



SEATTLE • PHOENIX

January 7, 2018

Ms. Nduta Mbuthia
Senior Capital Project Engineer
City of Bothell
nduta.mbuthia@bothellwa.gov
(425) 806-6829

Dear Ms. Mbuthia:

Thank you for contacting Kane Environmental for your environmental service needs. Kane Environmental is providing the following:

Service: Quarterly Progress Report Backup for City of Bothell
Subject Property: Bothell Service Center Simon & Sons (BSCSS)

- Attachments include the second groundwater sampling conducted in December 2018, with tabulated data and analytical data packages
- Electrical Resistance Heating (ERH) report dated December 10, 2018.
- ERH hot soil sampling analytical results and figure
- Two new ERH area groundwater well sampling results and figure.

Air sampling was conducted by Cascade Thermal using tedlar bag on December 17, 2018 and analyzed by Fremont Analytical. The analytical results are shown in the attached Mass Removal Calculations table. The PCE Daily Mass Removal rate is 0.0478086 pounds per day (lbs/day). The Cumulative Mass removal between November 20, 2018 and December 17, 2018 is 8.3471 lbs., which is an approximate weekly average of 2.08 lbs. per week. This is similar to the previous weekly average between November 13 and November 17, 2018 of 2.84 lbs. per week. The data results reveal that the ongoing soil vapor extraction using the existing ERH wells is removing PCE and other chemicals of concern from the ERH array.

Two wells were installed in December 2018 in the ERH array. Vadose zone soil samples collected during the well installations revealed non-detectable concentrations of Halogenated Volatile Organic Compounds (HVOCs). The deeper well, MW-42, resulted in non-detectable HVOC groundwater concentrations. The shallow well, MW-43, detected concentrations of PCE (225 ppb) and TCE (31.6 ppb). An explanation of this finding is provided below:

The concentration of various dissolved phase contaminants in the subsurface is a function of both an individual compounds' aqueous solubility and their ability to sorb to varying soil matrices. As temperatures

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increase during the progress of in-situ thermal remediation (ISTR) treatment, both the Freundlich constant (K_d (mL g^{-1})), which dictates matrix sorption effects, and the thermodynamically influenced aqueous solubility ($c_{\text{sat w}}$ (mol L^{-1})) increase significantly. As solubility of Common Volatile Organic Compounds (CVOCs) increase with temperature and their soil adsorption coefficient decrease, CVOC mass in the dissolved phase increases with heating (Figure 1).

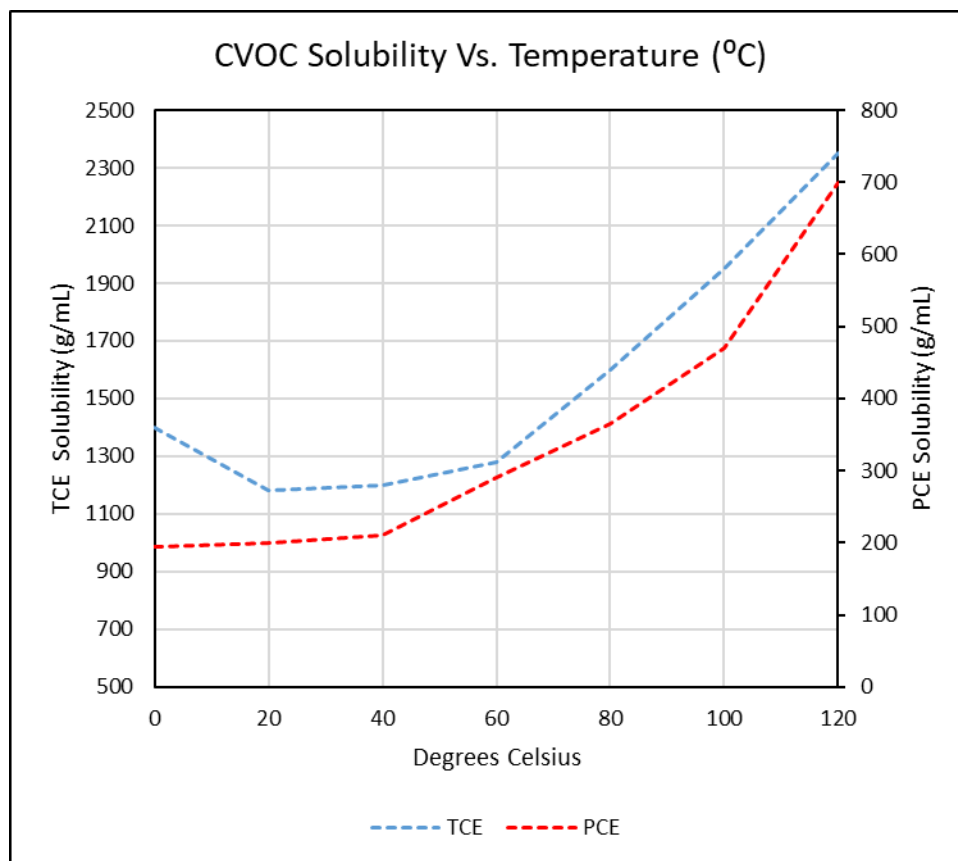


Figure 1. PCE/TCE Solubility with Temperature

As ISTR treatment progresses, CVOC concentrations in groundwater increase until the mass of CVOCs sorbed (adsorbed and absorbed) to the subsurface soil and organic matrices are exhausted by volatilization and steam stripping. Once this occurs, impact to site groundwater quickly dissipates. However, even without a continued source of contaminant mass, elevated groundwater temperatures often lead to higher groundwater contaminant concentrations.

Cascade Thermal states that data from many of their ERH sites shows that the concentration of PCE (along with associated chlorinated solvents and daughter products) in the subsurface will continue to decline as the treatment volume cools. This long-term reduction in PCE concentrations is primarily a product of changes in the solubility constant of each CVOC compound (thermodynamics), as well as thermally enhanced abiotic and biotic dechlorination reactions.

Furthermore, it would be prudent to inject bioremediation product in or upgradient of the ERH array area using the currently operating bioremediation/groundwater recirculation system to enhance the

biodegradation of the near surface groundwater, especially since the groundwater temperature is conducive for the growth of the bacteria species that remediate the HVOCs in groundwater. In addition, vadose zone soil removal within the ERH array, as proposed in the Engineering and Remedial Design Report will also likely contribute to reducing the HVOC concentrations in near surface groundwater.

KANE ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads "John Kane". The signature is written in a cursive style with a long horizontal line extending to the right.

John Kane, President



CASCADE
T H E R M A L

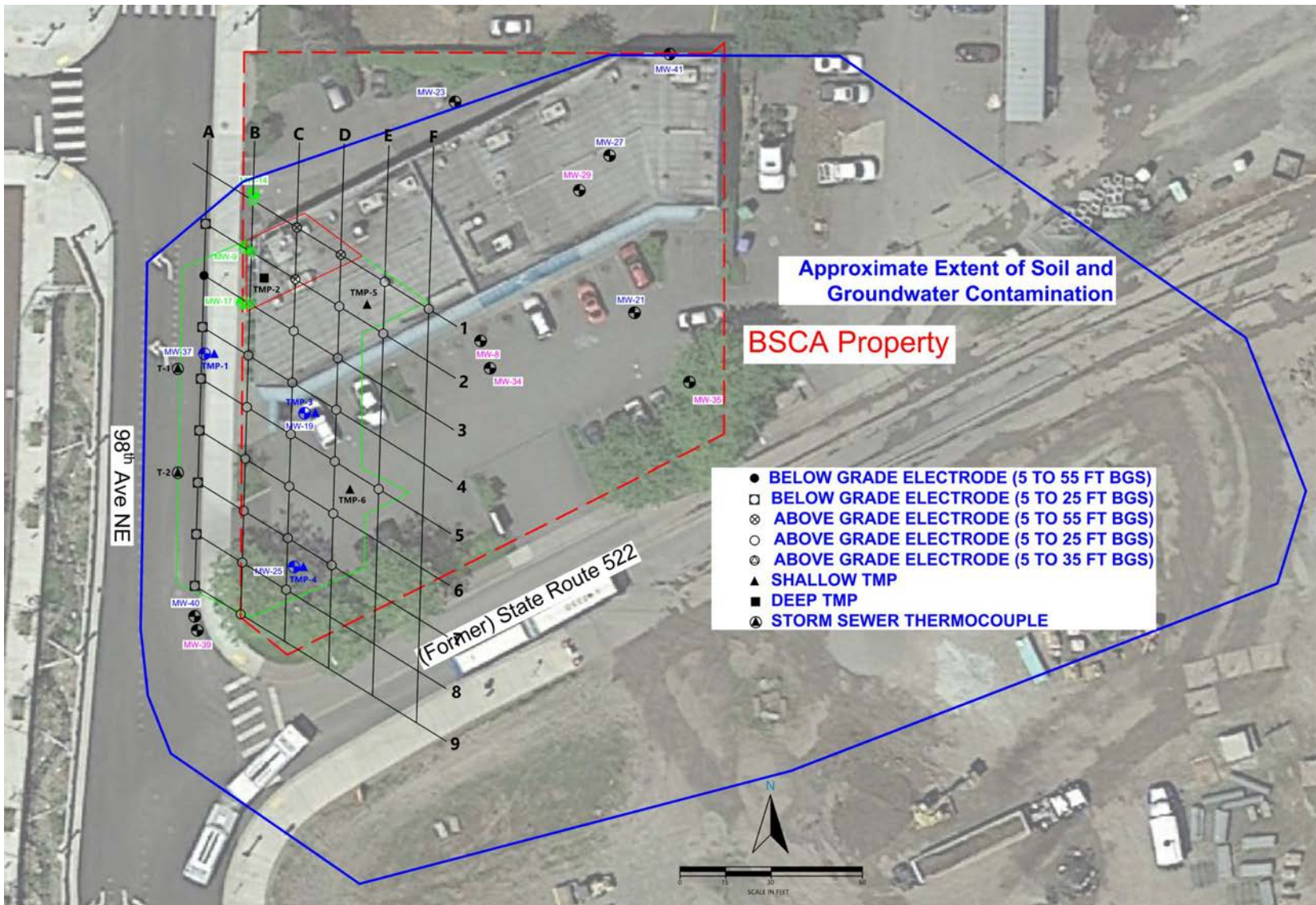
BSCSS ERH Project – Bothell, WA

12/10/2018



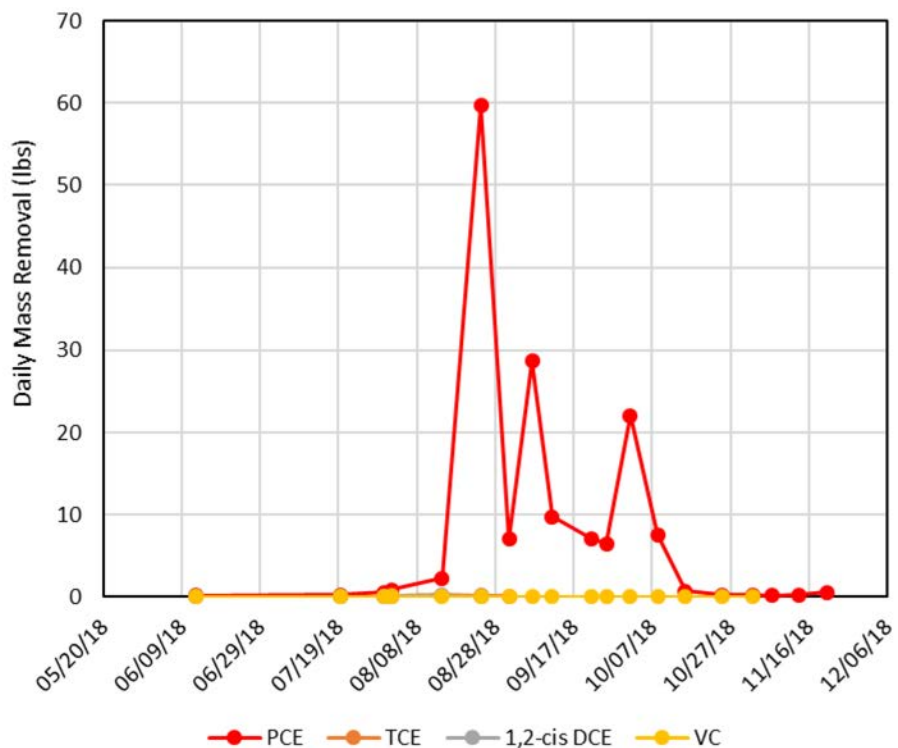
TERRATHERM
a Cascade Company



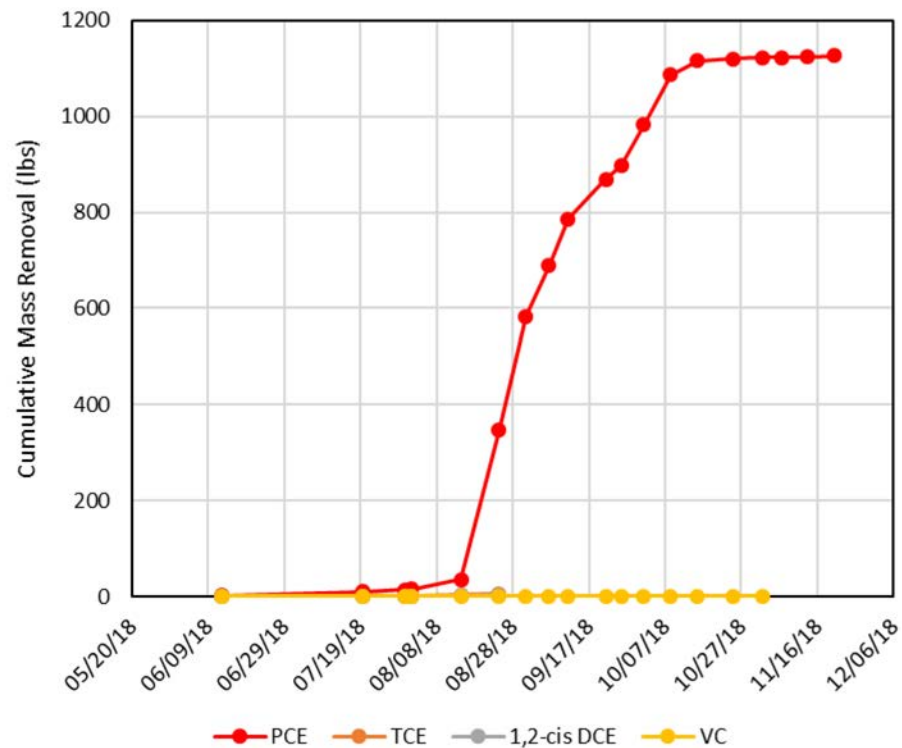


Mass Removal Based off of Analytical Sampling Data

BSCSS ERH Project - Bothell, WA - Daily Mass Removal Based on Analytical Sampling

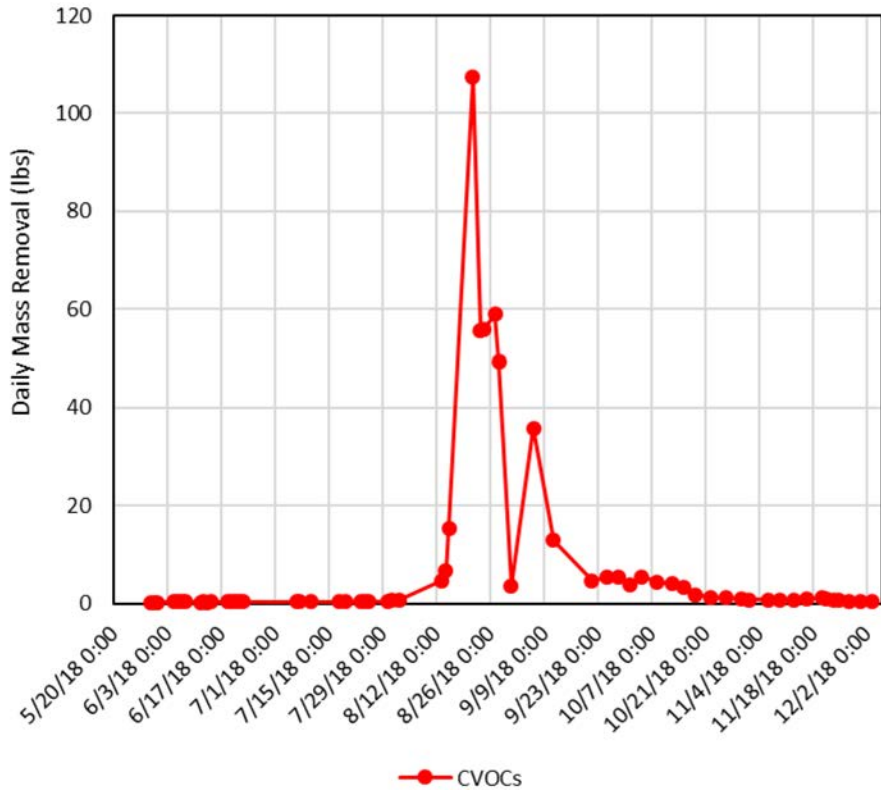


BSCSS ERH Project - Bothell, WA - Cumulative Mass Removal Based on Analytical Sampling

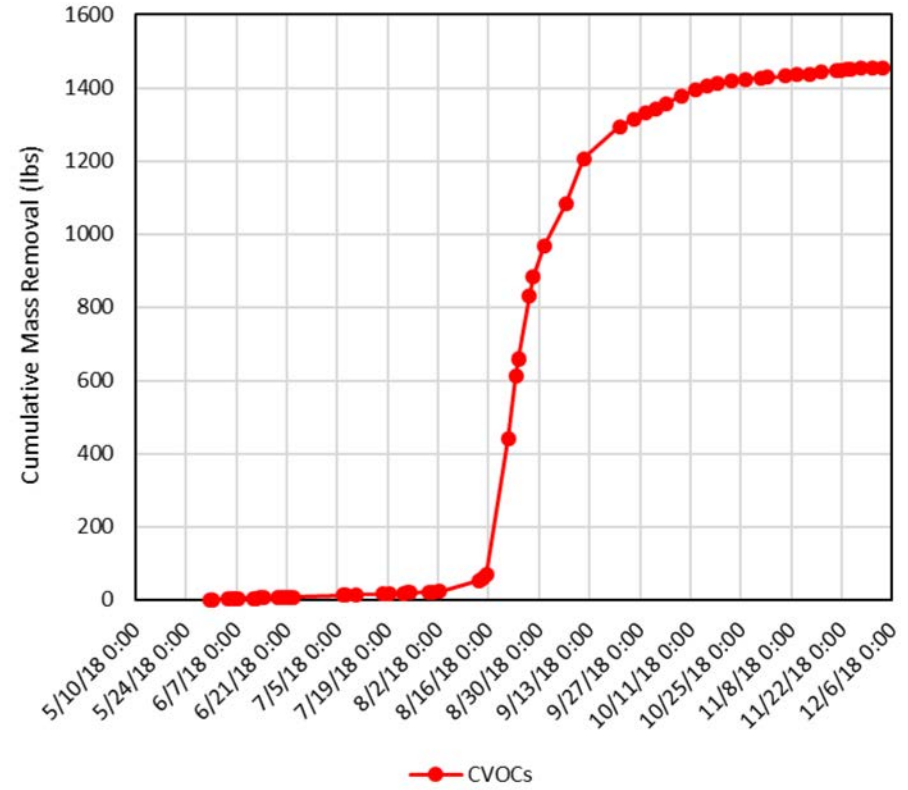


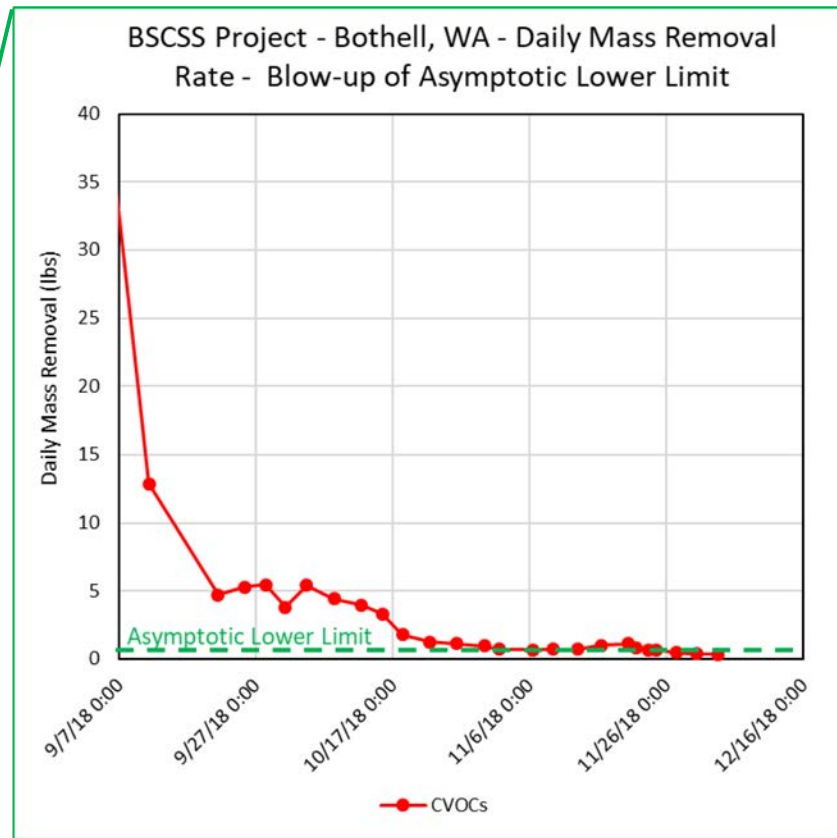
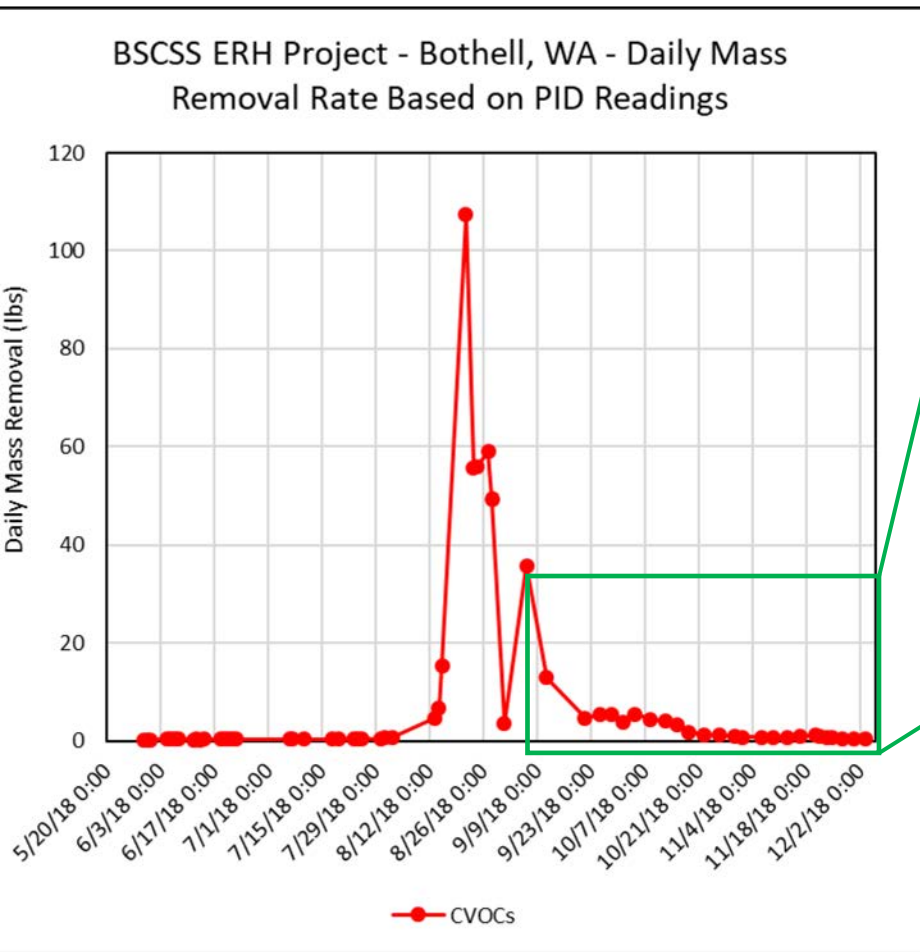
Mass Removal Based off of Field PID Data Calibrated with Analytical Sampling Data

BSCSS ERH Project - Bothell, WA - Daily Mass Removal Rate Based on PID Readings

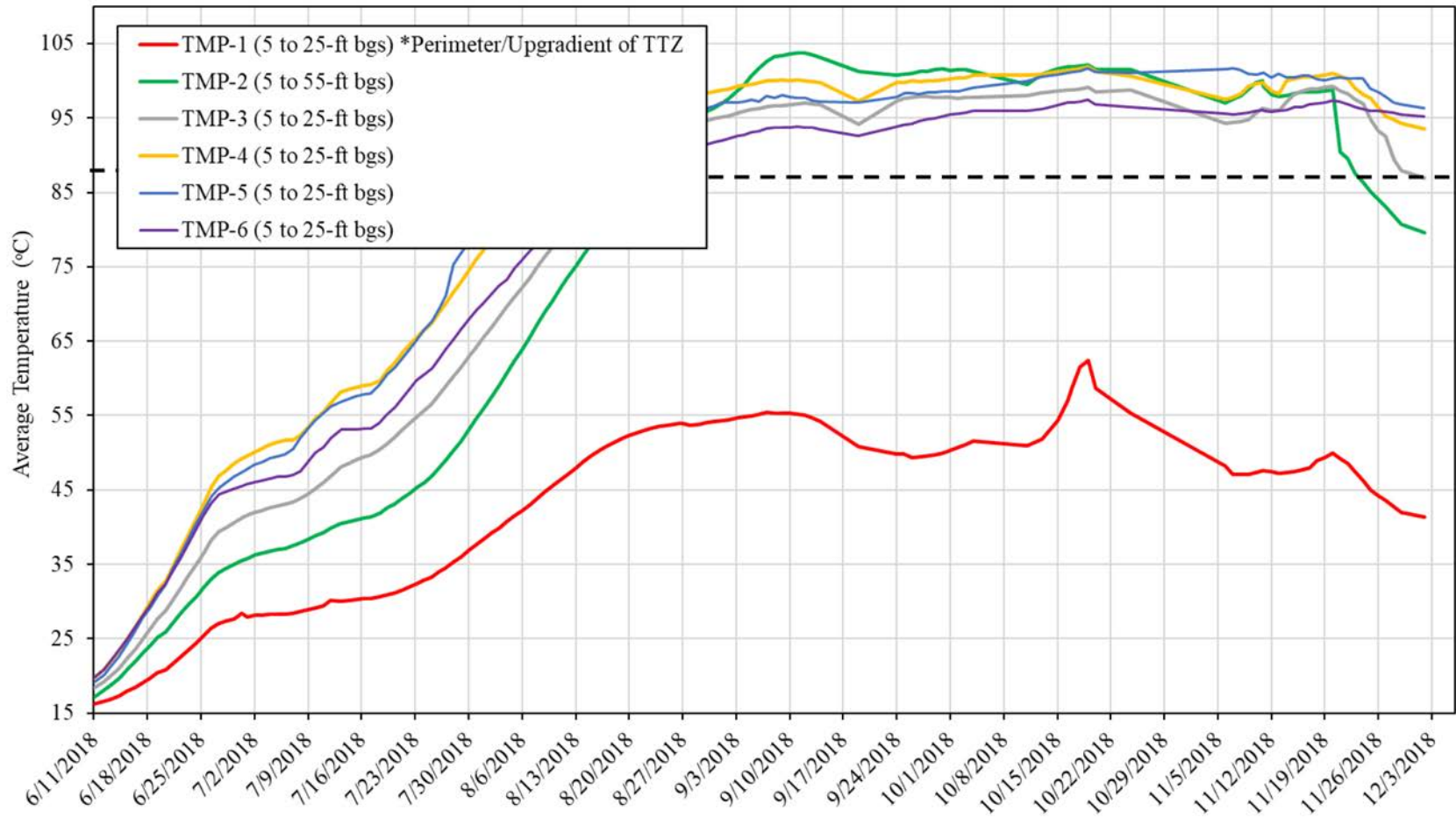


BSCSS ERH Project - Bothell, WA - Cumulative Mass Removal Based on PID Readings

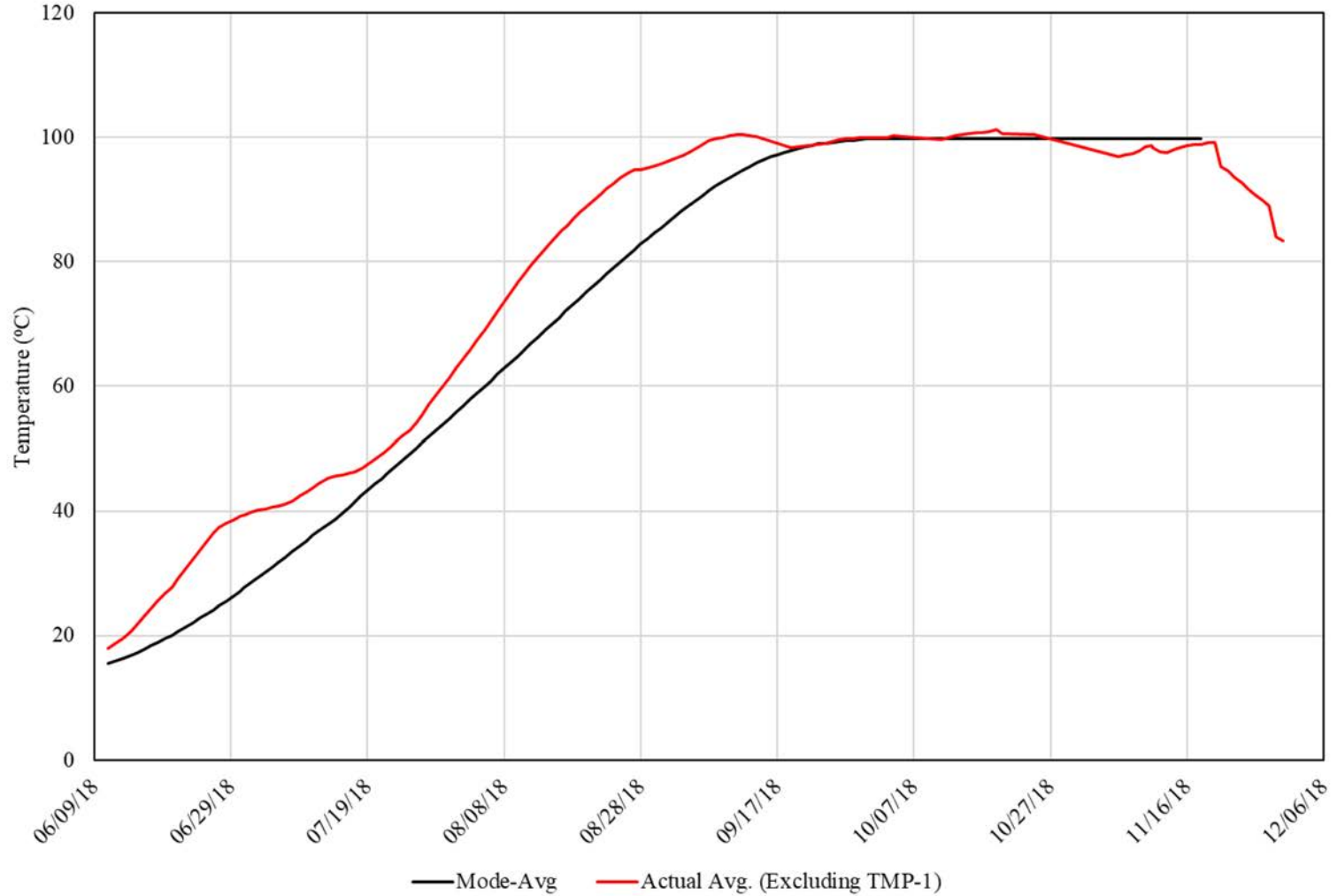




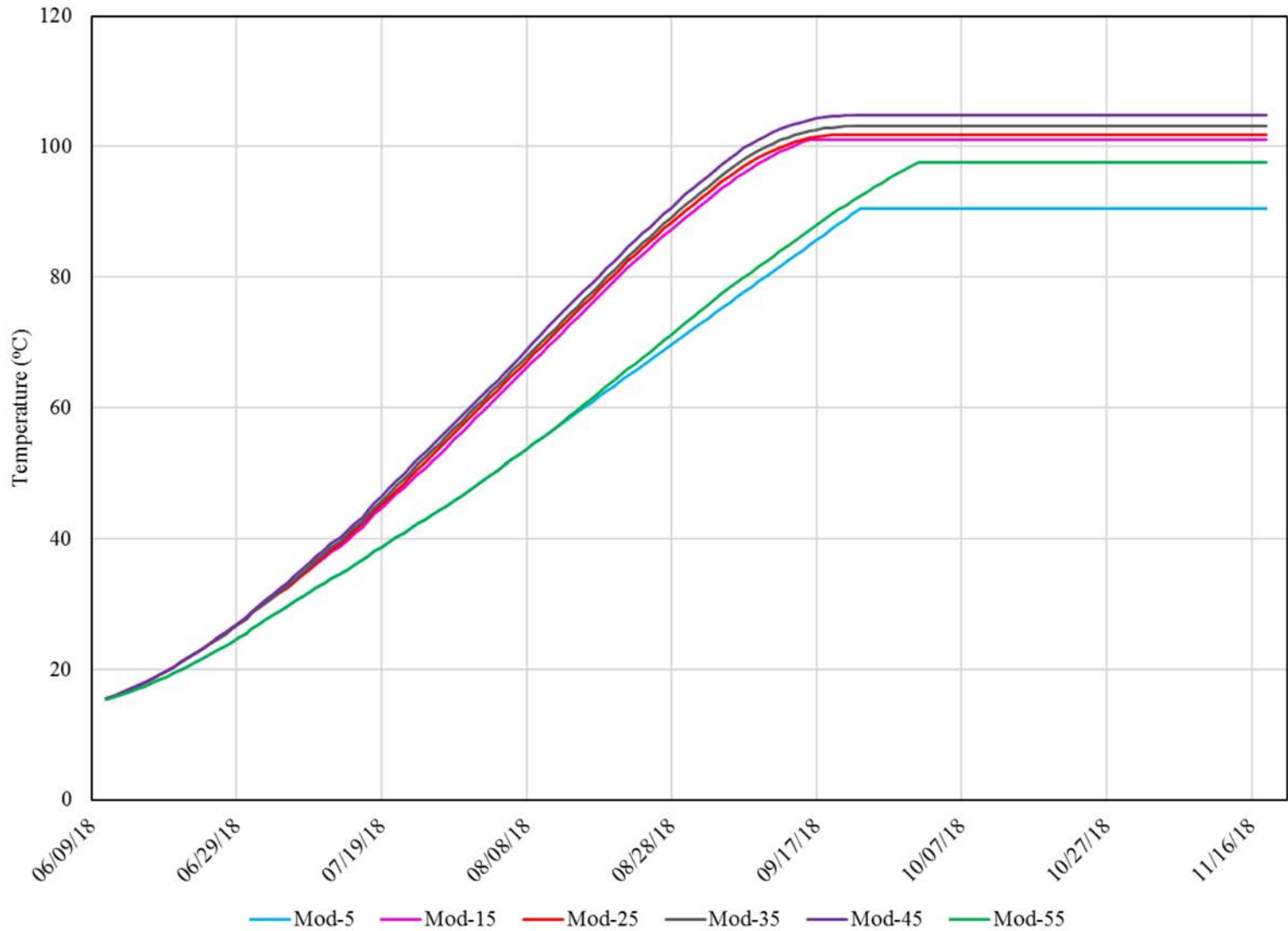
BSCSS ERH Project - Bothell, WA Average Temperature Progress



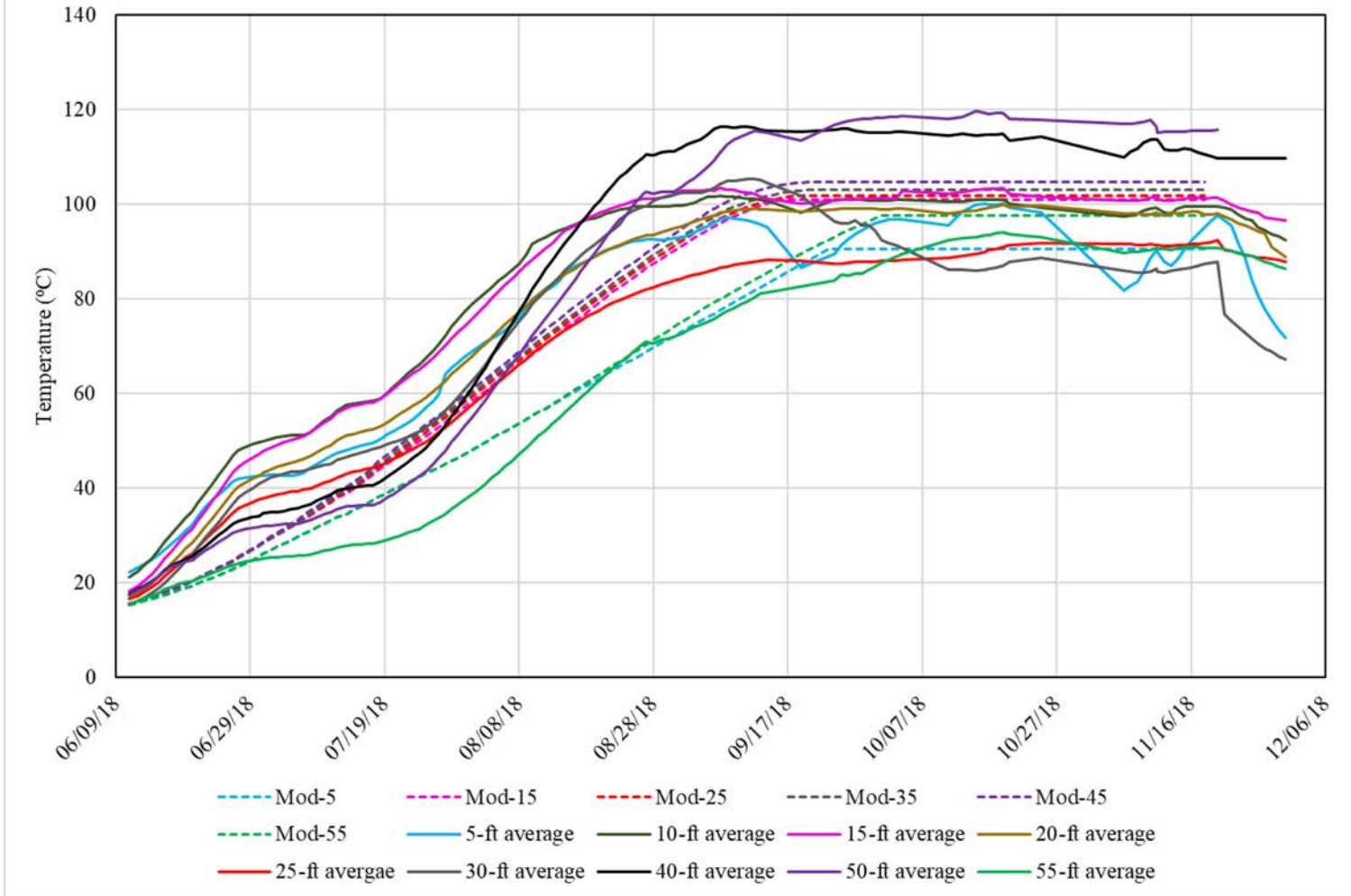
BSCSS-ERH Project - Modelled Average vs Actual Average Temperature Curves



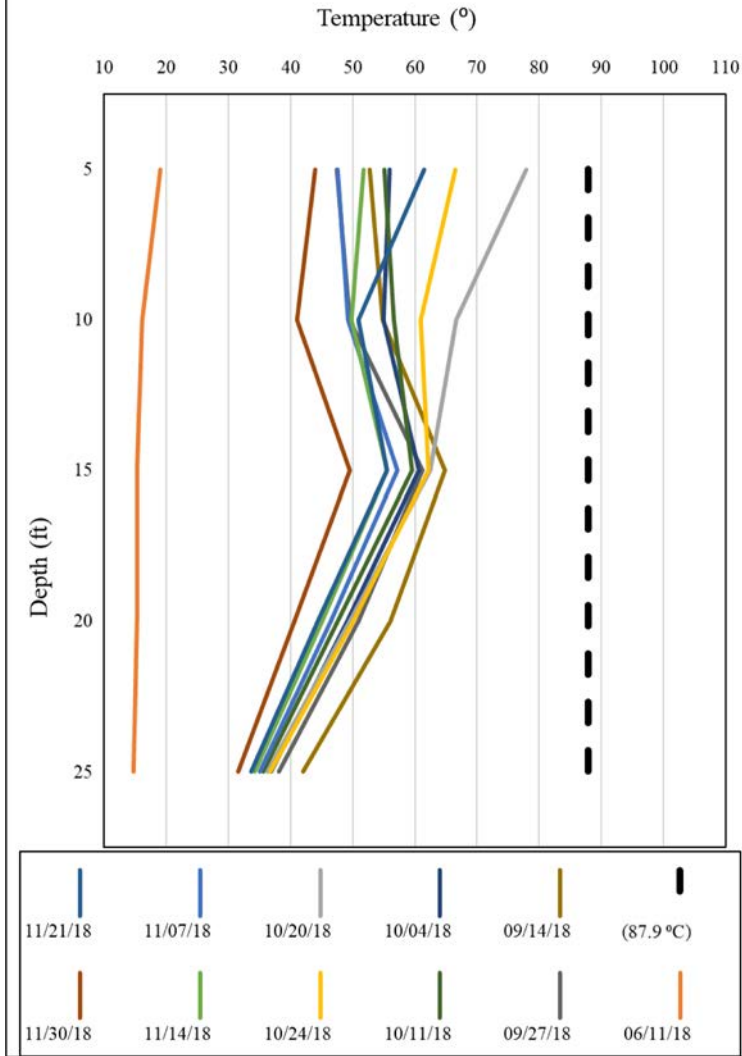
BSCSS-ERH Project - Modelled Temperature Curves



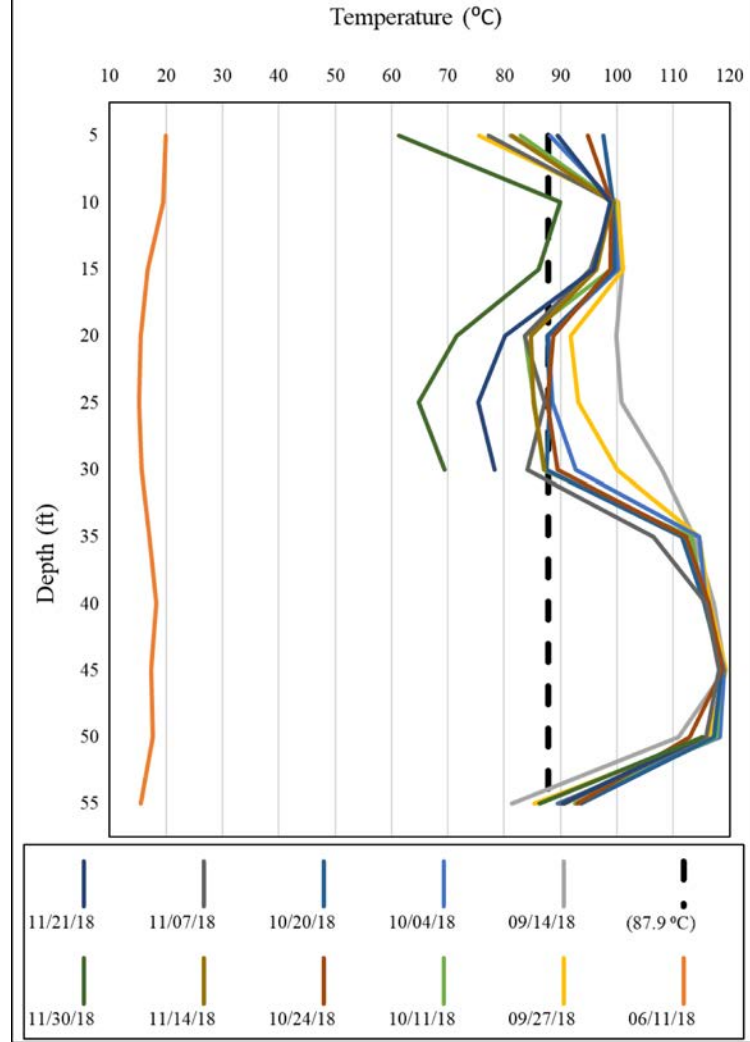
BSCSS-ERH Project - Modelled vs Achieved Temperature Curves (Excluding TMP-1)



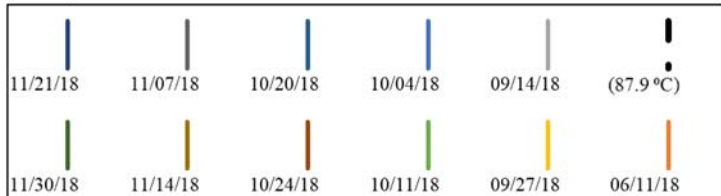
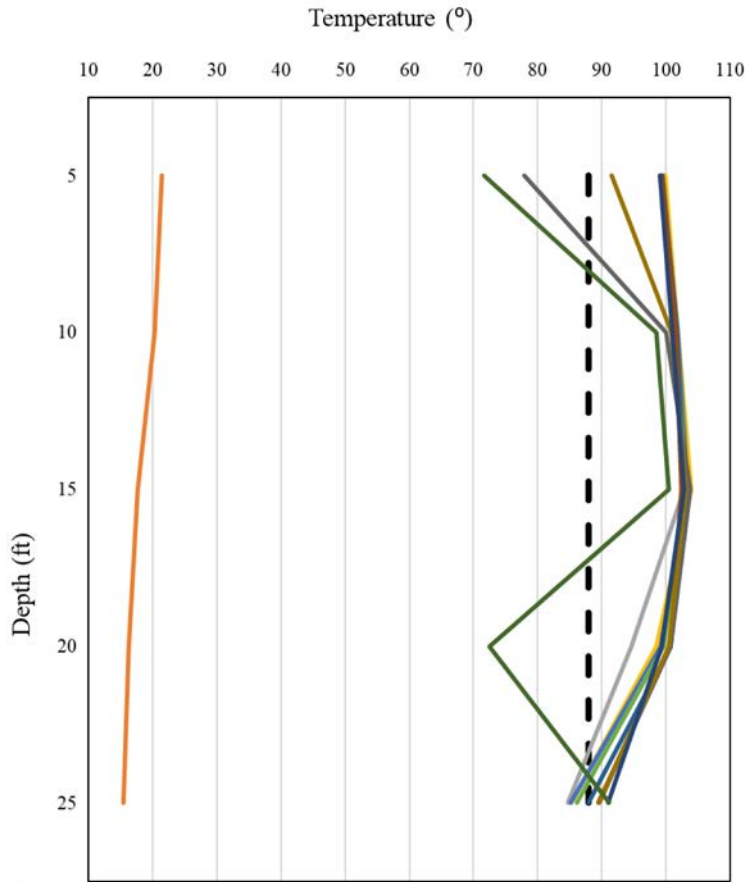
TMP-1 Temperature By Individual TMP



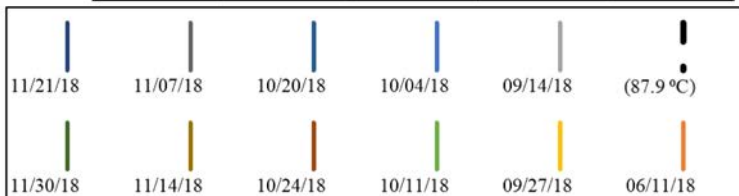
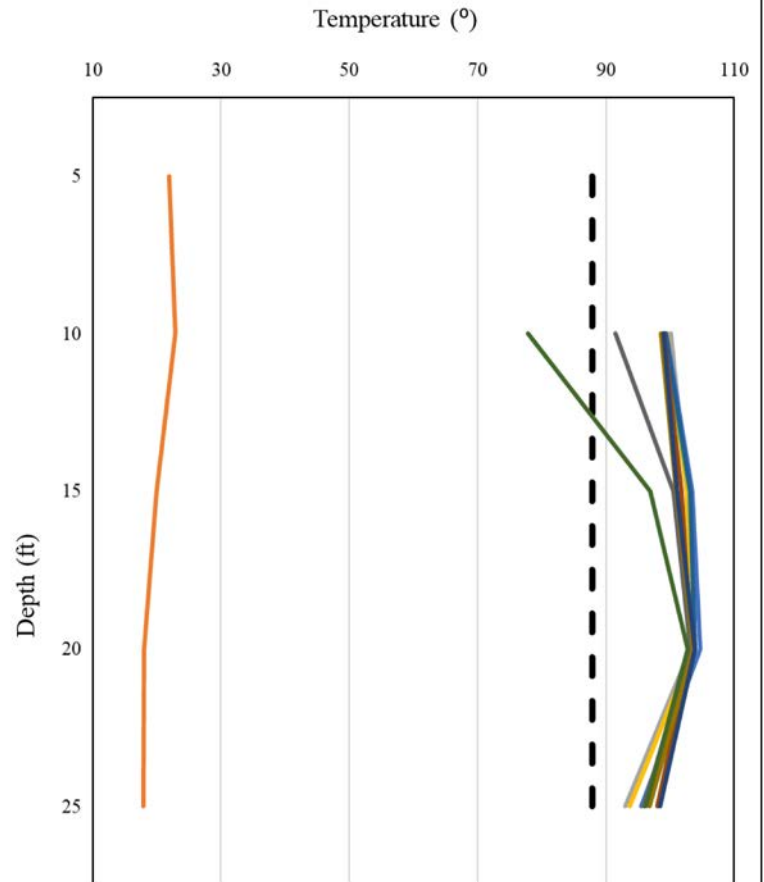
TMP-2 Temperature By Individual TMP



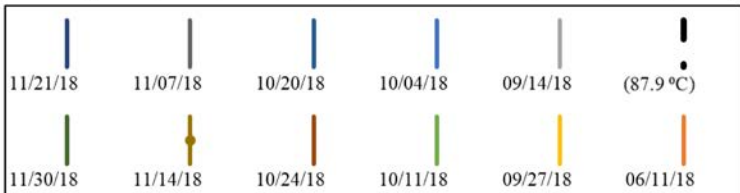
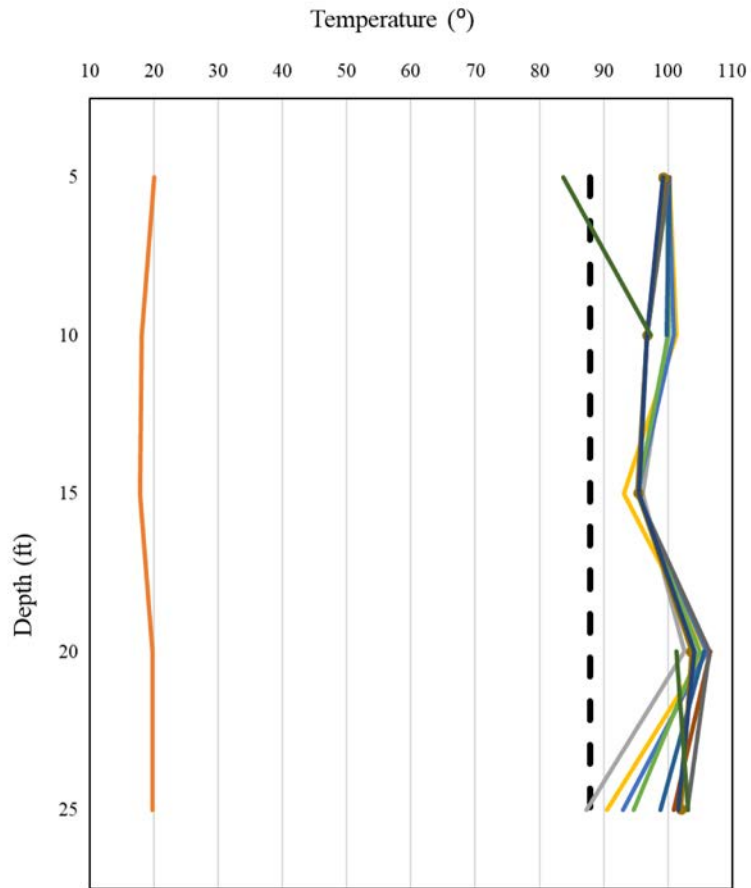
TMP-3 Temperature By Individual TMP



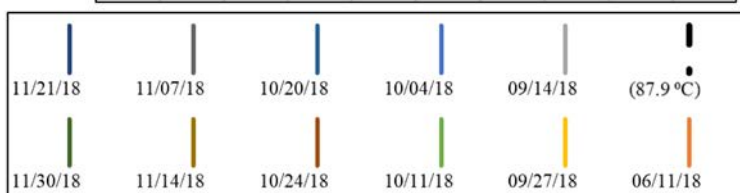
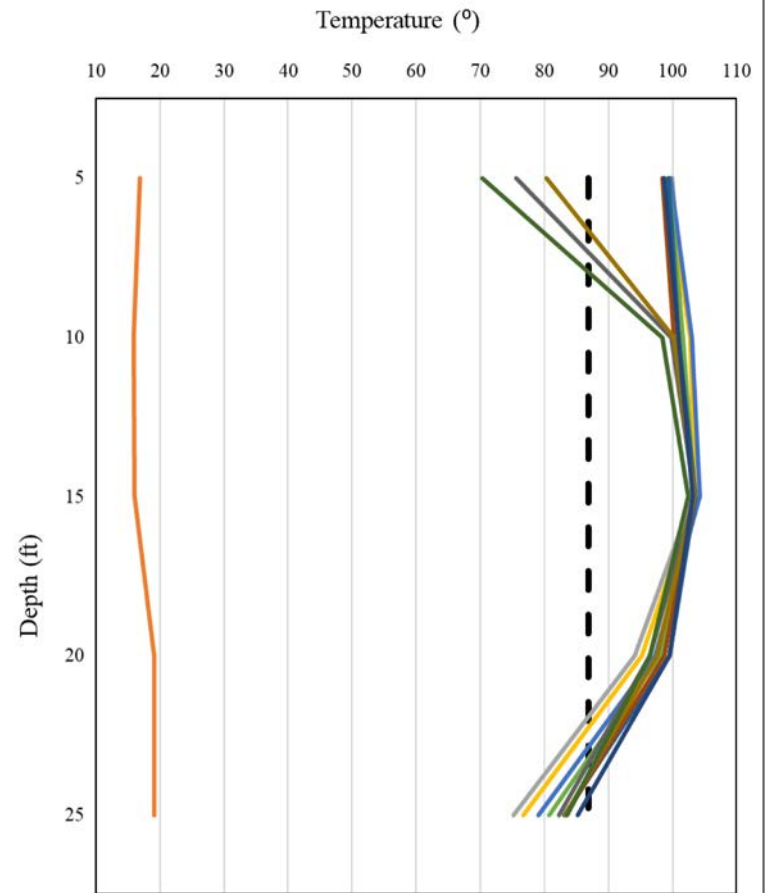
TMP-4 Temperature By Individual TMP



TMP-5 Temperature By Individual TMP



TMP-6 Temperature By Individual TMP



Mass Removal Calculations: Simon & Sons, Bothell, WA

Vapor Mass Removal Based On Lab Analytical:

Sample Date	Flow (SCFM)	Analytical Concentrations (ppbv)				Daily Mass Removal Rate (lbs/day)				Cumulative Mass Removed (lbs)			
		PCE	TCE	1,2-cis DCE	VC	PCE	TCE	1,2-cis DCE	VC	PCE	TCE	1,2-cis DCE	VC
		(Averaged, Mass between Sample Dates)											
5/29/18 13:00	225	968	12.5	7.19	0.145	0.1323007	0.00136	0.0005749	7.444E-06	Start of Operations			
6/12/18 13:00	255	1180	48.8	118	5.72	0.182779	0.00601	0.0106922	0.0003328	2.2056	0.0516	0.0789	0.0024
7/19/18 14:00	265	1410	47.8	55.9	2.38	0.2269703	0.00612	0.0052638	0.0001439	7.5889	0.2248	0.2955	0.0088
7/30/18 14:00	265	3370	144	162	16.5	0.5424752	0.01844	0.0152548	0.0009977	4.2320	0.1351	0.1129	0.0063
8/1/18 11:15	265	5510	1120	589	25.4	0.886955	0.14346	0.0554634	0.0015359	1.3475	0.1526	0.0667	0.0024
8/14/18 9:20	265	14,300	2,160	1,780	113	2.3018978	0.27666	0.1676144	0.0068327	20.6002	2.7140	1.4411	0.0541
8/24/18 10:00	265	371,000	1,400	217	14.2	59.720566	0.17932	0.0204339	0.0008586	310.9737	2.2862	0.9429	0.0386
8/31/18 12:05	265	43,600	693	317	22.6	7.0183738	0.08876	0.0298504	0.0013665	236.4829	0.9499	0.1782	0.0079
9/6/18 9:35	265	178,000	472	472	42.5	28.652994	0.06046	0.0444461	0.0025698	105.1562	0.4399	0.2190	0.0116
9/11/18 11:10	265	60,500	228	101	42.5	9.7387984	0.02920	0.0095107	0.0025698	97.2459	0.2271	0.1367	0.0130
9/21/18 10:20	265	43,900	281	77.6	6	7.0666653	0.03599	0.0073072	0.0003628	83.7356	0.3248	0.0838	0.0146
9/25/18 9:45	265	40,200	322	82.8	3.82	6.4710694	0.04124	0.0077969	0.000231	26.9109	0.1535	0.0300	0.0012
10/1/18 10:20	265	137,000	1040	301	8.58	22.053147	0.13321	0.0283438	0.0005188	85.9193	0.5255	0.1089	0.0023
10/8/18 12:00	265	47,000	998	466	11	7.5656781	0.12783	0.0438811	0.0006651	104.6943	0.9227	0.2553	0.0042
10/15/18 11:15	265	4,420	303	177	6	0.7114957	0.03881	0.0166673	0.0003628	28.8408	0.5806	0.2110	0.0036
10/24/18 16:35	265	1,580	91	43.5	1.71	0.2543356	0.01166	0.0040962	0.0001034	4.4536	0.2327	0.0957	0.0021
11/1/18 12:20	265	1,370	83.4	28.3	42.5	0.2205315	0.01068	0.0026649	0.0025698	1.8574	0.0874	0.0264	0.0105
11/6/18 12:00	265	941	66.3	27	1.24	0.1514745	0.00849	0.0025425	7.498E-05	0.9274	0.0478	0.0130	0.0066
11/13/18 11:34	265	1,470	277	198	1.65	0.2366287	0.03548	0.0186447	9.977E-05	1.3549	0.1535	0.0740	0.0006
11/20/18 12:45	265	3,550	248	125	598	0.5714502	0.03177	0.0117707	0.036159	2.8482	0.2370	0.1072	0.1278
12/17/18 11:45	265	297	22.4	21.7	0.336	0.0478086	0.00287	0.0020434	2.032E-05	8.3471	0.4668	0.1862	0.4877
Total lbs:										1135.72	10.914	4.663	0.806

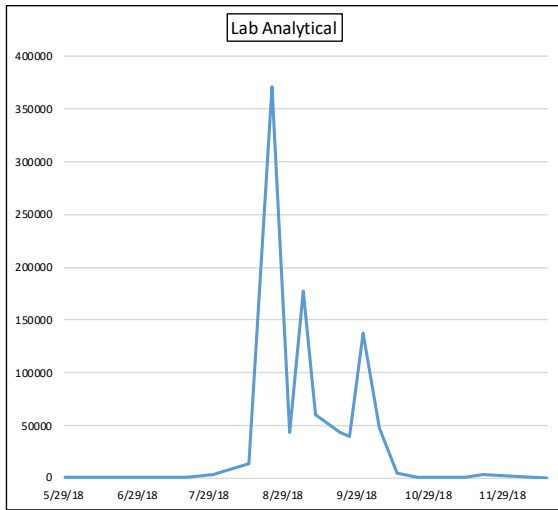
**Through 12/17/18

Estimated Vapor Mass Based On Lab Analytical, adjusted for Daily PID Field Readings : Total lbs:

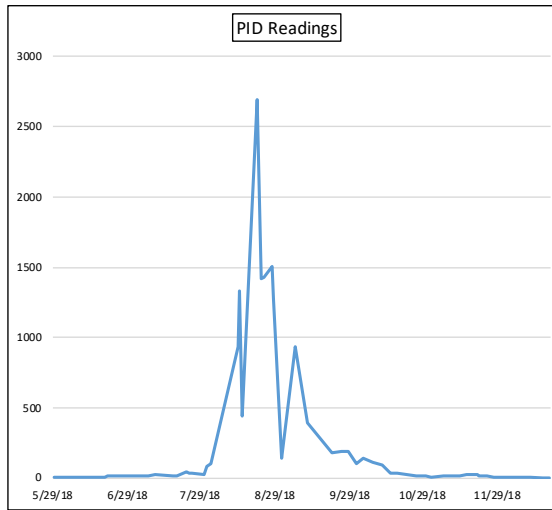
1452.05 **Through 12/20/18

Liquid Mass Removal Based On Lab Analytical:

Sample Date	Treated gallons	Analytical Concentrations (ug/L)				Daily Mass Removal Rate (g/gal)				Cumulative Mass Removed (lbs)			
		PCE	TCE	1,2-cis DCE	VC	PCE	TCE	1,2-cis DCE	VC	PCE	TCE	1,2-cis DCE	VC
		(Averaged, Mass between Sample Dates)											
5/29/18 13:00	0	21.8	N/D	N/D	N/D	7.949E-05				Start of Operations			
7/19/18 14:00	167370	12.7	N/D	N/D	N/D	4.807E-05				0.0235			
7/30/18 14:00	183397	8.85	0.703	1.14	N/D	3.35E-05	2.661E-06	4.315E-06		0.0014	0.0001	0.0002	
8/14/18 8:45	221416	448	2.24	2.81	N/D	0.001696	8.479E-06	1.064E-05		0.0725	0.0005	0.0006	
8/31/18 11:00	267961	710	1.68	2.03	N/D	0.0026876	0.0000064	7.684E-05		0.2249	0.0008	0.0045	
9/21/18 9:25	308292	686	6.27	N/D	N/D	0.0025968	0.0000237			0.2349	0.0013		
10/26/18 10:00	543808	31.1	1.98	N/D	N/D	0.0001177	0.0000072			0.7047	0.0080		
11/30/18 9:30	674812	48.9	4.43	N/D	N/D	0.0001851	0.0000168			0.0437	0.0035		
Total lbs:										1.3057	0.0141	0.0053	0.0000



Lab Analytical (ug/L vs. Time)



PID Readings (ppm vs. Time)

PID Reading Mass Removal Estimates -Vapor Stream: Simon & Sons, Bothell,WA

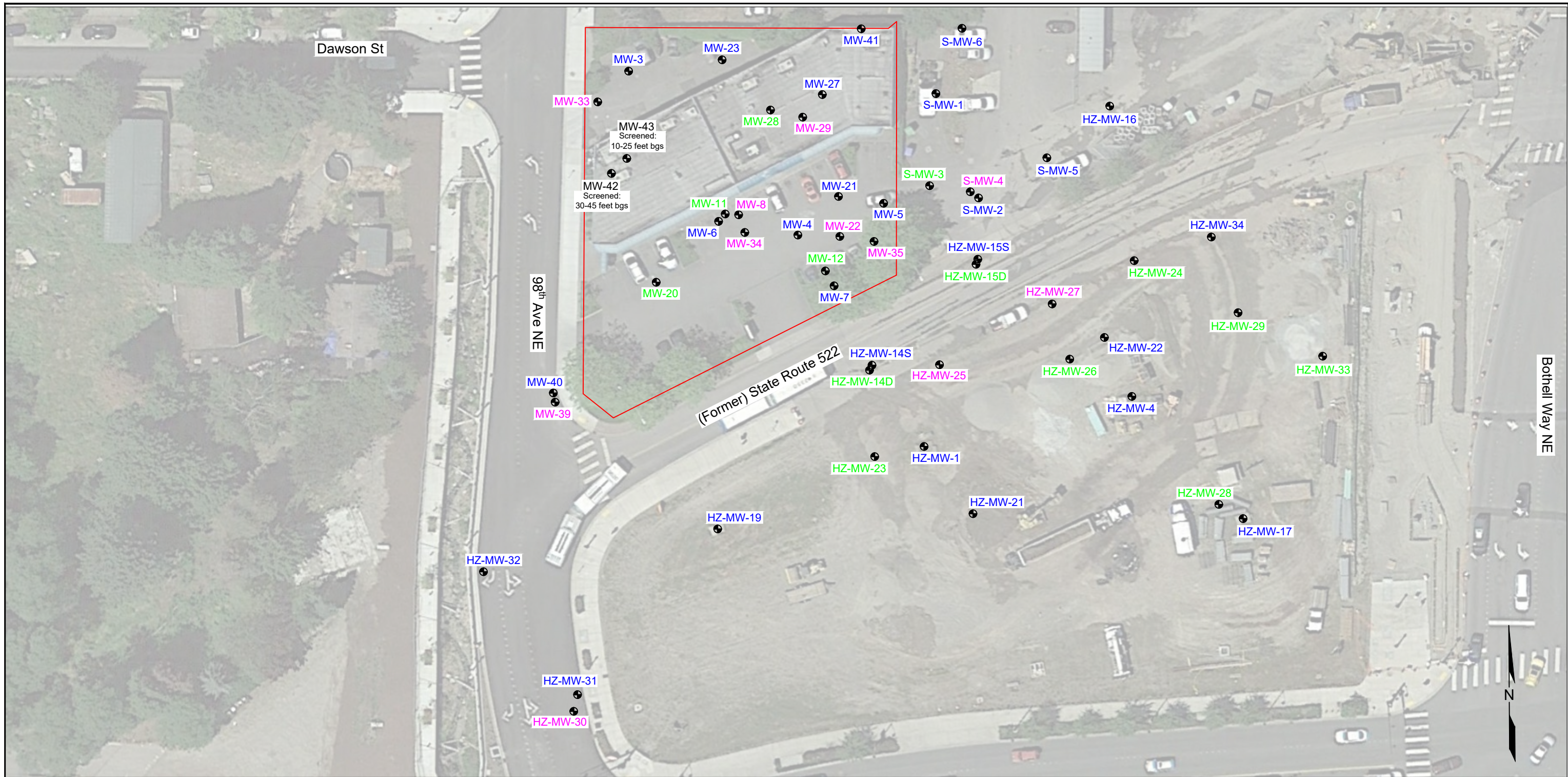
(Averaged Mass between PID Readings)

Sample Date	PID Reading	Flow	Estimated ppbv	Daily Mass Removal Rat	Cumulative Mass Removed (lbs)
		(SCFM)	PCE	PCE	PCE
5/29/18 17:30	7.7	225	1796.21	0.245495898	Start of Operations
5/30/18 15:30	5.9	255	1743.00	0.2699869	0.2363
5/31/18 13:30	5.7	255	1737.09	0.269071147	0.2471
6/4/18 16:30	7.3	255	1784.39	0.276397177	1.1250
6/5/18 14:00	8.4	255	1816.90	0.281433823	0.2499
6/6/18 14:00	8.8	255	1828.73	0.283265331	0.2823
6/7/18 14:30	9.2	255	1840.55	0.285096838	0.2901
6/11/18 16:25	5.6	255	1734.14	0.26861327	1.1295
6/12/18 10:00	8.4	255	1816.90	0.281433823	0.2015
6/13/18 13:15	6	255	1745.96	0.270444777	0.3133
6/14/18 10:30	7.5	255	1790.30	0.277312931	0.2425
6/18/18 14:00	11.5	255	1908.54	0.295628007	1.1877
6/19/18 15:00	10.9	260	1890.80	0.298623505	0.3095
6/20/18 14:00	20.2	260	2165.71	0.34204101	0.3070
6/21/18 16:00	19.4	260	2142.06	0.338306171	0.3685
6/22/18 15:00	20.1	260	2162.76	0.341574155	0.3258
7/6/18 15:00	19	260	2130.24	0.336438751	4.7461
7/7/18 11:00	18.6	265	2118.42	0.341005396	0.2823
7/10/18 9:30	27.3	265	2375.59	0.382402855	1.0625
7/17/18 16:00	20	265	2159.80	0.347667056	2.6541
7/19/18 12:30	13	265	1952.88	0.314358755	0.6138
7/23/18 13:00	43.8	265	2863.33	0.460915277	1.5586
7/24/18 11:00	41.4	265	2792.38	0.449495288	0.4173
7/25/18 7:30	36.2	265	2638.67	0.424751979	0.3734
7/30/18 9:30	30.3	265	2464.27	0.396677841	2.0878
7/31/18 13:30	88	265	4169.88	0.671233402	0.6229
8/2/18 9:45	102.0	265	4583.72	0.737850003	1.2990
8/13/18 10:30	932.0	265	29118.52	4.687262762	29.9229
8/14/18 11:40	1334.0	265	41001.64	6.60011087	5.9180
8/15/18 9:30	440.0	265	95522.00	15.37635545	9.9962
8/21/18 10:40	2691.0	265	667276.00	107.4126689	371.3515
8/23/18 13:30	1423.0	265	345204.00	55.56813515	172.6012
8/24/18 8:30	1428.0	265	346474.00	55.77256943	44.0724
8/27/18 9:30	1505.0	265	366032.00	58.92085736	174.4296
8/28/18 9:00	1269.0	265	306088.00	49.27155928	52.9692
8/31/18 11:00	139.8	265	22554.77	3.630684262	81.5576
9/6/18 9:00	934.0	265	222796.42	35.86395748	116.8383
9/11/18 11:00	390.0	265	80061.30	12.88761758	123.9103
9/21/18 11:05	179.0	265	29321.62	4.71995615	88.0684
9/25/18 10:15	190.3	265	32757.38	5.273017523	19.8125
9/28/18 10:40	194.6	265	33777.69	5.437257771	16.1584
10/1/18 8:45	100.9	265	23576.69	3.795183352	13.4800
10/4/18 9:50	144.9	265	33500.45	5.392629607	13.9891
10/8/18 11:30	109.5	265	27368.21	4.40551208	19.9365
10/12/18 9:50	98.0	265	24794.74	3.991255789	16.5020
10/15/18 13:00	35.1	265	10141.54	1.632503353	8.8067
10/18/18 10:00	39.0	265	11016.86	1.773404611	4.8960
10/22/18 10:30	24.0	265	7650.26	1.231476697	6.0411
10/26/18 10:10	21.0	265	6976.94	1.123091114	4.6928
10/30/18 10:30	17.0	265	6079.18	0.978577003	4.2179
11/1/18 12:45	9.6	265	4418.32	0.711225899	1.7690
11/6/18 12:20	13.0	265	4302.94	0.69265232	3.4975
11/9/18 11:30	13.1	265	4325.49	0.696281914	2.0593
11/13/18 0:00	14.2	265	4358.01	0.701516719	2.4607
11/16/18 9:50	22.8	265	6299.37	1.014021722	2.9248
11/20/18 12:45	25.0	265	6590.16	1.060830412	4.2758
11/21/18 12:45	18.0	265	5008.30	0.806195442	0.9335
11/23/18 10:30	13.7	265	4036.59	0.649776817	1.3877
11/24/18 14:00	14	265	4104.38	0.660689744	0.7508
11/27/18 11:15	9	265	2974.48	0.478807623	1.6440
11/30/18 9:08	6.3	265	2364.33	0.380591277	1.2512
12/3/18 11:50	5.3	265	2138.35	0.344214853	1.1280
12/10/18 15:30	6.4	265	2386.93	0.38422892	2.6052
12/12/18 14:30	3.4	265	1708.99	0.275099647	0.6456
12/17/18 12:11	3	265	1535.80	0.247220606	1.2806
12/20/18 11:45	3.0	265	1535.80	0.247220606	0.7372
Total:					1452.0530

Notes:

- Power application to the subsurface was removed on 11/20/18 at 16:30, vapor recovery system remains on.
- Vapor recovery system turned off on 12/3/18 at 12:05 for monitoring well installation
- Vapor recovery system turned back on 12/10/18 at 14:00 for continued Vapor Extraction

ATTACHMENT A
DECEMBER 2018 GROUNDWATER SAMPLING
RESULTS



Aerial Photo Source: Google Earth Pro
 Aerial Photo Date: June 27, 2016

LEGEND

- BSCA Property Boundary
- MW-1 Monitoring Well, Shallow (5-25ft)
- MW-2 Monitoring Well, Intermediate (25-35 ft)
- MW-3 Monitoring Well, Deep (35-55 ft)
- MW-4 New Monitoring Well, Screened as Noted

0 50 100
 Approximate Scale in Feet

Table 1
Bothell Service Center Simon Son
Groundwater Analytical Results

Well	Well Type and Water Bearing Zone	Screened Depth, (ft bgs)	Top of Casing (TOC) Elevation (feet)*	Date Sampled	Depth to Water below TOC (ft)	GW Elevation (feet)	Sampled By	PCE (µg/L)	TCE (µg/L)	(cis) 1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-3	Shallow	5 to 20	47.957	7/17/18	7.95	40.01	Kane	<1.00	<0.50	<1.00	<0.20
				9/11/18	8.69	39.27	Kane	<1.00	<0.50	<1.00	<0.20
				12/5/18	7.93	40.03	Kane	<1.00	<0.50	<1.00	<0.20
MW-4	Shallow	10 to 25	45.717	9/17/18	8.89	36.83	Kane	4,060	360	1,740	11.9
				11/30/18	7.67	38.05	Kane	4,370	373	1,720	<10
MW-5	Shallow	10 to 25	44.297	9/14/18	8.27	36.03	Kane	2,220	33.9	24	<0.20
				12/3/18	6.29	38.01	Kane	58.5	13.6	1.13	<0.20
MW-6	Shallow	10 to 25	47.142	7/17/18	8.92	38.22	Kane	27.4	14.3	4,480	851
				9/18/18	9.51	37.63	Kane	738	238	2,620	472
				12/21/18	8.79	38.35	Kane	2,670	1,000	2,560	25.5
MW-7	Shallow	10 to 25	45.527	9/18/18	9.12	36.41	Kane	1,370	78.1	673	5.85
				11/30/18	8.9	36.63	Kane	2,670	305	1,440	<10
MW-8	Deep	45 to 50	47.387	7/17/18	9.7	37.69	Kane	8.75	1.59	4.21	<0.20
				9/17/18	10.33	37.06	Kane	14.8	2.14	8.25	<0.20
				12/20/18	10.05	37.34	Kane	14.5	4.37	9.38	<0.20
MW-11	Intermediate	25 to 33	47.207	7/17/18	9.02	38.19	Kane	11.2	2.12	3.73	<0.20
				9/17/18	9.82	37.39	Kane	35.8	29.6	27.6	<0.20
				12/20/18	8.56	38.65	Kane	41	11.5	4.92	<0.20
MW-12	Intermediate	25 to 33	45.467	7/20/18	8.44	37.03	Kane	4,110	351	2,110	14.3
				9/10/18	9.14	36.33	Kane	3,460	231	1,460	11.1
				11/30/18	8.59	36.88	Kane	2,340	194	669	<4.0
MW-20	Intermediate	25 to 30	46.857	12/20/18	7.5	39.36	Kane	32	879	552	2.23
MW-21	Shallow	10 to 15	45.717	9/10/18	9.31	36.41	Kane	410	12.2	9.45	<0.20
				12/3/18	7.23	38.49	Kane	122	1.67	<1.00	<0.20
MW-22	Deep	54 to 59	44.957	7/16/18	8.27	36.69	Kane	<1.00	<0.50	1.6	<0.20
				9/19/18	8.85	36.11	Kane	<1.00	<0.50	1.22	<0.20
				12/3/18	8.63	36.33	Kane	<1.00	<0.50	1.11	<0.20
MW-23	Shallow	6 to 16	48.027	9/19/18	9.04	38.99	Kane	<1.00	<0.50	<1.00	<0.20
				12/5/18	8.70	39.33	Kane	1.05	<0.50	<1.00	<0.20
				7/19/18	10.40	37.78	Kane	138	<0.50	<1.00	<0.20
MW-27	Shallow	6 to 16	48.177	9/14/18	10.98	37.20	Kane	106	<0.50	<1.00	<0.20
				12/12/18	10.09	38.09	Kane	169	0.712	<1.00	<0.20
				7/19/18	10.48	37.71	Kane	<1.00	<0.50	<1.00	<0.20
MW-28	Intermediate	25 to 35	48.187	9/14/18	10.6	37.59	Kane	<1.00	<0.50	<1.00	<0.20
				12/12/18	10.01	38.18	Kane	<1.00	<0.50	<1.00	<0.20
				7/17/18	10.32	37.92	Kane	<1.00	<0.50	<1.00	<0.20
MW-29	Shallow	45 to 55	48.242	9/14/18	10.73	37.51	Kane	<1.00	<0.50	<1.00	<0.20
				12/12/18	10.25	37.99	Kane	1.06	<0.50	<1.00	<0.20
				12/5/18	10.4	39.15	Kane	<1.00	<0.50	<1.00	<0.20
MW-33	Deep	40 to 50	49.547	7/16/18	8.82	37.78	Kane	<1.00	<0.50	<1.00	<0.20
MW-34	Deep	40 to 50	46.597	9/18/18	9.45	37.15	Kane	<1.00	<0.50	<1.00	<0.20
				12/11/18	8.5	38.10	Kane	<1.00	<0.50	<1.00	<0.20
				7/16/18	7.74	36.51	Kane	<1.00	<0.50	<1.00	<0.20
MW-35	Deep	48 to 58	44.247	9/10/18	8.45	35.80	Kane	<1.00	<0.50	<1.00	<0.20
				12/11/18	7.53	36.72	Kane	<1.00	<0.50	<1.00	<0.20
				7/25/18	7.15	37.37	Kane	<1.00	<0.50	1.03	<0.20
MW-39	Deep	40 to 50	44.524	12/17/18	6.33	38.19	Kane	2.32	2.62	6.81	<0.20
				7/25/18	7	37.52	Kane	5,460	55.6	9.5	<0.20
MW-40	Shallow	15 to 25	44.521	12/17/18	6.28	38.24	Kane	212	46	56.7	<0.20
MW-41	Shallow	5 to 15		10/23/18			Kane	2.02	<0.50	<0.50	<0.20
HZ-MW-1	Shallow	5 to 15	41.637	7/20/18	7.47	34.17	Kane	<1.00	<0.50	<1.00	<0.20
				9/13/18	8.2	33.44	Kane	10.8	<0.50	<1.00	<0.20
				12/19/18	6.94	34.70	Kane	7.8	<0.50	<1.00	<0.20
HZ-MW-4	Shallow	8 to 18	40.177	7/24/18	6.95	33.23	Kane	<1.00	<0.50	<1.00	<0.20
				9/13/18	7.59	32.59	Kane	<1.00	<0.50	<1.00	<0.20
				12/21/18	6.27	33.91	Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-14S	Shallow	5 to 15	42.377	7/20/18	7	35.38	Kane	2,560	52.5	86.6	0.572
				9/21/18	7.36	35.02	Kane	2,710	61.9	203	<2.00
				12/13/18	6.23	36.15	Kane	240	7.33	6.12	<0.20
HZ-MW-14D	Intermediate	30 to 40	42.397	7/20/18	6.96	35.44	Kane	42.9	2.18	7.55	<0.20
				9/19/18	7.19	35.21	Kane	36.4	1.98	7.14	<0.20
				12/13/18	6.7	35.70	Kane	44.2	3.3	13.5	<0.20
HZ-MW-15S	Shallow	10 to 15	41.747	9/19/18	6.61	35.14	Kane	29.2	1.2	1.11	<0.20
				12/27/18	4.4	37.35	Kane	11.8	<0.50	<1.00	<0.20
				9/19/18	6.74	35.05	Kane	4,910	152	117	<0.20
HZ-MW-15D	Intermediate	20 to 30	41.787	12/27/18	6.33	35.46	Kane	6,410	229	199	<10.0
				9/24/18	6.23		Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-16	Shallow	15 to 25		1/3/19	5.56		Kane	1.39	<0.50	<1.00	<0.20
				7/24/18	7.45	31.12	Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-17	Shallow	10 to 20	38.567	9/12/18	7.90	30.67	Kane	<1.00	<0.50	<1.00	<0.20
				12/6/18	7.68	30.89	Kane	<1.00	<0.50	<1.00	<0.20
				7/24/18	7.17	35.01	Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-19	Shallow	5 to 15	42.177	9/7/18	7.72	34.46	Kane	<1.00	0.574	<1.00	<0.20
				12/7/18	6.32	35.86	Kane	<1.00	<0.50	<1.00	<0.20
				7/23/18	6.90	32.62	Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-21	Shallow	6 to 16	39.517	9/13/18	7.37	32.15	Kane	<1.00	<0.50	<1.00	<0.20
				12/10/18	6.69	32.83	Kane	<1.00	<0.50	<1.00	<0.20
				7/23/18	6.45	34.38	Kane	1.52	0.849	<1.00	<0.20
HZ-MW-22	Shallow	5 to 15	40.827	9/7/18	7.10	33.73	Kane	1.44	1.33	1.07	<0.20
				12/21/18	5.35	35.48	Kane	1.46	0.956	<1.00	<0.20
				9/7/18	8.26	33.42	Kane	<1.00	<0.500	<1.00	<0.20
HZ-MW-23	Intermediate	28 to 38	41.677	12/19/18	7.40	34.28	Kane	<1.00	<0.50	<1.00	<0.20
				9/18/18	6.92	34.08	Kane	4.48	2.3	14.8	0.577
				12/10/18	6.04	34.96	Kane	2.79	0.908	5.38	<0.20
HZ-MW-24	Intermediate	25 to 35	40.997	7/19/18	8.00	33.91	Kane	<1.00	<0.50	<1.00	<0.20
				9/11/18	8.41	33.50	Kane	<1.00	<0.50	<1.00	<0.20
				12/4/18	7.35	34.56	Kane	3.67	1.36	<1.00	<0.20
HZ-MW-25	Deep	44.33 to 54.33	41.907	7/23/18	7.36	33.33	Kane	11.9	<0.50	2.01	<0.20
				9/17/18	6.83	33.86	Kane	7.12	<0.50	1.3	<0.20
				12/4/18	7.23	33.46	Kane	6.21	<0.50	1.03	<0.20
HZ-MW-26	Intermediate	25 to 35	40.692	7/13/18	7.35	34.25	Kane	2.24	<0.50	1.07	<0.20
				9/18/18	7.73	33.87	Kane	1.75	<0.50	<1.00	<0.20
				12/7/18	8.18	33.42	Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-27	Deep	45 to 55	41.597	7/24/18	6.65	32.09	Kane	<1.00	<0.50	<1.00	<0.20
				9/13/18	7.00	31.74	Kane	<1.00	<0.50	<1.00	<0.20
				12/6/18	6.40	32.34	Kane	<1.00	<0.50	<1.00	<0.20
HZ-MW-28	Intermediate	25 to 35	38.744	7/23/18	6.75	33.56	Kane	54.8	4.2	33.2	1.31
				9/11/18	7.11	33.20	Kane	36.6	3.48	23.7	<0.20
				12/10/18	5.68	34.63	Kane	13.6	4.06	11.4	<0.20
HZ-MW-29	Intermediate	25 to 35	40.309	8/27/18	8.60		Kane	<1.00	<0.50	<1.00	<0.20
				9/20/18	9.54		Kane	<1.00	<0.50	<1.00	<0.20
				12/18/18	7.71		Kane	<1.00	<0.50	<1.00	



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Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812005

December 07, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 11/30/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/07/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812005

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812005-001	MW-7:W	11/30/2018 10:50 AM	11/30/2018 3:11 PM
1812005-002	MW-12:W	11/30/2018 12:30 PM	11/30/2018 3:11 PM
1812005-003	MW-4:W	11/30/2018 2:00 PM	11/30/2018 3:11 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 10:50:00 AM

Project: BSCSS

Lab ID: 1812005-001

Matrix: Groundwater

Client Sample ID: MW-7:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48081 Analyst: AD

Methane	0.197	0.0863	D	mg/L	10	12/4/2018 12:54:00 PM
Ethene	ND	0.151	D	mg/L	10	12/4/2018 12:54:00 PM
Ethane	ND	0.162	D	mg/L	10	12/4/2018 12:54:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22849 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Chloromethane	ND	100	D	µg/L	50	12/6/2018 6:31:01 PM
Vinyl chloride	ND	10.0	D	µg/L	50	12/6/2018 6:31:01 PM
Bromomethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Trichlorofluoromethane (CFC-11)	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Chloroethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,1-Dichloroethene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Methylene chloride	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
trans-1,2-Dichloroethene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Methyl tert-butyl ether (MTBE)	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,1-Dichloroethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
2,2-Dichloropropane	ND	100	D	µg/L	50	12/6/2018 6:31:01 PM
cis-1,2-Dichloroethene	1,440	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Chloroform	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,1,1-Trichloroethane (TCA)	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,1-Dichloropropene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Carbon tetrachloride	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2-Dichloroethane (EDC)	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Benzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Trichloroethene (TCE)	305	50.0	D	µg/L	100	12/7/2018 10:08:50 AM
1,2-Dichloropropane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Bromodichloromethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Dibromomethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
cis-1,3-Dichloropropene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Toluene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
trans-1,3-Dichloropropylene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,1,2-Trichloroethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,3-Dichloropropane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Tetrachloroethene (PCE)	2,670	100	D	µg/L	100	12/7/2018 10:08:50 AM
Dibromochloromethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2-Dibromoethane (EDB)	ND	12.5	D	µg/L	50	12/6/2018 6:31:01 PM
Chlorobenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,1,1,2-Tetrachloroethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 10:50:00 AM

Project: BSCSS

Lab ID: 1812005-001

Matrix: Groundwater

Client Sample ID: MW-7:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22849

Analyst: KT

Ethylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
m,p-Xylene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
o-Xylene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Styrene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Isopropylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Bromoform	ND	100	D	µg/L	50	12/6/2018 6:31:01 PM
1,1,2,2-Tetrachloroethane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
n-Propylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Bromobenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,3,5-Trimethylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
2-Chlorotoluene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
4-Chlorotoluene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
tert-Butylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2,3-Trichloropropane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2,4-Trichlorobenzene	ND	100	D	µg/L	50	12/6/2018 6:31:01 PM
sec-Butylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
4-Isopropyltoluene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,3-Dichlorobenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,4-Dichlorobenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
n-Butylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2-Dichlorobenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2-Dibromo-3-chloropropane	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2,4-Trimethylbenzene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
Hexachloro-1,3-butadiene	ND	200	D	µg/L	50	12/6/2018 6:31:01 PM
Naphthalene	ND	50.0	D	µg/L	50	12/6/2018 6:31:01 PM
1,2,3-Trichlorobenzene	ND	200	D	µg/L	50	12/6/2018 6:31:01 PM
Surr: Dibromofluoromethane	98.1	45.4 - 152	D	%Rec	50	12/6/2018 6:31:01 PM
Surr: Toluene-d8	98.7	40.1 - 139	D	%Rec	50	12/6/2018 6:31:01 PM
Surr: 1-Bromo-4-fluorobenzene	98.1	64.2 - 128	D	%Rec	50	12/6/2018 6:31:01 PM

Ion Chromatography by EPA Method 300.0

Batch ID: R48160

Analyst: GM

Chloride	8.50	0.500	D	mg/L	5	12/5/2018 3:47:00 PM
Sulfate	35.0	1.50	D	mg/L	5	12/5/2018 3:47:00 PM

Dissolved Metals by EPA Method 200.8

Batch ID: 22822

Analyst: WC

Iron	1,620	100		µg/L	1	12/4/2018 12:48:41 PM
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Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812005-001
Client Sample ID: MW-7:W

Collection Date: 11/30/2018 10:50:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	4.18	0.500		mg/L	1	12/5/2018 6:29:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22835		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/4/2018 2:13:00 PM



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 12:30:00 PM

Project: BSCSS

Lab ID: 1812005-002

Matrix: Groundwater

Client Sample ID: MW-12:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48081 Analyst: AD

Methane	0.727	0.0863	D	mg/L	10	12/4/2018 12:57:00 PM
Ethene	ND	0.151	D	mg/L	10	12/4/2018 12:57:00 PM
Ethane	ND	0.162	D	mg/L	10	12/4/2018 12:57:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22849 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	20.0	DQ	µg/L	20	12/7/2018 11:09:44 AM
Chloromethane	ND	40.0	D	µg/L	20	12/7/2018 11:09:44 AM
Vinyl chloride	ND	4.00	D	µg/L	20	12/7/2018 11:09:44 AM
Bromomethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Trichlorofluoromethane (CFC-11)	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Chloroethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1-Dichloroethene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Methylene chloride	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
trans-1,2-Dichloroethene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Methyl tert-butyl ether (MTBE)	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1-Dichloroethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
2,2-Dichloropropane	ND	40.0	D	µg/L	20	12/7/2018 11:09:44 AM
cis-1,2-Dichloroethene	669	100	D	µg/L	100	12/6/2018 6:00:41 PM
Chloroform	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1,1-Trichloroethane (TCA)	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1-Dichloropropene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Carbon tetrachloride	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2-Dichloroethane (EDC)	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Benzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Trichloroethene (TCE)	194	50.0	D	µg/L	100	12/6/2018 6:00:41 PM
1,2-Dichloropropane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Bromodichloromethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Dibromomethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
cis-1,3-Dichloropropene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Toluene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
trans-1,3-Dichloropropylene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1,2-Trichloroethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,3-Dichloropropane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Tetrachloroethene (PCE)	2,340	100	D	µg/L	100	12/6/2018 6:00:41 PM
Dibromochloromethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2-Dibromoethane (EDB)	ND	5.00	D	µg/L	20	12/7/2018 11:09:44 AM
Chlorobenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1,1,2-Tetrachloroethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 12:30:00 PM

Project: BSCSS

Lab ID: 1812005-002

Matrix: Groundwater

Client Sample ID: MW-12:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22849

Analyst: KT

Ethylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
m,p-Xylene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
o-Xylene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Styrene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Isopropylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Bromoform	ND	40.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,1,2,2-Tetrachloroethane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
n-Propylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Bromobenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,3,5-Trimethylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
2-Chlorotoluene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
4-Chlorotoluene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
tert-Butylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2,3-Trichloropropane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2,4-Trichlorobenzene	ND	40.0	D	µg/L	20	12/7/2018 11:09:44 AM
sec-Butylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
4-Isopropyltoluene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,3-Dichlorobenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,4-Dichlorobenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
n-Butylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2-Dichlorobenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2-Dibromo-3-chloropropane	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2,4-Trimethylbenzene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
Hexachloro-1,3-butadiene	ND	80.0	D	µg/L	20	12/7/2018 11:09:44 AM
Naphthalene	ND	20.0	D	µg/L	20	12/7/2018 11:09:44 AM
1,2,3-Trichlorobenzene	ND	80.0	D	µg/L	20	12/7/2018 11:09:44 AM
Surr: Dibromofluoromethane	97.3	45.4 - 152	D	%Rec	100	12/6/2018 6:00:41 PM
Surr: Toluene-d8	97.2	40.1 - 139	D	%Rec	100	12/6/2018 6:00:41 PM
Surr: 1-Bromo-4-fluorobenzene	100	64.2 - 128	D	%Rec	100	12/6/2018 6:00:41 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160

Analyst: GM

Chloride	46.2	5.00	D	mg/L	50	12/5/2018 4:10:00 PM
Sulfate	14.0	0.300		mg/L	1	12/4/2018 9:56:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812005-002
Client Sample ID: MW-12:W

Collection Date: 11/30/2018 12:30:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22822		Analyst: WC
Iron	2,330	100		µg/L	1	12/4/2018 12:52:42 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	3.90	0.500		mg/L	1	12/5/2018 9:42:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22835		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/4/2018 2:18:00 PM



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 2:00:00 PM

Project: BSCSS

Lab ID: 1812005-003

Matrix: Groundwater

Client Sample ID: MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48081 Analyst: AD

Methane	0.721	0.0863	D	mg/L	10	12/4/2018 1:00:00 PM
Ethene	ND	0.151	D	mg/L	10	12/4/2018 1:00:00 PM
Ethane	ND	0.162	D	mg/L	10	12/4/2018 1:00:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22849 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	50.0	DQ	µg/L	50	12/7/2018 10:39:17 AM
Chloromethane	ND	100	D	µg/L	50	12/7/2018 10:39:17 AM
Vinyl chloride	ND	10.0	D	µg/L	50	12/7/2018 10:39:17 AM
Bromomethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Trichlorofluoromethane (CFC-11)	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Chloroethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,1-Dichloroethene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Methylene chloride	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
trans-1,2-Dichloroethene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Methyl tert-butyl ether (MTBE)	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,1-Dichloroethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
2,2-Dichloropropane	ND	100	D	µg/L	50	12/7/2018 10:39:17 AM
cis-1,2-Dichloroethene	1,720	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Chloroform	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,1,1-Trichloroethane (TCA)	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,1-Dichloropropene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Carbon tetrachloride	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2-Dichloroethane (EDC)	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Benzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Trichloroethene (TCE)	373	25.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2-Dichloropropane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Bromodichloromethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Dibromomethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
cis-1,3-Dichloropropene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Toluene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
trans-1,3-Dichloropropylene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,1,2-Trichloroethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,3-Dichloropropane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Tetrachloroethene (PCE)	4,370	2,000	D	µg/L	2000	12/6/2018 5:30:29 PM
Dibromochloromethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2-Dibromoethane (EDB)	ND	12.5	D	µg/L	50	12/7/2018 10:39:17 AM
Chlorobenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,1,1,2-Tetrachloroethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 2:00:00 PM

Project: BSCSS

Lab ID: 1812005-003

Matrix: Groundwater

Client Sample ID: MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22849

Analyst: KT

Ethylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
m,p-Xylene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
o-Xylene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Styrene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Isopropylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Bromoform	ND	100	D	µg/L	50	12/7/2018 10:39:17 AM
1,1,2,2-Tetrachloroethane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
n-Propylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Bromobenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,3,5-Trimethylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
2-Chlorotoluene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
4-Chlorotoluene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
tert-Butylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2,3-Trichloropropane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2,4-Trichlorobenzene	ND	100	D	µg/L	50	12/7/2018 10:39:17 AM
sec-Butylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
4-Isopropyltoluene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,3-Dichlorobenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,4-Dichlorobenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
n-Butylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2-Dichlorobenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2-Dibromo-3-chloropropane	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2,4-Trimethylbenzene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
Hexachloro-1,3-butadiene	ND	200	D	µg/L	50	12/7/2018 10:39:17 AM
Naphthalene	ND	50.0	D	µg/L	50	12/7/2018 10:39:17 AM
1,2,3-Trichlorobenzene	ND	200	D	µg/L	50	12/7/2018 10:39:17 AM
Surr: Dibromofluoromethane	97.1	45.4 - 152	D	%Rec	2000	12/6/2018 5:30:29 PM
Surr: Toluene-d8	97.6	40.1 - 139	D	%Rec	2000	12/6/2018 5:30:29 PM
Surr: 1-Bromo-4-fluorobenzene	102	64.2 - 128	D	%Rec	2000	12/6/2018 5:30:29 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160

Analyst: GM

Chloride	16.3	1.00	D	mg/L	10	12/5/2018 4:33:00 PM
Sulfate	18.8	0.600	D	mg/L	2	12/4/2018 9:09:00 PM



Client: Kane Environmental, Inc.

Collection Date: 11/30/2018 2:00:00 PM

Project: BSCSS

Lab ID: 1812005-003

Matrix: Groundwater

Client Sample ID: MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 22822 Analyst: WC

Iron	604	100		µg/L	1	12/4/2018 12:56:43 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48176 Analyst: GM

Total Organic Carbon	3.11	0.500		mg/L	1	12/5/2018 10:13:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 22835 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/4/2018 2:23:00 PM
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Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22835	SampType: MBLK	Units: mg/L	Prep Date: 12/4/2018	RunNo: 48071							
Client ID: MBLKW	Batch ID: 22835		Analysis Date: 12/4/2018	SeqNo: 939000							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22835	SampType: LCS	Units: mg/L	Prep Date: 12/4/2018	RunNo: 48071							
Client ID: LCSW	Batch ID: 22835		Analysis Date: 12/4/2018	SeqNo: 939001							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.560 0.100 0.5000 0 112 80 120

Sample ID 1811433-001BDUP	SampType: DUP	Units: mg/L	Prep Date: 12/4/2018	RunNo: 48071							
Client ID: BATCH	Batch ID: 22835		Analysis Date: 12/4/2018	SeqNo: 939006							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1811433-001BMS	SampType: MS	Units: mg/L	Prep Date: 12/4/2018	RunNo: 48071							
Client ID: BATCH	Batch ID: 22835		Analysis Date: 12/4/2018	SeqNo: 939007							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.344 0.100 0.5000 0 68.8 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID 1811433-001BMSD	SampType: MSD	Units: mg/L	Prep Date: 12/4/2018	RunNo: 48071							
Client ID: BATCH	Batch ID: 22835		Analysis Date: 12/4/2018	SeqNo: 939008							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.352 0.100 0.5000 0 70.4 70 130 0.3440 2.30 30



Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812005-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/4/2018	RunNo: 48071					
Client ID: MW-7:W	Batch ID: 22835				Analysis Date: 12/4/2018	SeqNo: 939419					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812005-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/4/2018	RunNo: 48071					
Client ID: MW-7:W	Batch ID: 22835				Analysis Date: 12/4/2018	SeqNo: 939420					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.414	0.100	0.5000	0	82.8	70	130				

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-48100	SampType:	MBLK	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48100		
Client ID:	MBLKW	Batch ID:	R48100			Analysis Date:	12/4/2018	SeqNo:	939482		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.300

Sample ID	LCS-48100	SampType:	LCS	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48100		
Client ID:	LCSW	Batch ID:	R48100			Analysis Date:	12/4/2018	SeqNo:	939483		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 3.73 0.300 3.750 0 99.4 90 110

Sample ID	1812005-003FDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48100		
Client ID:	MW-4:W	Batch ID:	R48100			Analysis Date:	12/4/2018	SeqNo:	939506		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 18.2 0.300 18.16 0.0991 20 E

Sample ID	1812005-003FMS	SampType:	MS	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48100		
Client ID:	MW-4:W	Batch ID:	R48100			Analysis Date:	12/4/2018	SeqNo:	939507		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 22.1 0.300 3.750 18.16 105 80 120 E

Sample ID	1812005-003FMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48100		
Client ID:	MW-4:W	Batch ID:	R48100			Analysis Date:	12/5/2018	SeqNo:	939508		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 22.2 0.300 3.750 18.16 107 80 120 22.10 0.384 20 E

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812005-001FDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48100		
Client ID:	MW-7:W	Batch ID:	R48100			Analysis Date:	12/5/2018	SeqNo:	939509		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	36.0	0.300						36.09	0.205	20	E
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Sample ID	1812005-001FMS	SampType:	MS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48100		
Client ID:	MW-7:W	Batch ID:	R48100			Analysis Date:	12/5/2018	SeqNo:	939510		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	39.9	0.300	3.750	36.09	102	80	120				E
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Sample ID	MB-48160	SampType:	MBLK	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	MBLKW	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940757		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-48160	SampType:	LCS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	LCSW	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940758		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.712	0.100	0.7500	0	94.9	90	110				
Sulfate	3.60	0.300	3.750	0	96.1	90	110				

Sample ID	1812048-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940766		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.77	0.100						3.738	0.773	20	E
Sulfate	1.83	0.300						1.813	0.769	20	

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812048-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940767		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.66	0.100	0.7500	3.738	123	80	120				ES
Sulfate	5.38	0.300	3.750	1.813	95.2	80	120				

NOTES:
 S - Outlying spike recovery(ies) observed.

Sample ID	1812048-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940770		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.66	0.100	0.7500	3.738	123	80	120	4.658	0.129	20	ES
Sulfate	5.41	0.300	3.750	1.813	96.0	80	120	5.384	0.519	20	

NOTES:
 S - Outlying spike recovery(ies) observed.

Sample ID	1812062-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/6/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/6/2018	SeqNo:	940800		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	30.4	0.200						30.66	0.714	20	DE
Sulfate	32.9	0.600						33.15	0.684	20	DE

Sample ID	1812062-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/6/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/6/2018	SeqNo:	940801		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	32.0	0.200	1.500	30.66	86.1	80	120				DE
Sulfate	40.8	0.600	7.500	33.15	102	80	120				DE

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48176	SampType: MBLK	Units: mg/L	Prep Date: 12/5/2018	RunNo: 48176							
Client ID: MBLKW	Batch ID: R48176		Analysis Date: 12/5/2018	SeqNo: 941089							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48176	SampType: LCS	Units: mg/L	Prep Date: 12/5/2018	RunNo: 48176							
Client ID: LCSW	Batch ID: R48176		Analysis Date: 12/5/2018	SeqNo: 941090							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.10 0.500 5.000 0 102 80 120

Sample ID 1811435-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941104							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.998 0.500 1.142 13.4 20

Sample ID 1811435-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941105							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.671 0.500 5.000 1.142 -9.42 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1811435-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941106							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.658 0.500 5.000 1.142 -9.68 70 130 0.6711 1.96 30 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.



Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812005-001DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/6/2018	RunNo: 48176					
Client ID: MW-7:W	Batch ID: R48176				Analysis Date: 12/6/2018	SeqNo: 941107					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.83	0.500						4.179	8.79	20	

Sample ID 1812005-001DMS	SampType: MS	Units: mg/L			Prep Date: 12/6/2018	RunNo: 48176					
Client ID: MW-7:W	Batch ID: R48176				Analysis Date: 12/6/2018	SeqNo: 941108					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.70	0.500	5.000	4.179	90.5	70	130				

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID	MB-22822	SampType:	MBLK	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	48072		
Client ID:	MBLKW	Batch ID:	22822	Analysis Date:	12/4/2018	SeqNo:	938840				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID	LCS-22822	SampType:	LCS	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	48072		
Client ID:	LCSW	Batch ID:	22822	Analysis Date:	12/4/2018	SeqNo:	938841				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 954 100 1,000 0 95.4 50 150

Sample ID	1811444-001BDUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	48072		
Client ID:	BATCH	Batch ID:	22822	Analysis Date:	12/4/2018	SeqNo:	938843				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID	1811444-001BMS	SampType:	MS	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	48072		
Client ID:	BATCH	Batch ID:	22822	Analysis Date:	12/4/2018	SeqNo:	938844				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,830 100 5,000 0 96.5 50 150

Sample ID	1811444-001BMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/4/2018	RunNo:	48072		
Client ID:	BATCH	Batch ID:	22822	Analysis Date:	12/4/2018	SeqNo:	938845				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,920 100 5,000 0 98.5 50 150 4,827 1.98 30



Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22810FB	SampType: MBLK	Units: µg/L	Prep Date: 12/4/2018	RunNo: 48072							
Client ID: MBLKW	Batch ID: 22822	Analysis Date: 12/4/2018	SeqNo: 938856								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48081	SampType:	MBLK	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48081		
Client ID:	MBLKW	Batch ID:	R48081			Analysis Date:	12/4/2018	SeqNo:	939077		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48081	SampType:	LCS	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48081		
Client ID:	LCSW	Batch ID:	R48081			Analysis Date:	12/4/2018	SeqNo:	939076		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	836	0.00863	1,000	0	83.6	70	130				
Ethene	828	0.0151	1,000	0	82.8	70	130				
Ethane	824	0.0162	1,000	0	82.4	70	130				

Sample ID	1811444-001DREP	SampType:	REP	Units:	mg/L	Prep Date:	12/4/2018	RunNo:	48081		
Client ID:	BATCH	Batch ID:	R48081			Analysis Date:	12/4/2018	SeqNo:	939071		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863						0		30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22849	SampType:	LCS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150		
Client ID:	LCSW	Batch ID:	22849	Analysis Date:	12/6/2018	SeqNo:	940574				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.8	1.00	20.00	0	83.9	18.7	171				
Chloromethane	17.1	2.00	20.00	0	85.5	38.5	171				
Vinyl chloride	18.4	0.200	20.00	0	92.1	48	145				
Bromomethane	24.5	1.00	20.00	0	123	32.5	184				
Trichlorofluoromethane (CFC-11)	19.3	1.00	20.00	0	96.4	43.5	149				
Chloroethane	17.8	1.00	20.00	0	88.9	43.8	168				
1,1-Dichloroethene	19.5	1.00	20.00	0	97.6	57.5	150				
Methylene chloride	19.4	1.00	20.00	0	96.9	67.1	131				
trans-1,2-Dichloroethene	19.9	1.00	20.00	0	99.3	71.7	129				
Methyl tert-butyl ether (MTBE)	20.3	1.00	20.00	0	101	58	138				
1,1-Dichloroethane	19.9	1.00	20.00	0	99.6	67.9	134				
2,2-Dichloropropane	27.1	2.00	20.00	0	135	26.5	185				
cis-1,2-Dichloroethene	19.8	1.00	20.00	0	99.2	70.2	139				
Chloroform	19.8	1.00	20.00	0	99.0	66.3	131				
1,1,1-Trichloroethane (TCA)	19.7	1.00	20.00	0	98.5	63	140				
1,1-Dichloropropene	20.0	1.00	20.00	0	99.9	69.9	124				
Carbon tetrachloride	19.6	1.00	20.00	0	98.0	66.2	134				
1,2-Dichloroethane (EDC)	19.7	1.00	20.00	0	98.4	67	126				
Benzene	19.8	1.00	20.00	0	99.2	69.3	132				
Trichloroethene (TCE)	19.8	0.500	20.00	0	98.8	65.2	136				
1,2-Dichloropropane	20.0	1.00	20.00	0	99.8	70.5	130				
Bromodichloromethane	19.7	1.00	20.00	0	98.4	67.2	137				
Dibromomethane	20.3	1.00	20.00	0	102	69.3	143				
cis-1,3-Dichloropropene	20.6	1.00	20.00	0	103	62.6	137				
Toluene	20.2	1.00	20.00	0	101	61.3	145				
trans-1,3-Dichloropropylene	20.7	1.00	20.00	0	104	56.5	163				
1,1,2-Trichloroethane	20.1	1.00	20.00	0	101	71.7	131				
1,3-Dichloropropane	20.2	1.00	20.00	0	101	73.5	127				
Tetrachloroethene (PCE)	20.5	1.00	20.00	0	102	47.5	147				
Dibromochloromethane	19.5	1.00	20.00	0	97.4	67.2	134				
1,2-Dibromoethane (EDB)	20.1	0.250	20.00	0	101	73.6	125				

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22849	SampType:	LCS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150		
Client ID:	LCSW	Batch ID:	22849	Analysis Date:	12/6/2018	SeqNo:	940574				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.1	1.00	20.00	0	101	73.9	126				
1,1,1,2-Tetrachloroethane	19.8	1.00	20.00	0	99.2	76.8	124				
Ethylbenzene	20.1	1.00	20.00	0	100	72	130				
m,p-Xylene	40.7	1.00	40.00	0	102	70.3	134				
o-Xylene	20.5	1.00	20.00	0	102	72.1	131				
Styrene	20.5	1.00	20.00	0	103	64.3	140				
Isopropylbenzene	20.5	1.00	20.00	0	102	73.9	128				
Bromoform	20.0	2.00	20.00	0	99.9	55.3	141				
1,1,2,2-Tetrachloroethane	20.8	1.00	20.00	0	104	62.9	132				
n-Propylbenzene	20.7	1.00	20.00	0	104	74.5	127				
Bromobenzene	20.2	1.00	20.00	0	101	71	131				
1,3,5-Trimethylbenzene	20.3	1.00	20.00	0	102	73.1	128				
2-Chlorotoluene	20.5	1.00	20.00	0	102	70.8	130				
4-Chlorotoluene	20.6	1.00	20.00	0	103	70.1	131				
tert-Butylbenzene	20.2	1.00	20.00	0	101	68.2	131				
1,2,3-Trichloropropane	21.2	1.00	20.00	0	106	67.7	131				
1,2,4-Trichlorobenzene	21.7	2.00	20.00	0	108	41	139				
sec-Butylbenzene	19.9	1.00	20.00	0	99.7	72	129				
4-Isopropyltoluene	19.9	1.00	20.00	0	99.6	69.2	130				
1,3-Dichlorobenzene	21.1	1.00	20.00	0	106	69.5	128				
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	66.8	119				
n-Butylbenzene	21.2	1.00	20.00	0	106	73.8	127				
1,2-Dichlorobenzene	20.7	1.00	20.00	0	104	69.7	119				
1,2-Dibromo-3-chloropropane	21.9	1.00	20.00	0	110	63.1	136				
1,2,4-Trimethylbenzene	20.1	1.00	20.00	0	100	73.4	127				
Hexachloro-1,3-butadiene	21.7	4.00	20.00	0	108	58.6	138				
Naphthalene	21.9	1.00	20.00	0	110	41.8	165				
1,2,3-Trichlorobenzene	21.8	4.00	20.00	0	109	35.8	155				
Surr: Dibromofluoromethane	25.1		25.00		101	45.4	152				
Surr: Toluene-d8	24.6		25.00		98.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.6		25.00		102	64.2	128				

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-22849	SampType: LCS	Units: µg/L	Prep Date: 12/5/2018	RunNo: 48150							
Client ID: LCSW	Batch ID: 22849		Analysis Date: 12/6/2018	SeqNo: 940574							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-22849	SampType: MBLK	Units: µg/L	Prep Date: 12/5/2018	RunNo: 48150							
Client ID: MBLKW	Batch ID: 22849		Analysis Date: 12/6/2018	SeqNo: 940576							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-22849	SampType: MBLK	Units: µg/L	Prep Date: 12/5/2018	RunNo: 48150
Client ID: MBLKW	Batch ID: 22849		Analysis Date: 12/6/2018	SeqNo: 940576

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-22849	SampType: MBLK	Units: µg/L	Prep Date: 12/5/2018	RunNo: 48150							
Client ID: MBLKW	Batch ID: 22849		Analysis Date: 12/6/2018	SeqNo: 940576							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.7		25.00		98.8	45.4	152				
Surr: Toluene-d8	24.8		25.00		99.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.2	64.2	128				

Sample ID 1811454-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/5/2018	RunNo: 48150							
Client ID: BATCH	Batch ID: 22849		Analysis Date: 12/6/2018	SeqNo: 940560							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 1812005
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1811454-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150		
Client ID:	BATCH	Batch ID:	22849	Analysis Date:	12/6/2018	SeqNo:	940560				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1811454-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150		
Client ID:	BATCH	Batch ID:	22849	Analysis Date:	12/6/2018	SeqNo:	940560				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.6		25.00		98.6	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.4	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.6		25.00		102	64.2	128		0		

Sample ID	1812005-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150		
Client ID:	MW-7:W	Batch ID:	22849	Analysis Date:	12/6/2018	SeqNo:	940566				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	877	50.0	1,000	0	87.7	33.3	122				D
Chloromethane	902	100	1,000	0	90.2	39.7	143				D
Vinyl chloride	1,010	10.0	1,000	0	101	41	165				D
Bromomethane	1,570	50.0	1,000	0	157	31.5	135				DS
Trichlorofluoromethane (CFC-11)	1,100	50.0	1,000	0	110	54.7	138				D
Chloroethane	995	50.0	1,000	0	99.5	49.9	143				D
1,1-Dichloroethene	1,090	50.0	1,000	0	109	51.6	164				D
Methylene chloride	1,050	50.0	1,000	0	105	61.6	135				D
trans-1,2-Dichloroethene	1,110	50.0	1,000	0	111	63.5	138				D
Methyl tert-butyl ether (MTBE)	1,050	50.0	1,000	0	105	60.9	132				D
1,1-Dichloroethane	1,070	50.0	1,000	0	107	55.7	151				D
2,2-Dichloropropane	1,100	100	1,000	0	110	37.7	150				D
cis-1,2-Dichloroethene	2,520	50.0	1,000	1,445	107	60	154				DE

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812005-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150
Client ID:	MW-7:W	Batch ID:	22849			Analysis Date:	12/6/2018	SeqNo:	940566

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	1,090	50.0	1,000	0	109	48.1	140				D
1,1,1-Trichloroethane (TCA)	1,130	50.0	1,000	0	113	64.2	146				D
1,1-Dichloropropene	1,120	50.0	1,000	0	112	73.8	136				D
Carbon tetrachloride	1,120	50.0	1,000	0	112	62.7	146				D
1,2-Dichloroethane (EDC)	1,080	50.0	1,000	0	108	63.4	137				D
Benzene	1,100	50.0	1,000	0	110	65.4	138				D
Trichloroethene (TCE)	1,430	25.0	1,000	316.6	112	60.4	134				D
1,2-Dichloropropane	1,070	50.0	1,000	0	107	62.6	138				D
Bromodichloromethane	1,080	50.0	1,000	0	108	59.4	139				D
Dibromomethane	1,100	50.0	1,000	0	110	58.7	148				D
cis-1,3-Dichloropropene	1,060	50.0	1,000	0	106	63.8	132				D
Toluene	1,120	50.0	1,000	0	112	52	147				D
trans-1,3-Dichloropropylene	1,050	50.0	1,000	0	105	57.7	125				D
1,1,2-Trichloroethane	1,090	50.0	1,000	0	109	57.5	153				D
1,3-Dichloropropane	1,090	50.0	1,000	0	109	54.1	157				D
Tetrachloroethene (PCE)	3,290	50.0	1,000	2,191	110	50.3	133				DE
Dibromochloromethane	1,090	50.0	1,000	0	109	61.6	139				D
1,2-Dibromoethane (EDB)	1,090	12.5	1,000	0	109	63.2	134				D
Chlorobenzene	1,110	50.0	1,000	0	111	65.8	134				D
1,1,1,2-Tetrachloroethane	1,100	50.0	1,000	0	110	65.4	135				D
Ethylbenzene	1,130	50.0	1,000	0	113	64.5	136				D
m,p-Xylene	2,240	50.0	2,000	0	112	63.3	135				D
o-Xylene	1,130	50.0	1,000	0	113	64.8	150				D
Styrene	1,120	50.0	1,000	0	112	52.9	163				D
Isopropylbenzene	1,150	50.0	1,000	0	115	56	147				D
Bromoform	1,100	100	1,000	0	110	57.7	139				D
1,1,1,2-Tetrachloroethane	1,120	50.0	1,000	0	112	59.8	146				D
n-Propylbenzene	1,120	50.0	1,000	0	112	57.6	142				D
Bromobenzene	1,120	50.0	1,000	0	112	69.3	157				D
1,3,5-Trimethylbenzene	1,090	50.0	1,000	0	109	59.9	136				D
2-Chlorotoluene	1,110	50.0	1,000	0	111	61.7	134				D

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812005-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150
Client ID:	MW-7:W	Batch ID:	22849			Analysis Date:	12/6/2018	SeqNo:	940566

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	1,110	50.0	1,000	0	111	58.4	134				D
tert-Butylbenzene	1,140	50.0	1,000	0	114	66.8	141				D
1,2,3-Trichloropropane	1,100	50.0	1,000	0	110	62.4	129				D
1,2,4-Trichlorobenzene	1,100	100	1,000	0	110	50.9	133				D
sec-Butylbenzene	1,130	50.0	1,000	0	113	56	146				D
4-Isopropyltoluene	1,120	50.0	1,000	0	112	56.4	136				D
1,3-Dichlorobenzene	1,130	50.0	1,000	0	113	58.2	128				D
1,4-Dichlorobenzene	1,120	50.0	1,000	0	112	60.1	123				D
n-Butylbenzene	1,120	50.0	1,000	0	112	54.6	135				D
1,2-Dichlorobenzene	1,110	50.0	1,000	0	111	65.4	133				D
1,2-Dibromo-3-chloropropane	1,090	50.0	1,000	0	109	51.8	142				D
1,2,4-Trimethylbenzene	1,100	50.0	1,000	0	110	63.7	132				D
Hexachloro-1,3-butadiene	1,160	200	1,000	0	116	58.1	130				D
Naphthalene	1,100	50.0	1,000	0	110	50.7	154				D
1,2,3-Trichlorobenzene	1,130	200	1,000	0	113	57	131				D
Surr: Dibromofluoromethane	1,260		1,250		101	45.4	152				D
Surr: Toluene-d8	1,230		1,250		98.4	40.1	139				D
Surr: 1-Bromo-4-fluorobenzene	1,270		1,250		101	64.2	128				D

NOTES:

- S - Outlying spike recovery(ies) observed.
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812005-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150
Client ID:	MW-7:W	Batch ID:	22849			Analysis Date:	12/6/2018	SeqNo:	940567

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	856	50.0	1,000	0	85.6	33.3	122	876.9	2.44	30	D
Chloromethane	948	100	1,000	0	94.8	39.7	143	902.4	4.93	30	D
Vinyl chloride	999	10.0	1,000	0	99.9	41	165	1,011	1.21	30	D
Bromomethane	1,440	50.0	1,000	0	144	31.5	135	1,568	8.64	30	DS
Trichlorofluoromethane (CFC-11)	1,070	50.0	1,000	0	107	54.7	138	1,098	2.84	30	D

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812005-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150		
Client ID:	MW-7:W	Batch ID:	22849	Analysis Date:	12/6/2018	SeqNo:	940567				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	959	50.0	1,000	0	95.9	49.9	143	994.7	3.64	30	D
1,1-Dichloroethene	1,070	50.0	1,000	0	107	51.6	164	1,086	1.39	30	D
Methylene chloride	1,010	50.0	1,000	0	101	61.6	135	1,046	3.18	30	D
trans-1,2-Dichloroethene	1,050	50.0	1,000	0	105	63.5	138	1,108	5.37	30	D
Methyl tert-butyl ether (MTBE)	1,010	50.0	1,000	0	101	60.9	132	1,048	3.60	30	D
1,1-Dichloroethane	1,050	50.0	1,000	0	105	55.7	151	1,069	1.94	30	D
2,2-Dichloropropane	1,030	100	1,000	0	103	37.7	150	1,096	6.22	30	D
cis-1,2-Dichloroethene	2,400	50.0	1,000	1,445	95.7	60	154	2,518	4.71	30	DE
Chloroform	1,050	50.0	1,000	0	105	48.1	140	1,086	3.53	30	D
1,1,1-Trichloroethane (TCA)	1,080	50.0	1,000	0	108	64.2	146	1,126	3.93	30	D
1,1-Dichloropropene	1,050	50.0	1,000	0	105	73.8	136	1,116	5.67	30	D
Carbon tetrachloride	1,090	50.0	1,000	0	109	62.7	146	1,119	2.86	30	D
1,2-Dichloroethane (EDC)	1,020	50.0	1,000	0	102	63.4	137	1,081	5.97	30	D
Benzene	1,040	50.0	1,000	0	104	65.4	138	1,096	4.88	30	D
Trichloroethene (TCE)	1,370	25.0	1,000	316.6	105	60.4	134	1,433	4.81	30	D
1,2-Dichloropropane	1,020	50.0	1,000	0	102	62.6	138	1,070	5.16	30	D
Bromodichloromethane	1,040	50.0	1,000	0	104	59.4	139	1,081	4.20	30	D
Dibromomethane	1,050	50.0	1,000	0	105	58.7	148	1,099	4.17	30	D
cis-1,3-Dichloropropene	1,010	50.0	1,000	0	101	63.8	132	1,061	4.81	30	D
Toluene	1,060	50.0	1,000	0	106	52	147	1,118	4.99	30	D
trans-1,3-Dichloropropylene	1,010	50.0	1,000	0	101	57.7	125	1,050	3.56	30	D
1,1,2-Trichloroethane	1,040	50.0	1,000	0	104	57.5	153	1,089	4.78	30	D
1,3-Dichloropropane	1,030	50.0	1,000	0	103	54.1	157	1,091	5.52	30	D
Tetrachloroethene (PCE)	3,130	50.0	1,000	2,191	93.7	50.3	133	3,289	5.01	30	DE
Dibromochloromethane	1,050	50.0	1,000	0	105	61.6	139	1,091	4.21	30	D
1,2-Dibromoethane (EDB)	1,050	12.5	1,000	0	105	63.2	134	1,094	3.92	30	D
Chlorobenzene	1,060	50.0	1,000	0	106	65.8	134	1,110	4.16	30	D
1,1,1,2-Tetrachloroethane	1,080	50.0	1,000	0	108	65.4	135	1,104	2.49	30	D
Ethylbenzene	1,080	50.0	1,000	0	108	64.5	136	1,125	3.89	30	D
m,p-Xylene	2,150	50.0	2,000	0	108	63.3	135	2,242	4.12	30	D
o-Xylene	1,070	50.0	1,000	0	107	64.8	150	1,126	4.99	30	D

Work Order: 1812005
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812005-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/5/2018	RunNo:	48150
Client ID:	MW-7:W	Batch ID:	22849			Analysis Date:	12/6/2018	SeqNo:	940567

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	1,070	50.0	1,000	0	107	52.9	163	1,117	4.19	30	D
Isopropylbenzene	1,090	50.0	1,000	0	109	56	147	1,152	5.14	30	D
Bromoform	1,030	100	1,000	0	103	57.7	139	1,104	6.97	30	D
1,1,2,2-Tetrachloroethane	1,040	50.0	1,000	0	104	59.8	146	1,117	7.17	30	D
n-Propylbenzene	1,110	50.0	1,000	0	111	57.6	142	1,125	1.00	30	D
Bromobenzene	1,060	50.0	1,000	0	106	69.3	157	1,118	5.65	30	D
1,3,5-Trimethylbenzene	1,060	50.0	1,000	0	106	59.9	136	1,089	2.29	30	D
2-Chlorotoluene	1,050	50.0	1,000	0	105	61.7	134	1,107	4.87	30	D
4-Chlorotoluene	1,060	50.0	1,000	0	106	58.4	134	1,108	4.53	30	D
tert-Butylbenzene	1,100	50.0	1,000	0	110	66.8	141	1,142	4.01	30	D
1,2,3-Trichloropropane	1,010	50.0	1,000	0	101	62.4	129	1,103	8.70	30	D
1,2,4-Trichlorobenzene	1,030	100	1,000	0	103	50.9	133	1,103	7.36	30	D
sec-Butylbenzene	1,090	50.0	1,000	0	109	56	146	1,128	3.87	30	D
4-Isopropyltoluene	1,060	50.0	1,000	0	106	56.4	136	1,123	5.39	30	D
1,3-Dichlorobenzene	1,090	50.0	1,000	0	109	58.2	128	1,127	2.92	30	D
1,4-Dichlorobenzene	1,070	50.0	1,000	0	107	60.1	123	1,121	4.26	30	D
n-Butylbenzene	1,080	50.0	1,000	0	108	54.6	135	1,119	3.25	30	D
1,2-Dichlorobenzene	1,070	50.0	1,000	0	107	65.4	133	1,114	3.83	30	D
1,2-Dibromo-3-chloropropane	964	50.0	1,000	0	96.4	51.8	142	1,092	12.4	30	D
1,2,4-Trimethylbenzene	1,060	50.0	1,000	0	106	63.7	132	1,103	3.79	30	D
Hexachloro-1,3-butadiene	1,090	200	1,000	0	109	58.1	130	1,160	5.85	30	D
Naphthalene	972	50.0	1,000	0	97.2	50.7	154	1,097	12.1	30	D
1,2,3-Trichlorobenzene	1,020	200	1,000	0	102	57	131	1,135	10.4	30	D
Surr: Dibromofluoromethane	1,250		1,250		100	45.4	152		0		D
Surr: Toluene-d8	1,220		1,250		97.4	40.1	139		0		D
Surr: 1-Bromo-4-fluorobenzene	1,240		1,250		99.4	64.2	128		0		D

NOTES:

- S - Outlying spike recovery(ies) observed.
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812005**
 Date Received: **11/30/2018 3:11:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	5.1
Sample	4.1
Temp Blank	3.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812035

December 10, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 4 sample(s) on 12/3/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812035

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812035-001	MW-22:W	12/03/2018 11:35 AM	12/03/2018 3:45 PM
1812035-002	MW-5:W	12/03/2018 1:25 PM	12/03/2018 3:45 PM
1812035-003	MW-21:W	12/03/2018 2:25 PM	12/03/2018 3:45 PM
1812035-004	Trip Blank	11/28/2018 1:18 PM	12/03/2018 3:45 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/3/2018 11:35:00 AM

Project: BSCSS

Lab ID: 1812035-001

Matrix: Groundwater

Client Sample ID: MW-22:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	0.0695	0.0173	D	mg/L	2	12/7/2018 11:36:00 AM
Ethene	ND	0.0303	D	mg/L	2	12/7/2018 11:36:00 AM
Ethane	ND	0.0324	D	mg/L	2	12/7/2018 11:36:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22874 Analyst: TN

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/7/2018 6:06:43 AM
Chloromethane	ND	2.00		µg/L	1	12/7/2018 6:06:43 AM
Vinyl chloride	ND	0.200		µg/L	1	12/7/2018 6:06:43 AM
Bromomethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Chloroethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Methylene chloride	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/7/2018 6:06:43 AM
cis-1,2-Dichloroethene	1.11	1.00		µg/L	1	12/7/2018 6:06:43 AM
Chloroform	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Benzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/7/2018 6:06:43 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Dibromomethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Toluene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/7/2018 6:06:43 AM
Chlorobenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM



Client: Kane Environmental, Inc.

Collection Date: 12/3/2018 11:35:00 AM

Project: BSCSS

Lab ID: 1812035-001

Matrix: Groundwater

Client Sample ID: MW-22:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22874

Analyst: TN

Ethylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
m,p-Xylene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
o-Xylene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Styrene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Bromoform	ND	2.00		µg/L	1	12/7/2018 6:06:43 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Bromobenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/7/2018 6:06:43 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/7/2018 6:06:43 AM
Naphthalene	ND	1.00		µg/L	1	12/7/2018 6:06:43 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/7/2018 6:06:43 AM
Surr: Dibromofluoromethane	99.8	45.4 - 152		%Rec	1	12/7/2018 6:06:43 AM
Surr: Toluene-d8	96.9	40.1 - 139		%Rec	1	12/7/2018 6:06:43 AM
Surr: 1-Bromo-4-fluorobenzene	98.9	64.2 - 128		%Rec	1	12/7/2018 6:06:43 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160

Analyst: GM

Chloride	6.66	0.400	D	mg/L	4	12/6/2018 12:40:00 AM
Sulfate	0.533	0.300		mg/L	1	12/6/2018 1:04:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/3/2018 11:35:00 AM

Project: BSCSS

Lab ID: 1812035-001

Matrix: Groundwater

Client Sample ID: MW-22:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 22864 Analyst: WC

Iron	ND	100		µg/L	1	12/7/2018 11:58:20 AM
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Total Organic Carbon by SM 5310C

Batch ID: R48176 Analyst: GM

Total Organic Carbon	2.26	0.500		mg/L	1	12/5/2018 7:31:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 22862 Analyst: GM

Nitrogen, Ammonia	0.291	0.100		mg/L	1	12/6/2018 1:10:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/3/2018 1:25:00 PM

Project: BSCSS

Lab ID: 1812035-002

Matrix: Groundwater

Client Sample ID: MW-5:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 10:31:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 10:31:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 10:31:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22874 Analyst: TN

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/10/2018 9:46:25 AM
Chloromethane	ND	2.00		µg/L	1	12/10/2018 9:46:25 AM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/10/2018 9:46:25 AM
Bromomethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Trichlorofluoromethane (CFC-11)	ND	1.00	Q	µg/L	1	12/10/2018 9:46:25 AM
Chloroethane	ND	1.00	Q	µg/L	1	12/10/2018 9:46:25 AM
1,1-Dichloroethene	ND	1.00	Q	µg/L	1	12/10/2018 9:46:25 AM
Methylene chloride	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/10/2018 9:46:25 AM
cis-1,2-Dichloroethene	1.13	1.00		µg/L	1	12/10/2018 9:46:25 AM
Chloroform	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Benzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Trichloroethene (TCE)	13.6	0.500		µg/L	1	12/10/2018 9:46:25 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Dibromomethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Toluene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Tetrachloroethene (PCE)	58.5	10.0	D	µg/L	10	12/7/2018 10:17:26 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/10/2018 9:46:25 AM
Chlorobenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM



Client: Kane Environmental, Inc.

Collection Date: 12/3/2018 1:25:00 PM

Project: BSCSS

Lab ID: 1812035-002

Matrix: Groundwater

Client Sample ID: MW-5:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22874

Analyst: TN

Ethylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
m,p-Xylene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
o-Xylene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Styrene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Bromoform	ND	2.00		µg/L	1	12/10/2018 9:46:25 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Bromobenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/10/2018 9:46:25 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/10/2018 9:46:25 AM
Naphthalene	ND	1.00		µg/L	1	12/10/2018 9:46:25 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/10/2018 9:46:25 AM
Surr: Dibromofluoromethane	97.4	45.4 - 152		%Rec	1	12/10/2018 9:46:25 AM
Surr: Toluene-d8	93.1	40.1 - 139		%Rec	1	12/10/2018 9:46:25 AM
Surr: 1-Bromo-4-fluorobenzene	95.9	64.2 - 128		%Rec	1	12/10/2018 9:46:25 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160

Analyst: GM

Chloride	7.48	0.500	D	mg/L	5	12/6/2018 1:27:00 AM
Sulfate	15.7	1.50	D	mg/L	5	12/6/2018 1:27:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812035-002
Client Sample ID: MW-5:W

Collection Date: 12/3/2018 1:25:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22864		Analyst: WC
Iron	1,810	100		µg/L	1	12/7/2018 12:02:21 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	3.79	0.500		mg/L	1	12/5/2018 11:34:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22862		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 1:15:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812035-003
Client Sample ID: MW-21:W

Collection Date: 12/3/2018 2:25:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 10:34:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 10:34:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 10:34:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22874 Analyst: TN

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/10/2018 10:16:51 AM
Chloromethane	ND	2.00		µg/L	1	12/10/2018 10:16:51 AM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/10/2018 10:16:51 AM
Bromomethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Trichlorofluoromethane (CFC-11)	ND	1.00	Q	µg/L	1	12/10/2018 10:16:51 AM
Chloroethane	ND	1.00	Q	µg/L	1	12/10/2018 10:16:51 AM
1,1-Dichloroethene	ND	1.00	Q	µg/L	1	12/10/2018 10:16:51 AM
Methylene chloride	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/10/2018 10:16:51 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Chloroform	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Benzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Trichloroethene (TCE)	1.67	0.500		µg/L	1	12/10/2018 10:16:51 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Dibromomethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Toluene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Tetrachloroethene (PCE)	122	5.00	D	µg/L	5	12/7/2018 10:47:37 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/10/2018 10:16:51 AM
Chlorobenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM



Client: Kane Environmental, Inc.

Collection Date: 12/3/2018 2:25:00 PM

Project: BSCSS

Lab ID: 1812035-003

Matrix: Groundwater

Client Sample ID: MW-21:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22874

Analyst: TN

Ethylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
m,p-Xylene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
o-Xylene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Styrene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Bromoform	ND	2.00		µg/L	1	12/10/2018 10:16:51 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Bromobenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/10/2018 10:16:51 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/10/2018 10:16:51 AM
Naphthalene	ND	1.00		µg/L	1	12/10/2018 10:16:51 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/10/2018 10:16:51 AM
Surr: Dibromofluoromethane	96.6	45.4 - 152		%Rec	1	12/10/2018 10:16:51 AM
Surr: Toluene-d8	93.4	40.1 - 139		%Rec	1	12/10/2018 10:16:51 AM
Surr: 1-Bromo-4-fluorobenzene	96.2	64.2 - 128		%Rec	1	12/10/2018 10:16:51 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160

Analyst: GM

Chloride	4.61	0.200	D	mg/L	2	12/6/2018 2:13:00 AM
Sulfate	12.9	0.600	D	mg/L	2	12/6/2018 2:13:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812035-003
Client Sample ID: MW-21:W

Collection Date: 12/3/2018 2:25:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22864		Analyst: WC
Iron	ND	100		µg/L	1	12/7/2018 12:06:23 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	4.03	0.500		mg/L	1	12/6/2018 12:08:00 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22862		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 1:19:00 PM

Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22862	SampType: MBLK	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: MBLKW	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940857							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22862	SampType: LCS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: LCSW	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940858							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.564 0.100 0.5000 0 113 80 120

Sample ID 1812062-001BDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940870							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812062-001BMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940871							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.5000 0 0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1812062-001BMSD	SampType: MSD	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940872							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.5000 0 0 70 130 0 30 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-48160	SampType:	MBLK	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160			
Client ID:	MBLKW	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940757			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100
Sulfate	ND	0.300

Sample ID	LCS-48160	SampType:	LCS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160			
Client ID:	LCSW	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940758			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.712	0.100	0.7500	0	94.9	90	110
Sulfate	3.60	0.300	3.750	0	96.1	90	110

Sample ID	1812048-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160			
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940766			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.77	0.100						3.738	0.773	20	E
Sulfate	1.83	0.300						1.813	0.769	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812048-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160			
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940767			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.66	0.100	0.7500	3.738	123	80	120					ES
Sulfate	5.38	0.300	3.750	1.813	95.2	80	120					

NOTES:

S - Outlying spike recovery(ies) observed.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812048-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160	Analysis Date:	12/5/2018	SeqNo:	940770				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.66	0.100	0.7500	3.738	123	80	120	4.658	0.129	20	ES
Sulfate	5.41	0.300	3.750	1.813	96.0	80	120	5.384	0.519	20	

NOTES:

S - Outlying spike recovery(ies) observed.
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812062-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/6/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160	Analysis Date:	12/6/2018	SeqNo:	940800				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	30.4	0.200						30.66	0.714	20	DE
Sulfate	32.9	0.600						33.15	0.684	20	DE

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument. NO3

Sample ID	1812062-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/6/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160	Analysis Date:	12/6/2018	SeqNo:	940801				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	32.0	0.200	1.500	30.66	86.1	80	120				DE
Sulfate	40.8	0.600	7.500	33.15	102	80	120				DE

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812005-001DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/6/2018	RunNo: 48176					
Client ID: BATCH	Batch ID: R48176				Analysis Date: 12/6/2018	SeqNo: 941107					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.83	0.500						4.179	8.79	20	

Sample ID 1812005-001DMS	SampType: MS	Units: mg/L			Prep Date: 12/6/2018	RunNo: 48176					
Client ID: BATCH	Batch ID: R48176				Analysis Date: 12/6/2018	SeqNo: 941108					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.70	0.500	5.000	4.179	90.5	70	130				

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID	MB-22864	SampType:	MBLK	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48170		
Client ID:	MBLKW	Batch ID:	22864			Analysis Date:	12/7/2018	SeqNo:	940956		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID	LCS-22864	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48170		
Client ID:	LCSW	Batch ID:	22864			Analysis Date:	12/7/2018	SeqNo:	940957		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 1,020 100 1,000 0 102 50 150

Sample ID	1812027-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48170		
Client ID:	BATCH	Batch ID:	22864			Analysis Date:	12/7/2018	SeqNo:	940959		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID	1812027-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48170		
Client ID:	BATCH	Batch ID:	22864			Analysis Date:	12/7/2018	SeqNo:	940960		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,070 100 5,000 26.94 101 50 150

Sample ID	1812027-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48170		
Client ID:	BATCH	Batch ID:	22864			Analysis Date:	12/7/2018	SeqNo:	940961		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,000 100 5,000 26.94 99.5 50 150 5,066 1.23 30

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48164	SampType:	MBLK	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	MBLKW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940854		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863
Ethene	ND	0.0151
Ethane	ND	0.0162

Sample ID	LCS-R48164	SampType:	LCS	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	LCSW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940853		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	1,250	0.00863	1,000	0	125	70	130
Ethene	1,240	0.0151	1,000	0	124	70	130
Ethane	1,240	0.0162	1,000	0	124	70	130

Sample ID	1811444-005DREP	SampType:	REP	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	BATCH	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940849		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0103	0.00863						0.009270	10.1	30
Ethene	ND	0.0151						0		30
Ethane	ND	0.0162						0		30

Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22874	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	LCSW	Batch ID:	22874	Analysis Date:	12/6/2018	SeqNo:	941586				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	13.0	1.00	20.00	0	65.2	18.7	171				
Chloromethane	16.2	2.00	20.00	0	81.2	38.5	171				
Vinyl chloride	16.8	0.200	20.00	0	83.8	48	145				
Bromomethane	21.1	1.00	20.00	0	105	32.5	184				
Trichlorofluoromethane (CFC-11)	18.4	1.00	20.00	0	92.0	43.5	149				
Chloroethane	17.7	1.00	20.00	0	88.4	43.8	168				
1,1-Dichloroethene	18.9	1.00	20.00	0	94.6	57.5	150				
Methylene chloride	19.4	1.00	20.00	0	97.2	67.1	131				
trans-1,2-Dichloroethene	19.6	1.00	20.00	0	98.0	71.7	129				
Methyl tert-butyl ether (MTBE)	19.3	1.00	20.00	0	96.7	58	138				
1,1-Dichloroethane	19.6	1.00	20.00	0	97.9	67.9	134				
2,2-Dichloropropane	18.3	2.00	20.00	0	91.4	26.5	185				
cis-1,2-Dichloroethene	19.8	1.00	20.00	0	99.2	70.2	139				
Chloroform	19.7	1.00	20.00	0	98.7	66.3	131				
1,1,1-Trichloroethane (TCA)	19.8	1.00	20.00	0	98.9	63	140				
1,1-Dichloropropene	19.4	1.00	20.00	0	97.1	69.9	124				
Carbon tetrachloride	19.4	1.00	20.00	0	96.8	66.2	134				
1,2-Dichloroethane (EDC)	19.4	1.00	20.00	0	97.1	67	126				
Benzene	19.8	1.00	20.00	0	98.8	69.3	132				
Trichloroethene (TCE)	19.8	0.500	20.00	0	99.0	65.2	136				
1,2-Dichloropropane	19.6	1.00	20.00	0	98.0	70.5	130				
Bromodichloromethane	19.8	1.00	20.00	0	98.9	67.2	137				
Dibromomethane	20.0	1.00	20.00	0	99.8	69.3	143				
cis-1,3-Dichloropropene	19.5	1.00	20.00	0	97.5	62.6	137				
Toluene	20.0	1.00	20.00	0	99.8	61.3	145				
trans-1,3-Dichloropropylene	19.2	1.00	20.00	0	96.2	56.5	163				
1,1,2-Trichloroethane	19.7	1.00	20.00	0	98.3	71.7	131				
1,3-Dichloropropane	19.5	1.00	20.00	0	97.7	73.5	127				
Tetrachloroethene (PCE)	20.2	1.00	20.00	0	101	47.5	147				
Dibromochloromethane	19.2	1.00	20.00	0	96.2	67.2	134				
1,2-Dibromoethane (EDB)	19.5	0.250	20.00	0	97.6	73.6	125				

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22874	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	LCSW	Batch ID:	22874	Analysis Date:	12/6/2018	SeqNo:	941586				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.2	1.00	20.00	0	101	73.9	126				
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	101	76.8	124				
Ethylbenzene	19.8	1.00	20.00	0	99.0	72	130				
m,p-Xylene	40.2	1.00	40.00	0	100	70.3	134				
o-Xylene	19.5	1.00	20.00	0	97.5	72.1	131				
Styrene	20.5	1.00	20.00	0	102	64.3	140				
Isopropylbenzene	20.0	1.00	20.00	0	100	73.9	128				
Bromoform	21.0	2.00	20.00	0	105	55.3	141				
1,1,2,2-Tetrachloroethane	20.5	1.00	20.00	0	103	62.9	132				
n-Propylbenzene	19.5	1.00	20.00	0	97.5	74.5	127				
Bromobenzene	21.2	1.00	20.00	0	106	71	131				
1,3,5-Trimethylbenzene	20.9	1.00	20.00	0	104	73.1	128				
2-Chlorotoluene	21.1	1.00	20.00	0	106	70.8	130				
4-Chlorotoluene	21.1	1.00	20.00	0	106	70.1	131				
tert-Butylbenzene	21.1	1.00	20.00	0	105	68.2	131				
1,2,3-Trichloropropane	20.2	1.00	20.00	0	101	67.7	131				
1,2,4-Trichlorobenzene	21.1	2.00	20.00	0	106	41	139				
sec-Butylbenzene	21.1	1.00	20.00	0	105	72	129				
4-Isopropyltoluene	21.1	1.00	20.00	0	105	69.2	130				
1,3-Dichlorobenzene	21.4	1.00	20.00	0	107	69.5	128				
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	66.8	119				
n-Butylbenzene	20.7	1.00	20.00	0	103	73.8	127				
1,2-Dichlorobenzene	21.2	1.00	20.00	0	106	69.7	119				
1,2-Dibromo-3-chloropropane	20.0	1.00	20.00	0	100	63.1	136				
1,2,4-Trimethylbenzene	21.1	1.00	20.00	0	106	73.4	127				
Hexachloro-1,3-butadiene	21.2	4.00	20.00	0	106	58.6	138				
Naphthalene	20.0	1.00	20.00	0	100	41.8	165				
1,2,3-Trichlorobenzene	20.8	4.00	20.00	0	104	35.8	155				
Surr: Dibromofluoromethane	25.1		25.00		100	45.4	152				
Surr: Toluene-d8	24.4		25.00		97.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.0		25.00		104	64.2	128				

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22874	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180				
Client ID:	LCSW	Batch ID:	22874			Analysis Date:	12/6/2018	SeqNo:	941586				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-22874	SampType:	MBLK	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180				
Client ID:	MBLKW	Batch ID:	22874			Analysis Date:	12/6/2018	SeqNo:	941587				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00											Q
Chloromethane	ND	2.00											
Vinyl chloride	ND	0.200											
Bromomethane	ND	1.00											
Trichlorofluoromethane (CFC-11)	ND	1.00											
Chloroethane	ND	1.00											
1,1-Dichloroethene	ND	1.00											
Methylene chloride	ND	1.00											
trans-1,2-Dichloroethene	ND	1.00											
Methyl tert-butyl ether (MTBE)	ND	1.00											
1,1-Dichloroethane	ND	1.00											
2,2-Dichloropropane	ND	2.00											
cis-1,2-Dichloroethene	ND	1.00											
Chloroform	ND	1.00											
1,1,1-Trichloroethane (TCA)	ND	1.00											
1,1-Dichloropropene	ND	1.00											
Carbon tetrachloride	ND	1.00											
1,2-Dichloroethane (EDC)	ND	1.00											
Benzene	ND	1.00											
Trichloroethene (TCE)	ND	0.500											
1,2-Dichloropropane	ND	1.00											
Bromodichloromethane	ND	1.00											
Dibromomethane	ND	1.00											
cis-1,3-Dichloropropene	ND	1.00											
Toluene	ND	1.00											

Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-22874	SampType: MBLK	Units: µg/L	Prep Date: 12/7/2018	RunNo: 48180
Client ID: MBLKW	Batch ID: 22874		Analysis Date: 12/6/2018	SeqNo: 941587

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22874	SampType:	MBLK	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	MBLKW	Batch ID:	22874			Analysis Date:	12/6/2018	SeqNo:	941587		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.8		25.00		99.1	45.4	152				
Surr: Toluene-d8	24.5		25.00		98.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.1		25.00		100	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812004-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	BATCH	Batch ID:	22874			Analysis Date:	12/7/2018	SeqNo:	941549		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812004-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/7/2018	RunNo: 48180
Client ID: BATCH	Batch ID: 22874		Analysis Date: 12/7/2018	SeqNo: 941549

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	2.88	1.00						3.041	5.37	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812004-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	BATCH	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941549				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.5		25.00		97.9	45.4	152		0		
Surr: Toluene-d8	24.4		25.00		97.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.3	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812025-019ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	BATCH	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941572				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812025-019ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	BATCH	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941572				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812025-019ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	BATCH	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941572				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.7		25.00		98.9	45.4	152		0		
Surr: Toluene-d8	24.0		25.00		96.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.1	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812035-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	MW-22:W	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941575				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	12.2	1.00	20.00	0	61.2	33.3	122				
Chloromethane	16.3	2.00	20.00	0	81.6	39.7	143				
Vinyl chloride	17.2	0.200	20.00	0	86.2	41	165				
Bromomethane	25.2	1.00	20.00	0	126	31.5	135				



Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812035-001AMS	SampType: MS	Units: µg/L	Prep Date: 12/7/2018	RunNo: 48180
Client ID: MW-22:W	Batch ID: 22874		Analysis Date: 12/7/2018	SeqNo: 941575

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	19.9	1.00	20.00	0	99.6	54.7	138				
Chloroethane	17.2	1.00	20.00	0	86.2	49.9	143				
1,1-Dichloroethene	20.1	1.00	20.00	0	101	51.6	164				
Methylene chloride	19.6	1.00	20.00	0	97.8	61.6	135				
trans-1,2-Dichloroethene	20.9	1.00	20.00	0	104	63.5	138				
Methyl tert-butyl ether (MTBE)	19.4	1.00	20.00	0	97.2	60.9	132				
1,1-Dichloroethane	20.9	1.00	20.00	0	105	55.7	151				
2,2-Dichloropropane	15.0	2.00	20.00	0	74.9	37.7	150				
cis-1,2-Dichloroethene	21.8	1.00	20.00	1.113	103	60	154				
Chloroform	20.9	1.00	20.00	0	104	48.1	140				
1,1,1-Trichloroethane (TCA)	21.4	1.00	20.00	0	107	64.2	146				
1,1-Dichloropropene	21.0	1.00	20.00	0	105	73.8	136				
Carbon tetrachloride	21.1	1.00	20.00	0	106	62.7	146				
1,2-Dichloroethane (EDC)	20.2	1.00	20.00	0	101	63.4	137				
Benzene	20.9	1.00	20.00	0	105	65.4	138				
Trichloroethene (TCE)	21.2	0.500	20.00	0	106	60.4	134				
1,2-Dichloropropane	20.3	1.00	20.00	0	102	62.6	138				
Bromodichloromethane	20.7	1.00	20.00	0	104	59.4	139				
Dibromomethane	21.4	1.00	20.00	0	107	58.7	148				
cis-1,3-Dichloropropene	19.3	1.00	20.00	0	96.6	63.8	132				
Toluene	21.3	1.00	20.00	0	107	52	147				
trans-1,3-Dichloropropylene	18.9	1.00	20.00	0	94.7	57.7	125				
1,1,2-Trichloroethane	21.0	1.00	20.00	0	105	57.5	153				
1,3-Dichloropropane	20.4	1.00	20.00	0	102	54.1	157				
Tetrachloroethene (PCE)	21.9	1.00	20.00	0	110	50.3	133				
Dibromochloromethane	21.1	1.00	20.00	0	105	61.6	139				
1,2-Dibromoethane (EDB)	21.1	0.250	20.00	0	106	63.2	134				
Chlorobenzene	21.3	1.00	20.00	0	107	65.8	134				
1,1,1,2-Tetrachloroethane	21.7	1.00	20.00	0	108	65.4	135				
Ethylbenzene	21.4	1.00	20.00	0	107	64.5	136				
m,p-Xylene	42.9	1.00	40.00	0	107	63.3	135				

Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812035-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	MW-22:W	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941575				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	21.7	1.00	20.00	0	108	64.8	150				
Styrene	21.3	1.00	20.00	0	107	52.9	163				
Isopropylbenzene	21.7	1.00	20.00	0	109	56	147				
Bromoform	21.2	2.00	20.00	0	106	57.7	139				
1,1,1,2,2-Tetrachloroethane	20.5	1.00	20.00	0	103	59.8	146				
n-Propylbenzene	21.9	1.00	20.00	0	109	57.6	142				
Bromobenzene	21.6	1.00	20.00	0	108	69.3	157				
1,3,5-Trimethylbenzene	21.1	1.00	20.00	0	106	59.9	136				
2-Chlorotoluene	21.4	1.00	20.00	0	107	61.7	134				
4-Chlorotoluene	20.4	1.00	20.00	0	102	58.4	134				
tert-Butylbenzene	21.9	1.00	20.00	0	109	66.8	141				
1,2,3-Trichloropropane	19.1	1.00	20.00	0	95.6	62.4	129				
1,2,4-Trichlorobenzene	20.7	2.00	20.00	0	103	50.9	133				
sec-Butylbenzene	21.3	1.00	20.00	0	106	56	146				
4-Isopropyltoluene	21.0	1.00	20.00	0	105	56.4	136				
1,3-Dichlorobenzene	21.4	1.00	20.00	0	107	58.2	128				
1,4-Dichlorobenzene	21.4	1.00	20.00	0	107	60.1	123				
n-Butylbenzene	20.5	1.00	20.00	0	103	54.6	135				
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	65.4	133				
1,2-Dibromo-3-chloropropane	19.9	1.00	20.00	0	99.5	51.8	142				
1,2,4-Trimethylbenzene	20.7	1.00	20.00	0	104	63.7	132				
Hexachloro-1,3-butadiene	22.0	4.00	20.00	0	110	58.1	130				
Naphthalene	20.3	1.00	20.00	0	101	50.7	154				
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	57	131				
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	24.5		25.00		97.9	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128				

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812035-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	MW-22:W	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941576				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	12.6	1.00	20.00	0	63.1	33.3	122	12.24	3.03	30	
Chloromethane	16.6	2.00	20.00	0	83.0	39.7	143	16.31	1.77	30	
Vinyl chloride	17.8	0.200	20.00	0	89.1	41	165	17.24	3.32	30	
Bromomethane	25.4	1.00	20.00	0	127	31.5	135	25.18	0.772	30	
Trichlorofluoromethane (CFC-11)	20.7	1.00	20.00	0	104	54.7	138	19.92	3.92	30	
Chloroethane	19.4	1.00	20.00	0	97.0	49.9	143	17.24	11.8	30	
1,1-Dichloroethene	20.8	1.00	20.00	0	104	51.6	164	20.12	3.44	30	
Methylene chloride	19.7	1.00	20.00	0	98.5	61.6	135	19.56	0.706	30	
trans-1,2-Dichloroethene	21.5	1.00	20.00	0	108	63.5	138	20.88	3.10	30	
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.7	60.9	132	19.44	2.53	30	
1,1-Dichloroethane	21.1	1.00	20.00	0	105	55.7	151	20.92	0.734	30	
2,2-Dichloropropane	15.2	2.00	20.00	0	76.2	37.7	150	14.98	1.67	30	
cis-1,2-Dichloroethene	22.4	1.00	20.00	1.113	106	60	154	21.78	2.65	30	
Chloroform	21.1	1.00	20.00	0	105	48.1	140	20.86	1.02	30	
1,1,1-Trichloroethane (TCA)	21.9	1.00	20.00	0	109	64.2	146	21.42	1.99	30	
1,1-Dichloropropene	21.8	1.00	20.00	0	109	73.8	136	21.00	3.81	30	
Carbon tetrachloride	21.8	1.00	20.00	0	109	62.7	146	21.13	3.18	30	
1,2-Dichloroethane (EDC)	20.4	1.00	20.00	0	102	63.4	137	20.21	0.863	30	
Benzene	21.2	1.00	20.00	0	106	65.4	138	20.94	1.20	30	
Trichloroethene (TCE)	21.9	0.500	20.00	0	110	60.4	134	21.22	3.20	30	
1,2-Dichloropropane	20.5	1.00	20.00	0	103	62.6	138	20.30	1.01	30	
Bromodichloromethane	20.9	1.00	20.00	0	104	59.4	139	20.73	0.671	30	
Dibromomethane	21.3	1.00	20.00	0	107	58.7	148	21.37	0.257	30	
cis-1,3-Dichloropropene	19.5	1.00	20.00	0	97.5	63.8	132	19.33	0.895	30	
Toluene	21.5	1.00	20.00	0	108	52	147	21.31	0.955	30	
trans-1,3-Dichloropropylene	19.3	1.00	20.00	0	96.7	57.7	125	18.93	2.14	30	
1,1,2-Trichloroethane	21.0	1.00	20.00	0	105	57.5	153	21.04	0.102	30	
1,3-Dichloropropane	20.7	1.00	20.00	0	103	54.1	157	20.43	1.22	30	
Tetrachloroethene (PCE)	22.5	1.00	20.00	0	113	50.3	133	21.92	2.67	30	
Dibromochloromethane	21.3	1.00	20.00	0	107	61.6	139	21.09	1.14	30	
1,2-Dibromoethane (EDB)	21.2	0.250	20.00	0	106	63.2	134	21.10	0.462	30	

Work Order: 1812035
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812035-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	MW-22:W	Batch ID:	22874	Analysis Date:	12/7/2018	SeqNo:	941576				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.9	1.00	20.00	0	110	65.8	134	21.32	2.70	30	
1,1,1,2-Tetrachloroethane	22.0	1.00	20.00	0	110	65.4	135	21.70	1.33	30	
Ethylbenzene	21.6	1.00	20.00	0	108	64.5	136	21.36	1.32	30	
m,p-Xylene	44.2	1.00	40.00	0	110	63.3	135	42.94	2.84	30	
o-Xylene	21.6	1.00	20.00	0	108	64.8	150	21.70	0.593	30	
Styrene	21.9	1.00	20.00	0	110	52.9	163	21.32	2.71	30	
Isopropylbenzene	22.7	1.00	20.00	0	113	56	147	21.71	4.29	30	
Bromoform	21.6	2.00	20.00	0	108	57.7	139	21.20	1.98	30	
1,1,2,2-Tetrachloroethane	21.0	1.00	20.00	0	105	59.8	146	20.54	2.28	30	
n-Propylbenzene	23.2	1.00	20.00	0	116	57.6	142	21.85	5.78	30	
Bromobenzene	22.1	1.00	20.00	0	111	69.3	157	21.61	2.44	30	
1,3,5-Trimethylbenzene	21.4	1.00	20.00	0	107	59.9	136	21.12	1.44	30	
2-Chlorotoluene	22.2	1.00	20.00	0	111	61.7	134	21.44	3.46	30	
4-Chlorotoluene	22.2	1.00	20.00	0	111	58.4	134	20.44	8.03	30	
tert-Butylbenzene	22.7	1.00	20.00	0	113	66.8	141	21.86	3.57	30	
1,2,3-Trichloropropane	19.7	1.00	20.00	0	98.5	62.4	129	19.12	3.01	30	
1,2,4-Trichlorobenzene	21.9	2.00	20.00	0	110	50.9	133	20.66	6.02	30	
sec-Butylbenzene	22.2	1.00	20.00	0	111	56	146	21.28	4.40	30	
4-Isopropyltoluene	21.7	1.00	20.00	0	109	56.4	136	20.95	3.51	30	
1,3-Dichlorobenzene	22.5	1.00	20.00	0	112	58.2	128	21.39	4.87	30	
1,4-Dichlorobenzene	22.2	1.00	20.00	0	111	60.1	123	21.43	3.52	30	
n-Butylbenzene	21.8	1.00	20.00	0	109	54.6	135	20.54	5.72	30	
1,2-Dichlorobenzene	22.2	1.00	20.00	0	111	65.4	133	21.55	3.18	30	
1,2-Dibromo-3-chloropropane	20.4	1.00	20.00	0	102	51.8	142	19.90	2.65	30	
1,2,4-Trimethylbenzene	21.6	1.00	20.00	0	108	63.7	132	20.74	3.99	30	
Hexachloro-1,3-butadiene	23.3	4.00	20.00	0	116	58.1	130	22.01	5.58	30	
Naphthalene	21.3	1.00	20.00	0	106	50.7	154	20.29	4.74	30	
1,2,3-Trichlorobenzene	22.3	4.00	20.00	0	111	57	131	21.37	4.10	30	
Surr: Dibromofluoromethane	25.0		25.00		100	45.4	152		0		
Surr: Toluene-d8	24.2		25.00		96.7	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	64.2	128		0		



Date: 12/10/2018

Work Order: 1812035
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812035-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48180		
Client ID:	MW-22:W	Batch ID:	22874			Analysis Date:	12/7/2018	SeqNo:	941576		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Client Name: **KANE**

 Work Order Number: **1812035**

 Logged by: **Brianna Barnes**

 Date Received: **12/3/2018 3:45:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.9
Sample	4.3
Temp Blank	3.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/3/2018 Page: 1 of 1

Laboratory Project No (Internal): 1912005

Client: KANE ENVIRONMENTAL

Project Name: BSCSS

Special Remarks:

Address: 4015 13th Ave N

Project No: 82302-9.1

City, State, Zip: Seattle, WA 98119

Collected by: Bg

Telephone: (206) 991 6470

Location: Botwell

Report To (PM): Jeff Jensen

Fax:

PM Email: Jeff@kane-environmental.com

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes														Comments	
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DH)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (C)***	EDB (8011)	TDC		
1 MN-22:IN	12/3	1325	GW	X															lab filter, QC
2 MN-5:IN	12/3	1325	GW	X															lab filter
3 MN-21:IN	12/3	1425	GW	X															lab filter
4																			
5																			
6																			
7																			
8																			
9																			
10																			

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Prio: PCBs/Pol: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe/Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Received
 Date/Time: 12/3/18 1543 Date/Time: 12/3/18 1545
 Turn-around Time: Standard 3 Day 2 Day Next Day Same Day (specify)



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812047

December 11, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 12/4/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/11/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812047

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812047-001	HZ-MW-25:W	12/04/2018 12:40 PM	12/04/2018 4:25 PM
1812047-002	HZ-MW-26:W	12/04/2018 3:15 PM	12/04/2018 4:25 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812047-001
Client Sample ID: HZ-MW-25:W

Collection Date: 12/4/2018 12:40:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 10:43:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 10:43:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 10:43:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22872 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/10/2018 1:19:13 PM
Chloromethane	ND	2.00		µg/L	1	12/10/2018 1:19:13 PM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/10/2018 1:19:13 PM
Bromomethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Trichlorofluoromethane (CFC-11)	ND	1.00	Q	µg/L	1	12/10/2018 1:19:13 PM
Chloroethane	ND	1.00	Q	µg/L	1	12/10/2018 1:19:13 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Methylene chloride	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/10/2018 1:19:13 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Chloroform	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Benzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Trichloroethene (TCE)	1.36	0.500		µg/L	1	12/10/2018 1:19:13 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Dibromomethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Toluene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Tetrachloroethene (PCE)	3.67	1.00		µg/L	1	12/10/2018 1:19:13 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/10/2018 1:19:13 PM
Chlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812047-001
Client Sample ID: HZ-MW-25:W

Collection Date: 12/4/2018 12:40:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22872 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
m,p-Xylene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
o-Xylene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Styrene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Bromoform	ND	2.00		µg/L	1	12/10/2018 1:19:13 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Bromobenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/10/2018 1:19:13 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/10/2018 1:19:13 PM
Naphthalene	ND	1.00		µg/L	1	12/10/2018 1:19:13 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/10/2018 1:19:13 PM
Surr: Dibromofluoromethane	96.2	45.4 - 152		%Rec	1	12/10/2018 1:19:13 PM
Surr: Toluene-d8	90.0	40.1 - 139		%Rec	1	12/10/2018 1:19:13 PM
Surr: 1-Bromo-4-fluorobenzene	102	64.2 - 128		%Rec	1	12/10/2018 1:19:13 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160 Analyst: GM

Chloride	21.1	1.00	D	mg/L	10	12/5/2018 10:44:00 PM
Sulfate	14.5	3.00	D	mg/L	10	12/5/2018 10:44:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/4/2018 12:40:00 PM

Project: BSCSS

Lab ID: 1812047-001

Matrix: Groundwater

Client Sample ID: HZ-MW-25:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 22864 Analyst: WC

Iron	5,900	100		µg/L	1	12/7/2018 12:10:24 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48176 Analyst: GM

Total Organic Carbon	4.34	0.500		mg/L	1	12/6/2018 1:33:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 22862 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 1:24:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/4/2018 3:15:00 PM

Project: BSCSS

Lab ID: 1812047-002

Matrix: Groundwater

Client Sample ID: HZ-MW-26:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 10:49:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 10:49:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 10:49:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22872 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/10/2018 1:49:32 PM
Chloromethane	ND	2.00		µg/L	1	12/10/2018 1:49:32 PM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/10/2018 1:49:32 PM
Bromomethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Trichlorofluoromethane (CFC-11)	ND	1.00	Q	µg/L	1	12/10/2018 1:49:32 PM
Chloroethane	ND	1.00	Q	µg/L	1	12/10/2018 1:49:32 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Methylene chloride	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/10/2018 1:49:32 PM
cis-1,2-Dichloroethene	1.03	1.00		µg/L	1	12/10/2018 1:49:32 PM
Chloroform	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Benzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/10/2018 1:49:32 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Dibromomethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Toluene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Tetrachloroethene (PCE)	6.21	1.00		µg/L	1	12/10/2018 1:49:32 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/10/2018 1:49:32 PM
Chlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812047-002
Client Sample ID: HZ-MW-26:W

Collection Date: 12/4/2018 3:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22872 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
m,p-Xylene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
o-Xylene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Styrene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Bromoform	ND	2.00		µg/L	1	12/10/2018 1:49:32 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Bromobenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/10/2018 1:49:32 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/10/2018 1:49:32 PM
Naphthalene	ND	1.00		µg/L	1	12/10/2018 1:49:32 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/10/2018 1:49:32 PM
Surr: Dibromofluoromethane	96.8	45.4 - 152		%Rec	1	12/10/2018 1:49:32 PM
Surr: Toluene-d8	93.4	40.1 - 139		%Rec	1	12/10/2018 1:49:32 PM
Surr: 1-Bromo-4-fluorobenzene	95.3	64.2 - 128		%Rec	1	12/10/2018 1:49:32 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48160 Analyst: GM

Chloride	8.08	0.500	D	mg/L	5	12/6/2018 12:17:00 AM
Sulfate	25.3	1.50	D	mg/L	5	12/6/2018 12:17:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/4/2018 3:15:00 PM

Project: BSCSS

Lab ID: 1812047-002

Matrix: Groundwater

Client Sample ID: HZ-MW-26:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 22864 Analyst: WC

Iron	ND	100		µg/L	1	12/7/2018 12:14:25 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48176 Analyst: GM

Total Organic Carbon	2.30	0.500		mg/L	1	12/6/2018 2:03:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 22862 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 1:30:00 PM
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Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22862	SampType: MBLK	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: MBLKW	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940857							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22862	SampType: LCS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: LCSW	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940858							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.564 0.100 0.5000 0 113 80 120

Sample ID 1812062-001BDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940870							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812062-001BMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940871							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.5000 0 0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1812062-001BMSD	SampType: MSD	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940872							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.5000 0 0 70 130 0 30 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-48160	SampType:	MBLK	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	MBLKW	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940757		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100
Sulfate	ND	0.300

Sample ID	LCS-48160	SampType:	LCS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	LCSW	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940758		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.712	0.100	0.7500	0	94.9	90	110
Sulfate	3.60	0.300	3.750	0	96.1	90	110

Sample ID	1812048-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940766		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.77	0.100						3.738	0.773	20	E
Sulfate	1.83	0.300						1.813	0.769	20	

Sample ID	1812048-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940767		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.66	0.100	0.7500	3.738	123	80	120				ES
Sulfate	5.38	0.300	3.750	1.813	95.2	80	120				

Sample ID	1812048-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940770		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.66	0.100	0.7500	3.738	123	80	120	4.658	0.129	20	ES
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Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812048-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/5/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/5/2018	SeqNo:	940770		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	5.41	0.300	3.750	1.813	96.0	80	120	5.384	0.519	20	

Sample ID	1812062-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/6/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/6/2018	SeqNo:	940800		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	30.4	0.200						30.66	0.714	20	DE
Sulfate	32.9	0.600						33.15	0.684	20	DE

Sample ID	1812062-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/6/2018	RunNo:	48160		
Client ID:	BATCH	Batch ID:	R48160			Analysis Date:	12/6/2018	SeqNo:	940801		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	32.0	0.200	1.500	30.66	86.1	80	120				DE
Sulfate	40.8	0.600	7.500	33.15	102	80	120				DE

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48176	SampType: MBLK	Units: mg/L	Prep Date: 12/5/2018	RunNo: 48176							
Client ID: MBLKW	Batch ID: R48176		Analysis Date: 12/5/2018	SeqNo: 941089							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48176	SampType: LCS	Units: mg/L	Prep Date: 12/5/2018	RunNo: 48176							
Client ID: LCSW	Batch ID: R48176		Analysis Date: 12/5/2018	SeqNo: 941090							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.10 0.500 5.000 0 102 80 120

Sample ID 1811435-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941104							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.998 0.500 1.142 13.4 20

Sample ID 1811435-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941105							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.671 0.500 5.000 1.142 -9.42 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1811435-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941106							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.658 0.500 5.000 1.142 -9.68 70 130 0.6711 1.96 30 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812005-001DDUP	SampType: DUP		Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176						
Client ID: BATCH	Batch ID: R48176			Analysis Date: 12/6/2018	SeqNo: 941107						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.83	0.500						4.179	8.79	20	

Sample ID 1812005-001DMS	SampType: MS		Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176						
Client ID: BATCH	Batch ID: R48176			Analysis Date: 12/6/2018	SeqNo: 941108						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.70	0.500	5.000	4.179	90.5	70	130				

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22864	SampType: MBLK	Units: µg/L			Prep Date: 12/7/2018	RunNo: 48170					
Client ID: MBLKW	Batch ID: 22864				Analysis Date: 12/7/2018	SeqNo: 940956					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-22864	SampType: LCS	Units: µg/L			Prep Date: 12/7/2018	RunNo: 48170					
Client ID: LCSW	Batch ID: 22864				Analysis Date: 12/7/2018	SeqNo: 940957					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 1,020 100 1,000 0 102 50 150

Sample ID 1812027-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 12/7/2018	RunNo: 48170					
Client ID: BATCH	Batch ID: 22864				Analysis Date: 12/7/2018	SeqNo: 940959					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812027-001AMS	SampType: MS	Units: µg/L			Prep Date: 12/7/2018	RunNo: 48170					
Client ID: BATCH	Batch ID: 22864				Analysis Date: 12/7/2018	SeqNo: 940960					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,070 100 5,000 26.94 101 50 150

Sample ID 1812027-001AMSD	SampType: MSD	Units: µg/L			Prep Date: 12/7/2018	RunNo: 48170					
Client ID: BATCH	Batch ID: 22864				Analysis Date: 12/7/2018	SeqNo: 940961					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,000 100 5,000 26.94 99.5 50 150 5,066 1.23 30

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22853	SampType: MBLK	Units: µg/L	Prep Date: 12/7/2018	RunNo: 48170							
Client ID: MBLKW	Batch ID: 22864		Analysis Date: 12/7/2018	SeqNo: 940983							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	ND	100									
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NOTES:
 Filter Blank.

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48164	SampType:	MBLK	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	MBLKW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940854		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48164	SampType:	LCS	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	LCSW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940853		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	1,250	0.00863	1,000	0	125	70	130				
Ethene	1,240	0.0151	1,000	0	124	70	130				
Ethane	1,240	0.0162	1,000	0	124	70	130				

Sample ID	1811444-005DREP	SampType:	REP	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	BATCH	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940849		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0103	0.00863						0.009270	10.1	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22872	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	LCSW	Batch ID:	22872	Analysis Date:	12/7/2018	SeqNo:	941731				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.4	1.00	20.00	0	76.8	18.7	171				
Chloromethane	18.7	2.00	20.00	0	93.3	38.5	171				
Vinyl chloride	15.8	0.200	20.00	0	79.0	48	145				
Bromomethane	21.5	1.00	20.00	0	108	32.5	184				
Trichlorofluoromethane (CFC-11)	16.0	1.00	20.00	0	80.2	43.5	149				
Chloroethane	15.4	1.00	20.00	0	77.0	43.8	168				
1,1-Dichloroethene	16.7	1.00	20.00	0	83.3	57.5	150				
Methylene chloride	16.4	1.00	20.00	0	82.1	67.1	131				
trans-1,2-Dichloroethene	17.6	1.00	20.00	0	88.1	71.7	129				
Methyl tert-butyl ether (MTBE)	17.6	1.00	20.00	0	87.9	58	138				
1,1-Dichloroethane	17.3	1.00	20.00	0	86.3	67.9	134				
2,2-Dichloropropane	20.2	2.00	20.00	0	101	26.5	185				
cis-1,2-Dichloroethene	17.8	1.00	20.00	0	88.8	70.2	139				
Chloroform	17.5	1.00	20.00	0	87.4	66.3	131				
1,1,1-Trichloroethane (TCA)	17.0	1.00	20.00	0	85.1	63	140				
1,1-Dichloropropene	16.8	1.00	20.00	0	84.2	69.9	124				
Carbon tetrachloride	16.8	1.00	20.00	0	84.1	66.2	134				
1,2-Dichloroethane (EDC)	17.4	1.00	20.00	0	86.8	67	126				
Benzene	17.4	1.00	20.00	0	86.9	69.3	132				
Trichloroethene (TCE)	17.4	0.500	20.00	0	86.8	65.2	136				
1,2-Dichloropropane	17.1	1.00	20.00	0	85.4	70.5	130				
Bromodichloromethane	17.5	1.00	20.00	0	87.7	67.2	137				
Dibromomethane	18.4	1.00	20.00	0	91.8	69.3	143				
cis-1,3-Dichloropropene	17.6	1.00	20.00	0	88.2	62.6	137				
Toluene	17.6	1.00	20.00	0	87.9	61.3	145				
trans-1,3-Dichloropropylene	17.8	1.00	20.00	0	89.0	56.5	163				
1,1,2-Trichloroethane	18.4	1.00	20.00	0	92.2	71.7	131				
1,3-Dichloropropane	17.7	1.00	20.00	0	88.4	73.5	127				
Tetrachloroethene (PCE)	18.0	1.00	20.00	0	90.1	47.5	147				
Dibromochloromethane	18.3	1.00	20.00	0	91.3	67.2	134				
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	91.9	73.6	125				

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22872	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	LCSW	Batch ID:	22872	Analysis Date:	12/7/2018	SeqNo:	941731				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	18.2	1.00	20.00	0	90.9	73.9	126				
1,1,1,2-Tetrachloroethane	18.6	1.00	20.00	0	93.1	76.8	124				
Ethylbenzene	17.8	1.00	20.00	0	89.0	72	130				
m,p-Xylene	35.9	1.00	40.00	0	89.8	70.3	134				
o-Xylene	18.4	1.00	20.00	0	91.8	72.1	131				
Styrene	18.5	1.00	20.00	0	92.7	64.3	140				
Isopropylbenzene	18.0	1.00	20.00	0	90.0	73.9	128				
Bromoform	18.3	2.00	20.00	0	91.6	55.3	141				
1,1,2,2-Tetrachloroethane	17.9	1.00	20.00	0	89.4	62.9	132				
n-Propylbenzene	17.3	1.00	20.00	0	86.7	74.5	127				
Bromobenzene	18.6	1.00	20.00	0	93.1	71	131				
1,3,5-Trimethylbenzene	17.1	1.00	20.00	0	85.3	73.1	128				
2-Chlorotoluene	17.5	1.00	20.00	0	87.3	70.8	130				
4-Chlorotoluene	17.9	1.00	20.00	0	89.3	70.1	131				
tert-Butylbenzene	17.8	1.00	20.00	0	88.9	68.2	131				
1,2,3-Trichloropropane	17.3	1.00	20.00	0	86.5	67.7	131				
1,2,4-Trichlorobenzene	18.9	2.00	20.00	0	94.4	41	139				
sec-Butylbenzene	17.0	1.00	20.00	0	85.2	72	129				
4-Isopropyltoluene	17.2	1.00	20.00	0	86.2	69.2	130				
1,3-Dichlorobenzene	19.0	1.00	20.00	0	94.8	69.5	128				
1,4-Dichlorobenzene	19.1	1.00	20.00	0	95.5	66.8	119				
n-Butylbenzene	17.6	1.00	20.00	0	87.9	73.8	127				
1,2-Dichlorobenzene	18.8	1.00	20.00	0	93.8	69.7	119				
1,2-Dibromo-3-chloropropane	18.3	1.00	20.00	0	91.7	63.1	136				
1,2,4-Trimethylbenzene	17.5	1.00	20.00	0	87.6	73.4	127				
Hexachloro-1,3-butadiene	18.6	4.00	20.00	0	93.2	58.6	138				
Naphthalene	17.9	1.00	20.00	0	89.5	41.8	165				
1,2,3-Trichlorobenzene	18.8	4.00	20.00	0	94.2	35.8	155				
Surr: Dibromofluoromethane	24.7		25.00		98.9	45.4	152				
Surr: Toluene-d8	24.2		25.00		96.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.2	64.2	128				

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22872	SampType:	LCS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195				
Client ID:	LCSW	Batch ID:	22872			Analysis Date:	12/7/2018	SeqNo:	941731				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-22872	SampType:	MBLK	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195				
Client ID:	MBLKW	Batch ID:	22872			Analysis Date:	12/7/2018	SeqNo:	941732				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00											
Chloromethane	ND	2.00											
Vinyl chloride	ND	0.200											
Bromomethane	ND	1.00											
Trichlorofluoromethane (CFC-11)	ND	1.00											
Chloroethane	ND	1.00											
1,1-Dichloroethene	ND	1.00											
Methylene chloride	ND	1.00											
trans-1,2-Dichloroethene	ND	1.00											
Methyl tert-butyl ether (MTBE)	ND	1.00											
1,1-Dichloroethane	ND	1.00											
2,2-Dichloropropane	ND	2.00											
cis-1,2-Dichloroethene	ND	1.00											
Chloroform	ND	1.00											
1,1,1-Trichloroethane (TCA)	ND	1.00											
1,1-Dichloropropene	ND	1.00											
Carbon tetrachloride	ND	1.00											
1,2-Dichloroethane (EDC)	ND	1.00											
Benzene	ND	1.00											
Trichloroethene (TCE)	ND	0.500											
1,2-Dichloropropane	ND	1.00											
Bromodichloromethane	ND	1.00											
Dibromomethane	ND	1.00											
cis-1,3-Dichloropropene	ND	1.00											
Toluene	ND	1.00											

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-22872	SampType: MBLK	Units: µg/L	Prep Date: 12/7/2018	RunNo: 48195
Client ID: MBLKW	Batch ID: 22872		Analysis Date: 12/7/2018	SeqNo: 941732

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22872	SampType:	MBLK	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	MBLKW	Batch ID:	22872			Analysis Date:	12/7/2018	SeqNo:	941732		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.1		25.00		96.3	45.4	152				
Surr: Toluene-d8	23.8		25.00		95.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.8	64.2	128				

Sample ID	1812038-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	BATCH	Batch ID:	22872			Analysis Date:	12/8/2018	SeqNo:	941717		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812038-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195
Client ID:	BATCH	Batch ID:	22872			Analysis Date:	12/8/2018	SeqNo:	941717

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	2.98	1.00						2.758	7.77	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812038-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	BATCH	Batch ID:	22872	Analysis Date:	12/8/2018	SeqNo:	941717				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.2		25.00		96.8	45.4	152		0		
Surr: Toluene-d8	23.7		25.00		94.7	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.9	64.2	128		0		

Sample ID	1812044-001BDUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	BATCH	Batch ID:	22872	Analysis Date:	12/10/2018	SeqNo:	941777				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	Q
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	Q
Chloroethane	ND	1.00						0		30	Q
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812044-001BDUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195
Client ID:	BATCH	Batch ID:	22872			Analysis Date:	12/10/2018	SeqNo:	941777

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812044-001BDUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	BATCH	Batch ID:	22872	Analysis Date:	12/10/2018	SeqNo:	941777				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.3		25.00		97.1	45.4	152		0		
Surr: Toluene-d8	21.9		25.00		87.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.1		25.00		105	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812047-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	HZ-MW-26:W	Batch ID:	22872	Analysis Date:	12/10/2018	SeqNo:	941780				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	10.4	1.00	20.00	0	51.8	33.3	122				
Chloromethane	16.4	2.00	20.00	0	82.0	39.7	143				
Vinyl chloride	15.2	0.200	20.00	0	76.2	41	165				
Bromomethane	21.2	1.00	20.00	0	106	31.5	135				
Trichlorofluoromethane (CFC-11)	16.8	1.00	20.00	0	83.8	54.7	138				
Chloroethane	16.6	1.00	20.00	0	83.1	49.9	143				

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812047-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195
Client ID:	HZ-MW-26:W	Batch ID:	22872			Analysis Date:	12/10/2018	SeqNo:	941780

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	18.1	1.00	20.00	0	90.7	51.6	164				
Methylene chloride	17.8	1.00	20.00	0	89.0	61.6	135				
trans-1,2-Dichloroethene	19.7	1.00	20.00	0	98.4	63.5	138				
Methyl tert-butyl ether (MTBE)	18.4	1.00	20.00	0	91.9	60.9	132				
1,1-Dichloroethane	18.9	1.00	20.00	0	94.3	55.7	151				
2,2-Dichloropropane	25.9	2.00	20.00	0	130	37.7	150				
cis-1,2-Dichloroethene	20.8	1.00	20.00	1.032	99.0	60	154				
Chloroform	19.4	1.00	20.00	0	96.9	48.1	140				
1,1,1-Trichloroethane (TCA)	20.1	1.00	20.00	0	101	64.2	146				
1,1-Dichloropropene	19.7	1.00	20.00	0	98.7	73.8	136				
Carbon tetrachloride	20.7	1.00	20.00	0	103	62.7	146				
1,2-Dichloroethane (EDC)	18.7	1.00	20.00	0	93.4	63.4	137				
Benzene	19.3	1.00	20.00	0	96.5	65.4	138				
Trichloroethene (TCE)	20.1	0.500	20.00	0	100	60.4	134				
1,2-Dichloropropane	18.4	1.00	20.00	0	92.0	62.6	138				
Bromodichloromethane	19.6	1.00	20.00	0	98.0	59.4	139				
Dibromomethane	20.4	1.00	20.00	0	102	58.7	148				
cis-1,3-Dichloropropene	19.6	1.00	20.00	0	98.2	63.8	132				
Toluene	20.2	1.00	20.00	0	101	52	147				
trans-1,3-Dichloropropylene	19.6	1.00	20.00	0	97.9	57.7	125				
1,1,2-Trichloroethane	20.5	1.00	20.00	0	103	57.5	153				
1,3-Dichloropropane	19.4	1.00	20.00	0	96.9	54.1	157				
Tetrachloroethene (PCE)	28.9	1.00	20.00	6.211	113	50.3	133				
Dibromochloromethane	21.1	1.00	20.00	0	106	61.6	139				
1,2-Dibromoethane (EDB)	20.4	0.250	20.00	0	102	63.2	134				
Chlorobenzene	21.2	1.00	20.00	0	106	65.8	134				
1,1,1,2-Tetrachloroethane	21.6	1.00	20.00	0	108	65.4	135				
Ethylbenzene	20.8	1.00	20.00	0	104	64.5	136				
m,p-Xylene	42.4	1.00	40.00	0	106	63.3	135				
o-Xylene	21.2	1.00	20.00	0	106	64.8	150				
Styrene	20.9	1.00	20.00	0	105	52.9	163				

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812047-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195
Client ID:	HZ-MW-26:W	Batch ID:	22872			Analysis Date:	12/10/2018	SeqNo:	941780

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	21.7	1.00	20.00	0	109	56	147				
Bromoform	21.8	2.00	20.00	0	109	57.7	139				
1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	59.8	146				
n-Propylbenzene	20.7	1.00	20.00	0	104	57.6	142				
Bromobenzene	21.6	1.00	20.00	0	108	69.3	157				
1,3,5-Trimethylbenzene	20.9	1.00	20.00	0	105	59.9	136				
2-Chlorotoluene	20.3	1.00	20.00	0	102	61.7	134				
4-Chlorotoluene	20.2	1.00	20.00	0	101	58.4	134				
tert-Butylbenzene	21.3	1.00	20.00	0	107	66.8	141				
1,2,3-Trichloropropane	19.7	1.00	20.00	0	98.4	62.4	129				
1,2,4-Trichlorobenzene	21.1	2.00	20.00	0	106	50.9	133				
sec-Butylbenzene	21.2	1.00	20.00	0	106	56	146				
4-Isopropyltoluene	21.1	1.00	20.00	0	105	56.4	136				
1,3-Dichlorobenzene	21.8	1.00	20.00	0	109	58.2	128				
1,4-Dichlorobenzene	21.6	1.00	20.00	0	108	60.1	123				
n-Butylbenzene	21.2	1.00	20.00	0	106	54.6	135				
1,2-Dichlorobenzene	21.4	1.00	20.00	0	107	65.4	133				
1,2-Dibromo-3-chloropropane	19.8	1.00	20.00	0	98.8	51.8	142				
1,2,4-Trimethylbenzene	20.5	1.00	20.00	0	103	63.7	132				
Hexachloro-1,3-butadiene	23.4	4.00	20.00	0	117	58.1	130				
Naphthalene	19.3	1.00	20.00	0	96.3	50.7	154				
1,2,3-Trichlorobenzene	21.1	4.00	20.00	0	105	57	131				
Surr: Dibromofluoromethane	24.4		25.00		97.8	45.4	152				
Surr: Toluene-d8	23.6		25.00		94.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.0	64.2	128				

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812047-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	HZ-MW-26:W	Batch ID:	22872	Analysis Date:	12/10/2018	SeqNo:	941781				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	10.2	1.00	20.00	0	51.2	33.3	122	10.37	1.15	30	
Chloromethane	17.2	2.00	20.00	0	86.2	39.7	143	16.39	5.00	30	
Vinyl chloride	15.3	0.200	20.00	0	76.7	41	165	15.24	0.707	30	
Bromomethane	22.9	1.00	20.00	0	115	31.5	135	21.22	7.66	30	
Trichlorofluoromethane (CFC-11)	17.2	1.00	20.00	0	86.0	54.7	138	16.76	2.60	30	
Chloroethane	16.8	1.00	20.00	0	84.1	49.9	143	16.63	1.15	30	
1,1-Dichloroethene	18.9	1.00	20.00	0	94.3	51.6	164	18.14	3.86	30	
Methylene chloride	18.0	1.00	20.00	0	89.9	61.6	135	17.80	0.984	30	
trans-1,2-Dichloroethene	19.7	1.00	20.00	0	98.3	63.5	138	19.67	0.0220	30	
Methyl tert-butyl ether (MTBE)	18.6	1.00	20.00	0	93.0	60.9	132	18.37	1.24	30	
1,1-Dichloroethane	18.5	1.00	20.00	0	92.5	55.7	151	18.86	1.97	30	
2,2-Dichloropropane	25.7	2.00	20.00	0	128	37.7	150	25.93	1.03	30	
cis-1,2-Dichloroethene	21.0	1.00	20.00	1.032	100	60	154	20.83	0.941	30	
Chloroform	19.5	1.00	20.00	0	97.7	48.1	140	19.38	0.797	30	
1,1,1-Trichloroethane (TCA)	20.4	1.00	20.00	0	102	64.2	146	20.11	1.26	30	
1,1-Dichloropropene	19.7	1.00	20.00	0	98.5	73.8	136	19.74	0.234	30	
Carbon tetrachloride	20.9	1.00	20.00	0	105	62.7	146	20.69	1.21	30	
1,2-Dichloroethane (EDC)	18.5	1.00	20.00	0	92.4	63.4	137	18.67	1.04	30	
Benzene	19.2	1.00	20.00	0	96.2	65.4	138	19.29	0.252	30	
Trichloroethene (TCE)	20.5	0.500	20.00	0	103	60.4	134	20.08	2.22	30	
1,2-Dichloropropane	18.3	1.00	20.00	0	91.5	62.6	138	18.40	0.478	30	
Bromodichloromethane	19.5	1.00	20.00	0	97.3	59.4	139	19.59	0.672	30	
Dibromomethane	19.9	1.00	20.00	0	99.5	58.7	148	20.43	2.60	30	
cis-1,3-Dichloropropene	19.4	1.00	20.00	0	97.1	63.8	132	19.64	1.18	30	
Toluene	20.1	1.00	20.00	0	101	52	147	20.17	0.135	30	
trans-1,3-Dichloropropylene	19.3	1.00	20.00	0	96.7	57.7	125	19.58	1.29	30	
1,1,2-Trichloroethane	20.1	1.00	20.00	0	100	57.5	153	20.55	2.22	30	
1,3-Dichloropropane	19.2	1.00	20.00	0	96.2	54.1	157	19.38	0.745	30	
Tetrachloroethene (PCE)	28.8	1.00	20.00	6.211	113	50.3	133	28.89	0.459	30	
Dibromochloromethane	20.9	1.00	20.00	0	105	61.6	139	21.14	1.02	30	
1,2-Dibromoethane (EDB)	20.1	0.250	20.00	0	101	63.2	134	20.37	1.18	30	

Work Order: 1812047
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812047-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	HZ-MW-26:W	Batch ID:	22872	Analysis Date:	12/10/2018	SeqNo:	941781				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.3	1.00	20.00	0	107	65.8	134	21.18	0.807	30	
1,1,1,2-Tetrachloroethane	21.8	1.00	20.00	0	109	65.4	135	21.58	0.990	30	
Ethylbenzene	21.0	1.00	20.00	0	105	64.5	136	20.81	1.09	30	
m,p-Xylene	42.6	1.00	40.00	0	107	63.3	135	42.39	0.531	30	
o-Xylene	21.3	1.00	20.00	0	106	64.8	150	21.17	0.557	30	
Styrene	21.1	1.00	20.00	0	105	52.9	163	20.94	0.556	30	
Isopropylbenzene	21.7	1.00	20.00	0	108	56	147	21.72	0.215	30	
Bromoform	21.8	2.00	20.00	0	109	57.7	139	21.81	0.126	30	
1,1,2,2-Tetrachloroethane	20.4	1.00	20.00	0	102	59.8	146	20.25	0.715	30	
n-Propylbenzene	21.9	1.00	20.00	0	110	57.6	142	20.71	5.77	30	
Bromobenzene	22.0	1.00	20.00	0	110	69.3	157	21.57	1.90	30	
1,3,5-Trimethylbenzene	21.5	1.00	20.00	0	107	59.9	136	20.91	2.66	30	
2-Chlorotoluene	20.8	1.00	20.00	0	104	61.7	134	20.34	2.13	30	
4-Chlorotoluene	21.3	1.00	20.00	0	106	58.4	134	20.17	5.38	30	
tert-Butylbenzene	22.1	1.00	20.00	0	110	66.8	141	21.34	3.35	30	
1,2,3-Trichloropropane	19.8	1.00	20.00	0	98.8	62.4	129	19.68	0.390	30	
1,2,4-Trichlorobenzene	21.4	2.00	20.00	0	107	50.9	133	21.12	1.30	30	
sec-Butylbenzene	21.4	1.00	20.00	0	107	56	146	21.16	1.21	30	
4-Isopropyltoluene	21.2	1.00	20.00	0	106	56.4	136	21.07	0.700	30	
1,3-Dichlorobenzene	21.8	1.00	20.00	0	109	58.2	128	21.83	0.102	30	
1,4-Dichlorobenzene	21.6	1.00	20.00	0	108	60.1	123	21.57	0.359	30	
n-Butylbenzene	21.0	1.00	20.00	0	105	54.6	135	21.16	0.950	30	
1,2-Dichlorobenzene	21.2	1.00	20.00	0	106	65.4	133	21.43	0.983	30	
1,2-Dibromo-3-chloropropane	19.5	1.00	20.00	0	97.7	51.8	142	19.76	1.08	30	
1,2,4-Trimethylbenzene	21.0	1.00	20.00	0	105	63.7	132	20.52	2.53	30	
Hexachloro-1,3-butadiene	23.8	4.00	20.00	0	119	58.1	130	23.37	1.69	30	
Naphthalene	19.3	1.00	20.00	0	96.7	50.7	154	19.27	0.426	30	
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	57	131	21.10	1.25	30	
Surr: Dibromofluoromethane	24.3		25.00		97.3	45.4	152		0		
Surr: Toluene-d8	23.3		25.00		93.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.9	64.2	128		0		

Work Order: 1812047
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812047-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/7/2018	RunNo:	48195		
Client ID:	HZ-MW-26:W	Batch ID:	22872			Analysis Date:	12/10/2018	SeqNo:	941781		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Client Name: **KANE**

 Work Order Number: **1812047**

 Logged by: **Brianna Barnes**

 Date Received: **12/4/2018 4:25:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	3.3
Sample	7.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/14/18 Page: 1 of 1

Laboratory Project No (Internal): 1912047

Client: KANE ENVIRONMENTAL

Project Name: BSCSS

Special Remarks:

Address: 4015 13TH AVE W

Project No: 87302-9.1

City, State, zip: SEATTLE, WA 98119

Collected by: B6

Telephone: (206) 691 0476

Location: Botwell

Fax:

Report To (PM): Jeff Jensen
PM Email: jeff@kane-environmental.com

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes													Comments		
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (801)		TDC	AMMONIA-N
1 H2-MW-25: W	12/14	1240	GW	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X	lab filter, AC
2 H2-MW-20's W	12/14	1515	GW	X	D	X	X	X	X	X	X	X	X	X	X	X	X	X	lab filter
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TMA Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide Fluoride Nitrate+Nitrite O-Phosphate
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished [Signature] Date/Time 12/14/18 1025
 Received [Signature] Date/Time 12/14/18 1625

Turn-around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify) _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812065

December 13, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/5/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812065

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812065-001	MW-33:W	12/05/2018 11:25 AM	12/05/2018 4:05 PM
1812065-002	MW-3:W	12/05/2018 12:55 PM	12/05/2018 4:05 PM
1812065-003	MW-23:W	12/05/2018 2:50 PM	12/05/2018 4:05 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 11:25:00 AM

Project: BSCSS

Lab ID: 1812065-001

Matrix: Groundwater

Client Sample ID: MW-33:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 10:57:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 10:57:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 10:57:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/12/2018 1:41:52 PM
Chloromethane	ND	2.00		µg/L	1	12/12/2018 1:41:52 PM
Vinyl chloride	ND	0.200		µg/L	1	12/12/2018 1:41:52 PM
Bromomethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Chloroethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Methylene chloride	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/12/2018 1:41:52 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Chloroform	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Benzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/12/2018 1:41:52 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Dibromomethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Toluene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/12/2018 1:41:52 PM
Chlorobenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 11:25:00 AM

Project: BSCSS

Lab ID: 1812065-001

Matrix: Groundwater

Client Sample ID: MW-33:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
m,p-Xylene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
o-Xylene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Styrene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Bromoform	ND	2.00		µg/L	1	12/12/2018 1:41:52 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Bromobenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/12/2018 1:41:52 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/12/2018 1:41:52 PM
Naphthalene	ND	1.00		µg/L	1	12/12/2018 1:41:52 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/12/2018 1:41:52 PM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	12/12/2018 1:41:52 PM
Surr: Toluene-d8	90.0	40.1 - 139		%Rec	1	12/12/2018 1:41:52 PM
Surr: 1-Bromo-4-fluorobenzene	96.3	64.2 - 128		%Rec	1	12/12/2018 1:41:52 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48248

Analyst: TN

Chloride	6.74	0.100	E	mg/L	1	12/11/2018 12:33:00 AM
Sulfate	10.6	0.300	Q	mg/L	1	12/11/2018 12:33:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 11:25:00 AM

Project: BSCSS

Lab ID: 1812065-001

Matrix: Groundwater

Client Sample ID: MW-33:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22875		Analyst: WC
Iron	ND	100		µg/L	1	12/10/2018 10:45:29 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	3.01	0.500		mg/L	1	12/6/2018 4:42:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22862		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 2:03:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 12:55:00 PM

Project: BSCSS

Lab ID: 1812065-002

Matrix: Groundwater

Client Sample ID: MW-3:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 11:00:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 11:00:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 11:00:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/12/2018 2:12:15 PM
Chloromethane	ND	2.00		µg/L	1	12/12/2018 2:12:15 PM
Vinyl chloride	ND	0.200		µg/L	1	12/12/2018 2:12:15 PM
Bromomethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Chloroethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Methylene chloride	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/12/2018 2:12:15 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Chloroform	14.1	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Benzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/12/2018 2:12:15 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Dibromomethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Toluene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/12/2018 2:12:15 PM
Chlorobenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 12:55:00 PM

Project: BSCSS

Lab ID: 1812065-002

Matrix: Groundwater

Client Sample ID: MW-3:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
m,p-Xylene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
o-Xylene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Styrene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Bromoform	ND	2.00		µg/L	1	12/12/2018 2:12:15 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Bromobenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/12/2018 2:12:15 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/12/2018 2:12:15 PM
Naphthalene	ND	1.00		µg/L	1	12/12/2018 2:12:15 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/12/2018 2:12:15 PM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	12/12/2018 2:12:15 PM
Surr: Toluene-d8	90.5	40.1 - 139		%Rec	1	12/12/2018 2:12:15 PM
Surr: 1-Bromo-4-fluorobenzene	96.5	64.2 - 128		%Rec	1	12/12/2018 2:12:15 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48248

Analyst: TN

Chloride	2.79	0.100		mg/L	1	12/11/2018 12:56:00 AM
Sulfate	3.18	0.300	Q	mg/L	1	12/11/2018 12:56:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 12:55:00 PM

Project: BSCSS

Lab ID: 1812065-002

Matrix: Groundwater

Client Sample ID: MW-3:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22875		Analyst: WC
Iron	ND	100		µg/L	1	12/10/2018 11:30:37 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	2.68	0.500		mg/L	1	12/6/2018 5:16:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22862		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 2:08:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 2:50:00 PM

Project: BSCSS

Lab ID: 1812065-003

Matrix: Groundwater

Client Sample ID: MW-23:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	0.0854	0.0173	D	mg/L	2	12/7/2018 11:32:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 11:02:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 11:02:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/12/2018 3:13:12 PM
Chloromethane	ND	2.00		µg/L	1	12/12/2018 3:13:12 PM
Vinyl chloride	ND	0.200		µg/L	1	12/12/2018 3:13:12 PM
Bromomethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Chloroethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Methylene chloride	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/12/2018 3:13:12 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Chloroform	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Benzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/12/2018 3:13:12 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Dibromomethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Toluene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Tetrachloroethene (PCE)	1.05	1.00		µg/L	1	12/12/2018 3:13:12 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/12/2018 3:13:12 PM
Chlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM



Client: Kane Environmental, Inc.

Collection Date: 12/5/2018 2:50:00 PM

Project: BSCSS

Lab ID: 1812065-003

Matrix: Groundwater

Client Sample ID: MW-23:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
m,p-Xylene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
o-Xylene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Styrene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Bromoform	ND	2.00		µg/L	1	12/12/2018 3:13:12 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Bromobenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/12/2018 3:13:12 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/12/2018 3:13:12 PM
Naphthalene	ND	1.00		µg/L	1	12/12/2018 3:13:12 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/12/2018 3:13:12 PM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	12/12/2018 3:13:12 PM
Surr: Toluene-d8	90.7	40.1 - 139		%Rec	1	12/12/2018 3:13:12 PM
Surr: 1-Bromo-4-fluorobenzene	96.8	64.2 - 128		%Rec	1	12/12/2018 3:13:12 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48248

Analyst: TN

Chloride	2.16	0.100		mg/L	1	12/11/2018 2:29:00 AM
Sulfate	10.3	0.300	Q	mg/L	1	12/11/2018 2:29:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812065-003
Client Sample ID: MW-23:W

Collection Date: 12/5/2018 2:50:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22875		Analyst: WC
Iron	124	100		µg/L	1	12/10/2018 11:34:38 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	2.40	0.500		mg/L	1	12/6/2018 6:22:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22862		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/6/2018 2:13:00 PM

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22862	SampType: MBLK	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: MBLKW	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940857							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22862	SampType: LCS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: LCSW	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940858							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.564 0.100 0.5000 0 113 80 120

Sample ID 1812062-001BDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940870							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812062-001BMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940871							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.5000 0 0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1812062-001BMSD	SampType: MSD	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48165							
Client ID: BATCH	Batch ID: 22862		Analysis Date: 12/6/2018	SeqNo: 940872							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.5000 0 0 70 130 0 30 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-R48248	SampType:	MBLK	Units:	mg/L	Prep Date:	12/10/2018	RunNo:	48248			
Client ID:	MBLKW	Batch ID:	R48248			Analysis Date:	12/10/2018	SeqNo:	943045			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100										
Sulfate	ND	0.300										

Sample ID	LCS-R48248	SampType:	LCS	Units:	mg/L	Prep Date:	12/10/2018	RunNo:	48248			
Client ID:	LCSW	Batch ID:	R48248			Analysis Date:	12/10/2018	SeqNo:	943046			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.719	0.100	0.7500	0	95.9	90	110					
Sulfate	3.42	0.300	3.750	0	91.2	90	110					

Sample ID	1812065-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248			
Client ID:	MW-3:W	Batch ID:	R48248			Analysis Date:	12/11/2018	SeqNo:	943061			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.78	0.100							2.787	0.180	20	
Sulfate	3.17	0.300							3.179	0.347	20	Q

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812065-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248			
Client ID:	MW-3:W	Batch ID:	R48248			Analysis Date:	12/11/2018	SeqNo:	943062			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.61	0.100	0.7500	2.787	110	80	120					E
Sulfate	6.95	0.300	3.750	3.179	101	80	120					

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812065-002DMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	MW-3:W	Batch ID:	R48248	Analysis Date:	12/11/2018	SeqNo:	943063				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.61	0.100	0.7500	2.787	110	80	120	3.610	0.0277	20	E
Sulfate	6.93	0.300	3.750	3.179	100	80	120	6.950	0.317	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812097-001CDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248	Analysis Date:	12/11/2018	SeqNo:	943034				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.83	0.100						4.814	0.249	20	E
Sulfate	14.3	0.300						14.25	0.602	20	Q

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812097-001CMS	SampType:	MS	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248	Analysis Date:	12/11/2018	SeqNo:	943035				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.66	0.100	0.7500	4.814	113	80	120				E
Sulfate	18.2	0.300	3.750	14.25	105	80	120				E

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48176		SampType: MBLK			Units: mg/L		Prep Date: 12/5/2018		RunNo: 48176		
Client ID: MBLKW		Batch ID: R48176					Analysis Date: 12/5/2018		SeqNo: 941089		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	ND	0.500
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Sample ID LCS-48176		SampType: LCS			Units: mg/L		Prep Date: 12/5/2018		RunNo: 48176		
Client ID: LCSW		Batch ID: R48176					Analysis Date: 12/5/2018		SeqNo: 941090		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	5.10	0.500	5.000	0	102	80	120
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Sample ID 1811435-001EDUP		SampType: DUP			Units: mg/L		Prep Date: 12/6/2018		RunNo: 48176		
Client ID: BATCH		Batch ID: R48176					Analysis Date: 12/6/2018		SeqNo: 941104		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	0.998	0.500					1.142	13.4	20
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Sample ID 1811435-001EMS		SampType: MS			Units: mg/L		Prep Date: 12/6/2018		RunNo: 48176		
Client ID: BATCH		Batch ID: R48176					Analysis Date: 12/6/2018		SeqNo: 941105		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	0.671	0.500	5.000	1.142	-9.42	70	130			S
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NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1811435-001EMSD		SampType: MSD			Units: mg/L		Prep Date: 12/6/2018		RunNo: 48176		
Client ID: BATCH		Batch ID: R48176					Analysis Date: 12/6/2018		SeqNo: 941106		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	0.658	0.500	5.000	1.142	-9.68	70	130	0.6711	1.96	30	S
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NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.



Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812005-001DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/6/2018	RunNo: 48176					
Client ID: BATCH	Batch ID: R48176				Analysis Date: 12/6/2018	SeqNo: 941107					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.83	0.500						4.179	8.79	20	

Sample ID 1812005-001DMS	SampType: MS	Units: mg/L			Prep Date: 12/6/2018	RunNo: 48176					
Client ID: BATCH	Batch ID: R48176				Analysis Date: 12/6/2018	SeqNo: 941108					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.70	0.500	5.000	4.179	90.5	70	130				

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22875	SampType: MBLK	Units: µg/L			Prep Date: 12/10/2018	RunNo: 48207					
Client ID: MBLKW	Batch ID: 22875				Analysis Date: 12/10/2018	SeqNo: 941845					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-22875	SampType: LCS	Units: µg/L			Prep Date: 12/10/2018	RunNo: 48207					
Client ID: LCSW	Batch ID: 22875				Analysis Date: 12/10/2018	SeqNo: 941846					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 999 100 1,000 0 99.9 50 150

Sample ID 1812065-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 12/10/2018	RunNo: 48207					
Client ID: MW-33:W	Batch ID: 22875				Analysis Date: 12/10/2018	SeqNo: 941850					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812065-001CMS	SampType: MS	Units: µg/L			Prep Date: 12/10/2018	RunNo: 48207					
Client ID: MW-33:W	Batch ID: 22875				Analysis Date: 12/10/2018	SeqNo: 941851					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,860 100 5,000 0 97.2 50 150

Sample ID 1812065-001CMSD	SampType: MSD	Units: µg/L			Prep Date: 12/10/2018	RunNo: 48207					
Client ID: MW-33:W	Batch ID: 22875				Analysis Date: 12/10/2018	SeqNo: 941852					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,830 100 5,000 0 96.5 50 150 4,859 0.659 30



Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22865FB	SampType: MBLK	Units: µg/L	Prep Date: 12/10/2018	RunNo: 48207							
Client ID: MBLKW	Batch ID: 22875	Analysis Date: 12/10/2018	SeqNo: 941875								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48164	SampType:	MBLK	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	MBLKW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940854		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48164	SampType:	LCS	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	LCSW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940853		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	1,250	0.00863	1,000	0	125	70	130				
Ethene	1,240	0.0151	1,000	0	124	70	130				
Ethane	1,240	0.0162	1,000	0	124	70	130				

Sample ID	1811444-005DREP	SampType:	REP	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	BATCH	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940849		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0103	0.00863						0.009270	10.1	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22898	SampType:	LCS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	LCSW	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	14.0	1.00	20.00	0	69.8	18.7	171				
Chloromethane	16.4	2.00	20.00	0	81.9	38.5	171				
Vinyl chloride	16.8	0.200	20.00	0	84.0	48	145				
Bromomethane	18.2	1.00	20.00	0	90.8	32.5	184				
Trichlorofluoromethane (CFC-11)	18.4	1.00	20.00	0	92.1	43.5	149				
Chloroethane	18.3	1.00	20.00	0	91.5	43.8	168				
1,1-Dichloroethene	17.1	1.00	20.00	0	85.6	57.5	150				
Methylene chloride	18.5	1.00	20.00	0	92.6	67.1	131				
trans-1,2-Dichloroethene	19.5	1.00	20.00	0	97.4	71.7	129				
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.5	58	138				
1,1-Dichloroethane	19.7	1.00	20.00	0	98.3	67.9	134				
2,2-Dichloropropane	22.9	2.00	20.00	0	115	26.5	185				
cis-1,2-Dichloroethene	19.3	1.00	20.00	0	96.5	70.2	139				
Chloroform	19.3	1.00	20.00	0	96.7	66.3	131				
1,1,1-Trichloroethane (TCA)	19.4	1.00	20.00	0	96.9	63	140				
1,1-Dichloropropene	19.6	1.00	20.00	0	97.9	69.9	124				
Carbon tetrachloride	18.9	1.00	20.00	0	94.5	66.2	134				
1,2-Dichloroethane (EDC)	19.7	1.00	20.00	0	98.4	67	126				
Benzene	19.5	1.00	20.00	0	97.6	69.3	132				
Trichloroethene (TCE)	19.4	0.500	20.00	0	97.2	65.2	136				
1,2-Dichloropropane	19.4	1.00	20.00	0	97.0	70.5	130				
Bromodichloromethane	18.7	1.00	20.00	0	93.6	67.2	137				
Dibromomethane	19.3	1.00	20.00	0	96.7	69.3	143				
cis-1,3-Dichloropropene	21.6	1.00	20.00	0	108	62.6	137				
Toluene	21.0	1.00	20.00	0	105	61.3	145				
trans-1,3-Dichloropropylene	21.7	1.00	20.00	0	109	56.5	163				
1,1,2-Trichloroethane	21.7	1.00	20.00	0	109	71.7	131				
1,3-Dichloropropane	21.8	1.00	20.00	0	109	73.5	127				
Tetrachloroethene (PCE)	20.8	1.00	20.00	0	104	47.5	147				
Dibromochloromethane	20.8	1.00	20.00	0	104	67.2	134				
1,2-Dibromoethane (EDB)	21.4	0.250	20.00	0	107	73.6	125				

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22898	SampType:	LCS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	LCSW	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.3	1.00	20.00	0	96.6	73.9	126				
1,1,1,2-Tetrachloroethane	19.1	1.00	20.00	0	95.6	76.8	124				
Ethylbenzene	19.9	1.00	20.00	0	99.5	72	130				
m,p-Xylene	38.8	1.00	40.00	0	97.0	70.3	134				
o-Xylene	17.8	1.00	20.00	0	88.8	72.1	131				
Styrene	18.1	1.00	20.00	0	90.3	64.3	140				
Isopropylbenzene	19.0	1.00	20.00	0	95.0	73.9	128				
Bromoform	17.8	2.00	20.00	0	88.8	55.3	141				
1,1,2,2-Tetrachloroethane	19.0	1.00	20.00	0	94.8	62.9	132				
n-Propylbenzene	19.5	1.00	20.00	0	97.3	74.5	127				
Bromobenzene	18.2	1.00	20.00	0	91.0	71	131				
1,3,5-Trimethylbenzene	19.5	1.00	20.00	0	97.5	73.1	128				
2-Chlorotoluene	19.2	1.00	20.00	0	96.2	70.8	130				
4-Chlorotoluene	19.9	1.00	20.00	0	99.7	70.1	131				
tert-Butylbenzene	19.6	1.00	20.00	0	97.8	68.2	131				
1,2,3-Trichloropropane	19.3	1.00	20.00	0	96.6	67.7	131				
1,2,4-Trichlorobenzene	20.3	2.00	20.00	0	102	41	139				
sec-Butylbenzene	19.3	1.00	20.00	0	96.5	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	96.1	69.2	130				
1,3-Dichlorobenzene	20.1	1.00	20.00	0	100	69.5	128				
1,4-Dichlorobenzene	20.1	1.00	20.00	0	100	66.8	119				
n-Butylbenzene	21.3	1.00	20.00	0	106	73.8	127				
1,2-Dichlorobenzene	20.3	1.00	20.00	0	101	69.7	119				
1,2-Dibromo-3-chloropropane	20.7	1.00	20.00	0	104	63.1	136				
1,2,4-Trimethylbenzene	19.2	1.00	20.00	0	96.1	73.4	127				
Hexachloro-1,3-butadiene	20.4	4.00	20.00	0	102	58.6	138				
Naphthalene	20.7	1.00	20.00	0	104	41.8	165				
1,2,3-Trichlorobenzene	19.9	4.00	20.00	0	99.6	35.8	155				
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152				
Surr: Toluene-d8	27.8		25.00		111	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.0	64.2	128				

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22898	SampType:	LCS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	LCSW	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-22898	SampType:	MBLK	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MBLKW	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942222				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-22898	SampType: MBLK	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226
Client ID: MBLKW	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942222

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Pentachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-22898	SampType: MBLK	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: MBLKW	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942222							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.2		25.00		101	45.4	152				
Surr: Toluene-d8	26.9		25.00		108	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	27.2		25.00		109	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812059-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: BATCH	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942216							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812059-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942216				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	1.77	1.00						1.866	5.17	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812059-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898			Analysis Date:	12/11/2018	SeqNo:	942216		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.0		25.00		99.8	45.4	152		0		
Surr: Toluene-d8	24.0		25.00		95.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812065-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-3:W	Batch ID:	22898			Analysis Date:	12/12/2018	SeqNo:	943349		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-3:W	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943349				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	15.5	1.00						14.05	9.74	30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-3:W	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943349				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152		0		
Surr: Toluene-d8	25.8		25.00		103	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.1	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812065-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-33:W	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943346				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.1	1.00	20.00	0	75.6	33.3	122				
Chloromethane	20.1	2.00	20.00	0	101	39.7	143				
Vinyl chloride	21.1	0.200	20.00	0	105	41	165				
Bromomethane	20.6	1.00	20.00	0	103	31.5	135				

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-33:W	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943346				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	19.2	1.00	20.00	0	96.0	54.7	138				
Chloroethane	19.7	1.00	20.00	0	98.5	49.9	143				
1,1-Dichloroethene	19.4	1.00	20.00	0	96.8	51.6	164				
Methylene chloride	20.4	1.00	20.00	0	102	61.6	135				
trans-1,2-Dichloroethene	22.0	1.00	20.00	0	110	63.5	138				
Methyl tert-butyl ether (MTBE)	20.9	1.00	20.00	0	105	60.9	132				
1,1-Dichloroethane	21.3	1.00	20.00	0	106	55.7	151				
2,2-Dichloropropane	9.24	2.00	20.00	0	46.2	37.7	150				
cis-1,2-Dichloroethene	20.4	1.00	20.00	0	102	60	154				
Chloroform	22.0	1.00	20.00	0	110	48.1	140				
1,1,1-Trichloroethane (TCA)	22.3	1.00	20.00	0	112	64.2	146				
1,1-Dichloropropene	22.9	1.00	20.00	0	115	73.8	136				
Carbon tetrachloride	22.3	1.00	20.00	0	112	62.7	146				
1,2-Dichloroethane (EDC)	21.7	1.00	20.00	0	108	63.4	137				
Benzene	22.5	1.00	20.00	0	113	65.4	138				
Trichloroethene (TCE)	22.6	0.500	20.00	0	113	60.4	134				
1,2-Dichloropropane	22.2	1.00	20.00	0	111	62.6	138				
Bromodichloromethane	21.2	1.00	20.00	0	106	59.4	139				
Dibromomethane	21.5	1.00	20.00	0	107	58.7	148				
cis-1,3-Dichloropropene	19.0	1.00	20.00	0	95.2	63.8	132				
Toluene	22.1	1.00	20.00	0	111	52	147				
trans-1,3-Dichloropropylene	18.4	1.00	20.00	0	91.8	57.7	125				
1,1,2-Trichloroethane	20.9	1.00	20.00	0	104	57.5	153				
1,3-Dichloropropane	18.4	1.00	20.00	0	92.2	54.1	157				
Tetrachloroethene (PCE)	19.0	1.00	20.00	0	95.2	50.3	133				
Dibromochloromethane	17.9	1.00	20.00	0	89.5	61.6	139				
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	92.1	63.2	134				
Chlorobenzene	21.3	1.00	20.00	0	107	65.8	134				
1,1,1,2-Tetrachloroethane	21.2	1.00	20.00	0	106	65.4	135				
Ethylbenzene	21.9	1.00	20.00	0	110	64.5	136				
m,p-Xylene	42.5	1.00	40.00	0	106	63.3	135				

Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-33:W	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943346				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	19.2	1.00	20.00	0	96.0	64.8	150				
Styrene	19.6	1.00	20.00	0	97.9	52.9	163				
Isopropylbenzene	21.0	1.00	20.00	0	105	56	147				
Bromoform	19.5	2.00	20.00	0	97.4	57.7	139				
1,1,1,2,2-Tetrachloroethane	19.8	1.00	20.00	0	99.1	59.8	146				
n-Propylbenzene	21.7	1.00	20.00	0	108	57.6	142				
Bromobenzene	20.7	1.00	20.00	0	103	69.3	157				
1,3,5-Trimethylbenzene	21.4	1.00	20.00	0	107	59.9	136				
2-Chlorotoluene	21.8	1.00	20.00	0	109	61.7	134				
4-Chlorotoluene	21.7	1.00	20.00	0	109	58.4	134				
tert-Butylbenzene	21.7	1.00	20.00	0	109	66.8	141				
1,2,3-Trichloropropane	18.8	1.00	20.00	0	93.8	62.4	129				
1,2,4-Trichlorobenzene	22.3	2.00	20.00	0	111	50.9	133				
sec-Butylbenzene	21.6	1.00	20.00	0	108	56	146				
4-Isopropyltoluene	21.2	1.00	20.00	0	106	56.4	136				
1,3-Dichlorobenzene	21.6	1.00	20.00	0	108	58.2	128				
1,4-Dichlorobenzene	21.5	1.00	20.00	0	108	60.1	123				
n-Butylbenzene	22.0	1.00	20.00	0	110	54.6	135				
1,2-Dichlorobenzene	22.0	1.00	20.00	0	110	65.4	133				
1,2-Dibromo-3-chloropropane	19.4	1.00	20.00	0	97.1	51.8	142				
1,2,4-Trimethylbenzene	21.1	1.00	20.00	0	106	63.7	132				
Hexachloro-1,3-butadiene	21.8	4.00	20.00	0	109	58.1	130				
Naphthalene	22.7	1.00	20.00	0	113	50.7	154				
1,2,3-Trichlorobenzene	22.7	4.00	20.00	0	114	57	131				
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152				
Surr: Toluene-d8	25.9		25.00		104	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.2	64.2	128				

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226
Client ID:	MW-33:W	Batch ID:	22898			Analysis Date:	12/12/2018	SeqNo:	943347

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.9	1.00	20.00	0	84.7	33.3	122	15.12	11.4	30	
Chloromethane	22.4	2.00	20.00	0	112	39.7	143	20.11	10.7	30	
Vinyl chloride	21.2	0.200	20.00	0	106	41	165	21.07	0.478	30	
Bromomethane	24.1	1.00	20.00	0	120	31.5	135	20.60	15.5	30	
Trichlorofluoromethane (CFC-11)	23.7	1.00	20.00	0	119	54.7	138	19.19	21.0	30	
Chloroethane	22.6	1.00	20.00	0	113	49.9	143	19.69	13.8	30	
1,1-Dichloroethene	22.7	1.00	20.00	0	114	51.6	164	19.36	16.0	30	
Methylene chloride	20.2	1.00	20.00	0	101	61.6	135	20.39	1.13	30	
trans-1,2-Dichloroethene	21.8	1.00	20.00	0	109	63.5	138	21.98	1.00	30	
Methyl tert-butyl ether (MTBE)	20.8	1.00	20.00	0	104	60.9	132	20.92	0.524	30	
1,1-Dichloroethane	24.3	1.00	20.00	0	121	55.7	151	21.28	13.1	30	
2,2-Dichloropropane	9.85	2.00	20.00	0	49.2	37.7	150	9.240	6.38	30	
cis-1,2-Dichloroethene	21.8	1.00	20.00	0	109	60	154	20.38	6.57	30	
Chloroform	21.6	1.00	20.00	0	108	48.1	140	21.99	1.77	30	
1,1,1-Trichloroethane (TCA)	22.2	1.00	20.00	0	111	64.2	146	22.31	0.662	30	
1,1-Dichloropropene	22.0	1.00	20.00	0	110	73.8	136	22.92	4.20	30	
Carbon tetrachloride	22.4	1.00	20.00	0	112	62.7	146	22.32	0.297	30	
1,2-Dichloroethane (EDC)	21.1	1.00	20.00	0	106	63.4	137	21.65	2.46	30	
Benzene	21.7	1.00	20.00	0	108	65.4	138	22.54	3.91	30	
Trichloroethene (TCE)	22.1	0.500	20.00	0	111	60.4	134	22.60	2.14	30	
1,2-Dichloropropane	21.0	1.00	20.00	0	105	62.6	138	22.16	5.29	30	
Bromodichloromethane	20.7	1.00	20.00	0	104	59.4	139	21.24	2.47	30	
Dibromomethane	20.7	1.00	20.00	0	104	58.7	148	21.50	3.78	30	
cis-1,3-Dichloropropene	18.5	1.00	20.00	0	92.5	63.8	132	19.03	2.89	30	
Toluene	21.8	1.00	20.00	0	109	52	147	22.13	1.48	30	
trans-1,3-Dichloropropylene	18.4	1.00	20.00	0	92.1	57.7	125	18.35	0.405	30	
1,1,2-Trichloroethane	21.4	1.00	20.00	0	107	57.5	153	20.87	2.74	30	
1,3-Dichloropropane	21.0	1.00	20.00	0	105	54.1	157	18.45	12.9	30	
Tetrachloroethene (PCE)	21.7	1.00	20.00	0	109	50.3	133	19.04	13.1	30	
Dibromochloromethane	21.0	1.00	20.00	0	105	61.6	139	17.90	16.0	30	
1,2-Dibromoethane (EDB)	21.3	0.250	20.00	0	107	63.2	134	18.41	14.8	30	

Work Order: 1812065
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-33:W	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943347				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.6	1.00	20.00	0	108	65.8	134	21.31	1.35	30	
1,1,1,2-Tetrachloroethane	21.5	1.00	20.00	0	107	65.4	135	21.15	1.44	30	
Ethylbenzene	22.0	1.00	20.00	0	110	64.5	136	21.93	0.439	30	
m,p-Xylene	43.1	1.00	40.00	0	108	63.3	135	42.49	1.38	30	
o-Xylene	19.7	1.00	20.00	0	98.4	64.8	150	19.20	2.41	30	
Styrene	20.0	1.00	20.00	0	100	52.9	163	19.58	2.21	30	
Isopropylbenzene	21.2	1.00	20.00	0	106	56	147	20.97	0.927	30	
Bromoform	19.0	2.00	20.00	0	95.2	57.7	139	19.48	2.24	30	
1,1,2,2-Tetrachloroethane	20.3	1.00	20.00	0	101	59.8	146	19.82	2.25	30	
n-Propylbenzene	21.1	1.00	20.00	0	105	57.6	142	21.69	2.93	30	
Bromobenzene	20.2	1.00	20.00	0	101	69.3	157	20.66	2.29	30	
1,3,5-Trimethylbenzene	21.7	1.00	20.00	0	109	59.9	136	21.41	1.45	30	
2-Chlorotoluene	21.9	1.00	20.00	0	109	61.7	134	21.79	0.297	30	
4-Chlorotoluene	21.3	1.00	20.00	0	107	58.4	134	21.70	1.75	30	
tert-Butylbenzene	21.9	1.00	20.00	0	109	66.8	141	21.75	0.567	30	
1,2,3-Trichloropropane	19.0	1.00	20.00	0	94.8	62.4	129	18.77	1.08	30	
1,2,4-Trichlorobenzene	21.5	2.00	20.00	0	108	50.9	133	22.25	3.41	30	
sec-Butylbenzene	22.1	1.00	20.00	0	110	56	146	21.63	2.03	30	
4-Isopropyltoluene	21.3	1.00	20.00	0	107	56.4	136	21.18	0.740	30	
1,3-Dichlorobenzene	22.1	1.00	20.00	0	111	58.2	128	21.63	2.23	30	
1,4-Dichlorobenzene	21.9	1.00	20.00	0	110	60.1	123	21.54	1.64	30	
n-Butylbenzene	22.9	1.00	20.00	0	115	54.6	135	22.04	3.86	30	
1,2-Dichlorobenzene	22.3	1.00	20.00	0	112	65.4	133	21.96	1.58	30	
1,2-Dibromo-3-chloropropane	20.0	1.00	20.00	0	99.9	51.8	142	19.42	2.85	30	
1,2,4-Trimethylbenzene	21.7	1.00	20.00	0	108	63.7	132	21.12	2.49	30	
Hexachloro-1,3-butadiene	20.8	4.00	20.00	0	104	58.1	130	21.77	4.58	30	
Naphthalene	22.1	1.00	20.00	0	111	50.7	154	22.67	2.52	30	
1,2,3-Trichlorobenzene	21.7	4.00	20.00	0	109	57	131	22.72	4.39	30	
Surr: Dibromofluoromethane	25.1		25.00		101	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.0	64.2	128		0		



Work Order: 1812065
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	MW-33:W	Batch ID:	22898			Analysis Date:	12/12/2018	SeqNo:	943347		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812065**
 Date Received: **12/5/2018 4:05:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 HNO3 for C fractions
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	3.3
Sample	3.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/15/18 Page: 1 of 1

Laboratory Project No (Internal): 1612005

Project Name: BSSS

Special Remarks:

Collected by: B6

Location: BOTWILL

Report To (PM): JEFF JENSEN

Sample Disposal: Return to client Disposal by lab (after 30 days)

PM Email: JEFF@KAWA-ENVIRONMENTAL.COM

Client: KAWA ENVIRONMENTAL
Address: 4015 13th Ave W
City, State, Zip: SEATTLE, WA 98119
Telephone: (206) 441 0470
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCS (EPA 8260 / 624)	GY/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	TU	AMMONIA -N	RSP	Comments
1 MW-30' W	12/15	1705	GW																	lab filter, DC
2 MW-3' W	12/15	1255	GW																	lab filter
3 MW-23' W	12/15	1450	GW																	lab filter
4																				
5																				
6																				
7																				
8																				
9																				
10																				B6

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: [Signature] Date/Time: 12/15/18 1004
 Received: [Signature] Date/Time: 12/15/18 1605
 Relinquished: [Signature] Date/Time: []
 Received: [Signature] Date/Time: []



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812076

December 14, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/6/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812076

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812076-001	HZ-MW-28:W	12/06/2018 11:50 AM	12/06/2018 4:29 PM
1812076-002	HZ-MW-17:W	12/06/2018 1:15 PM	12/06/2018 4:29 PM
1812076-003	HZ-MW-33:W	12/06/2018 3:05 PM	12/06/2018 4:29 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-001
Client Sample ID: HZ-MW-28:W

Collection Date: 12/6/2018 11:50:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	0.0101	0.00863		mg/L	1	12/7/2018 11:12:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 11:12:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 11:12:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/12/2018 3:43:24 PM
Chloromethane	ND	2.00		µg/L	1	12/12/2018 3:43:24 PM
Vinyl chloride	ND	0.200		µg/L	1	12/12/2018 3:43:24 PM
Bromomethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Chloroethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Methylene chloride	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/12/2018 3:43:24 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Chloroform	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Benzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/12/2018 3:43:24 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Dibromomethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Toluene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/12/2018 3:43:24 PM
Chlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM



Client: Kane Environmental, Inc.

Collection Date: 12/6/2018 11:50:00 AM

Project: BSCSS

Lab ID: 1812076-001

Matrix: Groundwater

Client Sample ID: HZ-MW-28:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
m,p-Xylene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
o-Xylene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Styrene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Bromoform	ND	2.00		µg/L	1	12/12/2018 3:43:24 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Bromobenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/12/2018 3:43:24 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/12/2018 3:43:24 PM
Naphthalene	ND	1.00		µg/L	1	12/12/2018 3:43:24 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/12/2018 3:43:24 PM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	12/12/2018 3:43:24 PM
Surr: Toluene-d8	102	40.1 - 139		%Rec	1	12/12/2018 3:43:24 PM
Surr: 1-Bromo-4-fluorobenzene	86.2	64.2 - 128		%Rec	1	12/12/2018 3:43:24 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48248

Analyst: TN

Chloride	14.0	0.500	D	mg/L	5	12/11/2018 2:52:00 AM
Sulfate	37.6	1.50	DQ	mg/L	5	12/11/2018 2:52:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-001
Client Sample ID: HZ-MW-28:W

Collection Date: 12/6/2018 11:50:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22875		Analyst: WC
Iron	ND	100		µg/L	1	12/10/2018 12:34:59 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	2.77	0.500		mg/L	1	12/6/2018 6:54:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 12:44:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/6/2018 1:15:00 PM

Project: BSCSS

Lab ID: 1812076-002

Matrix: Groundwater

Client Sample ID: HZ-MW-17:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 11:16:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 11:16:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 11:16:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/12/2018 4:13:46 PM
Chloromethane	ND	2.00		µg/L	1	12/12/2018 4:13:46 PM
Vinyl chloride	ND	0.200		µg/L	1	12/12/2018 4:13:46 PM
Bromomethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Chloroethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Methylene chloride	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/12/2018 4:13:46 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Chloroform	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Benzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/12/2018 4:13:46 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Dibromomethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Toluene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/12/2018 4:13:46 PM
Chlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-002
Client Sample ID: HZ-MW-17:W

Collection Date: 12/6/2018 1:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
m,p-Xylene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
o-Xylene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Styrene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Bromoform	ND	2.00		µg/L	1	12/12/2018 4:13:46 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Bromobenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/12/2018 4:13:46 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/12/2018 4:13:46 PM
Naphthalene	ND	1.00		µg/L	1	12/12/2018 4:13:46 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/12/2018 4:13:46 PM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	12/12/2018 4:13:46 PM
Surr: Toluene-d8	89.8	40.1 - 139		%Rec	1	12/12/2018 4:13:46 PM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	12/12/2018 4:13:46 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48248 Analyst: TN

Chloride	9.10	0.200	DE	mg/L	2	12/11/2018 3:15:00 AM
Sulfate	23.7	0.600	DQ	mg/L	2	12/11/2018 3:15:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-002
Client Sample ID: HZ-MW-17:W

Collection Date: 12/6/2018 1:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22875		Analyst: WC
Iron	2,060	100		µg/L	1	12/10/2018 12:39:00 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	2.28	0.500		mg/L	1	12/6/2018 7:24:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 12:49:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-003
Client Sample ID: HZ-MW-33:W

Collection Date: 12/6/2018 3:05:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48164 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/7/2018 11:19:00 AM
Ethene	ND	0.0151		mg/L	1	12/7/2018 11:19:00 AM
Ethane	ND	0.0162		mg/L	1	12/7/2018 11:19:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/12/2018 4:44:07 PM
Chloromethane	ND	2.00		µg/L	1	12/12/2018 4:44:07 PM
Vinyl chloride	0.303	0.200		µg/L	1	12/12/2018 4:44:07 PM
Bromomethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Chloroethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Methylene chloride	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/12/2018 4:44:07 PM
cis-1,2-Dichloroethene	2.06	1.00		µg/L	1	12/12/2018 4:44:07 PM
Chloroform	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Benzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/12/2018 4:44:07 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Dibromomethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Toluene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/12/2018 4:44:07 PM
Chlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-003
Client Sample ID: HZ-MW-33:W

Collection Date: 12/6/2018 3:05:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22898 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
m,p-Xylene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
o-Xylene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Styrene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Bromoform	ND	2.00		µg/L	1	12/12/2018 4:44:07 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Bromobenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/12/2018 4:44:07 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/12/2018 4:44:07 PM
Naphthalene	ND	1.00		µg/L	1	12/12/2018 4:44:07 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/12/2018 4:44:07 PM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	12/12/2018 4:44:07 PM
Surr: Toluene-d8	88.6	40.1 - 139		%Rec	1	12/12/2018 4:44:07 PM
Surr: 1-Bromo-4-fluorobenzene	97.7	64.2 - 128		%Rec	1	12/12/2018 4:44:07 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: R48248 Analyst: TN

Chloride	7.87	0.200	DE	mg/L	2	12/11/2018 3:38:00 AM
Sulfate	19.1	0.600	DQ	mg/L	2	12/11/2018 3:38:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812076-003
Client Sample ID: HZ-MW-33:W

Collection Date: 12/6/2018 3:05:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22875		Analyst: WC
Iron	ND	100		µg/L	1	12/10/2018 12:43:01 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48176		Analyst: GM
Total Organic Carbon	2.36	0.500		mg/L	1	12/6/2018 7:51:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 12:55:00 PM

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22935	SampType: MBLK	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: MBLKW	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944419							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22935	SampType: LCS	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: LCSW	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944420							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.212 0.100 0.2500 0 84.8 80 120

Sample ID 1812076-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: HZ-MW-28:W	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944442							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812076-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: HZ-MW-28:W	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944443							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.135 0.100 0.2500 0 54.0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID 1812076-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: HZ-MW-28:W	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944444							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.175 0.100 0.2500 0 70.0 70 130 0.1350 25.8 30



Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812152-002FDUP	SampType: DUP	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: BATCH	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944445					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812152-002FMS	SampType: MS	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: BATCH	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944446					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.222	0.100	0.2500	0	88.8	70	130				

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-R48248	SampType:	MBLK	Units:	mg/L	Prep Date:	12/10/2018	RunNo:	48248		
Client ID:	MBLKW	Batch ID:	R48248			Analysis Date:	12/10/2018	SeqNo:	943045		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-R48248	SampType:	LCS	Units:	mg/L	Prep Date:	12/10/2018	RunNo:	48248		
Client ID:	LCSW	Batch ID:	R48248			Analysis Date:	12/10/2018	SeqNo:	943046		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.719	0.100	0.7500	0	95.9	90	110				
Sulfate	3.42	0.300	3.750	0	91.2	90	110				

Sample ID	1812065-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248			Analysis Date:	12/11/2018	SeqNo:	943061		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.78	0.100						2.787	0.180	20	
Sulfate	3.17	0.300						3.179	0.347	20	Q

NOTES:
 Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812065-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248			Analysis Date:	12/11/2018	SeqNo:	943062		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.61	0.100	0.7500	2.787	110	80	120				E
Sulfate	6.95	0.300	3.750	3.179	101	80	120				

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812065-002DMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248	Analysis Date:	12/11/2018	SeqNo:	943063				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.61	0.100	0.7500	2.787	110	80	120	3.610	0.0277	20	E
Sulfate	6.93	0.300	3.750	3.179	100	80	120	6.950	0.317	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812097-001CDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248	Analysis Date:	12/11/2018	SeqNo:	943034				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.83	0.100						4.814	0.249	20	E
Sulfate	14.3	0.300						14.25	0.602	20	Q

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812097-001CMS	SampType:	MS	Units:	mg/L	Prep Date:	12/11/2018	RunNo:	48248		
Client ID:	BATCH	Batch ID:	R48248	Analysis Date:	12/11/2018	SeqNo:	943035				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.66	0.100	0.7500	4.814	113	80	120				E
Sulfate	18.2	0.300	3.750	14.25	105	80	120				E

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48176	SampType: MBLK	Units: mg/L	Prep Date: 12/5/2018	RunNo: 48176							
Client ID: MBLKW	Batch ID: R48176		Analysis Date: 12/5/2018	SeqNo: 941089							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500									

Sample ID LCS-48176	SampType: LCS	Units: mg/L	Prep Date: 12/5/2018	RunNo: 48176							
Client ID: LCSW	Batch ID: R48176		Analysis Date: 12/5/2018	SeqNo: 941090							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.10	0.500	5.000	0	102	80	120				

Sample ID 1811435-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941104							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.998	0.500						1.142	13.4	20	

Sample ID 1811435-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941105							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.671	0.500	5.000	1.142	-9.42	70	130				S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1811435-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941106							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	0.658	0.500	5.000	1.142	-9.68	70	130	0.6711	1.96	30	S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812005-001DDUP	SampType: DUP	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941107							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.83	0.500						4.179	8.79	20	

Sample ID 1812005-001DMS	SampType: MS	Units: mg/L	Prep Date: 12/6/2018	RunNo: 48176							
Client ID: BATCH	Batch ID: R48176		Analysis Date: 12/6/2018	SeqNo: 941108							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.70	0.500	5.000	4.179	90.5	70	130				

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID	MB-22875	SampType:	MBLK	Units:	µg/L	Prep Date:	12/10/2018	RunNo:	48207		
Client ID:	MBLKW	Batch ID:	22875	Analysis Date:	12/10/2018	SeqNo:	941845				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID	LCS-22875	SampType:	LCS	Units:	µg/L	Prep Date:	12/10/2018	RunNo:	48207		
Client ID:	LCSW	Batch ID:	22875	Analysis Date:	12/10/2018	SeqNo:	941846				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 999 100 1,000 0 99.9 50 150

Sample ID	1812065-001CDUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/10/2018	RunNo:	48207		
Client ID:	BATCH	Batch ID:	22875	Analysis Date:	12/10/2018	SeqNo:	941850				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID	1812065-001CMS	SampType:	MS	Units:	µg/L	Prep Date:	12/10/2018	RunNo:	48207		
Client ID:	BATCH	Batch ID:	22875	Analysis Date:	12/10/2018	SeqNo:	941851				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,860 100 5,000 0 97.2 50 150

Sample ID	1812065-001CMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/10/2018	RunNo:	48207		
Client ID:	BATCH	Batch ID:	22875	Analysis Date:	12/10/2018	SeqNo:	941852				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,830 100 5,000 0 96.5 50 150 4,859 0.659 30



Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22865FB	SampType: MBLK	Units: µg/L	Prep Date: 12/10/2018	RunNo: 48207							
Client ID: MBLKW	Batch ID: 22875	Analysis Date: 12/10/2018	SeqNo: 941875								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48164	SampType:	MBLK	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	MBLKW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940854		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863
Ethene	ND	0.0151
Ethane	ND	0.0162

Sample ID	LCS-R48164	SampType:	LCS	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	LCSW	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940853		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	1,250	0.00863	1,000	0	125	70	130
Ethene	1,240	0.0151	1,000	0	124	70	130
Ethane	1,240	0.0162	1,000	0	124	70	130

Sample ID	1811444-005DREP	SampType:	REP	Units:	mg/L	Prep Date:	12/7/2018	RunNo:	48164		
Client ID:	BATCH	Batch ID:	R48164			Analysis Date:	12/7/2018	SeqNo:	940849		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0103	0.00863						0.009270	10.1	30
Ethene	ND	0.0151						0		30
Ethane	ND	0.0162						0		30

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22898	SampType:	LCS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	LCSW	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	14.0	1.00	20.00	0	69.8	18.7	171				
Chloromethane	16.4	2.00	20.00	0	81.9	38.5	171				
Vinyl chloride	16.8	0.200	20.00	0	84.0	48	145				
Bromomethane	18.2	1.00	20.00	0	90.8	32.5	184				
Trichlorofluoromethane (CFC-11)	18.4	1.00	20.00	0	92.1	43.5	149				
Chloroethane	18.3	1.00	20.00	0	91.5	43.8	168				
1,1-Dichloroethene	17.1	1.00	20.00	0	85.6	57.5	150				
Methylene chloride	18.5	1.00	20.00	0	92.6	67.1	131				
trans-1,2-Dichloroethene	19.5	1.00	20.00	0	97.4	71.7	129				
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.5	58	138				
1,1-Dichloroethane	19.7	1.00	20.00	0	98.3	67.9	134				
2,2-Dichloropropane	22.9	2.00	20.00	0	115	26.5	185				
cis-1,2-Dichloroethene	19.3	1.00	20.00	0	96.5	70.2	139				
Chloroform	19.3	1.00	20.00	0	96.7	66.3	131				
1,1,1-Trichloroethane (TCA)	19.4	1.00	20.00	0	96.9	63	140				
1,1-Dichloropropene	19.6	1.00	20.00	0	97.9	69.9	124				
Carbon tetrachloride	18.9	1.00	20.00	0	94.5	66.2	134				
1,2-Dichloroethane (EDC)	19.7	1.00	20.00	0	98.4	67	126				
Benzene	19.5	1.00	20.00	0	97.6	69.3	132				
Trichloroethene (TCE)	19.4	0.500	20.00	0	97.2	65.2	136				
1,2-Dichloropropane	19.4	1.00	20.00	0	97.0	70.5	130				
Bromodichloromethane	18.7	1.00	20.00	0	93.6	67.2	137				
Dibromomethane	19.3	1.00	20.00	0	96.7	69.3	143				
cis-1,3-Dichloropropene	21.6	1.00	20.00	0	108	62.6	137				
Toluene	21.0	1.00	20.00	0	105	61.3	145				
trans-1,3-Dichloropropylene	21.7	1.00	20.00	0	109	56.5	163				
1,1,2-Trichloroethane	21.7	1.00	20.00	0	109	71.7	131				
1,3-Dichloropropane	21.8	1.00	20.00	0	109	73.5	127				
Tetrachloroethene (PCE)	20.8	1.00	20.00	0	104	47.5	147				
Dibromochloromethane	20.8	1.00	20.00	0	104	67.2	134				
1,2-Dibromoethane (EDB)	21.4	0.250	20.00	0	107	73.6	125				

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22898	SampType:	LCS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	LCSW	Batch ID:	22898	Analysis Date:	12/11/2018	SeqNo:	942219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.3	1.00	20.00	0	96.6	73.9	126				
1,1,1,2-Tetrachloroethane	19.1	1.00	20.00	0	95.6	76.8	124				
Ethylbenzene	19.9	1.00	20.00	0	99.5	72	130				
m,p-Xylene	38.8	1.00	40.00	0	97.0	70.3	134				
o-Xylene	17.8	1.00	20.00	0	88.8	72.1	131				
Styrene	18.1	1.00	20.00	0	90.3	64.3	140				
Isopropylbenzene	19.0	1.00	20.00	0	95.0	73.9	128				
Bromoform	17.8	2.00	20.00	0	88.8	55.3	141				
1,1,2,2-Tetrachloroethane	19.0	1.00	20.00	0	94.8	62.9	132				
n-Propylbenzene	19.5	1.00	20.00	0	97.3	74.5	127				
Bromobenzene	18.2	1.00	20.00	0	91.0	71	131				
1,3,5-Trimethylbenzene	19.5	1.00	20.00	0	97.5	73.1	128				
2-Chlorotoluene	19.2	1.00	20.00	0	96.2	70.8	130				
4-Chlorotoluene	19.9	1.00	20.00	0	99.7	70.1	131				
tert-Butylbenzene	19.6	1.00	20.00	0	97.8	68.2	131				
1,2,3-Trichloropropane	19.3	1.00	20.00	0	96.6	67.7	131				
1,2,4-Trichlorobenzene	20.3	2.00	20.00	0	102	41	139				
sec-Butylbenzene	19.3	1.00	20.00	0	96.5	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	96.1	69.2	130				
1,3-Dichlorobenzene	20.1	1.00	20.00	0	100	69.5	128				
1,4-Dichlorobenzene	20.1	1.00	20.00	0	100	66.8	119				
n-Butylbenzene	21.3	1.00	20.00	0	106	73.8	127				
1,2-Dichlorobenzene	20.3	1.00	20.00	0	101	69.7	119				
1,2-Dibromo-3-chloropropane	20.7	1.00	20.00	0	104	63.1	136				
1,2,4-Trimethylbenzene	19.2	1.00	20.00	0	96.1	73.4	127				
Hexachloro-1,3-butadiene	20.4	4.00	20.00	0	102	58.6	138				
Naphthalene	20.7	1.00	20.00	0	104	41.8	165				
1,2,3-Trichlorobenzene	19.9	4.00	20.00	0	99.6	35.8	155				
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152				
Surr: Toluene-d8	27.8		25.00		111	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.0	64.2	128				

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-22898	SampType: LCS	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: LCSW	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942219							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-22898	SampType: MBLK	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: MBLKW	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942222							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-22898	SampType: MBLK	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226
Client ID: MBLKW	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942222

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-22898	SampType: MBLK	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: MBLKW	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942222							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.2		25.00		101	45.4	152				
Surr: Toluene-d8	26.9		25.00		108	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	27.2		25.00		109	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812059-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: BATCH	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942216							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812059-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226
Client ID: BATCH	Batch ID: 22898		Analysis Date: 12/11/2018	SeqNo: 942216

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	1.77	1.00						1.866	5.17	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812059-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898			Analysis Date:	12/11/2018	SeqNo:	942216		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.0		25.00		99.8	45.4	152		0		
Surr: Toluene-d8	24.0		25.00		95.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812065-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898			Analysis Date:	12/12/2018	SeqNo:	943349		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812065-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226							
Client ID: BATCH	Batch ID: 22898		Analysis Date: 12/12/2018	SeqNo: 943349							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	15.5	1.00						14.05	9.74	30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943349				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152		0		
Surr: Toluene-d8	25.8		25.00		103	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.1	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812065-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943346				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.1	1.00	20.00	0	75.6	33.3	122				
Chloromethane	20.1	2.00	20.00	0	101	39.7	143				
Vinyl chloride	21.1	0.200	20.00	0	105	41	165				
Bromomethane	20.6	1.00	20.00	0	103	31.5	135				

Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943346				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	19.2	1.00	20.00	0	96.0	54.7	138				
Chloroethane	19.7	1.00	20.00	0	98.5	49.9	143				
1,1-Dichloroethene	19.4	1.00	20.00	0	96.8	51.6	164				
Methylene chloride	20.4	1.00	20.00	0	102	61.6	135				
trans-1,2-Dichloroethene	22.0	1.00	20.00	0	110	63.5	138				
Methyl tert-butyl ether (MTBE)	20.9	1.00	20.00	0	105	60.9	132				
1,1-Dichloroethane	21.3	1.00	20.00	0	106	55.7	151				
2,2-Dichloropropane	9.24	2.00	20.00	0	46.2	37.7	150				
cis-1,2-Dichloroethene	20.4	1.00	20.00	0	102	60	154				
Chloroform	22.0	1.00	20.00	0	110	48.1	140				
1,1,1-Trichloroethane (TCA)	22.3	1.00	20.00	0	112	64.2	146				
1,1-Dichloropropene	22.9	1.00	20.00	0	115	73.8	136				
Carbon tetrachloride	22.3	1.00	20.00	0	112	62.7	146				
1,2-Dichloroethane (EDC)	21.7	1.00	20.00	0	108	63.4	137				
Benzene	22.5	1.00	20.00	0	113	65.4	138				
Trichloroethene (TCE)	22.6	0.500	20.00	0	113	60.4	134				
1,2-Dichloropropane	22.2	1.00	20.00	0	111	62.6	138				
Bromodichloromethane	21.2	1.00	20.00	0	106	59.4	139				
Dibromomethane	21.5	1.00	20.00	0	107	58.7	148				
cis-1,3-Dichloropropene	19.0	1.00	20.00	0	95.2	63.8	132				
Toluene	22.1	1.00	20.00	0	111	52	147				
trans-1,3-Dichloropropylene	18.4	1.00	20.00	0	91.8	57.7	125				
1,1,2-Trichloroethane	20.9	1.00	20.00	0	104	57.5	153				
1,3-Dichloropropane	18.4	1.00	20.00	0	92.2	54.1	157				
Tetrachloroethene (PCE)	19.0	1.00	20.00	0	95.2	50.3	133				
Dibromochloromethane	17.9	1.00	20.00	0	89.5	61.6	139				
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	92.1	63.2	134				
Chlorobenzene	21.3	1.00	20.00	0	107	65.8	134				
1,1,1,2-Tetrachloroethane	21.2	1.00	20.00	0	106	65.4	135				
Ethylbenzene	21.9	1.00	20.00	0	110	64.5	136				
m,p-Xylene	42.5	1.00	40.00	0	106	63.3	135				

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226
Client ID:	BATCH	Batch ID:	22898			Analysis Date:	12/12/2018	SeqNo:	943346

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	19.2	1.00	20.00	0	96.0	64.8	150				
Styrene	19.6	1.00	20.00	0	97.9	52.9	163				
Isopropylbenzene	21.0	1.00	20.00	0	105	56	147				
Bromoform	19.5	2.00	20.00	0	97.4	57.7	139				
1,1,1,2,2-Tetrachloroethane	19.8	1.00	20.00	0	99.1	59.8	146				
n-Propylbenzene	21.7	1.00	20.00	0	108	57.6	142				
Bromobenzene	20.7	1.00	20.00	0	103	69.3	157				
1,3,5-Trimethylbenzene	21.4	1.00	20.00	0	107	59.9	136				
2-Chlorotoluene	21.8	1.00	20.00	0	109	61.7	134				
4-Chlorotoluene	21.7	1.00	20.00	0	109	58.4	134				
tert-Butylbenzene	21.7	1.00	20.00	0	109	66.8	141				
1,2,3-Trichloropropane	18.8	1.00	20.00	0	93.8	62.4	129				
1,2,4-Trichlorobenzene	22.3	2.00	20.00	0	111	50.9	133				
sec-Butylbenzene	21.6	1.00	20.00	0	108	56	146				
4-Isopropyltoluene	21.2	1.00	20.00	0	106	56.4	136				
1,3-Dichlorobenzene	21.6	1.00	20.00	0	108	58.2	128				
1,4-Dichlorobenzene	21.5	1.00	20.00	0	108	60.1	123				
n-Butylbenzene	22.0	1.00	20.00	0	110	54.6	135				
1,2-Dichlorobenzene	22.0	1.00	20.00	0	110	65.4	133				
1,2-Dibromo-3-chloropropane	19.4	1.00	20.00	0	97.1	51.8	142				
1,2,4-Trimethylbenzene	21.1	1.00	20.00	0	106	63.7	132				
Hexachloro-1,3-butadiene	21.8	4.00	20.00	0	109	58.1	130				
Naphthalene	22.7	1.00	20.00	0	113	50.7	154				
1,2,3-Trichlorobenzene	22.7	4.00	20.00	0	114	57	131				
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152				
Surr: Toluene-d8	25.9		25.00		104	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.2	64.2	128				

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898	Analysis Date:	12/12/2018	SeqNo:	943347				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.9	1.00	20.00	0	84.7	33.3	122	15.12	11.4	30	
Chloromethane	22.4	2.00	20.00	0	112	39.7	143	20.11	10.7	30	
Vinyl chloride	21.2	0.200	20.00	0	106	41	165	21.07	0.478	30	
Bromomethane	24.1	1.00	20.00	0	120	31.5	135	20.60	15.5	30	
Trichlorofluoromethane (CFC-11)	23.7	1.00	20.00	0	119	54.7	138	19.19	21.0	30	
Chloroethane	22.6	1.00	20.00	0	113	49.9	143	19.69	13.8	30	
1,1-Dichloroethene	22.7	1.00	20.00	0	114	51.6	164	19.36	16.0	30	
Methylene chloride	20.2	1.00	20.00	0	101	61.6	135	20.39	1.13	30	
trans-1,2-Dichloroethene	21.8	1.00	20.00	0	109	63.5	138	21.98	1.00	30	
Methyl tert-butyl ether (MTBE)	20.8	1.00	20.00	0	104	60.9	132	20.92	0.524	30	
1,1-Dichloroethane	24.3	1.00	20.00	0	121	55.7	151	21.28	13.1	30	
2,2-Dichloropropane	9.85	2.00	20.00	0	49.2	37.7	150	9.240	6.38	30	
cis-1,2-Dichloroethene	21.8	1.00	20.00	0	109	60	154	20.38	6.57	30	
Chloroform	21.6	1.00	20.00	0	108	48.1	140	21.99	1.77	30	
1,1,1-Trichloroethane (TCA)	22.2	1.00	20.00	0	111	64.2	146	22.31	0.662	30	
1,1-Dichloropropene	22.0	1.00	20.00	0	110	73.8	136	22.92	4.20	30	
Carbon tetrachloride	22.4	1.00	20.00	0	112	62.7	146	22.32	0.297	30	
1,2-Dichloroethane (EDC)	21.1	1.00	20.00	0	106	63.4	137	21.65	2.46	30	
Benzene	21.7	1.00	20.00	0	108	65.4	138	22.54	3.91	30	
Trichloroethene (TCE)	22.1	0.500	20.00	0	111	60.4	134	22.60	2.14	30	
1,2-Dichloropropane	21.0	1.00	20.00	0	105	62.6	138	22.16	5.29	30	
Bromodichloromethane	20.7	1.00	20.00	0	104	59.4	139	21.24	2.47	30	
Dibromomethane	20.7	1.00	20.00	0	104	58.7	148	21.50	3.78	30	
cis-1,3-Dichloropropene	18.5	1.00	20.00	0	92.5	63.8	132	19.03	2.89	30	
Toluene	21.8	1.00	20.00	0	109	52	147	22.13	1.48	30	
trans-1,3-Dichloropropylene	18.4	1.00	20.00	0	92.1	57.7	125	18.35	0.405	30	
1,1,2-Trichloroethane	21.4	1.00	20.00	0	107	57.5	153	20.87	2.74	30	
1,3-Dichloropropane	21.0	1.00	20.00	0	105	54.1	157	18.45	12.9	30	
Tetrachloroethene (PCE)	21.7	1.00	20.00	0	109	50.3	133	19.04	13.1	30	
Dibromochloromethane	21.0	1.00	20.00	0	105	61.6	139	17.90	16.0	30	
1,2-Dibromoethane (EDB)	21.3	0.250	20.00	0	107	63.2	134	18.41	14.8	30	

Work Order: 1812076
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812065-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 12/11/2018	RunNo: 48226
Client ID: BATCH	Batch ID: 22898		Analysis Date: 12/12/2018	SeqNo: 943347

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.6	1.00	20.00	0	108	65.8	134	21.31	1.35	30	
1,1,1,2-Tetrachloroethane	21.5	1.00	20.00	0	107	65.4	135	21.15	1.44	30	
Ethylbenzene	22.0	1.00	20.00	0	110	64.5	136	21.93	0.439	30	
m,p-Xylene	43.1	1.00	40.00	0	108	63.3	135	42.49	1.38	30	
o-Xylene	19.7	1.00	20.00	0	98.4	64.8	150	19.20	2.41	30	
Styrene	20.0	1.00	20.00	0	100	52.9	163	19.58	2.21	30	
Isopropylbenzene	21.2	1.00	20.00	0	106	56	147	20.97	0.927	30	
Bromoform	19.0	2.00	20.00	0	95.2	57.7	139	19.48	2.24	30	
1,1,2,2-Tetrachloroethane	20.3	1.00	20.00	0	101	59.8	146	19.82	2.25	30	
n-Propylbenzene	21.1	1.00	20.00	0	105	57.6	142	21.69	2.93	30	
Bromobenzene	20.2	1.00	20.00	0	101	69.3	157	20.66	2.29	30	
1,3,5-Trimethylbenzene	21.7	1.00	20.00	0	109	59.9	136	21.41	1.45	30	
2-Chlorotoluene	21.9	1.00	20.00	0	109	61.7	134	21.79	0.297	30	
4-Chlorotoluene	21.3	1.00	20.00	0	107	58.4	134	21.70	1.75	30	
tert-Butylbenzene	21.9	1.00	20.00	0	109	66.8	141	21.75	0.567	30	
1,2,3-Trichloropropane	19.0	1.00	20.00	0	94.8	62.4	129	18.77	1.08	30	
1,2,4-Trichlorobenzene	21.5	2.00	20.00	0	108	50.9	133	22.25	3.41	30	
sec-Butylbenzene	22.1	1.00	20.00	0	110	56	146	21.63	2.03	30	
4-Isopropyltoluene	21.3	1.00	20.00	0	107	56.4	136	21.18	0.740	30	
1,3-Dichlorobenzene	22.1	1.00	20.00	0	111	58.2	128	21.63	2.23	30	
1,4-Dichlorobenzene	21.9	1.00	20.00	0	110	60.1	123	21.54	1.64	30	
n-Butylbenzene	22.9	1.00	20.00	0	115	54.6	135	22.04	3.86	30	
1,2-Dichlorobenzene	22.3	1.00	20.00	0	112	65.4	133	21.96	1.58	30	
1,2-Dibromo-3-chloropropane	20.0	1.00	20.00	0	99.9	51.8	142	19.42	2.85	30	
1,2,4-Trimethylbenzene	21.7	1.00	20.00	0	108	63.7	132	21.12	2.49	30	
Hexachloro-1,3-butadiene	20.8	4.00	20.00	0	104	58.1	130	21.77	4.58	30	
Naphthalene	22.1	1.00	20.00	0	111	50.7	154	22.67	2.52	30	
1,2,3-Trichlorobenzene	21.7	4.00	20.00	0	109	57	131	22.72	4.39	30	
Surr: Dibromofluoromethane	25.1		25.00		101	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.0	64.2	128		0		



Work Order: 1812076
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812065-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/11/2018	RunNo:	48226		
Client ID:	BATCH	Batch ID:	22898			Analysis Date:	12/12/2018	SeqNo:	943347		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Client Name: **KANE**

 Work Order Number: **1812076**

 Logged by: **Brianna Barnes**

 Date Received: **12/6/2018 4:29:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
HNO₃ added to C Fraction.
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	4.9
Sample	4.8
Temp Blank	4.6

* Note: DoD/ELAP and TNI require items to be received at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/10/18 Page: 1 of 1
Project Name: BSCSS

Laboratory Project No (Internal): 18120710
Special Remarks:

Client: KANE ENVIRONMENTAL

Project No: B2302-9.1

Address: 4015 13th Ave W

Collected by: Bg

City, State, zip: SEATTLE, WA 98119

Location: Botwell

Telephone: (206) 691 0470

Report To (PM): Jeff Jensen

Sample Disposal: Return to client Disposal by lab (after 30 days)

Fax: PM Email: Jeff@Kane-Environmental.com

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes															Comments		
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	Diesel/heavy Oil Range Organics (DY)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	TOL	AMMONIA-N		RSK	
1 H2-MW-28:W	12/6	1150	GW	X																	lab filter, bc
2 H2-MW-17:W	12/6	1315	GW	X																	lab filter
3 H2-MW-33:W	12/6	1505	GW	X																	lab filter
4																					
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: [Signature] Date/Time: 12/10/18 10:29
Received: [Signature] Date/Time: 12/16/18 16:29

Turn-around Time: Standard 3 Day 2 Day Next Day Same Day (specify) _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812096

December 19, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/7/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812096

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812096-001	HZ-MW-27:W	12/07/2018 11:45 AM	12/07/2018 3:54 PM
1812096-002	HZ-MW-19:W	12/07/2018 1:00 PM	12/07/2018 3:54 PM
1812096-003	HZ-MW-34:W	12/07/2018 2:20 PM	12/07/2018 3:54 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-001
Client Sample ID: HZ-MW-27:W

Collection Date: 12/7/2018 11:45:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	0.0636	0.00863		mg/L	1	12/13/2018 10:20:00 AM
Ethene	ND	0.0151		mg/L	1	12/13/2018 10:20:00 AM
Ethane	ND	0.0162		mg/L	1	12/13/2018 10:20:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22911 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Chloromethane	ND	2.00		µg/L	1	12/13/2018 1:48:07 AM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2018 1:48:07 AM
Bromomethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Chloroethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Methylene chloride	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/13/2018 1:48:07 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Chloroform	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Benzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2018 1:48:07 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Dibromomethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Toluene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/13/2018 1:48:07 AM
Chlorobenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-001
Client Sample ID: HZ-MW-27:W

Collection Date: 12/7/2018 11:45:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22911 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
o-Xylene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Styrene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Bromoform	ND	2.00		µg/L	1	12/13/2018 1:48:07 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Bromobenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/13/2018 1:48:07 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/13/2018 1:48:07 AM
Naphthalene	ND	1.00		µg/L	1	12/13/2018 1:48:07 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/13/2018 1:48:07 AM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	12/13/2018 1:48:07 AM
Surr: Toluene-d8	96.6	40.1 - 139		%Rec	1	12/13/2018 1:48:07 AM
Surr: 1-Bromo-4-fluorobenzene	95.3	64.2 - 128		%Rec	1	12/13/2018 1:48:07 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 22992 Analyst: TN

Chloride	8.36	1.00	D	mg/L	10	12/19/2018 4:50:00 AM
Sulfate	21.1	3.00	D	mg/L	10	12/19/2018 4:50:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-001
Client Sample ID: HZ-MW-27:W

Collection Date: 12/7/2018 11:45:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22920		Analyst: WC
Iron	835	100		µg/L	1	12/13/2018 10:32:39 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	1.28	0.500		mg/L	1	12/18/2018 3:43:15 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 1:00:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-002
Client Sample ID: HZ-MW-19:W

Collection Date: 12/7/2018 1:00:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	0.0158	0.00863		mg/L	1	12/13/2018 10:31:00 AM
Ethene	ND	0.0151		mg/L	1	12/13/2018 10:31:00 AM
Ethane	ND	0.0162		mg/L	1	12/13/2018 10:31:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22911 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Chloromethane	ND	2.00		µg/L	1	12/13/2018 2:18:18 AM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2018 2:18:18 AM
Bromomethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Chloroethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Methylene chloride	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/13/2018 2:18:18 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Chloroform	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Benzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/13/2018 2:18:18 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Dibromomethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Toluene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,1,2-Trichloroethane	1.99	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/13/2018 2:18:18 AM
Chlorobenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM



Client: Kane Environmental, Inc.

Collection Date: 12/7/2018 1:00:00 PM

Project: BSCSS

Lab ID: 1812096-002

Matrix: Groundwater

Client Sample ID: HZ-MW-19:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22911

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
o-Xylene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Styrene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
Isopropylbenzene	5.72	1.00		µg/L	1	12/13/2018 2:18:18 AM
Bromoform	ND	2.00		µg/L	1	12/13/2018 2:18:18 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
n-Propylbenzene	3.37	1.00		µg/L	1	12/13/2018 2:18:18 AM
Bromobenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
2-Chlorotoluene	5.41	1.00		µg/L	1	12/13/2018 2:18:18 AM
4-Chlorotoluene	4.38	1.00		µg/L	1	12/13/2018 2:18:18 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/13/2018 2:18:18 AM
sec-Butylbenzene	2.29	1.00		µg/L	1	12/13/2018 2:18:18 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2,4-Trimethylbenzene	2.43	1.00		µg/L	1	12/13/2018 2:18:18 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/13/2018 2:18:18 AM
Naphthalene	2.01	1.00		µg/L	1	12/13/2018 2:18:18 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/13/2018 2:18:18 AM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	12/13/2018 2:18:18 AM
Surr: Toluene-d8	90.3	40.1 - 139		%Rec	1	12/13/2018 2:18:18 AM
Surr: 1-Bromo-4-fluorobenzene	98.0	64.2 - 128		%Rec	1	12/13/2018 2:18:18 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 22939

Analyst: TN

Chloride	2.44	0.200	D	mg/L	2	12/14/2018 8:36:00 AM
Sulfate	24.5	0.600	D	mg/L	2	12/19/2018 5:13:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-002
Client Sample ID: HZ-MW-19:W

Collection Date: 12/7/2018 1:00:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22920		Analyst: WC
Iron	2,500	100		µg/L	1	12/13/2018 10:56:51 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	6.15	0.500		mg/L	1	12/18/2018 5:02:22 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 1:05:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-003
Client Sample ID: HZ-MW-34:W

Collection Date: 12/7/2018 2:20:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/13/2018 10:35:00 AM
Ethene	ND	0.0151		mg/L	1	12/13/2018 10:35:00 AM
Ethane	ND	0.0162		mg/L	1	12/13/2018 10:35:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22911 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Chloromethane	ND	2.00		µg/L	1	12/13/2018 10:54:30 AM
Vinyl chloride	ND	0.200		µg/L	1	12/13/2018 10:54:30 AM
Bromomethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Chloroethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Methylene chloride	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/13/2018 10:54:30 AM
cis-1,2-Dichloroethene	32.6	1.00		µg/L	1	12/13/2018 10:54:30 AM
Chloroform	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Benzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Trichloroethene (TCE)	12.7	0.500		µg/L	1	12/13/2018 10:54:30 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Dibromomethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Toluene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Tetrachloroethene (PCE)	4.36	1.00		µg/L	1	12/13/2018 10:54:30 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/13/2018 10:54:30 AM
Chlorobenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM



Client: Kane Environmental, Inc.

Collection Date: 12/7/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812096-003

Matrix: Groundwater

Client Sample ID: HZ-MW-34:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22911

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
m,p-Xylene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
o-Xylene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Styrene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Bromoform	ND	2.00		µg/L	1	12/13/2018 10:54:30 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Bromobenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/13/2018 10:54:30 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/13/2018 10:54:30 AM
Naphthalene	ND	1.00		µg/L	1	12/13/2018 10:54:30 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/13/2018 10:54:30 AM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	12/13/2018 10:54:30 AM
Surr: Toluene-d8	99.9	40.1 - 139		%Rec	1	12/13/2018 10:54:30 AM
Surr: 1-Bromo-4-fluorobenzene	90.3	64.2 - 128		%Rec	1	12/13/2018 10:54:30 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 22939

Analyst: TN

Chloride	14.2	0.200	DE	mg/L	2	12/14/2018 8:59:00 AM
Sulfate	7.80	0.600	D	mg/L	2	12/19/2018 5:36:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812096-003
Client Sample ID: HZ-MW-34:W

Collection Date: 12/7/2018 2:20:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22920		Analyst: WC
Iron	5,750	100		µg/L	1	12/13/2018 11:00:52 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	3.96	0.500		mg/L	1	12/18/2018 5:22:16 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 1:10:00 PM

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22935	SampType: MBLK	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: MBLKW	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944419							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22935	SampType: LCS	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: LCSW	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944420							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.212 0.100 0.2500 0 84.8 80 120

Sample ID 1812076-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: BATCH	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944442							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812076-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: BATCH	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944443							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.135 0.100 0.2500 0 54.0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID 1812076-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: BATCH	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944444							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.175 0.100 0.2500 0 70.0 70 130 0.1350 25.8 30



Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812152-002FDUP	SampType: DUP	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: BATCH	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944445					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812152-002FMS	SampType: MS	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: BATCH	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944446					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.222	0.100	0.2500	0	88.8	70	130				

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	LCS-22939	SampType:	LCS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304		
Client ID:	LCSW	Batch ID:	22939			Analysis Date:	12/13/2018	SeqNo:	945134		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 0.682 0.100 0.7500 0 90.9 90 110

Sample ID	MB-22939	SampType:	MBLK	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304		
Client ID:	MBLKW	Batch ID:	22939			Analysis Date:	12/13/2018	SeqNo:	945135		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.100

Sample ID	1812160-003BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304		
Client ID:	BATCH	Batch ID:	22939			Analysis Date:	12/13/2018	SeqNo:	945137		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 4.46 0.100 4.458 0.0673 20 E

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812160-003BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304		
Client ID:	BATCH	Batch ID:	22939			Analysis Date:	12/13/2018	SeqNo:	945138		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 5.27 0.100 0.7500 4.458 108 80 120 E

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812160-003BMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304		
Client ID:	BATCH	Batch ID:	22939			Analysis Date:	12/13/2018	SeqNo:	945139		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 5.27 0.100 0.7500 4.458 109 80 120 5.271 0.0379 20 E

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812160-003BMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304				
Client ID:	BATCH	Batch ID:	22939			Analysis Date:	12/13/2018	SeqNo:	945139				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812160-014BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304				
Client ID:	BATCH	Batch ID:	22939			Analysis Date:	12/14/2018	SeqNo:	945152				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		4.47		0.100						4.756		6.27		20	E
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NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812160-014BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48304				
Client ID:	BATCH	Batch ID:	22939			Analysis Date:	12/14/2018	SeqNo:	945153				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		5.27		0.100	0.7500	4.756	68.8	80	120						ES
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NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	MB-22992	SampType:	MBLK	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398				
Client ID:	MBLKW	Batch ID:	22992			Analysis Date:	12/18/2018	SeqNo:	947599				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		ND		0.100									
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Sulfate		ND		0.300									
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Sample ID	LCS-22992	SampType:	LCS	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398				
Client ID:	LCSW	Batch ID:	22992			Analysis Date:	12/18/2018	SeqNo:	947600				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		0.733		0.100	0.7500	0	97.7	90	110				
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Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	LCS-22992	SampType:	LCS	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398		
Client ID:	LCSW	Batch ID:	22992			Analysis Date:	12/18/2018	SeqNo:	947600		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	3.45	0.300	3.750	0	92.1	90	110				
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Sample ID	1812065-003DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398		
Client ID:	BATCH	Batch ID:	22992			Analysis Date:	12/18/2018	SeqNo:	947605		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.05	0.100						2.047	0.341	20	
Sulfate	10.9	0.300						10.88	0.275	20	

Sample ID	1812065-003DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398		
Client ID:	BATCH	Batch ID:	22992			Analysis Date:	12/18/2018	SeqNo:	947606		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.85	0.100	0.7500	2.047	107	80	120				
Sulfate	15.0	0.300	3.750	10.88	109	80	120				

Sample ID	1812065-003DMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398		
Client ID:	BATCH	Batch ID:	22992			Analysis Date:	12/18/2018	SeqNo:	947607		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.85	0.100	0.7500	2.047	107	80	120	2.853	0.211	20	
Sulfate	15.0	0.300	3.750	10.88	109	80	120	14.98	0	20	

Sample ID	1812144-003DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48398		
Client ID:	BATCH	Batch ID:	22992			Analysis Date:	12/19/2018	SeqNo:	947623		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	1.85	1.00						1.880	1.61	20	D
Sulfate	47.8	3.00						49.16	2.85	20	D

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID 1812144-003DDUP	SampType: DUP	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48398							
Client ID: BATCH	Batch ID: 22992		Analysis Date: 12/19/2018	SeqNo: 947623							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID 1812144-003DMS	SampType: MS	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48398							
Client ID: BATCH	Batch ID: 22992		Analysis Date: 12/19/2018	SeqNo: 947624							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	8.66	1.00	7.500	1.880	90.4	80	120				D
Sulfate	86.4	3.00	37.50	49.16	99.2	80	120				D



Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48373	SampType: MBLK	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: MBLKW	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946777					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	ND	0.500									
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Sample ID LCS-48373	SampType: LCS	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: LCSW	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946778					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	4.98	0.500	5.000	0	99.6	80	120				
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Sample ID 1812096-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: HZ-MW-27:W	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946780					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	1.29	0.500						1.282	0.932	20	
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Sample ID 1812096-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: HZ-MW-27:W	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946781					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	6.47	0.500	5.000	1.282	104	70	130				
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Sample ID 1812096-001EMSD	SampType: MSD	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: HZ-MW-27:W	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946782					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	6.54	0.500	5.000	1.282	105	70	130	6.469	1.17	30	
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Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22920	SampType: MBLK	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: MBLKW	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943880								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-22920	SampType: LCS	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: LCSW	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943881								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 938 100 1,000 0 93.8 50 150

Sample ID 1812096-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: HZ-MW-27:W	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943883								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 826 100 834.5 1.07 30

Sample ID 1812096-001CMS	SampType: MS	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: HZ-MW-27:W	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943886								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,430 100 5,000 834.5 91.8 50 150

Sample ID 1812096-001CMSD	SampType: MSD	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: HZ-MW-27:W	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943887								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,420 100 5,000 834.5 91.8 50 150 5,426 0.0741 30



Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22906FB	SampType: MBLK	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: MBLKW	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943910								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48280	SampType:	MBLK	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	MBLKW	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944341		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48280	SampType:	LCS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	LCSW	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944340		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	780	0.00863	1,000	0	78.0	70	130				
Ethene	799	0.0151	1,000	0	79.9	70	130				
Ethane	807	0.0162	1,000	0	80.7	70	130				

Sample ID	1812096-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	HZ-MW-27:W	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944329		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0635	0.00863						0.06360	0.157	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22911	SampType:	LCS	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	LCSW	Batch ID:	22911	Analysis Date:	12/12/2018	SeqNo:	943942				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.7	1.00	20.00	0	98.3	18.7	171				
Chloromethane	23.7	2.00	20.00	0	119	38.5	171				
Vinyl chloride	21.0	0.200	20.00	0	105	48	145				
Bromomethane	21.5	1.00	20.00	0	107	32.5	184				
Trichlorofluoromethane (CFC-11)	19.5	1.00	20.00	0	97.4	43.5	149				
Chloroethane	18.7	1.00	20.00	0	93.5	43.8	168				
1,1-Dichloroethene	18.5	1.00	20.00	0	92.5	57.5	150				
Methylene chloride	18.2	1.00	20.00	0	90.9	67.1	131				
trans-1,2-Dichloroethene	17.5	1.00	20.00	0	87.4	71.7	129				
Methyl tert-butyl ether (MTBE)	17.4	1.00	20.00	0	86.9	58	138				
1,1-Dichloroethane	16.9	1.00	20.00	0	84.4	67.9	134				
2,2-Dichloropropane	18.6	2.00	20.00	0	92.9	26.5	185				
cis-1,2-Dichloroethene	18.8	1.00	20.00	0	94.1	70.2	139				
Chloroform	19.7	1.00	20.00	0	98.4	66.3	131				
1,1,1-Trichloroethane (TCA)	20.0	1.00	20.00	0	100	63	140				
1,1-Dichloropropene	20.7	1.00	20.00	0	103	69.9	124				
Carbon tetrachloride	19.9	1.00	20.00	0	99.7	66.2	134				
1,2-Dichloroethane (EDC)	20.2	1.00	20.00	0	101	67	126				
Benzene	20.4	1.00	20.00	0	102	69.3	132				
Trichloroethene (TCE)	20.4	0.500	20.00	0	102	65.2	136				
1,2-Dichloropropane	20.2	1.00	20.00	0	101	70.5	130				
Bromodichloromethane	19.2	1.00	20.00	0	95.8	67.2	137				
Dibromomethane	19.8	1.00	20.00	0	98.9	69.3	143				
cis-1,3-Dichloropropene	19.2	1.00	20.00	0	95.8	62.6	137				
Toluene	19.2	1.00	20.00	0	96.2	61.3	145				
trans-1,3-Dichloropropylene	18.6	1.00	20.00	0	93.1	56.5	163				
1,1,2-Trichloroethane	18.9	1.00	20.00	0	94.7	71.7	131				
1,3-Dichloropropane	17.4	1.00	20.00	0	87.1	73.5	127				
Tetrachloroethene (PCE)	17.5	1.00	20.00	0	87.6	47.5	147				
Dibromochloromethane	16.9	1.00	20.00	0	84.5	67.2	134				
1,2-Dibromoethane (EDB)	17.5	0.250	20.00	0	87.4	73.6	125				

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22911	SampType:	LCS	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	LCSW	Batch ID:	22911	Analysis Date:	12/12/2018	SeqNo:	943942				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.5	1.00	20.00	0	97.7	73.9	126				
1,1,1,2-Tetrachloroethane	19.5	1.00	20.00	0	97.3	76.8	124				
Ethylbenzene	19.8	1.00	20.00	0	99.2	72	130				
m,p-Xylene	39.1	1.00	40.00	0	97.7	70.3	134				
o-Xylene	17.6	1.00	20.00	0	88.2	72.1	131				
Styrene	18.1	1.00	20.00	0	90.3	64.3	140				
Isopropylbenzene	19.1	1.00	20.00	0	95.5	73.9	128				
Bromoform	17.6	2.00	20.00	0	88.2	55.3	141				
1,1,2,2-Tetrachloroethane	18.4	1.00	20.00	0	92.2	62.9	132				
n-Propylbenzene	19.5	1.00	20.00	0	97.4	74.5	127				
Bromobenzene	18.7	1.00	20.00	0	93.6	71	131				
1,3,5-Trimethylbenzene	19.9	1.00	20.00	0	99.6	73.1	128				
2-Chlorotoluene	19.4	1.00	20.00	0	97.1	70.8	130				
4-Chlorotoluene	19.3	1.00	20.00	0	96.5	70.1	131				
tert-Butylbenzene	19.4	1.00	20.00	0	97.0	68.2	131				
1,2,3-Trichloropropane	18.1	1.00	20.00	0	90.3	67.7	131				
1,2,4-Trichlorobenzene	20.9	2.00	20.00	0	105	41	139				
sec-Butylbenzene	19.6	1.00	20.00	0	98.2	72	129				
4-Isopropyltoluene	19.4	1.00	20.00	0	97.2	69.2	130				
1,3-Dichlorobenzene	20.4	1.00	20.00	0	102	69.5	128				
1,4-Dichlorobenzene	20.3	1.00	20.00	0	102	66.8	119				
n-Butylbenzene	20.7	1.00	20.00	0	104	73.8	127				
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	69.7	119				
1,2-Dibromo-3-chloropropane	19.0	1.00	20.00	0	94.9	63.1	136				
1,2,4-Trimethylbenzene	19.4	1.00	20.00	0	96.8	73.4	127				
Hexachloro-1,3-butadiene	20.7	4.00	20.00	0	104	58.6	138				
Naphthalene	21.3	1.00	20.00	0	107	41.8	165				
1,2,3-Trichlorobenzene	21.1	4.00	20.00	0	105	35.8	155				
Surr: Dibromofluoromethane	25.5		25.00		102	45.4	152				
Surr: Toluene-d8	24.7		25.00		98.8	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.0		25.00		96.0	64.2	128				

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22911	SampType:	LCS	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	LCSW	Batch ID:	22911			Analysis Date:	12/12/2018	SeqNo:	943942		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-22911	SampType:	MBLK	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	MBLKW	Batch ID:	22911			Analysis Date:	12/12/2018	SeqNo:	943943		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									Q
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22911	SampType:	MBLK	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250
Client ID:	MBLKW	Batch ID:	22911			Analysis Date:	12/12/2018	SeqNo:	943943

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22911	SampType:	MBLK	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	MBLKW	Batch ID:	22911			Analysis Date:	12/12/2018	SeqNo:	943943		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152				
Surr: Toluene-d8	25.0		25.00		99.8	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.7	64.2	128				

Sample ID	1812079-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	BATCH	Batch ID:	22911			Analysis Date:	12/12/2018	SeqNo:	943918		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812079-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250
Client ID:	BATCH	Batch ID:	22911			Analysis Date:	12/12/2018	SeqNo:	943918

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812079-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	BATCH	Batch ID:	22911	Analysis Date:	12/12/2018	SeqNo:	943918				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.9		25.00		99.6	45.4	152		0		
Surr: Toluene-d8	28.6		25.00		115	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.1		25.00		96.6	64.2	128		0		

Sample ID	1812092-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	BATCH	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943923				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812092-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	BATCH	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943923				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812092-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	BATCH	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943923				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.2		25.00		105	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.8		25.00		107	64.2	128		0		

Sample ID	1812096-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	HZ-MW-27:W	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943926				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.3	1.00	20.00	0	116	33.3	122				
Chloromethane	25.3	2.00	20.00	0	127	39.7	143				
Vinyl chloride	24.0	0.200	20.00	0	120	41	165				
Bromomethane	23.0	1.00	20.00	0	115	31.5	135				
Trichlorofluoromethane (CFC-11)	22.1	1.00	20.00	0	110	54.7	138				
Chloroethane	21.0	1.00	20.00	0	105	49.9	143				
1,1-Dichloroethene	21.3	1.00	20.00	0	107	51.6	164				

Work Order: 1812096
CLIENT: Kane Environmental, Inc.
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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812096-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250
Client ID:	HZ-MW-27:W	Batch ID:	22911			Analysis Date:	12/13/2018	SeqNo:	943926

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	20.5	1.00	20.00	0	103	61.6	135				
trans-1,2-Dichloroethene	22.1	1.00	20.00	0	111	63.5	138				
Methyl tert-butyl ether (MTBE)	21.3	1.00	20.00	0	107	60.9	132				
1,1-Dichloroethane	18.7	1.00	20.00	0	93.5	55.7	151				
2,2-Dichloropropane	12.8	2.00	20.00	0	64.0	37.7	150				
cis-1,2-Dichloroethene	17.7	1.00	20.00	0	88.5	60	154				
Chloroform	21.2	1.00	20.00	0	106	48.1	140				
1,1,1-Trichloroethane (TCA)	21.8	1.00	20.00	0	109	64.2	146				
1,1-Dichloropropene	23.3	1.00	20.00	0	116	73.8	136				
Carbon tetrachloride	22.4	1.00	20.00	0	112	62.7	146				
1,2-Dichloroethane (EDC)	21.4	1.00	20.00	0	107	63.4	137				
Benzene	22.2	1.00	20.00	0	111	65.4	138				
Trichloroethene (TCE)	22.0	0.500	20.00	0	110	60.4	134				
1,2-Dichloropropane	22.4	1.00	20.00	0	112	62.6	138				
Bromodichloromethane	21.3	1.00	20.00	0	106	59.4	139				
Dibromomethane	21.3	1.00	20.00	0	107	58.7	148				
cis-1,3-Dichloropropene	20.8	1.00	20.00	0	104	63.8	132				
Toluene	22.6	1.00	20.00	0	113	52	147				
trans-1,3-Dichloropropylene	20.6	1.00	20.00	0	103	57.7	125				
1,1,2-Trichloroethane	22.2	1.00	20.00	0	111	57.5	153				
1,3-Dichloropropane	22.5	1.00	20.00	0	112	54.1	157				
Tetrachloroethene (PCE)	22.3	1.00	20.00	0.1690	111	50.3	133				
Dibromochloromethane	21.3	1.00	20.00	0	106	61.6	139				
1,2-Dibromoethane (EDB)	22.4	0.250	20.00	0	112	63.2	134				
Chlorobenzene	20.6	1.00	20.00	0	103	65.8	134				
1,1,1,2-Tetrachloroethane	19.9	1.00	20.00	0	99.6	65.4	135				
Ethylbenzene	21.4	1.00	20.00	0	107	64.5	136				
m,p-Xylene	41.6	1.00	40.00	0	104	63.3	135				
o-Xylene	18.8	1.00	20.00	0	93.8	64.8	150				
Styrene	19.2	1.00	20.00	0.1157	95.6	52.9	163				
Isopropylbenzene	20.4	1.00	20.00	0	102	56	147				

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812096-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	HZ-MW-27:W	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943926				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	19.5	2.00	20.00	0	97.6	57.7	139				
1,1,2,2-Tetrachloroethane	19.5	1.00	20.00	0	97.5	59.8	146				
n-Propylbenzene	21.8	1.00	20.00	0	109	57.6	142				
Bromobenzene	20.1	1.00	20.00	0	100	69.3	157				
1,3,5-Trimethylbenzene	21.7	1.00	20.00	0	109	59.9	136				
2-Chlorotoluene	21.5	1.00	20.00	0	107	61.7	134				
4-Chlorotoluene	21.4	1.00	20.00	0	107	58.4	134				
tert-Butylbenzene	21.8	1.00	20.00	0	109	66.8	141				
1,2,3-Trichloropropane	20.0	1.00	20.00	0	100	62.4	129				
1,2,4-Trichlorobenzene	20.1	2.00	20.00	0	101	50.9	133				
sec-Butylbenzene	21.5	1.00	20.00	0	108	56	146				
4-Isopropyltoluene	20.8	1.00	20.00	0	104	56.4	136				
1,3-Dichlorobenzene	21.2	1.00	20.00	0	106	58.2	128				
1,4-Dichlorobenzene	20.6	1.00	20.00	0	103	60.1	123				
n-Butylbenzene	22.3	1.00	20.00	0	111	54.6	135				
1,2-Dichlorobenzene	21.0	1.00	20.00	0	105	65.4	133				
1,2-Dibromo-3-chloropropane	19.1	1.00	20.00	0	95.6	51.8	142				
1,2,4-Trimethylbenzene	20.9	1.00	20.00	0	104	63.7	132				
Hexachloro-1,3-butadiene	19.9	4.00	20.00	0	99.5	58.1	130				
Naphthalene	21.1	1.00	20.00	0	106	50.7	154				
1,2,3-Trichlorobenzene	21.0	4.00	20.00	0	105	57	131				
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152				
Surr: Toluene-d8	27.3		25.00		109	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	64.2	128				

Sample ID	1812096-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	HZ-MW-27:W	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943927				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	22.3	1.00	20.00	0	111	33.3	122	23.26	4.25	30	

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812096-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250
Client ID:	HZ-MW-27:W	Batch ID:	22911			Analysis Date:	12/13/2018	SeqNo:	943927

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	26.9	2.00	20.00	0	135	39.7	143	25.33	6.18	30	
Vinyl chloride	24.6	0.200	20.00	0	123	41	165	24.04	2.23	30	
Bromomethane	22.7	1.00	20.00	0	113	31.5	135	22.97	1.24	30	
Trichlorofluoromethane (CFC-11)	21.8	1.00	20.00	0	109	54.7	138	22.07	1.31	30	
Chloroethane	21.1	1.00	20.00	0	106	49.9	143	20.97	0.773	30	
1,1-Dichloroethene	19.3	1.00	20.00	0	96.3	51.6	164	21.33	10.2	30	
Methylene chloride	21.0	1.00	20.00	0	105	61.6	135	20.53	2.36	30	
trans-1,2-Dichloroethene	22.9	1.00	20.00	0	114	63.5	138	22.15	3.31	30	
Methyl tert-butyl ether (MTBE)	21.7	1.00	20.00	0	109	60.9	132	21.32	1.86	30	
1,1-Dichloroethane	20.9	1.00	20.00	0	104	55.7	151	18.71	11.0	30	
2,2-Dichloropropane	13.1	2.00	20.00	0	65.3	37.7	150	12.81	1.88	30	
cis-1,2-Dichloroethene	18.3	1.00	20.00	0	91.3	60	154	17.70	3.11	30	
Chloroform	21.4	1.00	20.00	0	107	48.1	140	21.24	0.631	30	
1,1,1-Trichloroethane (TCA)	22.9	1.00	20.00	0	115	64.2	146	21.83	4.90	30	
1,1-Dichloropropene	23.7	1.00	20.00	0	118	73.8	136	23.27	1.74	30	
Carbon tetrachloride	22.8	1.00	20.00	0	114	62.7	146	22.39	1.85	30	
1,2-Dichloroethane (EDC)	22.1	1.00	20.00	0	111	63.4	137	21.43	3.32	30	
Benzene	23.0	1.00	20.00	0	115	65.4	138	22.17	3.83	30	
Trichloroethene (TCE)	23.0	0.500	20.00	0	115	60.4	134	21.99	4.46	30	
1,2-Dichloropropane	22.5	1.00	20.00	0	113	62.6	138	22.37	0.604	30	
Bromodichloromethane	21.1	1.00	20.00	0	105	59.4	139	21.25	0.869	30	
Dibromomethane	21.1	1.00	20.00	0	106	58.7	148	21.32	0.934	30	
cis-1,3-Dichloropropene	17.9	1.00	20.00	0	89.6	63.8	132	20.83	15.0	30	
Toluene	19.6	1.00	20.00	0	97.8	52	147	22.60	14.5	30	
trans-1,3-Dichloropropylene	17.8	1.00	20.00	0	89.2	57.7	125	20.63	14.5	30	
1,1,2-Trichloroethane	19.2	1.00	20.00	0	95.9	57.5	153	22.18	14.6	30	
1,3-Dichloropropane	19.0	1.00	20.00	0	95.2	54.1	157	22.49	16.6	30	
Tetrachloroethene (PCE)	20.0	1.00	20.00	0.1690	99.3	50.3	133	22.33	10.9	30	
Dibromochloromethane	18.8	1.00	20.00	0	93.9	61.6	139	21.29	12.6	30	
1,2-Dibromoethane (EDB)	19.2	0.250	20.00	0	96.1	63.2	134	22.38	15.1	30	
Chlorobenzene	21.6	1.00	20.00	0	108	65.8	134	20.56	4.81	30	

Work Order: 1812096
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812096-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/12/2018	RunNo:	48250		
Client ID:	HZ-MW-27:W	Batch ID:	22911	Analysis Date:	12/13/2018	SeqNo:	943927				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	21.3	1.00	20.00	0	107	65.4	135	19.92	6.80	30	
Ethylbenzene	22.2	1.00	20.00	0	111	64.5	136	21.43	3.58	30	
m,p-Xylene	43.6	1.00	40.00	0	109	63.3	135	41.55	4.84	30	
o-Xylene	19.4	1.00	20.00	0	97.1	64.8	150	18.76	3.42	30	
Styrene	19.8	1.00	20.00	0.1157	98.3	52.9	163	19.24	2.75	30	
Isopropylbenzene	21.0	1.00	20.00	0	105	56	147	20.37	2.83	30	
Bromoform	19.3	2.00	20.00	0	96.5	57.7	139	19.52	1.18	30	
1,1,1,2,2-Tetrachloroethane	19.5	1.00	20.00	0	97.7	59.8	146	19.49	0.249	30	
n-Propylbenzene	20.7	1.00	20.00	0	103	57.6	142	21.82	5.48	30	
Bromobenzene	20.4	1.00	20.00	0	102	69.3	157	20.09	1.49	30	
1,3,5-Trimethylbenzene	21.4	1.00	20.00	0	107	59.9	136	21.73	1.35	30	
2-Chlorotoluene	20.9	1.00	20.00	0	104	61.7	134	21.45	2.61	30	
4-Chlorotoluene	21.1	1.00	20.00	0	105	58.4	134	21.35	1.27	30	
tert-Butylbenzene	21.8	1.00	20.00	0	109	66.8	141	21.83	0.235	30	
1,2,3-Trichloropropane	18.9	1.00	20.00	0	94.7	62.4	129	20.04	5.68	30	
1,2,4-Trichlorobenzene	22.1	2.00	20.00	0	111	50.9	133	20.14	9.43	30	
sec-Butylbenzene	21.8	1.00	20.00	0	109	56	146	21.54	1.21	30	
4-Isopropyltoluene	21.6	1.00	20.00	0	108	56.4	136	20.79	3.62	30	
1,3-Dichlorobenzene	21.2	1.00	20.00	0	106	58.2	128	21.16	0.226	30	
1,4-Dichlorobenzene	21.7	1.00	20.00	0	108	60.1	123	20.58	5.06	30	
n-Butylbenzene	22.9	1.00	20.00	0	114	54.6	135	22.27	2.66	30	
1,2-Dichlorobenzene	22.0	1.00	20.00	0	110	65.4	133	21.01	4.80	30	
1,2-Dibromo-3-chloropropane	19.9	1.00	20.00	0	99.4	51.8	142	19.12	3.92	30	
1,2,4-Trimethylbenzene	21.2	1.00	20.00	0	106	63.7	132	20.85	1.80	30	
Hexachloro-1,3-butadiene	21.9	4.00	20.00	0	109	58.1	130	19.90	9.43	30	
Naphthalene	22.5	1.00	20.00	0	113	50.7	154	21.11	6.41	30	
1,2,3-Trichlorobenzene	22.4	4.00	20.00	0	112	57	131	21.03	6.45	30	
Surr: Dibromofluoromethane	25.9		25.00		104	45.4	152		0		
Surr: Toluene-d8	22.5		25.00		90.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.6	64.2	128		0		

Client Name: **KANE**

 Work Order Number: **1812096**

 Logged by: **Brianna Barnes**

 Date Received: **12/7/2018 3:54:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA

Received straight from field.

8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
- HNO₃ added to C fraction.
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	4.1
Sample	13.5
Temp Blank	13.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/3/10 Page: 1 of 1

Project Name: BSCSS

Project No: 02302-9.1

Collected by: BG

Location: Bethnell

Report To (PM): Jeff Jensen

PM Email: JEFF@KAME-ENVIRONMENTAL.COM

Laboratory Project No (Internal): 10120910
Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes																	Comments
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	TOC	AMMONIA-N	FSK		
1 H2-MW-27:W	12/7	1145	GW	X							X	D	X	X	X	X	X	X	lab filter, AC		
2 H2-MW-19:W	12/7	1200	GW	X							X	D	X	X	X	X	X	X	lab filter		
3 H2-MW-34:W	12/7	1420	GW	X							X	D	X	X	X	X	X	X	lab filter		
4																					
5																					
6																					
7																					
8																					
9																					
10																			lab		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SI = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MICA-5 RCRA-8 Priority Pollutants Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite
 I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.
 Relinquished: [Signature] Date/Time: 12/10/10 1554
 Received: [Signature] Date/Time: 12/17/10 1554
 www.fremontanalytical.com



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812127

December 18, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/10/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/18/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812127

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812127-001	HZ-MW-21:W	12/10/2018 11:05 AM	12/10/2018 4:37 PM
1812127-002	HZ-MW-29:W	12/10/2018 1:15 PM	12/10/2018 4:37 PM
1812127-003	HZ-MW-24:W	12/10/2018 3:12 PM	12/10/2018 4:37 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/10/2018 11:05:00 AM

Project: BSCSS

Lab ID: 1812127-001

Matrix: Groundwater

Client Sample ID: HZ-MW-21:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/13/2018 12:36:00 PM
Ethene	ND	0.0151		mg/L	1	12/13/2018 12:36:00 PM
Ethane	ND	0.0162		mg/L	1	12/13/2018 12:36:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Chloromethane	ND	2.00		µg/L	1	12/14/2018 1:32:58 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2018 1:32:58 AM
Bromomethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Methylene chloride	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/14/2018 1:32:58 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Chloroform	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Benzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2018 1:32:58 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Dibromomethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Toluene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/14/2018 1:32:58 AM
Chlorobenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-001
Client Sample ID: HZ-MW-21:W

Collection Date: 12/10/2018 11:05:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
o-Xylene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Styrene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Bromoform	ND	2.00		µg/L	1	12/14/2018 1:32:58 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Bromobenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/14/2018 1:32:58 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/14/2018 1:32:58 AM
Naphthalene	ND	1.00		µg/L	1	12/14/2018 1:32:58 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/14/2018 1:32:58 AM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	12/14/2018 1:32:58 AM
Surr: Toluene-d8	98.8	40.1 - 139		%Rec	1	12/14/2018 1:32:58 AM
Surr: 1-Bromo-4-fluorobenzene	97.6	64.2 - 128		%Rec	1	12/14/2018 1:32:58 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 22956 Analyst: TN

Chloride	1.40	0.200	D	mg/L	2	12/18/2018 11:52:00 AM
Sulfate	8.51	0.600	D	mg/L	2	12/18/2018 11:52:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 22920 Analyst: WC

Iron	ND	100		µg/L	1	12/13/2018 12:01:47 PM
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Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-001
Client Sample ID: HZ-MW-21:W

Collection Date: 12/10/2018 11:05:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	1.94	0.500		mg/L	1	12/18/2018 5:43:25 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	0.125	0.100		mg/L	1	12/13/2018 1:15:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-002
Client Sample ID: HZ-MW-29:W

Collection Date: 12/10/2018 1:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/13/2018 12:40:00 PM
Ethene	ND	0.0151		mg/L	1	12/13/2018 12:40:00 PM
Ethane	ND	0.0162		mg/L	1	12/13/2018 12:40:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Chloromethane	ND	2.00		µg/L	1	12/14/2018 2:04:10 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2018 2:04:10 AM
Bromomethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Methylene chloride	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/14/2018 2:04:10 AM
cis-1,2-Dichloroethene	11.4	1.00		µg/L	1	12/14/2018 2:04:10 AM
Chloroform	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Benzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Trichloroethene (TCE)	4.06	0.500		µg/L	1	12/14/2018 2:04:10 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Dibromomethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Toluene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Tetrachloroethene (PCE)	13.6	1.00		µg/L	1	12/14/2018 2:04:10 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/14/2018 2:04:10 AM
Chlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-002
Client Sample ID: HZ-MW-29:W

Collection Date: 12/10/2018 1:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
o-Xylene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Styrene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Bromoform	ND	2.00		µg/L	1	12/14/2018 2:04:10 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Bromobenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/14/2018 2:04:10 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/14/2018 2:04:10 AM
Naphthalene	ND	1.00		µg/L	1	12/14/2018 2:04:10 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/14/2018 2:04:10 AM
Surr: Dibromofluoromethane	106	45.4 - 152		%Rec	1	12/14/2018 2:04:10 AM
Surr: Toluene-d8	98.9	40.1 - 139		%Rec	1	12/14/2018 2:04:10 AM
Surr: 1-Bromo-4-fluorobenzene	95.4	64.2 - 128		%Rec	1	12/14/2018 2:04:10 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 22956 Analyst: TN

Chloride	17.2	1.00	D	mg/L	10	12/18/2018 5:17:00 PM
Sulfate	17.9	0.600	D	mg/L	2	12/18/2018 12:16:00 PM

Dissolved Metals by EPA Method 200.8

Batch ID: 22920 Analyst: WC

Iron	2,140	100		µg/L	1	12/13/2018 12:05:48 PM
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Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-002
Client Sample ID: HZ-MW-29:W

Collection Date: 12/10/2018 1:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	2.68	0.500		mg/L	1	12/18/2018 6:04:06 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 1:20:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-003
Client Sample ID: HZ-MW-24:W

Collection Date: 12/10/2018 3:12:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/13/2018 12:43:00 PM
Ethene	ND	0.0151		mg/L	1	12/13/2018 12:43:00 PM
Ethane	ND	0.0162		mg/L	1	12/13/2018 12:43:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Chloromethane	ND	2.00		µg/L	1	12/14/2018 2:35:16 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2018 2:35:16 AM
Bromomethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Methylene chloride	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/14/2018 2:35:16 AM
cis-1,2-Dichloroethene	5.38	1.00		µg/L	1	12/14/2018 2:35:16 AM
Chloroform	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Benzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Trichloroethene (TCE)	0.908	0.500		µg/L	1	12/14/2018 2:35:16 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Dibromomethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Toluene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Tetrachloroethene (PCE)	2.79	1.00		µg/L	1	12/14/2018 2:35:16 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/14/2018 2:35:16 AM
Chlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812127-003
Client Sample ID: HZ-MW-24:W

Collection Date: 12/10/2018 3:12:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
o-Xylene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Styrene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Bromoform	ND	2.00		µg/L	1	12/14/2018 2:35:16 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Bromobenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/14/2018 2:35:16 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/14/2018 2:35:16 AM
Naphthalene	ND	1.00		µg/L	1	12/14/2018 2:35:16 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/14/2018 2:35:16 AM
Surr: Dibromofluoromethane	108	45.4 - 152		%Rec	1	12/14/2018 2:35:16 AM
Surr: Toluene-d8	99.1	40.1 - 139		%Rec	1	12/14/2018 2:35:16 AM
Surr: 1-Bromo-4-fluorobenzene	95.7	64.2 - 128		%Rec	1	12/14/2018 2:35:16 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 22956 Analyst: TN

Chloride	7.18	0.500	D	mg/L	5	12/18/2018 5:40:00 PM
Sulfate	10.3	0.600	D	mg/L	2	12/18/2018 12:39:00 PM

Dissolved Metals by EPA Method 200.8

Batch ID: 22920 Analyst: WC

Iron	828	100		µg/L	1	12/13/2018 12:09:49 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/10/2018 3:12:00 PM

Project: BSCSS

Lab ID: 1812127-003

Matrix: Groundwater

Client Sample ID: HZ-MW-24:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Organic Carbon by SM 5310C

Batch ID: R48373 Analyst: GM

Total Organic Carbon	7.02	0.500		mg/L	1	12/18/2018 6:24:47 AM
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Ammonia by SM 4500 NH3G

Batch ID: 22935 Analyst: KT

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 1:26:00 PM
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Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID	MB-22935	SampType:	MBLK	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48283			
Client ID:	MBLKW	Batch ID:	22935			Analysis Date:	12/13/2018	SeqNo:	944419			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID	LCS-22935	SampType:	LCS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48283			
Client ID:	LCSW	Batch ID:	22935			Analysis Date:	12/13/2018	SeqNo:	944420			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.212 0.100 0.2500 0 84.8 80 120

Sample ID	1812076-001FDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48283			
Client ID:	BATCH	Batch ID:	22935			Analysis Date:	12/13/2018	SeqNo:	944442			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID	1812076-001FMS	SampType:	MS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48283			
Client ID:	BATCH	Batch ID:	22935			Analysis Date:	12/13/2018	SeqNo:	944443			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.135 0.100 0.2500 0 54.0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID	1812076-001FMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48283			
Client ID:	BATCH	Batch ID:	22935			Analysis Date:	12/13/2018	SeqNo:	944444			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.175 0.100 0.2500 0 70.0 70 130 0.1350 25.8 30



Work Order: 1812127
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Ammonia by SM 4500 NH3G

Sample ID 1812152-002FDUP	SampType: DUP	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: BATCH	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944445					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812152-002FMS	SampType: MS	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: BATCH	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944446					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.222	0.100	0.2500	0	88.8	70	130				



Work Order: 1812127
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	LCS-22956	SampType:	LCS	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	LCSW	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947532				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 0.691 0.100 0.7500 0 92.1 90 110

Sample ID	LCS-22956A	SampType:	LCS	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	LCSW	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947533				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 91.2 3.00 98.60 0 92.5 90 110 D

Sample ID	MB-22956	SampType:	MBLK	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	MBLKW	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947534				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.100
Sulfate ND 0.300

Sample ID	1812108-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	BATCH	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947536				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.500 39.80 200 20 RD
Sulfate 16.8 1.50 14.88 11.9 20 D

NOTES:
R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	1812108-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	BATCH	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947537				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 44.0 0.500 3.750 39.80 112 80 120 ED
Sulfate 34.2 1.50 18.75 14.88 103 80 120 D

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812108-001AMS	SampType: MS	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/17/2018	SeqNo: 947537				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812108-001AMSD	SampType: MSD	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/17/2018	SeqNo: 947538				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	44.1	0.500	3.750	39.80	116	80	120	44.02	0.284	20	ED
Sulfate	34.6	1.50	18.75	14.88	105	80	120	34.17	1.12	20	D

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812114-002CDUP	SampType: DUP	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/18/2018	SeqNo: 947561				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.08	0.100						4.064	0.466	20	E
Sulfate	6.82	0.300						6.715	1.55	20	

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812114-002CMS	SampType: MS	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/18/2018	SeqNo: 947562				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.91	0.100	0.7500	4.064	113	80	120				E
Sulfate	10.7	0.300	3.750	6.715	106	80	120				

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48373	SampType: MBLK	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: MBLKW	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946777					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48373	SampType: LCS	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: LCSW	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946778					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 4.98 0.500 5.000 0 99.6 80 120

Sample ID 1812096-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: BATCH	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946780					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 1.29 0.500 1.282 0.932 20

Sample ID 1812096-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: BATCH	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946781					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.47 0.500 5.000 1.282 104 70 130

Sample ID 1812096-001EMSD	SampType: MSD	Units: mg/L			Prep Date: 12/18/2018	RunNo: 48373					
Client ID: BATCH	Batch ID: R48373				Analysis Date: 12/18/2018	SeqNo: 946782					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.54 0.500 5.000 1.282 105 70 130 6.469 1.17 30

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22920	SampType: MBLK	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: MBLKW	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943880								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-22920	SampType: LCS	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: LCSW	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943881								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 938 100 1,000 0 93.8 50 150

Sample ID 1812096-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: BATCH	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943883								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 826 100 834.5 1.07 30

Sample ID 1812096-001CMS	SampType: MS	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: BATCH	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943886								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,430 100 5,000 834.5 91.8 50 150

Sample ID 1812096-001CMSD	SampType: MSD	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: BATCH	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943887								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,420 100 5,000 834.5 91.8 50 150 5,426 0.0741 30



Work Order: 1812127
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22906FB	SampType: MBLK	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48270							
Client ID: MBLKW	Batch ID: 22920	Analysis Date: 12/13/2018	SeqNo: 943910								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48280	SampType:	MBLK	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	MBLKW	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944341		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48280	SampType:	LCS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	LCSW	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944340		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	780	0.00863	1,000	0	78.0	70	130				
Ethene	799	0.0151	1,000	0	79.9	70	130				
Ethane	807	0.0162	1,000	0	80.7	70	130				

Sample ID	1812096-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	BATCH	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944329		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0635	0.00863						0.06360	0.157	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812127
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945009				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	34.5	1.00	20.00	0	172	18.7	171				S
Chloromethane	25.6	2.00	20.00	0	128	38.5	171				
Vinyl chloride	24.8	0.200	20.00	0	124	48	145				
Bromomethane	24.0	1.00	20.00	0	120	32.5	184				
Trichlorofluoromethane (CFC-11)	22.6	1.00	20.00	0	113	43.5	149				
Chloroethane	23.1	1.00	20.00	0	115	43.8	168				
1,1-Dichloroethene	22.1	1.00	20.00	0	111	57.5	150				
Methylene chloride	20.8	1.00	20.00	0	104	67.1	131				
trans-1,2-Dichloroethene	21.3	1.00	20.00	0	106	71.7	129				
Methyl tert-butyl ether (MTBE)	20.6	1.00	20.00	0	103	58	138				
1,1-Dichloroethane	21.3	1.00	20.00	0	107	67.9	134				
2,2-Dichloropropane	24.3	2.00	20.00	0	121	26.5	185				
cis-1,2-Dichloroethene	20.6	1.00	20.00	0	103	70.2	139				
Chloroform	20.8	1.00	20.00	0	104	66.3	131				
1,1,1-Trichloroethane (TCA)	21.1	1.00	20.00	0	105	63	140				
1,1-Dichloropropene	21.5	1.00	20.00	0	107	69.9	124				
Carbon tetrachloride	21.3	1.00	20.00	0	107	66.2	134				
1,2-Dichloroethane (EDC)	20.6	1.00	20.00	0	103	67	126				
Benzene	24.2	1.00	20.00	0	121	69.3	132				
Trichloroethene (TCE)	20.8	0.500	20.00	0	104	65.2	136				
1,2-Dichloropropane	20.6	1.00	20.00	0	103	70.5	130				
Bromodichloromethane	20.4	1.00	20.00	0	102	67.2	137				
Dibromomethane	20.2	1.00	20.00	0	101	69.3	143				
cis-1,3-Dichloropropene	20.5	1.00	20.00	0	103	62.6	137				
Toluene	24.5	1.00	20.00	0	122	61.3	145				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	56.5	163				
1,1,2-Trichloroethane	20.0	1.00	20.00	0	100	71.7	131				
1,3-Dichloropropane	20.0	1.00	20.00	0	99.9	73.5	127				
Tetrachloroethene (PCE)	21.1	1.00	20.00	0	105	47.5	147				
Dibromochloromethane	19.9	1.00	20.00	0	99.4	67.2	134				
1,2-Dibromoethane (EDB)	19.8	0.250	20.00	0	99.0	73.6	125				

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945009				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.6	1.00	20.00	0	103	73.9	126				
1,1,1,2-Tetrachloroethane	20.4	1.00	20.00	0	102	76.8	124				
Ethylbenzene	25.4	1.00	20.00	0	127	72	130				
m,p-Xylene	50.5	1.00	40.00	0	126	70.3	134				
o-Xylene	24.3	1.00	20.00	0	121	72.1	131				
Styrene	20.8	1.00	20.00	0	104	64.3	140				
Isopropylbenzene	20.5	1.00	20.00	0	103	73.9	128				
Bromoform	18.7	2.00	20.00	0	93.3	55.3	141				
1,1,2,2-Tetrachloroethane	19.7	1.00	20.00	0	98.5	62.9	132				
n-Propylbenzene	22.1	1.00	20.00	0	111	74.5	127				
Bromobenzene	20.3	1.00	20.00	0	101	71	131				
1,3,5-Trimethylbenzene	21.2	1.00	20.00	0	106	73.1	128				
2-Chlorotoluene	20.8	1.00	20.00	0	104	70.8	130				
4-Chlorotoluene	21.3	1.00	20.00	0	106	70.1	131				
tert-Butylbenzene	21.0	1.00	20.00	0	105	68.2	131				
1,2,3-Trichloropropane	19.6	1.00	20.00	0	97.8	67.7	131				
1,2,4-Trichlorobenzene	21.4	2.00	20.00	0	107	41	139				
sec-Butylbenzene	21.9	1.00	20.00	0	109	72	129				
4-Isopropyltoluene	21.6	1.00	20.00	0	108	69.2	130				
1,3-Dichlorobenzene	21.3	1.00	20.00	0	106	69.5	128				
1,4-Dichlorobenzene	21.2	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	22.3	1.00	20.00	0	111	73.8	127				
1,2-Dichlorobenzene	21.0	1.00	20.00	0	105	69.7	119				
1,2-Dibromo-3-chloropropane	19.6	1.00	20.00	0	98.2	63.1	136				
1,2,4-Trimethylbenzene	21.4	1.00	20.00	0	107	73.4	127				
Hexachloro-1,3-butadiene	22.0	4.00	20.00	0	110	58.6	138				
Naphthalene	20.8	1.00	20.00	0	104	41.8	165				
1,2,3-Trichlorobenzene	20.9	4.00	20.00	0	104	35.8	155				
Surr: Dibromofluoromethane	25.0		25.00		100	45.4	152				
Surr: Toluene-d8	24.6		25.00		98.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.6	64.2	128				

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945009		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW02	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945010		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	33.2	1.00	20.00	0	166	18.7	171	34.50	3.85	20	
Chloromethane	24.9	2.00	20.00	0	125	38.5	171	25.64	2.81	20	
Vinyl chloride	24.2	0.200	20.00	0	121	48	145	24.76	2.23	20	
Bromomethane	25.3	1.00	20.00	0	126	32.5	184	24.05	4.93	20	
Trichlorofluoromethane (CFC-11)	22.1	1.00	20.00	0	110	43.5	149	22.63	2.50	20	
Chloroethane	22.1	1.00	20.00	0	111	43.8	168	23.08	4.10	20	
1,1-Dichloroethene	21.3	1.00	20.00	0	106	57.5	150	22.14	4.04	20	
Methylene chloride	20.4	1.00	20.00	0	102	67.1	131	20.81	1.83	20	
trans-1,2-Dichloroethene	20.6	1.00	20.00	0	103	71.7	129	21.26	3.36	20	
Methyl tert-butyl ether (MTBE)	20.8	1.00	20.00	0	104	58	138	20.63	0.683	20	
1,1-Dichloroethane	20.6	1.00	20.00	0	103	67.9	134	21.31	3.50	20	
2,2-Dichloropropane	23.0	2.00	20.00	0	115	26.5	185	24.26	5.39	20	
cis-1,2-Dichloroethene	20.1	1.00	20.00	0	101	70.2	139	20.60	2.36	20	
Chloroform	20.0	1.00	20.00	0	100	66.3	131	20.80	3.92	20	
1,1,1-Trichloroethane (TCA)	20.3	1.00	20.00	0	101	63	140	21.07	3.90	20	
1,1-Dichloropropene	20.6	1.00	20.00	0	103	69.9	124	21.47	4.35	20	
Carbon tetrachloride	20.5	1.00	20.00	0	102	66.2	134	21.33	4.03	20	
1,2-Dichloroethane (EDC)	20.4	1.00	20.00	0	102	68.8	123	20.56	0.878	20	
Benzene	23.4	1.00	20.00	0	117	69.3	132	24.16	3.34	20	
Trichloroethene (TCE)	19.9	0.500	20.00	0	99.3	65.2	136	20.84	4.81	20	
1,2-Dichloropropane	20.1	1.00	20.00	0	100	70.5	130	20.62	2.76	20	
Bromodichloromethane	20.0	1.00	20.00	0	100	74.6	127	20.40	1.77	20	
Dibromomethane	19.8	1.00	20.00	0	99.1	69.3	143	20.18	1.81	20	
cis-1,3-Dichloropropene	20.2	1.00	20.00	0	101	62.6	137	20.55	1.60	20	

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-22941	SampType:	LCSD	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW02	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945010				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	23.6	1.00	20.00	0	118	61.3	145	24.46	3.63	20	
trans-1,3-Dichloropropylene	20.2	1.00	20.00	0	101	56.5	163	20.38	0.957	20	
1,1,2-Trichloroethane	19.9	1.00	20.00	0	99.4	71.7	131	20.00	0.604	20	
1,3-Dichloropropane	20.0	1.00	20.00	0	99.8	73.5	127	19.97	0.0983	20	
Tetrachloroethene (PCE)	20.3	1.00	20.00	0	101	47.5	147	21.10	4.04	20	
Dibromochloromethane	19.7	1.00	20.00	0	98.5	67.2	134	19.88	0.891	20	
1,2-Dibromoethane (EDB)	19.8	0.250	20.00	0	99.2	73.6	125	19.80	0.193	20	
Chlorobenzene	20.2	1.00	20.00	0	101	73.9	126	20.64	2.37	20	
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	101	76.8	124	20.44	1.47	20	
Ethylbenzene	24.7	1.00	20.00	0	124	72	130	25.44	2.78	20	
m,p-Xylene	49.1	1.00	40.00	0	123	70.3	134	50.49	2.85	20	
o-Xylene	23.6	1.00	20.00	0	118	72.1	131	24.29	2.81	20	
Styrene	20.2	1.00	20.00	0	101	64.3	140	20.81	3.20	20	
Isopropylbenzene	20.0	1.00	20.00	0	99.9	73.9	128	20.54	2.81	20	
Bromoform	18.8	2.00	20.00	0	93.8	55.3	141	18.65	0.525	20	
1,1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	62.9	132	19.71	2.36	20	
n-Propylbenzene	21.4	1.00	20.00	0	107	74.5	127	22.14	3.59	20	
Bromobenzene	19.8	1.00	20.00	0	99.1	71	131	20.26	2.15	20	
1,3,5-Trimethylbenzene	20.6	1.00	20.00	0	103	73.1	128	21.15	2.63	20	
2-Chlorotoluene	20.3	1.00	20.00	0	101	70.8	130	20.82	2.71	20	
4-Chlorotoluene	20.6	1.00	20.00	0	103	70.1	131	21.29	3.12	20	
tert-Butylbenzene	20.3	1.00	20.00	0	102	68.2	131	21.02	3.28	20	
1,2,3-Trichloropropane	19.7	1.00	20.00	0	98.5	67.7	131	19.57	0.628	20	
1,2,4-Trichlorobenzene	21.6	2.00	20.00	0	108	41	139	21.43	0.708	20	
sec-Butylbenzene	21.2	1.00	20.00	0	106	72	129	21.85	3.10	20	
4-Isopropyltoluene	20.9	1.00	20.00	0	104	69.2	130	21.62	3.43	20	
1,3-Dichlorobenzene	20.9	1.00	20.00	0	105	69.5	128	21.27	1.69	20	
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	66.8	119	21.15	0.730	20	
n-Butylbenzene	21.8	1.00	20.00	0	109	73.8	127	22.29	2.42	20	
1,2-Dichlorobenzene	21.0	1.00	20.00	0	105	69.7	119	21.04	0.238	20	
1,2-Dibromo-3-chloropropane	20.8	1.00	20.00	0	104	63.1	136	19.63	5.59	20	

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-22941	SampType:	LCSD	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW02	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945010				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	20.8	1.00	20.00	0	104	73.4	127	21.36	2.75	20	
Hexachloro-1,3-butadiene	22.4	4.00	20.00	0	112	58.6	138	22.00	1.69	20	
Naphthalene	21.7	1.00	20.00	0	109	41.8	165	20.77	4.56	20	
1,2,3-Trichlorobenzene	21.3	4.00	20.00	0	106	35.8	155	20.88	1.97	20	
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.3	64.2	128		0		

Sample ID	MB-22941	SampType:	MBLK	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	MBLKW	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945011				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									



Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-22941	SampType: MBLK	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48299
Client ID: MBLKW	Batch ID: 22941		Analysis Date: 12/13/2018	SeqNo: 945011

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									

Work Order: 1812127
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22941	SampType:	MBLK	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	MBLKW	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945011		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.5		25.00		102	45.4	152				
Surr: Toluene-d8	24.7		25.00		98.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.0	64.2	128				

Sample ID	1812179-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	BATCH	Batch ID:	22941			Analysis Date:	12/14/2018	SeqNo:	945006		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	

Work Order: 1812127
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812179-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	BATCH	Batch ID:	22941	Analysis Date:	12/14/2018	SeqNo:	945006				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	

Work Order: 1812127
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812179-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48299							
Client ID: BATCH	Batch ID: 22941		Analysis Date: 12/14/2018	SeqNo: 945006							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.0		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.0		25.00		96.1	64.2	128		0		

Client Name: **KANE**
 Logged by: **Clare Griggs**

 Work Order Number: **1812127**
 Date Received: **12/10/2018 4:37:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

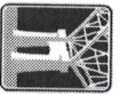
Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	3.3
Sample	4.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

ANALYTICAL

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/10/18 Page: 1 of 1
Project Name: BCS5
Project No: 82802-9.1
Collected by: BK
Location: Bethell

Laboratory Project No (Internal): 181227
Special Remarks:

Client: Kane Environmental
Address: 4015 13th Ave W
City, State, zip: Seattle, WA 98119
Telephone: (206) 691 0470
Fax:

Report To (PM): Jeff Jensen
PM Email: jff@kane-environmental.com

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes										Comments						
				VOCs (EPA 8260 / 624)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)		Total (T) / Dissolved (D)	Anions (C)***	EDB (8013)	TOC	ammonia-N	RSK
1 H2 - MN - 21:W	12/16	1105	GW	X																lab filter, RC
2 H2 - MW - 29:W	12/10	1315	GW	X																lab filter
3 H2 - MW - 24:W	12/10	1512	GW	X																lab filter
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Reinforced x Date/Time 12/10/18 1637
 Reinforced x Date/Time 12/10/18 1637
 Received x Date/Time 12/10/18 1637
 Received x Date/Time 12/10/18 1637

Turn-around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify)



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812152

December 18, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 12/11/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/18/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812152

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812152-001	MW-35:W	12/11/2018 12:00 PM	12/11/2018 3:19 PM
1812152-002	MW-34:W	12/11/2018 2:20 PM	12/11/2018 3:19 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/11/2018 12:00:00 PM

Project: BSCSS

Lab ID: 1812152-001

Matrix: Groundwater

Client Sample ID: MW-35:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	0.111	0.00863		mg/L	1	12/13/2018 12:56:00 PM
Ethene	ND	0.0151		mg/L	1	12/13/2018 12:56:00 PM
Ethane	ND	0.0162		mg/L	1	12/13/2018 12:56:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Chloromethane	ND	2.00		µg/L	1	12/14/2018 4:40:09 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2018 4:40:09 AM
Bromomethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Methylene chloride	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/14/2018 4:40:09 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Chloroform	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Benzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2018 4:40:09 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Dibromomethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Toluene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/14/2018 4:40:09 AM
Chlorobenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM



Client: Kane Environmental, Inc.

Collection Date: 12/11/2018 12:00:00 PM

Project: BSCSS

Lab ID: 1812152-001

Matrix: Groundwater

Client Sample ID: MW-35:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
o-Xylene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Styrene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Bromoform	ND	2.00		µg/L	1	12/14/2018 4:40:09 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Bromobenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/14/2018 4:40:09 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/14/2018 4:40:09 AM
Naphthalene	ND	1.00		µg/L	1	12/14/2018 4:40:09 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/14/2018 4:40:09 AM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	12/14/2018 4:40:09 AM
Surr: Toluene-d8	98.3	40.1 - 139		%Rec	1	12/14/2018 4:40:09 AM
Surr: 1-Bromo-4-fluorobenzene	95.5	64.2 - 128		%Rec	1	12/14/2018 4:40:09 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 22956

Analyst: TN

Chloride	13.1	0.200	DE	mg/L	2	12/18/2018 1:02:00 PM
Sulfate	7.13	0.600	D	mg/L	2	12/18/2018 1:02:00 PM

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812152-001
Client Sample ID: MW-35:W

Collection Date: 12/11/2018 12:00:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22965		Analyst: WC
Iron	942	100		µg/L	1	12/17/2018 11:39:51 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	2.09	0.500		mg/L	1	12/18/2018 7:24:51 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	0.220	0.100		mg/L	1	12/13/2018 2:41:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/11/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812152-002

Matrix: Groundwater

Client Sample ID: MW-34:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48280 Analyst: AD

Methane	0.0103	0.00863		mg/L	1	12/13/2018 1:00:00 PM
Ethene	ND	0.0151		mg/L	1	12/13/2018 1:00:00 PM
Ethane	ND	0.0162		mg/L	1	12/13/2018 1:00:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Chloromethane	ND	2.00		µg/L	1	12/14/2018 5:42:36 AM
Vinyl chloride	ND	0.200		µg/L	1	12/14/2018 5:42:36 AM
Bromomethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Chloroethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Methylene chloride	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/14/2018 5:42:36 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Chloroform	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Benzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/14/2018 5:42:36 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Dibromomethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Toluene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/14/2018 5:42:36 AM
Chlorobenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM



Client: Kane Environmental, Inc.

Collection Date: 12/11/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812152-002

Matrix: Groundwater

Client Sample ID: MW-34:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22941

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
m,p-Xylene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
o-Xylene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Styrene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Bromoform	ND	2.00		µg/L	1	12/14/2018 5:42:36 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Bromobenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/14/2018 5:42:36 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/14/2018 5:42:36 AM
Naphthalene	ND	1.00		µg/L	1	12/14/2018 5:42:36 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/14/2018 5:42:36 AM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	12/14/2018 5:42:36 AM
Surr: Toluene-d8	98.5	40.1 - 139		%Rec	1	12/14/2018 5:42:36 AM
Surr: 1-Bromo-4-fluorobenzene	96.8	64.2 - 128		%Rec	1	12/14/2018 5:42:36 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 22956

Analyst: TN

Chloride	39.0	0.200	DE	mg/L	2	12/18/2018 1:25:00 PM
Sulfate	13.5	0.600	D	mg/L	2	12/18/2018 1:25:00 PM

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Client: Kane Environmental, Inc.

Collection Date: 12/11/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812152-002

Matrix: Groundwater

Client Sample ID: MW-34:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22965		Analyst: WC
Iron	561	100		µg/L	1	12/17/2018 11:43:52 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48373		Analyst: GM
Total Organic Carbon	1.20	0.500		mg/L	1	12/18/2018 7:44:40 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22935		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/13/2018 2:47:00 PM

Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22935	SampType: MBLK	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: MBLKW	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944419							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22935	SampType: LCS	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: LCSW	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944420							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.212 0.100 0.2500 0 84.8 80 120

Sample ID 1812076-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: BATCH	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944442							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812076-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: BATCH	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944443							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.135 0.100 0.2500 0 54.0 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID 1812076-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/13/2018	RunNo: 48283							
Client ID: BATCH	Batch ID: 22935		Analysis Date: 12/13/2018	SeqNo: 944444							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.175 0.100 0.2500 0 70.0 70 130 0.1350 25.8 30



Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812152-002FDUP	SampType: DUP	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: MW-34:W	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944445					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812152-002FMS	SampType: MS	Units: mg/L			Prep Date: 12/13/2018	RunNo: 48283					
Client ID: MW-34:W	Batch ID: 22935				Analysis Date: 12/13/2018	SeqNo: 944446					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.222	0.100	0.2500	0	88.8	70	130				



Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	LCS-22956	SampType:	LCS	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	LCSW	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947532				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 0.691 0.100 0.7500 0 92.1 90 110

Sample ID	LCS-22956A	SampType:	LCS	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	LCSW	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947533				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 91.2 3.00 98.60 0 92.5 90 110 D

Sample ID	MB-22956	SampType:	MBLK	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	MBLKW	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947534				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.100
 Sulfate ND 0.300

Sample ID	1812108-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	BATCH	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947536				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.500 39.80 200 20 DR
 Sulfate 16.8 1.50 14.88 11.9 20 D

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	1812108-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/17/2018	RunNo:	48386		
Client ID:	BATCH	Batch ID:	22956	Analysis Date:	12/17/2018	SeqNo:	947537				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 44.0 0.500 3.750 39.80 112 80 120 DE
 Sulfate 34.2 1.50 18.75 14.88 103 80 120 D

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812108-001AMS	SampType: MS	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/17/2018	SeqNo: 947537				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812108-001AMSD	SampType: MSD	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/17/2018	SeqNo: 947538				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	44.1	0.500	3.750	39.80	116	80	120	44.02	0.284	20	DE
Sulfate	34.6	1.50	18.75	14.88	105	80	120	34.17	1.12	20	D

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812114-002CDUP	SampType: DUP	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/18/2018	SeqNo: 947561				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.08	0.100						4.064	0.466	20	E
Sulfate	6.82	0.300						6.715	1.55	20	

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812114-002CMS	SampType: MS	Units: mg/L			Prep Date: 12/17/2018	RunNo: 48386				
Client ID:	BATCH	Batch ID: 22956				Analysis Date: 12/18/2018	SeqNo: 947562				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.91	0.100	0.7500	4.064	113	80	120				E
Sulfate	10.7	0.300	3.750	6.715	106	80	120				

NOTES:
 E - Estimated value. The amount exceeds the linear working range of the instrument.



Date: 12/18/2018

Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48373	SampType: MBLK	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48373							
Client ID: MBLKW	Batch ID: R48373		Analysis Date: 12/18/2018	SeqNo: 946777							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48373	SampType: LCS	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48373							
Client ID: LCSW	Batch ID: R48373		Analysis Date: 12/18/2018	SeqNo: 946778							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 4.98 0.500 5.000 0 99.6 80 120

Sample ID 1812096-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48373							
Client ID: BATCH	Batch ID: R48373		Analysis Date: 12/18/2018	SeqNo: 946780							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 1.29 0.500 1.282 0.932 20

Sample ID 1812096-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48373							
Client ID: BATCH	Batch ID: R48373		Analysis Date: 12/18/2018	SeqNo: 946781							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.47 0.500 5.000 1.282 104 70 130

Sample ID 1812096-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/18/2018	RunNo: 48373							
Client ID: BATCH	Batch ID: R48373		Analysis Date: 12/18/2018	SeqNo: 946782							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.54 0.500 5.000 1.282 105 70 130 6.469 1.17 30

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID	MB-22965	SampType:	MBLK	Units:	µg/L	Prep Date:	12/17/2018	RunNo:	48347			
Client ID:	MBLKW	Batch ID:	22965			Analysis Date:	12/17/2018	SeqNo:	946104			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID	LCS-22965	SampType:	LCS	Units:	µg/L	Prep Date:	12/17/2018	RunNo:	48347			
Client ID:	LCSW	Batch ID:	22965			Analysis Date:	12/17/2018	SeqNo:	946105			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 950 100 1,000 0 95.0 50 150

Sample ID	1812131-001FDUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/17/2018	RunNo:	48347			
Client ID:	BATCH	Batch ID:	22965			Analysis Date:	12/17/2018	SeqNo:	946107			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 169 100 176.5 4.31 30

Sample ID	1812131-001FMS	SampType:	MS	Units:	µg/L	Prep Date:	12/17/2018	RunNo:	48347			
Client ID:	BATCH	Batch ID:	22965			Analysis Date:	12/17/2018	SeqNo:	946108			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,830 100 5,000 176.5 93.1 50 150

Sample ID	1812131-001FMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/17/2018	RunNo:	48347			
Client ID:	BATCH	Batch ID:	22965			Analysis Date:	12/17/2018	SeqNo:	946111			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,790 100 5,000 176.5 92.3 50 150 4,831 0.875 30



Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22943FB	SampType: MBLK	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: MBLKW	Batch ID: 22965	Analysis Date: 12/17/2018	SeqNo: 946135								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48280	SampType:	MBLK	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	MBLKW	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944341		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48280	SampType:	LCS	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	LCSW	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944340		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	780	0.00863	1,000	0	78.0	70	130				
Ethene	799	0.0151	1,000	0	79.9	70	130				
Ethane	807	0.0162	1,000	0	80.7	70	130				

Sample ID	1812096-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/13/2018	RunNo:	48280		
Client ID:	BATCH	Batch ID:	R48280			Analysis Date:	12/13/2018	SeqNo:	944329		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0635	0.00863						0.06360	0.157	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945009				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	34.5	1.00	20.00	0	172	18.7	171				S
Chloromethane	25.6	2.00	20.00	0	128	38.5	171				
Vinyl chloride	24.8	0.200	20.00	0	124	48	145				
Bromomethane	24.0	1.00	20.00	0	120	32.5	184				
Trichlorofluoromethane (CFC-11)	22.6	1.00	20.00	0	113	43.5	149				
Chloroethane	23.1	1.00	20.00	0	115	43.8	168				
1,1-Dichloroethene	22.1	1.00	20.00	0	111	57.5	150				
Methylene chloride	20.8	1.00	20.00	0	104	67.1	131				
trans-1,2-Dichloroethene	21.3	1.00	20.00	0	106	71.7	129				
Methyl tert-butyl ether (MTBE)	20.6	1.00	20.00	0	103	58	138				
1,1-Dichloroethane	21.3	1.00	20.00	0	107	67.9	134				
2,2-Dichloropropane	24.3	2.00	20.00	0	121	26.5	185				
cis-1,2-Dichloroethene	20.6	1.00	20.00	0	103	70.2	139				
Chloroform	20.8	1.00	20.00	0	104	66.3	131				
1,1,1-Trichloroethane (TCA)	21.1	1.00	20.00	0	105	63	140				
1,1-Dichloropropene	21.5	1.00	20.00	0	107	69.9	124				
Carbon tetrachloride	21.3	1.00	20.00	0	107	66.2	134				
1,2-Dichloroethane (EDC)	20.6	1.00	20.00	0	103	67	126				
Benzene	24.2	1.00	20.00	0	121	69.3	132				
Trichloroethene (TCE)	20.8	0.500	20.00	0	104	65.2	136				
1,2-Dichloropropane	20.6	1.00	20.00	0	103	70.5	130				
Bromodichloromethane	20.4	1.00	20.00	0	102	67.2	137				
Dibromomethane	20.2	1.00	20.00	0	101	69.3	143				
cis-1,3-Dichloropropene	20.5	1.00	20.00	0	103	62.6	137				
Toluene	24.5	1.00	20.00	0	122	61.3	145				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	56.5	163				
1,1,2-Trichloroethane	20.0	1.00	20.00	0	100	71.7	131				
1,3-Dichloropropane	20.0	1.00	20.00	0	99.9	73.5	127				
Tetrachloroethene (PCE)	21.1	1.00	20.00	0	105	47.5	147				
Dibromochloromethane	19.9	1.00	20.00	0	99.4	67.2	134				
1,2-Dibromoethane (EDB)	19.8	0.250	20.00	0	99.0	73.6	125				

Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945009				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.6	1.00	20.00	0	103	73.9	126				
1,1,1,2-Tetrachloroethane	20.4	1.00	20.00	0	102	76.8	124				
Ethylbenzene	25.4	1.00	20.00	0	127	72	130				
m,p-Xylene	50.5	1.00	40.00	0	126	70.3	134				
o-Xylene	24.3	1.00	20.00	0	121	72.1	131				
Styrene	20.8	1.00	20.00	0	104	64.3	140				
Isopropylbenzene	20.5	1.00	20.00	0	103	73.9	128				
Bromoform	18.7	2.00	20.00	0	93.3	55.3	141				
1,1,2,2-Tetrachloroethane	19.7	1.00	20.00	0	98.5	62.9	132				
n-Propylbenzene	22.1	1.00	20.00	0	111	74.5	127				
Bromobenzene	20.3	1.00	20.00	0	101	71	131				
1,3,5-Trimethylbenzene	21.2	1.00	20.00	0	106	73.1	128				
2-Chlorotoluene	20.8	1.00	20.00	0	104	70.8	130				
4-Chlorotoluene	21.3	1.00	20.00	0	106	70.1	131				
tert-Butylbenzene	21.0	1.00	20.00	0	105	68.2	131				
1,2,3-Trichloropropane	19.6	1.00	20.00	0	97.8	67.7	131				
1,2,4-Trichlorobenzene	21.4	2.00	20.00	0	107	41	139				
sec-Butylbenzene	21.9	1.00	20.00	0	109	72	129				
4-Isopropyltoluene	21.6	1.00	20.00	0	108	69.2	130				
1,3-Dichlorobenzene	21.3	1.00	20.00	0	106	69.5	128				
1,4-Dichlorobenzene	21.2	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	22.3	1.00	20.00	0	111	73.8	127				
1,2-Dichlorobenzene	21.0	1.00	20.00	0	105	69.7	119				
1,2-Dibromo-3-chloropropane	19.6	1.00	20.00	0	98.2	63.1	136				
1,2,4-Trimethylbenzene	21.4	1.00	20.00	0	107	73.4	127				
Hexachloro-1,3-butadiene	22.0	4.00	20.00	0	110	58.6	138				
Naphthalene	20.8	1.00	20.00	0	104	41.8	165				
1,2,3-Trichlorobenzene	20.9	4.00	20.00	0	104	35.8	155				
Surr: Dibromofluoromethane	25.0		25.00		100	45.4	152				
Surr: Toluene-d8	24.6		25.00		98.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.6	64.2	128				

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945009		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID	LCS-22941	SampType:	LCS	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW02	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945010		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	33.2	1.00	20.00	0	166	18.7	171	34.50	3.85	20	
Chloromethane	24.9	2.00	20.00	0	125	38.5	171	25.64	2.81	20	
Vinyl chloride	24.2	0.200	20.00	0	121	48	145	24.76	2.23	20	
Bromomethane	25.3	1.00	20.00	0	126	32.5	184	24.05	4.93	20	
Trichlorofluoromethane (CFC-11)	22.1	1.00	20.00	0	110	43.5	149	22.63	2.50	20	
Chloroethane	22.1	1.00	20.00	0	111	43.8	168	23.08	4.10	20	
1,1-Dichloroethene	21.3	1.00	20.00	0	106	57.5	150	22.14	4.04	20	
Methylene chloride	20.4	1.00	20.00	0	102	67.1	131	20.81	1.83	20	
trans-1,2-Dichloroethene	20.6	1.00	20.00	0	103	71.7	129	21.26	3.36	20	
Methyl tert-butyl ether (MTBE)	20.8	1.00	20.00	0	104	58	138	20.63	0.683	20	
1,1-Dichloroethane	20.6	1.00	20.00	0	103	67.9	134	21.31	3.50	20	
2,2-Dichloropropane	23.0	2.00	20.00	0	115	26.5	185	24.26	5.39	20	
cis-1,2-Dichloroethene	20.1	1.00	20.00	0	101	70.2	139	20.60	2.36	20	
Chloroform	20.0	1.00	20.00	0	100	66.3	131	20.80	3.92	20	
1,1,1-Trichloroethane (TCA)	20.3	1.00	20.00	0	101	63	140	21.07	3.90	20	
1,1-Dichloropropene	20.6	1.00	20.00	0	103	69.9	124	21.47	4.35	20	
Carbon tetrachloride	20.5	1.00	20.00	0	102	66.2	134	21.33	4.03	20	
1,2-Dichloroethane (EDC)	20.4	1.00	20.00	0	102	68.8	123	20.56	0.878	20	
Benzene	23.4	1.00	20.00	0	117	69.3	132	24.16	3.34	20	
Trichloroethene (TCE)	19.9	0.500	20.00	0	99.3	65.2	136	20.84	4.81	20	
1,2-Dichloropropane	20.1	1.00	20.00	0	100	70.5	130	20.62	2.76	20	
Bromodichloromethane	20.0	1.00	20.00	0	100	74.6	127	20.40	1.77	20	
Dibromomethane	19.8	1.00	20.00	0	99.1	69.3	143	20.18	1.81	20	
cis-1,3-Dichloropropene	20.2	1.00	20.00	0	101	62.6	137	20.55	1.60	20	



Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-22941	SampType:	LCSD	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299
Client ID:	LCSW02	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945010

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	23.6	1.00	20.00	0	118	61.3	145	24.46	3.63	20	
trans-1,3-Dichloropropylene	20.2	1.00	20.00	0	101	56.5	163	20.38	0.957	20	
1,1,2-Trichloroethane	19.9	1.00	20.00	0	99.4	71.7	131	20.00	0.604	20	
1,3-Dichloropropane	20.0	1.00	20.00	0	99.8	73.5	127	19.97	0.0983	20	
Tetrachloroethene (PCE)	20.3	1.00	20.00	0	101	47.5	147	21.10	4.04	20	
Dibromochloromethane	19.7	1.00	20.00	0	98.5	67.2	134	19.88	0.891	20	
1,2-Dibromoethane (EDB)	19.8	0.250	20.00	0	99.2	73.6	125	19.80	0.193	20	
Chlorobenzene	20.2	1.00	20.00	0	101	73.9	126	20.64	2.37	20	
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	101	76.8	124	20.44	1.47	20	
Ethylbenzene	24.7	1.00	20.00	0	124	72	130	25.44	2.78	20	
m,p-Xylene	49.1	1.00	40.00	0	123	70.3	134	50.49	2.85	20	
o-Xylene	23.6	1.00	20.00	0	118	72.1	131	24.29	2.81	20	
Styrene	20.2	1.00	20.00	0	101	64.3	140	20.81	3.20	20	
Isopropylbenzene	20.0	1.00	20.00	0	99.9	73.9	128	20.54	2.81	20	
Bromoform	18.8	2.00	20.00	0	93.8	55.3	141	18.65	0.525	20	
1,1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	62.9	132	19.71	2.36	20	
n-Propylbenzene	21.4	1.00	20.00	0	107	74.5	127	22.14	3.59	20	
Bromobenzene	19.8	1.00	20.00	0	99.1	71	131	20.26	2.15	20	
1,3,5-Trimethylbenzene	20.6	1.00	20.00	0	103	73.1	128	21.15	2.63	20	
2-Chlorotoluene	20.3	1.00	20.00	0	101	70.8	130	20.82	2.71	20	
4-Chlorotoluene	20.6	1.00	20.00	0	103	70.1	131	21.29	3.12	20	
tert-Butylbenzene	20.3	1.00	20.00	0	102	68.2	131	21.02	3.28	20	
1,2,3-Trichloropropane	19.7	1.00	20.00	0	98.5	67.7	131	19.57	0.628	20	
1,2,4-Trichlorobenzene	21.6	2.00	20.00	0	108	41	139	21.43	0.708	20	
sec-Butylbenzene	21.2	1.00	20.00	0	106	72	129	21.85	3.10	20	
4-Isopropyltoluene	20.9	1.00	20.00	0	104	69.2	130	21.62	3.43	20	
1,3-Dichlorobenzene	20.9	1.00	20.00	0	105	69.5	128	21.27	1.69	20	
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	66.8	119	21.15	0.730	20	
n-Butylbenzene	21.8	1.00	20.00	0	109	73.8	127	22.29	2.42	20	
1,2-Dichlorobenzene	21.0	1.00	20.00	0	105	69.7	119	21.04	0.238	20	
1,2-Dibromo-3-chloropropane	20.8	1.00	20.00	0	104	63.1	136	19.63	5.59	20	

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-22941	SampType:	LCSD	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	LCSW02	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945010				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	20.8	1.00	20.00	0	104	73.4	127	21.36	2.75	20	
Hexachloro-1,3-butadiene	22.4	4.00	20.00	0	112	58.6	138	22.00	1.69	20	
Naphthalene	21.7	1.00	20.00	0	109	41.8	165	20.77	4.56	20	
1,2,3-Trichlorobenzene	21.3	4.00	20.00	0	106	35.8	155	20.88	1.97	20	
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.3	64.2	128		0		

Sample ID	MB-22941	SampType:	MBLK	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	MBLKW	Batch ID:	22941	Analysis Date:	12/13/2018	SeqNo:	945011				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22941	SampType:	MBLK	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299
Client ID:	MBLKW	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945011

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									

Work Order: 1812152
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22941	SampType:	MBLK	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	MBLKW	Batch ID:	22941			Analysis Date:	12/13/2018	SeqNo:	945011		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.5		25.00		102	45.4	152				
Surr: Toluene-d8	24.7		25.00		98.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.0	64.2	128				

Sample ID	1812179-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299		
Client ID:	BATCH	Batch ID:	22941			Analysis Date:	12/14/2018	SeqNo:	945006		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	

Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812179-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/13/2018	RunNo:	48299
Client ID:	BATCH	Batch ID:	22941			Analysis Date:	12/14/2018	SeqNo:	945006

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	

Work Order: 1812152
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812179-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/13/2018	RunNo: 48299
Client ID: BATCH	Batch ID: 22941		Analysis Date: 12/14/2018	SeqNo: 945006

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.0		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.0		25.00		96.1	64.2	128		0		

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812152**
 Date Received: **12/11/2018 3:19:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	3.6
Sample	8.4
Temp Blank	1.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/10/18 Page: 1 of 1
Project Name: 85055

Project No: 82302-9.1

Collected by: BSA

Location: BOTTLE

Report To (PM): Jeff Fink

PM Email: Jeff@Kane-Environmental.com

Laboratory Project No (Internal): 181252
Special Remarks:
Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes														Comments		
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	TR		AMMONIA-N	RSK
1 MN-35-W	12/11	1200	GW	X																Lab Filter, DC
2 MN-34-W	12/11	1420	GW	X																Lab Filter, DC
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SI = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time 12/11 1519 Received Date/Time 12/11/18 1519
 Relinquished Date/Time Received Date/Time



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812174

December 26, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/12/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/26/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812174

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812174-001	MW-27:W	12/12/2018 10:00 AM	12/12/2018 3:10 PM
1812174-002	MW-29:W	12/12/2018 12:20 PM	12/12/2018 3:10 PM
1812174-003	MW-28:W	12/12/2018 1:53 PM	12/12/2018 3:10 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 10:00:00 AM

Project: BSCSS

Lab ID: 1812174-001

Matrix: Groundwater

Client Sample ID: MW-27:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48370 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/18/2018 12:06:00 PM
Ethene	ND	0.0151		mg/L	1	12/18/2018 12:06:00 PM
Ethane	ND	0.0162		mg/L	1	12/18/2018 12:06:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Chloromethane	ND	2.00		µg/L	1	12/19/2018 9:30:25 AM
Vinyl chloride	ND	0.200		µg/L	1	12/19/2018 9:30:25 AM
Bromomethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Chloroethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Methylene chloride	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/19/2018 9:30:25 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Chloroform	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Benzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Trichloroethene (TCE)	0.712	0.500		µg/L	1	12/19/2018 9:30:25 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Dibromomethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Toluene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Tetrachloroethene (PCE)	169	10.0	D	µg/L	10	12/19/2018 1:09:46 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/19/2018 9:30:25 AM
Chlorobenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 10:00:00 AM

Project: BSCSS

Lab ID: 1812174-001

Matrix: Groundwater

Client Sample ID: MW-27:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
m,p-Xylene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
o-Xylene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Styrene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Bromoform	ND	2.00		µg/L	1	12/19/2018 9:30:25 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Bromobenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/19/2018 9:30:25 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/19/2018 9:30:25 AM
Naphthalene	ND	1.00		µg/L	1	12/19/2018 9:30:25 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/19/2018 9:30:25 AM
Surr: Dibromofluoromethane	91.6	45.4 - 152		%Rec	1	12/19/2018 9:30:25 AM
Surr: Toluene-d8	87.8	40.1 - 139		%Rec	1	12/19/2018 9:30:25 AM
Surr: 1-Bromo-4-fluorobenzene	87.6	64.2 - 128		%Rec	1	12/19/2018 9:30:25 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 23006

Analyst: TN

Chloride	2.67	0.200	D	mg/L	2	12/19/2018 9:37:00 AM
Sulfate	34.9	1.50	D	mg/L	5	12/19/2018 11:56:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 22965

Analyst: WC

Iron	ND	100		µg/L	1	12/17/2018 12:13:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 10:00:00 AM

Project: BSCSS

Lab ID: 1812174-001

Matrix: Groundwater

Client Sample ID: MW-27:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48532		Analyst: GM
Total Organic Carbon	0.793	0.500		mg/L	1	12/21/2018 7:40:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22949		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/14/2018 12:11:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 12:20:00 PM

Project: BSCSS

Lab ID: 1812174-002

Matrix: Groundwater

Client Sample ID: MW-29:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48370 Analyst: AD

Methane	0.0400	0.00863		mg/L	1	12/18/2018 12:26:00 PM
Ethene	ND	0.0151		mg/L	1	12/18/2018 12:26:00 PM
Ethane	ND	0.0162		mg/L	1	12/18/2018 12:26:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Chloromethane	ND	2.00		µg/L	1	12/18/2018 8:59:35 PM
Vinyl chloride	ND	0.200		µg/L	1	12/18/2018 8:59:35 PM
Bromomethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Chloroethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Methylene chloride	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/18/2018 8:59:35 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Chloroform	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Benzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/18/2018 8:59:35 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Dibromomethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Toluene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Tetrachloroethene (PCE)	1.06	1.00		µg/L	1	12/18/2018 8:59:35 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/18/2018 8:59:35 PM
Chlorobenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 12:20:00 PM

Project: BSCSS

Lab ID: 1812174-002

Matrix: Groundwater

Client Sample ID: MW-29:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
m,p-Xylene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
o-Xylene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Styrene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Bromoform	ND	2.00	Q	µg/L	1	12/18/2018 8:59:35 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Bromobenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	12/18/2018 8:59:35 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/18/2018 8:59:35 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	12/18/2018 8:59:35 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/18/2018 8:59:35 PM
Naphthalene	ND	1.00		µg/L	1	12/18/2018 8:59:35 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/18/2018 8:59:35 PM
Surr: Dibromofluoromethane	96.3	45.4 - 152		%Rec	1	12/18/2018 8:59:35 PM
Surr: Toluene-d8	93.1	40.1 - 139		%Rec	1	12/18/2018 8:59:35 PM
Surr: 1-Bromo-4-fluorobenzene	94.1	64.2 - 128		%Rec	1	12/18/2018 8:59:35 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23006

Analyst: TN

Chloride	5.32	0.200	D	mg/L	2	12/19/2018 10:00:00 AM
Sulfate	6.72	0.600	D	mg/L	2	12/19/2018 10:00:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 12:20:00 PM

Project: BSCSS

Lab ID: 1812174-002

Matrix: Groundwater

Client Sample ID: MW-29:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22965		Analyst: WC
Iron	ND	100		µg/L	1	12/17/2018 12:17:01 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48532		Analyst: GM
Total Organic Carbon	3.02	0.500		mg/L	1	12/21/2018 8:05:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22949		Analyst: KT
Nitrogen, Ammonia	0.243	0.100		mg/L	1	12/14/2018 12:17:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 1:53:00 PM

Project: BSCSS

Lab ID: 1812174-003

Matrix: Groundwater

Client Sample ID: MW-28:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48370 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/18/2018 12:30:00 PM
Ethene	ND	0.0151		mg/L	1	12/18/2018 12:30:00 PM
Ethane	ND	0.0162		mg/L	1	12/18/2018 12:30:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Chloromethane	ND	2.00		µg/L	1	12/18/2018 10:02:14 PM
Vinyl chloride	ND	0.200		µg/L	1	12/18/2018 10:02:14 PM
Bromomethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Chloroethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Methylene chloride	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/18/2018 10:02:14 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Chloroform	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Benzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/18/2018 10:02:14 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Dibromomethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Toluene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/18/2018 10:02:14 PM
Chlorobenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 1:53:00 PM

Project: BSCSS

Lab ID: 1812174-003

Matrix: Groundwater

Client Sample ID: MW-28:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
m,p-Xylene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
o-Xylene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Styrene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Bromoform	ND	2.00	Q	µg/L	1	12/18/2018 10:02:14 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Bromobenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	12/18/2018 10:02:14 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/18/2018 10:02:14 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	12/18/2018 10:02:14 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/18/2018 10:02:14 PM
Naphthalene	ND	1.00		µg/L	1	12/18/2018 10:02:14 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/18/2018 10:02:14 PM
Surr: Dibromofluoromethane	96.8	45.4 - 152		%Rec	1	12/18/2018 10:02:14 PM
Surr: Toluene-d8	92.9	40.1 - 139		%Rec	1	12/18/2018 10:02:14 PM
Surr: 1-Bromo-4-fluorobenzene	93.8	64.2 - 128		%Rec	1	12/18/2018 10:02:14 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23006

Analyst: TN

Chloride	8.06	0.500	D	mg/L	5	12/19/2018 10:00:00 PM
Sulfate	11.8	0.600	D	mg/L	2	12/19/2018 10:23:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/12/2018 1:53:00 PM

Project: BSCSS

Lab ID: 1812174-003

Matrix: Groundwater

Client Sample ID: MW-28:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 22965		Analyst: WC
Iron	ND	100		µg/L	1	12/17/2018 12:21:02 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48532		Analyst: GM
Total Organic Carbon	0.690	0.500		mg/L	1	12/21/2018 11:46:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 22949		Analyst: KT
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/14/2018 12:22:00 PM

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-22949	SampType: MBLK	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: MBLKW	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945238							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-22949	SampType: LCS	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: LCSW	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945239							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.226 0.100 0.2500 0 90.4 80 120

Sample ID 1812131-001CDUP	SampType: DUP	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: BATCH	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945229							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812131-001CMS	SampType: MS	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: BATCH	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945230							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.129 0.100 0.2500 0 51.6 70 130 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID 1812131-001CMSD	SampType: MSD	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: BATCH	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945231							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.124 0.100 0.2500 0 49.6 70 130 0.1290 3.95 30 S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812174-003FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: MW-28:W	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945232							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812174-003FMS	SampType: MS	Units: mg/L	Prep Date: 12/14/2018	RunNo: 48309							
Client ID: MW-28:W	Batch ID: 22949		Analysis Date: 12/14/2018	SeqNo: 945233							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.258	0.100	0.2500	0	103	70	130				

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID MB-23006	SampType: MBLK	Units: mg/L			Prep Date: 12/19/2018	RunNo: 48438					
Client ID: MBLKW	Batch ID: 23006				Analysis Date: 12/19/2018	SeqNo: 948499					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID LCS-23006	SampType: LCS	Units: mg/L			Prep Date: 12/19/2018	RunNo: 48438					
Client ID: LCSW	Batch ID: 23006				Analysis Date: 12/19/2018	SeqNo: 948500					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.727	0.100	0.7500	0	96.9	90	110				
Sulfate	3.42	0.300	3.750	0	91.1	90	110				

Sample ID 1812174-003DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/19/2018	RunNo: 48438					
Client ID: MW-28:W	Batch ID: 23006				Analysis Date: 12/19/2018	SeqNo: 948463					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	6.75	0.200						6.808	0.856	20	DE
Sulfate	11.9	0.600						11.80	0.406	20	D

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID 1812174-003DMS	SampType: MS	Units: mg/L			Prep Date: 12/19/2018	RunNo: 48438					
Client ID: MW-28:W	Batch ID: 23006				Analysis Date: 12/19/2018	SeqNo: 948464					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.41	0.200	1.500	6.808	107	80	120				DE
Sulfate	19.4	0.600	7.500	11.80	102	80	120				D

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812174-003DMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/19/2018	RunNo:	48438		
Client ID:	MW-28:W	Batch ID:	23006			Analysis Date:	12/19/2018	SeqNo:	948465		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	8.39	0.200	1.500	6.808	105	80	120	8.410	0.286	20	DE
Sulfate	19.5	0.600	7.500	11.80	103	80	120	19.44	0.329	20	D

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812240-001BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/19/2018	RunNo:	48438		
Client ID:	BATCH	Batch ID:	23006			Analysis Date:	12/19/2018	SeqNo:	948471		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	13.7	0.500						13.87	1.34	20	D
Sulfate	33.6	1.50						34.19	1.68	20	D

Sample ID	1812240-001BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/19/2018	RunNo:	48438		
Client ID:	BATCH	Batch ID:	23006			Analysis Date:	12/19/2018	SeqNo:	948472		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	17.4	0.500	3.750	13.87	93.3	80	120				DE
Sulfate	50.4	1.50	18.75	34.19	86.2	80	120				D

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID	LCS-48532	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48532		
Client ID:	LCSW	Batch ID:	R48532			Analysis Date:	12/21/2018	SeqNo:	951042		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.09	0.500	5.000	0	102	80	120				

Sample ID	MB-48532	SampType:	MBLK	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48532		
Client ID:	MBLKW	Batch ID:	R48532			Analysis Date:	12/21/2018	SeqNo:	951043		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500									

Sample ID	1812146-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48532		
Client ID:	BATCH	Batch ID:	R48532			Analysis Date:	12/21/2018	SeqNo:	951045		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	2.26	0.500						2.924	25.4	20	R

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	1812146-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48532		
Client ID:	BATCH	Batch ID:	R48532			Analysis Date:	12/21/2018	SeqNo:	951046		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	7.11	0.500	5.000	2.924	83.7	70	130				

Sample ID	1812146-002DMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48532		
Client ID:	BATCH	Batch ID:	R48532			Analysis Date:	12/21/2018	SeqNo:	951047		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	6.97	0.500	5.000	2.924	80.9	70	130	7.107	1.93	30	

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812146-014DDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48532							
Client ID: BATCH	Batch ID: R48532		Analysis Date: 12/21/2018	SeqNo: 951060							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	1.79	0.500						1.778	0.617	20	

Sample ID 1812146-014DMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48532							
Client ID: BATCH	Batch ID: R48532		Analysis Date: 12/21/2018	SeqNo: 951061							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	6.65	0.500	5.000	1.778	97.5	70	130				

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22965	SampType: MBLK	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: MBLKW	Batch ID: 22965		Analysis Date: 12/17/2018	SeqNo: 946104							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-22965	SampType: LCS	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: LCSW	Batch ID: 22965		Analysis Date: 12/17/2018	SeqNo: 946105							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 950 100 1,000 0 95.0 50 150

Sample ID 1812131-001FDUP	SampType: DUP	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: BATCH	Batch ID: 22965		Analysis Date: 12/17/2018	SeqNo: 946107							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 169 100 176.5 4.31 30

Sample ID 1812131-001FMS	SampType: MS	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: BATCH	Batch ID: 22965		Analysis Date: 12/17/2018	SeqNo: 946108							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,830 100 5,000 176.5 93.1 50 150

Sample ID 1812131-001FMSD	SampType: MSD	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: BATCH	Batch ID: 22965		Analysis Date: 12/17/2018	SeqNo: 946111							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,790 100 5,000 176.5 92.3 50 150 4,831 0.875 30



Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22943FB	SampType: MBLK	Units: µg/L	Prep Date: 12/17/2018	RunNo: 48347							
Client ID: MBLKW	Batch ID: 22965	Analysis Date: 12/17/2018	SeqNo: 946135								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48370	SampType:	MBLK	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48370		
Client ID:	MBLKW	Batch ID:	R48370			Analysis Date:	12/18/2018	SeqNo:	946749		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48370	SampType:	LCS	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48370		
Client ID:	LCSW	Batch ID:	R48370			Analysis Date:	12/18/2018	SeqNo:	946748		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	912	0.00863	1,000	0	91.2	70	130				
Ethene	934	0.0151	1,000	0	93.4	70	130				
Ethane	941	0.0162	1,000	0	94.1	70	130				

Sample ID	1812174-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48370		
Client ID:	MW-27:W	Batch ID:	R48370			Analysis Date:	12/18/2018	SeqNo:	946741		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863						0		30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22996	SampType:	LCS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	LCSW	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947837				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	27.8	1.00	20.00	0	139	18.7	171				
Chloromethane	20.7	2.00	20.00	0	104	38.5	171				
Vinyl chloride	20.9	0.200	20.00	0	105	48	145				
Bromomethane	18.4	1.00	20.00	0	91.9	32.5	184				
Trichlorofluoromethane (CFC-11)	20.0	1.00	20.00	0	99.8	43.5	149				
Chloroethane	19.4	1.00	20.00	0	97.1	43.8	168				
1,1-Dichloroethene	19.6	1.00	20.00	0	97.8	57.5	150				
Methylene chloride	18.8	1.00	20.00	0	94.1	67.1	131				
trans-1,2-Dichloroethene	19.1	1.00	20.00	0	95.6	71.7	129				
Methyl tert-butyl ether (MTBE)	19.3	1.00	20.00	0	96.5	58	138				
1,1-Dichloroethane	18.7	1.00	20.00	0	93.7	67.9	134				
2,2-Dichloropropane	23.4	2.00	20.00	0	117	26.5	185				
cis-1,2-Dichloroethene	18.9	1.00	20.00	0	94.7	70.2	139				
Chloroform	18.5	1.00	20.00	0	92.5	66.3	131				
1,1,1-Trichloroethane (TCA)	18.7	1.00	20.00	0	93.4	63	140				
1,1-Dichloropropene	19.0	1.00	20.00	0	94.9	69.9	124				
Carbon tetrachloride	18.8	1.00	20.00	0	94.0	66.2	134				
1,2-Dichloroethane (EDC)	18.3	1.00	20.00	0	91.3	67	126				
Benzene	18.4	1.00	20.00	0	92.0	69.3	132				
Trichloroethene (TCE)	18.3	0.500	20.00	0	91.3	65.2	136				
1,2-Dichloropropane	17.9	1.00	20.00	0	89.3	70.5	130				
Bromodichloromethane	17.7	1.00	20.00	0	88.6	67.2	137				
Dibromomethane	17.8	1.00	20.00	0	89.1	69.3	143				
cis-1,3-Dichloropropene	19.1	1.00	20.00	0	95.5	62.6	137				
Toluene	18.9	1.00	20.00	0	94.5	61.3	145				
trans-1,3-Dichloropropylene	19.1	1.00	20.00	0	95.3	56.5	163				
1,1,2-Trichloroethane	18.0	1.00	20.00	0	90.1	71.7	131				
1,3-Dichloropropane	18.0	1.00	20.00	0	90.2	73.5	127				
Tetrachloroethene (PCE)	19.5	1.00	20.00	0	97.7	47.5	147				
Dibromochloromethane	18.0	1.00	20.00	0	90.0	67.2	134				
1,2-Dibromoethane (EDB)	18.0	0.250	20.00	0	90.1	73.6	125				

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22996	SampType:	LCS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	LCSW	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947837				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.1	1.00	20.00	0	100	73.9	126				
1,1,1,2-Tetrachloroethane	19.6	1.00	20.00	0	98.0	76.8	124				
Ethylbenzene	20.1	1.00	20.00	0	101	72	130				
m,p-Xylene	40.8	1.00	40.00	0	102	70.3	134				
o-Xylene	20.0	1.00	20.00	0	100	72.1	131				
Styrene	19.7	1.00	20.00	0	98.7	64.3	140				
Isopropylbenzene	19.8	1.00	20.00	0	98.9	73.9	128				
Bromoform	17.3	2.00	20.00	0	86.5	55.3	141				
1,1,2,2-Tetrachloroethane	17.5	1.00	20.00	0	87.6	62.9	132				
n-Propylbenzene	19.7	1.00	20.00	0	98.4	74.5	127				
Bromobenzene	19.1	1.00	20.00	0	95.5	71	131				
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	99.8	73.1	128				
2-Chlorotoluene	18.5	1.00	20.00	0	92.6	70.8	130				
4-Chlorotoluene	19.5	1.00	20.00	0	97.6	70.1	131				
tert-Butylbenzene	20.1	1.00	20.00	0	100	68.2	131				
1,2,3-Trichloropropane	17.5	1.00	20.00	0	87.7	67.7	131				
1,2,4-Trichlorobenzene	21.7	2.00	20.00	0	108	41	139				
sec-Butylbenzene	20.0	1.00	20.00	0	99.8	72	129				
4-Isopropyltoluene	20.0	1.00	20.00	0	100	69.2	130				
1,3-Dichlorobenzene	20.4	1.00	20.00	0	102	69.5	128				
1,4-Dichlorobenzene	20.0	1.00	20.00	0	100	66.8	119				
n-Butylbenzene	20.1	1.00	20.00	0	101	73.8	127				
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	69.7	119				
1,2-Dibromo-3-chloropropane	16.7	1.00	20.00	0	83.4	63.1	136				
1,2,4-Trimethylbenzene	19.8	1.00	20.00	0	98.9	73.4	127				
Hexachloro-1,3-butadiene	22.0	4.00	20.00	0	110	58.6	138				
Naphthalene	20.4	1.00	20.00	0	102	41.8	165				
1,2,3-Trichlorobenzene	20.8	4.00	20.00	0	104	35.8	155				
Surr: Dibromofluoromethane	23.7		25.00		94.6	45.4	152				
Surr: Toluene-d8	23.8		25.00		95.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.5	64.2	128				

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-22996	SampType: LCS	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406							
Client ID: LCSW	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947837							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-22996	SampType: MBLK	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406							
Client ID: MBLKW	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947838							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22996	SampType:	MBLK	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	MBLKW	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947838

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									Q
1,1,1,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									Q
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									Q
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22996	SampType:	MBLK	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	MBLKW	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947838		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.0		25.00		96.1	45.4	152				
Surr: Toluene-d8	23.6		25.00		94.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.3	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812169-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947802		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812169-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406	Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947802
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual						
Benzene	2.22	1.00						2.433	9.17	30							
Trichloroethene (TCE)	ND	0.500						0		30							
1,2-Dichloropropane	ND	1.00						0		30							
Bromodichloromethane	ND	1.00						0		30							
Dibromomethane	ND	1.00						0		30							
cis-1,3-Dichloropropene	ND	1.00						0		30							
Toluene	5.70	1.00						5.920	3.85	30							
trans-1,3-Dichloropropylene	ND	1.00						0		30							
1,1,2-Trichloroethane	ND	1.00						0		30							
1,3-Dichloropropane	ND	1.00						0		30							
Tetrachloroethene (PCE)	ND	1.00						0		30							
Dibromochloromethane	ND	1.00						0		30							
1,2-Dibromoethane (EDB)	ND	0.250						0		30							
Chlorobenzene	ND	1.00						0		30							
1,1,1,2-Tetrachloroethane	ND	1.00						0		30							
Ethylbenzene	1.06	1.00						1.152	8.08	30							
m,p-Xylene	7.84	1.00						8.340	6.17	30							
o-Xylene	1.65	1.00						1.678	1.85	30							
Styrene	ND	1.00						0		30							
Isopropylbenzene	ND	1.00						0		30							
Bromoform	ND	2.00						0		30	Q						
1,1,2,2-Tetrachloroethane	ND	1.00						0		30							
n-Propylbenzene	ND	1.00						0		30							
Bromobenzene	ND	1.00						0		30							
1,3,5-Trimethylbenzene	ND	1.00						0		30							
2-Chlorotoluene	ND	1.00						0		30							
4-Chlorotoluene	ND	1.00						0		30							
tert-Butylbenzene	ND	1.00						0		30							
1,2,3-Trichloropropane	ND	1.00						0		30	Q						
1,2,4-Trichlorobenzene	ND	2.00						0		30							
sec-Butylbenzene	ND	1.00						0		30							

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812169-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406
Client ID: BATCH	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947802

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	1.34	1.00						1.375	2.43	30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.3		25.00		97.2	45.4	152		0		
Surr: Toluene-d8	23.4		25.00		93.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.6	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812174-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406
Client ID: MW-29:W	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947811

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	MW-29:W	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947811				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	1.06	1.00						1.058	0.688	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	Q
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	MW-29:W	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947811				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	Q
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.0		25.00		96.0	45.4	152		0		
Surr: Toluene-d8	23.4		25.00		93.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.6	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812174-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	MW-27:W	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947808				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	27.3	1.00	20.00	0	137	33.3	122				S
Chloromethane	19.7	2.00	20.00	0	98.4	39.7	143				
Vinyl chloride	20.3	0.200	20.00	0	102	41	165				
Bromomethane	18.7	1.00	20.00	0	93.3	31.5	135				



Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	MW-27:W	Batch ID:	22996			Analysis Date:	12/19/2018	SeqNo:	947808

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	22.3	1.00	20.00	0	111	54.7	138				
Chloroethane	18.8	1.00	20.00	0	94.2	49.9	143				
1,1-Dichloroethene	19.9	1.00	20.00	0	99.3	51.6	164				
Methylene chloride	18.0	1.00	20.00	0	90.1	61.6	135				
trans-1,2-Dichloroethene	18.8	1.00	20.00	0	94.1	63.5	138				
Methyl tert-butyl ether (MTBE)	17.9	1.00	20.00	0	89.5	60.9	132				
1,1-Dichloroethane	18.3	1.00	20.00	0	91.4	55.7	151				
2,2-Dichloropropane	15.1	2.00	20.00	0	75.3	37.7	150				
cis-1,2-Dichloroethene	18.2	1.00	20.00	0	90.9	60	154				
Chloroform	19.1	1.00	20.00	0	95.5	48.1	140				
1,1,1-Trichloroethane (TCA)	20.7	1.00	20.00	0	103	64.2	146				
1,1-Dichloropropene	18.7	1.00	20.00	0	93.7	73.8	136				
Carbon tetrachloride	21.7	1.00	20.00	0	109	62.7	146				
1,2-Dichloroethane (EDC)	19.3	1.00	20.00	0	96.3	63.4	137				
Benzene	17.5	1.00	20.00	0	87.4	65.4	138				
Trichloroethene (TCE)	18.3	0.500	20.00	0	91.6	60.4	134				
1,2-Dichloropropane	16.6	1.00	20.00	0	83.1	62.6	138				
Bromodichloromethane	18.5	1.00	20.00	0	92.6	59.4	139				
Dibromomethane	18.0	1.00	20.00	0	89.8	58.7	148				
cis-1,3-Dichloropropene	16.2	1.00	20.00	0	80.9	63.8	132				
Toluene	18.1	1.00	20.00	0	90.7	52	147				
trans-1,3-Dichloropropylene	17.5	1.00	20.00	0	87.7	57.7	125				
1,1,2-Trichloroethane	17.6	1.00	20.00	0	87.9	57.5	153				
1,3-Dichloropropane	17.0	1.00	20.00	0	85.0	54.1	157				
Tetrachloroethene (PCE)	197	1.00	20.00	169.1	140	50.3	133				SE
Dibromochloromethane	19.3	1.00	20.00	0	96.6	61.6	139				
1,2-Dibromoethane (EDB)	17.2	0.250	20.00	0	85.8	63.2	134				
Chlorobenzene	20.4	1.00	20.00	0	102	65.8	134				
1,1,1,2-Tetrachloroethane	21.0	1.00	20.00	0	105	65.4	135				
Ethylbenzene	20.0	1.00	20.00	0	100	64.5	136				
m,p-Xylene	41.5	1.00	40.00	0	104	63.3	135				

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	MW-27:W	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947808				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	19.8	1.00	20.00	0	99.1	64.8	150				
Styrene	19.6	1.00	20.00	0	98.1	52.9	163				
Isopropylbenzene	20.0	1.00	20.00	0	99.8	56	147				
Bromoform	19.7	2.00	20.00	0	98.4	57.7	139				
1,1,2,2-Tetrachloroethane	17.1	1.00	20.00	0	85.4	59.8	146				
n-Propylbenzene	19.9	1.00	20.00	0	99.6	57.6	142				
Bromobenzene	20.0	1.00	20.00	0	100	69.3	157				
1,3,5-Trimethylbenzene	20.4	1.00	20.00	0	102	59.9	136				
2-Chlorotoluene	19.1	1.00	20.00	0	95.3	61.7	134				
4-Chlorotoluene	19.6	1.00	20.00	0	97.9	58.4	134				
tert-Butylbenzene	21.0	1.00	20.00	0	105	66.8	141				
1,2,3-Trichloropropane	16.8	1.00	20.00	0	83.9	62.4	129				
1,2,4-Trichlorobenzene	20.9	2.00	20.00	0	105	50.9	133				
sec-Butylbenzene	20.7	1.00	20.00	0	104	56	146				
4-Isopropyltoluene	21.1	1.00	20.00	0	105	56.4	136				
1,3-Dichlorobenzene	20.3	1.00	20.00	0	102	58.2	128				
1,4-Dichlorobenzene	20.0	1.00	20.00	0	100	60.1	123				
n-Butylbenzene	19.1	1.00	20.00	0	95.7	54.6	135				
1,2-Dichlorobenzene	20.3	1.00	20.00	0	102	65.4	133				
1,2-Dibromo-3-chloropropane	17.3	1.00	20.00	0	86.3	51.8	142				
1,2,4-Trimethylbenzene	19.9	1.00	20.00	0	99.7	63.7	132				
Hexachloro-1,3-butadiene	24.0	4.00	20.00	0	120	58.1	130				
Naphthalene	19.1	1.00	20.00	0	95.6	50.7	154				
1,2,3-Trichlorobenzene	20.6	4.00	20.00	0	103	57	131				
Surr: Dibromofluoromethane	24.0		25.00		96.1	45.4	152				
Surr: Toluene-d8	22.4		25.00		89.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.5	64.2	128				

NOTES:

- S - Outlying spike recovery(ies) observed.
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	MW-27:W	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947809		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	28.9	1.00	20.00	0	145	33.3	122	27.31	5.74	30	S
Chloromethane	21.8	2.00	20.00	0	109	39.7	143	19.67	10.1	30	
Vinyl chloride	22.5	0.200	20.00	0	112	41	165	20.34	9.95	30	
Bromomethane	21.2	1.00	20.00	0	106	31.5	135	18.66	12.6	30	
Trichlorofluoromethane (CFC-11)	23.6	1.00	20.00	0	118	54.7	138	22.29	5.58	30	
Chloroethane	19.8	1.00	20.00	0	99.0	49.9	143	18.83	5.04	30	
1,1-Dichloroethene	21.4	1.00	20.00	0	107	51.6	164	19.85	7.32	30	
Methylene chloride	19.0	1.00	20.00	0	94.8	61.6	135	18.02	5.10	30	
trans-1,2-Dichloroethene	20.2	1.00	20.00	0	101	63.5	138	18.82	6.99	30	
Methyl tert-butyl ether (MTBE)	19.3	1.00	20.00	0	96.6	60.9	132	17.89	7.69	30	
1,1-Dichloroethane	19.0	1.00	20.00	0	95.2	55.7	151	18.29	4.08	30	
2,2-Dichloropropane	15.6	2.00	20.00	0	78.0	37.7	150	15.07	3.52	30	
cis-1,2-Dichloroethene	19.3	1.00	20.00	0	96.4	60	154	18.18	5.83	30	
Chloroform	20.2	1.00	20.00	0	101	48.1	140	19.11	5.44	30	
1,1,1-Trichloroethane (TCA)	22.0	1.00	20.00	0	110	64.2	146	20.70	6.18	30	
1,1-Dichloropropene	20.0	1.00	20.00	0	100	73.8	136	18.74	6.72	30	
Carbon tetrachloride	23.3	1.00	20.00	0	116	62.7	146	21.73	6.84	30	
1,2-Dichloroethane (EDC)	20.5	1.00	20.00	0	103	63.4	137	19.25	6.43	30	
Benzene	18.6	1.00	20.00	0	93.0	65.4	138	17.47	6.20	30	
Trichloroethene (TCE)	19.7	0.500	20.00	0	98.5	60.4	134	18.32	7.25	30	
1,2-Dichloropropane	17.7	1.00	20.00	0	88.7	62.6	138	16.62	6.48	30	
Bromodichloromethane	19.6	1.00	20.00	0	98.1	59.4	139	18.52	5.72	30	
Dibromomethane	19.0	1.00	20.00	0	95.0	58.7	148	17.96	5.70	30	
cis-1,3-Dichloropropene	16.9	1.00	20.00	0	84.5	63.8	132	16.18	4.31	30	
Toluene	19.3	1.00	20.00	0	96.5	52	147	18.15	6.16	30	
trans-1,3-Dichloropropylene	18.8	1.00	20.00	0	94.1	57.7	125	17.54	7.00	30	
1,1,2-Trichloroethane	18.4	1.00	20.00	0	92.0	57.5	153	17.58	4.55	30	
1,3-Dichloropropane	17.9	1.00	20.00	0	89.7	54.1	157	17.01	5.29	30	
Tetrachloroethene (PCE)	202	1.00	20.00	169.1	163	50.3	133	197.1	2.26	30	SE
Dibromochloromethane	20.5	1.00	20.00	0	102	61.6	139	19.32	5.69	30	
1,2-Dibromoethane (EDB)	18.6	0.250	20.00	0	92.8	63.2	134	17.16	7.83	30	

Work Order: 1812174
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	MW-27:W	Batch ID:	22996			Analysis Date:	12/19/2018	SeqNo:	947809

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.5	1.00	20.00	0	107	65.8	134	20.39	5.11	30	
1,1,1,2-Tetrachloroethane	22.5	1.00	20.00	0	112	65.4	135	21.03	6.66	30	
Ethylbenzene	21.3	1.00	20.00	0	107	64.5	136	20.03	6.32	30	
m,p-Xylene	44.1	1.00	40.00	0	110	63.3	135	41.50	6.13	30	
o-Xylene	21.5	1.00	20.00	0	107	64.8	150	19.83	7.95	30	
Styrene	20.5	1.00	20.00	0	103	52.9	163	19.62	4.58	30	
Isopropylbenzene	21.6	1.00	20.00	0	108	56	147	19.96	8.06	30	
Bromoform	21.3	2.00	20.00	0	107	57.7	139	19.68	8.11	30	
1,1,2,2-Tetrachloroethane	18.8	1.00	20.00	0	94.1	59.8	146	17.07	9.72	30	
n-Propylbenzene	20.9	1.00	20.00	0	105	57.6	142	19.92	4.88	30	
Bromobenzene	21.3	1.00	20.00	0	107	69.3	157	20.05	6.15	30	
1,3,5-Trimethylbenzene	21.6	1.00	20.00	0	108	59.9	136	20.37	5.68	30	
2-Chlorotoluene	19.7	1.00	20.00	0	98.6	61.7	134	19.06	3.39	30	
4-Chlorotoluene	21.0	1.00	20.00	0	105	58.4	134	19.58	7.10	30	
tert-Butylbenzene	22.5	1.00	20.00	0	112	66.8	141	20.98	6.83	30	
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.6	62.4	129	16.77	5.45	30	
1,2,4-Trichlorobenzene	22.9	2.00	20.00	0	115	50.9	133	20.90	9.24	30	
sec-Butylbenzene	22.3	1.00	20.00	0	111	56	146	20.73	7.16	30	
4-Isopropyltoluene	22.6	1.00	20.00	0	113	56.4	136	21.09	6.76	30	
1,3-Dichlorobenzene	21.8	1.00	20.00	0	109	58.2	128	20.32	6.84	30	
1,4-Dichlorobenzene	21.5	1.00	20.00	0	107	60.1	123	20.02	7.06	30	
n-Butylbenzene	20.6	1.00	20.00	0	103	54.6	135	19.15	7.08	30	
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	65.4	133	20.30	6.20	30	
1,2-Dibromo-3-chloropropane	17.6	1.00	20.00	0	87.8	51.8	142	17.26	1.73	30	
1,2,4-Trimethylbenzene	21.4	1.00	20.00	0	107	63.7	132	19.94	6.91	30	
Hexachloro-1,3-butadiene	25.3	4.00	20.00	0	127	58.1	130	24.00	5.40	30	
Naphthalene	21.4	1.00	20.00	0	107	50.7	154	19.11	11.3	30	
1,2,3-Trichlorobenzene	22.8	4.00	20.00	0	114	57	131	20.61	10.2	30	
Surr: Dibromofluoromethane	24.1		25.00		96.3	45.4	152		0		
Surr: Toluene-d8	22.1		25.00		88.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.2	64.2	128		0		

Work Order: 1812174
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	MW-27:W	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947809				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

- S - Outlying spike recovery(ies) observed.
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812174**
 Date Received: **12/12/2018 3:10:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	5.6
Sample	3.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Chain of Custody Record & Laboratory Services Agreement

Client: KEANE ENVIRONMENTAL
Address: 4015 13th Ave N
City, State, zip: SCOTTIE, WA 98019
Telephone: (206) 991 0470
Fax:

Date: 12/21/18 **Page:** 1 **of:** 1
Project Name: BSCSS
Project No: 82302-9.1
Collected by: BS
Location: Botwell
Report To (PM): JEFF JENSEN
PM Email: JEFF@KEANE-ENVIRONMENTAL.COM

Laboratory Project No (Internal): 181217A
Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	Diesel/Heavy Oil Range Organics (Dx)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals ** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	TDC	ammonia-N	RSK	Comments
1 MN-23:N	12/10	1000	GW	X									X							lab filter, OC
2 MN-29:N	12/12	1220	GW	X									X							lab filter
3 MN-28:N	12/12	1353	GW	X							X	X	X							lab filter
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SI = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
X	1510 12/12/18	X	1510 12/12/18
Relinquished	Date/Time	Received	Date/Time
X		X	

Turn-around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify)

www.fremontanalytical.com



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812201

December 27, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 12/13/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/27/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812201

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812201-001	HZ-MW-14S:W	12/13/2018 8:35 AM	12/13/2018 11:40 AM
1812201-002	HZ-MW-14D:W	12/13/2018 10:20 AM	12/13/2018 11:40 AM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812201-001
Client Sample ID: HZ-MW-14S:W

Collection Date: 12/13/2018 8:35:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48370 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/18/2018 12:32:00 PM
Ethene	ND	0.0151		mg/L	1	12/18/2018 12:32:00 PM
Ethane	ND	0.0162		mg/L	1	12/18/2018 12:32:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Chloromethane	ND	2.00		µg/L	1	12/19/2018 11:04:36 AM
Vinyl chloride	ND	0.200		µg/L	1	12/19/2018 11:04:36 AM
Bromomethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Chloroethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Methylene chloride	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/19/2018 11:04:36 AM
cis-1,2-Dichloroethene	6.12	1.00		µg/L	1	12/19/2018 11:04:36 AM
Chloroform	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Benzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Trichloroethene (TCE)	7.33	0.500		µg/L	1	12/19/2018 11:04:36 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Dibromomethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Toluene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Tetrachloroethene (PCE)	240	10.0	D	µg/L	10	12/19/2018 12:38:41 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/19/2018 11:04:36 AM
Chlorobenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812201-001
Client Sample ID: HZ-MW-14S:W

Collection Date: 12/13/2018 8:35:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996 Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
m,p-Xylene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
o-Xylene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Styrene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Bromoform	ND	2.00		µg/L	1	12/19/2018 11:04:36 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Bromobenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/19/2018 11:04:36 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/19/2018 11:04:36 AM
Naphthalene	ND	1.00		µg/L	1	12/19/2018 11:04:36 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/19/2018 11:04:36 AM
Surr: Dibromofluoromethane	101	45.4 - 152		%Rec	1	12/19/2018 11:04:36 AM
Surr: Toluene-d8	87.3	40.1 - 139		%Rec	1	12/19/2018 11:04:36 AM
Surr: 1-Bromo-4-fluorobenzene	98.4	64.2 - 128		%Rec	1	12/19/2018 11:04:36 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 23048 Analyst: TN

Chloride	7.29	0.500	D	mg/L	5	12/22/2018 2:07:00 AM
Sulfate	22.4	1.50	D	mg/L	5	12/22/2018 2:07:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23003 Analyst: WC

Iron	ND	100		µg/L	1	12/19/2018 10:58:35 AM
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Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812201-001
Client Sample ID: HZ-MW-14S:W

Collection Date: 12/13/2018 8:35:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	1.89	0.500		mg/L	1	12/22/2018 2:40:00 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23045		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/21/2018 1:18:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/13/2018 10:20:00 AM

Project: BSCSS

Lab ID: 1812201-002

Matrix: Groundwater

Client Sample ID: HZ-MW-14D:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48370 Analyst: AD

Methane	0.0524	0.00863		mg/L	1	12/18/2018 12:41:00 PM
Ethene	ND	0.0151		mg/L	1	12/18/2018 12:41:00 PM
Ethane	ND	0.0162		mg/L	1	12/18/2018 12:41:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Chloromethane	ND	2.00		µg/L	1	12/19/2018 8:27:32 AM
Vinyl chloride	ND	0.200		µg/L	1	12/19/2018 8:27:32 AM
Bromomethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Chloroethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Methylene chloride	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/19/2018 8:27:32 AM
cis-1,2-Dichloroethene	13.5	1.00		µg/L	1	12/19/2018 8:27:32 AM
Chloroform	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Benzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Trichloroethene (TCE)	3.30	0.500		µg/L	1	12/19/2018 8:27:32 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Dibromomethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Toluene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Tetrachloroethene (PCE)	44.2	10.0	D	µg/L	10	12/19/2018 6:22:11 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/19/2018 8:27:32 AM
Chlorobenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM



Client: Kane Environmental, Inc.

Collection Date: 12/13/2018 10:20:00 AM

Project: BSCSS

Lab ID: 1812201-002

Matrix: Groundwater

Client Sample ID: HZ-MW-14D:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22996

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
m,p-Xylene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
o-Xylene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Styrene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Bromoform	ND	2.00		µg/L	1	12/19/2018 8:27:32 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Bromobenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/19/2018 8:27:32 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/19/2018 8:27:32 AM
Naphthalene	ND	1.00		µg/L	1	12/19/2018 8:27:32 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/19/2018 8:27:32 AM
Surr: Dibromofluoromethane	92.1	45.4 - 152		%Rec	1	12/19/2018 8:27:32 AM
Surr: Toluene-d8	85.8	40.1 - 139		%Rec	1	12/19/2018 8:27:32 AM
Surr: 1-Bromo-4-fluorobenzene	89.4	64.2 - 128		%Rec	1	12/19/2018 8:27:32 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 23071

Analyst: TN

Chloride	90.8	10.0	D	mg/L	100	12/27/2018 3:58:00 AM
Sulfate	15.5	3.00	D	mg/L	10	12/22/2018 2:30:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23003

Analyst: WC

Iron	ND	100		µg/L	1	12/19/2018 11:22:44 AM
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Client: Kane Environmental, Inc.

Collection Date: 12/13/2018 10:20:00 AM

Project: BSCSS

Lab ID: 1812201-002

Matrix: Groundwater

Client Sample ID: HZ-MW-14D:W

Analyses

Result	RL	Qual	Units	DF	Date Analyzed
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Total Organic Carbon by SM 5310C

Batch ID: R48546 Analyst: GM

Total Organic Carbon	0.968	0.500	mg/L	1	12/22/2018 3:59:00 AM
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Ammonia by SM 4500 NH3G

Batch ID: 23045 Analyst: GM

Nitrogen, Ammonia	ND	0.100	mg/L	1	12/21/2018 1:39:00 PM
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Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-23045	SampType: MBLK	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: MBLKW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949985							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-23045	SampType: LCS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: LCSW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949986							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.540 0.100 0.5000 0 108 80 120

Sample ID 1812201-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: HZ-MW-14S:W	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949992							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812201-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: HZ-MW-14S:W	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949993							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.501 0.100 0.5000 0 100 70 130

Sample ID 1812201-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: HZ-MW-14S:W	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949994							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.480 0.100 0.5000 0 96.0 70 130 0.5010 4.28 30



Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812301-001FDUP	SampType: DUP	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48498					
Client ID: BATCH	Batch ID: 23045				Analysis Date: 12/21/2018	SeqNo: 950010					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.394	0.100						0.3560	10.1	30	

Sample ID 1812301-001FMS	SampType: MS	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48498					
Client ID: BATCH	Batch ID: 23045				Analysis Date: 12/21/2018	SeqNo: 950011					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.938	0.100	0.5000	0.3560	116	70	130				

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-23048	SampType:	MBLK	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	MBLKW	Batch ID:	23048	Analysis Date:	12/21/2018	SeqNo:	950722				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	1812180-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/21/2018	SeqNo:	950725				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	7.28	0.100						7.269	0.206	20	E
Sulfate	8.03	0.300						8.007	0.237	20	

Sample ID	1812180-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/22/2018	SeqNo:	950726				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.12	0.100	0.7500	7.269	113	80	120				E
Sulfate	12.2	0.300	3.750	8.007	110	80	120				

Sample ID	1812180-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/22/2018	SeqNo:	950727				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.08	0.100	0.7500	7.269	109	80	120	8.117	0.407	20	E
Sulfate	11.9	0.300	3.750	8.007	105	80	120	12.15	1.79	20	

Sample ID	1812244-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/22/2018	SeqNo:	950746				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.586	0.100						0.5860	0	20	
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Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812244-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950746		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1.56	0.300						1.553	0.129	20	

Sample ID	1812244-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950747		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.31	0.100	0.7500	0.5860	96.5	80	120				
Sulfate	5.08	0.300	3.750	1.553	94.0	80	120				

Sample ID	LCS-23048	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	LCSW	Batch ID:	23048			Analysis Date:	12/24/2018	SeqNo:	950949		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.726	0.100	0.7500	0	96.8	90	110				
Sulfate	3.73	0.300	3.750	0	99.5	90	110				

Sample ID	MB-23071	SampType:	MBLK	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	MBLKW	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952310		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									

Sample ID	LCS-23071	SampType:	LCS	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	LCSW	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952311		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.717	0.100	0.7500	0	95.6	90	110				



Date: 12/27/2018

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812160-004BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	BATCH	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952315		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.27	0.100						4.237	0.682	20	E
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Sample ID	1812160-004BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	BATCH	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952316		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.96	0.100	0.7500	4.237	96.1	80	120				E
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Sample ID	1812160-004BMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	BATCH	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952317		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.68	0.100	0.7500	4.237	58.9	80	120	4.958	5.79	20	SE
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NOTES:
 S - Outlying spike recovery(ies) observed.

Sample ID	1812160-007BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	BATCH	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952322		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.87	0.100						2.871	0.0697	20	
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Sample ID	1812160-007BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/26/2018	RunNo:	48584		
Client ID:	BATCH	Batch ID:	23071			Analysis Date:	12/26/2018	SeqNo:	952323		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	3.60	0.100	0.7500	2.871	96.7	80	120				E
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Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48546	SampType: MBLK	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: MBLKW	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951419							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48546	SampType: LCS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: LCSW	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951420							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 4.82 0.500 5.000 0 96.5 80 120

Sample ID 1812201-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: HZ-MW-14S:W	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951422							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 1.88 0.500 1.893 0.955 20

Sample ID 1812201-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: HZ-MW-14S:W	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951423							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.85 0.500 5.000 1.893 99.2 70 130

Sample ID 1812201-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: HZ-MW-14S:W	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951424							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.89 0.500 5.000 1.893 100 70 130 6.854 0.538 30



Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812244-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: BATCH	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951437					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.33	0.500						3.365	0.956	20	

Sample ID 1812244-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: BATCH	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951438					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.17	0.500	5.000	3.365	96.2	70	130				



Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23003	SampType: MBLK	Units: µg/L			Prep Date: 12/19/2018	RunNo: 48409					
Client ID: MBLKW	Batch ID: 23003				Analysis Date: 12/19/2018	SeqNo: 947897					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23003	SampType: LCS	Units: µg/L			Prep Date: 12/19/2018	RunNo: 48409					
Client ID: LCSW	Batch ID: 23003				Analysis Date: 12/19/2018	SeqNo: 947898					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 975 100 1,000 0 97.5 50 150

Sample ID 1812201-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 12/19/2018	RunNo: 48409					
Client ID: HZ-MW-14S:W	Batch ID: 23003				Analysis Date: 12/19/2018	SeqNo: 947900					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812201-001CMS	SampType: MS	Units: µg/L			Prep Date: 12/19/2018	RunNo: 48409					
Client ID: HZ-MW-14S:W	Batch ID: 23003				Analysis Date: 12/19/2018	SeqNo: 947901					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,870 100 5,000 0 97.4 50 150

Sample ID 1812201-001CMSD	SampType: MSD	Units: µg/L			Prep Date: 12/19/2018	RunNo: 48409					
Client ID: HZ-MW-14S:W	Batch ID: 23003				Analysis Date: 12/19/2018	SeqNo: 947927					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,800 100 5,000 0 96.0 50 150 4,868 1.39 30



Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22988FB	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: MBLKW	Batch ID: 23003	Analysis Date: 12/19/2018	SeqNo: 947933								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48370	SampType:	MBLK	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48370		
Client ID:	MBLKW	Batch ID:	R48370			Analysis Date:	12/18/2018	SeqNo:	946749		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48370	SampType:	LCS	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48370		
Client ID:	LCSW	Batch ID:	R48370			Analysis Date:	12/18/2018	SeqNo:	946748		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	912	0.00863	1,000	0	91.2	70	130				
Ethene	934	0.0151	1,000	0	93.4	70	130				
Ethane	941	0.0162	1,000	0	94.1	70	130				

Sample ID	1812174-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/18/2018	RunNo:	48370		
Client ID:	BATCH	Batch ID:	R48370			Analysis Date:	12/18/2018	SeqNo:	946741		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863						0		30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22996	SampType:	LCS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	LCSW	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947837				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	27.8	1.00	20.00	0	139	18.7	171				
Chloromethane	20.7	2.00	20.00	0	104	38.5	171				
Vinyl chloride	20.9	0.200	20.00	0	105	48	145				
Bromomethane	18.4	1.00	20.00	0	91.9	32.5	184				
Trichlorofluoromethane (CFC-11)	20.0	1.00	20.00	0	99.8	43.5	149				
Chloroethane	19.4	1.00	20.00	0	97.1	43.8	168				
1,1-Dichloroethene	19.6	1.00	20.00	0	97.8	57.5	150				
Methylene chloride	18.8	1.00	20.00	0	94.1	67.1	131				
trans-1,2-Dichloroethene	19.1	1.00	20.00	0	95.6	71.7	129				
Methyl tert-butyl ether (MTBE)	19.3	1.00	20.00	0	96.5	58	138				
1,1-Dichloroethane	18.7	1.00	20.00	0	93.7	67.9	134				
2,2-Dichloropropane	23.4	2.00	20.00	0	117	26.5	185				
cis-1,2-Dichloroethene	18.9	1.00	20.00	0	94.7	70.2	139				
Chloroform	18.5	1.00	20.00	0	92.5	66.3	131				
1,1,1-Trichloroethane (TCA)	18.7	1.00	20.00	0	93.4	63	140				
1,1-Dichloropropene	19.0	1.00	20.00	0	94.9	69.9	124				
Carbon tetrachloride	18.8	1.00	20.00	0	94.0	66.2	134				
1,2-Dichloroethane (EDC)	18.3	1.00	20.00	0	91.3	67	126				
Benzene	18.4	1.00	20.00	0	92.0	69.3	132				
Trichloroethene (TCE)	18.3	0.500	20.00	0	91.3	65.2	136				
1,2-Dichloropropane	17.9	1.00	20.00	0	89.3	70.5	130				
Bromodichloromethane	17.7	1.00	20.00	0	88.6	67.2	137				
Dibromomethane	17.8	1.00	20.00	0	89.1	69.3	143				
cis-1,3-Dichloropropene	19.1	1.00	20.00	0	95.5	62.6	137				
Toluene	18.9	1.00	20.00	0	94.5	61.3	145				
trans-1,3-Dichloropropylene	19.1	1.00	20.00	0	95.3	56.5	163				
1,1,2-Trichloroethane	18.0	1.00	20.00	0	90.1	71.7	131				
1,3-Dichloropropane	18.0	1.00	20.00	0	90.2	73.5	127				
Tetrachloroethene (PCE)	19.5	1.00	20.00	0	97.7	47.5	147				
Dibromochloromethane	18.0	1.00	20.00	0	90.0	67.2	134				
1,2-Dibromoethane (EDB)	18.0	0.250	20.00	0	90.1	73.6	125				

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22996	SampType:	LCS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	LCSW	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947837				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.1	1.00	20.00	0	100	73.9	126				
1,1,1,2-Tetrachloroethane	19.6	1.00	20.00	0	98.0	76.8	124				
Ethylbenzene	20.1	1.00	20.00	0	101	72	130				
m,p-Xylene	40.8	1.00	40.00	0	102	70.3	134				
o-Xylene	20.0	1.00	20.00	0	100	72.1	131				
Styrene	19.7	1.00	20.00	0	98.7	64.3	140				
Isopropylbenzene	19.8	1.00	20.00	0	98.9	73.9	128				
Bromoform	17.3	2.00	20.00	0	86.5	55.3	141				
1,1,2,2-Tetrachloroethane	17.5	1.00	20.00	0	87.6	62.9	132				
n-Propylbenzene	19.7	1.00	20.00	0	98.4	74.5	127				
Bromobenzene	19.1	1.00	20.00	0	95.5	71	131				
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	99.8	73.1	128				
2-Chlorotoluene	18.5	1.00	20.00	0	92.6	70.8	130				
4-Chlorotoluene	19.5	1.00	20.00	0	97.6	70.1	131				
tert-Butylbenzene	20.1	1.00	20.00	0	100	68.2	131				
1,2,3-Trichloropropane	17.5	1.00	20.00	0	87.7	67.7	131				
1,2,4-Trichlorobenzene	21.7	2.00	20.00	0	108	41	139				
sec-Butylbenzene	20.0	1.00	20.00	0	99.8	72	129				
4-Isopropyltoluene	20.0	1.00	20.00	0	100	69.2	130				
1,3-Dichlorobenzene	20.4	1.00	20.00	0	102	69.5	128				
1,4-Dichlorobenzene	20.0	1.00	20.00	0	100	66.8	119				
n-Butylbenzene	20.1	1.00	20.00	0	101	73.8	127				
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	69.7	119				
1,2-Dibromo-3-chloropropane	16.7	1.00	20.00	0	83.4	63.1	136				
1,2,4-Trimethylbenzene	19.8	1.00	20.00	0	98.9	73.4	127				
Hexachloro-1,3-butadiene	22.0	4.00	20.00	0	110	58.6	138				
Naphthalene	20.4	1.00	20.00	0	102	41.8	165				
1,2,3-Trichlorobenzene	20.8	4.00	20.00	0	104	35.8	155				
Surr: Dibromofluoromethane	23.7		25.00		94.6	45.4	152				
Surr: Toluene-d8	23.8		25.00		95.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.5	64.2	128				

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-22996	SampType:	LCS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406				
Client ID:	LCSW	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947837				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-22996	SampType:	MBLK	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406				
Client ID:	MBLKW	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947838				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00											
Chloromethane	ND	2.00											
Vinyl chloride	ND	0.200											
Bromomethane	ND	1.00											
Trichlorofluoromethane (CFC-11)	ND	1.00											
Chloroethane	ND	1.00											
1,1-Dichloroethene	ND	1.00											
Methylene chloride	ND	1.00											
trans-1,2-Dichloroethene	ND	1.00											
Methyl tert-butyl ether (MTBE)	ND	1.00											
1,1-Dichloroethane	ND	1.00											
2,2-Dichloropropane	ND	2.00											
cis-1,2-Dichloroethene	ND	1.00											
Chloroform	ND	1.00											
1,1,1-Trichloroethane (TCA)	ND	1.00											
1,1-Dichloropropene	ND	1.00											
Carbon tetrachloride	ND	1.00											
1,2-Dichloroethane (EDC)	ND	1.00											
Benzene	ND	1.00											
Trichloroethene (TCE)	ND	0.500											
1,2-Dichloropropane	ND	1.00											
Bromodichloromethane	ND	1.00											
Dibromomethane	ND	1.00											
cis-1,3-Dichloropropene	ND	1.00											
Toluene	ND	1.00											

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-22996	SampType:	MBLK	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	MBLKW	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947838

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									Q
1,1,1,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									Q
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									Q
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-22996	SampType: MBLK	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406							
Client ID: MBLKW	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947838							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.0		25.00		96.1	45.4	152				
Surr: Toluene-d8	23.6		25.00		94.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.3	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1812169-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406							
Client ID: BATCH	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947802							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	

Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812169-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	BATCH	Batch ID:	22996			Analysis Date:	12/18/2018	SeqNo:	947802

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.22	1.00						2.433	9.17	30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	5.70	1.00						5.920	3.85	30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	1.06	1.00						1.152	8.08	30	
m,p-Xylene	7.84	1.00						8.340	6.17	30	
o-Xylene	1.65	1.00						1.678	1.85	30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	Q
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	Q
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812169-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947802				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	1.34	1.00						1.375	2.43	30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.3		25.00		97.2	45.4	152		0		
Surr: Toluene-d8	23.4		25.00		93.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.6	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812174-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947811				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812174-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/18/2018	RunNo: 48406
Client ID: BATCH	Batch ID: 22996		Analysis Date: 12/18/2018	SeqNo: 947811

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	1.06	1.00						1.058	0.688	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	Q
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/18/2018	SeqNo:	947811				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	Q
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.0		25.00		96.0	45.4	152		0		
Surr: Toluene-d8	23.4		25.00		93.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.6	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812174-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947808				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	27.3	1.00	20.00	0	137	33.3	122				S
Chloromethane	19.7	2.00	20.00	0	98.4	39.7	143				
Vinyl chloride	20.3	0.200	20.00	0	102	41	165				
Bromomethane	18.7	1.00	20.00	0	93.3	31.5	135				

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	BATCH	Batch ID:	22996			Analysis Date:	12/19/2018	SeqNo:	947808

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	22.3	1.00	20.00	0	111	54.7	138				
Chloroethane	18.8	1.00	20.00	0	94.2	49.9	143				
1,1-Dichloroethene	19.9	1.00	20.00	0	99.3	51.6	164				
Methylene chloride	18.0	1.00	20.00	0	90.1	61.6	135				
trans-1,2-Dichloroethene	18.8	1.00	20.00	0	94.1	63.5	138				
Methyl tert-butyl ether (MTBE)	17.9	1.00	20.00	0	89.5	60.9	132				
1,1-Dichloroethane	18.3	1.00	20.00	0	91.4	55.7	151				
2,2-Dichloropropane	15.1	2.00	20.00	0	75.3	37.7	150				
cis-1,2-Dichloroethene	18.2	1.00	20.00	0	90.9	60	154				
Chloroform	19.1	1.00	20.00	0	95.5	48.1	140				
1,1,1-Trichloroethane (TCA)	20.7	1.00	20.00	0	103	64.2	146				
1,1-Dichloropropene	18.7	1.00	20.00	0	93.7	73.8	136				
Carbon tetrachloride	21.7	1.00	20.00	0	109	62.7	146				
1,2-Dichloroethane (EDC)	19.3	1.00	20.00	0	96.3	63.4	137				
Benzene	17.5	1.00	20.00	0	87.4	65.4	138				
Trichloroethene (TCE)	18.3	0.500	20.00	0	91.6	60.4	134				
1,2-Dichloropropane	16.6	1.00	20.00	0	83.1	62.6	138				
Bromodichloromethane	18.5	1.00	20.00	0	92.6	59.4	139				
Dibromomethane	18.0	1.00	20.00	0	89.8	58.7	148				
cis-1,3-Dichloropropene	16.2	1.00	20.00	0	80.9	63.8	132				
Toluene	18.1	1.00	20.00	0	90.7	52	147				
trans-1,3-Dichloropropylene	17.5	1.00	20.00	0	87.7	57.7	125				
1,1,2-Trichloroethane	17.6	1.00	20.00	0	87.9	57.5	153				
1,3-Dichloropropane	17.0	1.00	20.00	0	85.0	54.1	157				
Tetrachloroethene (PCE)	197	1.00	20.00	169.1	140	50.3	133				ES
Dibromochloromethane	19.3	1.00	20.00	0	96.6	61.6	139				
1,2-Dibromoethane (EDB)	17.2	0.250	20.00	0	85.8	63.2	134				
Chlorobenzene	20.4	1.00	20.00	0	102	65.8	134				
1,1,1,2-Tetrachloroethane	21.0	1.00	20.00	0	105	65.4	135				
Ethylbenzene	20.0	1.00	20.00	0	100	64.5	136				
m,p-Xylene	41.5	1.00	40.00	0	104	63.3	135				

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947808				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	19.8	1.00	20.00	0	99.1	64.8	150				
Styrene	19.6	1.00	20.00	0	98.1	52.9	163				
Isopropylbenzene	20.0	1.00	20.00	0	99.8	56	147				
Bromoform	19.7	2.00	20.00	0	98.4	57.7	139				
1,1,2,2-Tetrachloroethane	17.1	1.00	20.00	0	85.4	59.8	146				
n-Propylbenzene	19.9	1.00	20.00	0	99.6	57.6	142				
Bromobenzene	20.0	1.00	20.00	0	100	69.3	157				
1,3,5-Trimethylbenzene	20.4	1.00	20.00	0	102	59.9	136				
2-Chlorotoluene	19.1	1.00	20.00	0	95.3	61.7	134				
4-Chlorotoluene	19.6	1.00	20.00	0	97.9	58.4	134				
tert-Butylbenzene	21.0	1.00	20.00	0	105	66.8	141				
1,2,3-Trichloropropane	16.8	1.00	20.00	0	83.9	62.4	129				
1,2,4-Trichlorobenzene	20.9	2.00	20.00	0	105	50.9	133				
sec-Butylbenzene	20.7	1.00	20.00	0	104	56	146				
4-Isopropyltoluene	21.1	1.00	20.00	0	105	56.4	136				
1,3-Dichlorobenzene	20.3	1.00	20.00	0	102	58.2	128				
1,4-Dichlorobenzene	20.0	1.00	20.00	0	100	60.1	123				
n-Butylbenzene	19.1	1.00	20.00	0	95.7	54.6	135				
1,2-Dichlorobenzene	20.3	1.00	20.00	0	102	65.4	133				
1,2-Dibromo-3-chloropropane	17.3	1.00	20.00	0	86.3	51.8	142				
1,2,4-Trimethylbenzene	19.9	1.00	20.00	0	99.7	63.7	132				
Hexachloro-1,3-butadiene	24.0	4.00	20.00	0	120	58.1	130				
Naphthalene	19.1	1.00	20.00	0	95.6	50.7	154				
1,2,3-Trichlorobenzene	20.6	4.00	20.00	0	103	57	131				
Surr: Dibromofluoromethane	24.0		25.00		96.1	45.4	152				
Surr: Toluene-d8	22.4		25.00		89.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.5	64.2	128				

NOTES:

- S - Outlying spike recovery(ies) observed.
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947809				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	28.9	1.00	20.00	0	145	33.3	122	27.31	5.74	30	S
Chloromethane	21.8	2.00	20.00	0	109	39.7	143	19.67	10.1	30	
Vinyl chloride	22.5	0.200	20.00	0	112	41	165	20.34	9.95	30	
Bromomethane	21.2	1.00	20.00	0	106	31.5	135	18.66	12.6	30	
Trichlorofluoromethane (CFC-11)	23.6	1.00	20.00	0	118	54.7	138	22.29	5.58	30	
Chloroethane	19.8	1.00	20.00	0	99.0	49.9	143	18.83	5.04	30	
1,1-Dichloroethene	21.4	1.00	20.00	0	107	51.6	164	19.85	7.32	30	
Methylene chloride	19.0	1.00	20.00	0	94.8	61.6	135	18.02	5.10	30	
trans-1,2-Dichloroethene	20.2	1.00	20.00	0	101	63.5	138	18.82	6.99	30	
Methyl tert-butyl ether (MTBE)	19.3	1.00	20.00	0	96.6	60.9	132	17.89	7.69	30	
1,1-Dichloroethane	19.0	1.00	20.00	0	95.2	55.7	151	18.29	4.08	30	
2,2-Dichloropropane	15.6	2.00	20.00	0	78.0	37.7	150	15.07	3.52	30	
cis-1,2-Dichloroethene	19.3	1.00	20.00	0	96.4	60	154	18.18	5.83	30	
Chloroform	20.2	1.00	20.00	0	101	48.1	140	19.11	5.44	30	
1,1,1-Trichloroethane (TCA)	22.0	1.00	20.00	0	110	64.2	146	20.70	6.18	30	
1,1-Dichloropropene	20.0	1.00	20.00	0	100	73.8	136	18.74	6.72	30	
Carbon tetrachloride	23.3	1.00	20.00	0	116	62.7	146	21.73	6.84	30	
1,2-Dichloroethane (EDC)	20.5	1.00	20.00	0	103	63.4	137	19.25	6.43	30	
Benzene	18.6	1.00	20.00	0	93.0	65.4	138	17.47	6.20	30	
Trichloroethene (TCE)	19.7	0.500	20.00	0	98.5	60.4	134	18.32	7.25	30	
1,2-Dichloropropane	17.7	1.00	20.00	0	88.7	62.6	138	16.62	6.48	30	
Bromodichloromethane	19.6	1.00	20.00	0	98.1	59.4	139	18.52	5.72	30	
Dibromomethane	19.0	1.00	20.00	0	95.0	58.7	148	17.96	5.70	30	
cis-1,3-Dichloropropene	16.9	1.00	20.00	0	84.5	63.8	132	16.18	4.31	30	
Toluene	19.3	1.00	20.00	0	96.5	52	147	18.15	6.16	30	
trans-1,3-Dichloropropylene	18.8	1.00	20.00	0	94.1	57.7	125	17.54	7.00	30	
1,1,2-Trichloroethane	18.4	1.00	20.00	0	92.0	57.5	153	17.58	4.55	30	
1,3-Dichloropropane	17.9	1.00	20.00	0	89.7	54.1	157	17.01	5.29	30	
Tetrachloroethene (PCE)	202	1.00	20.00	169.1	163	50.3	133	197.1	2.26	30	ES
Dibromochloromethane	20.5	1.00	20.00	0	102	61.6	139	19.32	5.69	30	
1,2-Dibromoethane (EDB)	18.6	0.250	20.00	0	92.8	63.2	134	17.16	7.83	30	

Work Order: 1812201
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947809		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.5	1.00	20.00	0	107	65.8	134	20.39	5.11	30	
1,1,1,2-Tetrachloroethane	22.5	1.00	20.00	0	112	65.4	135	21.03	6.66	30	
Ethylbenzene	21.3	1.00	20.00	0	107	64.5	136	20.03	6.32	30	
m,p-Xylene	44.1	1.00	40.00	0	110	63.3	135	41.50	6.13	30	
o-Xylene	21.5	1.00	20.00	0	107	64.8	150	19.83	7.95	30	
Styrene	20.5	1.00	20.00	0	103	52.9	163	19.62	4.58	30	
Isopropylbenzene	21.6	1.00	20.00	0	108	56	147	19.96	8.06	30	
Bromoform	21.3	2.00	20.00	0	107	57.7	139	19.68	8.11	30	
1,1,2,2-Tetrachloroethane	18.8	1.00	20.00	0	94.1	59.8	146	17.07	9.72	30	
n-Propylbenzene	20.9	1.00	20.00	0	105	57.6	142	19.92	4.88	30	
Bromobenzene	21.3	1.00	20.00	0	107	69.3	157	20.05	6.15	30	
1,3,5-Trimethylbenzene	21.6	1.00	20.00	0	108	59.9	136	20.37	5.68	30	
2-Chlorotoluene	19.7	1.00	20.00	0	98.6	61.7	134	19.06	3.39	30	
4-Chlorotoluene	21.0	1.00	20.00	0	105	58.4	134	19.58	7.10	30	
tert-Butylbenzene	22.5	1.00	20.00	0	112	66.8	141	20.98	6.83	30	
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.6	62.4	129	16.77	5.45	30	
1,2,4-Trichlorobenzene	22.9	2.00	20.00	0	115	50.9	133	20.90	9.24	30	
sec-Butylbenzene	22.3	1.00	20.00	0	111	56	146	20.73	7.16	30	
4-Isopropyltoluene	22.6	1.00	20.00	0	113	56.4	136	21.09	6.76	30	
1,3-Dichlorobenzene	21.8	1.00	20.00	0	109	58.2	128	20.32	6.84	30	
1,4-Dichlorobenzene	21.5	1.00	20.00	0	107	60.1	123	20.02	7.06	30	
n-Butylbenzene	20.6	1.00	20.00	0	103	54.6	135	19.15	7.08	30	
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	65.4	133	20.30	6.20	30	
1,2-Dibromo-3-chloropropane	17.6	1.00	20.00	0	87.8	51.8	142	17.26	1.73	30	
1,2,4-Trimethylbenzene	21.4	1.00	20.00	0	107	63.7	132	19.94	6.91	30	
Hexachloro-1,3-butadiene	25.3	4.00	20.00	0	127	58.1	130	24.00	5.40	30	
Naphthalene	21.4	1.00	20.00	0	107	50.7	154	19.11	11.3	30	
1,2,3-Trichlorobenzene	22.8	4.00	20.00	0	114	57	131	20.61	10.2	30	
Surr: Dibromofluoromethane	24.1		25.00		96.3	45.4	152		0		
Surr: Toluene-d8	22.1		25.00		88.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.2	64.2	128		0		

Work Order: 1812201
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812174-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/18/2018	RunNo:	48406		
Client ID:	BATCH	Batch ID:	22996	Analysis Date:	12/19/2018	SeqNo:	947809				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

- S - Outlying spike recovery(ies) observed.
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812201**
 Date Received: **12/13/2018 11:40:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.6
Sample	2.6
Temp Blank	2.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/13/18 Page: 1 of 1

Project Name: BSCS

Project No: B2302-9,1

Collected by: BSN

Location: Butwell

Report To (PM): Jeff Jensen

PM Email: jeff@kane-environmental.com

Laboratory Project No (Internal): 1612201

Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	Diesel/Heavy Oil Range Organics (DHO)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	TUC	AWWA 9131-A-N	RSK	Comments
1 HZ-MW-14S:W	12/13	0855	GMW	X									X	X	X	X				lab filter, DC
2 HZ-MW-14D:W	12/13	1020	GMW	X									X	X	X	X				lab filter
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants Ag Al As B Ba Be Ca Cd Co Cr Cl Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time 12/13/18 1140

Received Date/Time 12/13/18 1140

Relinquished Date/Time 12/13/18 1140

Received Date/Time 12/13/18 1140

Turn-around Time: Standard 3 Day 2 Day Next Day Same Day (specify)



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812244

December 26, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 12/17/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/26/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812244

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812244-001	MW-39:W	12/17/2018 12:25 PM	12/17/2018 3:15 PM
1812244-002	MW-40:W	12/17/2018 2:05 PM	12/17/2018 3:15 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/17/2018 12:25:00 PM

Project: BSCSS

Lab ID: 1812244-001

Matrix: Groundwater

Client Sample ID: MW-39:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	0.364	0.0432	D	mg/L	5	12/21/2018 12:46:00 PM
Ethene	ND	0.0151		mg/L	1	12/21/2018 11:53:00 AM
Ethane	ND	0.0162		mg/L	1	12/21/2018 11:53:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23014 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/20/2018 3:31:56 AM
Chloromethane	ND	2.00		µg/L	1	12/20/2018 3:31:56 AM
Vinyl chloride	ND	0.200		µg/L	1	12/20/2018 3:31:56 AM
Bromomethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Chloroethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Methylene chloride	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/20/2018 3:31:56 AM
cis-1,2-Dichloroethene	6.81	1.00		µg/L	1	12/20/2018 3:31:56 AM
Chloroform	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Benzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Trichloroethene (TCE)	2.62	0.500		µg/L	1	12/20/2018 3:31:56 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Dibromomethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Toluene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Tetrachloroethene (PCE)	2.32	1.00		µg/L	1	12/20/2018 3:31:56 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/20/2018 3:31:56 AM
Chlorobenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM



Client: Kane Environmental, Inc.

Collection Date: 12/17/2018 12:25:00 PM

Project: BSCSS

Lab ID: 1812244-001

Matrix: Groundwater

Client Sample ID: MW-39:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23014

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
m,p-Xylene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
o-Xylene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Styrene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Bromoform	ND	2.00		µg/L	1	12/20/2018 3:31:56 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Bromobenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/20/2018 3:31:56 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	12/20/2018 3:31:56 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/20/2018 3:31:56 AM
Naphthalene	ND	1.00		µg/L	1	12/20/2018 3:31:56 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/20/2018 3:31:56 AM
Surr: Dibromofluoromethane	97.1	45.4 - 152		%Rec	1	12/20/2018 3:31:56 AM
Surr: Toluene-d8	99.6	40.1 - 139		%Rec	1	12/20/2018 3:31:56 AM
Surr: 1-Bromo-4-fluorobenzene	97.4	64.2 - 128		%Rec	1	12/20/2018 3:31:56 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	3.45	0.200	D	mg/L	2	12/22/2018 5:11:00 AM
Sulfate	2.13	0.600	D	mg/L	2	12/22/2018 5:11:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812244-001
Client Sample ID: MW-39:W

Collection Date: 12/17/2018 12:25:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 23003		Analyst: WC
Iron	4,580	100		µg/L	1	12/19/2018 11:34:48 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	3.36	0.500		mg/L	1	12/22/2018 7:54:00 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23045		Analyst: GM
Nitrogen, Ammonia	0.563	0.100		mg/L	1	12/21/2018 2:41:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/17/2018 2:05:00 PM

Project: BSCSS

Lab ID: 1812244-002

Matrix: Groundwater

Client Sample ID: MW-40:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	ND	0.00863		mg/L	1	12/21/2018 11:57:00 AM
Ethene	ND	0.0151		mg/L	1	12/21/2018 11:57:00 AM
Ethane	ND	0.0162		mg/L	1	12/21/2018 11:57:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23014 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Chloromethane	ND	2.00		µg/L	1	12/22/2018 10:02:01 AM
Vinyl chloride	ND	0.200		µg/L	1	12/22/2018 10:02:01 AM
Bromomethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Chloroethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Methylene chloride	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/22/2018 10:02:01 AM
cis-1,2-Dichloroethene	56.7	10.0	D	µg/L	10	12/24/2018 5:53:06 PM
Chloroform	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Benzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Trichloroethene (TCE)	46.0	5.00	D	µg/L	10	12/24/2018 5:53:06 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Dibromomethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Toluene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Tetrachloroethene (PCE)	212	10.0	D	µg/L	10	12/24/2018 5:53:06 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/22/2018 10:02:01 AM
Chlorobenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM



Client: Kane Environmental, Inc.

Collection Date: 12/17/2018 2:05:00 PM

Project: BSCSS

Lab ID: 1812244-002

Matrix: Groundwater

Client Sample ID: MW-40:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23014

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
m,p-Xylene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
o-Xylene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Styrene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Bromoform	ND	2.00		µg/L	1	12/22/2018 10:02:01 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Bromobenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/22/2018 10:02:01 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/22/2018 10:02:01 AM
Naphthalene	ND	1.00		µg/L	1	12/22/2018 10:02:01 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/22/2018 10:02:01 AM
Surr: Dibromofluoromethane	96.1	45.4 - 152		%Rec	1	12/22/2018 10:02:01 AM
Surr: Toluene-d8	94.7	40.1 - 139		%Rec	1	12/22/2018 10:02:01 AM
Surr: 1-Bromo-4-fluorobenzene	94.7	64.2 - 128		%Rec	1	12/22/2018 10:02:01 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	0.586	0.100		mg/L	1	12/22/2018 5:57:00 AM
Sulfate	1.55	0.300		mg/L	1	12/22/2018 5:57:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/17/2018 2:05:00 PM

Project: BSCSS

Lab ID: 1812244-002

Matrix: Groundwater

Client Sample ID: MW-40:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 23003		Analyst: WC
Iron	ND	100		µg/L	1	12/19/2018 11:38:49 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	1.11	0.500		mg/L	1	12/22/2018 8:54:00 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23045		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/21/2018 2:46:00 PM

Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-23045	SampType: MBLK	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: MBLKW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949985							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-23045	SampType: LCS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: LCSW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949986							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.540 0.100 0.5000 0 108 80 120

Sample ID 1812201-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949992							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812201-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949993							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.501 0.100 0.5000 0 100 70 130

Sample ID 1812201-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949994							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.480 0.100 0.5000 0 96.0 70 130 0.5010 4.28 30

Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812301-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 950010							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.394	0.100						0.3560	10.1	30	

Sample ID 1812301-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 950011							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.938	0.100	0.5000	0.3560	116	70	130				

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID MB-23048	SampType: MBLK	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: MBLKW	Batch ID: 23048				Analysis Date: 12/21/2018	SeqNo: 950722					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID 1812180-001ADUP	SampType: DUP	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/21/2018	SeqNo: 950725					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	7.28	0.100						7.269	0.206	20	E
Sulfate	8.03	0.300						8.007	0.237	20	

Sample ID 1812180-001AMS	SampType: MS	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/22/2018	SeqNo: 950726					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.12	0.100	0.7500	7.269	113	80	120				E
Sulfate	12.2	0.300	3.750	8.007	110	80	120				

Sample ID 1812180-001AMSD	SampType: MSD	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/22/2018	SeqNo: 950727					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.08	0.100	0.7500	7.269	109	80	120	8.117	0.407	20	E
Sulfate	11.9	0.300	3.750	8.007	105	80	120	12.15	1.79	20	

Sample ID 1812244-002DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: MW-40:W	Batch ID: 23048				Analysis Date: 12/22/2018	SeqNo: 950746					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.586	0.100						0.5860	0	20	
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Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812244-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	MW-40:W	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950746		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1.56	0.300						1.553	0.129	20	

Sample ID	1812244-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	MW-40:W	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950747		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.31	0.100	0.7500	0.5860	96.5	80	120				
Sulfate	5.08	0.300	3.750	1.553	94.0	80	120				

Sample ID	LCS-23048	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	LCSW	Batch ID:	23048			Analysis Date:	12/24/2018	SeqNo:	950949		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.726	0.100	0.7500	0	96.8	90	110				
Sulfate	3.73	0.300	3.750	0	99.5	90	110				



Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812244-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: MW-39:W	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951437					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.33	0.500						3.365	0.956	20	

Sample ID 1812244-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: MW-39:W	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951438					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.17	0.500	5.000	3.365	96.2	70	130				

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23003	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: MBLKW	Batch ID: 23003		Analysis Date: 12/19/2018	SeqNo: 947897							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23003	SampType: LCS	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: LCSW	Batch ID: 23003		Analysis Date: 12/19/2018	SeqNo: 947898							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 975 100 1,000 0 97.5 50 150

Sample ID 1812201-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: BATCH	Batch ID: 23003		Analysis Date: 12/19/2018	SeqNo: 947900							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812201-001CMS	SampType: MS	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: BATCH	Batch ID: 23003		Analysis Date: 12/19/2018	SeqNo: 947901							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,870 100 5,000 0 97.4 50 150

Sample ID 1812201-001CMSD	SampType: MSD	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: BATCH	Batch ID: 23003		Analysis Date: 12/19/2018	SeqNo: 947927							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,800 100 5,000 0 96.0 50 150 4,868 1.39 30



Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-22988FB	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48409							
Client ID: MBLKW	Batch ID: 23003	Analysis Date: 12/19/2018	SeqNo: 947933								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48486	SampType:	MBLK	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	MBLKW	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949829		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48486	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	LCSW	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949828		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	844	0.00863	1,000	0	84.4	70	130				
Ethene	848	0.0151	1,000	0	84.8	70	130				
Ethane	848	0.0162	1,000	0	84.8	70	130				

Sample ID	1812221-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	BATCH	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949810		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.121	0.00863						0.1452	17.8	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23014	SampType:	LCS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	LCSW	Batch ID:	23014	Analysis Date:	12/19/2018	SeqNo:	948777				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.5	1.00	20.00	0	97.4	18.7	171				
Chloromethane	22.5	0.500	20.00	0	113	38.5	171				
Vinyl chloride	19.7	0.200	20.00	0	98.6	48	145				
Bromomethane	24.2	0.500	20.00	0	121	32.5	184				
Trichlorofluoromethane (CFC-11)	19.0	0.500	20.00	0	94.9	43.5	149				
Chloroethane	16.9	0.500	20.00	0	84.3	43.8	168				
1,1-Dichloroethene	18.7	0.500	20.00	0	93.3	57.5	150				
Methylene chloride	18.0	1.00	20.00	0	90.1	67.1	131				
trans-1,2-Dichloroethene	19.4	0.500	20.00	0	96.8	71.7	129				
Methyl tert-butyl ether (MTBE)	18.7	1.00	20.00	0	93.4	58	138				
1,1-Dichloroethane	17.9	0.500	20.00	0	89.3	67.9	134				
2,2-Dichloropropane	19.4	1.00	20.00	0	97.0	26.5	185				
cis-1,2-Dichloroethene	18.0	0.500	20.00	0	89.8	70.2	139				
Chloroform	19.1	1.00	20.00	0	95.7	66.3	131				
1,1,1-Trichloroethane (TCA)	19.8	0.500	20.00	0	98.9	63	140				
1,1-Dichloropropene	19.6	0.500	20.00	0	97.9	69.9	124				
Carbon tetrachloride	19.5	0.500	20.00	0	97.3	66.2	134				
1,2-Dichloroethane (EDC)	18.1	0.500	20.00	0	90.7	67	126				
Benzene	19.4	1.00	20.00	0	97.0	69.3	132				
Trichloroethene (TCE)	21.3	0.500	20.00	0	107	65.2	136				
1,2-Dichloropropane	19.4	0.500	20.00	0	97.1	70.5	130				
Bromodichloromethane	18.7	0.500	20.00	0	93.3	67.2	137				
Dibromomethane	19.2	0.500	20.00	0	96.1	69.3	143				
cis-1,3-Dichloropropene	20.0	0.500	20.00	0	100	62.6	137				
Toluene	20.2	1.00	20.00	0	101	61.3	145				
trans-1,3-Dichloropropylene	19.6	0.500	20.00	0	97.8	56.5	163				
1,1,2-Trichloroethane	19.6	0.500	20.00	0	98.0	71.7	131				
1,3-Dichloropropane	19.5	0.500	20.00	0	97.7	73.5	127				
Tetrachloroethene (PCE)	20.2	0.500	20.00	0	101	47.5	147				
Dibromochloromethane	18.8	0.500	20.00	0	93.8	67.2	134				
1,2-Dibromoethane (EDB)	18.7	0.200	20.00	0	93.7	73.6	125				

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23014	SampType:	LCS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446
Client ID:	LCSW	Batch ID:	23014			Analysis Date:	12/19/2018	SeqNo:	948777

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.4	0.500	20.00	0	96.8	73.9	126				
1,1,1,2-Tetrachloroethane	18.7	0.500	20.00	0	93.5	76.8	124				
Ethylbenzene	19.5	1.00	20.00	0	97.4	72	130				
m,p-Xylene	38.3	1.00	40.00	0	95.7	70.3	134				
o-Xylene	17.2	1.00	20.00	0	86.2	72.1	131				
Styrene	17.5	1.00	20.00	0	87.6	64.3	140				
Isopropylbenzene	16.9	1.00	20.00	0	84.3	73.9	128				
Bromoform	16.4	0.500	20.00	0	82.0	55.3	141				
1,1,2,2-Tetrachloroethane	13.0	0.500	20.00	0	64.8	62.9	132				
n-Propylbenzene	15.3	1.00	20.00	0	76.5	74.5	127				
Bromobenzene	15.9	0.500	20.00	0	79.6	71	131				
1,3,5-Trimethylbenzene	16.5	1.00	20.00	0	82.3	73.1	128				
2-Chlorotoluene	15.4	0.500	20.00	0	77.0	70.8	130				
4-Chlorotoluene	15.7	0.500	20.00	0	78.6	70.1	131				
tert-Butylbenzene	16.5	1.00	20.00	0	82.3	68.2	131				
1,2,3-Trichloropropane	13.8	0.500	20.00	0	69.2	67.7	131				
1,2,4-Trichlorobenzene	20.5	1.00	20.00	0	103	41	139				
sec-Butylbenzene	16.3	1.00	20.00	0	81.7	72	129				
4-Isopropyltoluene	16.3	1.00	20.00	0	81.6	69.2	130				
1,3-Dichlorobenzene	20.2	0.500	20.00	0	101	69.5	128				
1,4-Dichlorobenzene	19.9	0.500	20.00	0	99.7	66.8	119				
n-Butylbenzene	20.2	1.00	20.00	0	101	73.8	127				
1,2-Dichlorobenzene	20.1	0.500	20.00	0	101	69.7	119				
1,2-Dibromo-3-chloropropane	16.2	0.500	20.00	0	81.1	63.1	136				
1,2,4-Trimethylbenzene	15.9	1.00	20.00	0	79.6	73.4	127				
Hexachloro-1,3-butadiene	19.9	2.00	20.00	0	99.4	58.6	138				
Naphthalene	19.7	1.00	20.00	0	98.6	41.8	165				
1,2,3-Trichlorobenzene	20.2	2.00	20.00	0	101	35.8	155				
Surr: Dibromofluoromethane	23.7		25.00		94.8	45.4	152				
Surr: Toluene-d8	26.0		25.00		104	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	20.6		25.00		82.3	64.2	128				

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23014	SampType:	LCS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	LCSW	Batch ID:	23014			Analysis Date:	12/19/2018	SeqNo:	948777		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-23014	SampType:	MBLK	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	MBLKW	Batch ID:	23014			Analysis Date:	12/19/2018	SeqNo:	948778		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	0.500									
Vinyl chloride	ND	0.200									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.500									
Chloroethane	ND	0.500									
1,1-Dichloroethene	ND	0.500									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	0.500									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	0.500									
2,2-Dichloropropane	ND	1.00									Q
cis-1,2-Dichloroethene	ND	0.500									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	0.500									
1,1-Dichloropropene	ND	0.500									
Carbon tetrachloride	ND	0.500									
1,2-Dichloroethane (EDC)	ND	0.500									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	0.500									
Bromodichloromethane	ND	0.500									
Dibromomethane	ND	0.500									
cis-1,3-Dichloropropene	ND	0.500									
Toluene	ND	1.00									

Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23014	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48446
Client ID: MBLKW	Batch ID: 23014		Analysis Date: 12/19/2018	SeqNo: 948778

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.500									
1,1,2-Trichloroethane	ND	0.500									
1,3-Dichloropropane	ND	0.500									
Tetrachloroethene (PCE)	ND	0.500									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.500									
1,1,1,2-Tetrachloroethane	ND	0.500									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	0.500									
1,1,1,2-Tetrachloroethane	ND	0.500									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	0.500									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	0.500									
4-Chlorotoluene	ND	0.500									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	0.500									
1,2,4-Trichlorobenzene	ND	1.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	0.500									
1,4-Dichlorobenzene	ND	0.500									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	0.500									
1,2-Dibromo-3-chloropropane	ND	0.500									Q
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23014	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48446							
Client ID: MBLKW	Batch ID: 23014		Analysis Date: 12/19/2018	SeqNo: 948778							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	2.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	2.00									
Surr: Dibromofluoromethane	24.2		25.00		97.0	45.4	152				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	19.8		25.00		79.4	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812229-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48446							
Client ID: BATCH	Batch ID: 23014		Analysis Date: 12/20/2018	SeqNo: 948763							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	0.500						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.500						0		30	
Chloroethane	ND	0.500						0		30	
1,1-Dichloroethene	ND	0.500						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	0.500						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	0.500						0		30	
2,2-Dichloropropane	ND	1.00						0		30	Q
cis-1,2-Dichloroethene	ND	0.500						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.500						0		30	
1,1-Dichloropropene	ND	0.500						0		30	
Carbon tetrachloride	ND	0.500						0		30	
1,2-Dichloroethane (EDC)	ND	0.500						0		30	



Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812229-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48446
Client ID: BATCH	Batch ID: 23014		Analysis Date: 12/20/2018	SeqNo: 948763

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	0.500						0		30	
Bromodichloromethane	ND	0.500						0		30	
Dibromomethane	ND	0.500						0		30	
cis-1,3-Dichloropropene	ND	0.500						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	0.500						0		30	
1,1,2-Trichloroethane	ND	0.500						0		30	
1,3-Dichloropropane	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	0.500						0		30	
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.500						0		30	
1,1,1,2-Tetrachloroethane	ND	0.500						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	0.500						0		30	
1,1,2,2-Tetrachloroethane	ND	0.500						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	0.500						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	0.500						0		30	
4-Chlorotoluene	ND	0.500						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	0.500						0		30	
1,2,4-Trichlorobenzene	ND	1.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812229-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	BATCH	Batch ID:	23014	Analysis Date:	12/20/2018	SeqNo:	948763				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	0.500						0		30	
1,4-Dichlorobenzene	ND	0.500						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	0.500						0		30	
1,2-Dibromo-3-chloropropane	ND	0.500						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	2.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	2.00						0		30	
Surr: Dibromofluoromethane	24.0		25.00		96.0	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.4	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812237-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	BATCH	Batch ID:	23014	Analysis Date:	12/20/2018	SeqNo:	948766				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	0.500						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.500						0		30	
Chloroethane	ND	0.500						0		30	
1,1-Dichloroethene	ND	0.500						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	0.500						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	0.500						0		30	

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812237-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446
Client ID:	BATCH	Batch ID:	23014			Analysis Date:	12/20/2018	SeqNo:	948766

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	1.00						0		30	Q
cis-1,2-Dichloroethene	ND	0.500						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.500						0		30	
1,1-Dichloropropene	ND	0.500						0		30	
Carbon tetrachloride	ND	0.500						0		30	
1,2-Dichloroethane (EDC)	ND	0.500						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	0.500						0		30	
Bromodichloromethane	ND	0.500						0		30	
Dibromomethane	ND	0.500						0		30	
cis-1,3-Dichloropropene	ND	0.500						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	0.500						0		30	
1,1,2-Trichloroethane	ND	0.500						0		30	
1,3-Dichloropropane	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	0.500						0		30	
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.500						0		30	
1,1,1,2-Tetrachloroethane	ND	0.500						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	0.500						0		30	
1,1,2,2-Tetrachloroethane	ND	0.500						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	0.500						0		30	

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812237-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	BATCH	Batch ID:	23014	Analysis Date:	12/20/2018	SeqNo:	948766				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	0.500						0		30	
4-Chlorotoluene	ND	0.500						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	0.500						0		30	
1,2,4-Trichlorobenzene	ND	1.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	0.500						0		30	
1,4-Dichlorobenzene	ND	0.500						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	0.500						0		30	
1,2-Dibromo-3-chloropropane	ND	0.500						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	2.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	2.00						0		30	
Surr: Dibromofluoromethane	24.3		25.00		97.1	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.4	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.5		25.00		93.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812221-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	BATCH	Batch ID:	23014	Analysis Date:	12/20/2018	SeqNo:	948759				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	14.4	1.00	20.00	0	72.2	33.3	122				
Chloromethane	19.1	0.500	20.00	0	95.6	39.7	143				
Vinyl chloride	18.0	0.200	20.00	0	90.0	41	165				
Bromomethane	23.6	0.500	20.00	0	118	31.5	135				

Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812221-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	BATCH	Batch ID:	23014	Analysis Date:	12/20/2018	SeqNo:	948759				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	18.0	0.500	20.00	0	89.8	54.7	138				
Chloroethane	22.3	0.500	20.00	0	112	49.9	143				
1,1-Dichloroethene	19.8	0.500	20.00	0	99.0	51.6	164				
Methylene chloride	18.9	1.00	20.00	0	94.6	61.6	135				
trans-1,2-Dichloroethene	21.1	0.500	20.00	0.8212	101	63.5	138				
Methyl tert-butyl ether (MTBE)	18.8	1.00	20.00	0	94.1	60.9	132				
1,1-Dichloroethane	18.4	0.500	20.00	0	91.8	55.7	151				
2,2-Dichloropropane	14.6	1.00	20.00	0	73.1	37.7	150				
cis-1,2-Dichloroethene	29.4	0.500	20.00	10.07	96.5	60	154				
Chloroform	24.5	1.00	20.00	4.958	97.6	48.1	140				
1,1,1-Trichloroethane (TCA)	20.3	0.500	20.00	0	102	64.2	146				
1,1-Dichloropropene	20.3	0.500	20.00	0	102	73.8	136				
Carbon tetrachloride	20.7	0.500	20.00	0	103	62.7	146				
1,2-Dichloroethane (EDC)	18.7	0.500	20.00	0	93.4	63.4	137				
Benzene	20.8	1.00	20.00	0	104	65.4	138				
Trichloroethene (TCE)	87.6	0.500	20.00	63.46	121	60.4	134				
1,2-Dichloropropane	18.8	0.500	20.00	0	93.8	62.6	138				
Bromodichloromethane	18.7	0.500	20.00	0	93.3	59.4	139				
Dibromomethane	19.5	0.500	20.00	0	97.7	58.7	148				
cis-1,3-Dichloropropene	18.6	0.500	20.00	0	92.9	63.8	132				
Toluene	20.7	1.00	20.00	0	103	52	147				
trans-1,3-Dichloropropylene	18.7	0.500	20.00	0	93.6	57.7	125				
1,1,2-Trichloroethane	20.4	0.500	20.00	0	102	57.5	153				
1,3-Dichloropropane	20.5	0.500	20.00	0	102	54.1	157				
Tetrachloroethene (PCE)	566	0.500	20.00	528.0	191	50.3	133				SE
Dibromochloromethane	21.3	0.500	20.00	0	107	61.6	139				
1,2-Dibromoethane (EDB)	21.1	0.200	20.00	0	106	63.2	134				
Chlorobenzene	20.6	0.500	20.00	0	103	65.8	134				
1,1,1,2-Tetrachloroethane	20.2	0.500	20.00	0	101	65.4	135				
Ethylbenzene	20.7	1.00	20.00	0	104	64.5	136				
m,p-Xylene	41.3	1.00	40.00	0.3324	103	63.3	135				

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812221-001AMS	SampType: MS	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48446
Client ID: BATCH	Batch ID: 23014		Analysis Date: 12/20/2018	SeqNo: 948759

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	18.5	1.00	20.00	0.6368	89.4	64.8	150				
Styrene	18.8	1.00	20.00	0	93.9	52.9	163				
Isopropylbenzene	20.0	1.00	20.00	0	99.9	56	147				
Bromoform	19.8	0.500	20.00	0	98.8	57.7	139				
1,1,2,2-Tetrachloroethane	18.9	0.500	20.00	0	94.3	59.8	146				
n-Propylbenzene	20.8	1.00	20.00	0	104	57.6	142				
Bromobenzene	20.4	0.500	20.00	0	102	69.3	157				
1,3,5-Trimethylbenzene	21.3	1.00	20.00	0	106	59.9	136				
2-Chlorotoluene	20.7	0.500	20.00	0	104	61.7	134				
4-Chlorotoluene	21.1	0.500	20.00	0	106	58.4	134				
tert-Butylbenzene	21.6	1.00	20.00	0	108	66.8	141				
1,2,3-Trichloropropane	18.2	0.500	20.00	0	91.1	62.4	129				
1,2,4-Trichlorobenzene	20.3	1.00	20.00	0	102	50.9	133				
sec-Butylbenzene	21.1	1.00	20.00	0	105	56	146				
4-Isopropyltoluene	20.7	1.00	20.00	0	103	56.4	136				
1,3-Dichlorobenzene	21.3	0.500	20.00	0	106	58.2	128				
1,4-Dichlorobenzene	20.7	0.500	20.00	0	103	60.1	123				
n-Butylbenzene	21.1	1.00	20.00	0	105	54.6	135				
1,2-Dichlorobenzene	20.7	0.500	20.00	0	104	65.4	133				
1,2-Dibromo-3-chloropropane	17.4	0.500	20.00	0	87.0	51.8	142				
1,2,4-Trimethylbenzene	21.0	1.00	20.00	0	105	63.7	132				
Hexachloro-1,3-butadiene	21.0	2.00	20.00	0	105	58.1	130				
Naphthalene	21.9	1.00	20.00	0.5061	107	50.7	154				
1,2,3-Trichlorobenzene	20.5	2.00	20.00	0	102	57	131				
Surr: Dibromofluoromethane	23.8		25.00		95.3	45.4	152				
Surr: Toluene-d8	25.0		25.00		99.8	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.2	64.2	128				

NOTES:

- S - Analyte concentration was too high for accurate spike recovery(ies).
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812221-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446
Client ID:	BATCH	Batch ID:	23014			Analysis Date:	12/20/2018	SeqNo:	948760

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	14.7	1.00	20.00	0	73.4	33.3	122	14.44	1.60	30	
Chloromethane	20.1	0.500	20.00	0	101	39.7	143	19.11	5.23	30	
Vinyl chloride	18.2	0.200	20.00	0	91.1	41	165	17.99	1.23	30	
Bromomethane	23.2	0.500	20.00	0	116	31.5	135	23.61	1.94	30	
Trichlorofluoromethane (CFC-11)	18.9	0.500	20.00	0	94.3	54.7	138	17.95	4.96	30	
Chloroethane	28.5	0.500	20.00	0	143	49.9	143	22.33	24.4	30	
1,1-Dichloroethene	21.0	0.500	20.00	0	105	51.6	164	19.81	6.00	30	
Methylene chloride	19.7	1.00	20.00	0	98.3	61.6	135	18.91	3.83	30	
trans-1,2-Dichloroethene	22.2	0.500	20.00	0.8212	107	63.5	138	21.10	4.97	30	
Methyl tert-butyl ether (MTBE)	19.7	1.00	20.00	0	98.7	60.9	132	18.83	4.76	30	
1,1-Dichloroethane	19.5	0.500	20.00	0	97.3	55.7	151	18.36	5.84	30	
2,2-Dichloropropane	15.3	1.00	20.00	0	76.4	37.7	150	14.62	4.49	30	
cis-1,2-Dichloroethene	30.2	0.500	20.00	10.07	101	60	154	29.38	2.78	30	
Chloroform	25.5	1.00	20.00	4.958	103	48.1	140	24.48	4.03	30	
1,1,1-Trichloroethane (TCA)	21.5	0.500	20.00	0	108	64.2	146	20.32	5.67	30	
1,1-Dichloropropene	21.4	0.500	20.00	0	107	73.8	136	20.32	5.25	30	
Carbon tetrachloride	22.2	0.500	20.00	0	111	62.7	146	20.69	6.97	30	
1,2-Dichloroethane (EDC)	19.4	0.500	20.00	0	96.9	63.4	137	18.68	3.67	30	
Benzene	21.8	1.00	20.00	0	109	65.4	138	20.80	4.81	30	
Trichloroethene (TCE)	89.4	0.500	20.00	63.46	130	60.4	134	87.63	2.03	30	
1,2-Dichloropropane	19.8	0.500	20.00	0	98.8	62.6	138	18.76	5.17	30	
Bromodichloromethane	19.7	0.500	20.00	0	98.6	59.4	139	18.66	5.53	30	
Dibromomethane	20.2	0.500	20.00	0	101	58.7	148	19.54	3.13	30	
cis-1,3-Dichloropropene	19.8	0.500	20.00	0	99.2	63.8	132	18.58	6.54	30	
Toluene	22.0	1.00	20.00	0	110	52	147	20.66	6.18	30	
trans-1,3-Dichloropropylene	20.0	0.500	20.00	0	100	57.7	125	18.72	6.82	30	
1,1,2-Trichloroethane	21.4	0.500	20.00	0	107	57.5	153	20.40	4.57	30	
1,3-Dichloropropane	21.4	0.500	20.00	0	107	54.1	157	20.48	4.45	30	
Tetrachloroethene (PCE)	571	0.500	20.00	528.0	215	50.3	133	566.2	0.840	30	SE
Dibromochloromethane	22.1	0.500	20.00	0	110	61.6	139	21.30	3.49	30	
1,2-Dibromoethane (EDB)	22.4	0.200	20.00	0	112	63.2	134	21.12	5.74	30	

Work Order: 1812244
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812221-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446		
Client ID:	BATCH	Batch ID:	23014	Analysis Date:	12/20/2018	SeqNo:	948760				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.7	0.500	20.00	0	109	65.8	134	20.65	5.18	30	
1,1,1,2-Tetrachloroethane	21.6	0.500	20.00	0	108	65.4	135	20.16	6.90	30	
Ethylbenzene	21.6	1.00	20.00	0	108	64.5	136	20.74	4.27	30	
m,p-Xylene	43.5	1.00	40.00	0.3324	108	63.3	135	41.35	5.09	30	
o-Xylene	19.7	1.00	20.00	0.6368	95.2	64.8	150	18.52	6.01	30	
Styrene	20.1	1.00	20.00	0	101	52.9	163	18.78	7.01	30	
Isopropylbenzene	21.1	1.00	20.00	0	105	56	147	19.98	5.38	30	
Bromoform	21.4	0.500	20.00	0	107	57.7	139	19.77	7.96	30	
1,1,2,2-Tetrachloroethane	19.1	0.500	20.00	0	95.7	59.8	146	18.87	1.47	30	
n-Propylbenzene	21.7	1.00	20.00	0	109	57.6	142	20.83	4.19	30	
Bromobenzene	21.7	0.500	20.00	0	109	69.3	157	20.38	6.34	30	
1,3,5-Trimethylbenzene	22.3	1.00	20.00	0	111	59.9	136	21.28	4.63	30	
2-Chlorotoluene	21.2	0.500	20.00	0	106	61.7	134	20.74	1.99	30	
4-Chlorotoluene	22.2	0.500	20.00	0	111	58.4	134	21.12	4.94	30	
tert-Butylbenzene	23.2	1.00	20.00	0	116	66.8	141	21.62	7.16	30	
1,2,3-Trichloropropane	18.2	0.500	20.00	0	90.8	62.4	129	18.23	0.374	30	
1,2,4-Trichlorobenzene	22.6	1.00	20.00	0	113	50.9	133	20.33	10.8	30	
sec-Butylbenzene	22.3	1.00	20.00	0	111	56	146	21.09	5.44	30	
4-Isopropyltoluene	21.7	1.00	20.00	0	108	56.4	136	20.69	4.65	30	
1,3-Dichlorobenzene	22.7	0.500	20.00	0	113	58.2	128	21.28	6.23	30	
1,4-Dichlorobenzene	22.1	0.500	20.00	0	111	60.1	123	20.66	6.77	30	
n-Butylbenzene	23.0	1.00	20.00	0	115	54.6	135	21.07	8.73	30	
1,2-Dichlorobenzene	22.5	0.500	20.00	0	112	65.4	133	20.72	8.16	30	
1,2-Dibromo-3-chloropropane	19.6	0.500	20.00	0	98.0	51.8	142	17.40	11.9	30	
1,2,4-Trimethylbenzene	21.7	1.00	20.00	0	109	63.7	132	20.96	3.68	30	
Hexachloro-1,3-butadiene	23.4	2.00	20.00	0	117	58.1	130	20.96	10.9	30	
Naphthalene	24.3	1.00	20.00	0.5061	119	50.7	154	21.93	10.2	30	
1,2,3-Trichlorobenzene	23.1	2.00	20.00	0	115	57	131	20.45	12.1	30	
Surr: Dibromofluoromethane	24.0		25.00		95.9	45.4	152		0		
Surr: Toluene-d8	25.0		25.00		100	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.2	64.2	128		0		

Work Order: 1812244
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812221-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48446				
Client ID:	BATCH	Batch ID:	23014			Analysis Date:	12/20/2018	SeqNo:	948760				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

- S - Analyte concentration was too high for accurate spike recovery(ies).
- E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812244**
 Date Received: **12/17/2018 3:15:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.8
Sample	5.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Client: **Kaile Environmental**

Address: **14015 13th Ave N**

City, State, zip: **Seattle, WA 98119**

Telephone: **206 991 0470**

Fax: _____

Date: **12/17/18**

Project Name: **BSCSS**

Project No: **82302-9.1**

Collected by: **bn + ek**

Location: **50thell**

Report To (PM): **JEFF SENSEN**

PM Email: **JEFF@KAILE-ENVIRONMENTAL.COM**

Page: **1** of **1**

Laboratory Project No (Internal): **1812244**

Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes														Comments			
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DH)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Metals (IC)***	EDB (8011)	TUC		AMMONIA-N	RSK	
1 MW-39:W	12/17	1225	GW	X																	lab filter, QC
2 MW-40:W	12/17	1405	GW	X																	lab filter
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl Ti U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished: **AKLE** Date/Time: **12/17/18 1515**

Received: **[Signature]** Date/Time: **12/17/18 1515**

Turn-around Time: Standard 3 Day 2 Day Next Day Same Day (specify) _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812269

December 28, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 12/18/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/28/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812269

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812269-001	HZ-MW-30:W	12/18/2018 12:55 PM	12/18/2018 3:16 PM
1812269-002	HZ-MW-31:W	12/18/2018 2:15 PM	12/18/2018 3:16 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/18/2018 12:55:00 PM

Project: BSCSS

Lab ID: 1812269-001

Matrix: Groundwater

Client Sample ID: HZ-MW-30:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	0.307	0.0432	D	mg/L	5	12/21/2018 1:00:00 PM
Ethene	ND	0.0151		mg/L	1	12/21/2018 12:00:00 PM
Ethane	ND	0.0162		mg/L	1	12/21/2018 12:00:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23018 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Chloromethane	ND	2.00		µg/L	1	12/20/2018 6:17:21 PM
Vinyl chloride	ND	0.200		µg/L	1	12/20/2018 6:17:21 PM
Bromomethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Chloroethane	ND	1.00	Q	µg/L	1	12/20/2018 6:17:21 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Methylene chloride	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/20/2018 6:17:21 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Chloroform	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Benzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/20/2018 6:17:21 PM
1,2-Dichloropropane	ND	1.00	Q	µg/L	1	12/20/2018 6:17:21 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Dibromomethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Toluene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/20/2018 6:17:21 PM
Chlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM



Client: Kane Environmental, Inc.

Collection Date: 12/18/2018 12:55:00 PM

Project: BSCSS

Lab ID: 1812269-001

Matrix: Groundwater

Client Sample ID: HZ-MW-30:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23018

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
m,p-Xylene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
o-Xylene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Styrene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Bromoform	ND	2.00		µg/L	1	12/20/2018 6:17:21 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Bromobenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/20/2018 6:17:21 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/20/2018 6:17:21 PM
Naphthalene	ND	1.00		µg/L	1	12/20/2018 6:17:21 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/20/2018 6:17:21 PM
Surr: Dibromofluoromethane	96.2	45.4 - 152		%Rec	1	12/20/2018 6:17:21 PM
Surr: Toluene-d8	86.9	40.1 - 139		%Rec	1	12/20/2018 6:17:21 PM
Surr: 1-Bromo-4-fluorobenzene	94.1	64.2 - 128		%Rec	1	12/20/2018 6:17:21 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	3.62	0.500	D	mg/L	5	12/22/2018 9:02:00 AM
Sulfate	ND	0.300		mg/L	1	12/27/2018 3:07:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812269-001
Client Sample ID: HZ-MW-30:W

Collection Date: 12/18/2018 12:55:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 23079		Analyst: WC
Iron	247	100		µg/L	1	12/27/2018 1:08:49 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	2.15	0.500		mg/L	1	12/22/2018 9:13:00 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23045		Analyst: GM
Nitrogen, Ammonia	0.956	0.100		mg/L	1	12/21/2018 2:51:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/18/2018 2:15:00 PM

Project: BSCSS

Lab ID: 1812269-002

Matrix: Groundwater

Client Sample ID: HZ-MW-31:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	0.151	0.00863		mg/L	1	12/21/2018 12:05:00 PM
Ethene	ND	0.0151		mg/L	1	12/21/2018 12:05:00 PM
Ethane	ND	0.0162		mg/L	1	12/21/2018 12:05:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23018 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Chloromethane	ND	2.00		µg/L	1	12/20/2018 6:48:38 PM
Vinyl chloride	ND	0.200		µg/L	1	12/20/2018 6:48:38 PM
Bromomethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Chloroethane	ND	1.00	Q	µg/L	1	12/20/2018 6:48:38 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Methylene chloride	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/20/2018 6:48:38 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Chloroform	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Benzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/20/2018 6:48:38 PM
1,2-Dichloropropane	ND	1.00	Q	µg/L	1	12/20/2018 6:48:38 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Dibromomethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Toluene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/20/2018 6:48:38 PM
Chlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM



Client: Kane Environmental, Inc.

Collection Date: 12/18/2018 2:15:00 PM

Project: BSCSS

Lab ID: 1812269-002

Matrix: Groundwater

Client Sample ID: HZ-MW-31:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23018

Analyst: KT

Ethylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
m,p-Xylene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
o-Xylene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Styrene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Bromoform	ND	2.00		µg/L	1	12/20/2018 6:48:38 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Bromobenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/20/2018 6:48:38 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/20/2018 6:48:38 PM
Naphthalene	ND	1.00		µg/L	1	12/20/2018 6:48:38 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/20/2018 6:48:38 PM
Surr: Dibromofluoromethane	97.1	45.4 - 152		%Rec	1	12/20/2018 6:48:38 PM
Surr: Toluene-d8	87.8	40.1 - 139		%Rec	1	12/20/2018 6:48:38 PM
Surr: 1-Bromo-4-fluorobenzene	92.0	64.2 - 128		%Rec	1	12/20/2018 6:48:38 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	8.76	0.500	D	mg/L	5	12/22/2018 9:25:00 AM
Sulfate	8.74	1.50	D	mg/L	5	12/22/2018 9:25:00 AM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812269-002
Client Sample ID: HZ-MW-31:W

Collection Date: 12/18/2018 2:15:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 23079		Analyst: WC
Iron	1,880	100		µg/L	1	12/27/2018 1:12:50 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	4.99	0.500		mg/L	1	12/22/2018 9:33:00 AM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23045		Analyst: GM
Nitrogen, Ammonia	0.297	0.100		mg/L	1	12/21/2018 2:56:00 PM

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-23045	SampType: MBLK	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: MBLKW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949985							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-23045	SampType: LCS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: LCSW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949986							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.540 0.100 0.5000 0 108 80 120

Sample ID 1812201-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949992							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812201-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949993							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.501 0.100 0.5000 0 100 70 130

Sample ID 1812201-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949994							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.480 0.100 0.5000 0 96.0 70 130 0.5010 4.28 30



Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Ammonia by SM 4500 NH3G

Sample ID 1812301-001FDUP	SampType: DUP	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48498					
Client ID: BATCH	Batch ID: 23045				Analysis Date: 12/21/2018	SeqNo: 950010					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.394	0.100						0.3560	10.1	30	

Sample ID 1812301-001FMS	SampType: MS	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48498					
Client ID: BATCH	Batch ID: 23045				Analysis Date: 12/21/2018	SeqNo: 950011					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.938	0.100	0.5000	0.3560	116	70	130				

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-23048	SampType:	MBLK	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	MBLKW	Batch ID:	23048	Analysis Date:	12/21/2018	SeqNo:	950722				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	1812180-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/21/2018	SeqNo:	950725				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	7.28	0.100						7.269	0.206	20	E
Sulfate	8.03	0.300						8.007	0.237	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812180-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/22/2018	SeqNo:	950726				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.12	0.100	0.7500	7.269	113	80	120				E
Sulfate	12.2	0.300	3.750	8.007	110	80	120				

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812180-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048	Analysis Date:	12/22/2018	SeqNo:	950727				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.08	0.100	0.7500	7.269	109	80	120	8.117	0.407	20	E
Sulfate	11.9	0.300	3.750	8.007	105	80	120	12.15	1.79	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812244-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950746		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.586	0.100						0.5860	0	20	
Sulfate	1.56	0.300						1.553	0.129	20	

Sample ID	1812244-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950747		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	1.31	0.100	0.7500	0.5860	96.5	80	120				
Sulfate	5.08	0.300	3.750	1.553	94.0	80	120				

Sample ID	LCS-23048	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	LCSW	Batch ID:	23048			Analysis Date:	12/24/2018	SeqNo:	950949		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.726	0.100	0.7500	0	96.8	90	110				
Sulfate	3.73	0.300	3.750	0	99.5	90	110				

Sample ID	LCS-23095	SampType:	LCS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48638		
Client ID:	LCSW	Batch ID:	23095			Analysis Date:	12/27/2018	SeqNo:	953561		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	3.69	0.300	3.750	0	98.5	90	110				
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Sample ID	MB-23095	SampType:	MBLK	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48638		
Client ID:	MBLKW	Batch ID:	23095			Analysis Date:	12/27/2018	SeqNo:	953562		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	ND	0.300									
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Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID 1812198-008BDUP	SampType: DUP	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48638					
Client ID: BATCH	Batch ID: 23095				Analysis Date: 12/27/2018	SeqNo: 953570					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	4.69	0.300				4.727	0.807	20
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Sample ID 1812198-008BMS	SampType: MS	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48638					
Client ID: BATCH	Batch ID: 23095				Analysis Date: 12/27/2018	SeqNo: 953571					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	8.53	0.300	3.750	4.727	101	80	120
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Sample ID 1812198-008BMSD	SampType: MSD	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48638					
Client ID: BATCH	Batch ID: 23095				Analysis Date: 12/27/2018	SeqNo: 953572					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	8.57	0.300	3.750	4.727	102	80	120	8.533	0.433	20
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Sample ID 1812198-015BDUP	SampType: DUP	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48638					
Client ID: BATCH	Batch ID: 23095				Analysis Date: 12/27/2018	SeqNo: 953574					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	8.99	0.300						8.937	0.591	20
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Sample ID 1812198-015BMS	SampType: MS	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48638					
Client ID: BATCH	Batch ID: 23095				Analysis Date: 12/27/2018	SeqNo: 953575					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	12.8	0.300	3.750	8.937	103	80	120
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Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812244-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951437							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.33	0.500						3.365	0.956	20	

Sample ID 1812244-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951438							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.17	0.500	5.000	3.365	96.2	70	130				



Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23079	SampType: MBLK	Units: µg/L			Prep Date: 12/27/2018	RunNo: 48598					
Client ID: MBLKW	Batch ID: 23079				Analysis Date: 12/27/2018	SeqNo: 952526					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23079	SampType: LCS	Units: µg/L			Prep Date: 12/27/2018	RunNo: 48598					
Client ID: LCSW	Batch ID: 23079				Analysis Date: 12/27/2018	SeqNo: 952528					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 984 100 1,000 0 98.4 50 150

Sample ID 1812259-001DDUP	SampType: DUP	Units: µg/L			Prep Date: 12/27/2018	RunNo: 48598					
Client ID: BATCH	Batch ID: 23079				Analysis Date: 12/27/2018	SeqNo: 952530					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812259-001DMS	SampType: MS	Units: µg/L			Prep Date: 12/27/2018	RunNo: 48598					
Client ID: BATCH	Batch ID: 23079				Analysis Date: 12/27/2018	SeqNo: 952531					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,120 100 5,000 32.14 102 50 150

Sample ID 1812259-001DMSD	SampType: MSD	Units: µg/L			Prep Date: 12/27/2018	RunNo: 48598					
Client ID: BATCH	Batch ID: 23079				Analysis Date: 12/27/2018	SeqNo: 952532					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,010 100 5,000 32.14 99.5 50 150 5,120 2.25 30



Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID	MB1-23023FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/27/2018	RunNo:	48598				
Client ID:	MBLKW	Batch ID:	23079			Analysis Date:	12/27/2018	SeqNo:	952615				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Sample ID	MB2-23023FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/27/2018	RunNo:	48598				
Client ID:	MBLKW	Batch ID:	23079			Analysis Date:	12/27/2018	SeqNo:	952616				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48486	SampType:	MBLK	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	MBLKW	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949829		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48486	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	LCSW	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949828		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	844	0.00863	1,000	0	84.4	70	130				
Ethene	848	0.0151	1,000	0	84.8	70	130				
Ethane	848	0.0162	1,000	0	84.8	70	130				

Sample ID	1812221-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	BATCH	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949810		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.121	0.00863						0.1452	17.8	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23018	SampType:	LCS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	LCSW	Batch ID:	23018	Analysis Date:	12/19/2018	SeqNo:	948457				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	20.7	1.00	20.00	0	103	18.7	171				
Chloromethane	16.8	2.00	20.00	0	84.2	38.5	171				
Vinyl chloride	17.0	0.200	20.00	0	85.0	48	145				
Bromomethane	18.6	1.00	20.00	0	92.8	32.5	184				
Trichlorofluoromethane (CFC-11)	19.4	1.00	20.00	0	96.8	43.5	149				
Chloroethane	15.9	1.00	20.00	0	79.7	43.8	168				
1,1-Dichloroethene	17.2	1.00	20.00	0	86.1	57.5	150				
Methylene chloride	16.5	1.00	20.00	0	82.3	67.1	131				
trans-1,2-Dichloroethene	17.3	1.00	20.00	0	86.3	71.7	129				
Methyl tert-butyl ether (MTBE)	16.6	1.00	20.00	0	82.9	58	138				
1,1-Dichloroethane	16.8	1.00	20.00	0	84.1	67.9	134				
2,2-Dichloropropane	24.3	2.00	20.00	0	121	26.5	185				
cis-1,2-Dichloroethene	17.2	1.00	20.00	0	85.8	70.2	139				
Chloroform	17.8	1.00	20.00	0	88.8	66.3	131				
1,1,1-Trichloroethane (TCA)	18.8	1.00	20.00	0	94.0	63	140				
1,1-Dichloropropene	17.5	1.00	20.00	0	87.3	69.9	124				
Carbon tetrachloride	19.9	1.00	20.00	0	99.6	66.2	134				
1,2-Dichloroethane (EDC)	18.4	1.00	20.00	0	92.0	67	126				
Benzene	16.4	1.00	20.00	0	82.2	69.3	132				
Trichloroethene (TCE)	17.1	0.500	20.00	0	85.6	65.2	136				
1,2-Dichloropropane	16.1	1.00	20.00	0	80.7	70.5	130				
Bromodichloromethane	17.6	1.00	20.00	0	88.1	67.2	137				
Dibromomethane	16.8	1.00	20.00	0	84.2	69.3	143				
cis-1,3-Dichloropropene	17.6	1.00	20.00	0	87.8	62.6	137				
Toluene	17.9	1.00	20.00	0	89.4	61.3	145				
trans-1,3-Dichloropropylene	18.2	1.00	20.00	0	90.8	56.5	163				
1,1,2-Trichloroethane	16.2	1.00	20.00	0	81.2	71.7	131				
1,3-Dichloropropane	16.0	1.00	20.00	0	79.9	73.5	127				
Tetrachloroethene (PCE)	20.4	1.00	20.00	0	102	47.5	147				
Dibromochloromethane	18.6	1.00	20.00	0	93.2	67.2	134				
1,2-Dibromoethane (EDB)	16.5	0.250	20.00	0	82.6	73.6	125				

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23018	SampType:	LCS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437
Client ID:	LCSW	Batch ID:	23018			Analysis Date:	12/19/2018	SeqNo:	948457

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.6	1.00	20.00	0	98.2	73.9	126				
1,1,1,2-Tetrachloroethane	20.6	1.00	20.00	0	103	76.8	124				
Ethylbenzene	19.5	1.00	20.00	0	97.6	72	130				
m,p-Xylene	40.3	1.00	40.00	0	101	70.3	134				
o-Xylene	19.7	1.00	20.00	0	98.3	72.1	131				
Styrene	19.2	1.00	20.00	0	96.2	64.3	140				
Isopropylbenzene	19.5	1.00	20.00	0	97.4	73.9	128				
Bromoform	18.9	2.00	20.00	0	94.3	55.3	141				
1,1,2,2-Tetrachloroethane	15.7	1.00	20.00	0	78.6	62.9	132				
n-Propylbenzene	19.4	1.00	20.00	0	97.0	74.5	127				
Bromobenzene	19.6	1.00	20.00	0	98.2	71	131				
1,3,5-Trimethylbenzene	20.2	1.00	20.00	0	101	73.1	128				
2-Chlorotoluene	18.5	1.00	20.00	0	92.5	70.8	130				
4-Chlorotoluene	19.8	1.00	20.00	0	98.9	70.1	131				
tert-Butylbenzene	20.4	1.00	20.00	0	102	68.2	131				
1,2,3-Trichloropropane	15.3	1.00	20.00	0	76.7	67.7	131				
1,2,4-Trichlorobenzene	21.4	2.00	20.00	0	107	41	139				
sec-Butylbenzene	20.7	1.00	20.00	0	103	72	129				
4-Isopropyltoluene	21.5	1.00	20.00	0	107	69.2	130				
1,3-Dichlorobenzene	20.1	1.00	20.00	0	101	69.5	128				
1,4-Dichlorobenzene	20.1	1.00	20.00	0	100	66.8	119				
n-Butylbenzene	19.9	1.00	20.00	0	99.3	73.8	127				
1,2-Dichlorobenzene	19.7	1.00	20.00	0	98.7	69.7	119				
1,2-Dibromo-3-chloropropane	16.2	1.00	20.00	0	81.0	63.1	136				
1,2,4-Trimethylbenzene	20.3	1.00	20.00	0	102	73.4	127				
Hexachloro-1,3-butadiene	23.7	4.00	20.00	0	119	58.6	138				
Naphthalene	17.7	1.00	20.00	0	88.7	41.8	165				
1,2,3-Trichlorobenzene	20.3	4.00	20.00	0	102	35.8	155				
Surr: Dibromofluoromethane	23.7		25.00		94.9	45.4	152				
Surr: Toluene-d8	22.6		25.00		90.5	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.6	64.2	128				

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23018	SampType:	LCS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437				
Client ID:	LCSW	Batch ID:	23018			Analysis Date:	12/19/2018	SeqNo:	948457				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-23018	SampType:	MBLK	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437				
Client ID:	MBLKW	Batch ID:	23018			Analysis Date:	12/19/2018	SeqNo:	948458				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00											
Chloromethane	ND	2.00											
Vinyl chloride	ND	0.200											
Bromomethane	ND	1.00											
Trichlorofluoromethane (CFC-11)	ND	1.00											
Chloroethane	ND	1.00											
1,1-Dichloroethene	ND	1.00											
Methylene chloride	ND	1.00											
trans-1,2-Dichloroethene	ND	1.00											
Methyl tert-butyl ether (MTBE)	ND	1.00											
1,1-Dichloroethane	ND	1.00											
2,2-Dichloropropane	ND	2.00											
cis-1,2-Dichloroethene	ND	1.00											
Chloroform	ND	1.00											
1,1,1-Trichloroethane (TCA)	ND	1.00											
1,1-Dichloropropene	ND	1.00											
Carbon tetrachloride	ND	1.00											
1,2-Dichloroethane (EDC)	ND	1.00											
Benzene	ND	1.00											
Trichloroethene (TCE)	ND	0.500											
1,2-Dichloropropane	ND	1.00											Q
Bromodichloromethane	ND	1.00											
Dibromomethane	ND	1.00											
cis-1,3-Dichloropropene	ND	1.00											
Toluene	ND	1.00											

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23018	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48437
Client ID: MBLKW	Batch ID: 23018		Analysis Date: 12/19/2018	SeqNo: 948458

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									Q
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									Q
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									Q
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23018	SampType: MBLK	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48437							
Client ID: MBLKW	Batch ID: 23018		Analysis Date: 12/19/2018	SeqNo: 948458							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	23.6		25.00		94.6	45.4	152				
Surr: Toluene-d8	21.8		25.00		87.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.0		25.00		91.9	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812254-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48437							
Client ID: BATCH	Batch ID: 23018		Analysis Date: 12/20/2018	SeqNo: 948451							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812254-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437
Client ID:	BATCH	Batch ID:	23018			Analysis Date:	12/20/2018	SeqNo:	948451

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	Q
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	Q
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	Q
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812254-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	BATCH	Batch ID:	23018			Analysis Date:	12/20/2018	SeqNo:	948451		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	23.8		25.00		95.3	45.4	152		0		
Surr: Toluene-d8	22.3		25.00		89.1	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.5		25.00		93.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812263-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	BATCH	Batch ID:	23018			Analysis Date:	12/20/2018	SeqNo:	949445		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	Q
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812263-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437
Client ID:	BATCH	Batch ID:	23018	Analysis Date:	12/20/2018	SeqNo:	949445		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	Q
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812263-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	BATCH	Batch ID:	23018	Analysis Date:	12/20/2018	SeqNo:	949445				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.1		25.00		96.5	45.4	152		0		
Surr: Toluene-d8	21.7		25.00		86.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.2		25.00		93.0	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812269-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	HZ-MW-30:W	Batch ID:	23018	Analysis Date:	12/20/2018	SeqNo:	949448				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	28.6	1.00	20.00	0	143	33.3	122				S
Chloromethane	20.7	2.00	20.00	0	104	39.7	143				
Vinyl chloride	21.0	0.200	20.00	0	105	41	165				
Bromomethane	23.6	1.00	20.00	0	118	31.5	135				

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812269-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437
Client ID:	HZ-MW-30:W	Batch ID:	23018			Analysis Date:	12/20/2018	SeqNo:	949448

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	23.3	1.00	20.00	0	117	54.7	138				
Chloroethane	19.1	1.00	20.00	0	95.5	49.9	143				
1,1-Dichloroethene	20.5	1.00	20.00	0	102	51.6	164				
Methylene chloride	18.3	1.00	20.00	0	91.7	61.6	135				
trans-1,2-Dichloroethene	19.6	1.00	20.00	0	97.8	63.5	138				
Methyl tert-butyl ether (MTBE)	18.5	1.00	20.00	0	92.6	60.9	132				
1,1-Dichloroethane	18.8	1.00	20.00	0	94.1	55.7	151				
2,2-Dichloropropane	20.5	2.00	20.00	0	103	37.7	150				
cis-1,2-Dichloroethene	19.2	1.00	20.00	0	96.0	60	154				
Chloroform	19.7	1.00	20.00	0	98.6	48.1	140				
1,1,1-Trichloroethane (TCA)	22.1	1.00	20.00	0	110	64.2	146				
1,1-Dichloropropene	20.1	1.00	20.00	0	100	73.8	136				
Carbon tetrachloride	23.5	1.00	20.00	0	117	62.7	146				
1,2-Dichloroethane (EDC)	20.7	1.00	20.00	0	103	63.4	137				
Benzene	18.4	1.00	20.00	0	91.9	65.4	138				
Trichloroethene (TCE)	18.9	0.500	20.00	0	94.5	60.4	134				
1,2-Dichloropropane	17.4	1.00	20.00	0	87.0	62.6	138				
Bromodichloromethane	20.0	1.00	20.00	0	100	59.4	139				
Dibromomethane	18.9	1.00	20.00	0	94.7	58.7	148				
cis-1,3-Dichloropropene	18.3	1.00	20.00	0	91.6	63.8	132				
Toluene	19.3	1.00	20.00	0	96.3	52	147				
trans-1,3-Dichloropropylene	19.2	1.00	20.00	0	95.8	57.7	125				
1,1,2-Trichloroethane	18.5	1.00	20.00	0	92.7	57.5	153				
1,3-Dichloropropane	18.0	1.00	20.00	0	89.8	54.1	157				
Tetrachloroethene (PCE)	22.3	1.00	20.00	0	111	50.3	133				
Dibromochloromethane	21.1	1.00	20.00	0	105	61.6	139				
1,2-Dibromoethane (EDB)	18.5	0.250	20.00	0	92.7	63.2	134				
Chlorobenzene	21.6	1.00	20.00	0	108	65.8	134				
1,1,1,2-Tetrachloroethane	23.0	1.00	20.00	0	115	65.4	135				
Ethylbenzene	21.5	1.00	20.00	0	108	64.5	136				
m,p-Xylene	44.2	1.00	40.00	0	111	63.3	135				

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812269-001AMS	SampType: MS	Units: µg/L	Prep Date: 12/19/2018	RunNo: 48437
Client ID: HZ-MW-30:W	Batch ID: 23018		Analysis Date: 12/20/2018	SeqNo: 949448

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	21.6	1.00	20.00	0	108	64.8	150				
Styrene	21.1	1.00	20.00	0	105	52.9	163				
Isopropylbenzene	21.8	1.00	20.00	0	109	56	147				
Bromoform	21.9	2.00	20.00	0	110	57.7	139				
1,1,1,2-Tetrachloroethane	20.0	1.00	20.00	0	100	59.8	146				
n-Propylbenzene	22.0	1.00	20.00	0	110	57.6	142				
Bromobenzene	22.1	1.00	20.00	0	110	69.3	157				
1,3,5-Trimethylbenzene	21.8	1.00	20.00	0	109	59.9	136				
2-Chlorotoluene	21.0	1.00	20.00	0	105	61.7	134				
4-Chlorotoluene	21.1	1.00	20.00	0	105	58.4	134				
tert-Butylbenzene	22.9	1.00	20.00	0	114	66.8	141				
1,2,3-Trichloropropane	18.8	1.00	20.00	0	94.1	62.4	129				
1,2,4-Trichlorobenzene	22.0	2.00	20.00	0	110	50.9	133				
sec-Butylbenzene	22.7	1.00	20.00	0	114	56	146				
4-Isopropyltoluene	23.2	1.00	20.00	0	116	56.4	136				
1,3-Dichlorobenzene	21.5	1.00	20.00	0	107	58.2	128				
1,4-Dichlorobenzene	21.4	1.00	20.00	0	107	60.1	123				
n-Butylbenzene	20.2	1.00	20.00	0	101	54.6	135				
1,2-Dichlorobenzene	21.2	1.00	20.00	0	106	65.4	133				
1,2-Dibromo-3-chloropropane	19.2	1.00	20.00	0	96.1	51.8	142				
1,2,4-Trimethylbenzene	22.0	1.00	20.00	0	110	63.7	132				
Hexachloro-1,3-butadiene	23.9	4.00	20.00	0	120	58.1	130				
Naphthalene	20.3	1.00	20.00	0	101	50.7	154				
1,2,3-Trichlorobenzene	22.2	4.00	20.00	0	111	57	131				
Surr: Dibromofluoromethane	23.7		25.00		94.8	45.4	152				
Surr: Toluene-d8	22.2		25.00		89.0	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.7		25.00		94.8	64.2	128				

NOTES:

S - Outlying spike recovery(ies) observed.

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812269-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	HZ-MW-30:W	Batch ID:	23018	Analysis Date:	12/20/2018	SeqNo:	949449				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	29.1	1.00	20.00	0	146	33.3	122	28.61	1.84	30	S
Chloromethane	21.7	2.00	20.00	0	108	39.7	143	20.74	4.49	30	
Vinyl chloride	22.1	0.200	20.00	0	110	41	165	21.05	4.65	30	
Bromomethane	22.7	1.00	20.00	0	114	31.5	135	23.64	4.03	30	
Trichlorofluoromethane (CFC-11)	23.6	1.00	20.00	0	118	54.7	138	23.31	1.38	30	
Chloroethane	19.7	1.00	20.00	0	98.4	49.9	143	19.10	3.01	30	
1,1-Dichloroethene	20.7	1.00	20.00	0	103	51.6	164	20.45	1.00	30	
Methylene chloride	18.8	1.00	20.00	0	94.0	61.6	135	18.33	2.49	30	
trans-1,2-Dichloroethene	19.9	1.00	20.00	0	99.4	63.5	138	19.56	1.58	30	
Methyl tert-butyl ether (MTBE)	18.7	1.00	20.00	0	93.4	60.9	132	18.53	0.845	30	
1,1-Dichloroethane	18.9	1.00	20.00	0	94.5	55.7	151	18.82	0.427	30	
2,2-Dichloropropane	20.3	2.00	20.00	0	101	37.7	150	20.53	1.24	30	
cis-1,2-Dichloroethene	19.2	1.00	20.00	0	96.2	60	154	19.20	0.183	30	
Chloroform	19.9	1.00	20.00	0	99.3	48.1	140	19.73	0.710	30	
1,1,1-Trichloroethane (TCA)	21.8	1.00	20.00	0	109	64.2	146	22.10	1.23	30	
1,1-Dichloropropene	20.1	1.00	20.00	0	101	73.8	136	20.10	0.141	30	
Carbon tetrachloride	23.5	1.00	20.00	0	117	62.7	146	23.46	0.0343	30	
1,2-Dichloroethane (EDC)	20.5	1.00	20.00	0	102	63.4	137	20.66	0.800	30	
Benzene	18.4	1.00	20.00	0	92.1	65.4	138	18.38	0.170	30	
Trichloroethene (TCE)	18.8	0.500	20.00	0	93.9	60.4	134	18.90	0.617	30	
1,2-Dichloropropane	17.2	1.00	20.00	0	85.8	62.6	138	17.40	1.45	30	
Bromodichloromethane	19.7	1.00	20.00	0	98.3	59.4	139	20.01	1.75	30	
Dibromomethane	18.7	1.00	20.00	0	93.5	58.7	148	18.95	1.33	30	
cis-1,3-Dichloropropene	18.3	1.00	20.00	0	91.4	63.8	132	18.31	0.213	30	
Toluene	19.1	1.00	20.00	0	95.3	52	147	19.26	1.09	30	
trans-1,3-Dichloropropylene	18.3	1.00	20.00	0	91.4	57.7	125	19.16	4.68	30	
1,1,2-Trichloroethane	18.1	1.00	20.00	0	90.6	57.5	153	18.53	2.21	30	
1,3-Dichloropropane	17.7	1.00	20.00	0	88.6	54.1	157	17.97	1.35	30	
Tetrachloroethene (PCE)	21.9	1.00	20.00	0	110	50.3	133	22.29	1.66	30	
Dibromochloromethane	21.0	1.00	20.00	0	105	61.6	139	21.08	0.443	30	
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	91.9	63.2	134	18.53	0.790	30	

Work Order: 1812269
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812269-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	HZ-MW-30:W	Batch ID:	23018	Analysis Date:	12/20/2018	SeqNo:	949449				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.9	1.00	20.00	0	110	65.8	134	21.59	1.64	30	
1,1,1,2-Tetrachloroethane	22.8	1.00	20.00	0	114	65.4	135	23.02	1.15	30	
Ethylbenzene	21.9	1.00	20.00	0	109	64.5	136	21.54	1.44	30	
m,p-Xylene	44.3	1.00	40.00	0	111	63.3	135	44.24	0.0381	30	
o-Xylene	21.7	1.00	20.00	0	108	64.8	150	21.63	0.271	30	
Styrene	21.2	1.00	20.00	0	106	52.9	163	21.08	0.432	30	
Isopropylbenzene	21.9	1.00	20.00	0	110	56	147	21.76	0.834	30	
Bromoform	21.8	2.00	20.00	0	109	57.7	139	21.93	0.582	30	
1,1,2,2-Tetrachloroethane	19.5	1.00	20.00	0	97.4	59.8	146	20.05	2.90	30	
n-Propylbenzene	22.4	1.00	20.00	0	112	57.6	142	21.99	1.79	30	
Bromobenzene	22.0	1.00	20.00	0	110	69.3	157	22.09	0.397	30	
1,3,5-Trimethylbenzene	22.2	1.00	20.00	0	111	59.9	136	21.76	2.14	30	
2-Chlorotoluene	21.2	1.00	20.00	0	106	61.7	134	21.02	0.632	30	
4-Chlorotoluene	21.6	1.00	20.00	0	108	58.4	134	21.08	2.30	30	
tert-Butylbenzene	23.2	1.00	20.00	0	116	66.8	141	22.89	1.53	30	
1,2,3-Trichloropropane	18.4	1.00	20.00	0	92.0	62.4	129	18.81	2.21	30	
1,2,4-Trichlorobenzene	23.0	2.00	20.00	0	115	50.9	133	22.02	4.22	30	
sec-Butylbenzene	23.2	1.00	20.00	0	116	56	146	22.72	2.18	30	
4-Isopropyltoluene	23.5	1.00	20.00	0	118	56.4	136	23.20	1.45	30	
1,3-Dichlorobenzene	21.7	1.00	20.00	0	109	58.2	128	21.47	1.14	30	
1,4-Dichlorobenzene	21.7	1.00	20.00	0	109	60.1	123	21.43	1.42	30	
n-Butylbenzene	20.7	1.00	20.00	0	104	54.6	135	20.24	2.43	30	
1,2-Dichlorobenzene	21.7	1.00	20.00	0	108	65.4	133	21.20	2.30	30	
1,2-Dibromo-3-chloropropane	19.4	1.00	20.00	0	96.8	51.8	142	19.21	0.745	30	
1,2,4-Trimethylbenzene	22.3	1.00	20.00	0	112	63.7	132	21.99	1.43	30	
Hexachloro-1,3-butadiene	25.4	4.00	20.00	0	127	58.1	130	23.95	5.86	30	
Naphthalene	21.0	1.00	20.00	0	105	50.7	154	20.26	3.70	30	
1,2,3-Trichlorobenzene	23.0	4.00	20.00	0	115	57	131	22.20	3.46	30	
Surr: Dibromofluoromethane	23.8		25.00		95.3	45.4	152		0		
Surr: Toluene-d8	21.9		25.00		87.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.7	64.2	128		0		

Work Order: 1812269
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812269-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/19/2018	RunNo:	48437		
Client ID:	HZ-MW-30:W	Batch ID:	23018	Analysis Date:	12/20/2018	SeqNo:	949449				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed.

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812269**
 Date Received: **12/18/2018 3:16:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	4.0
Sample	7.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812301

December 27, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/19/2018 for the analyses presented in the following report.

- Ammonia by SM 4500 NH3G***
- Dissolved Gases by RSK-175***
- Dissolved Metals by EPA Method 200.8***
- Ion Chromatography by EPA Method 300.0***
- Total Organic Carbon by SM 5310C***
- Volatile Organic Compounds by EPA Method 8260C***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Chelsea Ward".

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812301

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812301-001	HZ-MW-32:W	12/19/2018 10:40 AM	12/19/2018 3:40 PM
1812301-002	HZ-MW-23:W	12/19/2018 12:45 PM	12/19/2018 3:40 PM
1812301-003	HZ-MW-1:W	12/19/2018 2:20 PM	12/19/2018 3:40 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812301-001
Client Sample ID: HZ-MW-32:W

Collection Date: 12/19/2018 10:40:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	0.121	0.00863		mg/L	1	12/21/2018 12:08:00 PM
Ethene	ND	0.0151		mg/L	1	12/21/2018 12:08:00 PM
Ethane	ND	0.0162		mg/L	1	12/21/2018 12:08:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23033 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/22/2018 11:09:39 PM
Chloromethane	ND	2.00	Q	µg/L	1	12/22/2018 11:09:39 PM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/22/2018 11:09:39 PM
Bromomethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Chloroethane	ND	1.00	Q	µg/L	1	12/22/2018 11:09:39 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Methylene chloride	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/22/2018 11:09:39 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Chloroform	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Benzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/22/2018 11:09:39 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Dibromomethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
cis-1,3-Dichloropropene	ND	1.00	Q	µg/L	1	12/22/2018 11:09:39 PM
Toluene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
trans-1,3-Dichloropropylene	ND	1.00	Q	µg/L	1	12/22/2018 11:09:39 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/22/2018 11:09:39 PM
Chlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM



Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 10:40:00 AM

Project: BSCSS

Lab ID: 1812301-001

Matrix: Groundwater

Client Sample ID: HZ-MW-32:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23033

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
m,p-Xylene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
o-Xylene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Styrene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Bromoform	ND	2.00		µg/L	1	12/22/2018 11:09:39 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Bromobenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/22/2018 11:09:39 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/22/2018 11:09:39 PM
Naphthalene	ND	1.00		µg/L	1	12/22/2018 11:09:39 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/22/2018 11:09:39 PM
Surr: Dibromofluoromethane	95.9	45.4 - 152		%Rec	1	12/22/2018 11:09:39 PM
Surr: Toluene-d8	91.7	40.1 - 139		%Rec	1	12/22/2018 11:09:39 PM
Surr: 1-Bromo-4-fluorobenzene	96.1	64.2 - 128		%Rec	1	12/22/2018 11:09:39 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	13.6	0.500	D	mg/L	5	12/22/2018 9:48:00 AM
Sulfate	5.93	1.50	D	mg/L	5	12/22/2018 9:48:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 10:40:00 AM

Project: BSCSS

Lab ID: 1812301-001

Matrix: Groundwater

Client Sample ID: HZ-MW-32:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 23079 Analyst: WC

Iron	234	100		µg/L	1	12/27/2018 1:16:52 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48546 Analyst: GM

Total Organic Carbon	6.56	0.500		mg/L	1	12/22/2018 10:38:00 AM
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Ammonia by SM 4500 NH3G

Batch ID: 23045 Analyst: GM

Nitrogen, Ammonia	0.356	0.100		mg/L	1	12/21/2018 3:01:00 PM
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Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812301-002
Client Sample ID: HZ-MW-23:W

Collection Date: 12/19/2018 12:45:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	0.273	0.0863	D	mg/L	10	12/21/2018 12:57:00 PM
Ethene	ND	0.0151		mg/L	1	12/21/2018 12:11:00 PM
Ethane	ND	0.0162		mg/L	1	12/21/2018 12:11:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23033 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/22/2018 11:39:58 PM
Chloromethane	ND	2.00	Q	µg/L	1	12/22/2018 11:39:58 PM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/22/2018 11:39:58 PM
Bromomethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Chloroethane	ND	1.00	Q	µg/L	1	12/22/2018 11:39:58 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Methylene chloride	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/22/2018 11:39:58 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Chloroform	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Benzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/22/2018 11:39:58 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Dibromomethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
cis-1,3-Dichloropropene	ND	1.00	Q	µg/L	1	12/22/2018 11:39:58 PM
Toluene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
trans-1,3-Dichloropropylene	ND	1.00	Q	µg/L	1	12/22/2018 11:39:58 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/22/2018 11:39:58 PM
Chlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM



Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 12:45:00 PM

Project: BSCSS

Lab ID: 1812301-002

Matrix: Groundwater

Client Sample ID: HZ-MW-23:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23033

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
m,p-Xylene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
o-Xylene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Styrene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Bromoform	ND	2.00		µg/L	1	12/22/2018 11:39:58 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Bromobenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/22/2018 11:39:58 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/22/2018 11:39:58 PM
Naphthalene	ND	1.00		µg/L	1	12/22/2018 11:39:58 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/22/2018 11:39:58 PM
Surr: Dibromofluoromethane	94.7	45.4 - 152		%Rec	1	12/22/2018 11:39:58 PM
Surr: Toluene-d8	92.1	40.1 - 139		%Rec	1	12/22/2018 11:39:58 PM
Surr: 1-Bromo-4-fluorobenzene	96.0	64.2 - 128		%Rec	1	12/22/2018 11:39:58 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	11.3	0.500	D	mg/L	5	12/22/2018 10:11:00 AM
Sulfate	16.6	1.50	D	mg/L	5	12/22/2018 10:11:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 12:45:00 PM

Project: BSCSS

Lab ID: 1812301-002

Matrix: Groundwater

Client Sample ID: HZ-MW-23:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 23079 Analyst: WC

Iron	1,200	100		µg/L	1	12/27/2018 1:20:53 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48546 Analyst: GM

Total Organic Carbon	3.14	0.500		mg/L	1	12/22/2018 10:58:00 AM
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Ammonia by SM 4500 NH3G

Batch ID: 23045 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/21/2018 3:49:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812301-003

Matrix: Groundwater

Client Sample ID: HZ-MW-1:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48486 Analyst: SG

Methane	ND	0.00863		mg/L	1	12/21/2018 12:14:00 PM
Ethene	ND	0.0151		mg/L	1	12/21/2018 12:14:00 PM
Ethane	ND	0.0162		mg/L	1	12/21/2018 12:14:00 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23033 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	12/23/2018 3:42:20 AM
Chloromethane	ND	2.00	Q	µg/L	1	12/23/2018 3:42:20 AM
Vinyl chloride	ND	0.200	Q	µg/L	1	12/23/2018 3:42:20 AM
Bromomethane	ND	1.00	Q	µg/L	1	12/23/2018 3:42:20 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Chloroethane	ND	1.00	Q	µg/L	1	12/23/2018 3:42:20 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Methylene chloride	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	12/23/2018 3:42:20 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Chloroform	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Benzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/23/2018 3:42:20 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Dibromomethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
cis-1,3-Dichloropropene	ND	1.00	Q	µg/L	1	12/23/2018 3:42:20 AM
Toluene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
trans-1,3-Dichloropropylene	ND	1.00	Q	µg/L	1	12/23/2018 3:42:20 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Tetrachloroethene (PCE)	7.80	1.00		µg/L	1	12/23/2018 3:42:20 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/23/2018 3:42:20 AM
Chlorobenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM



Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812301-003

Matrix: Groundwater

Client Sample ID: HZ-MW-1:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23033

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
m,p-Xylene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
o-Xylene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Styrene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Bromoform	ND	2.00		µg/L	1	12/23/2018 3:42:20 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Bromobenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/23/2018 3:42:20 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/23/2018 3:42:20 AM
Naphthalene	ND	1.00		µg/L	1	12/23/2018 3:42:20 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/23/2018 3:42:20 AM
Surr: Dibromofluoromethane	92.8	45.4 - 152		%Rec	1	12/23/2018 3:42:20 AM
Surr: Toluene-d8	89.9	40.1 - 139		%Rec	1	12/23/2018 3:42:20 AM
Surr: 1-Bromo-4-fluorobenzene	96.1	64.2 - 128		%Rec	1	12/23/2018 3:42:20 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23048

Analyst: TN

Chloride	3.43	0.200	D	mg/L	2	12/22/2018 10:34:00 AM
Sulfate	8.54	0.600	D	mg/L	2	12/22/2018 10:34:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/19/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812301-003

Matrix: Groundwater

Client Sample ID: HZ-MW-1:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 23079 Analyst: WC

Iron	ND	100		µg/L	1	12/27/2018 1:24:55 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48546 Analyst: GM

Total Organic Carbon	1.17	0.500		mg/L	1	12/22/2018 11:18:00 AM
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Ammonia by SM 4500 NH3G

Batch ID: 23045 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/21/2018 3:54:00 PM
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Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-23045	SampType: MBLK	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: MBLKW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949985							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID LCS-23045	SampType: LCS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: LCSW	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949986							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.540 0.100 0.5000 0 108 80 120

Sample ID 1812201-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949992							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0 30

Sample ID 1812201-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949993							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.501 0.100 0.5000 0 100 70 130

Sample ID 1812201-001FMSD	SampType: MSD	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: BATCH	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 949994							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.480 0.100 0.5000 0 96.0 70 130 0.5010 4.28 30

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812301-001FDUP	SampType: DUP	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: HZ-MW-32:W	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 950010							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.394	0.100						0.3560	10.1	30	

Sample ID 1812301-001FMS	SampType: MS	Units: mg/L	Prep Date: 12/21/2018	RunNo: 48498							
Client ID: HZ-MW-32:W	Batch ID: 23045		Analysis Date: 12/21/2018	SeqNo: 950011							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.938	0.100	0.5000	0.3560	116	70	130				

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID MB-23048	SampType: MBLK	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: MBLKW	Batch ID: 23048				Analysis Date: 12/21/2018	SeqNo: 950722					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID 1812180-001ADUP	SampType: DUP	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/21/2018	SeqNo: 950725					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	7.28	0.100						7.269	0.206	20	E
Sulfate	8.03	0.300						8.007	0.237	20	

Sample ID 1812180-001AMS	SampType: MS	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/22/2018	SeqNo: 950726					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.12	0.100	0.7500	7.269	113	80	120				E
Sulfate	12.2	0.300	3.750	8.007	110	80	120				

Sample ID 1812180-001AMSD	SampType: MSD	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/22/2018	SeqNo: 950727					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.08	0.100	0.7500	7.269	109	80	120	8.117	0.407	20	E
Sulfate	11.9	0.300	3.750	8.007	105	80	120	12.15	1.79	20	

Sample ID 1812244-002DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/21/2018	RunNo: 48525					
Client ID: BATCH	Batch ID: 23048				Analysis Date: 12/22/2018	SeqNo: 950746					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.586	0.100						0.5860	0	20	
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Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812244-002DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950746		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1.56	0.300						1.553	0.129	20	

Sample ID	1812244-002DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	BATCH	Batch ID:	23048			Analysis Date:	12/22/2018	SeqNo:	950747		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.31	0.100	0.7500	0.5860	96.5	80	120				
Sulfate	5.08	0.300	3.750	1.553	94.0	80	120				

Sample ID	LCS-23048	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48525		
Client ID:	LCSW	Batch ID:	23048			Analysis Date:	12/24/2018	SeqNo:	950949		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.726	0.100	0.7500	0	96.8	90	110				
Sulfate	3.73	0.300	3.750	0	99.5	90	110				

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48546	SampType: MBLK	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: MBLKW	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951419							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48546	SampType: LCS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: LCSW	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951420							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 4.82 0.500 5.000 0 96.5 80 120

Sample ID 1812201-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951422							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 1.88 0.500 1.893 0.955 20

Sample ID 1812201-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951423							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.85 0.500 5.000 1.893 99.2 70 130

Sample ID 1812201-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951424							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.89 0.500 5.000 1.893 100 70 130 6.854 0.538 30

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812244-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: BATCH	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951437					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.33	0.500						3.365	0.956	20	

Sample ID 1812244-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: BATCH	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951438					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.17	0.500	5.000	3.365	96.2	70	130				

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23079	SampType: MBLK	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: MBLKW	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952526							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23079	SampType: LCS	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: LCSW	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952528							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 984 100 1,000 0 98.4 50 150

Sample ID 1812259-001DDUP	SampType: DUP	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: BATCH	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952530							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812259-001DMS	SampType: MS	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: BATCH	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952531							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,120 100 5,000 32.14 102 50 150

Sample ID 1812259-001DMSD	SampType: MSD	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: BATCH	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952532							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,010 100 5,000 32.14 99.5 50 150 5,120 2.25 30



Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID	MB1-23023FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/27/2018	RunNo:	48598			
Client ID:	MBLKW	Batch ID:	23079			Analysis Date:	12/27/2018	SeqNo:	952615			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Sample ID	MB2-23023FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/27/2018	RunNo:	48598			
Client ID:	MBLKW	Batch ID:	23079			Analysis Date:	12/27/2018	SeqNo:	952616			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48486	SampType:	MBLK	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	MBLKW	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949829		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48486	SampType:	LCS	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	LCSW	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949828		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	844	0.00863	1,000	0	84.4	70	130				
Ethene	848	0.0151	1,000	0	84.8	70	130				
Ethane	848	0.0162	1,000	0	84.8	70	130				

Sample ID	1812221-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/21/2018	RunNo:	48486		
Client ID:	BATCH	Batch ID:	R48486			Analysis Date:	12/21/2018	SeqNo:	949810		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.121	0.00863						0.1452	17.8	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23033	SampType:	LCS	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	LCSW	Batch ID:	23033	Analysis Date:	12/22/2018	SeqNo:	951100				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	17.2	1.00	20.00	0	86.0	18.7	171				
Chloromethane	16.8	2.00	20.00	0	83.8	38.5	171				
Vinyl chloride	17.9	0.200	20.00	0	89.6	48	145				
Bromomethane	19.9	1.00	20.00	0	99.3	32.5	184				
Trichlorofluoromethane (CFC-11)	19.0	1.00	20.00	0	95.1	43.5	149				
Chloroethane	17.9	1.00	20.00	0	89.4	43.8	168				
1,1-Dichloroethene	19.2	1.00	20.00	0	96.1	57.5	150				
Methylene chloride	18.7	1.00	20.00	0	93.3	67.1	131				
trans-1,2-Dichloroethene	19.4	1.00	20.00	0	97.2	71.7	129				
Methyl tert-butyl ether (MTBE)	19.5	1.00	20.00	0	97.7	58	138				
1,1-Dichloroethane	18.3	1.00	20.00	0	91.5	67.9	134				
2,2-Dichloropropane	9.39	2.00	20.00	0	46.9	26.5	185				
cis-1,2-Dichloroethene	19.3	1.00	20.00	0	96.4	70.2	139				
Chloroform	19.0	1.00	20.00	0	95.2	66.3	131				
1,1,1-Trichloroethane (TCA)	19.5	1.00	20.00	0	97.5	63	140				
1,1-Dichloropropene	18.8	1.00	20.00	0	93.9	69.9	124				
Carbon tetrachloride	19.8	1.00	20.00	0	98.8	66.2	134				
1,2-Dichloroethane (EDC)	19.0	1.00	20.00	0	95.0	67	126				
Benzene	18.8	1.00	20.00	0	94.0	69.3	132				
Trichloroethene (TCE)	19.6	0.500	20.00	0	97.8	65.2	136				
1,2-Dichloropropane	18.3	1.00	20.00	0	91.4	70.5	130				
Bromodichloromethane	19.0	1.00	20.00	0	95.1	67.2	137				
Dibromomethane	19.7	1.00	20.00	0	98.7	69.3	143				
cis-1,3-Dichloropropene	17.1	1.00	20.00	0	85.6	62.6	137				
Toluene	19.6	1.00	20.00	0	97.9	61.3	145				
trans-1,3-Dichloropropylene	17.3	1.00	20.00	0	86.5	56.5	163				
1,1,2-Trichloroethane	20.4	1.00	20.00	0	102	71.7	131				
1,3-Dichloropropane	19.4	1.00	20.00	0	96.9	73.5	127				
Tetrachloroethene (PCE)	20.4	1.00	20.00	0	102	47.5	147				
Dibromochloromethane	20.8	1.00	20.00	0	104	67.2	134				
1,2-Dibromoethane (EDB)	20.3	0.250	20.00	0	102	73.6	125				

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23033	SampType:	LCS	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531
Client ID:	LCSW	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951100

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.5	1.00	20.00	0	102	73.9	126				
1,1,1,2-Tetrachloroethane	21.0	1.00	20.00	0	105	76.8	124				
Ethylbenzene	19.9	1.00	20.00	0	99.3	72	130				
m,p-Xylene	40.8	1.00	40.00	0	102	70.3	134				
o-Xylene	20.6	1.00	20.00	0	103	72.1	131				
Styrene	20.5	1.00	20.00	0	103	64.3	140				
Isopropylbenzene	20.3	1.00	20.00	0	101	73.9	128				
Bromoform	21.6	2.00	20.00	0	108	55.3	141				
1,1,2,2-Tetrachloroethane	19.9	1.00	20.00	0	99.6	62.9	132				
n-Propylbenzene	19.4	1.00	20.00	0	97.0	74.5	127				
Bromobenzene	21.1	1.00	20.00	0	105	71	131				
1,3,5-Trimethylbenzene	20.2	1.00	20.00	0	101	73.1	128				
2-Chlorotoluene	19.9	1.00	20.00	0	99.3	70.8	130				
4-Chlorotoluene	19.6	1.00	20.00	0	98.2	70.1	131				
tert-Butylbenzene	20.6	1.00	20.00	0	103	68.2	131				
1,2,3-Trichloropropane	18.3	1.00	20.00	0	91.3	67.7	131				
1,2,4-Trichlorobenzene	20.5	2.00	20.00	0	102	41	139				
sec-Butylbenzene	19.8	1.00	20.00	0	98.9	72	129				
4-Isopropyltoluene	19.7	1.00	20.00	0	98.4	69.2	130				
1,3-Dichlorobenzene	21.3	1.00	20.00	0	107	69.5	128				
1,4-Dichlorobenzene	20.6	1.00	20.00	0	103	66.8	119				
n-Butylbenzene	18.6	1.00	20.00	0	93.2	73.8	127				
1,2-Dichlorobenzene	21.1	1.00	20.00	0	106	69.7	119				
1,2-Dibromo-3-chloropropane	20.5	1.00	20.00	0	102	63.1	136				
1,2,4-Trimethylbenzene	20.2	1.00	20.00	0	101	73.4	127				
Hexachloro-1,3-butadiene	20.1	4.00	20.00	0	100	58.6	138				
Naphthalene	21.3	1.00	20.00	0	106	41.8	165				
1,2,3-Trichlorobenzene	20.9	4.00	20.00	0	105	35.8	155				
Surr: Dibromofluoromethane	23.6		25.00		94.3	45.4	152				
Surr: Toluene-d8	23.6		25.00		94.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.1	64.2	128				

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23033	SampType:	LCS	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	LCSW	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951100		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-23033	SampType:	MBLK	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	MBLKW	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951101		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									Q
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									Q
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									Q
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									Q
Toluene	ND	1.00									

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23033	SampType: MBLK	Units: µg/L	Prep Date: 12/20/2018	RunNo: 48531
Client ID: MBLKW	Batch ID: 23033		Analysis Date: 12/22/2018	SeqNo: 951101

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									Q
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-23033	SampType:	MBLK	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	MBLKW	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951101		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	23.7		25.00		94.7	45.4	152				
Surr: Toluene-d8	23.3		25.00		93.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.7	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812312-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951096		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	Q
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	Q
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812312-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033	Analysis Date:	12/22/2018	SeqNo:	951096				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	Q
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	Q
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812312-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951096		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.1		25.00		96.5	45.4	152		0		
Surr: Toluene-d8	23.3		25.00		93.0	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.3	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812278-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033			Analysis Date:	12/22/2018	SeqNo:	951086		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	Q
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	Q
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812278-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033	Analysis Date:	12/22/2018	SeqNo:	951086				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	Q
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	Q
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812278-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033	Analysis Date:	12/22/2018	SeqNo:	951086				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						1.176	95.6	30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	23.8		25.00		95.0	45.4	152		0		
Surr: Toluene-d8	23.1		25.00		92.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.3	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812297-001BMS	SampType:	MS	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033	Analysis Date:	12/23/2018	SeqNo:	951089				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	17.0	1.00	20.00	0	85.2	33.3	122				
Chloromethane	17.7	2.00	20.00	0	88.6	39.7	143				
Vinyl chloride	18.3	0.200	20.00	0	91.5	41	165				
Bromomethane	16.5	1.00	20.00	0	82.4	31.5	135				



Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812297-001BMS	SampType:	MS	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531
Client ID:	BATCH	Batch ID:	23033			Analysis Date:	12/23/2018	SeqNo:	951089

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	20.0	1.00	20.00	0	100	54.7	138				
Chloroethane	21.9	1.00	20.00	0	110	49.9	143				
1,1-Dichloroethene	20.5	1.00	20.00	0	102	51.6	164				
Methylene chloride	19.5	1.00	20.00	0	97.7	61.6	135				
trans-1,2-Dichloroethene	20.5	1.00	20.00	0	102	63.5	138				
Methyl tert-butyl ether (MTBE)	19.8	1.00	20.00	0	98.9	60.9	132				
1,1-Dichloroethane	18.7	1.00	20.00	0	93.7	55.7	151				
2,2-Dichloropropane	6.88	2.00	20.00	0	34.4	37.7	150				S
cis-1,2-Dichloroethene	20.4	1.00	20.00	0	102	60	154				
Chloroform	20.5	1.00	20.00	0	103	48.1	140				
1,1,1-Trichloroethane (TCA)	21.4	1.00	20.00	0	107	64.2	146				
1,1-Dichloropropene	20.2	1.00	20.00	0	101	73.8	136				
Carbon tetrachloride	21.8	1.00	20.00	0	109	62.7	146				
1,2-Dichloroethane (EDC)	20.0	1.00	20.00	0	100	63.4	137				
Benzene	19.9	1.00	20.00	0	99.7	65.4	138				
Trichloroethene (TCE)	20.1	0.500	20.00	0	100	60.4	134				
1,2-Dichloropropane	19.0	1.00	20.00	0	95.1	62.6	138				
Bromodichloromethane	20.3	1.00	20.00	0	101	59.4	139				
Dibromomethane	20.9	1.00	20.00	0	105	58.7	148				
cis-1,3-Dichloropropene	17.0	1.00	20.00	0	84.9	63.8	132				
Toluene	20.7	1.00	20.00	0	104	52	147				
trans-1,3-Dichloropropylene	17.2	1.00	20.00	0	85.8	57.7	125				
1,1,2-Trichloroethane	21.3	1.00	20.00	0	107	57.5	153				
1,3-Dichloropropane	20.2	1.00	20.00	0	101	54.1	157				
Tetrachloroethene (PCE)	22.3	1.00	20.00	0	111	50.3	133				
Dibromochloromethane	22.1	1.00	20.00	0	110	61.6	139				
1,2-Dibromoethane (EDB)	21.7	0.250	20.00	0	108	63.2	134				
Chlorobenzene	22.1	1.00	20.00	0	111	65.8	134				
1,1,1,2-Tetrachloroethane	22.8	1.00	20.00	0	114	65.4	135				
Ethylbenzene	21.7	1.00	20.00	0	109	64.5	136				
m,p-Xylene	44.0	1.00	40.00	0	110	63.3	135				

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812297-001BMS	SampType: MS	Units: µg/L	Prep Date: 12/20/2018	RunNo: 48531
Client ID: BATCH	Batch ID: 23033		Analysis Date: 12/23/2018	SeqNo: 951089

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	22.0	1.00	20.00	0	110	64.8	150				
Styrene	20.9	1.00	20.00	0	105	52.9	163				
Isopropylbenzene	21.9	1.00	20.00	0	110	56	147				
Bromoform	22.5	2.00	20.00	0	113	57.7	139				
1,1,1,2,2-Tetrachloroethane	22.0	1.00	20.00	0	110	59.8	146				
n-Propylbenzene	20.4	1.00	20.00	0	102	57.6	142				
Bromobenzene	22.4	1.00	20.00	0	112	69.3	157				
1,3,5-Trimethylbenzene	21.8	1.00	20.00	0	109	59.9	136				
2-Chlorotoluene	21.5	1.00	20.00	0	108	61.7	134				
4-Chlorotoluene	19.9	1.00	20.00	0	99.5	58.4	134				
tert-Butylbenzene	22.0	1.00	20.00	0	110	66.8	141				
1,2,3-Trichloropropane	18.6	1.00	20.00	0	93.1	62.4	129				
1,2,4-Trichlorobenzene	21.2	2.00	20.00	0	106	50.9	133				
sec-Butylbenzene	21.2	1.00	20.00	0	106	56	146				
4-Isopropyltoluene	21.2	1.00	20.00	0	106	56.4	136				
1,3-Dichlorobenzene	22.2	1.00	20.00	0	111	58.2	128				
1,4-Dichlorobenzene	21.8	1.00	20.00	0	109	60.1	123				
n-Butylbenzene	19.2	1.00	20.00	0	95.9	54.6	135				
1,2-Dichlorobenzene	22.3	1.00	20.00	0	112	65.4	133				
1,2-Dibromo-3-chloropropane	22.3	1.00	20.00	0	111	51.8	142				
1,2,4-Trimethylbenzene	21.2	1.00	20.00	0	106	63.7	132				
Hexachloro-1,3-butadiene	22.2	4.00	20.00	0	111	58.1	130				
Naphthalene	22.7	1.00	20.00	0.3321	112	50.7	154				
1,2,3-Trichlorobenzene	22.5	4.00	20.00	0	112	57	131				
Surr: Dibromofluoromethane	24.0		25.00		96.1	45.4	152				
Surr: Toluene-d8	23.4		25.00		93.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.7	64.2	128				

NOTES:

S - Outlying spike recovery observed.

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812297-001BMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531		
Client ID:	BATCH	Batch ID:	23033	Analysis Date:	12/23/2018	SeqNo:	951090				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.5	1.00	20.00	0	82.3	33.3	122	17.05	3.45	30	
Chloromethane	18.0	2.00	20.00	0	89.9	39.7	143	17.73	1.47	30	
Vinyl chloride	17.9	0.200	20.00	0	89.4	41	165	18.29	2.29	30	
Bromomethane	16.7	1.00	20.00	0	83.6	31.5	135	16.49	1.39	30	
Trichlorofluoromethane (CFC-11)	19.5	1.00	20.00	0	97.4	54.7	138	20.02	2.71	30	
Chloroethane	22.1	1.00	20.00	0	111	49.9	143	21.93	0.797	30	
1,1-Dichloroethene	19.4	1.00	20.00	0	96.9	51.6	164	20.47	5.46	30	
Methylene chloride	19.0	1.00	20.00	0	94.9	61.6	135	19.54	2.94	30	
trans-1,2-Dichloroethene	19.8	1.00	20.00	0	99.1	63.5	138	20.46	3.18	30	
Methyl tert-butyl ether (MTBE)	18.8	1.00	20.00	0	93.8	60.9	132	19.79	5.33	30	
1,1-Dichloroethane	18.4	1.00	20.00	0	92.1	55.7	151	18.74	1.72	30	
2,2-Dichloropropane	6.47	2.00	20.00	0	32.4	37.7	150	6.883	6.18	30	S
cis-1,2-Dichloroethene	19.8	1.00	20.00	0	98.8	60	154	20.44	3.42	30	
Chloroform	19.6	1.00	20.00	0	97.8	48.1	140	20.52	4.76	30	
1,1,1-Trichloroethane (TCA)	20.6	1.00	20.00	0	103	64.2	146	21.43	4.17	30	
1,1-Dichloropropene	19.2	1.00	20.00	0	96.0	73.8	136	20.19	5.02	30	
Carbon tetrachloride	21.1	1.00	20.00	0	105	62.7	146	21.79	3.37	30	
1,2-Dichloroethane (EDC)	18.8	1.00	20.00	0	93.9	63.4	137	20.05	6.49	30	
Benzene	19.0	1.00	20.00	0	94.9	65.4	138	19.94	4.95	30	
Trichloroethene (TCE)	19.1	0.500	20.00	0	95.3	60.4	134	20.09	5.24	30	
1,2-Dichloropropane	18.1	1.00	20.00	0	90.4	62.6	138	19.03	5.12	30	
Bromodichloromethane	19.4	1.00	20.00	0	97.1	59.4	139	20.25	4.15	30	
Dibromomethane	19.3	1.00	20.00	0	96.6	58.7	148	20.92	7.98	30	
cis-1,3-Dichloropropene	15.8	1.00	20.00	0	79.1	63.8	132	16.97	7.02	30	
Toluene	19.7	1.00	20.00	0	98.5	52	147	20.73	5.10	30	
trans-1,3-Dichloropropylene	15.7	1.00	20.00	0	78.6	57.7	125	17.16	8.78	30	
1,1,2-Trichloroethane	19.9	1.00	20.00	0	99.6	57.5	153	21.34	6.84	30	
1,3-Dichloropropane	18.6	1.00	20.00	0	92.8	54.1	157	20.23	8.60	30	
Tetrachloroethene (PCE)	21.0	1.00	20.00	0	105	50.3	133	22.29	5.86	30	
Dibromochloromethane	20.6	1.00	20.00	0	103	61.6	139	22.06	6.86	30	
1,2-Dibromoethane (EDB)	19.7	0.250	20.00	0	98.5	63.2	134	21.68	9.63	30	

Work Order: 1812301
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812297-001BMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/20/2018	RunNo:	48531
Client ID:	BATCH	Batch ID:	23033			Analysis Date:	12/23/2018	SeqNo:	951090

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.2	1.00	20.00	0	106	65.8	134	22.11	4.17	30	
1,1,1,2-Tetrachloroethane	22.0	1.00	20.00	0	110	65.4	135	22.83	3.63	30	
Ethylbenzene	20.7	1.00	20.00	0	103	64.5	136	21.73	5.03	30	
m,p-Xylene	42.3	1.00	40.00	0	106	63.3	135	43.99	3.88	30	
o-Xylene	21.3	1.00	20.00	0	106	64.8	150	21.98	3.13	30	
Styrene	20.3	1.00	20.00	0	102	52.9	163	20.93	3.03	30	
Isopropylbenzene	20.8	1.00	20.00	0	104	56	147	21.94	5.13	30	
Bromoform	20.7	2.00	20.00	0	104	57.7	139	22.51	8.36	30	
1,1,2,2-Tetrachloroethane	21.2	1.00	20.00	0	106	59.8	146	22.00	3.76	30	
n-Propylbenzene	18.8	1.00	20.00	0	94.2	57.6	142	20.41	8.06	30	
Bromobenzene	21.4	1.00	20.00	0	107	69.3	157	22.43	4.91	30	
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	100	59.9	136	21.77	8.37	30	
2-Chlorotoluene	20.0	1.00	20.00	0	99.8	61.7	134	21.55	7.59	30	
4-Chlorotoluene	19.2	1.00	20.00	0	95.9	58.4	134	19.90	3.76	30	
tert-Butylbenzene	20.9	1.00	20.00	0	104	66.8	141	21.98	5.12	30	
1,2,3-Trichloropropane	16.7	1.00	20.00	0	83.5	62.4	129	18.63	10.9	30	
1,2,4-Trichlorobenzene	21.4	2.00	20.00	0	107	50.9	133	21.16	1.01	30	
sec-Butylbenzene	20.4	1.00	20.00	0	102	56	146	21.17	3.71	30	
4-Isopropyltoluene	20.8	1.00	20.00	0	104	56.4	136	21.18	1.74	30	
1,3-Dichlorobenzene	22.1	1.00	20.00	0	110	58.2	128	22.15	0.463	30	
1,4-Dichlorobenzene	21.3	1.00	20.00	0	107	60.1	123	21.80	2.32	30	
n-Butylbenzene	19.2	1.00	20.00	0	95.9	54.6	135	19.18	0.0160	30	
1,2-Dichlorobenzene	21.9	1.00	20.00	0	110	65.4	133	22.34	1.85	30	
1,2-Dibromo-3-chloropropane	21.3	1.00	20.00	0	107	51.8	142	22.28	4.48	30	
1,2,4-Trimethylbenzene	20.5	1.00	20.00	0	102	63.7	132	21.17	3.34	30	
Hexachloro-1,3-butadiene	22.5	4.00	20.00	0	112	58.1	130	22.20	1.23	30	
Naphthalene	22.0	1.00	20.00	0.3321	108	50.7	154	22.73	3.44	30	
1,2,3-Trichlorobenzene	22.5	4.00	20.00	0	113	57	131	22.46	0.276	30	
Surr: Dibromofluoromethane	24.1		25.00		96.4	45.4	152		0		
Surr: Toluene-d8	22.9		25.00		91.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.1		25.00		96.4	64.2	128		0		



Work Order: 1812301
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812297-001BMSD	SampType: MSD	Units: µg/L	Prep Date: 12/20/2018	RunNo: 48531							
Client ID: BATCH	Batch ID: 23033		Analysis Date: 12/23/2018	SeqNo: 951090							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery observed.

Client Name: **KANE**
 Logged by: **Clare Griggs**

Work Order Number: **1812301**
 Date Received: **12/19/2018 3:40:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
 8. Sample(s) in proper container(s)? Yes No
 9. Sufficient sample volume for indicated test(s)? Yes No
 10. Are samples properly preserved? Yes No
 11. Was preservative added to bottles? Yes No NA
 12. Is there headspace in the VOA vials? Yes No NA
 13. Did all samples containers arrive in good condition(unbroken)? Yes No
 14. Does paperwork match bottle labels? Yes No
 15. Are matrices correctly identified on Chain of Custody? Yes No
 16. Is it clear what analyses were requested? Yes No
 17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	1.6
Sample	2.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/19/18 Page: 1 of 1
Project Name: BSCSS
Project No: 82302-9.1
Collected by: BSN RST
Location: Bonnell

Laboratory Project No (Internal): 1817801
Special Remarks:

Client: KANE ENVIRONMENTAL
Address: 4015 13th Ave N
City, State, Zip: SEATTLE, WA 98119
Telephone: (206) 991 0470
Fax:

Report To (PM): JEFF JENKIN
PM Email: JEFF@KANE-ENVIRONMENTAL.COM

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes										Comments					
				VOCS (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 - SIM)	PAHs (EPA 8270 / 625)	PCBs (EPA 8082 - SIM)	Metals ** (EPA 6020 / 200.8)		Total (T) Dissolved (D)	Anions (IC)***	EDB (801-1)	TDC	AMMONIA-N
1 H2-MW-32:W	12/19	1040	GW	X															lab filter, RC
2 H2-MW-23:W	12/19	1245	GW	X															lab filter
3 H2-MW-1:W	12/19	1420	GW	X															lab filter
4																			
5																			
6																			
7																			
8																			
9																			
10																			

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SI = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MICA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time: 12/19/18 1540
 Received Date/Time: 12/19/18 1540
 Relinquished Date/Time: _____
 Received Date/Time: _____

Turn-around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify) _____

www.fremontanalytical.com



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812328

December 28, 2018

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/20/2018 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Dissolved Gases by RSK-175
Dissolved Metals by EPA Method 200.8
Ion Chromatography by EPA Method 300.0
Total Organic Carbon by SM 5310C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 12/28/2018

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812328

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812328-001	MW-20:W	12/20/2018 11:15 AM	12/20/2018 4:58 PM
1812328-002	MW-8:W	12/20/2018 1:55 PM	12/20/2018 4:58 PM
1812328-003	MW-11:W	12/20/2018 3:40 PM	12/20/2018 4:58 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 11:15:00 AM

Project: BSCSS

Lab ID: 1812328-001

Matrix: Groundwater

Client Sample ID: MW-20:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	0.0446	0.00863		mg/L	1	12/28/2018 10:13:00 AM
Ethene	ND	0.0151		mg/L	1	12/28/2018 10:13:00 AM
Ethane	ND	0.0162		mg/L	1	12/28/2018 10:13:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072 Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Chloromethane	ND	20.0	D	µg/L	10	12/27/2018 10:04:32 PM
Vinyl chloride	2.23	2.00	D	µg/L	10	12/27/2018 10:04:32 PM
Bromomethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Trichlorofluoromethane (CFC-11)	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Chloroethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1-Dichloroethene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Methylene chloride	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
trans-1,2-Dichloroethene	119	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Methyl tert-butyl ether (MTBE)	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1-Dichloroethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
2,2-Dichloropropane	ND	20.0	D	µg/L	10	12/27/2018 10:04:32 PM
cis-1,2-Dichloroethene	552	50.0	D	µg/L	50	12/27/2018 9:34:20 PM
Chloroform	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1,1-Trichloroethane (TCA)	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1-Dichloropropene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Carbon tetrachloride	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2-Dichloroethane (EDC)	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Benzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Trichloroethene (TCE)	879	25.0	D	µg/L	50	12/27/2018 9:34:20 PM
1,2-Dichloropropane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Bromodichloromethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Dibromomethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
cis-1,3-Dichloropropene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Toluene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
trans-1,3-Dichloropropylene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1,2-Trichloroethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,3-Dichloropropane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Tetrachloroethene (PCE)	31.8	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Dibromochloromethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2-Dibromoethane (EDB)	ND	2.50	D	µg/L	10	12/27/2018 10:04:32 PM
Chlorobenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1,1,2-Tetrachloroethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 11:15:00 AM

Project: BSCSS

Lab ID: 1812328-001

Matrix: Groundwater

Client Sample ID: MW-20:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072

Analyst: EM

Ethylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
m,p-Xylene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
o-Xylene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Styrene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Isopropylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Bromoform	ND	20.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,1,2,2-Tetrachloroethane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
n-Propylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Bromobenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,3,5-Trimethylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
2-Chlorotoluene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
4-Chlorotoluene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
tert-Butylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2,3-Trichloropropane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2,4-Trichlorobenzene	ND	20.0	D	µg/L	10	12/27/2018 10:04:32 PM
sec-Butylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
4-Isopropyltoluene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,3-Dichlorobenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,4-Dichlorobenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
n-Butylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2-Dichlorobenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2-Dibromo-3-chloropropane	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2,4-Trimethylbenzene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
Hexachloro-1,3-butadiene	ND	40.0	D	µg/L	10	12/27/2018 10:04:32 PM
Naphthalene	ND	10.0	D	µg/L	10	12/27/2018 10:04:32 PM
1,2,3-Trichlorobenzene	ND	40.0	D	µg/L	10	12/27/2018 10:04:32 PM
Surr: Dibromofluoromethane	107	45.4 - 152	D	%Rec	10	12/27/2018 10:04:32 PM
Surr: Toluene-d8	115	40.1 - 139	D	%Rec	10	12/27/2018 10:04:32 PM
Surr: 1-Bromo-4-fluorobenzene	104	64.2 - 128	D	%Rec	10	12/27/2018 10:04:32 PM

NOTES:

Diluted due to matrix.

Ion Chromatography by EPA Method 300.0

Batch ID: 23096

Analyst: GM

Chloride	8.88	1.00	D	mg/L	10	12/28/2018 3:27:00 AM
Sulfate	2.56	3.00	JD	mg/L	10	12/28/2018 3:27:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 11:15:00 AM

Project: BSCSS

Lab ID: 1812328-001

Matrix: Groundwater

Client Sample ID: MW-20:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 23079 Analyst: WC

Iron	3,140	100		µg/L	1	12/27/2018 1:28:56 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48636 Analyst: GM

Total Organic Carbon	95.4	5.00	D	mg/L	10	12/28/2018 8:35:00 AM
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Ammonia by SM 4500 NH3G

Batch ID: 23117 Analyst: GM

Nitrogen, Ammonia	1.54	0.200	D	mg/L	2	12/27/2018 6:32:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 1:55:00 PM

Project: BSCSS

Lab ID: 1812328-002

Matrix: Groundwater

Client Sample ID: MW-8:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/28/2018 10:20:00 AM
Ethene	ND	0.0151		mg/L	1	12/28/2018 10:20:00 AM
Ethane	ND	0.0162		mg/L	1	12/28/2018 10:20:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072 Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Chloromethane	ND	2.00		µg/L	1	12/27/2018 8:56:00 AM
Vinyl chloride	ND	0.200		µg/L	1	12/27/2018 8:56:00 AM
Bromomethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Chloroethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Methylene chloride	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/27/2018 8:56:00 AM
cis-1,2-Dichloroethene	9.38	1.00		µg/L	1	12/27/2018 8:56:00 AM
Chloroform	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Benzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Trichloroethene (TCE)	4.37	0.500		µg/L	1	12/27/2018 8:56:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Dibromomethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Toluene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Tetrachloroethene (PCE)	14.5	1.00		µg/L	1	12/27/2018 8:56:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/27/2018 8:56:00 AM
Chlorobenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 1:55:00 PM

Project: BSCSS

Lab ID: 1812328-002

Matrix: Groundwater

Client Sample ID: MW-8:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072

Analyst: EM

Ethylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
m,p-Xylene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
o-Xylene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Styrene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Bromoform	ND	2.00		µg/L	1	12/27/2018 8:56:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Bromobenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/27/2018 8:56:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	12/27/2018 8:56:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/27/2018 8:56:00 AM
Naphthalene	ND	1.00		µg/L	1	12/27/2018 8:56:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/27/2018 8:56:00 AM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	12/27/2018 8:56:00 AM
Surr: Toluene-d8	110	40.1 - 139		%Rec	1	12/27/2018 8:56:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	64.2 - 128		%Rec	1	12/27/2018 8:56:00 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23096

Analyst: GM

Chloride	6.53	0.400	D	mg/L	4	12/28/2018 3:42:00 PM
Sulfate	4.13	0.600	D	mg/L	2	12/28/2018 3:50:00 AM



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 1:55:00 PM

Project: BSCSS

Lab ID: 1812328-002

Matrix: Groundwater

Client Sample ID: MW-8:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 23079		Analyst: WC
Iron	ND	100		µg/L	1	12/27/2018 1:32:58 PM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	1.66	0.500		mg/L	1	12/22/2018 12:06:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23117		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/27/2018 5:31:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 3:40:00 PM

Project: BSCSS

Lab ID: 1812328-003

Matrix: Groundwater

Client Sample ID: MW-11:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	0.109	0.0863	D	mg/L	10	12/28/2018 11:06:00 AM
Ethene	ND	0.151	D	mg/L	10	12/28/2018 11:06:00 AM
Ethane	ND	0.162	D	mg/L	10	12/28/2018 11:06:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072 Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Chloromethane	ND	2.00		µg/L	1	12/27/2018 6:32:37 PM
Vinyl chloride	ND	0.200		µg/L	1	12/27/2018 6:32:37 PM
Bromomethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Chloroethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Methylene chloride	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/27/2018 6:32:37 PM
cis-1,2-Dichloroethene	4.92	1.00		µg/L	1	12/27/2018 6:32:37 PM
Chloroform	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Benzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Trichloroethene (TCE)	11.5	0.500		µg/L	1	12/27/2018 6:32:37 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Dibromomethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Toluene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Tetrachloroethene (PCE)	41.4	1.00		µg/L	1	12/27/2018 6:32:37 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/27/2018 6:32:37 PM
Chlorobenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM



Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 3:40:00 PM

Project: BSCSS

Lab ID: 1812328-003

Matrix: Groundwater

Client Sample ID: MW-11:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072

Analyst: EM

Ethylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
m,p-Xylene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
o-Xylene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Styrene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Bromoform	ND	2.00		µg/L	1	12/27/2018 6:32:37 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Bromobenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/27/2018 6:32:37 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/27/2018 6:32:37 PM
Naphthalene	ND	1.00		µg/L	1	12/27/2018 6:32:37 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/27/2018 6:32:37 PM
Surr: Dibromofluoromethane	107	45.4 - 152		%Rec	1	12/27/2018 6:32:37 PM
Surr: Toluene-d8	113	40.1 - 139		%Rec	1	12/27/2018 6:32:37 PM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	12/27/2018 6:32:37 PM

Ion Chromatography by EPA Method 300.0

Batch ID: 23096

Analyst: GM

Chloride	13.5	0.500	D	mg/L	5	12/28/2018 4:13:00 AM
Sulfate	37.4	1.50	D	mg/L	5	12/28/2018 4:13:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23079

Analyst: WC

Iron	611	100		µg/L	1	12/27/2018 1:36:59 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/20/2018 3:40:00 PM

Project: BSCSS

Lab ID: 1812328-003

Matrix: Groundwater

Client Sample ID: MW-11:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48546		Analyst: GM
Total Organic Carbon	8.99	0.500		mg/L	1	12/22/2018 12:23:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23117		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/27/2018 4:23:00 PM

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID	LCS-23117	SampType:	LCS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622			
Client ID:	LCSW	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953196			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.560	0.100	0.5000	0	112	80	120					B
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Sample ID	MB-23117	SampType:	MBLK	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622			
Client ID:	MBLKW	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953197			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.112	0.100										
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Sample ID	1812372-001BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622			
Client ID:	BATCH	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953199			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	ND	0.100							0		30	
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Sample ID	1812372-001BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622			
Client ID:	BATCH	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953200			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.488	0.100	0.5000	0	97.6	70	130					B
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Sample ID	1812372-001BMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622			
Client ID:	BATCH	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953201			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.455	0.100	0.5000	0	91.0	70	130	0.4880		7.00	30	B
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Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812345-004EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48622					
Client ID: BATCH	Batch ID: 23117				Analysis Date: 12/27/2018	SeqNo: 953222					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812345-004EMS	SampType: MS	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48622					
Client ID: BATCH	Batch ID: 23117				Analysis Date: 12/27/2018	SeqNo: 953223					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.498	0.100	0.5000	0.04700	90.2	70	130				B

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-23096	SampType:	MBLK	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	MBLKW	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953626		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-23096	SampType:	LCS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	LCSW	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953627		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.694	0.100	0.7500	0	92.5	90	110				
Sulfate	3.49	0.300	3.750	0	93.1	90	110				

Sample ID	1812323-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953629		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.54	0.100						8.520	0.270	20	E
Sulfate	1.68	0.300						1.680	0.298	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812323-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953634		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	9.28	0.100	0.7500	8.520	102	80	120				E
Sulfate	4.32	0.300	3.750	1.680	70.4	80	120				S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812323-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953635		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	9.32	0.100	0.7500	8.520	107	80	120	9.285	0.398	20	E
Sulfate	4.61	0.300	3.750	1.680	78.2	80	120	4.319	6.58	20	S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812340-003DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953646		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	11.2	0.200						11.49	2.77	20	ED
Sulfate	24.9	0.600						25.50	2.30	20	D

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812340-003DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953647		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	13.2	0.200	1.500	11.49	115	80	120				ED
Sulfate	33.5	0.600	7.500	25.50	106	80	120				ED

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48546	SampType: MBLK	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: MBLKW	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951419							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48546	SampType: LCS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: LCSW	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951420							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 4.82 0.500 5.000 0 96.5 80 120

Sample ID 1812201-001EDUP	SampType: DUP	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951422							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 1.88 0.500 1.893 0.955 20

Sample ID 1812201-001EMS	SampType: MS	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951423							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.85 0.500 5.000 1.893 99.2 70 130

Sample ID 1812201-001EMSD	SampType: MSD	Units: mg/L	Prep Date: 12/22/2018	RunNo: 48546							
Client ID: BATCH	Batch ID: R48546		Analysis Date: 12/22/2018	SeqNo: 951424							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.89 0.500 5.000 1.893 100 70 130 6.854 0.538 30



Date: 12/28/2018

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812244-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: BATCH	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951437					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	3.33	0.500						3.365	0.956	20	

Sample ID 1812244-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48546					
Client ID: BATCH	Batch ID: R48546				Analysis Date: 12/22/2018	SeqNo: 951438					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	8.17	0.500	5.000	3.365	96.2	70	130				

Sample ID LCS-48636	SampType: LCS	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: LCSW	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953488					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.03	0.500	5.000	0	101	80	120				

Sample ID MB-48636	SampType: MBLK	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: MBLKW	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953490					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500									

Sample ID 1812160-012DDUP	SampType: DUP	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: BATCH	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953493					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	30.7	2.50						29.38	4.26	20	D

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812160-012DMS	SampType: MS	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: BATCH	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953495					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	54.9	2.50	25.00	29.38	102	70	130				D

Sample ID 1812160-012DMSD	SampType: MSD	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: BATCH	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953497					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	52.0	2.50	25.00	29.38	90.4	70	130	54.95	5.55	30	D

Sample ID 1812345-001CDUP	SampType: DUP	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: BATCH	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953517					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	ND	0.500						0.5240	8.35	20	

Sample ID 1812345-001CMS	SampType: MS	Units: mg/L			Prep Date: 12/28/2018	RunNo: 48636					
Client ID: BATCH	Batch ID: R48636				Analysis Date: 12/28/2018	SeqNo: 953519					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	5.45	0.500	5.000	0.5240	98.6	70	130				

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23079	SampType: MBLK	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: MBLKW	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952526							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23079	SampType: LCS	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: LCSW	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952528							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 984 100 1,000 0 98.4 50 150

Sample ID 1812259-001DDUP	SampType: DUP	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: BATCH	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952530							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812259-001DMS	SampType: MS	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: BATCH	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952531							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,120 100 5,000 32.14 102 50 150

Sample ID 1812259-001DMSD	SampType: MSD	Units: µg/L	Prep Date: 12/27/2018	RunNo: 48598							
Client ID: BATCH	Batch ID: 23079		Analysis Date: 12/27/2018	SeqNo: 952532							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,010 100 5,000 32.14 99.5 50 150 5,120 2.25 30



Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID	MB1-23023FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/27/2018	RunNo:	48598				
Client ID:	MBLKW	Batch ID:	23079			Analysis Date:	12/27/2018	SeqNo:	952615				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Sample ID	MB2-23023FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/27/2018	RunNo:	48598				
Client ID:	MBLKW	Batch ID:	23079			Analysis Date:	12/27/2018	SeqNo:	952616				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48619	SampType:	MBLK	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	MBLKW	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953096		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48619	SampType:	LCS	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	LCSW	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953095		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	818	0.00863	1,000	0	81.8	70	130				
Ethene	818	0.0151	1,000	0	81.8	70	130				
Ethane	822	0.0162	1,000	0	82.2	70	130				

Sample ID	1812328-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	MW-20:W	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953080		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0573	0.00863						0.04465	24.9	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23072	SampType:	LCS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	LCSW	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952059				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.1	1.00	20.00	0	95.7	18.7	171				
Chloromethane	19.9	2.00	20.00	0	99.6	38.5	171				
Vinyl chloride	19.4	0.200	20.00	0	96.8	48	145				
Bromomethane	21.4	1.00	20.00	0	107	32.5	184				
Trichlorofluoromethane (CFC-11)	20.4	1.00	20.00	0	102	43.5	149				
Chloroethane	20.0	1.00	20.00	0	100	43.8	168				
1,1-Dichloroethene	19.2	1.00	20.00	0	96.1	57.5	150				
Methylene chloride	19.4	1.00	20.00	0	97.0	67.1	131				
trans-1,2-Dichloroethene	19.7	1.00	20.00	0	98.5	71.7	129				
Methyl tert-butyl ether (MTBE)	19.4	1.00	20.00	0	96.9	58	138				
1,1-Dichloroethane	19.2	1.00	20.00	0	96.0	67.9	134				
2,2-Dichloropropane	17.2	2.00	20.00	0	86.1	26.5	185				
cis-1,2-Dichloroethene	20.5	1.00	20.00	0	102	70.2	139				
Chloroform	20.8	1.00	20.00	0	104	66.3	131				
1,1,1-Trichloroethane (TCA)	20.3	1.00	20.00	0	102	63	140				
1,1-Dichloropropene	19.7	1.00	20.00	0	98.3	69.9	124				
Carbon tetrachloride	19.9	1.00	20.00	0	99.7	66.2	134				
1,2-Dichloroethane (EDC)	16.7	1.00	20.00	0	83.7	67	126				
Benzene	17.3	1.00	20.00	0	86.5	69.3	132				
Trichloroethene (TCE)	17.0	0.500	20.00	0	85.2	65.2	136				
1,2-Dichloropropane	17.3	1.00	20.00	0	86.7	70.5	130				
Bromodichloromethane	22.1	1.00	20.00	0	110	67.2	137				
Dibromomethane	20.8	1.00	20.00	0	104	69.3	143				
cis-1,3-Dichloropropene	18.2	1.00	20.00	0	91.2	62.6	137				
Toluene	17.4	1.00	20.00	0	86.9	61.3	145				
trans-1,3-Dichloropropylene	16.0	1.00	20.00	0	80.2	56.5	163				
1,1,2-Trichloroethane	17.2	1.00	20.00	0	86.2	71.7	131				
1,3-Dichloropropane	17.1	1.00	20.00	0	85.6	73.5	127				
Tetrachloroethene (PCE)	18.4	1.00	20.00	0	91.8	47.5	147				
Dibromochloromethane	18.6	1.00	20.00	0	93.0	67.2	134				
1,2-Dibromoethane (EDB)	18.1	0.250	20.00	0	90.7	73.6	125				

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23072	SampType:	LCS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	LCSW	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952059				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.6	1.00	20.00	0	103	73.9	126				
1,1,1,2-Tetrachloroethane	20.5	1.00	20.00	0	102	76.8	124				
Ethylbenzene	20.3	1.00	20.00	0	101	72	130				
m,p-Xylene	39.9	1.00	40.00	0	99.9	70.3	134				
o-Xylene	18.9	1.00	20.00	0	94.6	72.1	131				
Styrene	17.6	1.00	20.00	0	88.2	64.3	140				
Isopropylbenzene	17.2	1.00	20.00	0	85.8	73.9	128				
Bromoform	17.5	2.00	20.00	0	87.3	55.3	141				
1,1,2,2-Tetrachloroethane	16.6	1.00	20.00	0	82.8	62.9	132				
n-Propylbenzene	17.5	1.00	20.00	0	87.7	74.5	127				
Bromobenzene	17.9	1.00	20.00	0	89.5	71	131				
1,3,5-Trimethylbenzene	17.7	1.00	20.00	0	88.6	73.1	128				
2-Chlorotoluene	17.4	1.00	20.00	0	87.2	70.8	130				
4-Chlorotoluene	17.5	1.00	20.00	0	87.7	70.1	131				
tert-Butylbenzene	17.9	1.00	20.00	0	89.7	68.2	131				
1,2,3-Trichloropropane	16.6	1.00	20.00	0	83.1	67.7	131				
1,2,4-Trichlorobenzene	20.6	2.00	20.00	0	103	41	139				
sec-Butylbenzene	17.9	1.00	20.00	0	89.6	72	129				
4-Isopropyltoluene	17.9	1.00	20.00	0	89.7	69.2	130				
1,3-Dichlorobenzene	21.5	1.00	20.00	0	108	69.5	128				
1,4-Dichlorobenzene	21.3	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	20.9	1.00	20.00	0	104	73.8	127				
1,2-Dichlorobenzene	21.4	1.00	20.00	0	107	69.7	119				
1,2-Dibromo-3-chloropropane	23.4	1.00	20.00	0	117	63.1	136				
1,2,4-Trimethylbenzene	17.9	1.00	20.00	0	89.6	73.4	127				
Hexachloro-1,3-butadiene	21.4	4.00	20.00	0	107	58.6	138				
Naphthalene	20.6	1.00	20.00	0	103	41.8	165				
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	35.8	155				
Surr: Dibromofluoromethane	23.8		25.00		95.2	45.4	152				
Surr: Toluene-d8	25.7		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.0		25.00		88.0	64.2	128				

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23072	SampType:	LCS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	LCSW	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952059		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-23072	SampType:	MBLK	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MBLKW	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952060		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23072	SampType: MBLK	Units: µg/L	Prep Date: 12/26/2018	RunNo: 48570
Client ID: MBLKW	Batch ID: 23072		Analysis Date: 12/27/2018	SeqNo: 952060

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									Q
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-23072	SampType:	MBLK	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MBLKW	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952060		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.7		25.00		103	45.4	152				
Surr: Toluene-d8	27.6		25.00		111	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.1		25.00		100	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812304-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952055		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812304-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570
Client ID:	BATCH	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952055

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812304-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952055				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.6		25.00		107	45.4	152		0		
Surr: Toluene-d8	27.4		25.00		110	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.7	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812328-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MW-8:W	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	11.6	1.00	20.00	0	57.8	33.3	122				
Chloromethane	17.5	2.00	20.00	0	87.7	39.7	143				
Vinyl chloride	17.9	0.200	20.00	0	89.6	41	165				
Bromomethane	13.9	1.00	20.00	0	69.5	31.5	135				
Trichlorofluoromethane (CFC-11)	20.2	1.00	20.00	0	101	54.7	138				
Chloroethane	21.4	1.00	20.00	0	107	49.9	143				
1,1-Dichloroethene	21.3	1.00	20.00	0	106	51.6	164				
Methylene chloride	21.8	1.00	20.00	0	109	61.6	135				
trans-1,2-Dichloroethene	21.3	1.00	20.00	0.5209	104	63.5	138				
Methyl tert-butyl ether (MTBE)	20.9	1.00	20.00	0	104	60.9	132				
1,1-Dichloroethane	22.4	1.00	20.00	0	112	55.7	151				

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1812328-002AMS	SampType: MS	Units: µg/L	Prep Date: 12/26/2018	RunNo: 48570
Client ID: MW-8:W	Batch ID: 23072		Analysis Date: 12/27/2018	SeqNo: 952471

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	15.6	2.00	20.00	0	78.2	37.7	150				
cis-1,2-Dichloroethene	31.4	1.00	20.00	9.380	110	60	154				
Chloroform	22.6	1.00	20.00	0	113	48.1	140				
1,1,1-Trichloroethane (TCA)	23.1	1.00	20.00	0	115	64.2	146				
1,1-Dichloropropene	24.2	1.00	20.00	0	121	73.8	136				
Carbon tetrachloride	23.1	1.00	20.00	0	115	62.7	146				
1,2-Dichloroethane (EDC)	23.5	1.00	20.00	0	118	63.4	137				
Benzene	23.7	1.00	20.00	0	119	65.4	138				
Trichloroethene (TCE)	26.2	0.500	20.00	4.368	109	60.4	134				
1,2-Dichloropropane	25.2	1.00	20.00	0	126	62.6	138				
Bromodichloromethane	24.8	1.00	20.00	0	124	59.4	139				
Dibromomethane	24.1	1.00	20.00	0	120	58.7	148				
cis-1,3-Dichloropropene	19.1	1.00	20.00	0	95.3	63.8	132				
Toluene	21.8	1.00	20.00	0.2109	108	52	147				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	57.7	125				
1,1,2-Trichloroethane	21.5	1.00	20.00	0	108	57.5	153				
1,3-Dichloropropane	22.9	1.00	20.00	0	114	54.1	157				
Tetrachloroethene (PCE)	36.1	1.00	20.00	14.52	108	50.3	133				
Dibromochloromethane	21.9	1.00	20.00	0	110	61.6	139				
1,2-Dibromoethane (EDB)	22.5	0.250	20.00	0	113	63.2	134				
Chlorobenzene	21.5	1.00	20.00	0	108	65.8	134				
1,1,1,2-Tetrachloroethane	20.9	1.00	20.00	0	104	65.4	135				
Ethylbenzene	22.0	1.00	20.00	0	110	64.5	136				
m,p-Xylene	43.4	1.00	40.00	0	109	63.3	135				
o-Xylene	21.8	1.00	20.00	0	109	64.8	150				
Styrene	21.3	1.00	20.00	0	107	52.9	163				
Isopropylbenzene	22.4	1.00	20.00	0	112	56	147				
Bromoform	18.4	2.00	20.00	0	92.0	57.7	139				
1,1,2,2-Tetrachloroethane	22.7	1.00	20.00	0	113	59.8	146				
n-Propylbenzene	22.9	1.00	20.00	0	115	57.6	142				
Bromobenzene	20.7	1.00	20.00	0	104	69.3	157				

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MW-8:W	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	22.3	1.00	20.00	0	111	59.9	136				
2-Chlorotoluene	22.4	1.00	20.00	0	112	61.7	134				
4-Chlorotoluene	21.9	1.00	20.00	0	110	58.4	134				
tert-Butylbenzene	22.0	1.00	20.00	0	110	66.8	141				
1,2,3-Trichloropropane	20.9	1.00	20.00	0	104	62.4	129				
1,2,4-Trichlorobenzene	21.6	2.00	20.00	0	108	50.9	133				
sec-Butylbenzene	23.1	1.00	20.00	0	115	56	146				
4-Isopropyltoluene	22.5	1.00	20.00	0	112	56.4	136				
1,3-Dichlorobenzene	21.4	1.00	20.00	0	107	58.2	128				
1,4-Dichlorobenzene	22.2	1.00	20.00	0	111	60.1	123				
n-Butylbenzene	23.7	1.00	20.00	0	119	54.6	135				
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	65.4	133				
1,2-Dibromo-3-chloropropane	21.5	1.00	20.00	0	108	51.8	142				
1,2,4-Trimethylbenzene	22.3	1.00	20.00	0	112	63.7	132				
Hexachloro-1,3-butadiene	21.3	4.00	20.00	0	106	58.1	130				
Naphthalene	22.1	1.00	20.00	0	111	50.7	154				
1,2,3-Trichlorobenzene	22.4	4.00	20.00	0	112	57	131				
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152				
Surr: Toluene-d8	27.7		25.00		111	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		106	64.2	128				

Sample ID	1812328-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MW-8:W	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	10.7	1.00	20.00	0	53.3	33.3	122	11.56	8.05	30	
Chloromethane	16.0	2.00	20.00	0	79.8	39.7	143	17.54	9.52	30	
Vinyl chloride	16.0	0.200	20.00	0	80.1	41	165	17.92	11.2	30	
Bromomethane	14.6	1.00	20.00	0	72.8	31.5	135	13.90	4.59	30	
Trichlorofluoromethane (CFC-11)	18.3	1.00	20.00	0	91.7	54.7	138	20.20	9.58	30	

Work Order: 1812328
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MW-8:W	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952472				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	19.3	1.00	20.00	0	96.7	49.9	143	21.43	10.2	30	
1,1-Dichloroethene	18.2	1.00	20.00	0	90.8	51.6	164	21.29	15.8	30	
Methylene chloride	19.7	1.00	20.00	0	98.6	61.6	135	21.76	9.86	30	
trans-1,2-Dichloroethene	19.6	1.00	20.00	0.5209	95.5	63.5	138	21.27	8.07	30	
Methyl tert-butyl ether (MTBE)	18.8	1.00	20.00	0	94.1	60.9	132	20.86	10.3	30	
1,1-Dichloroethane	20.4	1.00	20.00	0	102	55.7	151	22.43	9.30	30	
2,2-Dichloropropane	14.3	2.00	20.00	0	71.7	37.7	150	15.65	8.80	30	
cis-1,2-Dichloroethene	27.9	1.00	20.00	9.380	92.8	60	154	31.37	11.6	30	
Chloroform	20.7	1.00	20.00	0	103	48.1	140	22.61	8.98	30	
1,1,1-Trichloroethane (TCA)	21.1	1.00	20.00	0	105	64.2	146	23.06	8.95	30	
1,1-Dichloropropene	22.1	1.00	20.00	0	111	73.8	136	24.18	8.80	30	
Carbon tetrachloride	21.3	1.00	20.00	0	106	62.7	146	23.09	8.19	30	
1,2-Dichloroethane (EDC)	21.4	1.00	20.00	0	107	63.4	137	23.52	9.23	30	
Benzene	21.8	1.00	20.00	0	109	65.4	138	23.73	8.61	30	
Trichloroethene (TCE)	23.5	0.500	20.00	4.368	95.6	60.4	134	26.18	10.9	30	
1,2-Dichloropropane	22.9	1.00	20.00	0	115	62.6	138	25.18	9.40	30	
Bromodichloromethane	23.0	1.00	20.00	0	115	59.4	139	24.79	7.65	30	
Dibromomethane	21.8	1.00	20.00	0	109	58.7	148	24.05	9.62	30	
cis-1,3-Dichloropropene	17.9	1.00	20.00	0	89.4	63.8	132	19.06	6.42	30	
Toluene	19.9	1.00	20.00	0.2109	98.4	52	147	21.82	9.27	30	
trans-1,3-Dichloropropylene	18.9	1.00	20.00	0	94.4	57.7	125	20.44	7.94	30	
1,1,2-Trichloroethane	19.5	1.00	20.00	0	97.6	57.5	153	21.53	9.75	30	
1,3-Dichloropropane	20.8	1.00	20.00	0	104	54.1	157	22.85	9.50	30	
Tetrachloroethene (PCE)	32.2	1.00	20.00	14.52	88.2	50.3	133	36.07	11.5	30	
Dibromochloromethane	20.2	1.00	20.00	0	101	61.6	139	21.91	8.19	30	
1,2-Dibromoethane (EDB)	20.1	0.250	20.00	0	101	63.2	134	22.54	11.2	30	
Chlorobenzene	19.8	1.00	20.00	0	99.1	65.8	134	21.50	8.12	30	
1,1,1,2-Tetrachloroethane	19.3	1.00	20.00	0	96.7	65.4	135	20.85	7.56	30	
Ethylbenzene	20.0	1.00	20.00	0	100	64.5	136	21.96	9.12	30	
m,p-Xylene	39.6	1.00	40.00	0	98.9	63.3	135	43.44	9.31	30	
o-Xylene	19.8	1.00	20.00	0	98.9	64.8	150	21.83	9.85	30	

Work Order: 1812328
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570
Client ID:	MW-8:W	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952472

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	19.4	1.00	20.00	0	97.0	52.9	163	21.31	9.43	30	
Isopropylbenzene	20.5	1.00	20.00	0	103	56	147	22.39	8.65	30	
Bromoform	16.6	2.00	20.00	0	83.1	57.7	139	18.40	10.1	30	
1,1,1,2-Tetrachloroethane	20.3	1.00	20.00	0	102	59.8	146	22.66	10.8	30	
n-Propylbenzene	20.3	1.00	20.00	0	102	57.6	142	22.92	11.9	30	
Bromobenzene	18.6	1.00	20.00	0	93.2	69.3	157	20.73	10.6	30	
1,3,5-Trimethylbenzene	20.3	1.00	20.00	0	101	59.9	136	22.26	9.35	30	
2-Chlorotoluene	20.6	1.00	20.00	0	103	61.7	134	22.42	8.58	30	
4-Chlorotoluene	19.7	1.00	20.00	0	98.6	58.4	134	21.94	10.7	30	
tert-Butylbenzene	20.2	1.00	20.00	0	101	66.8	141	21.95	8.56	30	
1,2,3-Trichloropropane	18.8	1.00	20.00	0	94.0	62.4	129	20.87	10.4	30	
1,2,4-Trichlorobenzene	19.6	2.00	20.00	0	98.1	50.9	133	21.64	9.80	30	
sec-Butylbenzene	20.9	1.00	20.00	0	105	56	146	23.10	9.80	30	
4-Isopropyltoluene	20.3	1.00	20.00	0	102	56.4	136	22.49	10.0	30	
1,3-Dichlorobenzene	20.4	1.00	20.00	0	102	58.2	128	21.45	4.80	30	
1,4-Dichlorobenzene	20.6	1.00	20.00	0	103	60.1	123	22.19	7.65	30	
n-Butylbenzene	22.4	1.00	20.00	0	112	54.6	135	23.74	5.97	30	
1,2-Dichlorobenzene	20.5	1.00	20.00	0	102	65.4	133	21.62	5.36	30	
1,2-Dibromo-3-chloropropane	20.0	1.00	20.00	0	100	51.8	142	21.51	7.09	30	
1,2,4-Trimethylbenzene	20.2	1.00	20.00	0	101	63.7	132	22.32	10.1	30	
Hexachloro-1,3-butadiene	19.6	4.00	20.00	0	98.2	58.1	130	21.26	7.92	30	
Naphthalene	20.0	1.00	20.00	0	100	50.7	154	22.10	9.77	30	
1,2,3-Trichlorobenzene	20.2	4.00	20.00	0	101	57	131	22.43	10.6	30	
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152		0		
Surr: Toluene-d8	28.0		25.00		112	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.3		25.00		105	64.2	128		0		

Client Name: **KANE**

Work Order Number: **1812328**

Logged by: **Clare Griggs**

Date Received: **12/20/2018 4:58:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	6.0
Sample	4.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.

Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS

Work Order Number: 1812340

January 02, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 4 sample(s) on 12/21/2018 for the analyses presented in the following report.

- Ammonia by SM 4500 NH3G***
- Dissolved Gases by RSK-175***
- Dissolved Metals by EPA Method 200.8***
- Ion Chromatography by EPA Method 300.0***
- Total Organic Carbon by SM 5310C***
- Volatile Organic Compounds by EPA Method 8260C***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 01/02/2019

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812340

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812340-001	MW-6:W	12/21/2018 9:00 AM	12/21/2018 12:26 PM
1812340-002	HZ-MW-4:W	12/21/2018 10:00 AM	12/21/2018 12:26 PM
1812340-003	HZ-MW-22:W	12/21/2018 11:30 AM	12/21/2018 12:26 PM
1812340-004	Trip Blank	12/17/2018 5:40 PM	12/21/2018 12:26 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 9:00:00 AM

Project: BSCSS

Lab ID: 1812340-001

Matrix: Groundwater

Client Sample ID: MW-6:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	0.0808	0.0863	JD	mg/L	10	12/28/2018 11:13:00 AM
Ethene	ND	0.151	D	mg/L	10	12/28/2018 11:13:00 AM
Ethane	ND	0.162	D	mg/L	10	12/28/2018 11:13:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072 Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Chloromethane	ND	2.00		µg/L	1	12/28/2018 12:05:38 AM
Vinyl chloride	25.5	0.200		µg/L	1	12/28/2018 12:05:38 AM
Bromomethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Chloroethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Methylene chloride	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
trans-1,2-Dichloroethene	40.3	1.00		µg/L	1	12/28/2018 12:05:38 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/28/2018 12:05:38 AM
cis-1,2-Dichloroethene	2,560	200	D	µg/L	200	12/27/2018 9:03:59 PM
Chloroform	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Carbon tetrachloride	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Benzene	3.48	1.00		µg/L	1	12/28/2018 12:05:38 AM
Trichloroethene (TCE)	1,000	100	D	µg/L	200	12/27/2018 9:03:59 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Bromodichloromethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Dibromomethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Toluene	7.36	1.00		µg/L	1	12/28/2018 12:05:38 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Tetrachloroethene (PCE)	2,670	200	D	µg/L	200	12/27/2018 9:03:59 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/28/2018 12:05:38 AM
Chlorobenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM



Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 9:00:00 AM

Project: BSCSS

Lab ID: 1812340-001

Matrix: Groundwater

Client Sample ID: MW-6:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072

Analyst: EM

Ethylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
m,p-Xylene	3.35	1.00		µg/L	1	12/28/2018 12:05:38 AM
o-Xylene	1.08	1.00		µg/L	1	12/28/2018 12:05:38 AM
Styrene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Isopropylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Bromoform	ND	2.00		µg/L	1	12/28/2018 12:05:38 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
n-Propylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
Bromobenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
2-Chlorotoluene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
4-Chlorotoluene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
tert-Butylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/28/2018 12:05:38 AM
sec-Butylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
n-Butylbenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2,4-Trimethylbenzene	1.24	1.00		µg/L	1	12/28/2018 12:05:38 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/28/2018 12:05:38 AM
Naphthalene	1.25	1.00		µg/L	1	12/28/2018 12:05:38 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/28/2018 12:05:38 AM
Surr: Dibromofluoromethane	85.6	45.4 - 152		%Rec	1	12/28/2018 12:05:38 AM
Surr: Toluene-d8	109	40.1 - 139		%Rec	1	12/28/2018 12:05:38 AM
Surr: 1-Bromo-4-fluorobenzene	107	64.2 - 128		%Rec	1	12/28/2018 12:05:38 AM

Ion Chromatography by EPA Method 300.0

Batch ID: 23096

Analyst: GM

Chloride	11.2	0.500	D	mg/L	5	12/28/2018 5:22:00 AM
Sulfate	8.68	1.50	D	mg/L	5	12/28/2018 5:22:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23105

Analyst: WC

Iron	5,260	100		µg/L	1	12/28/2018 9:23:17 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 9:00:00 AM

Project: BSCSS

Lab ID: 1812340-001

Matrix: Groundwater

Client Sample ID: MW-6:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Organic Carbon by SM 5310C

Batch ID: R48547 Analyst: GM

Total Organic Carbon	14.3	0.500		mg/L	1	12/22/2018 7:50:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 23117 Analyst: GM

Nitrogen, Ammonia	0.413	0.100		mg/L	1	12/31/2018 4:12:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 10:00:00 AM

Project: BSCSS

Lab ID: 1812340-002

Matrix: Groundwater

Client Sample ID: HZ-MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/28/2018 10:29:00 AM
Ethene	ND	0.0151		mg/L	1	12/28/2018 10:29:00 AM
Ethane	ND	0.0162		mg/L	1	12/28/2018 10:29:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072 Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Chloromethane	ND	2.00		µg/L	1	12/27/2018 7:02:52 PM
Vinyl chloride	ND	0.200		µg/L	1	12/27/2018 7:02:52 PM
Bromomethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Chloroethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Methylene chloride	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/27/2018 7:02:52 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Chloroform	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Benzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	12/27/2018 7:02:52 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Dibromomethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Toluene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/27/2018 7:02:52 PM
Chlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM



Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 10:00:00 AM

Project: BSCSS

Lab ID: 1812340-002

Matrix: Groundwater

Client Sample ID: HZ-MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072

Analyst: EM

Ethylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
m,p-Xylene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
o-Xylene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Styrene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Bromoform	ND	2.00		µg/L	1	12/27/2018 7:02:52 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Bromobenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/27/2018 7:02:52 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/27/2018 7:02:52 PM
Naphthalene	ND	1.00		µg/L	1	12/27/2018 7:02:52 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/27/2018 7:02:52 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	12/27/2018 7:02:52 PM
Surr: Toluene-d8	105	40.1 - 139		%Rec	1	12/27/2018 7:02:52 PM
Surr: 1-Bromo-4-fluorobenzene	125	64.2 - 128		%Rec	1	12/27/2018 7:02:52 PM

Ion Chromatography by EPA Method 300.0

Batch ID: 23096

Analyst: GM

Chloride	15.0	1.00	D	mg/L	10	12/28/2018 5:45:00 AM
Sulfate	36.5	1.50	D	mg/L	5	12/28/2018 6:08:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23105

Analyst: WC

Iron	ND	100		µg/L	1	12/28/2018 9:47:28 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 10:00:00 AM

Project: BSCSS

Lab ID: 1812340-002

Matrix: Groundwater

Client Sample ID: HZ-MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Organic Carbon by SM 5310C

Batch ID: R48547 Analyst: GM

Total Organic Carbon	3.10	0.500		mg/L	1	12/22/2018 8:49:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 23117 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/27/2018 5:50:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 11:30:00 AM

Project: BSCSS

Lab ID: 1812340-003

Matrix: Groundwater

Client Sample ID: HZ-MW-22:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/28/2018 10:32:00 AM
Ethene	ND	0.0151		mg/L	1	12/28/2018 10:32:00 AM
Ethane	ND	0.0162		mg/L	1	12/28/2018 10:32:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072 Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Chloromethane	ND	2.00		µg/L	1	12/27/2018 7:33:15 PM
Vinyl chloride	ND	0.200		µg/L	1	12/27/2018 7:33:15 PM
Bromomethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Chloroethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Methylene chloride	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	12/27/2018 7:33:15 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Chloroform	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Carbon tetrachloride	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Benzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Trichloroethene (TCE)	0.956	0.500		µg/L	1	12/27/2018 7:33:15 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Bromodichloromethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Dibromomethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Toluene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Tetrachloroethene (PCE)	1.46	1.00		µg/L	1	12/27/2018 7:33:15 PM
Dibromochloromethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	12/27/2018 7:33:15 PM
Chlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM



Client: Kane Environmental, Inc.

Collection Date: 12/21/2018 11:30:00 AM

Project: BSCSS

Lab ID: 1812340-003

Matrix: Groundwater

Client Sample ID: HZ-MW-22:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23072

Analyst: EM

Ethylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
m,p-Xylene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
o-Xylene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Styrene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Isopropylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Bromoform	ND	2.00		µg/L	1	12/27/2018 7:33:15 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
n-Propylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Bromobenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
2-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
4-Chlorotoluene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
tert-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	12/27/2018 7:33:15 PM
sec-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
n-Butylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	12/27/2018 7:33:15 PM
Naphthalene	ND	1.00		µg/L	1	12/27/2018 7:33:15 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	12/27/2018 7:33:15 PM
Surr: Dibromofluoromethane	107	45.4 - 152		%Rec	1	12/27/2018 7:33:15 PM
Surr: Toluene-d8	114	40.1 - 139		%Rec	1	12/27/2018 7:33:15 PM
Surr: 1-Bromo-4-fluorobenzene	105	64.2 - 128		%Rec	1	12/27/2018 7:33:15 PM

Ion Chromatography by EPA Method 300.0

Batch ID: 23096

Analyst: GM

Chloride	10.2	1.00	D	mg/L	10	12/28/2018 4:05:00 PM
Sulfate	25.5	0.600	D	mg/L	2	12/28/2018 6:31:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23105

Analyst: WC

Iron	ND	100		µg/L	1	12/28/2018 9:51:30 PM
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Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812340-003
Client Sample ID: HZ-MW-22:W

Collection Date: 12/21/2018 11:30:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48547		Analyst: GM
Total Organic Carbon	2.52	0.500		mg/L	1	12/22/2018 9:09:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23117		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/27/2018 5:56:00 PM

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID	LCS-23117	SampType:	LCS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622		
Client ID:	LCSW	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953196		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.560	0.100	0.5000	0	112	80	120				B
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Sample ID	MB-23117	SampType:	MBLK	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622		
Client ID:	MBLKW	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953197		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.112	0.100									
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Sample ID	1812372-001BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622		
Client ID:	BATCH	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953199		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	ND	0.100						0		30	
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Sample ID	1812372-001BMS	SampType:	MS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622		
Client ID:	BATCH	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953200		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.488	0.100	0.5000	0	97.6	70	130				B
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Sample ID	1812372-001BMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48622		
Client ID:	BATCH	Batch ID:	23117			Analysis Date:	12/27/2018	SeqNo:	953201		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia	0.455	0.100	0.5000	0	91.0	70	130	0.4880	7.00	30	B
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Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID 1812345-004EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48622					
Client ID: BATCH	Batch ID: 23117				Analysis Date: 12/27/2018	SeqNo: 953222					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	0.100						0		30	

Sample ID 1812345-004EMS	SampType: MS	Units: mg/L			Prep Date: 12/27/2018	RunNo: 48622					
Client ID: BATCH	Batch ID: 23117				Analysis Date: 12/27/2018	SeqNo: 953223					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	0.498	0.100	0.5000	0.04700	90.2	70	130				B

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-23096	SampType:	MBLK	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	MBLKW	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953626		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-23096	SampType:	LCS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	LCSW	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953627		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.694	0.100	0.7500	0	92.5	90	110				
Sulfate	3.49	0.300	3.750	0	93.1	90	110				

Sample ID	1812323-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953629		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	8.54	0.100						8.520	0.270	20	E
Sulfate	1.68	0.300						1.680	0.298	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812323-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953634		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	9.28	0.100	0.7500	8.520	102	80	120				E
Sulfate	4.32	0.300	3.750	1.680	70.4	80	120				S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812323-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	BATCH	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953635		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	9.32	0.100	0.7500	8.520	107	80	120	9.285	0.398	20	E
Sulfate	4.61	0.300	3.750	1.680	78.2	80	120	4.319	6.58	20	S

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.
 E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812340-003DDUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	HZ-MW-22:W	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953646		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	11.2	0.200						11.49	2.77	20	DE
Sulfate	24.9	0.600						25.50	2.30	20	D

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1812340-003DMS	SampType:	MS	Units:	mg/L	Prep Date:	12/27/2018	RunNo:	48641		
Client ID:	HZ-MW-22:W	Batch ID:	23096			Analysis Date:	12/28/2018	SeqNo:	953647		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	13.2	0.200	1.500	11.49	115	80	120				DE
Sulfate	33.5	0.600	7.500	25.50	106	80	120				DE

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Total Organic Carbon by SM 5310C

Sample ID	MB-48547	SampType:	MBLK	Units:	mg/L	Prep Date:	12/22/2018	RunNo:	48547		
Client ID:	MBLKW	Batch ID:	R48547			Analysis Date:	12/22/2018	SeqNo:	951446		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID	LCS-48547	SampType:	LCS	Units:	mg/L	Prep Date:	12/22/2018	RunNo:	48547		
Client ID:	LCSW	Batch ID:	R48547			Analysis Date:	12/22/2018	SeqNo:	951447		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.36 0.500 5.000 0 107 80 120

Sample ID	1812240-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	12/22/2018	RunNo:	48547		
Client ID:	BATCH	Batch ID:	R48547			Analysis Date:	12/22/2018	SeqNo:	951449		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.918 0.500 1.226 28.7 20

Sample ID	1812240-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	12/22/2018	RunNo:	48547		
Client ID:	BATCH	Batch ID:	R48547			Analysis Date:	12/22/2018	SeqNo:	951450		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.69 0.500 5.000 1.226 89.3 70 130

Sample ID	1812240-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	12/22/2018	RunNo:	48547		
Client ID:	BATCH	Batch ID:	R48547			Analysis Date:	12/22/2018	SeqNo:	951451		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.86 0.500 5.000 1.226 92.6 70 130 5.689 2.89 30



Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID 1812340-001EDUP	SampType: DUP	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48547					
Client ID: MW-6:W	Batch ID: R48547				Analysis Date: 12/22/2018	SeqNo: 951465					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	14.2	0.500						14.28	0.935	20	

Sample ID 1812340-001EMS	SampType: MS	Units: mg/L			Prep Date: 12/22/2018	RunNo: 48547					
Client ID: MW-6:W	Batch ID: R48547				Analysis Date: 12/22/2018	SeqNo: 951466					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Organic Carbon	18.5	0.500	5.000	14.28	83.3	70	130				



Date: 1/2/2019

Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23105	SampType: MBLK	Units: µg/L			Prep Date: 12/28/2018	RunNo: 48646					
Client ID: MBLKW	Batch ID: 23105				Analysis Date: 12/28/2018	SeqNo: 953827					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23105	SampType: LCS	Units: µg/L			Prep Date: 12/28/2018	RunNo: 48646					
Client ID: LCSW	Batch ID: 23105				Analysis Date: 12/28/2018	SeqNo: 953828					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 1,040 100 1,000 0 104 50 150

Sample ID 1812340-001CDUP	SampType: DUP	Units: µg/L			Prep Date: 12/28/2018	RunNo: 48646					
Client ID: MW-6:W	Batch ID: 23105				Analysis Date: 12/28/2018	SeqNo: 953830					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,080 100 5,258 3.38 30

Sample ID 1812340-001CMS	SampType: MS	Units: µg/L			Prep Date: 12/28/2018	RunNo: 48646					
Client ID: MW-6:W	Batch ID: 23105				Analysis Date: 12/28/2018	SeqNo: 953833					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 10,300 100 5,000 5,258 101 50 150

Sample ID 1812340-001CMSD	SampType: MSD	Units: µg/L			Prep Date: 12/28/2018	RunNo: 48646					
Client ID: MW-6:W	Batch ID: 23105				Analysis Date: 12/28/2018	SeqNo: 953834					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 10,200 100 5,000 5,258 99.2 50 150 10,310 0.891 30



Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID	MB-23082FB	SampType:	MBLK	Units:	µg/L	Prep Date:	12/28/2018	RunNo:	48646			
Client ID:	MBLKW	Batch ID:	23105			Analysis Date:	12/28/2018	SeqNo:	953837			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48619	SampType:	MBLK	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	MBLKW	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953096		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48619	SampType:	LCS	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	LCSW	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953095		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	818	0.00863	1,000	0	81.8	70	130				
Ethene	818	0.0151	1,000	0	81.8	70	130				
Ethane	822	0.0162	1,000	0	82.2	70	130				

Sample ID	1812328-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	BATCH	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953080		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0573	0.00863						0.04465	24.9	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23072	SampType:	LCS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	LCSW	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952059				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.1	1.00	20.00	0	95.7	18.7	171				
Chloromethane	19.9	2.00	20.00	0	99.6	38.5	171				
Vinyl chloride	19.4	0.200	20.00	0	96.8	48	145				
Bromomethane	21.4	1.00	20.00	0	107	32.5	184				
Trichlorofluoromethane (CFC-11)	20.4	1.00	20.00	0	102	43.5	149				
Chloroethane	20.0	1.00	20.00	0	100	43.8	168				
1,1-Dichloroethene	19.2	1.00	20.00	0	96.1	57.5	150				
Methylene chloride	19.4	1.00	20.00	0	97.0	67.1	131				
trans-1,2-Dichloroethene	19.7	1.00	20.00	0	98.5	71.7	129				
Methyl tert-butyl ether (MTBE)	19.4	1.00	20.00	0	96.9	58	138				
1,1-Dichloroethane	19.2	1.00	20.00	0	96.0	67.9	134				
2,2-Dichloropropane	17.2	2.00	20.00	0	86.1	26.5	185				
cis-1,2-Dichloroethene	20.5	1.00	20.00	0	102	70.2	139				
Chloroform	20.8	1.00	20.00	0	104	66.3	131				
1,1,1-Trichloroethane (TCA)	20.3	1.00	20.00	0	102	63	140				
1,1-Dichloropropene	19.7	1.00	20.00	0	98.3	69.9	124				
Carbon tetrachloride	19.9	1.00	20.00	0	99.7	66.2	134				
1,2-Dichloroethane (EDC)	16.7	1.00	20.00	0	83.7	67	126				
Benzene	17.3	1.00	20.00	0	86.5	69.3	132				
Trichloroethene (TCE)	17.0	0.500	20.00	0	85.2	65.2	136				
1,2-Dichloropropane	17.3	1.00	20.00	0	86.7	70.5	130				
Bromodichloromethane	22.1	1.00	20.00	0	110	67.2	137				
Dibromomethane	20.8	1.00	20.00	0	104	69.3	143				
cis-1,3-Dichloropropene	18.2	1.00	20.00	0	91.2	62.6	137				
Toluene	17.4	1.00	20.00	0	86.9	61.3	145				
trans-1,3-Dichloropropylene	16.0	1.00	20.00	0	80.2	56.5	163				
1,1,2-Trichloroethane	17.2	1.00	20.00	0	86.2	71.7	131				
1,3-Dichloropropane	17.1	1.00	20.00	0	85.6	73.5	127				
Tetrachloroethene (PCE)	18.4	1.00	20.00	0	91.8	47.5	147				
Dibromochloromethane	18.6	1.00	20.00	0	93.0	67.2	134				
1,2-Dibromoethane (EDB)	18.1	0.250	20.00	0	90.7	73.6	125				

Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23072	SampType:	LCS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	LCSW	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952059				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.6	1.00	20.00	0	103	73.9	126				
1,1,1,2-Tetrachloroethane	20.5	1.00	20.00	0	102	76.8	124				
Ethylbenzene	20.3	1.00	20.00	0	101	72	130				
m,p-Xylene	39.9	1.00	40.00	0	99.9	70.3	134				
o-Xylene	18.9	1.00	20.00	0	94.6	72.1	131				
Styrene	17.6	1.00	20.00	0	88.2	64.3	140				
Isopropylbenzene	17.2	1.00	20.00	0	85.8	73.9	128				
Bromoform	17.5	2.00	20.00	0	87.3	55.3	141				
1,1,2,2-Tetrachloroethane	16.6	1.00	20.00	0	82.8	62.9	132				
n-Propylbenzene	17.5	1.00	20.00	0	87.7	74.5	127				
Bromobenzene	17.9	1.00	20.00	0	89.5	71	131				
1,3,5-Trimethylbenzene	17.7	1.00	20.00	0	88.6	73.1	128				
2-Chlorotoluene	17.4	1.00	20.00	0	87.2	70.8	130				
4-Chlorotoluene	17.5	1.00	20.00	0	87.7	70.1	131				
tert-Butylbenzene	17.9	1.00	20.00	0	89.7	68.2	131				
1,2,3-Trichloropropane	16.6	1.00	20.00	0	83.1	67.7	131				
1,2,4-Trichlorobenzene	20.6	2.00	20.00	0	103	41	139				
sec-Butylbenzene	17.9	1.00	20.00	0	89.6	72	129				
4-Isopropyltoluene	17.9	1.00	20.00	0	89.7	69.2	130				
1,3-Dichlorobenzene	21.5	1.00	20.00	0	108	69.5	128				
1,4-Dichlorobenzene	21.3	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	20.9	1.00	20.00	0	104	73.8	127				
1,2-Dichlorobenzene	21.4	1.00	20.00	0	107	69.7	119				
1,2-Dibromo-3-chloropropane	23.4	1.00	20.00	0	117	63.1	136				
1,2,4-Trimethylbenzene	17.9	1.00	20.00	0	89.6	73.4	127				
Hexachloro-1,3-butadiene	21.4	4.00	20.00	0	107	58.6	138				
Naphthalene	20.6	1.00	20.00	0	103	41.8	165				
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	35.8	155				
Surr: Dibromofluoromethane	23.8		25.00		95.2	45.4	152				
Surr: Toluene-d8	25.7		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.0		25.00		88.0	64.2	128				

Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-23072	SampType: LCS	Units: µg/L	Prep Date: 12/26/2018	RunNo: 48570							
Client ID: LCSW	Batch ID: 23072		Analysis Date: 12/27/2018	SeqNo: 952059							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-23072	SampType: MBLK	Units: µg/L	Prep Date: 12/26/2018	RunNo: 48570							
Client ID: MBLKW	Batch ID: 23072		Analysis Date: 12/27/2018	SeqNo: 952060							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23072	SampType: MBLK	Units: µg/L	Prep Date: 12/26/2018	RunNo: 48570
Client ID: MBLKW	Batch ID: 23072		Analysis Date: 12/27/2018	SeqNo: 952060

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									Q
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-23072	SampType:	MBLK	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	MBLKW	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952060		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.7		25.00		103	45.4	152				
Surr: Toluene-d8	27.6		25.00		111	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.1		25.00		100	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812304-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952055		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812304-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570
Client ID:	BATCH	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952055

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812304-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952055				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.6		25.00		107	45.4	152		0		
Surr: Toluene-d8	27.4		25.00		110	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.7	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812328-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	11.6	1.00	20.00	0	57.8	33.3	122				
Chloromethane	17.5	2.00	20.00	0	87.7	39.7	143				
Vinyl chloride	17.9	0.200	20.00	0	89.6	41	165				
Bromomethane	13.9	1.00	20.00	0	69.5	31.5	135				
Trichlorofluoromethane (CFC-11)	20.2	1.00	20.00	0	101	54.7	138				
Chloroethane	21.4	1.00	20.00	0	107	49.9	143				
1,1-Dichloroethene	21.3	1.00	20.00	0	106	51.6	164				
Methylene chloride	21.8	1.00	20.00	0	109	61.6	135				
trans-1,2-Dichloroethene	21.3	1.00	20.00	0.5209	104	63.5	138				
Methyl tert-butyl ether (MTBE)	20.9	1.00	20.00	0	104	60.9	132				
1,1-Dichloroethane	22.4	1.00	20.00	0	112	55.7	151				

Work Order: 1812340
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	15.6	2.00	20.00	0	78.2	37.7	150				
cis-1,2-Dichloroethene	31.4	1.00	20.00	9.380	110	60	154				
Chloroform	22.6	1.00	20.00	0	113	48.1	140				
1,1,1-Trichloroethane (TCA)	23.1	1.00	20.00	0	115	64.2	146				
1,1-Dichloropropene	24.2	1.00	20.00	0	121	73.8	136				
Carbon tetrachloride	23.1	1.00	20.00	0	115	62.7	146				
1,2-Dichloroethane (EDC)	23.5	1.00	20.00	0	118	63.4	137				
Benzene	23.7	1.00	20.00	0	119	65.4	138				
Trichloroethene (TCE)	26.2	0.500	20.00	4.368	109	60.4	134				
1,2-Dichloropropane	25.2	1.00	20.00	0	126	62.6	138				
Bromodichloromethane	24.8	1.00	20.00	0	124	59.4	139				
Dibromomethane	24.1	1.00	20.00	0	120	58.7	148				
cis-1,3-Dichloropropene	19.1	1.00	20.00	0	95.3	63.8	132				
Toluene	21.8	1.00	20.00	0.2109	108	52	147				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	57.7	125				
1,1,2-Trichloroethane	21.5	1.00	20.00	0	108	57.5	153				
1,3-Dichloropropane	22.9	1.00	20.00	0	114	54.1	157				
Tetrachloroethene (PCE)	36.1	1.00	20.00	14.52	108	50.3	133				
Dibromochloromethane	21.9	1.00	20.00	0	110	61.6	139				
1,2-Dibromoethane (EDB)	22.5	0.250	20.00	0	113	63.2	134				
Chlorobenzene	21.5	1.00	20.00	0	108	65.8	134				
1,1,1,2-Tetrachloroethane	20.9	1.00	20.00	0	104	65.4	135				
Ethylbenzene	22.0	1.00	20.00	0	110	64.5	136				
m,p-Xylene	43.4	1.00	40.00	0	109	63.3	135				
o-Xylene	21.8	1.00	20.00	0	109	64.8	150				
Styrene	21.3	1.00	20.00	0	107	52.9	163				
Isopropylbenzene	22.4	1.00	20.00	0	112	56	147				
Bromoform	18.4	2.00	20.00	0	92.0	57.7	139				
1,1,2,2-Tetrachloroethane	22.7	1.00	20.00	0	113	59.8	146				
n-Propylbenzene	22.9	1.00	20.00	0	115	57.6	142				
Bromobenzene	20.7	1.00	20.00	0	104	69.3	157				

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMS	SampType:	MS	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952471				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	22.3	1.00	20.00	0	111	59.9	136				
2-Chlorotoluene	22.4	1.00	20.00	0	112	61.7	134				
4-Chlorotoluene	21.9	1.00	20.00	0	110	58.4	134				
tert-Butylbenzene	22.0	1.00	20.00	0	110	66.8	141				
1,2,3-Trichloropropane	20.9	1.00	20.00	0	104	62.4	129				
1,2,4-Trichlorobenzene	21.6	2.00	20.00	0	108	50.9	133				
sec-Butylbenzene	23.1	1.00	20.00	0	115	56	146				
4-Isopropyltoluene	22.5	1.00	20.00	0	112	56.4	136				
1,3-Dichlorobenzene	21.4	1.00	20.00	0	107	58.2	128				
1,4-Dichlorobenzene	22.2	1.00	20.00	0	111	60.1	123				
n-Butylbenzene	23.7	1.00	20.00	0	119	54.6	135				
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	65.4	133				
1,2-Dibromo-3-chloropropane	21.5	1.00	20.00	0	108	51.8	142				
1,2,4-Trimethylbenzene	22.3	1.00	20.00	0	112	63.7	132				
Hexachloro-1,3-butadiene	21.3	4.00	20.00	0	106	58.1	130				
Naphthalene	22.1	1.00	20.00	0	111	50.7	154				
1,2,3-Trichlorobenzene	22.4	4.00	20.00	0	112	57	131				
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152				
Surr: Toluene-d8	27.7		25.00		111	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		106	64.2	128				

Sample ID	1812328-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570		
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952472				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	10.7	1.00	20.00	0	53.3	33.3	122	11.56	8.05	30	
Chloromethane	16.0	2.00	20.00	0	79.8	39.7	143	17.54	9.52	30	
Vinyl chloride	16.0	0.200	20.00	0	80.1	41	165	17.92	11.2	30	
Bromomethane	14.6	1.00	20.00	0	72.8	31.5	135	13.90	4.59	30	
Trichlorofluoromethane (CFC-11)	18.3	1.00	20.00	0	91.7	54.7	138	20.20	9.58	30	

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570
Client ID:	BATCH	Batch ID:	23072	Analysis Date:	12/27/2018	SeqNo:	952472		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroethane	19.3	1.00	20.00	0	96.7	49.9	143	21.43	10.2	30	
1,1-Dichloroethene	18.2	1.00	20.00	0	90.8	51.6	164	21.29	15.8	30	
Methylene chloride	19.7	1.00	20.00	0	98.6	61.6	135	21.76	9.86	30	
trans-1,2-Dichloroethene	19.6	1.00	20.00	0.5209	95.5	63.5	138	21.27	8.07	30	
Methyl tert-butyl ether (MTBE)	18.8	1.00	20.00	0	94.1	60.9	132	20.86	10.3	30	
1,1-Dichloroethane	20.4	1.00	20.00	0	102	55.7	151	22.43	9.30	30	
2,2-Dichloropropane	14.3	2.00	20.00	0	71.7	37.7	150	15.65	8.80	30	
cis-1,2-Dichloroethene	27.9	1.00	20.00	9.380	92.8	60	154	31.37	11.6	30	
Chloroform	20.7	1.00	20.00	0	103	48.1	140	22.61	8.98	30	
1,1,1-Trichloroethane (TCA)	21.1	1.00	20.00	0	105	64.2	146	23.06	8.95	30	
1,1-Dichloropropene	22.1	1.00	20.00	0	111	73.8	136	24.18	8.80	30	
Carbon tetrachloride	21.3	1.00	20.00	0	106	62.7	146	23.09	8.19	30	
1,2-Dichloroethane (EDC)	21.4	1.00	20.00	0	107	63.4	137	23.52	9.23	30	
Benzene	21.8	1.00	20.00	0	109	65.4	138	23.73	8.61	30	
Trichloroethene (TCE)	23.5	0.500	20.00	4.368	95.6	60.4	134	26.18	10.9	30	
1,2-Dichloropropane	22.9	1.00	20.00	0	115	62.6	138	25.18	9.40	30	
Bromodichloromethane	23.0	1.00	20.00	0	115	59.4	139	24.79	7.65	30	
Dibromomethane	21.8	1.00	20.00	0	109	58.7	148	24.05	9.62	30	
cis-1,3-Dichloropropene	17.9	1.00	20.00	0	89.4	63.8	132	19.06	6.42	30	
Toluene	19.9	1.00	20.00	0.2109	98.4	52	147	21.82	9.27	30	
trans-1,3-Dichloropropylene	18.9	1.00	20.00	0	94.4	57.7	125	20.44	7.94	30	
1,1,2-Trichloroethane	19.5	1.00	20.00	0	97.6	57.5	153	21.53	9.75	30	
1,3-Dichloropropane	20.8	1.00	20.00	0	104	54.1	157	22.85	9.50	30	
Tetrachloroethene (PCE)	32.2	1.00	20.00	14.52	88.2	50.3	133	36.07	11.5	30	
Dibromochloromethane	20.2	1.00	20.00	0	101	61.6	139	21.91	8.19	30	
1,2-Dibromoethane (EDB)	20.1	0.250	20.00	0	101	63.2	134	22.54	11.2	30	
Chlorobenzene	19.8	1.00	20.00	0	99.1	65.8	134	21.50	8.12	30	
1,1,1,2-Tetrachloroethane	19.3	1.00	20.00	0	96.7	65.4	135	20.85	7.56	30	
Ethylbenzene	20.0	1.00	20.00	0	100	64.5	136	21.96	9.12	30	
m,p-Xylene	39.6	1.00	40.00	0	98.9	63.3	135	43.44	9.31	30	
o-Xylene	19.8	1.00	20.00	0	98.9	64.8	150	21.83	9.85	30	

Work Order: 1812340
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812328-002AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	12/26/2018	RunNo:	48570
Client ID:	BATCH	Batch ID:	23072			Analysis Date:	12/27/2018	SeqNo:	952472

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	19.4	1.00	20.00	0	97.0	52.9	163	21.31	9.43	30	
Isopropylbenzene	20.5	1.00	20.00	0	103	56	147	22.39	8.65	30	
Bromoform	16.6	2.00	20.00	0	83.1	57.7	139	18.40	10.1	30	
1,1,1,2-Tetrachloroethane	20.3	1.00	20.00	0	102	59.8	146	22.66	10.8	30	
n-Propylbenzene	20.3	1.00	20.00	0	102	57.6	142	22.92	11.9	30	
Bromobenzene	18.6	1.00	20.00	0	93.2	69.3	157	20.73	10.6	30	
1,3,5-Trimethylbenzene	20.3	1.00	20.00	0	101	59.9	136	22.26	9.35	30	
2-Chlorotoluene	20.6	1.00	20.00	0	103	61.7	134	22.42	8.58	30	
4-Chlorotoluene	19.7	1.00	20.00	0	98.6	58.4	134	21.94	10.7	30	
tert-Butylbenzene	20.2	1.00	20.00	0	101	66.8	141	21.95	8.56	30	
1,2,3-Trichloropropane	18.8	1.00	20.00	0	94.0	62.4	129	20.87	10.4	30	
1,2,4-Trichlorobenzene	19.6	2.00	20.00	0	98.1	50.9	133	21.64	9.80	30	
sec-Butylbenzene	20.9	1.00	20.00	0	105	56	146	23.10	9.80	30	
4-Isopropyltoluene	20.3	1.00	20.00	0	102	56.4	136	22.49	10.0	30	
1,3-Dichlorobenzene	20.4	1.00	20.00	0	102	58.2	128	21.45	4.80	30	
1,4-Dichlorobenzene	20.6	1.00	20.00	0	103	60.1	123	22.19	7.65	30	
n-Butylbenzene	22.4	1.00	20.00	0	112	54.6	135	23.74	5.97	30	
1,2-Dichlorobenzene	20.5	1.00	20.00	0	102	65.4	133	21.62	5.36	30	
1,2-Dibromo-3-chloropropane	20.0	1.00	20.00	0	100	51.8	142	21.51	7.09	30	
1,2,4-Trimethylbenzene	20.2	1.00	20.00	0	101	63.7	132	22.32	10.1	30	
Hexachloro-1,3-butadiene	19.6	4.00	20.00	0	98.2	58.1	130	21.26	7.92	30	
Naphthalene	20.0	1.00	20.00	0	100	50.7	154	22.10	9.77	30	
1,2,3-Trichlorobenzene	20.2	4.00	20.00	0	101	57	131	22.43	10.6	30	
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152		0		
Surr: Toluene-d8	28.0		25.00		112	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.3		25.00		105	64.2	128		0		

Client Name: **KANE**

 Work Order Number: **1812340**

 Logged by: **Clare Griggs**

 Date Received: **12/21/2018 12:26:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	7.1
Sample	8.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/21/18 Page: 1 of 1

Project Name: BSCS5

Project No: B23029.1

Collected by: Bg

Location: POTW

Report To (PM): HFF JENSEN

PM Email: HFF@KANE-ENVIRONMENTAL.COM

Laboratory Project No (Internal): 1812340

Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Client: KANE Environmental
Address: 4015 13th Ave W
City, State, Zip: SEATTLE, WA 98119
Telephone: (206) 991 0476
Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - 625)	Metals** (EPA 8082 / 608)	Total (T) Dissolved (D)	Anions (C)***	EDB (801)	OPD	DMMP	KSP	Comments
1 MN - U/S W	12/21	900	GW	X																lab filter, AC
2 HB - MN - U/S W	12/21	1000	GW	X																lab filter
3 H2 - MN - 22:5 W	12/21	1130	GW	X																lab filter
4																				
5																				
6																				
7																				
8																				
9																				
10																				

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Retrieved	Date/Time	Received	Date/Time
<i>[Signature]</i>	12/21/18 1226	<i>[Signature]</i>	12/21/18 1226
Retrieved	Date/Time	Received	Date/Time
<i>[Signature]</i>	12/21/18 1226	<i>[Signature]</i>	12/21/18 1226



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1812392

January 04, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 12/27/2018 for the analyses presented in the following report.

- Ammonia by SM 4500 NH3G***
- Dissolved Gases by RSK-175***
- Dissolved Metals by EPA Method 200.8***
- Ion Chromatography by EPA Method 300.0***
- Total Organic Carbon by SM 5310C***
- Volatile Organic Compounds by EPA Method 8260C***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1812392

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1812392-001	HZ-MW-15s:W	12/27/2018 10:40 AM	12/27/2018 3:50 PM
1812392-002	HZ-MW-15D:W	12/27/2018 12:40 PM	12/27/2018 3:50 PM
1812392-003	S-MW-5:W	12/27/2018 2:20 PM	12/27/2018 3:50 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 10:40:00 AM

Project: BSCSS

Lab ID: 1812392-001

Matrix: Groundwater

Client Sample ID: HZ-MW-15s:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/28/2018 10:53:00 AM
Ethene	ND	0.0151		mg/L	1	12/28/2018 10:53:00 AM
Ethane	ND	0.0162		mg/L	1	12/28/2018 10:53:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Chloromethane	ND	2.00		µg/L	1	1/2/2019 5:52:45 PM
Vinyl chloride	ND	0.200		µg/L	1	1/2/2019 5:52:45 PM
Bromomethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Chloroethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Methylene chloride	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/2/2019 5:52:45 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Chloroform	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Benzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/2/2019 5:52:45 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Dibromomethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Toluene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Tetrachloroethene (PCE)	11.8	1.00		µg/L	1	1/2/2019 5:52:45 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/2/2019 5:52:45 PM
Chlorobenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM



Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 10:40:00 AM

Project: BSCSS

Lab ID: 1812392-001

Matrix: Groundwater

Client Sample ID: HZ-MW-15s:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
m,p-Xylene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
o-Xylene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Styrene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Bromoform	ND	2.00		µg/L	1	1/2/2019 5:52:45 PM
1,1,2,2-Tetrachloroethane	ND	1.00	Q	µg/L	1	1/2/2019 5:52:45 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Bromobenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/2/2019 5:52:45 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/2/2019 5:52:45 PM
Naphthalene	ND	1.00		µg/L	1	1/2/2019 5:52:45 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/2/2019 5:52:45 PM
Surr: Dibromofluoromethane	106	45.4 - 152		%Rec	1	1/2/2019 5:52:45 PM
Surr: Toluene-d8	99.3	40.1 - 139		%Rec	1	1/2/2019 5:52:45 PM
Surr: 1-Bromo-4-fluorobenzene	92.7	64.2 - 128		%Rec	1	1/2/2019 5:52:45 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23134

Analyst: TN

Chloride	2.85	0.200	D	mg/L	2	1/2/2019 5:19:00 PM
Sulfate	19.5	0.600	D	mg/L	2	1/2/2019 5:19:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812392-001
Client Sample ID: HZ-MW-15s:W

Collection Date: 12/27/2018 10:40:00 AM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 23150		Analyst: WC
Iron	ND	100		µg/L	1	1/3/2019 11:52:25 AM
<u>Total Organic Carbon by SM 5310C</u>				Batch ID: R48677		Analyst: GM
Total Organic Carbon	1.36	0.500		mg/L	1	12/31/2018 3:57:00 PM
<u>Ammonia by SM 4500 NH3G</u>				Batch ID: 23130		Analyst: GM
Nitrogen, Ammonia	ND	0.100		mg/L	1	12/31/2018 4:22:00 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1812392-002
Client Sample ID: HZ-MW-15D:W

Collection Date: 12/27/2018 12:40:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	0.0463	0.0863	JD	mg/L	10	12/28/2018 11:16:00 AM
Ethene	ND	0.151	D	mg/L	10	12/28/2018 11:16:00 AM
Ethane	ND	0.162	D	mg/L	10	12/28/2018 11:16:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Chloromethane	ND	100	D	µg/L	50	1/2/2019 9:32:40 PM
Vinyl chloride	ND	10.0	D	µg/L	50	1/2/2019 9:32:40 PM
Bromomethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Trichlorofluoromethane (CFC-11)	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Chloroethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,1-Dichloroethene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Methylene chloride	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
trans-1,2-Dichloroethene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Methyl tert-butyl ether (MTBE)	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,1-Dichloroethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
2,2-Dichloropropane	ND	100	D	µg/L	50	1/2/2019 9:32:40 PM
cis-1,2-Dichloroethene	199	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Chloroform	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,1,1-Trichloroethane (TCA)	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,1-Dichloropropene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Carbon tetrachloride	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2-Dichloroethane (EDC)	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Benzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Trichloroethene (TCE)	229	25.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2-Dichloropropane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Bromodichloromethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Dibromomethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
cis-1,3-Dichloropropene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Toluene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
trans-1,3-Dichloropropylene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,1,2-Trichloroethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,3-Dichloropropane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Tetrachloroethene (PCE)	6,410	200	D	µg/L	200	1/2/2019 9:01:18 PM
Dibromochloromethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2-Dibromoethane (EDB)	ND	12.5	D	µg/L	50	1/2/2019 9:32:40 PM
Chlorobenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,1,1,2-Tetrachloroethane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM



Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 12:40:00 PM

Project: BSCSS

Lab ID: 1812392-002

Matrix: Groundwater

Client Sample ID: HZ-MW-15D:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145

Analyst: CR

Ethylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
m,p-Xylene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
o-Xylene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Styrene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Isopropylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Bromoform	ND	100	D	µg/L	50	1/2/2019 9:32:40 PM
1,1,2,2-Tetrachloroethane	ND	50.0	DQ	µg/L	50	1/2/2019 9:32:40 PM
n-Propylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Bromobenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,3,5-Trimethylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
2-Chlorotoluene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
4-Chlorotoluene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
tert-Butylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2,3-Trichloropropane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2,4-Trichlorobenzene	ND	100	D	µg/L	50	1/2/2019 9:32:40 PM
sec-Butylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
4-Isopropyltoluene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,3-Dichlorobenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,4-Dichlorobenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
n-Butylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2-Dichlorobenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2-Dibromo-3-chloropropane	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2,4-Trimethylbenzene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
Hexachloro-1,3-butadiene	ND	200	D	µg/L	50	1/2/2019 9:32:40 PM
Naphthalene	ND	50.0	D	µg/L	50	1/2/2019 9:32:40 PM
1,2,3-Trichlorobenzene	ND	200	D	µg/L	50	1/2/2019 9:32:40 PM
Surr: Dibromofluoromethane	103	45.4 - 152	D	%Rec	50	1/2/2019 9:32:40 PM
Surr: Toluene-d8	99.1	40.1 - 139	D	%Rec	50	1/2/2019 9:32:40 PM
Surr: 1-Bromo-4-fluorobenzene	91.8	64.2 - 128	D	%Rec	50	1/2/2019 9:32:40 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Ion Chromatography by EPA Method 300.0

Batch ID: 23134

Analyst: TN

Chloride	14.1	1.00	D	mg/L	10	1/3/2019 9:20:00 AM
Sulfate	26.0	1.50	D	mg/L	5	1/2/2019 6:52:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 12:40:00 PM

Project: BSCSS

Lab ID: 1812392-002

Matrix: Groundwater

Client Sample ID: HZ-MW-15D:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 23150 Analyst: WC

Iron	ND	100		µg/L	1	1/3/2019 12:08:32 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48677 Analyst: GM

Total Organic Carbon	1.08	0.500		mg/L	1	12/31/2018 5:16:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 23130 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/31/2018 4:27:00 PM
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Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812392-003

Matrix: Groundwater

Client Sample ID: S-MW-5:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Gases by RSK-175

Batch ID: R48619 Analyst: AD

Methane	ND	0.00863		mg/L	1	12/28/2018 11:00:00 AM
Ethene	ND	0.0151		mg/L	1	12/28/2018 11:00:00 AM
Ethane	ND	0.0162		mg/L	1	12/28/2018 11:00:00 AM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Chloromethane	ND	2.00		µg/L	1	1/2/2019 10:35:24 PM
Vinyl chloride	ND	0.200		µg/L	1	1/2/2019 10:35:24 PM
Bromomethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Chloroethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Methylene chloride	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/2/2019 10:35:24 PM
cis-1,2-Dichloroethene	16.7	1.00		µg/L	1	1/2/2019 10:35:24 PM
Chloroform	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Benzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Trichloroethene (TCE)	6.03	0.500		µg/L	1	1/2/2019 10:35:24 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Dibromomethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Toluene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Tetrachloroethene (PCE)	1,690	50.0	D	µg/L	50	1/2/2019 10:04:06 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/2/2019 10:35:24 PM
Chlorobenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM



Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812392-003

Matrix: Groundwater

Client Sample ID: S-MW-5:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145

Analyst: CR

Ethylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
m,p-Xylene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
o-Xylene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Styrene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Bromoform	ND	2.00		µg/L	1	1/2/2019 10:35:24 PM
1,1,2,2-Tetrachloroethane	ND	1.00	Q	µg/L	1	1/2/2019 10:35:24 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Bromobenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/2/2019 10:35:24 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/2/2019 10:35:24 PM
Naphthalene	ND	1.00		µg/L	1	1/2/2019 10:35:24 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/2/2019 10:35:24 PM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	1/2/2019 10:35:24 PM
Surr: Toluene-d8	99.0	40.1 - 139		%Rec	1	1/2/2019 10:35:24 PM
Surr: 1-Bromo-4-fluorobenzene	91.2	64.2 - 128		%Rec	1	1/2/2019 10:35:24 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Ion Chromatography by EPA Method 300.0

Batch ID: 23134

Analyst: TN

Chloride	6.56	0.500	D	mg/L	5	1/2/2019 7:15:00 PM
Sulfate	21.9	1.50	D	mg/L	5	1/2/2019 7:15:00 PM



Client: Kane Environmental, Inc.

Collection Date: 12/27/2018 2:20:00 PM

Project: BSCSS

Lab ID: 1812392-003

Matrix: Groundwater

Client Sample ID: S-MW-5:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Dissolved Metals by EPA Method 200.8

Batch ID: 23150 Analyst: WC

Iron	ND	100		µg/L	1	1/3/2019 12:12:34 PM
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Total Organic Carbon by SM 5310C

Batch ID: R48677 Analyst: GM

Total Organic Carbon	0.506	0.500		mg/L	1	12/31/2018 5:44:00 PM
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Ammonia by SM 4500 NH3G

Batch ID: 23130 Analyst: GM

Nitrogen, Ammonia	ND	0.100		mg/L	1	12/31/2018 4:43:00 PM
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Work Order: 1812392
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ammonia by SM 4500 NH3G

Sample ID MB-23130	SampType: MBLK	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48669							
Client ID: MBLKW	Batch ID: 23130		Analysis Date: 12/31/2018	SeqNo: 954256							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100

Sample ID 1812337-001CDUP	SampType: DUP	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48669							
Client ID: BATCH	Batch ID: 23130		Analysis Date: 12/31/2018	SeqNo: 954259							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia ND 0.100 0.1830 94.0 30 R

NOTES:

R - High RPD observed.

Sample ID 1812337-001CMS	SampType: MS	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48669							
Client ID: BATCH	Batch ID: 23130		Analysis Date: 12/31/2018	SeqNo: 954260							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.619 0.100 0.5000 0.1830 87.2 70 130

Sample ID 1812337-001CMSD	SampType: MSD	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48669							
Client ID: BATCH	Batch ID: 23130		Analysis Date: 12/31/2018	SeqNo: 954261							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.601 0.100 0.5000 0.1830 83.6 70 130 0.6190 2.95 30

Sample ID LCS-23130	SampType: LCS	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48669							
Client ID: LCSW	Batch ID: 23130		Analysis Date: 12/31/2018	SeqNo: 954270							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrogen, Ammonia 0.558 0.100 0.5000 0 112 80 120

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	LCS-23134	SampType:	LCS	Units:	mg/L	Prep Date:	1/2/2019	RunNo:	48701		
Client ID:	LCSW	Batch ID:	23134			Analysis Date:	1/2/2019	SeqNo:	954787		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.715	0.100	0.7500	0	95.3	90	110				
Sulfate	3.64	0.300	3.750	0	96.9	90	110				

Sample ID	MB-23134	SampType:	MBLK	Units:	mg/L	Prep Date:	1/2/2019	RunNo:	48701		
Client ID:	MBLKW	Batch ID:	23134			Analysis Date:	1/2/2019	SeqNo:	954788		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	ND	0.100									
Sulfate	ND	0.300									

Sample ID	1812392-001CDUP	SampType:	DUP	Units:	mg/L	Prep Date:	1/2/2019	RunNo:	48701		
Client ID:	HZ-MW-15s:W	Batch ID:	23134			Analysis Date:	1/2/2019	SeqNo:	954791		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	2.89	0.200						2.846	1.40	20	D
Sulfate	19.8	0.600						19.53	1.58	20	D

Sample ID	1812392-001CMS	SampType:	MS	Units:	mg/L	Prep Date:	1/2/2019	RunNo:	48701		
Client ID:	HZ-MW-15s:W	Batch ID:	23134			Analysis Date:	1/2/2019	SeqNo:	954792		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.48	0.200	1.500	2.846	109	80	120				D
Sulfate	27.6	0.600	7.500	19.53	108	80	120				D

Sample ID	1812392-001CMSD	SampType:	MSD	Units:	mg/L	Prep Date:	1/2/2019	RunNo:	48701		
Client ID:	HZ-MW-15s:W	Batch ID:	23134			Analysis Date:	1/2/2019	SeqNo:	954793		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.56	0.200	1.500	2.846	114	80	120	4.478	1.81	20	D
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Work Order: 1812392
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1812392-001CMSD	SampType:	MSD	Units:	mg/L	Prep Date:	1/2/2019	RunNo:	48701		
Client ID:	HZ-MW-15s:W	Batch ID:	23134			Analysis Date:	1/2/2019	SeqNo:	954793		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	28.1	0.600	7.500	19.53	115	80	120	27.62	1.84	20	D



Date: 1/4/2019

Work Order: 1812392
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Total Organic Carbon by SM 5310C

Sample ID MB-48677	SampType: MBLK	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48677							
Client ID: MBLKW	Batch ID: R48677	Analysis Date: 12/31/2018	SeqNo: 954389								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.500

Sample ID LCS-48677	SampType: LCS	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48677							
Client ID: LCSW	Batch ID: R48677	Analysis Date: 12/31/2018	SeqNo: 954390								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 5.08 0.500 5.000 0 102 80 120

Sample ID 1812392-001DDUP	SampType: DUP	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48677							
Client ID: HZ-MW-15s:W	Batch ID: R48677	Analysis Date: 12/31/2018	SeqNo: 954392								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 1.38 0.500 1.363 0.877 20

Sample ID 1812392-001DMS	SampType: MS	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48677							
Client ID: HZ-MW-15s:W	Batch ID: R48677	Analysis Date: 12/31/2018	SeqNo: 954393								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.50 0.500 5.000 1.363 103 70 130

Sample ID 1812392-001DMSD	SampType: MSD	Units: mg/L	Prep Date: 12/31/2018	RunNo: 48677							
Client ID: HZ-MW-15s:W	Batch ID: R48677	Analysis Date: 12/31/2018	SeqNo: 954394								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 6.55 0.500 5.000 1.363 104 70 130 6.505 0.644 30



Date: 1/4/2019

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23150	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: MBLKW	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955118								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23150	SampType: LCS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: LCSW	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955119								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 886 100 1,000 0 88.6 50 150

Sample ID 1812392-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: HZ-MW-15s:W	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955121								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812392-001BMS	SampType: MS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: HZ-MW-15s:W	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955122								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,540 100 5,000 0 90.8 50 150

Sample ID 1812392-001BMSD	SampType: MSD	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: HZ-MW-15s:W	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955123								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,490 100 5,000 0 89.8 50 150 4,542 1.18 30



Work Order: 1812392
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23131FB	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: MBLKW	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955129								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Dissolved Gases by RSK-175

Sample ID	MB-R48619	SampType:	MBLK	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	MBLKW	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953096		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	ND	0.00863									
Ethene	ND	0.0151									
Ethane	ND	0.0162									

Sample ID	LCS-R48619	SampType:	LCS	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	LCSW	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953095		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	818	0.00863	1,000	0	81.8	70	130				
Ethene	818	0.0151	1,000	0	81.8	70	130				
Ethane	822	0.0162	1,000	0	82.2	70	130				

Sample ID	1812328-001BREP	SampType:	REP	Units:	mg/L	Prep Date:	12/28/2018	RunNo:	48619		
Client ID:	BATCH	Batch ID:	R48619			Analysis Date:	12/28/2018	SeqNo:	953080		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.0573	0.00863						0.04465	24.9	30	
Ethene	ND	0.0151						0		30	
Ethane	ND	0.0162						0		30	

Work Order: 1812392
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23145	SampType:	LCS	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954569				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	30.0	1.00	20.00	0	150	18.7	171				
Chloromethane	22.4	2.00	20.00	0	112	38.5	171				
Vinyl chloride	21.8	0.200	20.00	0	109	48	145				
Bromomethane	18.2	1.00	20.00	0	91.2	32.5	184				
Trichlorofluoromethane (CFC-11)	19.8	1.00	20.00	0	99.2	43.5	149				
Chloroethane	20.1	1.00	20.00	0	101	43.8	168				
1,1-Dichloroethene	19.7	1.00	20.00	0	98.6	57.5	150				
Methylene chloride	19.2	1.00	20.00	0	95.9	67.1	131				
trans-1,2-Dichloroethene	19.3	1.00	20.00	0	96.4	71.7	129				
Methyl tert-butyl ether (MTBE)	19.1	1.00	20.00	0	95.5	58	138				
1,1-Dichloroethane	18.6	1.00	20.00	0	93.2	67.9	134				
2,2-Dichloropropane	23.7	2.00	20.00	0	118	26.5	185				
cis-1,2-Dichloroethene	18.9	1.00	20.00	0	94.5	70.2	139				
Chloroform	18.4	1.00	20.00	0	92.0	66.3	131				
1,1,1-Trichloroethane (TCA)	18.9	1.00	20.00	0	94.7	63	140				
1,1-Dichloropropene	19.4	1.00	20.00	0	96.9	69.9	124				
Carbon tetrachloride	19.3	1.00	20.00	0	96.5	66.2	134				
1,2-Dichloroethane (EDC)	18.8	1.00	20.00	0	93.9	67	126				
Benzene	18.8	1.00	20.00	0	94.1	69.3	132				
Trichloroethene (TCE)	18.8	0.500	20.00	0	94.1	65.2	136				
1,2-Dichloropropane	18.8	1.00	20.00	0	94.0	70.5	130				
Bromodichloromethane	18.7	1.00	20.00	0	93.5	67.2	137				
Dibromomethane	18.8	1.00	20.00	0	94.2	69.3	143				
cis-1,3-Dichloropropene	19.4	1.00	20.00	0	97.1	62.6	137				
Toluene	19.1	1.00	20.00	0	95.6	61.3	145				
trans-1,3-Dichloropropylene	19.4	1.00	20.00	0	97.0	56.5	163				
1,1,2-Trichloroethane	18.7	1.00	20.00	0	93.4	71.7	131				
1,3-Dichloropropane	18.6	1.00	20.00	0	93.0	73.5	127				
Tetrachloroethene (PCE)	19.6	1.00	20.00	0	98.0	47.5	147				
Dibromochloromethane	19.1	1.00	20.00	0	95.6	67.2	134				
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	91.8	73.6	125				

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23145	SampType:	LCS	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954569				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.2	1.00	20.00	0	95.9	73.9	126				
1,1,1,2-Tetrachloroethane	19.2	1.00	20.00	0	96.1	76.8	124				
Ethylbenzene	19.1	1.00	20.00	0	95.7	72	130				
m,p-Xylene	39.3	1.00	40.00	0	98.3	70.3	134				
o-Xylene	19.4	1.00	20.00	0	96.8	72.1	131				
Styrene	19.0	1.00	20.00	0	95.0	64.3	140				
Isopropylbenzene	18.7	1.00	20.00	0	93.6	73.9	128				
Bromoform	18.2	2.00	20.00	0	90.8	55.3	141				
1,1,2,2-Tetrachloroethane	17.9	1.00	20.00	0	89.3	62.9	132				
n-Propylbenzene	19.2	1.00	20.00	0	96.1	74.5	127				
Bromobenzene	18.2	1.00	20.00	0	91.0	71	131				
1,3,5-Trimethylbenzene	18.6	1.00	20.00	0	92.9	73.1	128				
2-Chlorotoluene	18.0	1.00	20.00	0	90.2	70.8	130				
4-Chlorotoluene	18.5	1.00	20.00	0	92.3	70.1	131				
tert-Butylbenzene	18.6	1.00	20.00	0	93.0	68.2	131				
1,2,3-Trichloropropane	17.9	1.00	20.00	0	89.4	67.7	131				
1,2,4-Trichlorobenzene	19.7	2.00	20.00	0	98.4	41	139				
sec-Butylbenzene	19.1	1.00	20.00	0	95.7	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	95.9	69.2	130				
1,3-Dichlorobenzene	19.3	1.00	20.00	0	96.7	69.5	128				
1,4-Dichlorobenzene	19.4	1.00	20.00	0	97.2	66.8	119				
n-Butylbenzene	20.0	1.00	20.00	0	99.8	73.8	127				
1,2-Dichlorobenzene	19.5	1.00	20.00	0	97.4	69.7	119				
1,2-Dibromo-3-chloropropane	17.9	1.00	20.00	0	89.6	63.1	136				
1,2,4-Trimethylbenzene	18.5	1.00	20.00	0	92.7	73.4	127				
Hexachloro-1,3-butadiene	20.5	4.00	20.00	0	103	58.6	138				
Naphthalene	18.8	1.00	20.00	0	93.9	41.8	165				
1,2,3-Trichlorobenzene	19.3	4.00	20.00	0	96.6	35.8	155				
Surr: Dibromofluoromethane	23.2		25.00		92.6	45.4	152				
Surr: Toluene-d8	24.8		25.00		99.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.7		25.00		94.8	64.2	128				

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23145	SampType:	LCS	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954569		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-23145	SampType:	MBLK	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	MBLKW	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954570		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									

Work Order: 1812392
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23145	SampType: MBLK	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686
Client ID: MBLKW	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954570

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									Q
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23145	SampType: MBLK	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686							
Client ID: MBLKW	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954570							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.7		25.00		103	45.4	152				
Surr: Toluene-d8	24.9		25.00		99.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.2		25.00		88.8	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812391-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686							
Client ID: BATCH	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954817							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Date: 1/4/2019

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812391-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686
Client ID: BATCH	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954817

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	Q
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812391-001BDUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	BATCH	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954817		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	27.0		25.00		108	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.7		25.00		90.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812392-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	HZ-MW-15s:W	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812392-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686
Client ID:	HZ-MW-15s:W	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954819

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	11.3	1.00						11.83	4.73	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	Q
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812392-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	HZ-MW-15s:W	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954819				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.9		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.3	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	LCSD-23145	SampType:	LCSD	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW02	Batch ID:	23145	Analysis Date:	1/3/2019	SeqNo:	954832				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	30.7	1.00	20.00	0	154	18.7	171	29.96	2.57	20	
Chloromethane	22.3	2.00	20.00	0	111	38.5	171	22.42	0.710	20	
Vinyl chloride	22.7	0.200	20.00	0	114	48	145	21.84	3.87	20	
Bromomethane	24.1	1.00	20.00	0	121	32.5	184	18.25	27.7	20	R

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-23145	SampType:	LCSD	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW02	Batch ID:	23145	Analysis Date:	1/3/2019	SeqNo:	954832				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	20.9	1.00	20.00	0	105	43.5	149	19.85	5.26	20	
Chloroethane	21.5	1.00	20.00	0	108	43.8	168	20.14	6.70	20	
1,1-Dichloroethene	21.1	1.00	20.00	0	106	57.5	150	19.72	6.87	20	
Methylene chloride	19.6	1.00	20.00	0	98.0	67.1	131	19.18	2.17	20	
trans-1,2-Dichloroethene	20.2	1.00	20.00	0	101	71.7	129	19.28	4.85	20	
Methyl tert-butyl ether (MTBE)	18.5	1.00	20.00	0	92.7	58	138	19.10	3.00	20	
1,1-Dichloroethane	19.4	1.00	20.00	0	96.9	67.9	134	18.63	3.89	20	
2,2-Dichloropropane	16.3	2.00	20.00	0	81.7	26.5	185	23.69	36.7	20	R
cis-1,2-Dichloroethene	19.7	1.00	20.00	0	98.6	70.2	139	18.90	4.18	20	
Chloroform	19.6	1.00	20.00	0	97.8	66.3	131	18.40	6.13	20	
1,1,1-Trichloroethane (TCA)	20.1	1.00	20.00	0	100	63	140	18.93	5.86	20	
1,1-Dichloropropene	20.4	1.00	20.00	0	102	69.9	124	19.38	5.35	20	
Carbon tetrachloride	20.8	1.00	20.00	0	104	66.2	134	19.30	7.68	20	
1,2-Dichloroethane (EDC)	19.1	1.00	20.00	0	95.7	68.8	123	18.78	1.91	20	
Benzene	19.9	1.00	20.00	0	99.3	69.3	132	18.82	5.41	20	
Trichloroethene (TCE)	19.7	0.500	20.00	0	98.7	65.2	136	18.83	4.70	20	
1,2-Dichloropropane	19.1	1.00	20.00	0	95.4	70.5	130	18.79	1.54	20	
Bromodichloromethane	19.6	1.00	20.00	0	98.0	74.6	127	18.70	4.70	20	
Dibromomethane	19.2	1.00	20.00	0	95.9	69.3	143	18.85	1.73	20	
cis-1,3-Dichloropropene	18.6	1.00	20.00	0	93.1	62.6	137	19.43	4.26	20	
Toluene	20.0	1.00	20.00	0	100	61.3	145	19.11	4.70	20	
trans-1,3-Dichloropropylene	18.3	1.00	20.00	0	91.6	56.5	163	19.39	5.71	20	
1,1,2-Trichloroethane	19.0	1.00	20.00	0	94.9	71.7	131	18.67	1.67	20	
1,3-Dichloropropane	18.8	1.00	20.00	0	94.0	73.5	127	18.60	1.05	20	
Tetrachloroethene (PCE)	21.0	1.00	20.00	0	105	47.5	147	19.60	7.09	20	
Dibromochloromethane	19.9	1.00	20.00	0	99.6	67.2	134	19.12	4.05	20	
1,2-Dibromoethane (EDB)	18.6	0.250	20.00	0	92.8	73.6	125	18.36	1.15	20	
Chlorobenzene	19.9	1.00	20.00	0	99.7	73.9	126	19.18	3.87	20	
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	100	76.8	124	19.22	4.27	20	
Ethylbenzene	20.2	1.00	20.00	0	101	72	130	19.14	5.19	20	
m,p-Xylene	41.1	1.00	40.00	0	103	70.3	134	39.34	4.29	20	

Work Order: 1812392
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-23145	SampType:	LCSD	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW02	Batch ID:	23145	Analysis Date:	1/3/2019	SeqNo:	954832				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	20.1	1.00	20.00	0	100	72.1	131	19.36	3.49	20	
Styrene	19.6	1.00	20.00	0	98.0	64.3	140	19.01	3.05	20	
Isopropylbenzene	19.5	1.00	20.00	0	97.5	73.9	128	18.72	4.05	20	
Bromoform	18.5	2.00	20.00	0	92.6	55.3	141	18.16	1.99	20	
1,1,1,2-Tetrachloroethane	17.0	1.00	20.00	0	84.8	62.9	132	17.87	5.27	20	
n-Propylbenzene	19.5	1.00	20.00	0	97.5	74.5	127	19.22	1.45	20	
Bromobenzene	18.6	1.00	20.00	0	93.2	71	131	18.19	2.38	20	
1,3,5-Trimethylbenzene	18.9	1.00	20.00	0	94.4	73.1	128	18.59	1.55	20	
2-Chlorotoluene	18.3	1.00	20.00	0	91.5	70.8	130	18.03	1.46	20	
4-Chlorotoluene	18.6	1.00	20.00	0	93.0	70.1	131	18.46	0.766	20	
tert-Butylbenzene	19.1	1.00	20.00	0	95.6	68.2	131	18.59	2.76	20	
1,2,3-Trichloropropane	17.0	1.00	20.00	0	84.9	67.7	131	17.87	5.07	20	
1,2,4-Trichlorobenzene	18.5	2.00	20.00	0	92.7	41	139	19.68	5.95	20	
sec-Butylbenzene	19.3	1.00	20.00	0	96.4	72	129	19.14	0.763	20	
4-Isopropyltoluene	19.2	1.00	20.00	0	96.2	69.2	130	19.18	0.296	20	
1,3-Dichlorobenzene	19.6	1.00	20.00	0	98.2	69.5	128	19.33	1.52	20	
1,4-Dichlorobenzene	20.0	1.00	20.00	0	99.8	66.8	119	19.43	2.68	20	
n-Butylbenzene	19.6	1.00	20.00	0	98.2	73.8	127	19.97	1.69	20	
1,2-Dichlorobenzene	19.2	1.00	20.00	0	96.1	69.7	119	19.48	1.33	20	
1,2-Dibromo-3-chloropropane	17.4	1.00	20.00	0	87.2	63.1	136	17.92	2.69	20	
1,2,4-Trimethylbenzene	18.7	1.00	20.00	0	93.3	73.4	127	18.53	0.657	20	
Hexachloro-1,3-butadiene	19.5	4.00	20.00	0	97.3	58.6	138	20.51	5.21	20	
Naphthalene	17.4	1.00	20.00	0	87.1	41.8	165	18.78	7.56	20	
1,2,3-Trichlorobenzene	19.0	4.00	20.00	0	94.8	35.8	155	19.31	1.82	20	
Surr: Dibromofluoromethane	24.2		25.00		96.7	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.0		25.00		92.2	64.2	128		0		

NOTES:

R - High RPD observed, spike recoveries are within range.

Client Name: **KANE**

 Work Order Number: **1812392**

 Logged by: **Brianna Barnes**

 Date Received: **12/27/2018 3:50:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
- HNO₃ added to fraction B.
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	1.9
Sample	4.7

* Note: DoD/ELAP and TNI require items to be received at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 12/27/18 Page: 1 of 1

Project Name: BSCSS

Project No: 82302-9.1

Collected by: JJ

Location: Bethell, WA

Report To (PM): Jeff Jensen

PM Email: jeff@kane-environmental.com

Laboratory Project No (Internal): 1912392

Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes												Comments				
				YOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***		EDB (8011)	TCC	Ammonia-N	RSK
1 HZ-Mw-15S:W	12/27/18	1040	GW	X																QC, Lab Filter
2 HZ-Mw-15D:W		1240		X																Lab Filter
3 S-Mw-5:W		1420		X																Lab Filter
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Turn-around Time:

Standard

3 Day

2 Day

Next Day

Same Day (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished *[Signature]* Date/Time 12/27/18 1546 Received *[Signature]* Date/Time 12/27/18 1550



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1901016

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 1/2/2019 for the analyses presented in the following report.

Ammonia by SM 4500 NH3G
Ion Chromatography by EPA Method 300.0
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Chelsea Ward".

Chelsea Ward
Project Manager

PRELIMINARY

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 01/04/2019

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1901016

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1901016-001	S-MW-2:W	01/02/2019 1:10 PM	01/02/2019 4:53 PM
1901016-002	S-MW-4:W	01/02/2019 3:30 PM	01/02/2019 4:53 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 1/2/2019 1:10:00 PM

Project: BSCSS

Lab ID: 1901016-001

Matrix: Groundwater

Client Sample ID: S-MW-2:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23158

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Chloromethane	ND	2.00		µg/L	1	1/3/2019 8:45:16 PM
Vinyl chloride	ND	0.200		µg/L	1	1/3/2019 8:45:16 PM
Bromomethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Chloroethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Methylene chloride	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/3/2019 8:45:16 PM
cis-1,2-Dichloroethene	5.02	1.00		µg/L	1	1/3/2019 8:45:16 PM
Chloroform	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Benzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Trichloroethene (TCE)	4.20	0.500		µg/L	1	1/3/2019 8:45:16 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Dibromomethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Toluene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Tetrachloroethene (PCE)	7.55	1.00		µg/L	1	1/3/2019 8:45:16 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/3/2019 8:45:16 PM
Chlorobenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Ethylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
m,p-Xylene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
o-Xylene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Styrene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Bromoform	ND	2.00		µg/L	1	1/3/2019 8:45:16 PM



Client: Kane Environmental, Inc.

Collection Date: 1/2/2019 1:10:00 PM

Project: BSCSS

Lab ID: 1901016-001

Matrix: Groundwater

Client Sample ID: S-MW-2:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23158

Analyst: KT

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Bromobenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/3/2019 8:45:16 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/3/2019 8:45:16 PM
Naphthalene	ND	1.00		µg/L	1	1/3/2019 8:45:16 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/3/2019 8:45:16 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	1/3/2019 8:45:16 PM
Surr: Toluene-d8	99.4	40.1 - 139		%Rec	1	1/3/2019 8:45:16 PM
Surr: 1-Bromo-4-fluorobenzene	92.9	64.2 - 128		%Rec	1	1/3/2019 8:45:16 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Client: Kane Environmental, Inc.

Collection Date: 1/2/2019 3:30:00 PM

Project: BSCSS

Lab ID: 1901016-002

Matrix: Groundwater

Client Sample ID: S-MW-4:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23158

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Chloromethane	ND	2.00		µg/L	1	1/3/2019 9:16:48 PM
Vinyl chloride	ND	0.200		µg/L	1	1/3/2019 9:16:48 PM
Bromomethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Chloroethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Methylene chloride	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/3/2019 9:16:48 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Chloroform	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Benzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/3/2019 9:16:48 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Dibromomethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Toluene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/3/2019 9:16:48 PM
Chlorobenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Ethylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
m,p-Xylene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
o-Xylene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Styrene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Bromoform	ND	2.00		µg/L	1	1/3/2019 9:16:48 PM



Client: Kane Environmental, Inc.
Project: BSCSS
Lab ID: 1901016-002
Client Sample ID: S-MW-4:W

Collection Date: 1/2/2019 3:30:00 PM
Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23158 Analyst: KT

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Bromobenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/3/2019 9:16:48 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/3/2019 9:16:48 PM
Naphthalene	ND	1.00		µg/L	1	1/3/2019 9:16:48 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/3/2019 9:16:48 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	1/3/2019 9:16:48 PM
Surr: Toluene-d8	99.5	40.1 - 139		%Rec	1	1/3/2019 9:16:48 PM
Surr: 1-Bromo-4-fluorobenzene	92.2	64.2 - 128		%Rec	1	1/3/2019 9:16:48 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: LCS-23158	SampType: LCS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: LCSW	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955748

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	24.2	1.00	20.00	0	121	18.7	171				
Chloromethane	20.8	2.00	20.00	0	104	38.5	171				
Vinyl chloride	20.3	0.200	20.00	0	102	48	145				
Bromomethane	25.2	1.00	20.00	0	126	32.5	184				
Trichlorofluoromethane (CFC-11)	19.6	1.00	20.00	0	98.2	43.5	149				
Chloroethane	20.2	1.00	20.00	0	101	43.8	168				
1,1-Dichloroethene	19.8	1.00	20.00	0	98.8	57.5	150				
Methylene chloride	19.3	1.00	20.00	0	96.6	67.1	131				
trans-1,2-Dichloroethene	19.5	1.00	20.00	0	97.3	71.7	129				
Methyl tert-butyl ether (MTBE)	18.6	1.00	20.00	0	92.8	58	138				
1,1-Dichloroethane	18.9	1.00	20.00	0	94.4	67.9	134				
2,2-Dichloropropane	23.8	2.00	20.00	0	119	26.5	185				
cis-1,2-Dichloroethene	19.1	1.00	20.00	0	95.7	70.2	139				
Chloroform	18.6	1.00	20.00	0	93.2	66.3	131				
1,1,1-Trichloroethane (TCA)	19.3	1.00	20.00	0	96.5	63	140				
1,1-Dichloropropene	19.9	1.00	20.00	0	99.3	69.9	124				
Carbon tetrachloride	19.6	1.00	20.00	0	97.9	66.2	134				
1,2-Dichloroethane (EDC)	18.4	1.00	20.00	0	92.2	67	126				
Benzene	19.1	1.00	20.00	0	95.5	69.3	132				
Trichloroethene (TCE)	19.2	0.500	20.00	0	96.2	65.2	136				
1,2-Dichloropropane	18.8	1.00	20.00	0	94.1	70.5	130				
Bromodichloromethane	19.0	1.00	20.00	0	95.0	67.2	137				
Dibromomethane	18.7	1.00	20.00	0	93.7	69.3	143				
cis-1,3-Dichloropropene	19.4	1.00	20.00	0	96.8	62.6	137				
Toluene	19.6	1.00	20.00	0	97.8	61.3	145				
trans-1,3-Dichloropropylene	19.0	1.00	20.00	0	95.1	56.5	163				
1,1,2-Trichloroethane	18.8	1.00	20.00	0	94.0	71.7	131				
1,3-Dichloropropane	18.5	1.00	20.00	0	92.7	73.5	127				
Tetrachloroethene (PCE)	19.8	1.00	20.00	0	99.2	47.5	147				
Dibromochloromethane	18.9	1.00	20.00	0	94.3	67.2	134				
1,2-Dibromoethane (EDB)	18.1	0.250	20.00	0	90.7	73.6	125				



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23158	SampType:	LCS	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744
Client ID:	LCSW	Batch ID:	23158			Analysis Date:	1/3/2019	SeqNo:	955748

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.5	1.00	20.00	0	97.4	73.9	126				
1,1,1,2-Tetrachloroethane	19.2	1.00	20.00	0	96.2	76.8	124				
Ethylbenzene	19.4	1.00	20.00	0	97.1	72	130				
m,p-Xylene	39.9	1.00	40.00	0	99.7	70.3	134				
o-Xylene	19.3	1.00	20.00	0	96.6	72.1	131				
Styrene	19.1	1.00	20.00	0	95.6	64.3	140				
Isopropylbenzene	19.1	1.00	20.00	0	95.6	73.9	128				
Bromoform	17.1	2.00	20.00	0	85.5	55.3	141				
1,1,2,2-Tetrachloroethane	16.3	1.00	20.00	0	81.5	62.9	132				
n-Propylbenzene	19.2	1.00	20.00	0	95.9	74.5	127				
Bromobenzene	18.1	1.00	20.00	0	90.4	71	131				
1,3,5-Trimethylbenzene	18.8	1.00	20.00	0	94.0	73.1	128				
2-Chlorotoluene	18.1	1.00	20.00	0	90.5	70.8	130				
4-Chlorotoluene	18.5	1.00	20.00	0	92.4	70.1	131				
tert-Butylbenzene	18.5	1.00	20.00	0	92.7	68.2	131				
1,2,3-Trichloropropane	16.6	1.00	20.00	0	82.8	67.7	131				
1,2,4-Trichlorobenzene	19.2	2.00	20.00	0	95.8	41	139				
sec-Butylbenzene	19.2	1.00	20.00	0	95.9	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	96.2	69.2	130				
1,3-Dichlorobenzene	19.5	1.00	20.00	0	97.6	69.5	128				
1,4-Dichlorobenzene	19.5	1.00	20.00	0	97.7	66.8	119				
n-Butylbenzene	20.2	1.00	20.00	0	101	73.8	127				
1,2-Dichlorobenzene	19.3	1.00	20.00	0	96.5	69.7	119				
1,2-Dibromo-3-chloropropane	16.5	1.00	20.00	0	82.3	63.1	136				
1,2,4-Trimethylbenzene	18.5	1.00	20.00	0	92.7	73.4	127				
Hexachloro-1,3-butadiene	20.4	4.00	20.00	0	102	58.6	138				
Naphthalene	17.8	1.00	20.00	0	88.8	41.8	165				
1,2,3-Trichlorobenzene	18.9	4.00	20.00	0	94.5	35.8	155				
Surr: Dibromofluoromethane	23.7		25.00		94.8	45.4	152				
Surr: Toluene-d8	24.9		25.00		99.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.4	64.2	128				



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-23158	SampType: LCS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: LCSW	Batch ID: 23158	Analysis Date: 1/3/2019	SeqNo: 955748								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-23158	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: MBLKW	Batch ID: 23158	Analysis Date: 1/3/2019	SeqNo: 955749								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									Q
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23158	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: MBLKW	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955749

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									



Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23158	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: MBLKW	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955749							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	24.8		25.00		99.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.3		25.00		89.0	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1901010-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955728							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1901010-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955728

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1901010-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955728							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.0		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.2		25.00		92.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1901013-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955731							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	



Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901013-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	BATCH	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955731				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	



Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901013-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	BATCH	Batch ID:	23158			Analysis Date:	1/3/2019	SeqNo:	955731		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.3		25.00		105	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.9		25.00		91.8	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1901016-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	S-MW-2:W	Batch ID:	23158			Analysis Date:	1/3/2019	SeqNo:	955735		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	26.3	1.00	20.00	0	131	33.3	122				S
Chloromethane	21.9	2.00	20.00	0	110	39.7	143				
Vinyl chloride	22.8	0.200	20.00	0	114	41	165				
Bromomethane	20.0	1.00	20.00	0	99.9	31.5	135				



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1901016-001AMS	SampType: MS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: S-MW-2:W	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955735

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	21.1	1.00	20.00	0	105	54.7	138				
Chloroethane	21.7	1.00	20.00	0	108	49.9	143				
1,1-Dichloroethene	21.7	1.00	20.00	0	109	51.6	164				
Methylene chloride	20.3	1.00	20.00	0	101	61.6	135				
trans-1,2-Dichloroethene	21.0	1.00	20.00	0	105	63.5	138				
Methyl tert-butyl ether (MTBE)	18.7	1.00	20.00	0	93.3	60.9	132				
1,1-Dichloroethane	19.9	1.00	20.00	0	99.3	55.7	151				
2,2-Dichloropropane	19.7	2.00	20.00	0	98.4	37.7	150				
cis-1,2-Dichloroethene	25.3	1.00	20.00	5.023	101	60	154				
Chloroform	20.5	1.00	20.00	0	102	48.1	140				
1,1,1-Trichloroethane (TCA)	20.6	1.00	20.00	0	103	64.2	146				
1,1-Dichloropropene	20.8	1.00	20.00	0	104	73.8	136				
Carbon tetrachloride	21.2	1.00	20.00	0	106	62.7	146				
1,2-Dichloroethane (EDC)	19.3	1.00	20.00	0	96.3	63.4	137				
Benzene	20.2	1.00	20.00	0	101	65.4	138				
Trichloroethene (TCE)	24.4	0.500	20.00	4.204	101	60.4	134				
1,2-Dichloropropane	19.8	1.00	20.00	0	98.8	62.6	138				
Bromodichloromethane	20.3	1.00	20.00	0	101	59.4	139				
Dibromomethane	19.7	1.00	20.00	0	98.6	58.7	148				
cis-1,3-Dichloropropene	19.5	1.00	20.00	0	97.4	63.8	132				
Toluene	20.4	1.00	20.00	0	102	52	147				
trans-1,3-Dichloropropylene	19.2	1.00	20.00	0	95.9	57.7	125				
1,1,2-Trichloroethane	19.3	1.00	20.00	0	96.4	57.5	153				
1,3-Dichloropropane	19.1	1.00	20.00	0	95.4	54.1	157				
Tetrachloroethene (PCE)	28.4	1.00	20.00	7.551	104	50.3	133				
Dibromochloromethane	20.1	1.00	20.00	0	100	61.6	139				
1,2-Dibromoethane (EDB)	18.9	0.250	20.00	0	94.3	63.2	134				
Chlorobenzene	20.1	1.00	20.00	0	100	65.8	134				
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	101	65.4	135				
Ethylbenzene	20.1	1.00	20.00	0	101	64.5	136				
m,p-Xylene	40.7	1.00	40.00	0	102	63.3	135				

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1901016-001AMS	SampType: MS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: S-MW-2:W	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955735

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	20.1	1.00	20.00	0	100	64.8	150				
Styrene	19.4	1.00	20.00	0	96.9	52.9	163				
Isopropylbenzene	19.8	1.00	20.00	0	99.1	56	147				
Bromoform	18.3	2.00	20.00	0	91.3	57.7	139				
1,1,2,2-Tetrachloroethane	17.8	1.00	20.00	0	89.1	59.8	146				
n-Propylbenzene	19.3	1.00	20.00	0	96.7	57.6	142				
Bromobenzene	18.5	1.00	20.00	0	92.5	69.3	157				
1,3,5-Trimethylbenzene	18.6	1.00	20.00	0	93.2	59.9	136				
2-Chlorotoluene	18.3	1.00	20.00	0	91.3	61.7	134				
4-Chlorotoluene	18.2	1.00	20.00	0	91.2	58.4	134				
tert-Butylbenzene	18.9	1.00	20.00	0	94.6	66.8	141				
1,2,3-Trichloropropane	16.8	1.00	20.00	0	84.2	62.4	129				
1,2,4-Trichlorobenzene	19.1	2.00	20.00	0	95.4	50.9	133				
sec-Butylbenzene	19.4	1.00	20.00	0.3355	95.3	56	146				
4-Isopropyltoluene	18.7	1.00	20.00	0	93.5	56.4	136				
1,3-Dichlorobenzene	19.8	1.00	20.00	0	99.0	58.2	128				
1,4-Dichlorobenzene	19.6	1.00	20.00	0	98.2	60.1	123				
n-Butylbenzene	19.3	1.00	20.00	0	96.7	54.6	135				
1,2-Dichlorobenzene	19.6	1.00	20.00	0	98.2	65.4	133				
1,2-Dibromo-3-chloropropane	17.7	1.00	20.00	0	88.3	51.8	142				
1,2,4-Trimethylbenzene	18.4	1.00	20.00	0	92.2	63.7	132				
Hexachloro-1,3-butadiene	19.4	4.00	20.00	0	96.9	58.1	130				
Naphthalene	18.5	1.00	20.00	0	92.4	50.7	154				
1,2,3-Trichlorobenzene	19.2	4.00	20.00	0	96.1	57	131				
Surr: Dibromofluoromethane	23.8		25.00		95.1	45.4	152				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.3		25.00		93.4	64.2	128				

NOTES:

S - Outlying spike recovery(ies) observed.



Date:

Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1901016-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: S-MW-2:W	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955736

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	28.2	1.00	20.00	0	141	33.3	122	26.29	6.86	30	S
Chloromethane	22.8	2.00	20.00	0	114	39.7	143	21.91	4.21	30	
Vinyl chloride	23.7	0.200	20.00	0	118	41	165	22.80	3.76	30	
Bromomethane	23.9	1.00	20.00	0	120	31.5	135	19.98	18.1	30	
Trichlorofluoromethane (CFC-11)	22.3	1.00	20.00	0	112	54.7	138	21.09	5.59	30	
Chloroethane	22.8	1.00	20.00	0	114	49.9	143	21.66	5.20	30	
1,1-Dichloroethene	22.5	1.00	20.00	0	113	51.6	164	21.72	3.68	30	
Methylene chloride	21.0	1.00	20.00	0	105	61.6	135	20.29	3.44	30	
trans-1,2-Dichloroethene	21.8	1.00	20.00	0	109	63.5	138	21.04	3.66	30	
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.4	60.9	132	18.65	6.34	30	
1,1-Dichloroethane	20.5	1.00	20.00	0	103	55.7	151	19.85	3.26	30	
2,2-Dichloropropane	20.0	2.00	20.00	0	99.9	37.7	150	19.67	1.53	30	
cis-1,2-Dichloroethene	26.3	1.00	20.00	5.023	106	60	154	25.31	3.64	30	
Chloroform	21.4	1.00	20.00	0	107	48.1	140	20.47	4.38	30	
1,1,1-Trichloroethane (TCA)	21.5	1.00	20.00	0	108	64.2	146	20.63	4.29	30	
1,1-Dichloropropene	21.9	1.00	20.00	0	110	73.8	136	20.78	5.35	30	
Carbon tetrachloride	22.1	1.00	20.00	0	111	62.7	146	21.25	3.97	30	
1,2-Dichloroethane (EDC)	20.0	1.00	20.00	0	100	63.4	137	19.26	3.85	30	
Benzene	21.2	1.00	20.00	0	106	65.4	138	20.24	4.57	30	
Trichloroethene (TCE)	25.2	0.500	20.00	4.204	105	60.4	134	24.41	2.98	30	
1,2-Dichloropropane	20.4	1.00	20.00	0	102	62.6	138	19.76	3.37	30	
Bromodichloromethane	20.8	1.00	20.00	0	104	59.4	139	20.28	2.68	30	
Dibromomethane	20.3	1.00	20.00	0	101	58.7	148	19.72	2.75	30	
cis-1,3-Dichloropropene	20.2	1.00	20.00	0	101	63.8	132	19.48	3.68	30	
Toluene	21.3	1.00	20.00	0	106	52	147	20.43	4.03	30	
trans-1,3-Dichloropropylene	20.0	1.00	20.00	0	99.8	57.7	125	19.17	4.08	30	
1,1,2-Trichloroethane	20.1	1.00	20.00	0	101	57.5	153	19.27	4.24	30	
1,3-Dichloropropane	19.9	1.00	20.00	0	99.5	54.1	157	19.08	4.25	30	
Tetrachloroethene (PCE)	29.7	1.00	20.00	7.551	111	50.3	133	28.42	4.41	30	
Dibromochloromethane	20.8	1.00	20.00	0	104	61.6	139	20.07	3.48	30	
1,2-Dibromoethane (EDB)	19.5	0.250	20.00	0	97.3	63.2	134	18.86	3.08	30	



Date:

Work Order: 1901016
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901016-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744
Client ID:	S-MW-2:W	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955736		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.1	1.00	20.00	0	106	65.8	134	20.06	5.27	30	
1,1,1,2-Tetrachloroethane	20.9	1.00	20.00	0	105	65.4	135	20.11	4.02	30	
Ethylbenzene	21.3	1.00	20.00	0	107	64.5	136	20.12	5.73	30	
m,p-Xylene	43.0	1.00	40.00	0	107	63.3	135	40.73	5.40	30	
o-Xylene	21.1	1.00	20.00	0	105	64.8	150	20.10	4.80	30	
Styrene	20.3	1.00	20.00	0	101	52.9	163	19.38	4.47	30	
Isopropylbenzene	21.1	1.00	20.00	0	106	56	147	19.83	6.24	30	
Bromoform	19.3	2.00	20.00	0	96.4	57.7	139	18.25	5.43	30	
1,1,2,2-Tetrachloroethane	19.3	1.00	20.00	0	96.3	59.8	146	17.83	7.73	30	
n-Propylbenzene	20.8	1.00	20.00	0	104	57.6	142	19.34	7.17	30	
Bromobenzene	19.8	1.00	20.00	0	99.0	69.3	157	18.49	6.80	30	
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	99.8	59.9	136	18.65	6.76	30	
2-Chlorotoluene	19.7	1.00	20.00	0	98.3	61.7	134	18.27	7.30	30	
4-Chlorotoluene	19.7	1.00	20.00	0	98.5	58.4	134	18.24	7.66	30	
tert-Butylbenzene	20.5	1.00	20.00	0	102	66.8	141	18.92	7.87	30	
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.3	62.4	129	16.83	4.75	30	
1,2,4-Trichlorobenzene	20.7	2.00	20.00	0	104	50.9	133	19.08	8.26	30	
sec-Butylbenzene	21.0	1.00	20.00	0.3355	104	56	146	19.40	8.13	30	
4-Isopropyltoluene	20.4	1.00	20.00	0	102	56.4	136	18.70	8.87	30	
1,3-Dichlorobenzene	20.9	1.00	20.00	0	105	58.2	128	19.81	5.44	30	
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	60.1	123	19.64	6.77	30	
n-Butylbenzene	21.3	1.00	20.00	0	107	54.6	135	19.35	9.71	30	
1,2-Dichlorobenzene	20.6	1.00	20.00	0	103	65.4	133	19.64	4.94	30	
1,2-Dibromo-3-chloropropane	18.5	1.00	20.00	0	92.6	51.8	142	17.66	4.71	30	
1,2,4-Trimethylbenzene	19.6	1.00	20.00	0	97.9	63.7	132	18.43	6.04	30	
Hexachloro-1,3-butadiene	21.3	4.00	20.00	0	107	58.1	130	19.39	9.56	30	
Naphthalene	20.2	1.00	20.00	0	101	50.7	154	18.48	9.00	30	
1,2,3-Trichlorobenzene	20.6	4.00	20.00	0	103	57	131	19.21	6.80	30	
Surr: Dibromofluoromethane	23.8		25.00		95.3	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.5	64.2	128		0		



Work Order: 1901016
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901016-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	S-MW-2:W	Batch ID:	23158			Analysis Date:	1/3/2019	SeqNo:	955736		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed.

Client Name: **KANE**

 Work Order Number: **1901016**

 Logged by: **Brianna Barnes**

 Date Received: **1/2/2019 4:53:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
HNO3 added to B fraction.
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	1.4
Sample	6.9
Temp Blank	5.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.
Jeff Jensen
4015 13th Ave W.
Seattle, WA 98103

RE: BSCSS
Work Order Number: 1901041

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 1/3/2019 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Chelsea Ward".

Chelsea Ward
Project Manager

PRELIMINARY



Date: 01/07/2019

CLIENT: Kane Environmental, Inc.
Project: BSCSS
Work Order: 1901041

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1901041-001	S-MW-3:W	01/03/2019 12:20 PM	01/03/2019 4:36 PM
1901041-002	HZ-MW-16:W	01/03/2019 3:05 PM	01/03/2019 4:36 PM

CLIENT: Kane Environmental, Inc.

Project: BSCSS

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 1/3/2019 12:20:00 PM

Project: BSCSS

Lab ID: 1901041-001

Matrix: Groundwater

Client Sample ID: S-MW-3:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23170

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Chloromethane	ND	2.00		µg/L	1	1/4/2019 6:29:55 PM
Vinyl chloride	ND	0.200		µg/L	1	1/4/2019 6:29:55 PM
Bromomethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Chloroethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Methylene chloride	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/4/2019 6:29:55 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Chloroform	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Benzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/4/2019 6:29:55 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Dibromomethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Toluene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Tetrachloroethene (PCE)	2.28	1.00		µg/L	1	1/4/2019 6:29:55 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/4/2019 6:29:55 PM
Chlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Ethylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
m,p-Xylene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
o-Xylene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Styrene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Bromoform	ND	2.00		µg/L	1	1/4/2019 6:29:55 PM



Client: Kane Environmental, Inc.

Collection Date: 1/3/2019 12:20:00 PM

Project: BSCSS

Lab ID: 1901041-001

Matrix: Groundwater

Client Sample ID: S-MW-3:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23170

Analyst: KT

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Bromobenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/4/2019 6:29:55 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/4/2019 6:29:55 PM
Naphthalene	ND	1.00		µg/L	1	1/4/2019 6:29:55 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/4/2019 6:29:55 PM
Surr: Dibromofluoromethane	101	45.4 - 152		%Rec	1	1/4/2019 6:29:55 PM
Surr: Toluene-d8	98.4	40.1 - 139		%Rec	1	1/4/2019 6:29:55 PM
Surr: 1-Bromo-4-fluorobenzene	98.3	64.2 - 128		%Rec	1	1/4/2019 6:29:55 PM



Client: Kane Environmental, Inc.

Collection Date: 1/3/2019 3:05:00 PM

Project: BSCSS

Lab ID: 1901041-002

Matrix: Groundwater

Client Sample ID: HZ-MW-16:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23170

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Chloromethane	ND	2.00		µg/L	1	1/4/2019 7:00:04 PM
Vinyl chloride	ND	0.200		µg/L	1	1/4/2019 7:00:04 PM
Bromomethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Chloroethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Methylene chloride	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/4/2019 7:00:04 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Chloroform	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Benzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/4/2019 7:00:04 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Dibromomethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Toluene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Tetrachloroethene (PCE)	1.39	1.00		µg/L	1	1/4/2019 7:00:04 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/4/2019 7:00:04 PM
Chlorobenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Ethylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
m,p-Xylene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
o-Xylene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Styrene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Bromoform	ND	2.00		µg/L	1	1/4/2019 7:00:04 PM



Client: Kane Environmental, Inc.

Collection Date: 1/3/2019 3:05:00 PM

Project: BSCSS

Lab ID: 1901041-002

Matrix: Groundwater

Client Sample ID: HZ-MW-16:W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23170

Analyst: KT

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Bromobenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/4/2019 7:00:04 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/4/2019 7:00:04 PM
Naphthalene	ND	1.00		µg/L	1	1/4/2019 7:00:04 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/4/2019 7:00:04 PM
Surr: Dibromofluoromethane	100	45.4 - 152		%Rec	1	1/4/2019 7:00:04 PM
Surr: Toluene-d8	98.4	40.1 - 139		%Rec	1	1/4/2019 7:00:04 PM
Surr: 1-Bromo-4-fluorobenzene	97.8	64.2 - 128		%Rec	1	1/4/2019 7:00:04 PM



Date:

Work Order: 1901041
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23170	SampType:	LCS	Units:	µg/L	Prep Date:	1/4/2019	RunNo:	48771
Client ID:	LCSW	Batch ID:	23170			Analysis Date:	1/4/2019	SeqNo:	956296

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	33.8	1.00	20.00	0	169	18.7	171				
Chloromethane	25.7	2.00	20.00	0	128	38.5	171				
Vinyl chloride	24.6	0.200	20.00	0	123	48	145				
Bromomethane	27.8	1.00	20.00	0	139	32.5	184				
Trichlorofluoromethane (CFC-11)	21.4	1.00	20.00	0	107	43.5	149				
Chloroethane	22.5	1.00	20.00	0	112	43.8	168				
1,1-Dichloroethene	21.7	1.00	20.00	0	108	57.5	150				
Methylene chloride	20.4	1.00	20.00	0	102	67.1	131				
trans-1,2-Dichloroethene	20.6	1.00	20.00	0	103	71.7	129				
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.3	58	138				
1,1-Dichloroethane	22.3	1.00	20.00	0	111	67.9	134				
2,2-Dichloropropane	23.3	2.00	20.00	0	116	26.5	185				
cis-1,2-Dichloroethene	21.1	1.00	20.00	0	105	70.2	139				
Chloroform	20.8	1.00	20.00	0	104	66.3	131				
1,1,1-Trichloroethane (TCA)	20.8	1.00	20.00	0	104	63	140				
1,1-Dichloropropene	21.2	1.00	20.00	0	106	69.9	124				
Carbon tetrachloride	20.9	1.00	20.00	0	104	66.2	134				
1,2-Dichloroethane (EDC)	20.6	1.00	20.00	0	103	67	126				
Benzene	20.6	1.00	20.00	0	103	69.3	132				
Trichloroethene (TCE)	20.6	0.500	20.00	0	103	65.2	136				
1,2-Dichloropropane	20.6	1.00	20.00	0	103	70.5	130				
Bromodichloromethane	20.3	1.00	20.00	0	102	67.2	137				
Dibromomethane	20.4	1.00	20.00	0	102	69.3	143				
cis-1,3-Dichloropropene	20.7	1.00	20.00	0	104	62.6	137				
Toluene	19.8	1.00	20.00	0	99.0	61.3	145				
trans-1,3-Dichloropropylene	20.0	1.00	20.00	0	100	56.5	163				
1,1,2-Trichloroethane	19.8	1.00	20.00	0	99.2	71.7	131				
1,3-Dichloropropane	19.8	1.00	20.00	0	98.9	73.5	127				
Tetrachloroethene (PCE)	20.2	1.00	20.00	0	101	47.5	147				
Dibromochloromethane	19.7	1.00	20.00	0	98.3	67.2	134				
1,2-Dibromoethane (EDB)	19.6	0.250	20.00	0	98.0	73.6	125				



Date:

Work Order: 1901041
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: LCS-23170	SampType: LCS	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48771
Client ID: LCSW	Batch ID: 23170		Analysis Date: 1/4/2019	SeqNo: 956296

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.4	1.00	20.00	0	102	73.9	126				
1,1,1,2-Tetrachloroethane	19.5	1.00	20.00	0	97.6	76.8	124				
Ethylbenzene	20.6	1.00	20.00	0	103	72	130				
m,p-Xylene	41.4	1.00	40.00	0	104	70.3	134				
o-Xylene	20.5	1.00	20.00	0	103	72.1	131				
Styrene	20.3	1.00	20.00	0	102	64.3	140				
Isopropylbenzene	20.7	1.00	20.00	0	104	73.9	128				
Bromoform	19.3	2.00	20.00	0	96.7	55.3	141				
1,1,2,2-Tetrachloroethane	18.8	1.00	20.00	0	94.2	62.9	132				
n-Propylbenzene	21.2	1.00	20.00	0	106	74.5	127				
Bromobenzene	20.2	1.00	20.00	0	101	71	131				
1,3,5-Trimethylbenzene	21.2	1.00	20.00	0	106	73.1	128				
2-Chlorotoluene	20.8	1.00	20.00	0	104	70.8	130				
4-Chlorotoluene	20.9	1.00	20.00	0	105	70.1	131				
tert-Butylbenzene	20.7	1.00	20.00	0	104	68.2	131				
1,2,3-Trichloropropane	19.5	1.00	20.00	0	97.6	67.7	131				
1,2,4-Trichlorobenzene	21.0	2.00	20.00	0	105	41	139				
sec-Butylbenzene	21.4	1.00	20.00	0	107	72	129				
4-Isopropyltoluene	21.5	1.00	20.00	0	108	69.2	130				
1,3-Dichlorobenzene	21.3	1.00	20.00	0	107	69.5	128				
1,4-Dichlorobenzene	21.2	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	22.5	1.00	20.00	0	112	73.8	127				
1,2-Dichlorobenzene	21.3	1.00	20.00	0	106	69.7	119				
1,2-Dibromo-3-chloropropane	19.9	1.00	20.00	0	99.4	63.1	136				
1,2,4-Trimethylbenzene	21.1	1.00	20.00	0	105	73.4	127				
Hexachloro-1,3-butadiene	22.4	4.00	20.00	0	112	58.6	138				
Naphthalene	20.4	1.00	20.00	0	102	41.8	165				
1,2,3-Trichlorobenzene	20.2	4.00	20.00	0	101	35.8	155				
Surr: Dibromofluoromethane	25.7		25.00		103	45.4	152				
Surr: Toluene-d8	24.3		25.00		97.0	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128				



Work Order: 1901041
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-23170	SampType: LCS	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48771							
Client ID: LCSW	Batch ID: 23170	Analysis Date: 1/4/2019	SeqNo: 956296								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-23170	SampType: MBLK	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48771							
Client ID: MBLKW	Batch ID: 23170	Analysis Date: 1/4/2019	SeqNo: 956297								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									



Date:

Work Order: 1901041
 CLIENT: Kane Environmental, Inc.
 Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-23170	SampType:	MBLK	Units:	µg/L	Prep Date:	1/4/2019	RunNo:	48771		
Client ID:	MBLKW	Batch ID:	23170			Analysis Date:	1/4/2019	SeqNo:	956297		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									



Work Order: 1901041
CLIENT: Kane Environmental, Inc.
Project: BSCSS

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23170	SampType: MBLK	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48771							
Client ID: MBLKW	Batch ID: 23170		Analysis Date: 1/4/2019	SeqNo: 956297							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.1		25.00		96.4	45.4	152				
Surr: Toluene-d8	24.4		25.00		97.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.4		25.00		97.6	64.2	128				

Client Name: **KANE**

 Work Order Number: **1901041**

 Logged by: **Brianna Barnes**

 Date Received: **1/3/2019 4:36:00 PM**
Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
HNO₃ added to B fraction.
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	7.9
Sample	8.4
Temp Blank	8.9

* Note: DoD/ELAP and TNI require items to be received at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 1/3/19 Page: 1 of 1
Project Name: BSCSS
Project No: 82302-9.1
Collected by: JJ
Location: Bothell, WA

Laboratory Project No (Internal): 1901041
Special Remarks: Need VOC results by 1/7/19 mid day please

Client: Kane Environmental
Address: 4015 13th Ave W
City, State, Zip: Seattle, WA 98119
Telephone: (206) 691-0476
Fax:

Report To (PM): Jeff Jensen
PM Email: jeff@kane-environmental.com

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	TOC	Ammonia - N	BSK	Comments	
1 S-Mw-3:W	1/3/19	1220	GW	X								X	D	X	X	X				
2 HZ-Mw-16:W	1/3/19	1505	GW	X								X	D	X	X	X				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

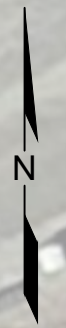
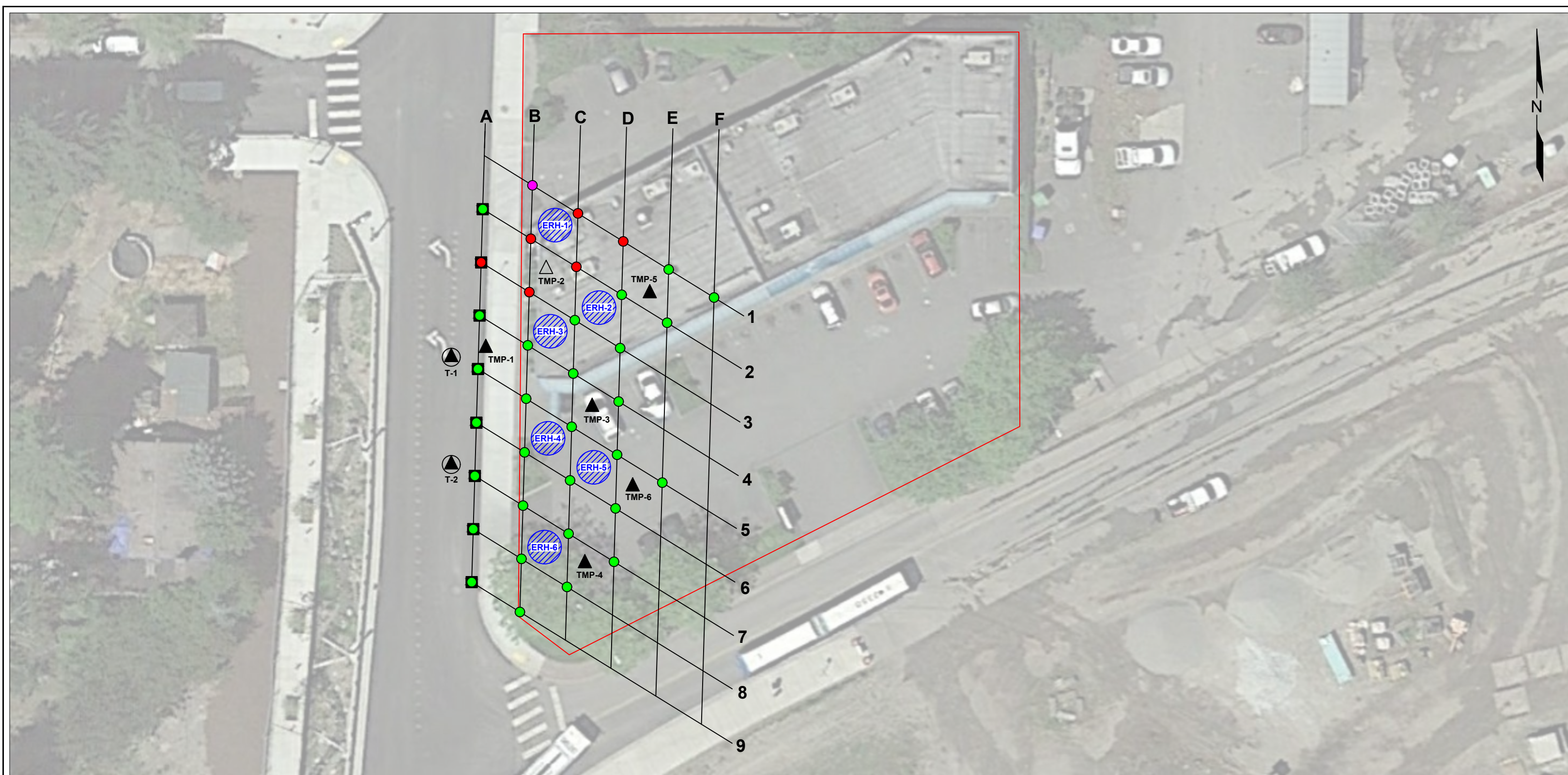
*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 Metals (Circle): MTCAs-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu **Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite **Chloride** Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished *[Signature]* Date/Time 1/3/19 1636
 Received *[Signature]* Date/Time 1/3/19 1036

Turn-around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify) _____

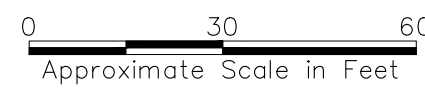
ATTACHMENT B
ERH HOT SOIL SAMPLING RESULTS



LEGEND

- BSCA Property Boundary
- Location of Above Grade Electrode (5-25 ft bgs)
- Location of Above Grade Electrode (5-35 ft bgs)
- Location of Below Grade Electrode (5-25 ft bgs)
- ▲ Location of Shallow Temperature Monitoring Probe (TMP)
- Location of Storm Sewer Thermocouple
- Location of Above Grade Electrode (5-55 ft bgs)
- Location of Below Grade Electrode (5-55 ft bgs)
- ▲ Location of Deep Temperature Monitoring Probe (TMP)
- Location of Proposed Soil Compliance Monitoring Sample Area

Aerial Photo Source: Google Earth Pro
Aerial Photo Date: June 27, 2016



**Table 1
Bothell Service Center Simon and Son
Hot Soil Sampling Analytical Results**

Sample Location	Sample Identifier	Date	Sampled By	Sample Depth (feet bgs)	PCE (mg/kg)	TCE (mg/kg)	(cis) 1,2-DCE (mg/kg)	1,1-DCE (mg/kg)	Vinyl Chloride (mg/kg)
ERH-1	1-ERH-1:2.5ft	10/30/18	Kane	2.5	18.2	0.142	0.0338	<0.0274	<0.0343
	1-ERH-1:5ft	10/30/18	Kane	5	1.29	<0.0232	<0.0232	<0.0232	<0.0289
	1-ERH-1:7.5ft	10/30/18	Kane	7.5	0.0666	<0.0238	<0.0238	<0.0238	<0.0289
ERH-2	1-ERH-2:2.5ft	10/26/18	Kane	2.5	0.0695	<0.0203	<0.0203	<0.0203	<0.0254
	1-ERH-2:5ft	10/26/18	Kane	5	<0.0269	<0.0215	<0.0215	<0.0215	<0.0269
ERH-3	1-ERH-3:1ft	10/30/18	Kane	1	0.0805	<0.0250	<0.0250	<0.0250	<0.0312
	1-ERH-3:4.5ft	10/30/18	Kane	4.5	<0.0335	<0.0268	<0.0268	<0.0268	<0.0335
ERH-4	1-ERH-4:2.5ft	10/30/18	Kane	2.5	3.8	0.0868	<0.0247	<0.0247	<0.0309
	1-ERH-4:4.5ft	10/30/18	Kane	4.5	1.31	0.0372	<0.0183	<0.0183	<0.0229
	1-ERH-4:6.5ft	10/30/18	Kane	6.5	0.172	<0.0192	<0.0192	<0.0192	<0.0240
ERH-5	1-ERH-5:2.5ft	10/26/18	Kane	2.5	<0.0350	<0.0280	<0.0280	<0.0280	<0.0350
	1-ERH-5:4.5ft	10/26/18	Kane	4.5	0.0528	<0.0324	<0.0324	<0.0324	<0.0405
ERH-6	1-ERH-6:2.5ft	10/30/18	Kane	2.5	2.67	0.0522	<0.0210	<0.0210	<0.0263
	1-ERH-6:5.5ft	10/30/18	Kane	5.5	0.144	<0.0228	<0.0228	<0.0228	<0.0285
MTCA Method A Cleanup Levels ¹					0.05	0.05	N/A	N/A	N/A
MTCA Method B Cleanup Levels					476	12	160	4000	0.67
RCRA Subtitle D Landfill Limits ²					14	10	N/A	N/A	4

Notes:

PCE – Tetrachloroethene

TCE – Trichloroethene

cis 1,2-DCE - cis 1,2-Dichloroethene

Blank – Not analyzed or not reported

Bold – Analyte detected

Bold / highlighted – Analyte exceeds MTCA Method A cleanup level

Bold / Highlighted – Analyte exceeds MTCA Method A cleanup level, and is greater than 5 feet below ground surface

mg/kg – milligrams per kilogram

ND – Analyte not detected at laboratory's reporting limit, which was not available

N/A – Not applicable

1 – Table 740-1. WAC 173-340-900

*- Analyzed by EPA Method 8021B

^ - Reporting limit greater than cleanup level

ATTACHMENT C
ERH AREA GROUNDWATER SAMPLING RESULTS

Table 1
Bothell Service Center Simon Son
ERH Area Groundwater Analytical Results

Well	Well Type and Water Bearing Zone	Screened Depth, (ft bgs)	Date Sampled	Depth to Water (ft below TOC)	Sampled By	PCE (µg/L)	TCE (µg/L)	(cis) 1,2-DCE (µg/L)	Vinyl Chloride (µg/L)
MW-42	Deep	30 to 45	1/3/19	10.21	Kane	<1.0	<1.0	<1.0	<0.2
MW-43	Shallow	10 to 25	1/2/19	10.4	Kane	225	32	7.16	<0.2
MTCA Method A Cleanup Level ¹						5.0	5.0		0.2
MTCA Method B Cleanup Level ²								16	

Notes:

PCE – Tetrachloroethene

TCE – Trichloroethene

1,1-DCE - 1,1-Dichloroethene

(cis) 1,2-DCE - (cis) 1,2-Dichloroethene

Blank – Not analyzed or not available

Bold – Analyte detected

Bold / highlighted – Analyte exceeds MTCA A/B cleanup level

< – Analyte not detected at listed reporting limit

Italicized - Reporting limit exceeds MTCA A/B cleanup level

ug/L – micrograms per liter

1 – Table 720-1, WAC 173-340-900

2 – WA Dept. of Ecology CLARC ground water data table

(<https://fortress.wa.gov/ecy/clarc/FocusSheets/Groundwater%20Methods%20B%20and%20A%20and%20ARARs.pdf>)

NA – Not Applicable



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.

John Kane
4015 13th Ave W.
Seattle, WA 98103

RE: Bothell ERH
Work Order Number: 1901007

January 03, 2019

Attention John Kane:

Fremont Analytical, Inc. received 1 sample(s) on 1/2/2019 for the analyses presented in the following report.

Dissolved Metals by EPA Method 200.8
Total Metals by EPA Method 200.8
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Chelsea Ward".

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 01/03/2019

CLIENT: Kane Environmental, Inc.
Project: Bothell ERH
Work Order: 1901007

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1901007-001	MW-43	01/02/2019 1:10 PM	01/02/2019 3:06 PM

CLIENT: Kane Environmental, Inc.

Project: Bothell ERH

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 1/2/2019 1:10:00 PM

Project: Bothell ERH

Lab ID: 1901007-001

Matrix: Groundwater

Client Sample ID: MW-43

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Chloromethane	ND	2.00		µg/L	1	1/3/2019 1:43:09 AM
Vinyl chloride	ND	0.200		µg/L	1	1/3/2019 1:43:09 AM
Bromomethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Chloroethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Methylene chloride	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/3/2019 1:43:09 AM
cis-1,2-Dichloroethene	7.16	1.00		µg/L	1	1/3/2019 1:43:09 AM
Chloroform	4.56	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Carbon tetrachloride	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Benzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Trichloroethene (TCE)	31.6	0.500		µg/L	1	1/3/2019 1:43:09 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Bromodichloromethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Dibromomethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Toluene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Tetrachloroethene (PCE)	225	50.0	D	µg/L	50	1/3/2019 1:11:52 AM
Dibromochloromethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/3/2019 1:43:09 AM
Chlorobenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Ethylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
m,p-Xylene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
o-Xylene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Styrene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Isopropylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Bromoform	ND	2.00		µg/L	1	1/3/2019 1:43:09 AM



Client: Kane Environmental, Inc.

Collection Date: 1/2/2019 1:10:00 PM

Project: Bothell ERH

Lab ID: 1901007-001

Matrix: Groundwater

Client Sample ID: MW-43

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23145

Analyst: CR

1,1,2,2-Tetrachloroethane	ND	1.00	Q	µg/L	1	1/3/2019 1:43:09 AM
n-Propylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Bromobenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
2-Chlorotoluene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
4-Chlorotoluene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
tert-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/3/2019 1:43:09 AM
sec-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
n-Butylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/3/2019 1:43:09 AM
Naphthalene	ND	1.00		µg/L	1	1/3/2019 1:43:09 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/3/2019 1:43:09 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	1/3/2019 1:43:09 AM
Surr: Toluene-d8	99.0	40.1 - 139		%Rec	1	1/3/2019 1:43:09 AM
Surr: 1-Bromo-4-fluorobenzene	91.3	64.2 - 128		%Rec	1	1/3/2019 1:43:09 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Dissolved Metals by EPA Method 200.8

Batch ID: 23150

Analyst: WC

Iron	1,280	100		µg/L	1	1/3/2019 12:16:36 PM
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Total Metals by EPA Method 200.8

Batch ID: 23151

Analyst: WC

Iron	1,360	100		µg/L	1	1/3/2019 2:57:38 PM
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Date: 1/3/2019

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23150	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: MBLKW	Batch ID: 23150		Analysis Date: 1/3/2019	SeqNo: 955118							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23150	SampType: LCS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: LCSW	Batch ID: 23150		Analysis Date: 1/3/2019	SeqNo: 955119							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 886 100 1,000 0 88.6 50 150

Sample ID 1812392-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: BATCH	Batch ID: 23150		Analysis Date: 1/3/2019	SeqNo: 955121							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1812392-001BMS	SampType: MS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: BATCH	Batch ID: 23150		Analysis Date: 1/3/2019	SeqNo: 955122							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,540 100 5,000 0 90.8 50 150

Sample ID 1812392-001BMSD	SampType: MSD	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: BATCH	Batch ID: 23150		Analysis Date: 1/3/2019	SeqNo: 955123							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,490 100 5,000 0 89.8 50 150 4,542 1.18 30



Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23131FB	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48713							
Client ID: MBLKW	Batch ID: 23150	Analysis Date: 1/3/2019	SeqNo: 955129								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

NOTES:
Filter Blank

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Total Metals by EPA Method 200.8

Sample ID MB-23151	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48723							
Client ID: MBLKW	Batch ID: 23151	Analysis Date: 1/3/2019	SeqNo: 955405								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23151	SampType: LCS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48723							
Client ID: LCSW	Batch ID: 23151	Analysis Date: 1/3/2019	SeqNo: 955406								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 842 100 1,000 0 84.2 50 150

Sample ID 1901002-001DDUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48723							
Client ID: BATCH	Batch ID: 23151	Analysis Date: 1/3/2019	SeqNo: 955408								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100 0 30

Sample ID 1901002-001DMS	SampType: MS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48723							
Client ID: BATCH	Batch ID: 23151	Analysis Date: 1/3/2019	SeqNo: 955409								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,670 100 5,000 0 93.4 50 150

Sample ID 1901002-001DMSD	SampType: MSD	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48723							
Client ID: BATCH	Batch ID: 23151	Analysis Date: 1/3/2019	SeqNo: 955410								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 4,970 100 5,000 0 99.3 50 150 4,670 6.17 30

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23145	SampType:	LCS	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954569				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	30.0	1.00	20.00	0	150	18.7	171				
Chloromethane	22.4	2.00	20.00	0	112	38.5	171				
Vinyl chloride	21.8	0.200	20.00	0	109	48	145				
Bromomethane	18.2	1.00	20.00	0	91.2	32.5	184				
Trichlorofluoromethane (CFC-11)	19.8	1.00	20.00	0	99.2	43.5	149				
Chloroethane	20.1	1.00	20.00	0	101	43.8	168				
1,1-Dichloroethene	19.7	1.00	20.00	0	98.6	57.5	150				
Methylene chloride	19.2	1.00	20.00	0	95.9	67.1	131				
trans-1,2-Dichloroethene	19.3	1.00	20.00	0	96.4	71.7	129				
Methyl tert-butyl ether (MTBE)	19.1	1.00	20.00	0	95.5	58	138				
1,1-Dichloroethane	18.6	1.00	20.00	0	93.2	67.9	134				
2,2-Dichloropropane	23.7	2.00	20.00	0	118	26.5	185				
cis-1,2-Dichloroethene	18.9	1.00	20.00	0	94.5	70.2	139				
Chloroform	18.4	1.00	20.00	0	92.0	66.3	131				
1,1,1-Trichloroethane (TCA)	18.9	1.00	20.00	0	94.7	63	140				
1,1-Dichloropropene	19.4	1.00	20.00	0	96.9	69.9	124				
Carbon tetrachloride	19.3	1.00	20.00	0	96.5	66.2	134				
1,2-Dichloroethane (EDC)	18.8	1.00	20.00	0	93.9	67	126				
Benzene	18.8	1.00	20.00	0	94.1	69.3	132				
Trichloroethene (TCE)	18.8	0.500	20.00	0	94.1	65.2	136				
1,2-Dichloropropane	18.8	1.00	20.00	0	94.0	70.5	130				
Bromodichloromethane	18.7	1.00	20.00	0	93.5	67.2	137				
Dibromomethane	18.8	1.00	20.00	0	94.2	69.3	143				
cis-1,3-Dichloropropene	19.4	1.00	20.00	0	97.1	62.6	137				
Toluene	19.1	1.00	20.00	0	95.6	61.3	145				
trans-1,3-Dichloropropylene	19.4	1.00	20.00	0	97.0	56.5	163				
1,1,2-Trichloroethane	18.7	1.00	20.00	0	93.4	71.7	131				
1,3-Dichloropropane	18.6	1.00	20.00	0	93.0	73.5	127				
Tetrachloroethene (PCE)	19.6	1.00	20.00	0	98.0	47.5	147				
Dibromochloromethane	19.1	1.00	20.00	0	95.6	67.2	134				
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	91.8	73.6	125				

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23145	SampType:	LCS	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954569				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.2	1.00	20.00	0	95.9	73.9	126				
1,1,1,2-Tetrachloroethane	19.2	1.00	20.00	0	96.1	76.8	124				
Ethylbenzene	19.1	1.00	20.00	0	95.7	72	130				
m,p-Xylene	39.3	1.00	40.00	0	98.3	70.3	134				
o-Xylene	19.4	1.00	20.00	0	96.8	72.1	131				
Styrene	19.0	1.00	20.00	0	95.0	64.3	140				
Isopropylbenzene	18.7	1.00	20.00	0	93.6	73.9	128				
Bromoform	18.2	2.00	20.00	0	90.8	55.3	141				
1,1,2,2-Tetrachloroethane	17.9	1.00	20.00	0	89.3	62.9	132				
n-Propylbenzene	19.2	1.00	20.00	0	96.1	74.5	127				
Bromobenzene	18.2	1.00	20.00	0	91.0	71	131				
1,3,5-Trimethylbenzene	18.6	1.00	20.00	0	92.9	73.1	128				
2-Chlorotoluene	18.0	1.00	20.00	0	90.2	70.8	130				
4-Chlorotoluene	18.5	1.00	20.00	0	92.3	70.1	131				
tert-Butylbenzene	18.6	1.00	20.00	0	93.0	68.2	131				
1,2,3-Trichloropropane	17.9	1.00	20.00	0	89.4	67.7	131				
1,2,4-Trichlorobenzene	19.7	2.00	20.00	0	98.4	41	139				
sec-Butylbenzene	19.1	1.00	20.00	0	95.7	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	95.9	69.2	130				
1,3-Dichlorobenzene	19.3	1.00	20.00	0	96.7	69.5	128				
1,4-Dichlorobenzene	19.4	1.00	20.00	0	97.2	66.8	119				
n-Butylbenzene	20.0	1.00	20.00	0	99.8	73.8	127				
1,2-Dichlorobenzene	19.5	1.00	20.00	0	97.4	69.7	119				
1,2-Dibromo-3-chloropropane	17.9	1.00	20.00	0	89.6	63.1	136				
1,2,4-Trimethylbenzene	18.5	1.00	20.00	0	92.7	73.4	127				
Hexachloro-1,3-butadiene	20.5	4.00	20.00	0	103	58.6	138				
Naphthalene	18.8	1.00	20.00	0	93.9	41.8	165				
1,2,3-Trichlorobenzene	19.3	4.00	20.00	0	96.6	35.8	155				
Surr: Dibromofluoromethane	23.2		25.00		92.6	45.4	152				
Surr: Toluene-d8	24.8		25.00		99.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.7		25.00		94.8	64.2	128				

Work Order: 1901007
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23145	SampType:	LCS	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686				
Client ID:	LCSW	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954569				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-23145	SampType:	MBLK	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686				
Client ID:	MBLKW	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954570				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00											
Chloromethane	ND	2.00											
Vinyl chloride	ND	0.200											
Bromomethane	ND	1.00											
Trichlorofluoromethane (CFC-11)	ND	1.00											
Chloroethane	ND	1.00											
1,1-Dichloroethene	ND	1.00											
Methylene chloride	ND	1.00											
trans-1,2-Dichloroethene	ND	1.00											
Methyl tert-butyl ether (MTBE)	ND	1.00											
1,1-Dichloroethane	ND	1.00											
2,2-Dichloropropane	ND	2.00											
cis-1,2-Dichloroethene	ND	1.00											
Chloroform	ND	1.00											
1,1,1-Trichloroethane (TCA)	ND	1.00											
1,1-Dichloropropene	ND	1.00											
Carbon tetrachloride	ND	1.00											
1,2-Dichloroethane (EDC)	ND	1.00											
Benzene	ND	1.00											
Trichloroethene (TCE)	ND	0.500											
1,2-Dichloropropane	ND	1.00											
Bromodichloromethane	ND	1.00											
Dibromomethane	ND	1.00											
cis-1,3-Dichloropropene	ND	1.00											
Toluene	ND	1.00											

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-23145	SampType: MBLK	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686
Client ID: MBLKW	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954570

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Pentachloroethane	ND	1.00									Q
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23145	SampType: MBLK	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686							
Client ID: MBLKW	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954570							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.7		25.00		103	45.4	152				
Surr: Toluene-d8	24.9		25.00		99.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.2		25.00		88.8	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1812391-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686							
Client ID: BATCH	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954817							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1812391-001BDUP	SampType: DUP	Units: µg/L	Prep Date: 1/2/2019	RunNo: 48686
Client ID: BATCH	Batch ID: 23145		Analysis Date: 1/2/2019	SeqNo: 954817

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	Q
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812391-001BDUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686
Client ID:	BATCH	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954817		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	27.0		25.00		108	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.7		25.00		90.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1812392-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686
Client ID:	BATCH	Batch ID:	23145	Analysis Date:	1/2/2019	SeqNo:	954819		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	



Date: 1/3/2019

Work Order: 1901007
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812392-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686
Client ID:	BATCH	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954819

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	11.3	1.00						11.83	4.73	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	Q
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1901007
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1812392-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	BATCH	Batch ID:	23145			Analysis Date:	1/2/2019	SeqNo:	954819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.9		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.3	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	LCS D-23145	SampType:	LCS D	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCS W02	Batch ID:	23145			Analysis Date:	1/3/2019	SeqNo:	954832		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	30.7	1.00	20.00	0	154	18.7	171	29.96	2.57	20	
Chloromethane	22.3	2.00	20.00	0	111	38.5	171	22.42	0.710	20	
Vinyl chloride	22.7	0.200	20.00	0	114	48	145	21.84	3.87	20	
Bromomethane	24.1	1.00	20.00	0	121	32.5	184	18.25	27.7	20	R



Date: 1/3/2019

Work Order: 1901007
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS D-23145	SampType:	LCS D	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686
Client ID:	LCS W02	Batch ID:	23145			Analysis Date:	1/3/2019	SeqNo:	954832

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	20.9	1.00	20.00	0	105	43.5	149	19.85	5.26	20	
Chloroethane	21.5	1.00	20.00	0	108	43.8	168	20.14	6.70	20	
1,1-Dichloroethene	21.1	1.00	20.00	0	106	57.5	150	19.72	6.87	20	
Methylene chloride	19.6	1.00	20.00	0	98.0	67.1	131	19.18	2.17	20	
trans-1,2-Dichloroethene	20.2	1.00	20.00	0	101	71.7	129	19.28	4.85	20	
Methyl tert-butyl ether (MTBE)	18.5	1.00	20.00	0	92.7	58	138	19.10	3.00	20	
1,1-Dichloroethane	19.4	1.00	20.00	0	96.9	67.9	134	18.63	3.89	20	
2,2-Dichloropropane	16.3	2.00	20.00	0	81.7	26.5	185	23.69	36.7	20	R
cis-1,2-Dichloroethene	19.7	1.00	20.00	0	98.6	70.2	139	18.90	4.18	20	
Chloroform	19.6	1.00	20.00	0	97.8	66.3	131	18.40	6.13	20	
1,1,1-Trichloroethane (TCA)	20.1	1.00	20.00	0	100	63	140	18.93	5.86	20	
1,1-Dichloropropene	20.4	1.00	20.00	0	102	69.9	124	19.38	5.35	20	
Carbon tetrachloride	20.8	1.00	20.00	0	104	66.2	134	19.30	7.68	20	
1,2-Dichloroethane (EDC)	19.1	1.00	20.00	0	95.7	68.8	123	18.78	1.91	20	
Benzene	19.9	1.00	20.00	0	99.3	69.3	132	18.82	5.41	20	
Trichloroethene (TCE)	19.7	0.500	20.00	0	98.7	65.2	136	18.83	4.70	20	
1,2-Dichloropropane	19.1	1.00	20.00	0	95.4	70.5	130	18.79	1.54	20	
Bromodichloromethane	19.6	1.00	20.00	0	98.0	74.6	127	18.70	4.70	20	
Dibromomethane	19.2	1.00	20.00	0	95.9	69.3	143	18.85	1.73	20	
cis-1,3-Dichloropropene	18.6	1.00	20.00	0	93.1	62.6	137	19.43	4.26	20	
Toluene	20.0	1.00	20.00	0	100	61.3	145	19.11	4.70	20	
trans-1,3-Dichloropropylene	18.3	1.00	20.00	0	91.6	56.5	163	19.39	5.71	20	
1,1,2-Trichloroethane	19.0	1.00	20.00	0	94.9	71.7	131	18.67	1.67	20	
1,3-Dichloropropane	18.8	1.00	20.00	0	94.0	73.5	127	18.60	1.05	20	
Tetrachloroethene (PCE)	21.0	1.00	20.00	0	105	47.5	147	19.60	7.09	20	
Dibromochloromethane	19.9	1.00	20.00	0	99.6	67.2	134	19.12	4.05	20	
1,2-Dibromoethane (EDB)	18.6	0.250	20.00	0	92.8	73.6	125	18.36	1.15	20	
Chlorobenzene	19.9	1.00	20.00	0	99.7	73.9	126	19.18	3.87	20	
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	100	76.8	124	19.22	4.27	20	
Ethylbenzene	20.2	1.00	20.00	0	101	72	130	19.14	5.19	20	
m,p-Xylene	41.1	1.00	40.00	0	103	70.3	134	39.34	4.29	20	

Work Order: 1901007
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSW02	SampType:	LCSW02	Units:	µg/L	Prep Date:	1/2/2019	RunNo:	48686		
Client ID:	LCSW02	Batch ID:	23145	Analysis Date:	1/3/2019	SeqNo:	954832				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	20.1	1.00	20.00	0	100	72.1	131	19.36	3.49	20	
Styrene	19.6	1.00	20.00	0	98.0	64.3	140	19.01	3.05	20	
Isopropylbenzene	19.5	1.00	20.00	0	97.5	73.9	128	18.72	4.05	20	
Bromoform	18.5	2.00	20.00	0	92.6	55.3	141	18.16	1.99	20	
1,1,1,2-Tetrachloroethane	17.0	1.00	20.00	0	84.8	62.9	132	17.87	5.27	20	
n-Propylbenzene	19.5	1.00	20.00	0	97.5	74.5	127	19.22	1.45	20	
Bromobenzene	18.6	1.00	20.00	0	93.2	71	131	18.19	2.38	20	
1,3,5-Trimethylbenzene	18.9	1.00	20.00	0	94.4	73.1	128	18.59	1.55	20	
2-Chlorotoluene	18.3	1.00	20.00	0	91.5	70.8	130	18.03	1.46	20	
4-Chlorotoluene	18.6	1.00	20.00	0	93.0	70.1	131	18.46	0.766	20	
tert-Butylbenzene	19.1	1.00	20.00	0	95.6	68.2	131	18.59	2.76	20	
1,2,3-Trichloropropane	17.0	1.00	20.00	0	84.9	67.7	131	17.87	5.07	20	
1,2,4-Trichlorobenzene	18.5	2.00	20.00	0	92.7	41	139	19.68	5.95	20	
sec-Butylbenzene	19.3	1.00	20.00	0	96.4	72	129	19.14	0.763	20	
4-Isopropyltoluene	19.2	1.00	20.00	0	96.2	69.2	130	19.18	0.296	20	
1,3-Dichlorobenzene	19.6	1.00	20.00	0	98.2	69.5	128	19.33	1.52	20	
1,4-Dichlorobenzene	20.0	1.00	20.00	0	99.8	66.8	119	19.43	2.68	20	
n-Butylbenzene	19.6	1.00	20.00	0	98.2	73.8	127	19.97	1.69	20	
1,2-Dichlorobenzene	19.2	1.00	20.00	0	96.1	69.7	119	19.48	1.33	20	
1,2-Dibromo-3-chloropropane	17.4	1.00	20.00	0	87.2	63.1	136	17.92	2.69	20	
1,2,4-Trimethylbenzene	18.7	1.00	20.00	0	93.3	73.4	127	18.53	0.657	20	
Hexachloro-1,3-butadiene	19.5	4.00	20.00	0	97.3	58.6	138	20.51	5.21	20	
Naphthalene	17.4	1.00	20.00	0	87.1	41.8	165	18.78	7.56	20	
1,2,3-Trichlorobenzene	19.0	4.00	20.00	0	94.8	35.8	155	19.31	1.82	20	
Surr: Dibromofluoromethane	24.2		25.00		96.7	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.0		25.00		92.2	64.2	128		0		

NOTES:

R - High RPD observed, spike recoveries are within range.

Client Name: **KANE**

 Work Order Number: **1901007**

 Logged by: **Brianna Barnes**

 Date Received: **1/2/2019 3:06:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C * Yes No NA
- Received straight from field.**
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	0.4
Sample	12.4
Temp Blank	3.3

* Note: DoD/ELAP and TNI require items to be received at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 1-2-19 Page: 1 of 1
Project Name: Bodell ERH

Laboratory Project No (Internal): 1901007
Special Remarks:

Client: Kane Environmental Inc
Project No: 82302-Tank 9.1

Address: 4015 130 Ave West
Collected by: J Kane

City, State, Zip: Seattle WA 98119
Location: Bodell

Telephone: 206 715 2779
Report To (PM): J Kane

Sample Disposal: Return to client Disposal by lab (after 30 days)

Fax: 206 715 2779
PM Email: j.kane@kane-environmental.com

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HClD)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (D) / Dissolved (D)	Anions (C)***	EDB (8011)	Comments	
1	MW-43	1-2-19	13:00 BW A															
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SI = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu (Fe) Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished [Signature] Date/Time 1-2-19 15:01 Received [Signature] Date/Time 1/2/19 1506
Relinquished [Signature] Date/Time 1-2-19 15:01 Received [Signature] Date/Time 1/2/19 1506

Turn-around Time: Standard 3 Day 2 Day Next Day Same Day (specify) _____



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Kane Environmental, Inc.

John Kane
4015 13th Ave W.
Seattle, WA 98103

RE: Bothell ERH
Work Order Number: 1901032

January 04, 2019

Attention John Kane:

Fremont Analytical, Inc. received 1 sample(s) on 1/3/2019 for the analyses presented in the following report.

Dissolved Metals by EPA Method 200.8
Total Metals by EPA Method 200.8
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Chelsea Ward".

Chelsea Ward
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Kane Environmental, Inc.
Project: Bothell ERH
Work Order: 1901032

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1901032-001	MW-42	01/03/2019 12:30 PM	01/03/2019 2:39 PM

CLIENT: Kane Environmental, Inc.

Project: Bothell ERH

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: Kane Environmental, Inc.

Collection Date: 1/3/2019 12:30:00 PM

Project: Bothell ERH

Lab ID: 1901032-001

Matrix: Groundwater

Client Sample ID: MW-42

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23158

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Chloromethane	ND	2.00		µg/L	1	1/4/2019 6:11:00 AM
Vinyl chloride	ND	0.200		µg/L	1	1/4/2019 6:11:00 AM
Bromomethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Chloroethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Methylene chloride	1.94	1.00		µg/L	1	1/4/2019 6:11:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/4/2019 6:11:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Chloroform	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Benzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/4/2019 6:11:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Dibromomethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Toluene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/4/2019 6:11:00 AM
Chlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Ethylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
m,p-Xylene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
o-Xylene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Styrene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Bromoform	ND	2.00		µg/L	1	1/4/2019 6:11:00 AM



Client: Kane Environmental, Inc.

Collection Date: 1/3/2019 12:30:00 PM

Project: Bothell ERH

Lab ID: 1901032-001

Matrix: Groundwater

Client Sample ID: MW-42

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23158

Analyst: KT

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Bromobenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/4/2019 6:11:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/4/2019 6:11:00 AM
Naphthalene	ND	1.00		µg/L	1	1/4/2019 6:11:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/4/2019 6:11:00 AM
Surr: Dibromofluoromethane	106	45.4 - 152		%Rec	1	1/4/2019 6:11:00 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	1/4/2019 6:11:00 AM
Surr: 1-Bromo-4-fluorobenzene	92.1	64.2 - 128		%Rec	1	1/4/2019 6:11:00 AM

Dissolved Metals by EPA Method 200.8

Batch ID: 23164

Analyst: WC

Iron	717	100		µg/L	1	1/4/2019 11:24:46 AM
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Total Metals by EPA Method 200.8

Batch ID: 23166

Analyst: WC

Iron	2,280	100		µg/L	1	1/4/2019 1:17:57 PM
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Date: 1/4/2019

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID MB-23164	SampType: MBLK	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48752							
Client ID: MBLKW	Batch ID: 23164	Analysis Date: 1/4/2019	SeqNo: 955959								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23164	SampType: LCS	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48752							
Client ID: LCSW	Batch ID: 23164	Analysis Date: 1/4/2019	SeqNo: 955960								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 926 100 1,000 0 92.6 50 150

Sample ID 1901032-001CDUP	SampType: DUP	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48752							
Client ID: MW-42	Batch ID: 23164	Analysis Date: 1/4/2019	SeqNo: 955962								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 731 100 717.3 1.91 30

Sample ID 1901032-001CMS	SampType: MS	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48752							
Client ID: MW-42	Batch ID: 23164	Analysis Date: 1/4/2019	SeqNo: 955963								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,760 100 5,000 717.3 101 50 150

Sample ID 1901032-001CMSD	SampType: MSD	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48752							
Client ID: MW-42	Batch ID: 23164	Analysis Date: 1/4/2019	SeqNo: 955964								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,300 100 5,000 717.3 91.6 50 150 5,755 8.30 30

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Total Metals by EPA Method 200.8

Sample ID MB-23166	SampType: MBLK	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48755							
Client ID: MBLKW	Batch ID: 23166	Analysis Date: 1/4/2019	SeqNo: 956072								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 100

Sample ID LCS-23166	SampType: LCS	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48755							
Client ID: LCSW	Batch ID: 23166	Analysis Date: 1/4/2019	SeqNo: 956073								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 1,010 100 1,000 0 101 50 150

Sample ID 1901019-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48755							
Client ID: BATCH	Batch ID: 23166	Analysis Date: 1/4/2019	SeqNo: 956077								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 421 100 394.2 6.59 30

Sample ID 1901019-001AMS	SampType: MS	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48755							
Client ID: BATCH	Batch ID: 23166	Analysis Date: 1/4/2019	SeqNo: 956078								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,490 100 5,000 394.2 102 50 150

Sample ID 1901019-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 1/4/2019	RunNo: 48755							
Client ID: BATCH	Batch ID: 23166	Analysis Date: 1/4/2019	SeqNo: 956079								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 5,950 100 5,000 394.2 111 50 150 5,488 8.04 30

Work Order: 1901032
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23158	SampType:	LCS	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	LCSW	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955748				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	24.2	1.00	20.00	0	121	18.7	171				
Chloromethane	20.8	2.00	20.00	0	104	38.5	171				
Vinyl chloride	20.3	0.200	20.00	0	102	48	145				
Bromomethane	25.2	1.00	20.00	0	126	32.5	184				
Trichlorofluoromethane (CFC-11)	19.6	1.00	20.00	0	98.2	43.5	149				
Chloroethane	20.2	1.00	20.00	0	101	43.8	168				
1,1-Dichloroethene	19.8	1.00	20.00	0	98.8	57.5	150				
Methylene chloride	19.3	1.00	20.00	0	96.6	67.1	131				
trans-1,2-Dichloroethene	19.5	1.00	20.00	0	97.3	71.7	129				
Methyl tert-butyl ether (MTBE)	18.6	1.00	20.00	0	92.8	58	138				
1,1-Dichloroethane	18.9	1.00	20.00	0	94.4	67.9	134				
2,2-Dichloropropane	23.8	2.00	20.00	0	119	26.5	185				
cis-1,2-Dichloroethene	19.1	1.00	20.00	0	95.7	70.2	139				
Chloroform	18.6	1.00	20.00	0	93.2	66.3	131				
1,1,1-Trichloroethane (TCA)	19.3	1.00	20.00	0	96.5	63	140				
1,1-Dichloropropene	19.9	1.00	20.00	0	99.3	69.9	124				
Carbon tetrachloride	19.6	1.00	20.00	0	97.9	66.2	134				
1,2-Dichloroethane (EDC)	18.4	1.00	20.00	0	92.2	67	126				
Benzene	19.1	1.00	20.00	0	95.5	69.3	132				
Trichloroethene (TCE)	19.2	0.500	20.00	0	96.2	65.2	136				
1,2-Dichloropropane	18.8	1.00	20.00	0	94.1	70.5	130				
Bromodichloromethane	19.0	1.00	20.00	0	95.0	67.2	137				
Dibromomethane	18.7	1.00	20.00	0	93.7	69.3	143				
cis-1,3-Dichloropropene	19.4	1.00	20.00	0	96.8	62.6	137				
Toluene	19.6	1.00	20.00	0	97.8	61.3	145				
trans-1,3-Dichloropropylene	19.0	1.00	20.00	0	95.1	56.5	163				
1,1,2-Trichloroethane	18.8	1.00	20.00	0	94.0	71.7	131				
1,3-Dichloropropane	18.5	1.00	20.00	0	92.7	73.5	127				
Tetrachloroethene (PCE)	19.8	1.00	20.00	0	99.2	47.5	147				
Dibromochloromethane	18.9	1.00	20.00	0	94.3	67.2	134				
1,2-Dibromoethane (EDB)	18.1	0.250	20.00	0	90.7	73.6	125				

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-23158	SampType:	LCS	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	LCSW	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955748				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.5	1.00	20.00	0	97.4	73.9	126				
1,1,1,2-Tetrachloroethane	19.2	1.00	20.00	0	96.2	76.8	124				
Ethylbenzene	19.4	1.00	20.00	0	97.1	72	130				
m,p-Xylene	39.9	1.00	40.00	0	99.7	70.3	134				
o-Xylene	19.3	1.00	20.00	0	96.6	72.1	131				
Styrene	19.1	1.00	20.00	0	95.6	64.3	140				
Isopropylbenzene	19.1	1.00	20.00	0	95.6	73.9	128				
Bromoform	17.1	2.00	20.00	0	85.5	55.3	141				
1,1,2,2-Tetrachloroethane	16.3	1.00	20.00	0	81.5	62.9	132				
n-Propylbenzene	19.2	1.00	20.00	0	95.9	74.5	127				
Bromobenzene	18.1	1.00	20.00	0	90.4	71	131				
1,3,5-Trimethylbenzene	18.8	1.00	20.00	0	94.0	73.1	128				
2-Chlorotoluene	18.1	1.00	20.00	0	90.5	70.8	130				
4-Chlorotoluene	18.5	1.00	20.00	0	92.4	70.1	131				
tert-Butylbenzene	18.5	1.00	20.00	0	92.7	68.2	131				
1,2,3-Trichloropropane	16.6	1.00	20.00	0	82.8	67.7	131				
1,2,4-Trichlorobenzene	19.2	2.00	20.00	0	95.8	41	139				
sec-Butylbenzene	19.2	1.00	20.00	0	95.9	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	96.2	69.2	130				
1,3-Dichlorobenzene	19.5	1.00	20.00	0	97.6	69.5	128				
1,4-Dichlorobenzene	19.5	1.00	20.00	0	97.7	66.8	119				
n-Butylbenzene	20.2	1.00	20.00	0	101	73.8	127				
1,2-Dichlorobenzene	19.3	1.00	20.00	0	96.5	69.7	119				
1,2-Dibromo-3-chloropropane	16.5	1.00	20.00	0	82.3	63.1	136				
1,2,4-Trimethylbenzene	18.5	1.00	20.00	0	92.7	73.4	127				
Hexachloro-1,3-butadiene	20.4	4.00	20.00	0	102	58.6	138				
Naphthalene	17.8	1.00	20.00	0	88.8	41.8	165				
1,2,3-Trichlorobenzene	18.9	4.00	20.00	0	94.5	35.8	155				
Surr: Dibromofluoromethane	23.7		25.00		94.8	45.4	152				
Surr: Toluene-d8	24.9		25.00		99.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.4	64.2	128				

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-23158	SampType: LCS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: LCSW	Batch ID: 23158	Analysis Date: 1/3/2019	SeqNo: 955748								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-23158	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: MBLKW	Batch ID: 23158	Analysis Date: 1/3/2019	SeqNo: 955749								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									Q
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									



Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23158	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: MBLKW	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955749

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-23158	SampType: MBLK	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: MBLKW	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955749							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	24.8		25.00		99.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.3		25.00		89.0	64.2	128				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1901010-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955728							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	



Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1901010-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955728

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1901010-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955728							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.0		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.2		25.00		92.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID 1901013-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744							
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955731							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901013-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	BATCH	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955731				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	

Work Order: 1901032
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901013-001ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	BATCH	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955731				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.3		25.00		105	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.9		25.00		91.8	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	1901016-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	BATCH	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955735				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	26.3	1.00	20.00	0	131	33.3	122				S
Chloromethane	21.9	2.00	20.00	0	110	39.7	143				
Vinyl chloride	22.8	0.200	20.00	0	114	41	165				
Bromomethane	20.0	1.00	20.00	0	99.9	31.5	135				



Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1901016-001AMS	SampType: MS	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955735

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	21.1	1.00	20.00	0	105	54.7	138				
Chloroethane	21.7	1.00	20.00	0	108	49.9	143				
1,1-Dichloroethene	21.7	1.00	20.00	0	109	51.6	164				
Methylene chloride	20.3	1.00	20.00	0	101	61.6	135				
trans-1,2-Dichloroethene	21.0	1.00	20.00	0	105	63.5	138				
Methyl tert-butyl ether (MTBE)	18.7	1.00	20.00	0	93.3	60.9	132				
1,1-Dichloroethane	19.9	1.00	20.00	0	99.3	55.7	151				
2,2-Dichloropropane	19.7	2.00	20.00	0	98.4	37.7	150				
cis-1,2-Dichloroethene	25.3	1.00	20.00	5.023	101	60	154				
Chloroform	20.5	1.00	20.00	0	102	48.1	140				
1,1,1-Trichloroethane (TCA)	20.6	1.00	20.00	0	103	64.2	146				
1,1-Dichloropropene	20.8	1.00	20.00	0	104	73.8	136				
Carbon tetrachloride	21.2	1.00	20.00	0	106	62.7	146				
1,2-Dichloroethane (EDC)	19.3	1.00	20.00	0	96.3	63.4	137				
Benzene	20.2	1.00	20.00	0	101	65.4	138				
Trichloroethene (TCE)	24.4	0.500	20.00	4.204	101	60.4	134				
1,2-Dichloropropane	19.8	1.00	20.00	0	98.8	62.6	138				
Bromodichloromethane	20.3	1.00	20.00	0	101	59.4	139				
Dibromomethane	19.7	1.00	20.00	0	98.6	58.7	148				
cis-1,3-Dichloropropene	19.5	1.00	20.00	0	97.4	63.8	132				
Toluene	20.4	1.00	20.00	0	102	52	147				
trans-1,3-Dichloropropylene	19.2	1.00	20.00	0	95.9	57.7	125				
1,1,2-Trichloroethane	19.3	1.00	20.00	0	96.4	57.5	153				
1,3-Dichloropropane	19.1	1.00	20.00	0	95.4	54.1	157				
Tetrachloroethene (PCE)	28.4	1.00	20.00	7.551	104	50.3	133				
Dibromochloromethane	20.1	1.00	20.00	0	100	61.6	139				
1,2-Dibromoethane (EDB)	18.9	0.250	20.00	0	94.3	63.2	134				
Chlorobenzene	20.1	1.00	20.00	0	100	65.8	134				
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	101	65.4	135				
Ethylbenzene	20.1	1.00	20.00	0	101	64.5	136				
m,p-Xylene	40.7	1.00	40.00	0	102	63.3	135				

Work Order: 1901032
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901016-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744
Client ID:	BATCH	Batch ID:	23158			Analysis Date:	1/3/2019	SeqNo:	955735

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	20.1	1.00	20.00	0	100	64.8	150				
Styrene	19.4	1.00	20.00	0	96.9	52.9	163				
Isopropylbenzene	19.8	1.00	20.00	0	99.1	56	147				
Bromoform	18.3	2.00	20.00	0	91.3	57.7	139				
1,1,2,2-Tetrachloroethane	17.8	1.00	20.00	0	89.1	59.8	146				
n-Propylbenzene	19.3	1.00	20.00	0	96.7	57.6	142				
Bromobenzene	18.5	1.00	20.00	0	92.5	69.3	157				
1,3,5-Trimethylbenzene	18.6	1.00	20.00	0	93.2	59.9	136				
2-Chlorotoluene	18.3	1.00	20.00	0	91.3	61.7	134				
4-Chlorotoluene	18.2	1.00	20.00	0	91.2	58.4	134				
tert-Butylbenzene	18.9	1.00	20.00	0	94.6	66.8	141				
1,2,3-Trichloropropane	16.8	1.00	20.00	0	84.2	62.4	129				
1,2,4-Trichlorobenzene	19.1	2.00	20.00	0	95.4	50.9	133				
sec-Butylbenzene	19.4	1.00	20.00	0.3355	95.3	56	146				
4-Isopropyltoluene	18.7	1.00	20.00	0	93.5	56.4	136				
1,3-Dichlorobenzene	19.8	1.00	20.00	0	99.0	58.2	128				
1,4-Dichlorobenzene	19.6	1.00	20.00	0	98.2	60.1	123				
n-Butylbenzene	19.3	1.00	20.00	0	96.7	54.6	135				
1,2-Dichlorobenzene	19.6	1.00	20.00	0	98.2	65.4	133				
1,2-Dibromo-3-chloropropane	17.7	1.00	20.00	0	88.3	51.8	142				
1,2,4-Trimethylbenzene	18.4	1.00	20.00	0	92.2	63.7	132				
Hexachloro-1,3-butadiene	19.4	4.00	20.00	0	96.9	58.1	130				
Naphthalene	18.5	1.00	20.00	0	92.4	50.7	154				
1,2,3-Trichlorobenzene	19.2	4.00	20.00	0	96.1	57	131				
Surr: Dibromofluoromethane	23.8		25.00		95.1	45.4	152				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.3		25.00		93.4	64.2	128				

NOTES:

S - Outlying spike recovery(ies) observed.

Work Order: 1901032
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1901016-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 1/3/2019	RunNo: 48744
Client ID: BATCH	Batch ID: 23158		Analysis Date: 1/3/2019	SeqNo: 955736

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	28.2	1.00	20.00	0	141	33.3	122	26.29	6.86	30	S
Chloromethane	22.8	2.00	20.00	0	114	39.7	143	21.91	4.21	30	
Vinyl chloride	23.7	0.200	20.00	0	118	41	165	22.80	3.76	30	
Bromomethane	23.9	1.00	20.00	0	120	31.5	135	19.98	18.1	30	
Trichlorofluoromethane (CFC-11)	22.3	1.00	20.00	0	112	54.7	138	21.09	5.59	30	
Chloroethane	22.8	1.00	20.00	0	114	49.9	143	21.66	5.20	30	
1,1-Dichloroethene	22.5	1.00	20.00	0	113	51.6	164	21.72	3.68	30	
Methylene chloride	21.0	1.00	20.00	0	105	61.6	135	20.29	3.44	30	
trans-1,2-Dichloroethene	21.8	1.00	20.00	0	109	63.5	138	21.04	3.66	30	
Methyl tert-butyl ether (MTBE)	19.9	1.00	20.00	0	99.4	60.9	132	18.65	6.34	30	
1,1-Dichloroethane	20.5	1.00	20.00	0	103	55.7	151	19.85	3.26	30	
2,2-Dichloropropane	20.0	2.00	20.00	0	99.9	37.7	150	19.67	1.53	30	
cis-1,2-Dichloroethene	26.3	1.00	20.00	5.023	106	60	154	25.31	3.64	30	
Chloroform	21.4	1.00	20.00	0	107	48.1	140	20.47	4.38	30	
1,1,1-Trichloroethane (TCA)	21.5	1.00	20.00	0	108	64.2	146	20.63	4.29	30	
1,1-Dichloropropene	21.9	1.00	20.00	0	110	73.8	136	20.78	5.35	30	
Carbon tetrachloride	22.1	1.00	20.00	0	111	62.7	146	21.25	3.97	30	
1,2-Dichloroethane (EDC)	20.0	1.00	20.00	0	100	63.4	137	19.26	3.85	30	
Benzene	21.2	1.00	20.00	0	106	65.4	138	20.24	4.57	30	
Trichloroethene (TCE)	25.2	0.500	20.00	4.204	105	60.4	134	24.41	2.98	30	
1,2-Dichloropropane	20.4	1.00	20.00	0	102	62.6	138	19.76	3.37	30	
Bromodichloromethane	20.8	1.00	20.00	0	104	59.4	139	20.28	2.68	30	
Dibromomethane	20.3	1.00	20.00	0	101	58.7	148	19.72	2.75	30	
cis-1,3-Dichloropropene	20.2	1.00	20.00	0	101	63.8	132	19.48	3.68	30	
Toluene	21.3	1.00	20.00	0	106	52	147	20.43	4.03	30	
trans-1,3-Dichloropropylene	20.0	1.00	20.00	0	99.8	57.7	125	19.17	4.08	30	
1,1,2-Trichloroethane	20.1	1.00	20.00	0	101	57.5	153	19.27	4.24	30	
1,3-Dichloropropane	19.9	1.00	20.00	0	99.5	54.1	157	19.08	4.25	30	
Tetrachloroethene (PCE)	29.7	1.00	20.00	7.551	111	50.3	133	28.42	4.41	30	
Dibromochloromethane	20.8	1.00	20.00	0	104	61.6	139	20.07	3.48	30	
1,2-Dibromoethane (EDB)	19.5	0.250	20.00	0	97.3	63.2	134	18.86	3.08	30	

Work Order: 1901032
 CLIENT: Kane Environmental, Inc.
 Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901016-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744		
Client ID:	BATCH	Batch ID:	23158	Analysis Date:	1/3/2019	SeqNo:	955736				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.1	1.00	20.00	0	106	65.8	134	20.06	5.27	30	
1,1,1,2-Tetrachloroethane	20.9	1.00	20.00	0	105	65.4	135	20.11	4.02	30	
Ethylbenzene	21.3	1.00	20.00	0	107	64.5	136	20.12	5.73	30	
m,p-Xylene	43.0	1.00	40.00	0	107	63.3	135	40.73	5.40	30	
o-Xylene	21.1	1.00	20.00	0	105	64.8	150	20.10	4.80	30	
Styrene	20.3	1.00	20.00	0	101	52.9	163	19.38	4.47	30	
Isopropylbenzene	21.1	1.00	20.00	0	106	56	147	19.83	6.24	30	
Bromoform	19.3	2.00	20.00	0	96.4	57.7	139	18.25	5.43	30	
1,1,2,2-Tetrachloroethane	19.3	1.00	20.00	0	96.3	59.8	146	17.83	7.73	30	
n-Propylbenzene	20.8	1.00	20.00	0	104	57.6	142	19.34	7.17	30	
Bromobenzene	19.8	1.00	20.00	0	99.0	69.3	157	18.49	6.80	30	
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	99.8	59.9	136	18.65	6.76	30	
2-Chlorotoluene	19.7	1.00	20.00	0	98.3	61.7	134	18.27	7.30	30	
4-Chlorotoluene	19.7	1.00	20.00	0	98.5	58.4	134	18.24	7.66	30	
tert-Butylbenzene	20.5	1.00	20.00	0	102	66.8	141	18.92	7.87	30	
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.3	62.4	129	16.83	4.75	30	
1,2,4-Trichlorobenzene	20.7	2.00	20.00	0	104	50.9	133	19.08	8.26	30	
sec-Butylbenzene	21.0	1.00	20.00	0.3355	104	56	146	19.40	8.13	30	
4-Isopropyltoluene	20.4	1.00	20.00	0	102	56.4	136	18.70	8.87	30	
1,3-Dichlorobenzene	20.9	1.00	20.00	0	105	58.2	128	19.81	5.44	30	
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	60.1	123	19.64	6.77	30	
n-Butylbenzene	21.3	1.00	20.00	0	107	54.6	135	19.35	9.71	30	
1,2-Dichlorobenzene	20.6	1.00	20.00	0	103	65.4	133	19.64	4.94	30	
1,2-Dibromo-3-chloropropane	18.5	1.00	20.00	0	92.6	51.8	142	17.66	4.71	30	
1,2,4-Trimethylbenzene	19.6	1.00	20.00	0	97.9	63.7	132	18.43	6.04	30	
Hexachloro-1,3-butadiene	21.3	4.00	20.00	0	107	58.1	130	19.39	9.56	30	
Naphthalene	20.2	1.00	20.00	0	101	50.7	154	18.48	9.00	30	
1,2,3-Trichlorobenzene	20.6	4.00	20.00	0	103	57	131	19.21	6.80	30	
Surr: Dibromofluoromethane	23.8		25.00		95.3	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.5	64.2	128		0		



Work Order: 1901032
CLIENT: Kane Environmental, Inc.
Project: Bothell ERH

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1901016-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	1/3/2019	RunNo:	48744				
Client ID:	BATCH	Batch ID:	23158			Analysis Date:	1/3/2019	SeqNo:	955736				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed.

Client Name: KANE	Work Order Number: 1901032
Logged by: Clare Griggs	Date Received: 1/3/2019 2:39:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
- Sample received straight from field.**
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

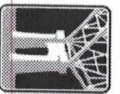
Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	1.5
Sample	13.4
Temp Blank	1.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 1-3-19 Page: 1 of 1

Project Name: Bdshell ERH

Project No: 8302 Talk 9.1

Collected by: Jean Bdshell

Location: Jean Bdshell

Report To (PM): Jean

PM Email: jean@kane-environmental.com

Laboratory Project No (Internal): 1961092

Special Remarks:

Sample Disposal: Return to client Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total Metals / Dissolved Metals	Anions (C)***	EDB (8011)	Comments
1 MW-42	1-3-19	12:30	GW														
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water
 **Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sp Se Sr Sn Tl U V Zn
 ***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished 1-3-19 14:35 Received 1/3/19 14:39

Relinquished 1-3-19 14:35 Received 1/3/19 14:39

Relinquished 1-3-19 14:35 Received 1/3/19 14:39

Turn-around Time:
 Standard
 3 Day
 2 Day
 Next Day
 Same Day (specify) _____