.39	0.12	
111-84-2	n-Nonane	ND	1.7	0.51	ND	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	ND	1.7	0.51	ND	0.35	0.10	
80-56-8	alpha-Pinene	**0.86**	1.7	0.48	**0.15**	0.31	0.086	**J**
103-65-1	n-Propylbenzene	**0.75**	1.7	0.55	**0.15**	0.35	0.11	**J**
622-96-8	4-Ethyltoluene	**1.4**	1.7	0.55	**0.28**	0.35	0.11	**J**
108-67-8	1,3,5-Trimethylbenzene	**1.1**	1.7	0.55	**0.22**	0.35	0.11	**J**
95-63-6	1,2,4-Trimethylbenzene	**2.6**	1.7	0.51	**0.52**	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	**5.9**	1.7	0.48	**0.99**	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	ND	1.7	0.48	ND	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	**0.93**	1.7	0.62	**0.18**	0.33	0.12	**J**
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-08** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-008

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00474

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	ND	1.7	0.48	ND	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	1.7	0.58	**0.38**	0.35	0.12	
74-87-3	Chloromethane	ND	1.7	0.51	ND	0.83	0.25	
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	**12**	17	2.7	**6.3**	9.1	1.5	**J**
75-05-8	Acetonitrile	ND	1.7	0.62	ND	1.0	0.37	
107-02-8	Acrolein	**1.5**	6.9	0.58	**0.63**	3.0	0.25	**J**
67-64-1	Acetone	**33**	17	2.6	**14**	7.2	1.1	
75-69-4	Trichlorofluoromethane	**1.3**	1.7	0.58	**0.23**	0.30	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	1.4	ND	7.0	0.59	
107-13-1	Acrylonitrile	ND	1.7	0.58	ND	0.79	0.27	
75-35-4	1,1-Dichloroethene	**270**	1.7	0.58	**67**	0.43	0.15	
75-09-2	Methylene Chloride	**51**	1.7	0.58	**15**	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	ND	1.7	0.58	ND	0.22	0.076	
75-15-0	Carbon Disulfide	**4.3**	17	0.51	**1.4**	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	**10**	1.7	0.55	**2.5**	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	**4.6**	17	2.2	**1.3**	4.9	0.63	**J**
78-93-3	2-Butanone (MEK)	**5.9**	17	0.72	**2.0**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-008

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00474

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	1.7	0.55	ND	0.43	0.14	
141-78-6	Ethyl Acetate	ND	3.4	1.2	ND	0.95	0.33	
110-54-3	n-Hexane	**1.6**	1.7	0.51	**0.46**	0.49	0.15	**J**
67-66-3	Chloroform	**1.1**	1.7	0.58	**0.22**	0.35	0.12	**J**
109-99-9	Tetrahydrofuran (THF)	ND	1.7	0.69	ND	0.58	0.23	
107-06-2	1,2-Dichloroethane	ND	1.7	0.55	ND	0.42	0.14	
71-55-6	1,1,1-Trichloroethane	**29**	1.7	0.58	**5.3**	0.31	0.11	
71-43-2	Benzene	**0.70**	1.7	0.55	**0.22**	0.54	0.17	**J**
56-23-5	Carbon Tetrachloride	ND	1.7	0.51	ND	0.27	0.082	
110-82-7	Cyclohexane	**1.8**	3.4	0.99	**0.53**	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	0.51	ND	0.26	0.077	
79-01-6	Trichloroethene	**1.3**	1.7	0.48	**0.24**	0.32	0.089	**J**
123-91-1	1,4-Dioxane	**0.72**	1.7	0.55	**0.20**	0.48	0.15	**J**
80-62-6	Methyl Methacrylate	ND	3.4	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	**0.86**	1.7	0.58	**0.21**	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	**9.0**	1.7	0.55	**2.2**	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	**21**	1.7	0.58	**5.5**	0.45	0.15	
591-78-6	2-Hexanone	**1.2**	1.7	0.55	**0.29**	0.42	0.13	**J**
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	**0.63**	1.7	0.55	**0.13**	0.36	0.12	**J**

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.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-08** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-008

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00474

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	1.7	0.62	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**4.0**	1.7	0.48	**0.59**	0.25	0.071	
108-90-7	Chlorobenzene	ND	1.7	0.55	ND	0.37	0.12	
100-41-4	Ethylbenzene	**9.8**	1.7	0.55	**2.3**	0.39	0.13	
179601-23-1	m,p-Xylenes	**46**	3.4	1.0	**11**	0.79	0.24	
75-25-2	Bromoform	ND	1.7	0.51	ND	0.17	0.050	
100-42-5	Styrene	ND	1.7	0.51	ND	0.40	0.12	
95-47-6	o-Xylene	**16**	1.7	0.51	**3.7**	0.39	0.12	
111-84-2	n-Nonane	**0.58**	1.7	0.51	**0.11**	0.33	0.098	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.51	ND	0.25	0.075	
98-82-8	Cumene	**0.59**	1.7	0.51	**0.12**	0.35	0.10	**J**
80-56-8	alpha-Pinene	**2.4**	1.7	0.48	**0.44**	0.31	0.086	
103-65-1	n-Propylbenzene	**2.0**	1.7	0.55	**0.40**	0.35	0.11	
622-96-8	4-Ethyltoluene	**3.9**	1.7	0.55	**0.80**	0.35	0.11	
108-67-8	1,3,5-Trimethylbenzene	**3.3**	1.7	0.55	**0.67**	0.35	0.11	
95-63-6	1,2,4-Trimethylbenzene	**7.3**	1.7	0.51	**1.5**	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	**15**	1.7	0.48	**2.5**	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	**1.8**	1.7	0.48	**0.33**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-009

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01125

Initial Pressure (psig): -0.30 Final Pressure (psig): 5.15

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	ND	1.7	0.48	ND	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	1.7	0.59	**0.40**	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	0.78	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	ND	17	2.8	ND	9.2	1.5	
75-05-8	Acetonitrile	ND	1.7	0.62	ND	1.0	0.37	
107-02-8	Acrolein	ND	6.9	0.59	ND	3.0	0.26	
67-64-1	Acetone	**9.8**	17	2.7	**4.1**	7.3	1.1	**J**
75-69-4	Trichlorofluoromethane	**1.4**	1.7	0.59	**0.24**	0.31	0.10	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**1.9**	17	1.4	**0.78**	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	**47**	1.7	0.59	**12**	0.44	0.15	
75-09-2	Methylene Chloride	**11**	1.7	0.59	**3.2**	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	ND	1.7	0.59	ND	0.23	0.077	
75-15-0	Carbon Disulfide	**0.91**	17	0.52	**0.29**	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	**0.55**	1.7	0.55	**0.14**	0.43	0.14	**J**
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	0.59	ND	0.48	0.16	
108-05-4	Vinyl Acetate	ND	17	2.2	ND	4.9	0.64	
78-93-3	2-Butanone (MEK)	**1.3**	17	0.72	**0.43**	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.

Client: **Environmental Management Services, Inc.**
Client Sample ID: **SVE-OBS-09** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-009

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01125

Initial Pressure (psig): -0.30 Final Pressure (psig): 5.15

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	1.7	0.55	ND	0.44	0.14	
141-78-6	Ethyl Acetate	**2.7**	3.5	1.2	**0.75**	0.96	0.34	**J**
110-54-3	n-Hexane	ND	1.7	0.52	ND	0.49	0.15	
67-66-3	Chloroform	ND	1.7	0.59	ND	0.35	0.12	
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	**7.8**	1.7	0.59	**1.4**	0.32	0.11	
71-43-2	Benzene	**0.79**	1.7	0.55	**0.25**	0.54	0.17	**J**
56-23-5	Carbon Tetrachloride	ND	1.7	0.52	ND	0.27	0.082	
110-82-7	Cyclohexane	ND	3.5	1.0	ND	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	0.52	ND	0.26	0.077	
79-01-6	Trichloroethene	**0.67**	1.7	0.48	**0.12**	0.32	0.090	**J**
123-91-1	1,4-Dioxane	**0.71**	1.7	0.55	**0.20**	0.48	0.15	**J**
80-62-6	Methyl Methacrylate	ND	3.5	1.1	ND	0.84	0.26	
142-82-5	n-Heptane	ND	1.7	0.59	ND	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	**1.6**	1.7	0.55	**0.40**	0.42	0.13	**J**
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	**4.2**	1.7	0.59	**1.1**	0.46	0.16	
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	0.065	
106-93-4	1,2-Dibromoethane	ND	1.7	0.55	ND	0.22	0.072	
123-86-4	n-Butyl Acetate	ND	1.7	0.55	ND	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: **SVE-OBS-09** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P1505600-009

Test Code: EPA TO-15 Date Collected: 12/21/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 1/6/16
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01125

Initial Pressure (psig): -0.30 Final Pressure (psig): 5.15

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	1.7	0.62	ND	0.37	0.13	
127-18-4	Tetrachloroethene	**1.9**	1.7	0.48	**0.28**	0.25	0.071	
108-90-7	Chlorobenzene	ND	1.7	0.55	ND	0.37	0.12	
100-41-4	Ethylbenzene	**2.0**	1.7	0.55	**0.46**	0.40	0.13	
179601-23-1	m,p-Xylenes	**11**	3.5	1.0	**2.5**	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	**3.4**	1.7	0.52	**0.78**	0.40	0.12	
111-84-2	n-Nonane	ND	1.7	0.52	ND	0.33	0.099	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	0.52	ND	0.25	0.075	
98-82-8	Cumene	ND	1.7	0.52	ND	0.35	0.11	
80-56-8	alpha-Pinene	**0.53**	1.7	0.48	**0.096**	0.31	0.087	**J**
103-65-1	n-Propylbenzene	ND	1.7	0.55	ND	0.35	0.11	
622-96-8	4-Ethyltoluene	**1.2**	1.7	0.55	**0.24**	0.35	0.11	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.86**	1.7	0.55	**0.17**	0.35	0.11	**J**
95-63-6	1,2,4-Trimethylbenzene	**2.2**	1.7	0.52	**0.45**	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	ND	1.7	0.52	ND	0.29	0.086	
106-46-7	1,4-Dichlorobenzene	**6.1**	1.7	0.48	**1.0**	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	**0.51**	1.7	0.48	**0.092**	0.31	0.087	**J**
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: **Method Blank** ALS Project ID: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160105-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: 1/5/16
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: P1505600

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160105-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: 1/5/16

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: P1505600

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160105-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: 1/5/16

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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160106-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: 1/6/16
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: P1505600

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160106-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: 1/6/16

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: P1505600

Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160106-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: 1/6/16

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 / KUHO-15-010** ALS Project ID: P1505600

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 12/21/15
Analyst: Wida Ang Date(s) Received: 12/28/15
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 1/5 - 1/6/16
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	P160105-MB	**98**	**100**	**100**	70-130	
Method Blank	P160106-MB	**95**	**104**	**99**	70-130	
Lab Control Sample	P160105-LCS	**92**	**98**	**104**	70-130	
Lab Control Sample	P160106-LCS	**93**	**100**	**100**	70-130	
SVE-OBS-01	P1505600-001	**96**	**101**	**101**	70-130	
SVE-OBS-02	P1505600-002	**95**	**101**	**102**	70-130	
SVE-OBS-03	P1505600-003	**96**	**101**	**101**	70-130	
SVE-OBS-04	P1505600-004	**96**	**101**	**100**	70-130	
SVE-OBS-05	P1505600-005	**96**	**101**	**100**	70-130	
SVE-OBS-06	P1505600-006	**95**	**100**	**100**	70-130	
SVE-OBS-07	P1505600-007	**93**	**101**	**98**	70-130	
SVE-OBS-08	P1505600-008	**94**	**100**	**100**	70-130	
SVE-OBS-09	P1505600-009	**96**	**101**	**100**	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160105-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: 1/5/16
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	**128**	**65**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**142**	**76**	65-117	
74-87-3	Chloromethane	200	**170**	**85**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**180**	**88**	65-122	
75-01-4	Vinyl Chloride	200	**171**	**86**	65-128	
106-99-0	1,3-Butadiene	206	**240**	**117**	62-143	
74-83-9	Bromomethane	202	**157**	**78**	65-130	
75-00-3	Chloroethane	200	**174**	**87**	69-126	
64-17-5	Ethanol	998	**828**	**83**	57-126	
75-05-8	Acetonitrile	212	**161**	**76**	51-134	
107-02-8	Acrolein	214	**207**	**97**	55-146	
67-64-1	Acetone	1,080	**868**	**80**	57-120	
75-69-4	Trichlorofluoromethane	216	**180**	**83**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**355**	**85**	59-129	
107-13-1	Acrylonitrile	212	**204**	**96**	64-136	
75-35-4	1,1-Dichloroethene	216	**226**	**105**	72-123	
75-09-2	Methylene Chloride	222	**178**	**80**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**201**	**92**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**181**	**82**	68-118	
75-15-0	Carbon Disulfide	210	**190**	**90**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**182**	**87**	69-129	
75-34-3	1,1-Dichloroethane	212	**170**	**80**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**173**	**80**	55-128	
108-05-4	Vinyl Acetate	1,040	**968**	**93**	66-140	
78-93-3	2-Butanone (MEK)	220	**189**	**86**	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160105-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: 1/5/16
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	**183**	**84**	65-125	
141-78-6	Ethyl Acetate	428	**369**	**86**	64-132	
110-54-3	n-Hexane	212	**136**	**64**	58-126	
67-66-3	Chloroform	224	**178**	**79**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**179**	**81**	64-123	
107-06-2	1,2-Dichloroethane	214	**173**	**81**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**190**	**90**	68-120	
71-43-2	Benzene	226	**180**	**80**	61-110	
56-23-5	Carbon Tetrachloride	230	**205**	**89**	65-137	
110-82-7	Cyclohexane	424	**357**	**84**	68-122	
78-87-5	1,2-Dichloropropane	216	**185**	**86**	67-122	
75-27-4	Bromodichloromethane	218	**202**	**93**	71-124	
79-01-6	Trichloroethene	216	**180**	**83**	71-121	
123-91-1	1,4-Dioxane	210	**215**	**102**	67-122	
80-62-6	Methyl Methacrylate	422	**428**	**101**	76-130	
142-82-5	n-Heptane	216	**171**	**79**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**204**	**98**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**218**	**99**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**230**	**110**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**199**	**92**	73-121	
108-88-3	Toluene	218	**178**	**82**	67-117	
591-78-6	2-Hexanone	220	**226**	**103**	59-128	
124-48-1	Dibromochloromethane	220	**217**	**99**	73-132	
106-93-4	1,2-Dibromoethane	218	**211**	**97**	73-128	
123-86-4	n-Butyl Acetate	226	**211**	**93**	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160105-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: 1/5/16
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	**171**	**81**	67-124	
127-18-4	Tetrachloroethene	202	**168**	**83**	65-126	
108-90-7	Chlorobenzene	220	**186**	**85**	68-120	
100-41-4	Ethylbenzene	218	**189**	**87**	69-123	
179601-23-1	m,p-Xylenes	428	**368**	**86**	67-125	
75-25-2	Bromoform	228	**221**	**97**	68-153	
100-42-5	Styrene	222	**222**	**100**	68-132	
95-47-6	o-Xylene	210	**183**	**87**	67-124	
111-84-2	n-Nonane	204	**176**	**86**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**196**	**93**	72-128	
98-82-8	Cumene	208	**176**	**85**	67-124	
80-56-8	alpha-Pinene	212	**193**	**91**	67-129	
103-65-1	n-Propylbenzene	204	**180**	**88**	67-125	
622-96-8	4-Ethyltoluene	214	**188**	**88**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**186**	**87**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**196**	**90**	62-134	
100-44-7	Benzyl Chloride	220	**263**	**120**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**208**	**91**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**201**	**97**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**203**	**92**	62-134	
5989-27-5	d-Limonene	210	**211**	**100**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**224**	**103**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**232**	**101**	60-145	
91-20-3	Naphthalene	218	**239**	**110**	56-158	
87-68-3	Hexachlorobutadiene	230	**197**	**86**	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160106-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: 1/6/16
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	**140**	**71**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**151**	**80**	65-117	
74-87-3	Chloromethane	200	**174**	**87**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**187**	**92**	65-122	
75-01-4	Vinyl Chloride	200	**178**	**89**	65-128	
106-99-0	1,3-Butadiene	206	**241**	**117**	62-143	
74-83-9	Bromomethane	202	**164**	**81**	65-130	
75-00-3	Chloroethane	200	**183**	**92**	69-126	
64-17-5	Ethanol	998	**833**	**83**	57-126	
75-05-8	Acetonitrile	212	**165**	**78**	51-134	
107-02-8	Acrolein	214	**216**	**101**	55-146	
67-64-1	Acetone	1,080	**898**	**83**	57-120	
75-69-4	Trichlorofluoromethane	216	**187**	**87**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**364**	**87**	59-129	
107-13-1	Acrylonitrile	212	**211**	**100**	64-136	
75-35-4	1,1-Dichloroethene	216	**236**	**109**	72-123	
75-09-2	Methylene Chloride	222	**184**	**83**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**208**	**95**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**186**	**85**	68-118	
75-15-0	Carbon Disulfide	210	**195**	**93**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**187**	**89**	69-129	
75-34-3	1,1-Dichloroethane	212	**176**	**83**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**179**	**83**	55-128	
108-05-4	Vinyl Acetate	1,040	**1010**	**97**	66-140	
78-93-3	2-Butanone (MEK)	220	**196**	**89**	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160106-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: 1/6/16
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	**189**	**87**	65-125	
141-78-6	Ethyl Acetate	428	**390**	**91**	64-132	
110-54-3	n-Hexane	212	**144**	**68**	58-126	
67-66-3	Chloroform	224	**186**	**83**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**187**	**85**	64-123	
107-06-2	1,2-Dichloroethane	214	**178**	**83**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**191**	**91**	68-120	
71-43-2	Benzene	226	**183**	**81**	61-110	
56-23-5	Carbon Tetrachloride	230	**204**	**89**	65-137	
110-82-7	Cyclohexane	424	**361**	**85**	68-122	
78-87-5	1,2-Dichloropropane	216	**187**	**87**	67-122	
75-27-4	Bromodichloromethane	218	**204**	**94**	71-124	
79-01-6	Trichloroethene	216	**182**	**84**	71-121	
123-91-1	1,4-Dioxane	210	**218**	**104**	67-122	
80-62-6	Methyl Methacrylate	422	**432**	**102**	76-130	
142-82-5	n-Heptane	216	**173**	**80**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**205**	**99**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**219**	**100**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**230**	**110**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**201**	**93**	73-121	
108-88-3	Toluene	218	**186**	**85**	67-117	
591-78-6	2-Hexanone	220	**235**	**107**	59-128	
124-48-1	Dibromochloromethane	220	**227**	**103**	73-132	
106-93-4	1,2-Dibromoethane	218	**219**	**100**	73-128	
123-86-4	n-Butyl Acetate	226	**219**	**97**	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: P1505600
Client Project ID: **SVE Performance Monitoring / KUHO-15-010** ALS Sample ID: P160106-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: 1/6/16
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	**179**	**85**	67-124	
127-18-4	Tetrachloroethene	202	**177**	**88**	65-126	
108-90-7	Chlorobenzene	220	**194**	**88**	68-120	
100-41-4	Ethylbenzene	218	**197**	**90**	69-123	
179601-23-1	m,p-Xylenes	428	**384**	**90**	67-125	
75-25-2	Bromoform	228	**226**	**99**	68-153	
100-42-5	Styrene	222	**230**	**104**	68-132	
95-47-6	o-Xylene	210	**191**	**91**	67-124	
111-84-2	n-Nonane	204	**183**	**90**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**206**	**98**	72-128	
98-82-8	Cumene	208	**183**	**88**	67-124	
80-56-8	alpha-Pinene	212	**202**	**95**	67-129	
103-65-1	n-Propylbenzene	204	**187**	**92**	67-125	
622-96-8	4-Ethyltoluene	214	**195**	**91**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**193**	**90**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**203**	**93**	62-134	
100-44-7	Benzyl Chloride	220	**274**	**125**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**215**	**94**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**208**	**100**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**210**	**95**	62-134	
5989-27-5	d-Limonene	210	**218**	**104**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**233**	**107**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**243**	**106**	60-145	
91-20-3	Naphthalene	218	**246**	**113**	56-158	
87-68-3	Hexachlorobutadiene	230	**204**	**89**	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.

Appendix B

Ambient Air Sampling Laboratory

Analytical Results

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

LABORATORY REPORT

September 29, 2015

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

RE: SVE In-Plant Monitoring / KUHO-15-011

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on September 17, 2015. For your reference, these analyses have been assigned our service request number P1503899.

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 4:19 pm, Sep 29, 2015

Sue Anderson
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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www.alsglobal.com

Client: Environmental Management Services, Inc. Service Request No: P1503899
Project: SVE In-Plant Monitoring / KUHO-15-011

CASE NARRATIVE

The samples were received intact under chain of custody on September 17, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

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 accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The canisters 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	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2-R1
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	876241
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
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: P1503899

Project ID: SVE In-Plant Monitoring / KUHO-15-011

Date Received: 9/17/2015

Time Received: 09:40

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
Air Mon 01-18	P1503899-001	Air	9/15/2015	07:04	1SC01009	-1.51	6.04	X
Air Mon 02-18	P1503899-002	Air	9/15/2015	07:19	1SC01228	-0.32	5.38	X

Air - Chain of Custody Record & Analytical Service Request

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. 15038997

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-15-011

Project Manager: Stephanie Kilgore
Phone: 601-544-3674 Fax: 601-544-0504

P.O. # / Billing Information: KUHO-15-011 / same as reporting

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
Air Mon 01-18	1	9-15-15	7:04	ISC01009	DA00052	30			X		
Air Mon 02-18	2	9-15-15	7:19	ISC01228	DA000147	17			X		

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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	9/16/15	16:30			
Relinquished by: (Signature) Fedex	Date:	Time:	Received by: (Signature)	Date: 9/17/15	Time: 0940

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1503899

Project: SVE In-Plant Monitoring / KUHO-15-011

Sample(s) received on: 9/17/15 Date opened: 9/17/15 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	Container(s) **supplied by ALS**?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9	Was a **trip blank** received?	☐	☒	☐
10	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☐	☒
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
11	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
12	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
13	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1503899-001.01	1.0 L Source Can					
P1503899-002.01	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 01-18** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P1503899-001

Test Code: EPA TO-15 Date Collected: 9/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 9/17/15
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01009

Initial Pressure (psig): -1.51 Final Pressure (psig): 6.04

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**15**	2.0	0.55	**9.0**	1.1	0.32	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	2.0	0.67	**0.39**	0.40	0.13	**J**
74-87-3	Chloromethane	ND	2.0	0.59	ND	0.95	0.29	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.0	0.75	ND	0.28	0.11	
75-01-4	Vinyl Chloride	ND	2.0	0.67	ND	0.77	0.26	
106-99-0	1,3-Butadiene	ND	2.0	0.86	ND	0.89	0.39	
74-83-9	Bromomethane	ND	2.0	0.75	ND	0.51	0.19	
75-00-3	Chloroethane	ND	2.0	0.67	ND	0.74	0.25	
64-17-5	Ethanol	**980**	20	3.1	**520**	10	1.7	
75-05-8	Acetonitrile	ND	2.0	0.71	ND	1.2	0.42	
107-02-8	Acrolein	**2.2**	7.9	0.67	**0.95**	3.4	0.29	**J**
67-64-1	Acetone	**120**	20	3.0	**51**	8.3	1.3	
75-69-4	Trichlorofluoromethane	**1.0**	2.0	0.67	**0.18**	0.35	0.12	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**69**	20	1.6	**28**	8.0	0.67	
107-13-1	Acrylonitrile	ND	2.0	0.67	ND	0.90	0.31	
75-35-4	1,1-Dichloroethene	ND	2.0	0.67	ND	0.50	0.17	
75-09-2	Methylene Chloride	**1.2**	2.0	0.67	**0.35**	0.57	0.19	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.0	0.63	ND	0.63	0.20	
76-13-1	Trichlorotrifluoroethane	ND	2.0	0.67	ND	0.26	0.087	
75-15-0	Carbon Disulfide	**0.97**	20	0.59	**0.31**	6.3	0.19	**J**
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.75	ND	0.50	0.19	
75-34-3	1,1-Dichloroethane	ND	2.0	0.63	ND	0.49	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	2.0	0.67	ND	0.54	0.19	
108-05-4	Vinyl Acetate	**6.0**	20	2.6	**1.7**	5.6	0.72	**J**
78-93-3	2-Butanone (MEK)	**14**	20	0.82	**4.9**	6.7	0.28	**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: **Air Mon 01-18** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P1503899-001

Test Code: EPA TO-15 Date Collected: 9/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 9/17/15
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01009

Initial Pressure (psig): -1.51 Final Pressure (psig): 6.04

Canister Dilution Factor: 1.57

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	0.63	ND	0.50	0.16	
141-78-6	Ethyl Acetate	**17**	3.9	1.4	**4.6**	1.1	0.38	
110-54-3	n-Hexane	**1.9**	2.0	0.59	**0.54**	0.56	0.17	**J**
67-66-3	Chloroform	ND	2.0	0.67	ND	0.40	0.14	
109-99-9	Tetrahydrofuran (THF)	**8.2**	2.0	0.79	**2.8**	0.67	0.27	
107-06-2	1,2-Dichloroethane	ND	2.0	0.63	ND	0.49	0.16	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.67	ND	0.36	0.12	
71-43-2	Benzene	**1.1**	2.0	0.63	**0.35**	0.61	0.20	**J**
56-23-5	Carbon Tetrachloride	ND	2.0	0.59	ND	0.31	0.094	
110-82-7	Cyclohexane	ND	3.9	1.1	ND	1.1	0.33	
78-87-5	1,2-Dichloropropane	ND	2.0	0.63	ND	0.42	0.14	
75-27-4	Bromodichloromethane	ND	2.0	0.59	ND	0.29	0.088	
79-01-6	Trichloroethene	ND	2.0	0.55	ND	0.37	0.10	
123-91-1	1,4-Dioxane	ND	2.0	0.63	ND	0.54	0.17	
80-62-6	Methyl Methacrylate	ND	3.9	1.2	ND	0.96	0.30	
142-82-5	n-Heptane	**2.6**	2.0	0.67	**0.62**	0.48	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.55	ND	0.43	0.12	
108-10-1	4-Methyl-2-pentanone	**25**	2.0	0.63	**6.1**	0.48	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.63	ND	0.43	0.14	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.63	ND	0.36	0.12	
108-88-3	Toluene	**70**	2.0	0.67	**19**	0.52	0.18	
591-78-6	2-Hexanone	**0.64**	2.0	0.63	**0.16**	0.48	0.15	**J**
124-48-1	Dibromochloromethane	ND	2.0	0.63	ND	0.23	0.074	
106-93-4	1,2-Dibromoethane	ND	2.0	0.63	ND	0.26	0.082	
123-86-4	n-Butyl Acetate	**4.3**	2.0	0.63	**0.90**	0.41	0.13	

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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 01-18** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P1503899-001

Test Code: EPA TO-15 Date Collected: 9/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 9/17/15
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01009

Initial Pressure (psig): -1.51 Final Pressure (psig): 6.04

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**1.5**	2.0	0.71	**0.31**	0.42	0.15	**J**
127-18-4	Tetrachloroethene	ND	2.0	0.55	ND	0.29	0.081	
108-90-7	Chlorobenzene	ND	2.0	0.63	ND	0.43	0.14	
100-41-4	Ethylbenzene	**18**	2.0	0.63	**4.2**	0.45	0.14	
179601-23-1	m,p-Xylenes	**89**	3.9	1.2	**21**	0.90	0.27	
75-25-2	Bromoform	ND	2.0	0.59	ND	0.19	0.057	
100-42-5	Styrene	**3.6**	2.0	0.59	**0.85**	0.46	0.14	
95-47-6	o-Xylene	**31**	2.0	0.59	**7.0**	0.45	0.14	
111-84-2	n-Nonane	**2.0**	2.0	0.59	**0.39**	0.37	0.11	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.59	ND	0.29	0.086	
98-82-8	Cumene	**1.8**	2.0	0.59	**0.37**	0.40	0.12	**J**
80-56-8	alpha-Pinene	**8.8**	2.0	0.55	**1.6**	0.35	0.099	
103-65-1	n-Propylbenzene	**4.6**	2.0	0.63	**0.93**	0.40	0.13	
622-96-8	4-Ethyltoluene	**8.3**	2.0	0.63	**1.7**	0.40	0.13	
108-67-8	1,3,5-Trimethylbenzene	**7.6**	2.0	0.63	**1.5**	0.40	0.13	
95-63-6	1,2,4-Trimethylbenzene	**22**	2.0	0.59	**4.5**	0.40	0.12	
100-44-7	Benzyl Chloride	ND	2.0	0.43	ND	0.38	0.083	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.59	ND	0.33	0.098	
106-46-7	1,4-Dichlorobenzene	**63**	2.0	0.55	**10**	0.33	0.091	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.59	ND	0.33	0.098	
5989-27-5	d-Limonene	**5.7**	2.0	0.55	**1.0**	0.35	0.099	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.39	ND	0.20	0.040	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.63	ND	0.26	0.085	
91-20-3	Naphthalene	**1.0**	2.0	0.71	**0.19**	0.37	0.13	**J**
87-68-3	Hexachlorobutadiene	ND	2.0	0.55	ND	0.18	0.052	

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ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-18** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P1503899-002

Test Code: EPA TO-15 Date Collected: 9/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 9/17/15
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01228

Initial Pressure (psig): -0.32 Final Pressure (psig): 5.38

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**	1.8	0.49	**9.5**	1.0	0.28	
75-71-8	Dichlorodifluoromethane (CFC 12)	**1.9**	1.8	0.60	**0.39**	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	**330**	18	2.8	**170**	9.3	1.5	
75-05-8	Acetonitrile	**0.73**	1.8	0.63	**0.44**	1.0	0.38	**J**
107-02-8	Acrolein	**16**	7.0	0.60	**6.9**	3.1	0.26	
67-64-1	Acetone	**160**	18	2.7	**68**	7.4	1.1	
75-69-4	Trichlorofluoromethane	**1.1**	1.8	0.60	**0.19**	0.31	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**48**	18	1.5	**20**	7.1	0.60	
107-13-1	Acrylonitrile	ND	1.8	0.60	ND	0.81	0.27	
75-35-4	1,1-Dichloroethene	ND	1.8	0.60	ND	0.44	0.15	
75-09-2	Methylene Chloride	**19**	1.8	0.60	**5.5**	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	ND	1.8	0.60	ND	0.23	0.078	
75-15-0	Carbon Disulfide	**1.9**	18	0.53	**0.61**	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	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	ND	18	2.3	ND	5.0	0.65	
78-93-3	2-Butanone (MEK)	**29**	18	0.74	**9.7**	5.9	0.25	

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

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-18** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P1503899-002

Test Code: EPA TO-15 Date Collected: 9/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 9/17/15
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01228

Initial Pressure (psig): -0.32 Final Pressure (psig): 5.38

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	**580**	3.5	1.2	**160**	0.97	0.34	
110-54-3	n-Hexane	**11**	1.8	0.53	**3.0**	0.50	0.15	
67-66-3	Chloroform	**7.5**	1.8	0.60	**1.5**	0.36	0.12	
109-99-9	Tetrahydrofuran (THF)	**20**	1.8	0.70	**6.9**	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	ND	1.8	0.60	ND	0.32	0.11	
71-43-2	Benzene	**3.8**	1.8	0.56	**1.2**	0.55	0.18	
56-23-5	Carbon Tetrachloride	ND	1.8	0.53	ND	0.28	0.083	
110-82-7	Cyclohexane	**4.5**	3.5	1.0	**1.3**	1.0	0.29	
78-87-5	1,2-Dichloropropane	**0.81**	1.8	0.56	**0.17**	0.38	0.12	**J**
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	ND	1.8	0.56	ND	0.49	0.16	
80-62-6	Methyl Methacrylate	**1.7**	3.5	1.1	**0.43**	0.86	0.27	**J**
142-82-5	n-Heptane	**6.2**	1.8	0.60	**1.5**	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	**14**	1.8	0.56	**3.4**	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	**110**	1.8	0.60	**29**	0.46	0.16	
591-78-6	2-Hexanone	**1.4**	1.8	0.56	**0.35**	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	**13**	1.8	0.56	**2.8**	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: **Air Mon 02-18** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P1503899-002

Test Code: EPA TO-15 Date Collected: 9/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 9/17/15
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01228

Initial Pressure (psig): -0.32 Final Pressure (psig): 5.38

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	**5.4**	1.8	0.63	**1.1**	0.37	0.13	
127-18-4	Tetrachloroethene	**1.4**	1.8	0.49	**0.21**	0.26	0.072	**J**
108-90-7	Chlorobenzene	ND	1.8	0.56	ND	0.38	0.12	
100-41-4	Ethylbenzene	**9.7**	1.8	0.56	**2.2**	0.40	0.13	
179601-23-1	m,p-Xylenes	**37**	3.5	1.1	**8.5**	0.81	0.24	
75-25-2	Bromoform	ND	1.8	0.53	ND	0.17	0.051	
100-42-5	Styrene	**8.9**	1.8	0.53	**2.1**	0.41	0.12	
95-47-6	o-Xylene	**15**	1.8	0.53	**3.6**	0.40	0.12	
111-84-2	n-Nonane	**2.4**	1.8	0.53	**0.46**	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	**4.9**	1.8	0.53	**1.0**	0.36	0.11	
80-56-8	alpha-Pinene	**12**	1.8	0.49	**2.2**	0.31	0.088	
103-65-1	n-Propylbenzene	**5.7**	1.8	0.56	**1.2**	0.36	0.11	
622-96-8	4-Ethyltoluene	**6.9**	1.8	0.56	**1.4**	0.36	0.11	
108-67-8	1,3,5-Trimethylbenzene	**7.3**	1.8	0.56	**1.5**	0.36	0.11	
95-63-6	1,2,4-Trimethylbenzene	**23**	1.8	0.53	**4.7**	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	**15**	1.8	0.49	**2.5**	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	**6.3**	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	**0.82**	1.8	0.63	**0.16**	0.33	0.12	**J**
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: **Method Blank** ALS Project ID: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P150921-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
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: P1503899

Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P150921-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Lusine Hakobyan Date Analyzed: 9/21/15

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: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P150921-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
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 / KUHO-15-011** ALS Project ID: P1503899

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 9/15/15
Analyst: Lusine Hakobyan Date(s) Received: 9/17/15
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 9/21/15
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	P150921-MB	**99**	**100**	**102**	70-130	
Lab Control Sample	P150921-LCS	**96**	**101**	**102**	70-130	
Air Mon 01-18	P1503899-001	**98**	**101**	**100**	70-130	
Air Mon 02-18	P1503899-002	**91**	**115**	**112**	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: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P150921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
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	**192**	**98**	50-128	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**167**	**89**	66-117	
74-87-3	Chloromethane	200	**161**	**81**	51-133	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**182**	**89**	65-117	
75-01-4	Vinyl Chloride	200	**190**	**95**	61-127	
106-99-0	1,3-Butadiene	206	**210**	**102**	65-132	
74-83-9	Bromomethane	202	**190**	**94**	62-114	
75-00-3	Chloroethane	200	**189**	**95**	64-122	
64-17-5	Ethanol	998	**897**	**90**	57-131	
75-05-8	Acetonitrile	212	**186**	**88**	52-135	
107-02-8	Acrolein	214	**202**	**94**	64-124	
67-64-1	Acetone	1,080	**950**	**88**	60-113	
75-69-4	Trichlorofluoromethane	216	**174**	**81**	64-112	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**398**	**95**	62-129	
107-13-1	Acrylonitrile	212	**208**	**98**	69-133	
75-35-4	1,1-Dichloroethene	216	**205**	**95**	70-114	
75-09-2	Methylene Chloride	222	**200**	**90**	63-103	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**210**	**96**	57-135	
76-13-1	Trichlorotrifluoroethane	220	**198**	**90**	69-116	
75-15-0	Carbon Disulfide	210	**166**	**79**	66-118	
156-60-5	trans-1,2-Dichloroethene	210	**204**	**97**	69-123	
75-34-3	1,1-Dichloroethane	212	**192**	**91**	65-118	
1634-04-4	Methyl tert-Butyl Ether	216	**199**	**92**	57-125	
108-05-4	Vinyl Acetate	1,040	**1100**	**106**	69-131	
78-93-3	2-Butanone (MEK)	220	**219**	**100**	63-121	

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: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P150921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
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	**205**	**94**	69-119	
141-78-6	Ethyl Acetate	428	**426**	**100**	65-129	
110-54-3	n-Hexane	212	**186**	**88**	55-116	
67-66-3	Chloroform	224	**197**	**88**	68-111	
109-99-9	Tetrahydrofuran (THF)	220	**203**	**92**	69-120	
107-06-2	1,2-Dichloroethane	214	**199**	**93**	67-117	
71-55-6	1,1,1-Trichloroethane	210	**190**	**90**	74-116	
71-43-2	Benzene	226	**197**	**87**	61-109	
56-23-5	Carbon Tetrachloride	230	**200**	**87**	76-120	
110-82-7	Cyclohexane	424	**381**	**90**	72-115	
78-87-5	1,2-Dichloropropane	216	**199**	**92**	67-119	
75-27-4	Bromodichloromethane	218	**206**	**94**	78-124	
79-01-6	Trichloroethene	216	**190**	**88**	69-115	
123-91-1	1,4-Dioxane	210	**231**	**110**	69-127	
80-62-6	Methyl Methacrylate	422	**466**	**110**	76-128	
142-82-5	n-Heptane	216	**201**	**93**	66-118	
10061-01-5	cis-1,3-Dichloropropene	208	**213**	**102**	77-124	
108-10-1	4-Methyl-2-pentanone	220	**234**	**106**	66-134	
10061-02-6	trans-1,3-Dichloropropene	210	**212**	**101**	80-130	
79-00-5	1,1,2-Trichloroethane	216	**203**	**94**	75-119	
108-88-3	Toluene	218	**196**	**90**	68-114	
591-78-6	2-Hexanone	220	**233**	**106**	60-136	
124-48-1	Dibromochloromethane	220	**227**	**103**	75-132	
106-93-4	1,2-Dibromoethane	218	**227**	**104**	72-122	
123-86-4	n-Butyl Acetate	226	**237**	**105**	60-137	

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: P1503899
Client Project ID: **SVE In-Plant Monitoring / KUHO-15-011** ALS Sample ID: P150921-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 9/21/15
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	**197**	**94**	66-120	
127-18-4	Tetrachloroethene	202	**189**	**94**	67-120	
108-90-7	Chlorobenzene	220	**204**	**93**	69-114	
100-41-4	Ethylbenzene	218	**199**	**91**	71-117	
179601-23-1	m,p-Xylenes	428	**389**	**91**	71-118	
75-25-2	Bromoform	228	**222**	**97**	76-149	
100-42-5	Styrene	222	**230**	**104**	71-128	
95-47-6	o-Xylene	210	**188**	**90**	72-118	
111-84-2	n-Nonane	204	**192**	**94**	63-123	
79-34-5	1,1,2,2-Tetrachloroethane	210	**205**	**98**	73-124	
98-82-8	Cumene	208	**194**	**93**	71-118	
80-56-8	alpha-Pinene	212	**205**	**97**	71-123	
103-65-1	n-Propylbenzene	204	**189**	**93**	71-120	
622-96-8	4-Ethyltoluene	214	**198**	**93**	71-121	
108-67-8	1,3,5-Trimethylbenzene	214	**194**	**91**	72-121	
95-63-6	1,2,4-Trimethylbenzene	218	**205**	**94**	71-122	
100-44-7	Benzyl Chloride	220	**237**	**108**	79-143	
541-73-1	1,3-Dichlorobenzene	228	**221**	**97**	67-121	
106-46-7	1,4-Dichlorobenzene	208	**213**	**102**	68-121	
95-50-1	1,2-Dichlorobenzene	220	**215**	**98**	68-121	
5989-27-5	d-Limonene	210	**209**	**100**	69-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**233**	**107**	73-145	
120-82-1	1,2,4-Trichlorobenzene	230	**244**	**106**	60-135	
91-20-3	Naphthalene	218	**233**	**107**	63-142	
87-68-3	Hexachlorobutadiene	230	**203**	**88**	65-127	

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.

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LABORATORY REPORT

December 10, 2015

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

RE: SVE In Plant Monitoring / KUH0-15-011

Dear Stephanie:

Enclosed are the results of the samples submitted to our laboratory on November 30, 2015. For your reference, these analyses have been assigned our service request number P1505151.

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 10:16 am, Dec 10, 2015

Sue Anderson
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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www.alsglobal.com

Client: Environmental Management Services, Inc. Service Request No: P1505151
Project: SVE In Plant Monitoring / KUH0-15-011

CASE NARRATIVE

The samples were received intact under chain of custody on November 30, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

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 accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The canisters 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	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L14-2-R1
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	4068-001
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA016272015-5
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: P1505151

Project ID: SVE In Plant Monitoring / KUH0-15-011

Date Received: 11/30/2015

Time Received: 09:25

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
Air Mon 01-19	P1505151-001	Air	11/23/2015	08:05	1SC01016	-0.95	5.18	X
Air Mon 02-19	P1505151-002	Air	11/23/2015	08:03	1SC00463	-0.61	6.33	X

Air - Chain of Custody Record & Analytical Service Request

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. PL505151

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-15-011
P.O. # / Billing Information: KUHO-15-011 same as reporting

Project Manager: Stephanie Kilgore
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:

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 D1-19	1	11-23-15	8:05	15C01016	DAD1371	29	2.5 "Hg	1L	X		
Air Mon D2-19	2	11-23-15	8:03	15C00463	DAD1355	30	2.0 "Hg	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 Kilgore FEDEX	11-23-15	18:20	FedEx		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 11/30/15	Time: 0925

Cooler / Blank Temperature ____ °C

5 of 19

ALS Environmental

Sample Acceptance Check Form

Client: Environmental Management Services, Inc. Work order: P1505151

Project: SVE In Plant Monitoring / KUH0-15-011

Sample(s) received on: 11/30/15 Date opened: 11/30/15 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
P1505151-001.01	1.0 L Source Can					
P1505151-002.01	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 01-19** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P1505151-001

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01016

Initial Pressure (psig): -0.95 Final Pressure (psig): 5.18

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	**9.2**	1.8	0.51	**5.3**	1.1	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.8	0.62	**0.45**	0.37	0.12	
74-87-3	Chloromethane	**0.69**	1.8	0.54	**0.33**	0.88	0.26	**J**
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.8	0.69	ND	0.26	0.099	
75-01-4	Vinyl Chloride	ND	1.8	0.62	ND	0.71	0.24	
106-99-0	1,3-Butadiene	ND	1.8	0.80	ND	0.82	0.36	
74-83-9	Bromomethane	ND	1.8	0.69	ND	0.47	0.18	
75-00-3	Chloroethane	ND	1.8	0.62	ND	0.69	0.23	
64-17-5	Ethanol	**630**	18	2.9	**330**	9.6	1.5	
75-05-8	Acetonitrile	ND	1.8	0.65	ND	1.1	0.39	
107-02-8	Acrolein	**0.79**	7.3	0.62	**0.34**	3.2	0.27	**J**
67-64-1	Acetone	**300**	18	2.8	**130**	7.6	1.2	
75-69-4	Trichlorofluoromethane	**1.1**	1.8	0.62	**0.20**	0.32	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**32**	18	1.5	**13**	7.4	0.62	
107-13-1	Acrylonitrile	ND	1.8	0.62	ND	0.84	0.28	
75-35-4	1,1-Dichloroethene	ND	1.8	0.62	ND	0.46	0.16	
75-09-2	Methylene Chloride	**0.92**	1.8	0.62	**0.27**	0.52	0.18	**J**
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.8	0.58	ND	0.58	0.19	
76-13-1	Trichlorotrifluoroethane	ND	1.8	0.62	ND	0.24	0.080	
75-15-0	Carbon Disulfide	ND	18	0.54	ND	5.8	0.17	
156-60-5	trans-1,2-Dichloroethene	ND	1.8	0.69	ND	0.46	0.17	
75-34-3	1,1-Dichloroethane	ND	1.8	0.58	ND	0.45	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.8	0.62	ND	0.50	0.17	
108-05-4	Vinyl Acetate	ND	18	2.4	ND	5.1	0.67	
78-93-3	2-Butanone (MEK)	**28**	18	0.76	**9.5**	6.1	0.26	

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 01-19** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P1505151-001

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01016

Initial Pressure (psig): -0.95 Final Pressure (psig): 5.18

Canister Dilution Factor: 1.45

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	0.58	ND	0.46	0.15	
141-78-6	Ethyl Acetate	**2.3**	3.6	1.3	**0.64**	1.0	0.35	**J**
110-54-3	n-Hexane	**1.7**	1.8	0.54	**0.47**	0.51	0.15	**J**
67-66-3	Chloroform	ND	1.8	0.62	ND	0.37	0.13	
109-99-9	Tetrahydrofuran (THF)	**1.0**	1.8	0.73	**0.35**	0.61	0.25	**J**
107-06-2	1,2-Dichloroethane	ND	1.8	0.58	ND	0.45	0.14	
71-55-6	1,1,1-Trichloroethane	ND	1.8	0.62	ND	0.33	0.11	
71-43-2	Benzene	**0.81**	1.8	0.58	**0.25**	0.57	0.18	**J**
56-23-5	Carbon Tetrachloride	ND	1.8	0.54	ND	0.29	0.086	
110-82-7	Cyclohexane	ND	3.6	1.1	ND	1.1	0.31	
78-87-5	1,2-Dichloropropane	ND	1.8	0.58	ND	0.39	0.13	
75-27-4	Bromodichloromethane	ND	1.8	0.54	ND	0.27	0.081	
79-01-6	Trichloroethene	ND	1.8	0.51	ND	0.34	0.094	
123-91-1	1,4-Dioxane	ND	1.8	0.58	ND	0.50	0.16	
80-62-6	Methyl Methacrylate	ND	3.6	1.1	ND	0.89	0.27	
142-82-5	n-Heptane	**1.0**	1.8	0.62	**0.24**	0.44	0.15	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.8	0.51	ND	0.40	0.11	
108-10-1	4-Methyl-2-pentanone	**6.0**	1.8	0.58	**1.5**	0.44	0.14	
10061-02-6	trans-1,3-Dichloropropene	ND	1.8	0.58	ND	0.40	0.13	
79-00-5	1,1,2-Trichloroethane	ND	1.8	0.58	ND	0.33	0.11	
108-88-3	Toluene	**51**	1.8	0.62	**14**	0.48	0.16	
591-78-6	2-Hexanone	ND	1.8	0.58	ND	0.44	0.14	
124-48-1	Dibromochloromethane	ND	1.8	0.58	ND	0.21	0.068	
106-93-4	1,2-Dibromoethane	ND	1.8	0.58	ND	0.24	0.076	
123-86-4	n-Butyl Acetate	**4.5**	1.8	0.58	**0.95**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 01-19** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P1505151-001

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01016

Initial Pressure (psig): -0.95 Final Pressure (psig): 5.18

Canister Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
111-65-9	n-Octane	**1.3**	1.8	0.65	**0.28**	0.39	0.14	**J**
127-18-4	Tetrachloroethene	ND	1.8	0.51	ND	0.27	0.075	
108-90-7	Chlorobenzene	ND	1.8	0.58	ND	0.39	0.13	
100-41-4	Ethylbenzene	**37**	1.8	0.58	**8.4**	0.42	0.13	
179601-23-1	m,p-Xylenes	**210**	3.6	1.1	**49**	0.83	0.25	
75-25-2	Bromoform	ND	1.8	0.54	ND	0.18	0.053	
100-42-5	Styrene	**0.76**	1.8	0.54	**0.18**	0.43	0.13	**J**
95-47-6	o-Xylene	**57**	1.8	0.54	**13**	0.42	0.13	
111-84-2	n-Nonane	**2.1**	1.8	0.54	**0.41**	0.35	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.8	0.54	ND	0.26	0.079	
98-82-8	Cumene	**1.1**	1.8	0.54	**0.23**	0.37	0.11	**J**
80-56-8	alpha-Pinene	**4.3**	1.8	0.51	**0.77**	0.33	0.091	
103-65-1	n-Propylbenzene	**3.2**	1.8	0.58	**0.65**	0.37	0.12	
622-96-8	4-Ethyltoluene	**5.4**	1.8	0.58	**1.1**	0.37	0.12	
108-67-8	1,3,5-Trimethylbenzene	**5.3**	1.8	0.58	**1.1**	0.37	0.12	
95-63-6	1,2,4-Trimethylbenzene	**13**	1.8	0.54	**2.6**	0.37	0.11	
100-44-7	Benzyl Chloride	ND	1.8	0.40	ND	0.35	0.077	
541-73-1	1,3-Dichlorobenzene	ND	1.8	0.54	ND	0.30	0.090	
106-46-7	1,4-Dichlorobenzene	**75**	1.8	0.51	**13**	0.30	0.084	
95-50-1	1,2-Dichlorobenzene	ND	1.8	0.54	ND	0.30	0.090	
5989-27-5	d-Limonene	**49**	1.8	0.51	**8.7**	0.33	0.091	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.8	0.36	ND	0.19	0.037	
120-82-1	1,2,4-Trichlorobenzene	ND	1.8	0.58	ND	0.24	0.078	
91-20-3	Naphthalene	**2.5**	1.8	0.65	**0.48**	0.35	0.12	
87-68-3	Hexachlorobutadiene	ND	1.8	0.51	ND	0.17	0.048	

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 02-19** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P1505151-002

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00463

Initial Pressure (psig): -0.61 Final Pressure (psig): 6.33

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	**4.0**	1.9	0.52	**2.3**	1.1	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	1.9	0.63	**0.44**	0.38	0.13	
74-87-3	Chloromethane	**0.88**	1.9	0.56	**0.43**	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	**150**	19	3.0	**80**	9.9	1.6	
75-05-8	Acetonitrile	ND	1.9	0.67	ND	1.1	0.40	
107-02-8	Acrolein	**1.4**	7.5	0.63	**0.62**	3.3	0.28	**J**
67-64-1	Acetone	**190**	19	2.9	**79**	7.8	1.2	
75-69-4	Trichlorofluoromethane	**1.1**	1.9	0.63	**0.20**	0.33	0.11	**J**
67-63-0	2-Propanol (Isopropyl Alcohol)	**9.6**	19	1.6	**3.9**	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	ND	1.9	0.63	ND	0.47	0.16	
75-09-2	Methylene Chloride	**0.89**	1.9	0.63	**0.26**	0.54	0.18	**J**
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	ND	19	0.56	ND	6.0	0.18	
156-60-5	trans-1,2-Dichloroethene	ND	1.9	0.71	ND	0.47	0.18	
75-34-3	1,1-Dichloroethane	ND	1.9	0.60	ND	0.46	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	1.9	0.63	ND	0.52	0.18	
108-05-4	Vinyl Acetate	ND	19	2.4	ND	5.3	0.69	
78-93-3	2-Butanone (MEK)	**17**	19	0.78	**5.6**	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.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **Environmental Management Services, Inc.**
Client Sample ID: **Air Mon 02-19** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P1505151-002

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00463

Initial Pressure (psig): -0.61 Final Pressure (psig): 6.33

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	**4.5**	3.7	1.3	**1.2**	1.0	0.36	
110-54-3	n-Hexane	**1.2**	1.9	0.56	**0.33**	0.53	0.16	**J**
67-66-3	Chloroform	ND	1.9	0.63	ND	0.38	0.13	
109-99-9	Tetrahydrofuran (THF)	**2.5**	1.9	0.75	**0.84**	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	ND	1.9	0.63	ND	0.34	0.12	
71-43-2	Benzene	**0.69**	1.9	0.60	**0.21**	0.58	0.19	**J**
56-23-5	Carbon Tetrachloride	ND	1.9	0.56	ND	0.30	0.089	
110-82-7	Cyclohexane	ND	3.7	1.1	ND	1.1	0.31	
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	ND	1.9	0.52	ND	0.35	0.097	
123-91-1	1,4-Dioxane	ND	1.9	0.60	ND	0.52	0.17	
80-62-6	Methyl Methacrylate	ND	3.7	1.2	ND	0.91	0.28	
142-82-5	n-Heptane	**0.66**	1.9	0.63	**0.16**	0.45	0.15	**J**
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.52	ND	0.41	0.11	
108-10-1	4-Methyl-2-pentanone	**2.8**	1.9	0.60	**0.69**	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	**16**	1.9	0.63	**4.3**	0.49	0.17	
591-78-6	2-Hexanone	ND	1.9	0.60	ND	0.45	0.15	
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	**1.6**	1.9	0.60	**0.34**	0.39	0.13	**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: **Air Mon 02-19** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P1505151-002

Test Code: EPA TO-15 Date Collected: 11/23/15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 11/30/15
Analyst: Evelyn Alvarez Date Analyzed: 12/2/15
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00463

Initial Pressure (psig): -0.61 Final Pressure (psig): 6.33

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	**0.89**	1.9	0.67	**0.19**	0.40	0.14	**J**
127-18-4	Tetrachloroethene	ND	1.9	0.52	ND	0.27	0.077	
108-90-7	Chlorobenzene	ND	1.9	0.60	ND	0.40	0.13	
100-41-4	Ethylbenzene	**17**	1.9	0.60	**4.0**	0.43	0.14	
179601-23-1	m,p-Xylenes	**93**	3.7	1.1	**21**	0.86	0.26	
75-25-2	Bromoform	ND	1.9	0.56	ND	0.18	0.054	
100-42-5	Styrene	ND	1.9	0.56	ND	0.44	0.13	
95-47-6	o-Xylene	**26**	1.9	0.56	**5.9**	0.43	0.13	
111-84-2	n-Nonane	**1.1**	1.9	0.56	**0.22**	0.36	0.11	**J**
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.9	0.56	ND	0.27	0.081	
98-82-8	Cumene	**0.57**	1.9	0.56	**0.12**	0.38	0.11	**J**
80-56-8	alpha-Pinene	**2.5**	1.9	0.52	**0.45**	0.33	0.094	
103-65-1	n-Propylbenzene	**1.0**	1.9	0.60	**0.21**	0.38	0.12	**J**
622-96-8	4-Ethyltoluene	**1.5**	1.9	0.60	**0.30**	0.38	0.12	**J**
108-67-8	1,3,5-Trimethylbenzene	**1.9**	1.9	0.60	**0.38**	0.38	0.12	
95-63-6	1,2,4-Trimethylbenzene	**3.1**	1.9	0.56	**0.64**	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	**1.2**	1.9	0.52	**0.19**	0.31	0.087	**J**
95-50-1	1,2-Dichlorobenzene	ND	1.9	0.56	ND	0.31	0.093	
5989-27-5	d-Limonene	**14**	1.9	0.52	**2.4**	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: **Method Blank** ALS Project ID: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P151202-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: 12/2/15
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: P1505151

Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P151202-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: 12/2/15

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: P1505151

Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P151202-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: 12/2/15

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 / KUH0-15-011** ALS Project ID: P1505151

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 11/23/15
Analyst: Evelyn Alvarez Date(s) Received: 11/30/15
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 12/2/15
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	P151202-MB	**99**	**100**	**99**	70-130	
Lab Control Sample	P151202-LCS	**100**	**99**	**100**	70-130	
Air Mon 01-19	P1505151-001	**104**	**97**	**98**	70-130	
Air Mon 02-19	P1505151-002	**105**	**97**	**96**	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: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P151202-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: 12/2/15
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	**186**	**95**	49-131	
75-71-8	Dichlorodifluoromethane (CFC 12)	188	**156**	**83**	65-117	
74-87-3	Chloromethane	200	**148**	**74**	48-132	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	**162**	**79**	65-122	
75-01-4	Vinyl Chloride	200	**168**	**84**	65-128	
106-99-0	1,3-Butadiene	206	**199**	**97**	62-143	
74-83-9	Bromomethane	202	**178**	**88**	65-130	
75-00-3	Chloroethane	200	**168**	**84**	69-126	
64-17-5	Ethanol	998	**958**	**96**	57-126	
75-05-8	Acetonitrile	212	**165**	**78**	51-134	
107-02-8	Acrolein	214	**180**	**84**	55-146	
67-64-1	Acetone	1,080	**922**	**85**	57-120	
75-69-4	Trichlorofluoromethane	216	**168**	**78**	59-139	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	**387**	**93**	59-129	
107-13-1	Acrylonitrile	212	**198**	**93**	64-136	
75-35-4	1,1-Dichloroethene	216	**192**	**89**	72-123	
75-09-2	Methylene Chloride	222	**177**	**80**	63-117	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	218	**197**	**90**	50-141	
76-13-1	Trichlorotrifluoroethane	220	**195**	**89**	68-118	
75-15-0	Carbon Disulfide	210	**139**	**66**	55-143	
156-60-5	trans-1,2-Dichloroethene	210	**189**	**90**	69-129	
75-34-3	1,1-Dichloroethane	212	**181**	**85**	66-122	
1634-04-4	Methyl tert-Butyl Ether	216	**196**	**91**	55-128	
108-05-4	Vinyl Acetate	1,040	**1040**	**100**	66-140	
78-93-3	2-Butanone (MEK)	220	**205**	**93**	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: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P151202-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: 12/2/15
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	**196**	**90**	65-125	
141-78-6	Ethyl Acetate	428	**423**	**99**	64-132	
110-54-3	n-Hexane	212	**189**	**89**	58-126	
67-66-3	Chloroform	224	**190**	**85**	68-117	
109-99-9	Tetrahydrofuran (THF)	220	**202**	**92**	64-123	
107-06-2	1,2-Dichloroethane	214	**192**	**90**	63-124	
71-55-6	1,1,1-Trichloroethane	210	**180**	**86**	68-120	
71-43-2	Benzene	226	**200**	**88**	61-110	
56-23-5	Carbon Tetrachloride	230	**193**	**84**	65-137	
110-82-7	Cyclohexane	424	**385**	**91**	68-122	
78-87-5	1,2-Dichloropropane	216	**192**	**89**	67-122	
75-27-4	Bromodichloromethane	218	**197**	**90**	71-124	
79-01-6	Trichloroethene	216	**188**	**87**	71-121	
123-91-1	1,4-Dioxane	210	**235**	**112**	67-122	
80-62-6	Methyl Methacrylate	422	**406**	**96**	76-130	
142-82-5	n-Heptane	216	**200**	**93**	67-125	
10061-01-5	cis-1,3-Dichloropropene	208	**202**	**97**	73-131	
108-10-1	4-Methyl-2-pentanone	220	**215**	**98**	66-132	
10061-02-6	trans-1,3-Dichloropropene	210	**211**	**100**	76-135	
79-00-5	1,1,2-Trichloroethane	216	**197**	**91**	73-121	
108-88-3	Toluene	218	**195**	**89**	67-117	
591-78-6	2-Hexanone	220	**257**	**117**	59-128	
124-48-1	Dibromochloromethane	220	**215**	**98**	73-132	
106-93-4	1,2-Dibromoethane	218	**211**	**97**	73-128	
123-86-4	n-Butyl Acetate	226	**258**	**114**	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: P1505151
Client Project ID: **SVE In Plant Monitoring / KUH0-15-011** ALS Sample ID: P151202-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: 12/2/15
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	**202**	**96**	67-124	
127-18-4	Tetrachloroethene	202	**184**	**91**	65-126	
108-90-7	Chlorobenzene	220	**198**	**90**	68-120	
100-41-4	Ethylbenzene	218	**205**	**94**	69-123	
179601-23-1	m,p-Xylenes	428	**413**	**96**	67-125	
75-25-2	Bromoform	228	**194**	**85**	68-153	
100-42-5	Styrene	222	**212**	**95**	68-132	
95-47-6	o-Xylene	210	**204**	**97**	67-124	
111-84-2	n-Nonane	204	**207**	**101**	60-130	
79-34-5	1,1,2,2-Tetrachloroethane	210	**207**	**99**	72-128	
98-82-8	Cumene	208	**196**	**94**	67-124	
80-56-8	alpha-Pinene	212	**211**	**100**	67-129	
103-65-1	n-Propylbenzene	204	**200**	**98**	67-125	
622-96-8	4-Ethyltoluene	214	**221**	**103**	66-128	
108-67-8	1,3,5-Trimethylbenzene	214	**211**	**99**	65-125	
95-63-6	1,2,4-Trimethylbenzene	218	**223**	**102**	62-134	
100-44-7	Benzyl Chloride	220	**221**	**100**	74-145	
541-73-1	1,3-Dichlorobenzene	228	**221**	**97**	63-133	
106-46-7	1,4-Dichlorobenzene	208	**196**	**94**	62-129	
95-50-1	1,2-Dichlorobenzene	220	**222**	**101**	62-134	
5989-27-5	d-Limonene	210	**226**	**108**	66-137	
96-12-8	1,2-Dibromo-3-chloropropane	218	**203**	**93**	71-147	
120-82-1	1,2,4-Trichlorobenzene	230	**195**	**85**	60-145	
91-20-3	Naphthalene	218	**214**	**98**	56-158	
87-68-3	Hexachlorobutadiene	230	**183**	**80**	56-139	

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