Georgia Environmental Protection Division 2 Martin Luther King Jr. Dr.
SE
Land Protection Branch
Suite 1054 East Tower
Response and Remediation Program
Atlanta, Georgia 30334
Response Development Units 1 –
3 Phone: 404-657-8600

Document Submittal Form

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Name of Document:	September 2017 VRP Progress Report
Date of Document:	September 8, 2017
Site Name:	Cessna Aircraft Company GA1 Facility
Site ID Number:	Non-HSRA, VRP only

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- ☐ laboratory data sheets
- ☐ manifests
- ☐ other: NA

I certify that the information I am submitting is, to the best of my knowledge and belief, true, accurate, and complete.	Receipt Date (for EPD use only)
Signature:	
Name (printed): J. Thom Duffey, P.G.	
Date: 9/8/2017	

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Document Submittal Form

Organization: CDM Smith Phone: 770-329-7143 Email: duffeyjt@cdmsmith.com	

CDM Smith
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Louisville, Kentucky 40220
tel: 502 339-0988

September 8, 2017

Mr. Kevin Collins
Manager – Response Development Unit 2
Response and Remediation Program
Georgia Environmental Protection Division Land Protection Branch
2 Martin Luther King, Jr. Drive SE
Suite 1054, East Tower
Atlanta, Georgia 30334

Subject: September 2017 Semi-Annual Voluntary Remediation Program Progress Report
Cessna Aircraft Company – Tax Parcel 112 003 002
Columbus, Muscogee County, Georgia

Dear Mr. Collins:

This Progress Report documents the activities completed for the Cessna Aircraft Company facility in Columbus, Georgia, from March 2017 through August 2017. This reporting schedule follows that prescribed by the Georgia Environmental Protection Division (EPD) in a letter dated September 27, 2016. This Progress Report includes the following:

- Work Performed This Period;
- Work Anticipated for the Next Period;
- Schedule; and
- Professional Certification.

Work Performed This Period

The following activities were performed during the current reporting period:

- Semi-annual groundwater monitoring;
- Soil vapor extraction (SVE) system operation and monitoring; and
- Voluntary Remediation Plan development.

These activities are described further below.

Semi-Annual Groundwater Monitoring

Semi-annual groundwater sampling is required to monitor groundwater conditions. The second semi-annual groundwater monitoring event was conducted on August 15, 2017. The August 2017 Groundwater Monitoring Report is provided in **Attachment A**.

The groundwater levels and flow direction in August 2017 were consistent with previous observations with the flow to the east-southeast. Volatile organic compound (VOC) concentrations in groundwater were lower than in previous sampling events and indicate a consistent decline that has been observed since 2016. Trichloroethene (TCE) continues to be the only VOC that exceeds the Risk Reduction Standards (RRSs). This trend is possibly a result of the former vapor degreaser being decommissioned in 2010. VOCs in bedrock groundwater were all below the RRSs.

SVE System Operation and Monitoring

CDM Smith began operation of the SVE system in February 2017. The second semi-annual SVE system monitoring event was conducted on August 15, 2017. The August 2017 SVE System Monitoring Report is provided in **Attachment B**.

As to be expected, the VOC concentrations in the extracted soil vapors have decreased after SVE system operation for over six months and TCE is the VOC present in soil vapor at the highest concentration. TCE in the combined SVE system discharge has been reduced from 510 mg/m3 in February to 3.5 mg/m3 in August. CDM Smith will continue to monitor the SVE system progress toward a potential endpoint in the future.

Voluntary Remediation Plan

CDM Smith submitted the Voluntary Remediation Plan to EPD on May 24, 2017. The plan provided details of the remediation objectives and scope, a groundwater focused feasibility study, and recommended an anaerobic biobarrier for the groundwater remedy. Comments on the plan have not yet been received from EPD.

Work Anticipated for the Next Period

The following activities are planned for the September 2017 - February 2018 reporting period:

- SVE system operation will continue;
- The first 2018 semi-annual SVE monitoring event will occur in February;
- The first 2018 semi-annual groundwater monitoring event will occur in February; and
- Assuming that comments are received from EPD on the Voluntary Remediation Plan, the Pre-Design Investigation will be initiated during the upcoming period.

Schedule

A detailed remedy implementation schedule was included in the Voluntary Remediation Plan. This schedule has been updated to reflect obtaining EPD approval of the Voluntary Remediation Plan by October 13, 2017 (**Figure 1**).

Professional Certification

Attachment C contains the professional certification and summary of incurred professional engineer and geologist hours for the period from March 1, 2017 through August 31, 2017.

If you have any questions related to this Progress Report or other related matters do not hesitate to contact me at (502) 217-7924 or by email at Hendershotpt@cdmsmith.com.

Sincerely,

Philip T. Hendershot

Philip T. Hendershot, CHMM
Principal Environmental Scientist
CDM Smith Inc.

cc: Greg Simpson, Textron
Tom Duffey, CDM Smith

Enclosures

Figures

Task	Start	End	2017												2018												2019											
			1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
EPD Remediation Plan Approval	5/1/17	10/13/17																																				
Environmental Covenant	3/1/18	5/30/18																																				
Pre-Design Investigation	11/14/17	2/12/18																																				
Remedial Design	2/12/18	6/12/18																																				
Remedial Construction																																						
Biobarrier Installation	6/18/18	7/13/18																																				
Initial Injection	7/16/18	8/10/18																																				
Bioaugmentation	9/24/18	10/19/18																																				
First EVO Injection	9/24/18	10/19/18																																				
Biobarrier O&M	As Needed																																					
SVE O&M	As Needed																																					
Compliance Status Report	7/15/19	10/13/19																																				
Monitoring/Reporting	Semi-Annual																																					

Figure 1: Remediation Plan Schedule
Updated September 15, 2017
Cessna GA1 Facility
Columbus, Muscogee County, Georgia

CDM Smith

Attachment A: 2nd 2017 Semi-Annual Groundwater Monitoring Report

2nd 2017 Semi-Annual Groundwater Monitoring Report

Cessna Aircraft Company GA1 Facility
Columbus, Muscogee County, Georgia

The Georgia Environmental Protection Division (EPD) accepted this site into Georgia's Voluntary Remediation Program (VRP) on September 27, 2016, and approved the Voluntary Investigation and Remediation Plan (VIRP) and VRP application dated March 24, 2016. EPD's acceptance and approval conditions currently require semi-annual groundwater monitoring and reporting. This report fulfills the second 2017 semi-annual reporting requirement.

Monitoring Program Description

The groundwater monitoring well network consists of eleven wells (**Figure A-1**). Water level measurements are recorded from all wells. Groundwater samples for laboratory analyses are collected from nine wells. Monitoring well GW-8 is not sampled because of its shallow depth and MW-1A is not sampled because it is upgradient and historically below the reporting level. The groundwater samples are analyzed for volatile organic compounds. CDM Smith has identified three zones of hydrogeologic interest at the site, as summarized below.

- Unit A – Unconsolidated coastal plain sediments and recent alluvium. The upper 20-25 feet is interbedded sand, silty sand, and silty clay. The lower portion of Unit A is permeable sand and permeable sand and gravel to a depth of approximately 30-35 feet below land surface (bls).
- Unit B – Piedmont saprolite. Unit B is below Unit A at depths ranging from approximately 30-35 feet bls and ranges in thickness from less than 1 foot up to 15 feet. Unit B is primarily silt.
- Unit C – Piedmont biotite gneiss bedrock. The bedrock depth ranges from approximately 30 feet to 45 feet bls. One boring, MW-3C, has been completed into bedrock and the rock was dense biotite gneiss with few fractures.

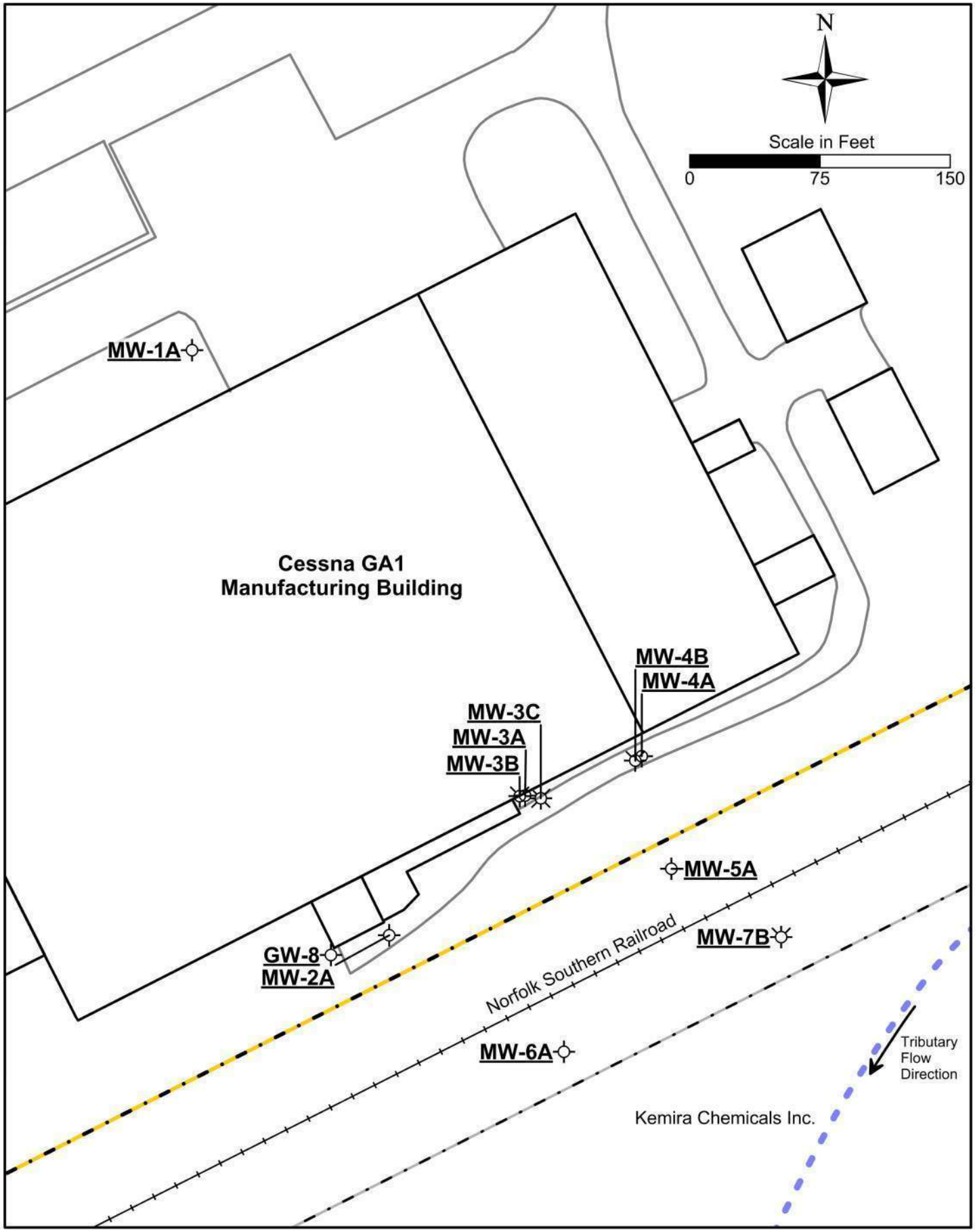
Results

Sampling for this event was completed on August 15, 2017. The water level records are summarized in **Table A-1** and the groundwater analytical results are summarized in **Table A-2**. The well purge records are in **Attachment A-1** and the full laboratory reports are in **Attachment A-2**.

Conclusions

Figure A-2 includes a potentiometric surface map prepared for combined Units A and B and shows the current trichloroethene (TCE) concentrations with the estimated extent of TCE exceeding the risk reduction standards reported in 2016 VIRP. The groundwater flow direction is southeast and consistent with previous events. The TCE extent in groundwater is also consistent with the 2016 mapping.

Figures



Stream Tributary
(Possibly Intermittent)

Offsite Properties

Site Boundary

Montioring Wells

Unit A (Coastal Plain/Recent Alluvium)

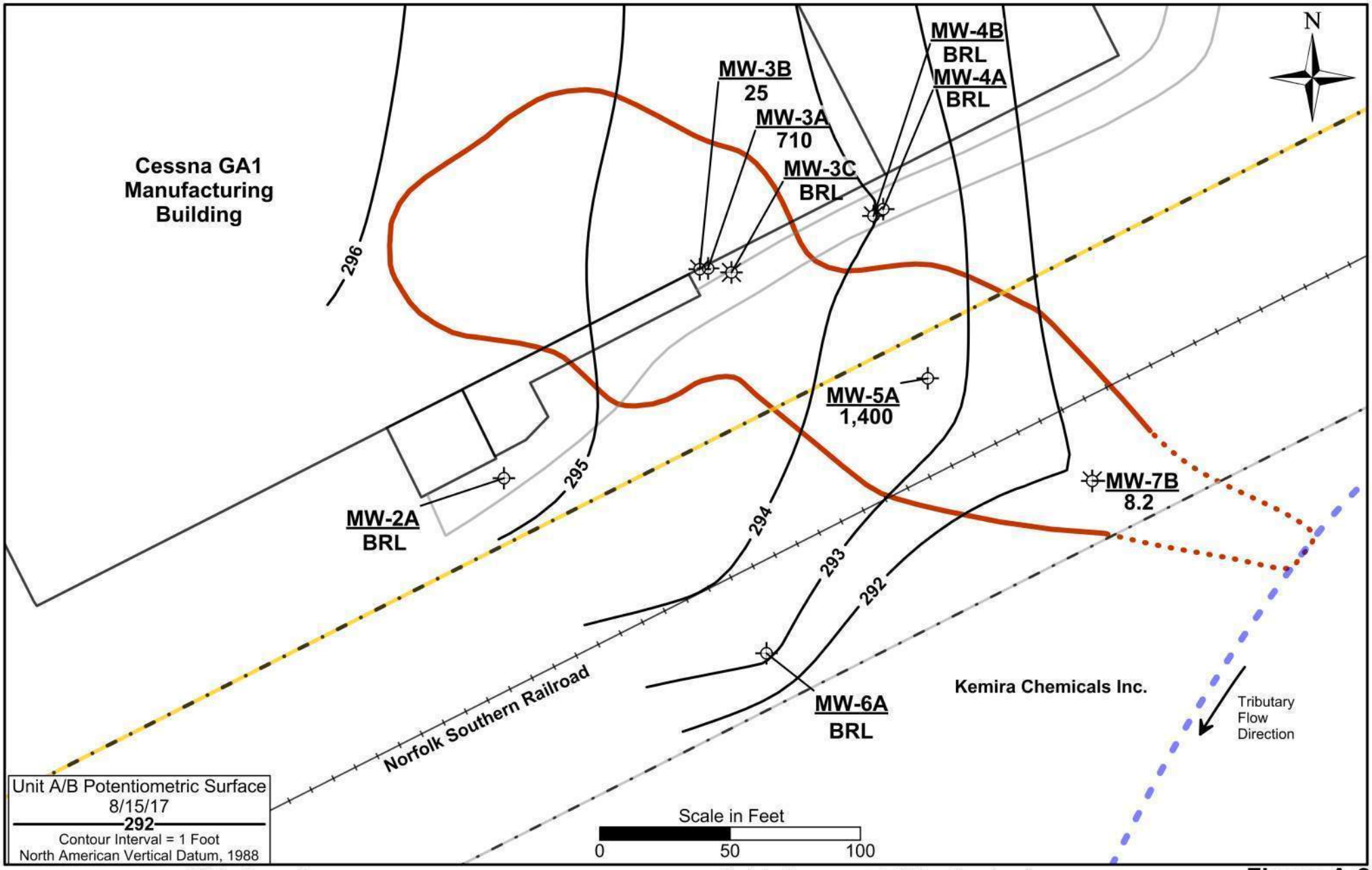
Unit B (Piedmont Saprolite)

Unit C (Upper Piedmont Bedrock)

Note: GW-8 monitored for water level only.

CDM Smith

Figure A-1
Groundwater Monitoring Network
Cessna GA1 Facility
Columbus, Muscogee County, Georgia



Offsite Properties
Site Boundary
Stream
Unit A Sediments Monitoring Well
Unit B Saprolite Monitoring Well
Unit C Upper Bedrock Monitoring Well

Posted values are current trichloroethene in ug/L
BRL - Below reporting level RRS - Risk Reduction Standard

Inferred Extent
2016 Groundwater Exceeded Type 1/3 RRS

CDM Smith

Figure A-2
Groundwater Data Summary
Cessna GA1 Facility
Columbus, Muscogee County, Georgia

Tables

CDM Smith

Well Construction and Water Levels

Well Code	Unit	Elevation TOC Feet	Screen Depth		Water Level TOC (8/7/14)		Water Level TOC (1/19/16)		Water Level TOC (2/1/17)	
			From	To	Depth	Elevation	Depth	Elevation	Depth	Elevation
MW-1A	A	311.09	17.5	27.5	15.15	295.94	14.73	296.36	15.30	295.79
MW-2A	A	311.89	23	33	18.17	293.72	16.71	295.18	17.37	294.52
MW-3A	A	312.09	25	30	19.41	292.68	18.12	293.97	18.72	293.37
MW-3B	B	312.32	36	41	19.43	292.89	18.14	294.18	18.69	293.63
MW-3C	C	312.32	77.5	87.5	--	--	82.5 (2)	229.82 (2)	43.10	269.22
MW-4A	A	313.17	25	30	20.51	292.66	19.28	293.89	19.72	293.45
MW-4B	B	313.11	42	47	21.14	291.97	18.95	294.16	19.81	293.30
MW-5A	A	299.59	20	30	--	--	6.34	293.25	6.79	292.80
MW-6A	A	298.34	11.5	21.5	--	--	5.42	292.92	5.80	292.54
MW-7B (1)	B	297.88	20	30	--	--	15.40 (2)	282.48 (2)	6.03	291.85
GW-8	A	314.34	8	18	20.26	294.08	17.92	296.42	18.48	295.86

Well Code	Unit	Elevation TOC Feet	Screen Depth		Water Level TOC (8/15/17)		Water Level TOC		Water Level TOC	
			From	To	Depth	Elevation	Depth	Elevation	Depth	Elevation
MW-1A	A	311.09	17.5	27.5	14.29	296.80				
MW-2A	A	311.89	23	33	16.59	295.30				
MW-3A	A	312.09	25	30	18.03	294.06				
MW-3B	B	312.32	36	41	18.04	294.28				
MW-3C	C	312.32	77.5	87.5	37.54	274.78				
MW-4A	A	313.17	25	30	19.17	294.00				
MW-4B	B	313.11	42	47	18.18	294.93				
MW-5A	A	299.59	20	30	6.32	293.27				
MW-6A	A	298.34	11.5	21.5	5.11	293.23				
MW-7B (1)	B	297.88	20	30	6.09	291.79				
GW-8	A	314.34	8	18	18.84	295.50				

Well Code	Unit	Elevation TOC Feet	Screen Depth		Water Level TOC		Water Level TOC		Water Level TOC	
			From	To	Depth	Elevation	Depth	Elevation	Depth	Elevation
MW-1A	A	311.09	17.5	27.5						
MW-2A	A	311.89	23	33						
MW-3A	A	312.09	25	30						
MW-3B	B	312.32	36	41						
MW-3C	C	312.32	77.5	87.5						
MW-4A	A	313.17	25	30						
MW-4B	B	313.11	42	47						
MW-5A	A	299.59	20	30						
MW-6A	A	298.34	11.5	21.5						
MW-7B (1)	B	297.88	20	30						
GW-8	A	314.34	8	18						

All measurements are in feet

A - Unconsolidated Coastal Plain sediments and recent alluvium

B - Piedmont saprolite

C - Piedmont upper bedrock

1 - Previously designated as MW-7A

Elevation is NGVD 1929

All wells are 2-inch diameter

TOC - Top of casing

-- No measurement

2 - Suspected to not be equilibrated

Table A-1

Well Construction and Water Levels

Cessna GA1 Facility

Columbus, Muscogee County, Georgia

CDM Smith

	Compound	1,1-DCA	1,1-DCE	MEK	CD	cis-1,2-DCE	TCE
	On-Site RRS	4,000	520	12,000	4,000	200	5.2
MW-2A	8/4/2014	BRL	BRL	BRL	BRL	BRL	BRL
	Duplicate	BRL	BRL	BRL	BRL	BRL	BRL
	1/19/2016	BRL	BRL	BRL	BRL	BRL	BRL
	2/1/2017	BRL	BRL	BRL	BRL	BRL	BRL
	Duplicate	BRL	BRL	BRL	BRL	BRL	BRL
	8/15/2017	BRL	BRL	BRL	BRL	BRL	BRL
MW-3A	8/4/2014	BRL	BRL	BRL	BRL	BRL	**160**
	1/20/2016	8.6	BRL	BRL	BRL	12	**1,000**
	2/1/2017	6.6	BRL	BRL	BRL	16	**1,300**
	8/15/2017	5.1	BRL	BRL	BRL	11	**710**
MW-3B	8/4/2014	BRL	BRL	BRL	BRL	BRL	**71**
	1/20/2016	BRL	BRL	BRL	BRL	BRL	**11**
	2/1/2017	BRL	BRL	BRL	BRL	BRL	**23**
	8/15/2017	BRL	BRL	BRL	BRL	BRL	**25**
	Duplicate	BRL	BRL	BRL	BRL	BRL	**24**
MW-3C	1/20/2016	BRL	BRL	BRL	BRL	BRL	BRL
	2/1/2017	BRL	BRL	BRL	18	BRL	**12**
	8/15/2017	BRL	BRL	BRL	63	BRL	BRL
MW-4A	8/4/2014	BRL	BRL	BRL	BRL	BRL	BRL
	1/20/2016	BRL	BRL	BRL	BRL	BRL	BRL
	2/1/2017	BRL	BRL	BRL	BRL	BRL	BRL
	8/15/2017	BRL	BRL	BRL	BRL	BRL	BRL
MW-4B	8/4/2014	BRL	BRL	BRL	6.8	BRL	BRL
	1/20/2016	BRL	BRL	BRL	BRL	BRL	BRL
	2/1/2017	BRL	BRL	BRL	BRL	BRL	BRL
	8/15/2017	BRL	BRL	BRL	BRL	BRL	BRL
MW-5A	1/19/2016	10	6.9	BRL	BRL	30	**1,900**
	2/1/2017	6	5.7	BRL	BRL	18	**1,500**
	8/15/2017	5.1	BRL	BRL	BRL	24	**1,400**

	Compound	1,1-DCA	1,1-DCE	MEK	CD	cis-1,2-DCE	TCE
	Off-Site RRS	4,000	100	2,300	4,000	70	5
MW-6A	1/19/2016	BRL	BRL	BRL	BRL	BRL	BRL
	2/1/2017	BRL	BRL	BRL	BRL	BRL	BRL
	8/15/2017	BRL	BRL	BRL	BRL	BRL	BRL
MW-7B[1]	1/19/2016	BRL	BRL	190	BRL	49	**100**
	Duplicate	BRL	BRL	110	BRL	34	**120**
	2/1/2017	BRL	BRL	BRL	BRL	8	**17**
	8/15/2017	BRL	BRL	BRL	BRL	BRL	**8**

1 - Previously designated as MW-7A

RRS - Risk Reduction Standard

DCA - Dichloroethane MEK - 2-Butanone

DCE - Dichloroethene CD - Carbon Disulfide

Shaded values exceed the RRS.

Concentrations are µg/L

BRL - Below reporting level

TCE - Trichloroethene

Table A-2: Groundwater Monitoring Analytical Results

Cessna GA1 Facility

Columbus, Muscogee County, Georgia

CDM Smith

Attachment A-1

Well Purge Records

CDM Smith

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-2A	SAMPLE ID: MW-2A	DATE: 8/15/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 22.02 to 32.02 feet bgl	STATIC DEPTH TO WATER (feet TOC): 16.59	PURGE PUMP TYPE: PP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= gallons/foot X feet = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 27	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 27	PURGING INITIATED AT: 1152	PURGING ENDED AT: 1213	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or mS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1157	1	1	0.20	16.92	4.50	21.0	105.1	502.3	0.27	213.6	Brown
1201	1	2	0.25	16.92	4.39	21.1	89.0	216.5	0.20	240.2	Cloudy
1205	1	3	0.25	16.92	4.36	21.1	87.3	18.6	0.15	247.7	Clear
1209	1	4	0.25	16.93	4.38	21.1	86.2	11.2	0.13	250.7	Clear
1213	1	5	0.25	16.93	4.39	21.1	85.6	9.7	0.13	253.6	Clear

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Nicholas Feller /CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1215	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 27	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: **Final Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L
Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**
Field Instruments:
SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-3A	SAMPLE ID: MW-3A	DATE: 8/15/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 22.0 to 32.0 feet bgl	STATIC DEPTH TO WATER (feet TOC): 18.03	PURGE PUMP TYPE: PP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= gallons/foot X feet = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 27	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 27	PURGING INITIATED AT: 1234	PURGING ENDED AT: 1255	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1239	1	1	0.20	18.55	4.48	21.4	47.8	42.3	3.64	328	Cloudy
1243	1	2	0.25	18.56	4.46	21.5	48.3	23.4	3.69	342.1	Clear
1247	1	3	0.25	18.56	4.50	21.4	48.8	11.2	3.73	347.5	Clear
1251	1	4	0.25	18.56	4.51	21.4	49.2	9.7	3.78	352.2	Clear
1255	1	5	0.25	18.56	4.53	21.5	49.3	7.6	3.84	356.4	Clear

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Nicholas Fellin /CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1255	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 27	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: **Final Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L
Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**

Field Instruments:
SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-3B	SAMPLE ID: MW-3B	DATE: 8/15/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 29.88 to 39.88 feet bgl	STATIC DEPTH TO WATER (feet TOC): 18.04	PURGE PUMP TYPE: PP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= gallons/foot X feet = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 35	PURGING INITIATED AT: 1307	PURGING ENDED AT: 1336	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	**SP. COND.** (circle units) µmhos/cm or µS/cm	**TURBIDITY** (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1312	1	1	0.20	23.30	5.21	21.5	75.9	32.1	3.93	241.5	Clear
1317	1	2	0.20	23.94	5.19	21.8	74.3	38.9	4.02	263.0	Clear
1322	1	3	0.20	24.22	5.19	21.8	73.2	26.3	4.23	278.4	Clear
1329	1	4	0.14	24.31	5.14	21.8	71.8	12.8	4.48	292.8	Clear
1336	1	5	0.14	24.43	5.12	21.9	71.3	8.7	4.68	299.6	Clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Nicholas Fuller /CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1336	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 35	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: (Y) N	DUP-1 @ 0800

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: **Final Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L

Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**

Field Instruments:

SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-3C	SAMPLE ID: MW-3C	DATE: 8/15/17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 82.5 to 87.5 feet bgl	STATIC DEPTH TO WATER (feet TOC): 37.54	PURGE PUMP TYPE: ESP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= gallons/foot X feet = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 85	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 85	PURGING INITIATED AT: 1359	PURGING ENDED AT: 1419	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1403	1	1	0.25	46.38	10.59	22.3	503	36.2	0.81	-194.4	cloudy
1407	1	2	0.25	52.29	10.56	22.3	498.8	13.9	0.24	-198.7	Clear
1411	1	3	0.25	56.81	10.48	22.5	495.1	8.6	0.19	-210.3	Clear
1415	1	4	0.25	62.90	10.47	22.7	484.9	7.3	0.15	-223.3	Clear
1419	1	5	0.25	63.84	10.40	22.8	466.8	7.8	0.14	-223.6	Clear

WELL CAPACITY (Gallons Per Foot): **0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88**
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016**

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Nicholas Fuller /CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1420	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 85	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: **Final Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L

Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**

Field Instruments:

SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-4A	SAMPLE ID: MW-4A	DATE: 8-15-17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 19.94 to 29.94 feet bgl	STATIC DEPTH TO WATER (feet TOC): 19.17	PURGE PUMP TYPE: PP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= 0.16 gallons/foot X 10 feet = 1.6 gallons X 3 vol = 4.8 gal

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 24.94	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 24.94	PURGING INITIATED AT: 1440	PURGING ENDED AT: 1505	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1447	1	1		19.30	5.79	22.8	119.5	102.2	0.22	164.9	
1451	1	2		19.32	5.71	23.0	119.3	99.1	0.17	177.9	
1456	1	3		19.32	5.66	22.9	117.9	82.7	0.14	187.1	
1500	1	4		19.32	5.65	23.1	117.8	183.1	0.13	190.0	
1505	1	5		19.32	5.64	23.4	117.5	199.5	0.12	192.2	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Daniel Good /CDM Smith	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1505	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 24.94	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: Final Ferrous Iron, mg/L Final Sulfate, mg/L Final CO_2, mg/L Final MNO_4, mg/L
Final Total Iron, mg/L Final Nitrate, mg/L Final Alkalinity, mg/L Dilution Ratio:
Field Instruments:
SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

TDC 30.15

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-4B	SAMPLE ID: MW-4B	DATE: 8-15-17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 35.81 to 45.81 feet bgl	STATIC DEPTH TO WATER (feet TOC): 15.15 PURGE PUMP TYPE: PP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY 18.46
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= 0.16 gallons/foot X 10 feet = 1.6 gallons x3 vol. = 4.8

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 40.81	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 40.81	PURGING INITIATED AT:	PURGING ENDED AT: 1422	TOTAL VOLUME PURGED (gallons): 2.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1415		1		25.31	6.67	23.8	363	107.9	2.8	42.0	
1422		2		28.35	6.69	23.8	361	35.6	3.6	53.8	
		3									
		4									
		5		Below Pump Capacity							

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Daniel Good /CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1455	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 40.81	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: **Final Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L
Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**
Field Instruments:
SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

TD = 45.93

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-5A	SAMPLE ID: MW-5A	DATE: 8-15-17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 20.29 to 30.29 feet bgl	STATIC DEPTH TO WATER (feet TOC): 6.32	PURGE PUMP TYPE:

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= 0.16 gallons/foot X 10 feet = 1.6 x 3 volumes gallons 4.8 gal

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 25.29	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 25.29	PURGING INITIATED AT: 1233	PURGING ENDED AT: 1258	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1238	1	1	0.2	9.08	5.13	23.1	213	293.8	1.3	197.4	
1243	1	2	0.2	10.63	5.10	22.0	65	132.5	0.6	185.3	
1248	1	3	0.2	11.01	5.09	21.8	65	~~205.7~~ 201.1	1.1	205.3	
1253	1	4	0.2	11.28	5.07	21.5	64	192.4	1.9	193.1	
1258	1	5	0.2	11.41	5.06	21.5	64	191.6	2.0	198.1	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Daniel Good /CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1258	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 25.29	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: Final **Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L

Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**

Field Instruments:

SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

TD= 30.39

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-6A	SAMPLE ID: MW-6A	DATE: 8-15-17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 11.4 to 21.4 feet bgl	STATIC DEPTH TO WATER (feet TOC): 5.11	PURGE PUMP TYPE: PP

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= 0.16 gallons/foot X 10 feet = 1.6 gallons ×3 Volumes = 4.8

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 16.4	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 16.4	PURGING INITIATED AT: 1117	PURGING ENDED AT: 1152	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1124	1	1	.14	5.31	5.22	23.1	131	3387	4.3	138.9	brown
1131	1	2	.14	5.33	5.16	22.2	53	438	2.4	17.7	clear
1138	1	3	.14	5.34	5.01	22.0	54	22.0	1.3	251.1	
1145	1	4	.14	5.34	5.00	21.9	54	7.9	0.8	253.8	
1152	1	5	.14	5.34	5.01	21.9	54	4.5	0.9	259.8	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Daniel Good / CDM Smith	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1152	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 16.4	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: Final Ferrous Iron, mg/L Final Sulfate, mg/L Final CO_2, mg/L Final MNO_4, mg/L
Final Total Iron, mg/L Final Nitrate, mg/L Final Alkalinity, mg/L Dilution Ratio:
Field Instruments:
SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or unstable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

TD = 21.64

CDM Smith

GROUNDWATER SAMPLING LOG

SITE NAME: Cessna	SITE LOCATION: Columbus, GA	
WELL NO: MW-7A	SAMPLE ID: MW-7A	DATE: 8-15-17

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 20.06 to 30.06 feet bgl	STATIC DEPTH TO WATER (feet TOC): 6.09	PURGE PUMP TYPE: PD

TRADITIONAL PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet TOC – feet TOC) X gallons/foot = gallons

LOW FLOW[1] PURGE: 1 SCREEN VOL. = WELL CAPACITY X SATURATED SCREEN LENGTH
(only fill out if applicable)
= 0.16 gallons/foot X 10 feet = X3 volume gallons 4.8 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 25.06	FINAL PUMP OR TUBING DEPTH IN WELL (feet bgl): 25.06	PURGING INITIATED AT: 1022	PURGING ENDED AT: 1052	TOTAL VOLUME PURGED (gallons): 5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet TOC)	pH (standard units)	TEMP. (°C)	SP. COND. (circle units) µmhos/cm or µS/cm	TURBIDITY (NTUs)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	ORP (mV)	COLOR/ ODOR (describe)
1026	1	1	0.16	8.94	5.85	20.7	148	~~31.4~~ 28.2	~~0.6~~ 0.6	-31.4	Clear
1032	~~2~~ 1	2	0.16	13.41	5.84	20.5	143	24.4	0.2	-28.2	
1038	~~3~~ 1	3	0.16	17.06	5.85	20.4	144	19.9	0.2	-30.7	
1045	~~4~~ 1	4	0.14	19.88	5.85	20.6	145	17.4	0.2	-31.9	
1053	~~5~~ 1	5	0.125	20.61	5.86	20.7	144	23.8	0.2	-31.6	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Daniel Good /CDM Smith	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: ~~1052~~ 1053	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet bgl): 25.06	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARK/NOTES:

Hach Field Data: **Final Ferrous Iron,** mg/L **Final Sulfate,** mg/L **Final CO_2,** mg/L **Final MNO_4,** mg/L
Final Total Iron, mg/L **Final Nitrate,** mg/L **Final Alkalinity,** mg/L **Dilution Ratio:**

Field Instruments:

SS Monsoon Pump, HACH Turbidimeter, YSI 556

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; HDPE = High Density Polyethylene; LDPE = Low Density Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After (Through) Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. Low Flow also referred to as "Tubing-in-Screened Interval" (tubing placed in the center of the well screen).
2. Stabilization criteria for range of variation of at least three consecutive readings (required parameters in **bold**).
pH: ± 0.1 units; **Specific Conductance:** ± 5%; **Turbidity:** ≤ 10 NTUs or until stable; Dissolved Oxygen: ± 0.2 mg/L or 10% saturation (whichever is greater)

TD 30.20

Attachment A-2

Laboratory Reports

CDM Smith

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

August 21, 2017

Tom Duffey
CDM Smith Inc.

3200 Windy Hill Road
Atlanta GA 30339

RE: Cessna

Dear Tom Duffey: Order No: 1708F60

Analytical Environmental Services, Inc. received 12 samples on 8/15/2017 5:55:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAC/Florida State Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, and Drinking Water Microbiology, effective 07/01/17-06/30/18.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective 07/01/17-06/30/18 and Total Coliforms and E. coli, effective 04/25/17-04/24/20.
-NELAC/Louisiana Agency Interest No. 100818 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 07/01/17-06/30/18.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Ioana Pacurar

Ioana Pacurar

Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3080 Presidential Drive Atlanta, GA 30340-3704
AES Phone: (770) 457-8177 / Toll-Free: (800) 972-4889 / Fax: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1708F60

Date: 8/15/17 Page 1 of 1

COMPANY: CDM Smith

ADDRESS: 3200 Windy Hill Road Suite 210W Atlanta, GA 30339

PHONE: 404-720-1400

EMAIL: fullerd@cdmsmith.com

SAMPLED BY: Nick Fuller / Daniel Good

SIGNATURE:

ANALYSIS REQUESTED: VOCs

PRESERVATION (see codes): HT

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	VOCs	REMARKS	Number of Containers
1	DUP-1	8/15/17	0800	X		GW	X		2
2	MW-7A	8/15/17	1053	X		GW	X		2
3	MW-6A	8/15/17	1152	X		GW	X		2
4	MW-2A	8/15/17	1215	X		GW	X		2
5	MW-3A	8/15/17	1255	X		GW	X		2
6	MW-5A	8/15/17	1258	X		GW	X		2
7	MW-3B	8/15/17	1336	X		GW	X		2
8	MW-3C	8/15/17	1420	X		GW	X		2
9	MW-4B	8/15/17	1455	X		GW	X		2
10	MW-4A	8/15/17	1505	X		GW	X		2
11	IDW-H_2O	8/15/17	1520	~~X~~ SF	X	GW	X		2
12	TRIP Blank			X		W	X		2
13									
14									

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1.	8-15-17 1755		8/15/17 1755
2.		2.	
3.		3.	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
client FedEx UPS US mail courier Greyhound
other: _____

PROJECT INFORMATION
PROJECT NAME: Cessna
PROJECT #:
SITE ADDRESS: Columbus, GA
SEND REPORT TO: Tom Duffey / Nick Fuller
INVOICE TO: (IF DIFFERENT FROM ABOVE) fullerd@cdmsmith.com
QUOTE #: _____ PO#: _____

RECEIPT
Total # of Containers: 24

Turnaround Time (TAT) Request
☒ Standard 5 Business Days
☐ 2 Business Day Rush
☐ Next Business Day Rush
☐ Same-Day Rush (auth req.)
☐ Other _____

STATE PROGRAM (if any): _____
E-mail? ☐ Fax? ☐
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	DUP-1
Project Name:	Cessna	**Collection Date:**	8/15/2017 8:00:00 AM
Lab ID:	1708F60-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 16:14	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 16:14	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 16:14	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 16:14	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 16:14	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 16:14	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 16:14	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 16:14	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	DUP-1
Project Name:	Cessna	**Collection Date:**	8/15/2017 8:00:00 AM
Lab ID:	1708F60-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Trichloroethene	24	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:14	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 16:14	NP
Surr: 4-Bromofluorobenzene	78	66.1-129		%REC	247220	1	08/20/2017 16:14	NP
Surr: Dibromofluoromethane	108	83.6-123		%REC	247220	1	08/20/2017 16:14	NP
Surr: Toluene-d8	87.1	81.8-118		%REC	247220	1	08/20/2017 16:14	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-7A
Project Name:	Cessna	**Collection Date:**	8/15/2017 10:53:00 AM
Lab ID:	1708F60-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 16:39	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 16:39	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 16:39	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 16:39	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 16:39	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 16:39	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 16:39	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 16:39	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-7A
Project Name:	Cessna	**Collection Date:**	8/15/2017 10:53:00 AM
Lab ID:	1708F60-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Trichloroethene	8.2	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 16:39	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 16:39	NP
Surr: 4-Bromofluorobenzene	79.7	66.1-129		%REC	247220	1	08/20/2017 16:39	NP
Surr: Dibromofluoromethane	108	83.6-123		%REC	247220	1	08/20/2017 16:39	NP
Surr: Toluene-d8	89.4	81.8-118		%REC	247220	1	08/20/2017 16:39	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-6A
Project Name:	Cessna	**Collection Date:**	8/15/2017 11:52:00 AM
Lab ID:	1708F60-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 17:03	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 17:03	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 17:03	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 17:03	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 17:03	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 17:03	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 17:03	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 17:03	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-6A
Project Name:	Cessna	**Collection Date:**	8/15/2017 11:52:00 AM
Lab ID:	1708F60-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Trichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:03	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 17:03	NP
Surr: 4-Bromofluorobenzene	79.5	66.1-129		%REC	247220	1	08/20/2017 17:03	NP
Surr: Dibromofluoromethane	112	83.6-123		%REC	247220	1	08/20/2017 17:03	NP
Surr: Toluene-d8	90	81.8-118		%REC	247220	1	08/20/2017 17:03	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-2A
Project Name:	Cessna	**Collection Date:**	8/15/2017 12:15:00 PM
Lab ID:	1708F60-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 17:27	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 17:27	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 17:27	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 17:27	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 17:27	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 17:27	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 17:27	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 17:27	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-2A
Project Name:	Cessna	**Collection Date:**	8/15/2017 12:15:00 PM
Lab ID:	1708F60-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Trichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:27	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 17:27	NP
Surr: 4-Bromofluorobenzene	78.6	66.1-129		%REC	247220	1	08/20/2017 17:27	NP
Surr: Dibromofluoromethane	107	83.6-123		%REC	247220	1	08/20/2017 17:27	NP
Surr: Toluene-d8	88.9	81.8-118		%REC	247220	1	08/20/2017 17:27	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-3A
Project Name:	Cessna	**Collection Date:**	8/15/2017 12:55:00 PM
Lab ID:	1708F60-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,1-Dichloroethane	5.1	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 17:51	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 17:51	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 17:51	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 17:51	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 17:51	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 17:51	NP
cis-1,2-Dichloroethene	11	5.0		ug/L	247220	1	08/20/2017 17:51	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 17:51	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 17:51	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-3A
Project Name:	Cessna	**Collection Date:**	8/15/2017 12:55:00 PM
Lab ID:	1708F60-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Trichloroethene	710	50		ug/L	247220	10	08/21/2017 10:17	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 17:51	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 17:51	NP
Surr: 4-Bromofluorobenzene	81.4	66.1-129		%REC	247220	1	08/20/2017 17:51	NP
Surr: 4-Bromofluorobenzene	81.4	66.1-129		%REC	247220	10	08/21/2017 10:17	NP
Surr: Dibromofluoromethane	101	83.6-123		%REC	247220	10	08/21/2017 10:17	NP
Surr: Dibromofluoromethane	113	83.6-123		%REC	247220	1	08/20/2017 17:51	NP
Surr: Toluene-d8	88.1	81.8-118		%REC	247220	10	08/21/2017 10:17	NP
Surr: Toluene-d8	90.5	81.8-118		%REC	247220	1	08/20/2017 17:51	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-5A
Project Name:	Cessna	**Collection Date:**	8/15/2017 12:58:00 PM
Lab ID:	1708F60-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,1-Dichloroethane	5.1	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 18:16	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 18:16	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 18:16	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 18:16	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 18:16	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 18:16	NP
cis-1,2-Dichloroethene	24	5.0		ug/L	247220	1	08/20/2017 18:16	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 18:16	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 18:16	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-5A
Project Name:	Cessna	**Collection Date:**	8/15/2017 12:58:00 PM
Lab ID:	1708F60-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Trichloroethene	1400	50		ug/L	247220	10	08/21/2017 10:41	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:16	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 18:16	NP
Surr: 4-Bromofluorobenzene	77.4	66.1-129		%REC	247220	1	08/20/2017 18:16	NP
Surr: 4-Bromofluorobenzene	79.7	66.1-129		%REC	247220	10	08/21/2017 10:41	NP
Surr: Dibromofluoromethane	102	83.6-123		%REC	247220	10	08/21/2017 10:41	NP
Surr: Dibromofluoromethane	115	83.6-123		%REC	247220	1	08/20/2017 18:16	NP
Surr: Toluene-d8	87.3	81.8-118		%REC	247220	10	08/21/2017 10:41	NP
Surr: Toluene-d8	91.1	81.8-118		%REC	247220	1	08/20/2017 18:16	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-3B
Project Name:	Cessna	**Collection Date:**	8/15/2017 1:36:00 PM
Lab ID:	1708F60-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 18:40	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 18:40	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 18:40	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 18:40	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 18:40	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 18:40	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 18:40	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 18:40	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-3B
Project Name:	Cessna	**Collection Date:**	8/15/2017 1:36:00 PM
Lab ID:	1708F60-007	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Trichloroethene	25	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 18:40	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 18:40	NP
Surr: 4-Bromofluorobenzene	79.3	66.1-129		%REC	247220	1	08/20/2017 18:40	NP
Surr: Dibromofluoromethane	115	83.6-123		%REC	247220	1	08/20/2017 18:40	NP
Surr: Toluene-d8	88.3	81.8-118		%REC	247220	1	08/20/2017 18:40	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-3C
Project Name:	Cessna	**Collection Date:**	8/15/2017 2:20:00 PM
Lab ID:	1708F60-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
2-Butanone	BRL	50		ug/L	247220	1	08/21/2017 11:05	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/21/2017 11:05	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/21/2017 11:05	NP
Acetone	BRL	50		ug/L	247220	1	08/21/2017 11:05	NP
Benzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Carbon disulfide	63	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Chloroethane	BRL	10		ug/L	247220	1	08/21/2017 11:05	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Chloromethane	BRL	10		ug/L	247220	1	08/21/2017 11:05	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/21/2017 11:05	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Freon-113	BRL	10		ug/L	247220	1	08/21/2017 11:05	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-3C
Project Name:	Cessna	**Collection Date:**	8/15/2017 2:20:00 PM
Lab ID:	1708F60-008	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Toluene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Trichloroethene	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/21/2017 11:05	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/21/2017 11:05	NP
Surr: 4-Bromofluorobenzene	84.4	66.1-129		%REC	247220	1	08/21/2017 11:05	NP
Surr: Dibromofluoromethane	103	83.6-123		%REC	247220	1	08/21/2017 11:05	NP
Surr: Toluene-d8	85.8	81.8-118		%REC	247220	1	08/21/2017 11:05	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-4B
Project Name:	Cessna	**Collection Date:**	8/15/2017 2:55:00 PM
Lab ID:	1708F60-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 19:28	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 19:28	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 19:28	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 19:28	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 19:28	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 19:28	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 19:28	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 19:28	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-4B
Project Name:	Cessna	**Collection Date:**	8/15/2017 2:55:00 PM
Lab ID:	1708F60-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Trichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:28	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 19:28	NP
Surr: 4-Bromofluorobenzene	75.9	66.1-129		%REC	247220	1	08/20/2017 19:28	NP
Surr: Dibromofluoromethane	109	83.6-123		%REC	247220	1	08/20/2017 19:28	NP
Surr: Toluene-d8	87.5	81.8-118		%REC	247220	1	08/20/2017 19:28	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-4A
Project Name:	Cessna	**Collection Date:**	8/15/2017 3:05:00 PM
Lab ID:	1708F60-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 19:53	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 19:53	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 19:53	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 19:53	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 19:53	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 19:53	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 19:53	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 19:53	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	MW-4A
Project Name:	Cessna	**Collection Date:**	8/15/2017 3:05:00 PM
Lab ID:	1708F60-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Trichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 19:53	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 19:53	NP
Surr: 4-Bromofluorobenzene	77.7	66.1-129		%REC	247220	1	08/20/2017 19:53	NP
Surr: Dibromofluoromethane	114	83.6-123		%REC	247220	1	08/20/2017 19:53	NP
Surr: Toluene-d8	88.2	81.8-118		%REC	247220	1	08/20/2017 19:53	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	IDW-H2O
Project Name:	Cessna	**Collection Date:**	8/15/2017 3:20:00 PM
Lab ID:	1708F60-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 20:17	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 20:17	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 20:17	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 20:17	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 20:17	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 20:17	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 20:17	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 20:17	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	IDW-H2O
Project Name:	Cessna	**Collection Date:**	8/15/2017 3:20:00 PM
Lab ID:	1708F60-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Trichloroethene	67	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 20:17	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 20:17	NP
Surr: 4-Bromofluorobenzene	77.4	66.1-129		%REC	247220	1	08/20/2017 20:17	NP
Surr: Dibromofluoromethane	114	83.6-123		%REC	247220	1	08/20/2017 20:17	NP
Surr: Toluene-d8	89.2	81.8-118		%REC	247220	1	08/20/2017 20:17	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Cessna	**Collection Date:**	8/15/2017
Lab ID:	1708F60-012	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,1-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,1-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,2-Dibromoethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,2-Dichloroethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,2-Dichloropropane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
2-Butanone	BRL	50		ug/L	247220	1	08/20/2017 13:01	NP
2-Hexanone	BRL	10		ug/L	247220	1	08/20/2017 13:01	NP
4-Methyl-2-pentanone	BRL	10		ug/L	247220	1	08/20/2017 13:01	NP
Acetone	BRL	50		ug/L	247220	1	08/20/2017 13:01	NP
Benzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Bromodichloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Bromoform	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Bromomethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Carbon disulfide	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Carbon tetrachloride	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Chlorobenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Chloroethane	BRL	10		ug/L	247220	1	08/20/2017 13:01	NP
Chloroform	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Chloromethane	BRL	10		ug/L	247220	1	08/20/2017 13:01	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Cyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Dibromochloromethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Dichlorodifluoromethane	BRL	10		ug/L	247220	1	08/20/2017 13:01	NP
Ethylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Freon-113	BRL	10		ug/L	247220	1	08/20/2017 13:01	NP
Isopropylbenzene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
m,p-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Methyl acetate	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Methylcyclohexane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Methylene chloride	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
o-Xylene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 21-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Cessna	**Collection Date:**	8/15/2017
Lab ID:	1708F60-012	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Tetrachloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Toluene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Trichloroethene	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Trichlorofluoromethane	BRL	5.0		ug/L	247220	1	08/20/2017 13:01	NP
Vinyl chloride	BRL	2.0		ug/L	247220	1	08/20/2017 13:01	NP
Surr: 4-Bromofluorobenzene	81.6	66.1-129		%REC	247220	1	08/20/2017 13:01	NP
Surr: Dibromofluoromethane	104	83.6-123		%REC	247220	1	08/20/2017 13:01	NP
Surr: Toluene-d8	88.4	81.8-118		%REC	247220	1	08/20/2017 13:01	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc

Date: 21-Aug-17

SUMMARY OF ANALYTES DETECTED

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	Dilution Factor
Client Sample ID: DUP-1				**Lab ID:** 1708F60-001			
Collection Date: 8/15/2017 8:00:00 AM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
Trichloroethene	24		0.30	5.0	ug/L	247220	1
Client Sample ID: MW-7A				**Lab ID:** 1708F60-002			
Collection Date: 8/15/2017 10:53:00 AM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
Trichloroethene	8.2		0.30	5.0	ug/L	247220	1
Client Sample ID: MW-3A				**Lab ID:** 1708F60-005			
Collection Date: 8/15/2017 12:55:00 PM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
1,1-Dichloroethane	5.1		0.43	5.0	ug/L	247220	1
cis-1,2-Dichloroethene	11		0.28	5.0	ug/L	247220	1
Trichloroethene	710		3.0	50	ug/L	247220	10
Client Sample ID: MW-5A				**Lab ID:** 1708F60-006			
Collection Date: 8/15/2017 12:58:00 PM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
1,1-Dichloroethane	5.1		0.43	5.0	ug/L	247220	1
cis-1,2-Dichloroethene	24		0.28	5.0	ug/L	247220	1
Trichloroethene	1400		3.0	50	ug/L	247220	10
Client Sample ID: MW-3B				**Lab ID:** 1708F60-007			
Collection Date: 8/15/2017 1:36:00 PM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
Trichloroethene	25		0.30	5.0	ug/L	247220	1
Client Sample ID: MW-3C				**Lab ID:** 1708F60-008			
Collection Date: 8/15/2017 2:20:00 PM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
Carbon disulfide	63		0.74	5.0	ug/L	247220	1
Client Sample ID: IDW-H2O				**Lab ID:** 1708F60-011			
Collection Date: 8/15/2017 3:20:00 PM				**Matrix:** Groundwater			
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**			
Trichloroethene	67		0.30	5.0	ug/L	247220	1

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear | Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC. AES

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: CDM Smith Inc. AES Work Order Number: 1708F60

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ■ Courier ☐ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	●	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	○	●	○		
5.	Custody seals intact on shipping container?	○	○	●		
6.	Temperature blanks present?	○	●	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	●	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	●	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	●	○	○		
10.	Sampler name and/or signature on COC?	●	○	○		
11.	Were all samples received within holding time?	●	○	○		
12.	TAT marked on the COC?	●	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 3.5 °C Cooler 2 Temperature _____ °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). TD 8/15/17

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	●	○	○		
17.	Custody seals present on sample containers?	○	●	○		
18.	Custody seals intact on sample containers?	○	○	●		
19.	Do sample container labels match the COC?	●	○	○	incomplete info ☐ illegible ☐ no label ☐ other ☐	
20.	Are analyses requested indicated on the COC?	●	○	○		
21.	Were all of the samples listed on the COC received?	●	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	●	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	●	○	○		
24.	Were samples received in appropriate containers?	●	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	●	○	○		
26.	Were trip blanks submitted?	●	○	○	listed on COC ■ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). BU 8/16/17

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	○	○	●		
29.	Containers meet preservation guidelines?	○	○	●		
30.	Was pH adjusted at Sample Receipt?	○	○	●		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). BU 8/16/17

Checklist 6.9.17 Rev 2

Locked

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F60

ANALYTICAL QC SUMMARY REPORT

BatchID: **247220**

Sample ID: **MB-247220** Client ID: Units: **ug/L** Prep Date: **08/18/2017** Run No: **350107**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **247220** Analysis Date: **08/18/2017** Seq No: **7694988**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F60

ANALYTICAL QC SUMMARY REPORT

BatchID: **247220**

Sample ID: **MB-247220** Client ID: Units: **ug/L** Prep Date: **08/18/2017** Run No: **350107**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **247220** Analysis Date: **08/18/2017** Seq No: **7694988**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	40.25	0	50.00		80.5	66.1	129				
Surr: Dibromofluoromethane	53.62	0	50.00		107	83.6	123				
Surr: Toluene-d8	44.94	0	50.00		89.9	81.8	118				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F60

ANALYTICAL QC SUMMARY REPORT

BatchID: **247220**

Sample ID: **LCS-247220** Client ID: Units: **ug/L** Prep Date: **08/18/2017** Run No: **350234**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **247220** Analysis Date: **08/21/2017** Seq No: **7696538**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	48.42	5.0	50.00		96.8	68	139				
Benzene	48.97	5.0	50.00		97.9	74	125				
Chlorobenzene	51.52	5.0	50.00		103	75.7	123				
Toluene	48.04	5.0	50.00		96.1	75.9	126				
Trichloroethene	48.12	5.0	50.00		96.2	70.6	129				
Surr: 4-Bromofluorobenzene	39.01	0	50.00		78.0	66.1	129				
Surr: Dibromofluoromethane	53.32	0	50.00		107	83.6	123				
Surr: Toluene-d8	42.46	0	50.00		84.9	81.8	118				

Sample ID: **1708F05-001AMS** Client ID: Units: **ug/L** Prep Date: **08/18/2017** Run No: **350107**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **247220** Analysis Date: **08/18/2017** Seq No: **7694990**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	2778	250	2500		111	64.3	149				
Benzene	2722	250	2500		109	71.6	132				
Chlorobenzene	2802	250	2500		112	73.1	126				
Toluene	2648	250	2500		106	72.5	135				
Trichloroethene	2646	250	2500		106	70.2	132				
Surr: 4-Bromofluorobenzene	2012	0	2500		80.5	66.1	129				
Surr: Dibromofluoromethane	2685	0	2500		107	83.6	123				
Surr: Toluene-d8	2238	0	2500		89.5	81.8	118				

Sample ID: **1708F05-001AMSD** Client ID: Units: **ug/L** Prep Date: **08/18/2017** Run No: **350107**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **247220** Analysis Date: **08/18/2017** Seq No: **7694991**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	2666	250	2500		107	64.3	149	2778	4.10	30.8	
Benzene	2648	250	2500		106	71.6	132	2722	2.74	20.7	

Qualifiers:
> Greater than Result value
< Less than Result value
B Analyte detected in the associated method blank
BRL Below reporting limit
E Estimated (value above quantitation range)
H Holding times for preparation or analysis exceeded
J Estimated value detected below Reporting Limit
N Analyte not NELAC certified
R RPD outside limits due to matrix
Rpt Lim Reporting Limit
S Spike Recovery outside limits due to matrix

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F60

ANALYTICAL QC SUMMARY REPORT

BatchID: **247220**

Sample ID: **1708F05-001AMSD** Client ID: Units: **ug/L** Prep Date: **08/18/2017** Run No: **350107**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **247220** Analysis Date: **08/18/2017** Seq No: **7694991**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	2865	250	2500		115	73.1	126	2802	2.22	26.6	
Toluene	2552	250	2500		102	72.5	135	2648	3.67	23.2	
Trichloroethene	2615	250	2500		105	70.2	132	2646	1.16	27.7	
Surr: 4-Bromofluorobenzene	1974	0	2500		79.0	66.1	129	2012	0	0	
Surr: Dibromofluoromethane	2550	0	2500		102	83.6	123	2685	0	0	
Surr: Toluene-d8	2154	0	2500		86.2	81.8	118	2238	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Attachment B: 2nd 2017 SVE System Monitoring Report

2nd 2017 Semi-Annual SVE System Monitoring Report

Cessna Aircraft Company GA1 Facility
Columbus, Muscogee County, Georgia

The Georgia Environmental Protection Division (EPD) accepted this site into Georgia's Voluntary Remediation Program (VRP) on September 27, 2016, and approved the Voluntary Investigation and Remediation Plan (VIRP) and VRP application dated March 24, 2016. As part of Cessna's voluntary remediation efforts, a soil vapor extraction (SVE) system was installed beneath the building to mitigate volatile organic compounds (VOCs) in soil gas from potentially migrating into the building. The SVE system began operation on February 1, 2017. This report summarizes the SVE system monitoring data for the second 2017 semi-annual reporting period.

SVE System Description

The SVE system consists of four SVE wells and three vapor monitoring points (**Figure B-1**). The SVE wells are 2-inch diameter PVC and screened from 5 to 15 feet below the floor slab. The vapor monitoring points are small diameter tubes that are sealed and extend beneath the floor slab. The extracted vapors are carried in PVC piping from floor level up to the roof rafters and then to the exterior wall and down to ground level to the SVE blower located on the exterior of the building. System monitoring is performed semi-annually.

Results

SVE well sampling was completed on August 15, 2017. The analytical results for each SVE well are summarized in **Table B-1** through **Table B-4**. The combined flow at the SVE discharge is sampled to calculate emission rates (**Table B-5**). The full laboratory reports are in **Attachment B-1**. The following vacuum measurements were recorded from the vapor monitoring points.

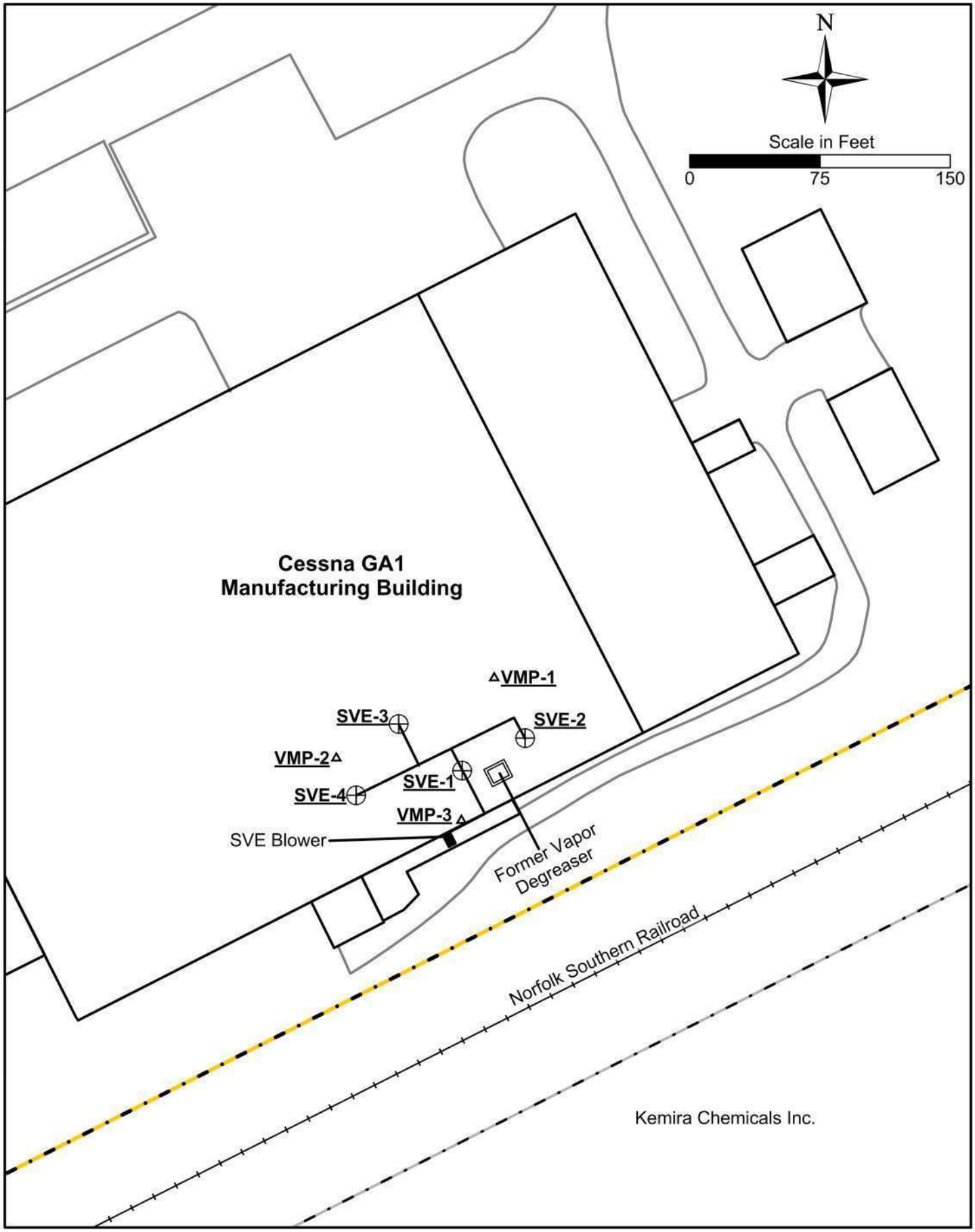
- VMP-1 – 3.5 Inches of water
- VMP-2 – 5.4 Inches of water
- VMP-3 – 0 Inches of water

Conclusions

The measured vacuums indicate that the system is capable of creating a negative pressures beneath the floor slab, which should reduce or eliminate sub-slab vapor intrusion into the building. The laboratory analyses show that trichloroethene is the dominant VOC in soil gas and it was the highest at SVE-1, which is the SVE well nearest the former vapor degreaser location. One additional VOC in SVE-1 (1,1,2-Trichloroethane) exceeded the EPA's Vapor Intrusion Screening Level (VISL) for soil gas. The output from the VISL Calculator are in **Attachment B-2**. The combined discharge from the system is well below the applicable permitting requirements and this discharge has declined rapidly in the first six months of operation.

CDM Smith

Figures



CDM Smith

Offsite Properties

Site Boundary

Soil Vapor Extraction Well

Sub-Slab Vapor Monitoring Point

Figure B-1
SVE System
Cessna GA1 Facility
Columbus, Muscogee County, Georgia

Tables

CDM Smith

Constituent (ug/m3)	$VISL_{SG}$	Pre-SVE	SVE-1 Operation							
			02/01/17	08/15/17						
1,1,1-Trichloroethane	73,000	<11	1,700	10						
1,1,2-Trichloroethane	2.9	<11	**2,200**	**31**						
1,1-Dichloroethane	2,600	<8.2	**17,000**	170						
1,1-Dichloroethene	2,900	120	**34,000**	140						
1,2,4-Trimethylbenzene	100	9.6	<49	15						
2-Butanone	73,000	-	74	10						
2-Propanol	2,900	-	<180	130						
Acetone	450,000	320	<120	57						
Benzene	440	10	89	6.9						
Carbon Disulfide	10,000	10J	86	17						
Chloroform	180	<9.9	**3,800**	28						
cis-1,2-Dichloroethene	NC	<8	38,000	950						
Ethyl Acetate	1,000	-	<36	140						
Ethyl Benzene	1,600	9.4	<43	9.3						
Trichlorofluoromethane	NC	<11	<56	<5.6						
Trichlorotrifluoroethane	440,000	-	170	<7.7						
Tetrachloroethene	580	<14	550	<6.8						
Tetrahydrofuran	29,000	<150	3,200	10						
Toluene	73,000	79	62	62						
trans-1,2-Dichloroethene	NC	<8.0	3,400	56						
Trichloroethene	29	**160**	**6,100,000**	**26,000**						
Vinyl Chloride	930	150	180	4						
Xylene, m&p	1,500	33	<87	24						
Xylene, o	1,500	12	<43	9.6						

$VISL_{SG}$ - Soil gas vapor intrusion screening level

NC - Not calculated, supporting toxicity data not available

< - Not detected, value is the reporting level (RL)

J - Estimated concentration below the RL

Bold/shaded values exceed the $VISL_{SG}$

- Not analyzed

CDM Smith

Table B-1: SVE-1 Data Summary

Cessna GA1 Facility

Columbus, Muscogee County, Georgia

Constituent (ug/m^3)	$VISL_{SG}$	Pre-SVE	SVE-2 Operation							
			02/01/17	08/15/17						
1,1,1-Trichloroethane	73,000	<15,000	580	<5.5						
1,1,2-Trichloroethane	2.9	<15,000	<55	<5.5						
1,1-Dichloroethane	2,600	5,800J	**2,600**	16						
1,1-Dichloroethene	2,900	8,300J	**2,900**	12						
1,2,4-Trimethylbenzene	100	<14,000	<49	15						
2-Butanone	73,000	-	<29	11						
2-Propanol	2,900	-	<180	110						
Acetone	450,000	<170,000	<120	52						
Benzene	440	<9,100	<32	5.4						
Carbon Disulfide	10,000	<22,000	<31	16						
Chloroform	180	<14,000	**700**	14						
cis-1,2-Dichloroethene	NC	22,000	15,000	77						
Ethyl Acetate	1,000	-	420	120						
Ethyl Benzene	1,600	<12,000	<43	8.7						
Trichlorofluoromethane	NC	<16,000	<56	<5.6						
Trichlorotrifluoroethane	440,000	-	<77	<7.7						
Tetrachloroethene	580	<19,000	<68	<6.8						
Tetrahydrofuran	29,000	<210,000	2,400	14						
Toluene	73,000	<11,000	38	57						
trans-1,2-Dichloroethene	NC	<11,000	840	<4.0						
Trichloroethene	29	**2,600,000**	**700,000**	**2,100**						
Vinyl Chloride	930	<7,300	60	<2.6						
Xylene, m&p	1,500	<31,000	<87	22						
Xylene, o	1,500	<12,000	<43	8.9						

$VISL_{SG}$ - Soil gas vapor intrusion screening level
NC - Not calculated, supporting toxicity data not available
< - Not detected, value is the reporting level (RL)
J - Estimated concentration below the RL
Bold/shaded values exceed the $VISL_{SG}$
- Not analyzed

CDM Smith

Table B-2: SVE-2 Data Summary
Cessna GA1 Facility
Columbus, Muscogee County, Georgia

Constituent (ug/m^3)	$VISL_{SG}$	Pre-SVE	SVE-3 Operation							
			02/01/17	08/15/17						
1,1,1-Trichloroethane	73,000	<11	140	<5.5						
1,1,2-Trichloroethane	2.9	<11	<55	<5.5						
1,1-Dichloroethane	2,600	1.9J	1,100	11						
1,1-Dichloroethene	2,900	120	**3,900**	12						
1,2,4-Trimethylbenzene	100	<10	<49	16						
2-Butanone	73,000	-	<29	8						
2-Propanol	2,900	-	<180	110						
Acetone	450,000	380	<120	50						
Benzene	440	1.8J	<32	5.8						
Carbon Disulfide	10,000	8J	<31	14						
Chloroform	180	<10	78	11						
cis-1,2-Dichloroethene	NC	15	46	<4.0						
Ethyl Acetate	1,000	-	280	110						
Ethyl Benzene	1,600	<8.9	<43	9.6						
Trichlorofluoromethane	NC	<11	<56	<5.6						
Trichlorotrifluoroethane	440,000	-	<77	<7.7						
Tetrachloroethene	580	<14	<68	<6.8						
Tetrahydrofuran	29,000	<150	960	4.9						
Toluene	73,000	<7.7	<38	59						
trans-1,2-Dichloroethene	NC	<8.1	<40	<4.0						
Trichloroethene	29	**110**	**81,000**	**260**						
Vinyl Chloride	930	3.3J	<26	<2.6						
Xylene, m&p	1,500	<22	<87	24						
Xylene, o	1,500	<8.9	<43	10						

$VISL_{SG}$ - Soil gas vapor intrusion screening level
NC - Not calculated, supporting toxicity data not available
< - Not detected, value is the reporting level (RL)
J - Estimated concentration below the RL
Bold/shaded values exceed the $VISL_{SG}$
- Not analyzed

CDM Smith

Table B-3: SVE-3 Data Summary
Cessna GA1 Facility
Columbus, Muscogee County, Georgia

Constituent (ug/m^3)	$VISL_{SG}$	Pre-SVE	SVE-4 Operation							
			02/01/17	08/15/17						
1,1,1-Trichloroethane	73,000	44	32	<5.5						
1,1,2-Trichloroethane	2.9	<38	<5.5	<5.5						
1,1-Dichloroethane	2,600	54	110	4.5						
1,1-Dichloroethene	2,900	1,400	1,700	14						
1,2,4-Trimethylbenzene	100	16J	<4.9	14						
2-Butanone	73,000	-	5.9	7.5						
2-Propanol	2,900	-	33	96						
Acetone	450,000	<410	34	41						
Benzene	440	7.8J	7.8	5.4						
Carbon Disulfide	10,000	<54	<3.1	13						
Chloroform	180	<34	15	<4.9						
cis-1,2-Dichloroethene	NC	<27	<4.0	5						
Ethyl Acetate	1,000	-	470	100						
Ethyl Benzene	1,600	13J	7.2	8.5						
Trichlorofluoromethane	NC	80	69	<5.6						
Trichlorotrifluoroethane	440,000	-	95	<7.7						
Tetrachloroethene	580	11J	<6.8	<6.8						
Tetrahydrofuran	29,000	530	290	3.8						
Toluene	73,000	77	61	54						
trans-1,2-Dichloroethene	NC	<27	<4.0	<4.0						
Trichloroethene	29	**4,600**	**2,000**	**200**						
Vinyl Chloride	930	<18	<2.6	<2.6						
Xylene, m&p	1,500	45J	31	23						
Xylene, o	1,500	17J	6.3	8.9						

$VISL_{SG}$ - Soil gas vapor intrusion screening level

NC - Not calculated, supporting toxicity data not available

< - Not detected, value is the reporting level (RL)

J - Estimated concentration below the RL

Bold/shaded values exceed the $VISL_{SG}$

- Not analyzed

CDM Smith

Table B-4: SVE-4 Data Summary

Cessna GA1 Facility

Columbus, Muscogee County, Georgia

Hazardous Air Pollutants (HAPs), mg/m^3	2/1/2017	8/15/2017				
1,1,1-Trichloroethane	0.24	BRL				
1,1,2-Trichloroethane	0.057	BRL				
1,1-Dichloroethane	3	0.017				
Benzene	BRL	BRL				
Carbon Disulfide	BRL	BRL				
Chloroform	0.36	0.0076				
Ethyl Benzene	BRL	BRL				
Methyl Isobutyl Ketone	BRL	BRL				
Styrene	BRL	BRL				
Tetrachloroethene	BRL	0.0078				
Toluene	BRL	BRL				
Trichloroethene	510	3.5				
Vinyl Chloride	BRL	BRL				
Xylene, m&p	BRL	BRL				
Xylene, o	BRL	BRL				
Total HAPs	513	3.53	0	0	0	0
Flowrate, cubic feet/minute	115	131				
Daily Emission Rate, pounds/day	**5.3**	**0.04**	**0.0**	**0.0**	**0.0**	**0.0**

Combined SVE System Discharge

Hazardous Air Pollutants (HAPs), mg/m^3						
1,1,1-Trichloroethane						
1,1,2-Trichloroethane						
1,1-Dichloroethane						
Benzene						
Carbon Disulfide						
Chloroform						
Ethyl Benzene						
Methyl Isobutyl Ketone						
Styrene						
Tetrachloroethene						
Toluene						
Trichloroethene						
Vinyl Chloride						
Xylene, m&p						
Xylene, o						
Total HAPs	0	0	0	0	0	0
Flowrate, cubic feet/minute						
Daily Emission Rate, pounds/day	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

BRL - Below reporting level

Constituents listed are those HAPs previously detected in any soil vapor sample.

Table B-5: SVE Emissions Calculations

Cessna GA1 Facility

Columbus, Muscogee County, Georgia

Attachment B-1

Laboratory Reports

CDM Smith

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

August 22, 2017

Tom Duffey
CDM Smith Inc.

3200 Windy Hill Road Suite 210W
Atlanta GA 30339

RE: Cessna

Dear Tom Duffey: Order No: 1708F75

Analytical Environmental Services, Inc. received 5 samples on 8/15/2017 5:55:00 PM
for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Air & Emissions for Volatile Organics effective 07/01/16-06/30/17.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

Ioana Pacurar

Ioana Pacurar

Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

APPENDIX

Compound	CAS #	Alternate Name	TO-14A	TO-15	SOP
Acetone	67-64-1				X
Allyl chloride	107-05-1	3-Chloropropene		X	
Benzene	71-43-2		X	X	
Benzyl chloride	100-44-7		X	X	
Bromodichloromethane	75-27-4	Dichlorobromomethane			X
Bromoform	75-25-2	Tribromomethane		X	
Bromomethane	74-83-9	Methyl bromide	X	X	
1,3-Butadiene	106-99-0			X	
Carbon disulfide	75-15-0			X	
Carbon tetrachloride	56-23-5		X	X	
Chlorobenzene	108-90-7		X	X	
Chloroethane	75-00-3	Ethyl chloride	X	X	
Chloroform	67-66-3		X	X	
Chloromethane	74-87-3	Methyl chloride	X	X	
Cyclohexane	110-82-7				X
Dibromochloromethane	124-48-1	Chlorodibromomethane			X
1,2-Dibromoethane	106-93-4	EDB/Ethylene dibromide	X	X	
1,2-Dichlorobenzene	95-50-1	*o*-Dichlorobenzene	X	X	
1,3-Dichlorobenzene	541-73-1	*m*-Dichlorobenzene	X	X	
1,4-Dichlorobenzene	106-46-7	p-Dichlorobenzene	X	X	
Dichlorodifluoromethane	75-71-8	Freon-12	X		
1,1-Dichloroethane	75-34-3		X	X	
1,2-Dichloroethane	107-06-2		X	X	
1,1-Dichloroethene	75-35-4	1,1-Dichloroethylene	X	X	
cis-1,2-Dichloroethene	156-59-2	*cis*-1,2-Dichloroethylene	X	X	
trans-1,2-Dichloroethene	156-60-5	*trans*-1,2-Dichloroethylene		X	
1,2-Dichloropropane	78-87-5		X	X	
cis-1,3-Dichloropropene	10061-01-5		X	X	
trans-1,3-Dichloropropene	10061-02-6		X	X	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	Freon-114	X		
1,4-Dioxane	123-91-1	1,4-Diethylene oxide		X	
Ethyl acetate	141-78-6	Acetic acid, ethyl ester			X
Ethylbenzene	100-41-4		X	X	
4-Ethyltoluene	622-96-8				X
n-Heptane	142-82-5	Heptane			X
Hexachlorobutadiene	87-68-3	Hexachloro-1,3-butadiene	X	X	

n-Hexane	110-54-3	Hexane		X	
Compound	**CAS #**	**Alternate Name**	**TO-14A**	**TO-15**	**SOP**
2-Hexanone	591-78-6	Methyl butyl ketone			X
Methylene chloride	75-09-2	Dichloromethane	X	X	
Methyl tert-butyl ether	1634-04-4	MTBE		X	
Methyl ethyl ketone	78-93-3	MEK/2-Butanone		X	
Methyl isobutyl ketone	108-10-1	4-Methyl-2-pentanone		X	
2-Propanol	67-63-0	Isopropanol/Isopropyl alcohol			X
Propene	115-07-1	Propylene			X
Styrene	100-42-5			X	
1,1,2,2-Tetrachloroethane	79-34-5		X	X	
Tetrachloroethene	127-18-4	Tetrachloroethylene	X	X	
Tetrahydrofuran	109-99-9				X
Toluene	108-88-3			X	
1,2,4-Trichlorobenzene	120-82-1			X	
1,1,1-Trichloroethane	74-55-6			X	
1,1,2-Trichloroethane	79-00-5			X	
Trichloroethene	79-01-6	Trichloroethylene		X	
Trichlorofluoromethane	75-69-4	Freon-11	X		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	Freon-113	X		
1,2,4-Trimethylbenzene	95-63-6		X	X	
1,3,5-Trimethylbenzene	108-67-8		X	X	
2,2,4-Trimethylpentane	540-84-1	Isooctane		X	
Vinyl acetate	108-05-04			X	
Vinyl bromide	593-60-2	Bromoethene		X	
Vinyl chloride	75-01-4	Chloroethene	X	X	
Xylenes, Total	1330-20-7		X	X	
m/p-Xylene	179601-23-1		X	X	
o-Xylene	95-47-6		X	X	

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

AES

VAPOR/AIR CHAIN OF CUSTODY

Work Order #: 1708F75

Company: CDM Smith

Address: 3200 Windy Hill Road Suite 210W Atlanta, GA 30339

Bottle Order #: 83673

Turnaround Time (Circle One): Standard | 3 Day Rush | 2 Day Rush | Other

Phone: 404-720-1400

Fax:

Sampled by: Nicholas Fuller

Signature:

#	Sample ID	Sample Start Date	Sample Start Time (24hr)	Sample Finish Date	Sample Finish Time (24 hr)	Sample Matrix*	Canister Serial #	Flow Controller ID	Canister Pressure In Field ("Hg) Start	Canister Pressure In Field ("Hg) Stop	ANALYSIS REQUESTED TO-15							Remarks
1	System	8/15/17	0933	8/15/17	0939	SV	3951	01113	-28	-3	X							
2	SVE-4	8/15/17	1038	8/15/17	1048	SV	3814	01144	-28	-4	X							
3	SVE-3	8/15/17	1042	8/15/17	1052	SV	3984	01137	-27	-4	X							
4	SVE-2	8/15/17	1052	8/15/17	1100	SV	3963	01119	-28	-4	X							
5	SVE-1	8/15/17	1057	8/15/17	1104	SV	3980	01133	-28	-4	X							
6																		
7																		
8																		
9																		
10																		

SPECIAL INSTRUCTIONS/COMMENTS:
If specialized list is required, list analytes here:

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1:	1755 8-15-17	1:	8/15/17 1755
2:		2:	
3:		3:	

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: Cessna
PROJECT #:
SITE ADDRESS: Columbus, GA
SEND REPORT TO: Tom Duffey / Nick Fuller
INVOICE TO: (IF DIFFERENT FROM ABOVE) fullernd@cdmsmith.com
PO#:
STATE PROGRAM (if any): _____ E-mail? Y / N Fax? Y / N
QUOTE #:_____ DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC, AES WILL PROCEED AS STANDARD TAT.
Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc. **Samples are disposed of ~~30~~ 15 days after collection unless prior arrangements have been made.**

*SAMPLE MATRIX: IA = Indoor Air AA = Ambient Air SS = Subslab SV = Soil Vapor O = Other (specify)

AES, Inc., assumes no liability with respect to the collection and shipment of these samples.

White Copy - Original; Blue Copy - Client

Client: CDM Smith Inc.
Project: Cessna
Lab ID: 1708F75

Case Narrative

Volatiles Organic Compounds Analysis by Method TO 14/15:

Trichloroethene, and cis-1,2-Dichloroethene values for the QC sample 1708F75-005ADUP are "E" qualified indicating estimated values over linear calibration range.

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SYSTEM
Project Name:	Cessna	**Collection Date:**	8/15/2017 9:39:00 AM
Lab ID:	1708F75-001	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**				
1,1,1-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 08:06	MD
1,1,2,2-Tetrachloroethane	BRL	6.9		ug/m3	247235	2	08/19/2017 08:06	MD
1,1,2-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 08:06	MD
1,1-Dichloroethane	17	4.0		ug/m3	247235	2	08/19/2017 08:06	MD
1,1-Dichloroethene	19	4.0		ug/m3	247235	2	08/19/2017 08:06	MD
1,2,4-Trichlorobenzene	BRL	7.4		ug/m3	247235	2	08/19/2017 08:06	MD
1,2,4-Trimethylbenzene	BRL	4.9		ug/m3	247235	2	08/19/2017 08:06	MD
1,2-Dibromoethane	BRL	7.7		ug/m3	247235	2	08/19/2017 08:06	MD
1,2-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 08:06	MD
1,2-Dichloroethane	BRL	4.0		ug/m3	247235	2	08/19/2017 08:06	MD
1,2-Dichloropropane	BRL	4.6		ug/m3	247235	2	08/19/2017 08:06	MD
1,3,5-Trimethylbenzene	BRL	4.9		ug/m3	247235	2	08/19/2017 08:06	MD
1,3-Butadiene	BRL	2.2		ug/m3	247235	2	08/19/2017 08:06	MD
1,3-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 08:06	MD
1,4-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 08:06	MD
1,4-Dioxane	BRL	3.6		ug/m3	247235	2	08/19/2017 08:06	MD
2,2,4-Trimethylpentane	BRL	4.7		ug/m3	247235	2	08/19/2017 08:06	MD
2-Butanone	BRL	2.9		ug/m3	247235	2	08/19/2017 08:06	MD
2-Hexanone	BRL	4.1		ug/m3	247235	2	08/19/2017 08:06	MD
4-Ethyltoluene	BRL	4.9		ug/m3	247235	2	08/19/2017 08:06	MD
4-Methyl-2-pentanone	BRL	4.1		ug/m3	247235	2	08/19/2017 08:06	MD
Acetone	34	12		ug/m3	247235	2	08/19/2017 08:06	MD
Allyl chloride	BRL	3.1		ug/m3	247235	2	08/19/2017 08:06	MD
Benzene	BRL	3.2		ug/m3	247235	2	08/19/2017 08:06	MD
Benzyl chloride	BRL	5.2		ug/m3	247235	2	08/19/2017 08:06	MD
Bromodichloromethane	BRL	6.7		ug/m3	247235	2	08/19/2017 08:06	MD
Bromoform	BRL	10		ug/m3	247235	2	08/19/2017 08:06	MD
Bromomethane	BRL	3.9		ug/m3	247235	2	08/19/2017 08:06	MD
Carbon disulfide	BRL	3.1		ug/m3	247235	2	08/19/2017 08:06	MD
Carbon tetrachloride	BRL	6.3		ug/m3	247235	2	08/19/2017 08:06	MD
Chlorobenzene	BRL	4.6		ug/m3	247235	2	08/19/2017 08:06	MD
Chloroethane	BRL	2.6		ug/m3	247235	2	08/19/2017 08:06	MD
Chloroform	7.6	4.9		ug/m3	247235	2	08/19/2017 08:06	MD
Chloromethane	BRL	2.1		ug/m3	247235	2	08/19/2017 08:06	MD
cis-1,2-Dichloroethene	77	4.0		ug/m3	247235	2	08/19/2017 08:06	MD
cis-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 08:06	MD
Cyclohexane	BRL	3.4		ug/m3	247235	2	08/19/2017 08:06	MD
Dibromochloromethane	BRL	8.5		ug/m3	247235	2	08/19/2017 08:06	MD
Dichlorodifluoromethane	BRL	4.9		ug/m3	247235	2	08/19/2017 08:06	MD
Ethyl acetate	BRL	3.6		ug/m3	247235	2	08/19/2017 08:06	MD
Ethylbenzene	BRL	4.3		ug/m3	247235	2	08/19/2017 08:06	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SYSTEM
Project Name:	Cessna	**Collection Date:**	8/15/2017 9:39:00 AM
Lab ID:	1708F75-001	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**				
Freon-113	BRL	7.7		ug/m3	247235	2	08/19/2017 08:06	MD
Freon-114	BRL	7.0		ug/m3	247235	2	08/19/2017 08:06	MD
Hexachlorobutadiene	BRL	11		ug/m3	247235	2	08/19/2017 08:06	MD
Isopropyl alcohol	BRL	18		ug/m3	247235	2	08/19/2017 08:06	MD
m,p-Xylene	BRL	8.7		ug/m3	247235	2	08/19/2017 08:06	MD
Methyl tert-butyl ether	BRL	3.6		ug/m3	247235	2	08/19/2017 08:06	MD
Methylene chloride	BRL	3.5		ug/m3	247235	2	08/19/2017 08:06	MD
n-Heptane	BRL	4.1		ug/m3	247235	2	08/19/2017 08:06	MD
n-Hexane	BRL	3.5		ug/m3	247235	2	08/19/2017 08:06	MD
o-Xylene	BRL	4.3		ug/m3	247235	2	08/19/2017 08:06	MD
Propene	7.7	1.7		ug/m3	247235	2	08/19/2017 08:06	MD
Styrene	BRL	4.3		ug/m3	247235	2	08/19/2017 08:06	MD
Tetrachloroethene	7.8	6.8		ug/m3	247235	2	08/19/2017 08:06	MD
Tetrahydrofuran	BRL	2.9		ug/m3	247235	2	08/19/2017 08:06	MD
Toluene	BRL	3.8		ug/m3	247235	2	08/19/2017 08:06	MD
trans-1,2-Dichloroethene	4.8	4.0		ug/m3	247235	2	08/19/2017 08:06	MD
trans-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 08:06	MD
Trichloroethene	3500	540		ug/m3	247235	2	08/19/2017 01:36	MD
Trichlorofluoromethane	BRL	5.6		ug/m3	247235	2	08/19/2017 08:06	MD
Vinyl acetate	BRL	3.5		ug/m3	247235	2	08/19/2017 08:06	MD
Vinyl bromide	BRL	4.4		ug/m3	247235	2	08/19/2017 08:06	MD
Vinyl chloride	BRL	2.6		ug/m3	247235	2	08/19/2017 08:06	MD
Xylenes, Total	BRL	13		ug/m3	247235	2	08/19/2017 08:06	MD
Surr: 4-Bromofluorobenzene	90	70-130		%REC	247235	2	08/19/2017 08:06	MD
Surr: 4-Bromofluorobenzene	91.2	70-130		%REC	247235	2	08/19/2017 01:36	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-4
Project Name:	Cessna	**Collection Date:**	8/15/2017 10:48:00 AM
Lab ID:	1708F75-002	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**				
1,1,1-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 08:55	MD
1,1,2,2-Tetrachloroethane	BRL	6.9		ug/m3	247235	2	08/19/2017 08:55	MD
1,1,2-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 08:55	MD
1,1-Dichloroethane	4.5	4.0		ug/m3	247235	2	08/19/2017 08:55	MD
1,1-Dichloroethene	14	4.0		ug/m3	247235	2	08/19/2017 08:55	MD
1,2,4-Trichlorobenzene	BRL	7.4		ug/m3	247235	2	08/19/2017 08:55	MD
1,2,4-Trimethylbenzene	14	4.9		ug/m3	247235	2	08/19/2017 08:55	MD
1,2-Dibromoethane	BRL	7.7		ug/m3	247235	2	08/19/2017 08:55	MD
1,2-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 08:55	MD
1,2-Dichloroethane	BRL	4.0		ug/m3	247235	2	08/19/2017 08:55	MD
1,2-Dichloropropane	BRL	4.6		ug/m3	247235	2	08/19/2017 08:55	MD
1,3,5-Trimethylbenzene	BRL	4.9		ug/m3	247235	2	08/19/2017 08:55	MD
1,3-Butadiene	BRL	2.2		ug/m3	247235	2	08/19/2017 08:55	MD
1,3-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 08:55	MD
1,4-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 08:55	MD
1,4-Dioxane	BRL	3.6		ug/m3	247235	2	08/19/2017 08:55	MD
2,2,4-Trimethylpentane	BRL	4.7		ug/m3	247235	2	08/19/2017 08:55	MD
2-Butanone	7.5	2.9		ug/m3	247235	2	08/19/2017 08:55	MD
2-Hexanone	BRL	4.1		ug/m3	247235	2	08/19/2017 08:55	MD
4-Ethyltoluene	BRL	4.9		ug/m3	247235	2	08/19/2017 08:55	MD
4-Methyl-2-pentanone	BRL	4.1		ug/m3	247235	2	08/19/2017 08:55	MD
Acetone	41	12		ug/m3	247235	2	08/19/2017 08:55	MD
Allyl chloride	BRL	3.1		ug/m3	247235	2	08/19/2017 08:55	MD
Benzene	5.4	3.2		ug/m3	247235	2	08/19/2017 08:55	MD
Benzyl chloride	BRL	5.2		ug/m3	247235	2	08/19/2017 08:55	MD
Bromodichloromethane	BRL	6.7		ug/m3	247235	2	08/19/2017 08:55	MD
Bromoform	BRL	10		ug/m3	247235	2	08/19/2017 08:55	MD
Bromomethane	BRL	3.9		ug/m3	247235	2	08/19/2017 08:55	MD
Carbon disulfide	13	3.1		ug/m3	247235	2	08/19/2017 08:55	MD
Carbon tetrachloride	BRL	6.3		ug/m3	247235	2	08/19/2017 08:55	MD
Chlorobenzene	BRL	4.6		ug/m3	247235	2	08/19/2017 08:55	MD
Chloroethane	BRL	2.6		ug/m3	247235	2	08/19/2017 08:55	MD
Chloroform	BRL	4.9		ug/m3	247235	2	08/19/2017 08:55	MD
Chloromethane	5.9	2.1		ug/m3	247235	2	08/19/2017 08:55	MD
cis-1,2-Dichloroethene	5.0	4.0		ug/m3	247235	2	08/19/2017 08:55	MD
cis-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 08:55	MD
Cyclohexane	5.3	3.4		ug/m3	247235	2	08/19/2017 08:55	MD
Dibromochloromethane	BRL	8.5		ug/m3	247235	2	08/19/2017 08:55	MD
Dichlorodifluoromethane	BRL	4.9		ug/m3	247235	2	08/19/2017 08:55	MD
Ethyl acetate	100	3.6		ug/m3	247235	2	08/19/2017 08:55	MD
Ethylbenzene	8.5	4.3		ug/m3	247235	2	08/19/2017 08:55	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-4
Project Name:	Cessna	**Collection Date:**	8/15/2017 10:48:00 AM
Lab ID:	1708F75-002	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**				
Freon-113	BRL	7.7		ug/m3	247235	2	08/19/2017 08:55	MD
Freon-114	BRL	7.0		ug/m3	247235	2	08/19/2017 08:55	MD
Hexachlorobutadiene	BRL	11		ug/m3	247235	2	08/19/2017 08:55	MD
Isopropyl alcohol	96	18		ug/m3	247235	2	08/19/2017 08:55	MD
m,p-Xylene	23	8.7		ug/m3	247235	2	08/19/2017 08:55	MD
Methyl tert-butyl ether	BRL	3.6		ug/m3	247235	2	08/19/2017 08:55	MD
Methylene chloride	BRL	3.5		ug/m3	247235	2	08/19/2017 08:55	MD
n-Heptane	4.1	4.1		ug/m3	247235	2	08/19/2017 08:55	MD
n-Hexane	BRL	3.5		ug/m3	247235	2	08/19/2017 08:55	MD
o-Xylene	8.9	4.3		ug/m3	247235	2	08/19/2017 08:55	MD
Propene	7.7	1.7		ug/m3	247235	2	08/19/2017 08:55	MD
Styrene	BRL	4.3		ug/m3	247235	2	08/19/2017 08:55	MD
Tetrachloroethene	BRL	6.8		ug/m3	247235	2	08/19/2017 08:55	MD
Tetrahydrofuran	3.8	2.9		ug/m3	247235	2	08/19/2017 08:55	MD
Toluene	54	3.8		ug/m3	247235	2	08/19/2017 08:55	MD
trans-1,2-Dichloroethene	BRL	4.0		ug/m3	247235	2	08/19/2017 08:55	MD
trans-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 08:55	MD
Trichloroethene	200	5.4		ug/m3	247235	2	08/19/2017 08:55	MD
Trichlorofluoromethane	BRL	5.6		ug/m3	247235	2	08/19/2017 08:55	MD
Vinyl acetate	BRL	3.5		ug/m3	247235	2	08/19/2017 08:55	MD
Vinyl bromide	BRL	4.4		ug/m3	247235	2	08/19/2017 08:55	MD
Vinyl chloride	BRL	2.6		ug/m3	247235	2	08/19/2017 08:55	MD
Xylenes, Total	31	13		ug/m3	247235	2	08/19/2017 08:55	MD
Surr: 4-Bromofluorobenzene	92	70-130		%REC	247235	2	08/19/2017 08:55	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-3
Project Name:	Cessna	**Collection Date:**	8/15/2017 10:52:00 AM
Lab ID:	1708F75-003	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**				
1,1,1-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 09:45	MD
1,1,2,2-Tetrachloroethane	BRL	6.9		ug/m3	247235	2	08/19/2017 09:45	MD
1,1,2-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 09:45	MD
1,1-Dichloroethane	11	4.0		ug/m3	247235	2	08/19/2017 09:45	MD
1,1-Dichloroethene	12	4.0		ug/m3	247235	2	08/19/2017 09:45	MD
1,2,4-Trichlorobenzene	BRL	7.4		ug/m3	247235	2	08/19/2017 09:45	MD
1,2,4-Trimethylbenzene	16	4.9		ug/m3	247235	2	08/19/2017 09:45	MD
1,2-Dibromoethane	BRL	7.7		ug/m3	247235	2	08/19/2017 09:45	MD
1,2-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 09:45	MD
1,2-Dichloroethane	BRL	4.0		ug/m3	247235	2	08/19/2017 09:45	MD
1,2-Dichloropropane	BRL	4.6		ug/m3	247235	2	08/19/2017 09:45	MD
1,3,5-Trimethylbenzene	BRL	4.9		ug/m3	247235	2	08/19/2017 09:45	MD
1,3-Butadiene	BRL	2.2		ug/m3	247235	2	08/19/2017 09:45	MD
1,3-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 09:45	MD
1,4-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 09:45	MD
1,4-Dioxane	BRL	3.6		ug/m3	247235	2	08/19/2017 09:45	MD
2,2,4-Trimethylpentane	BRL	4.7		ug/m3	247235	2	08/19/2017 09:45	MD
2-Butanone	8.0	2.9		ug/m3	247235	2	08/19/2017 09:45	MD
2-Hexanone	BRL	4.1		ug/m3	247235	2	08/19/2017 09:45	MD
4-Ethyltoluene	BRL	4.9		ug/m3	247235	2	08/19/2017 09:45	MD
4-Methyl-2-pentanone	BRL	4.1		ug/m3	247235	2	08/19/2017 09:45	MD
Acetone	50	12		ug/m3	247235	2	08/19/2017 09:45	MD
Allyl chloride	BRL	3.1		ug/m3	247235	2	08/19/2017 09:45	MD
Benzene	5.8	3.2		ug/m3	247235	2	08/19/2017 09:45	MD
Benzyl chloride	BRL	5.2		ug/m3	247235	2	08/19/2017 09:45	MD
Bromodichloromethane	BRL	6.7		ug/m3	247235	2	08/19/2017 09:45	MD
Bromoform	BRL	10		ug/m3	247235	2	08/19/2017 09:45	MD
Bromomethane	BRL	3.9		ug/m3	247235	2	08/19/2017 09:45	MD
Carbon disulfide	14	3.1		ug/m3	247235	2	08/19/2017 09:45	MD
Carbon tetrachloride	BRL	6.3		ug/m3	247235	2	08/19/2017 09:45	MD
Chlorobenzene	BRL	4.6		ug/m3	247235	2	08/19/2017 09:45	MD
Chloroethane	BRL	2.6		ug/m3	247235	2	08/19/2017 09:45	MD
Chloroform	11	4.9		ug/m3	247235	2	08/19/2017 09:45	MD
Chloromethane	2.8	2.1		ug/m3	247235	2	08/19/2017 09:45	MD
cis-1,2-Dichloroethene	BRL	4.0		ug/m3	247235	2	08/19/2017 09:45	MD
cis-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 09:45	MD
Cyclohexane	6.4	3.4		ug/m3	247235	2	08/19/2017 09:45	MD
Dibromochloromethane	BRL	8.5		ug/m3	247235	2	08/19/2017 09:45	MD
Dichlorodifluoromethane	BRL	4.9		ug/m3	247235	2	08/19/2017 09:45	MD
Ethyl acetate	110	3.6		ug/m3	247235	2	08/19/2017 09:45	MD
Ethylbenzene	9.6	4.3		ug/m3	247235	2	08/19/2017 09:45	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-3
Project Name:	Cessna	**Collection Date:**	8/15/2017 10:52:00 AM
Lab ID:	1708F75-003	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**				
Freon-113	BRL	7.7		ug/m3	247235	2	08/19/2017 09:45	MD
Freon-114	BRL	7.0		ug/m3	247235	2	08/19/2017 09:45	MD
Hexachlorobutadiene	BRL	11		ug/m3	247235	2	08/19/2017 09:45	MD
Isopropyl alcohol	110	18		ug/m3	247235	2	08/19/2017 09:45	MD
m,p-Xylene	24	8.7		ug/m3	247235	2	08/19/2017 09:45	MD
Methyl tert-butyl ether	BRL	3.6		ug/m3	247235	2	08/19/2017 09:45	MD
Methylene chloride	BRL	3.5		ug/m3	247235	2	08/19/2017 09:45	MD
n-Heptane	4.7	4.1		ug/m3	247235	2	08/19/2017 09:45	MD
n-Hexane	BRL	3.5		ug/m3	247235	2	08/19/2017 09:45	MD
o-Xylene	10.0	4.3		ug/m3	247235	2	08/19/2017 09:45	MD
Propene	7.3	1.7		ug/m3	247235	2	08/19/2017 09:45	MD
Styrene	BRL	4.3		ug/m3	247235	2	08/19/2017 09:45	MD
Tetrachloroethene	BRL	6.8		ug/m3	247235	2	08/19/2017 09:45	MD
Tetrahydrofuran	4.9	2.9		ug/m3	247235	2	08/19/2017 09:45	MD
Toluene	59	3.8		ug/m3	247235	2	08/19/2017 09:45	MD
trans-1,2-Dichloroethene	BRL	4.0		ug/m3	247235	2	08/19/2017 09:45	MD
trans-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 09:45	MD
Trichloroethene	260	5.4		ug/m3	247235	2	08/19/2017 09:45	MD
Trichlorofluoromethane	BRL	5.6		ug/m3	247235	2	08/19/2017 09:45	MD
Vinyl acetate	BRL	3.5		ug/m3	247235	2	08/19/2017 09:45	MD
Vinyl bromide	BRL	4.4		ug/m3	247235	2	08/19/2017 09:45	MD
Vinyl chloride	BRL	2.6		ug/m3	247235	2	08/19/2017 09:45	MD
Xylenes, Total	34	13		ug/m3	247235	2	08/19/2017 09:45	MD
Surr: 4-Bromofluorobenzene	93.2	70-130		%REC	247235	2	08/19/2017 09:45	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-2
Project Name:	Cessna	**Collection Date:**	8/15/2017 11:00:00 AM
Lab ID:	1708F75-004	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**				
1,1,1-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 10:35	MD
1,1,2,2-Tetrachloroethane	BRL	6.9		ug/m3	247235	2	08/19/2017 10:35	MD
1,1,2-Trichloroethane	BRL	5.5		ug/m3	247235	2	08/19/2017 10:35	MD
1,1-Dichloroethane	16	4.0		ug/m3	247235	2	08/19/2017 10:35	MD
1,1-Dichloroethene	12	4.0		ug/m3	247235	2	08/19/2017 10:35	MD
1,2,4-Trichlorobenzene	BRL	7.4		ug/m3	247235	2	08/19/2017 10:35	MD
1,2,4-Trimethylbenzene	15	4.9		ug/m3	247235	2	08/19/2017 10:35	MD
1,2-Dibromoethane	BRL	7.7		ug/m3	247235	2	08/19/2017 10:35	MD
1,2-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 10:35	MD
1,2-Dichloroethane	BRL	4.0		ug/m3	247235	2	08/19/2017 10:35	MD
1,2-Dichloropropane	BRL	4.6		ug/m3	247235	2	08/19/2017 10:35	MD
1,3,5-Trimethylbenzene	BRL	4.9		ug/m3	247235	2	08/19/2017 10:35	MD
1,3-Butadiene	BRL	2.2		ug/m3	247235	2	08/19/2017 10:35	MD
1,3-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 10:35	MD
1,4-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 10:35	MD
1,4-Dioxane	BRL	3.6		ug/m3	247235	2	08/19/2017 10:35	MD
2,2,4-Trimethylpentane	BRL	4.7		ug/m3	247235	2	08/19/2017 10:35	MD
2-Butanone	11	2.9		ug/m3	247235	2	08/19/2017 10:35	MD
2-Hexanone	BRL	4.1		ug/m3	247235	2	08/19/2017 10:35	MD
4-Ethyltoluene	BRL	4.9		ug/m3	247235	2	08/19/2017 10:35	MD
4-Methyl-2-pentanone	BRL	4.1		ug/m3	247235	2	08/19/2017 10:35	MD
Acetone	52	12		ug/m3	247235	2	08/19/2017 10:35	MD
Allyl chloride	BRL	3.1		ug/m3	247235	2	08/19/2017 10:35	MD
Benzene	5.4	3.2		ug/m3	247235	2	08/19/2017 10:35	MD
Benzyl chloride	BRL	5.2		ug/m3	247235	2	08/19/2017 10:35	MD
Bromodichloromethane	BRL	6.7		ug/m3	247235	2	08/19/2017 10:35	MD
Bromoform	BRL	10		ug/m3	247235	2	08/19/2017 10:35	MD
Bromomethane	BRL	3.9		ug/m3	247235	2	08/19/2017 10:35	MD
Carbon disulfide	16	3.1		ug/m3	247235	2	08/19/2017 10:35	MD
Carbon tetrachloride	BRL	6.3		ug/m3	247235	2	08/19/2017 10:35	MD
Chlorobenzene	BRL	4.6		ug/m3	247235	2	08/19/2017 10:35	MD
Chloroethane	BRL	2.6		ug/m3	247235	2	08/19/2017 10:35	MD
Chloroform	14	4.9		ug/m3	247235	2	08/19/2017 10:35	MD
Chloromethane	7.7	2.1		ug/m3	247235	2	08/19/2017 10:35	MD
cis-1,2-Dichloroethene	77	4.0		ug/m3	247235	2	08/19/2017 10:35	MD
cis-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 10:35	MD
Cyclohexane	6.7	3.4		ug/m3	247235	2	08/19/2017 10:35	MD
Dibromochloromethane	BRL	8.5		ug/m3	247235	2	08/19/2017 10:35	MD
Dichlorodifluoromethane	BRL	4.9		ug/m3	247235	2	08/19/2017 10:35	MD
Ethyl acetate	120	3.6		ug/m3	247235	2	08/19/2017 10:35	MD
Ethylbenzene	8.7	4.3		ug/m3	247235	2	08/19/2017 10:35	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-2
Project Name:	Cessna	**Collection Date:**	8/15/2017 11:00:00 AM
Lab ID:	1708F75-004	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**				
Freon-113	BRL	7.7		ug/m3	247235	2	08/19/2017 10:35	MD
Freon-114	BRL	7.0		ug/m3	247235	2	08/19/2017 10:35	MD
Hexachlorobutadiene	BRL	11		ug/m3	247235	2	08/19/2017 10:35	MD
Isopropyl alcohol	110	18		ug/m3	247235	2	08/19/2017 10:35	MD
m,p-Xylene	22	8.7		ug/m3	247235	2	08/19/2017 10:35	MD
Methyl tert-butyl ether	BRL	3.6		ug/m3	247235	2	08/19/2017 10:35	MD
Methylene chloride	BRL	3.5		ug/m3	247235	2	08/19/2017 10:35	MD
n-Heptane	4.5	4.1		ug/m3	247235	2	08/19/2017 10:35	MD
n-Hexane	BRL	3.5		ug/m3	247235	2	08/19/2017 10:35	MD
o-Xylene	8.9	4.3		ug/m3	247235	2	08/19/2017 10:35	MD
Propene	BRL	1.7		ug/m3	247235	2	08/19/2017 10:35	MD
Styrene	BRL	4.3		ug/m3	247235	2	08/19/2017 10:35	MD
Tetrachloroethene	BRL	6.8		ug/m3	247235	2	08/19/2017 10:35	MD
Tetrahydrofuran	14	2.9		ug/m3	247235	2	08/19/2017 10:35	MD
Toluene	57	3.8		ug/m3	247235	2	08/19/2017 10:35	MD
trans-1,2-Dichloroethene	BRL	4.0		ug/m3	247235	2	08/19/2017 10:35	MD
trans-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 10:35	MD
Trichloroethene	2100	540		ug/m3	247235	2	08/19/2017 04:03	MD
Trichlorofluoromethane	BRL	5.6		ug/m3	247235	2	08/19/2017 10:35	MD
Vinyl acetate	BRL	3.5		ug/m3	247235	2	08/19/2017 10:35	MD
Vinyl bromide	BRL	4.4		ug/m3	247235	2	08/19/2017 10:35	MD
Vinyl chloride	BRL	2.6		ug/m3	247235	2	08/19/2017 10:35	MD
Xylenes, Total	31	13		ug/m3	247235	2	08/19/2017 10:35	MD
Surr: 4-Bromofluorobenzene	91.8	70-130		%REC	247235	2	08/19/2017 10:35	MD
Surr: 4-Bromofluorobenzene	90.2	70-130		%REC	247235	2	08/19/2017 04:03	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-1
Project Name:	Cessna	**Collection Date:**	8/15/2017 11:04:00 AM
Lab ID:	1708F75-005	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**				
1,1,1-Trichloroethane	10	5.5		ug/m3	247235	2	08/19/2017 11:24	MD
1,1,2,2-Tetrachloroethane	BRL	6.9		ug/m3	247235	2	08/19/2017 11:24	MD
1,1,2-Trichloroethane	31	5.5		ug/m3	247235	2	08/19/2017 11:24	MD
1,1-Dichloroethane	170	4.0		ug/m3	247235	2	08/19/2017 11:24	MD
1,1-Dichloroethene	140	4.0		ug/m3	247235	2	08/19/2017 11:24	MD
1,2,4-Trichlorobenzene	BRL	7.4		ug/m3	247235	2	08/19/2017 11:24	MD
1,2,4-Trimethylbenzene	15	4.9		ug/m3	247235	2	08/19/2017 11:24	MD
1,2-Dibromoethane	BRL	7.7		ug/m3	247235	2	08/19/2017 11:24	MD
1,2-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 11:24	MD
1,2-Dichloroethane	BRL	4.0		ug/m3	247235	2	08/19/2017 11:24	MD
1,2-Dichloropropane	BRL	4.6		ug/m3	247235	2	08/19/2017 11:24	MD
1,3,5-Trimethylbenzene	BRL	4.9		ug/m3	247235	2	08/19/2017 11:24	MD
1,3-Butadiene	BRL	2.2		ug/m3	247235	2	08/19/2017 11:24	MD
1,3-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 11:24	MD
1,4-Dichlorobenzene	BRL	6.0		ug/m3	247235	2	08/19/2017 11:24	MD
1,4-Dioxane	BRL	3.6		ug/m3	247235	2	08/19/2017 11:24	MD
2,2,4-Trimethylpentane	BRL	4.7		ug/m3	247235	2	08/19/2017 11:24	MD
2-Butanone	10	2.9		ug/m3	247235	2	08/19/2017 11:24	MD
2-Hexanone	BRL	4.1		ug/m3	247235	2	08/19/2017 11:24	MD
4-Ethyltoluene	BRL	4.9		ug/m3	247235	2	08/19/2017 11:24	MD
4-Methyl-2-pentanone	BRL	4.1		ug/m3	247235	2	08/19/2017 11:24	MD
Acetone	57	12		ug/m3	247235	2	08/19/2017 11:24	MD
Allyl chloride	BRL	3.1		ug/m3	247235	2	08/19/2017 11:24	MD
Benzene	6.9	3.2		ug/m3	247235	2	08/19/2017 11:24	MD
Benzyl chloride	BRL	5.2		ug/m3	247235	2	08/19/2017 11:24	MD
Bromodichloromethane	BRL	6.7		ug/m3	247235	2	08/19/2017 11:24	MD
Bromoform	BRL	10		ug/m3	247235	2	08/19/2017 11:24	MD
Bromomethane	BRL	3.9		ug/m3	247235	2	08/19/2017 11:24	MD
Carbon disulfide	17	3.1		ug/m3	247235	2	08/19/2017 11:24	MD
Carbon tetrachloride	BRL	6.3		ug/m3	247235	2	08/19/2017 11:24	MD
Chlorobenzene	BRL	4.6		ug/m3	247235	2	08/19/2017 11:24	MD
Chloroethane	BRL	2.6		ug/m3	247235	2	08/19/2017 11:24	MD
Chloroform	28	4.9		ug/m3	247235	2	08/19/2017 11:24	MD
Chloromethane	8.1	2.1		ug/m3	247235	2	08/19/2017 11:24	MD
cis-1,2-Dichloroethene	950	400		ug/m3	247235	2	08/19/2017 04:51	MD
cis-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 11:24	MD
Cyclohexane	7.2	3.4		ug/m3	247235	2	08/19/2017 11:24	MD
Dibromochloromethane	BRL	8.5		ug/m3	247235	2	08/19/2017 11:24	MD
Dichlorodifluoromethane	BRL	4.9		ug/m3	247235	2	08/19/2017 11:24	MD
Ethyl acetate	140	3.6		ug/m3	247235	2	08/19/2017 11:24	MD
Ethylbenzene	9.3	4.3		ug/m3	247235	2	08/19/2017 11:24	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **TO-15 Report** **Date:** 22-Aug-17

Client:	CDM Smith Inc.	**Client Sample ID:**	SVE-1
Project Name:	Cessna	**Collection Date:**	8/15/2017 11:04:00 AM
Lab ID:	1708F75-005	**Matrix:**	Air

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**				
Freon-113	BRL	7.7		ug/m3	247235	2	08/19/2017 11:24	MD
Freon-114	BRL	7.0		ug/m3	247235	2	08/19/2017 11:24	MD
Hexachlorobutadiene	BRL	11		ug/m3	247235	2	08/19/2017 11:24	MD
Isopropyl alcohol	130	18		ug/m3	247235	2	08/19/2017 11:24	MD
m,p-Xylene	24	8.7		ug/m3	247235	2	08/19/2017 11:24	MD
Methyl tert-butyl ether	BRL	3.6		ug/m3	247235	2	08/19/2017 11:24	MD
Methylene chloride	BRL	3.5		ug/m3	247235	2	08/19/2017 11:24	MD
n-Heptane	5.1	4.1		ug/m3	247235	2	08/19/2017 11:24	MD
n-Hexane	BRL	3.5		ug/m3	247235	2	08/19/2017 11:24	MD
o-Xylene	9.6	4.3		ug/m3	247235	2	08/19/2017 11:24	MD
Propene	6.3	1.7		ug/m3	247235	2	08/19/2017 11:24	MD
Styrene	BRL	4.3		ug/m3	247235	2	08/19/2017 11:24	MD
Tetrachloroethene	BRL	6.8		ug/m3	247235	2	08/19/2017 11:24	MD
Tetrahydrofuran	10	2.9		ug/m3	247235	2	08/19/2017 11:24	MD
Toluene	62	3.8		ug/m3	247235	2	08/19/2017 11:24	MD
trans-1,2-Dichloroethene	56	4.0		ug/m3	247235	2	08/19/2017 11:24	MD
trans-1,3-Dichloropropene	BRL	4.5		ug/m3	247235	2	08/19/2017 11:24	MD
Trichloroethene	26000	540		ug/m3	247235	2	08/19/2017 04:51	MD
Trichlorofluoromethane	BRL	5.6		ug/m3	247235	2	08/19/2017 11:24	MD
Vinyl acetate	BRL	3.5		ug/m3	247235	2	08/19/2017 11:24	MD
Vinyl bromide	BRL	4.4		ug/m3	247235	2	08/19/2017 11:24	MD
Vinyl chloride	4.0	2.6		ug/m3	247235	2	08/19/2017 11:24	MD
Xylenes, Total	33	13		ug/m3	247235	2	08/19/2017 11:24	MD
Surr: 4-Bromofluorobenzene	91.2	70-130		%REC	247235	2	08/19/2017 11:24	MD
Surr: 4-Bromofluorobenzene	95.5	70-130		%REC	247235	2	08/19/2017 04:51	MD

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc TO-15 Report

Date: 22-Aug-17

SUMMARY OF ANALYTES DETECTED

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	Dilution Factor
Client Sample ID: SYSTEM				**Lab ID:** 1708F75-001			
Collection Date: 8/15/2017 9:39:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**			
1,1-Dichloroethane	17		0.34	4.0	ug/m3	247235	2
1,1-Dichloroethene	19		0.24	4.0	ug/m3	247235	2
Acetone	34		0.34	12	ug/m3	247235	2
Chloroform	7.6		0.29	4.9	ug/m3	247235	2
cis-1,2-Dichloroethene	77		0.24	4.0	ug/m3	247235	2
Propene	7.7		0.10	1.7	ug/m3	247235	2
Tetrachloroethene	7.8		0.52	6.8	ug/m3	247235	2
trans-1,2-Dichloroethene	4.8		0.24	4.0	ug/m3	247235	2
Trichloroethene	3500		58	540	ug/m3	247235	2
Client Sample ID: SVE-4				**Lab ID:** 1708F75-002			
Collection Date: 8/15/2017 10:48:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**			
1,1-Dichloroethane	4.5		0.34	4.0	ug/m3	247235	2
1,1-Dichloroethene	14		0.24	4.0	ug/m3	247235	2
1,2,4-Trimethylbenzene	14		0.41	4.9	ug/m3	247235	2
2-Butanone	7.5		0.35	2.9	ug/m3	247235	2
Acetone	41		0.34	12	ug/m3	247235	2
Benzene	5.4		0.19	3.2	ug/m3	247235	2
Carbon disulfide	13		0.19	3.1	ug/m3	247235	2
Chloromethane	5.9		0.16	2.1	ug/m3	247235	2
cis-1,2-Dichloroethene	5.0		0.24	4.0	ug/m3	247235	2
Cyclohexane	5.3		0.20	3.4	ug/m3	247235	2
Ethyl acetate	100		0.28	3.6	ug/m3	247235	2
Ethylbenzene	8.5		0.36	4.3	ug/m3	247235	2
Isopropyl alcohol	96		3.3	18	ug/m3	247235	2
m,p-Xylene	23		1.5	8.7	ug/m3	247235	2
n-Heptane	4.1		0.32	4.1	ug/m3	247235	2
o-Xylene	8.9		0.26	4.3	ug/m3	247235	2
Propene	7.7		0.10	1.7	ug/m3	247235	2
Tetrahydrofuran	3.8		0.23	2.9	ug/m3	247235	2
Toluene	54		0.29	3.8	ug/m3	247235	2
Trichloroethene	200		0.58	5.4	ug/m3	247235	2
Xylenes, Total	31		0.54	13	ug/m3	247235	2
Client Sample ID: SVE-3				**Lab ID:** 1708F75-003			
Collection Date: 8/15/2017 10:52:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS	**TO-15**			**(TO-15)**			
1,1-Dichloroethane	11		0.34	4.0	ug/m3	247235	2
1,1-Dichloroethene	12		0.24	4.0	ug/m3	247235	2
1,2,4-Trimethylbenzene	16		0.41	4.9	ug/m3	247235	2
2-Butanone	8.0		0.35	2.9	ug/m3	247235	2
Acetone	50		0.34	12	ug/m3	247235	2
Benzene	5.8		0.19	3.2	ug/m3	247235	2
Carbon disulfide	14		0.19	3.1	ug/m3	247235	2
Chloroform	11		0.29	4.9	ug/m3	247235	2
Chloromethane	2.8		0.16	2.1	ug/m3	247235	2
Cyclohexane	6.4		0.20	3.4	ug/m3	247235	2

Analytical Environmental Services, Inc TO-15 Report

Date: 22-Aug-17

SUMMARY OF ANALYTES DETECTED

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	Dilution Factor
Client Sample ID: SVE-3				**Lab ID:** 1708F75-003			
Collection Date: 8/15/2017 10:52:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**			
Ethyl acetate	110		0.28	3.6	ug/m3	247235	2
Ethylbenzene	9.6		0.36	4.3	ug/m3	247235	2
Isopropyl alcohol	110		3.3	18	ug/m3	247235	2
m,p-Xylene	24		1.5	8.7	ug/m3	247235	2
n-Heptane	4.7		0.32	4.1	ug/m3	247235	2
o-Xylene	10.0		0.26	4.3	ug/m3	247235	2
Propene	7.3		0.10	1.7	ug/m3	247235	2
Tetrahydrofuran	4.9		0.23	2.9	ug/m3	247235	2
Toluene	59		0.29	3.8	ug/m3	247235	2
Trichloroethene	260		0.58	5.4	ug/m3	247235	2
Xylenes, Total	34		0.54	13	ug/m3	247235	2
Client Sample ID: SVE-2				**Lab ID:** 1708F75-004			
Collection Date: 8/15/2017 11:00:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**			
1,1-Dichloroethane	16		0.34	4.0	ug/m3	247235	2
1,1-Dichloroethene	12		0.24	4.0	ug/m3	247235	2
1,2,4-Trimethylbenzene	15		0.41	4.9	ug/m3	247235	2
2-Butanone	11		0.35	2.9	ug/m3	247235	2
Acetone	52		0.34	12	ug/m3	247235	2
Benzene	5.4		0.19	3.2	ug/m3	247235	2
Carbon disulfide	16		0.19	3.1	ug/m3	247235	2
Chloroform	14		0.29	4.9	ug/m3	247235	2
Chloromethane	7.7		0.16	2.1	ug/m3	247235	2
cis-1,2-Dichloroethene	77		0.24	4.0	ug/m3	247235	2
Cyclohexane	6.7		0.20	3.4	ug/m3	247235	2
Ethyl acetate	120		0.28	3.6	ug/m3	247235	2
Ethylbenzene	8.7		0.36	4.3	ug/m3	247235	2
Isopropyl alcohol	110		3.3	18	ug/m3	247235	2
m,p-Xylene	22		1.5	8.7	ug/m3	247235	2
n-Heptane	4.5		0.32	4.1	ug/m3	247235	2
o-Xylene	8.9		0.26	4.3	ug/m3	247235	2
Tetrahydrofuran	14		0.23	2.9	ug/m3	247235	2
Toluene	57		0.29	3.8	ug/m3	247235	2
Trichloroethene	2100		58	540	ug/m3	247235	2
Xylenes, Total	31		0.54	13	ug/m3	247235	2
Client Sample ID: SVE-1				**Lab ID:** 1708F75-005			
Collection Date: 8/15/2017 11:04:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**			
1,1,1-Trichloroethane	10		0.42	5.5	ug/m3	247235	2
1,1,2-Trichloroethane	31		0.46	5.5	ug/m3	247235	2
1,1-Dichloroethane	170		0.34	4.0	ug/m3	247235	2
1,1-Dichloroethene	140		0.24	4.0	ug/m3	247235	2
1,2,4-Trimethylbenzene	15		0.41	4.9	ug/m3	247235	2
2-Butanone	10		0.35	2.9	ug/m3	247235	2
Acetone	57		0.34	12	ug/m3	247235	2
Benzene	6.9		0.19	3.2	ug/m3	247235	2

Analytical Environmental Services, Inc TO-15 Report

Date: 22-Aug-17

SUMMARY OF ANALYTES DETECTED

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	Dilution Factor
Client Sample ID: SVE-1				**Lab ID:** 1708F75-005			
Collection Date: 8/15/2017 11:04:00 AM				**Matrix:** Air			
Toxic Organic Compounds in Air by GCMS TO-15				**(TO-15)**			
Carbon disulfide	17		0.19	3.1	ug/m3	247235	2
Chloroform	28		0.29	4.9	ug/m3	247235	2
Chloromethane	8.1		0.16	2.1	ug/m3	247235	2
cis-1,2-Dichloroethene	950		24	400	ug/m3	247235	2
Cyclohexane	7.2		0.20	3.4	ug/m3	247235	2
Ethyl acetate	140		0.28	3.6	ug/m3	247235	2
Ethylbenzene	9.3		0.36	4.3	ug/m3	247235	2
Isopropyl alcohol	130		3.3	18	ug/m3	247235	2
m,p-Xylene	24		1.5	8.7	ug/m3	247235	2
n-Heptane	5.1		0.32	4.1	ug/m3	247235	2
o-Xylene	9.6		0.26	4.3	ug/m3	247235	2
Propene	6.3		0.10	1.7	ug/m3	247235	2
Tetrahydrofuran	10		0.23	2.9	ug/m3	247235	2
Toluene	62		0.29	3.8	ug/m3	247235	2
trans-1,2-Dichloroethene	56		0.24	4.0	ug/m3	247235	2
Trichloroethene	26000		58	540	ug/m3	247235	2
Vinyl chloride	4.0		0.59	2.6	ug/m3	247235	2
Xylenes, Total	33		0.54	13	ug/m3	247235	2

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample Receipt Checklist for Air Canisters

Client CDM Smith Work Order Number 1708F75

Checklist completed by [signature] 8/14/2017
Signature Date

Carrier name: FedEx____ UPS____ Courier____ Client ✓ US Mail____ Other_____

Shipping container in good condition?	Yes ✓	No___	Not Present___
Custody seals intact on shipping container?	Yes___	No___	Not Present ✓
Chain of custody present?	Yes ✓	No___	
Chain of custody signed when relinquished and received?	Yes ✓	No___	
Chain of custody agrees with sample labels?	Yes___	No___	
Field data sheets present?	Yes___	No ✓	
Sample containers intact?	Yes ✓	No___	

If no, explain: _____

All samples received within holding time?	Yes___	No___	
Was TAT marked on the COC?	Yes ✓	No___	
Proceed with Standard TAT as per project history?	Yes___	No___	Not Applicable ✓
All canisters received per Bottle Order issued?	Yes ✓	No___	

See Case Narrative for resolution of the Non-Conformance.

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: 247235

Sample ID: **MB-247235** Client ID: Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **MBLK** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/18/2017** Seq No: **7695119**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	0.20									
1,1,2,2-Tetrachloroethane	BRL	0.20									
1,1,2-Trichloroethane	BRL	0.20									
1,1-Dichloroethane	BRL	0.20									
1,1-Dichloroethene	BRL	0.20									
1,2,4-Trichlorobenzene	BRL	0.20									
1,2,4-Trimethylbenzene	BRL	0.20									
1,2-Dibromoethane	BRL	0.20									
1,2-Dichlorobenzene	BRL	0.20									
1,2-Dichloroethane	BRL	0.20									
1,2-Dichloropropane	BRL	0.20									
1,3,5-Trimethylbenzene	BRL	0.20									
1,3-Butadiene	BRL	0.20									
1,3-Dichlorobenzene	BRL	0.20									
1,4-Dichlorobenzene	BRL	0.20									
1,4-Dioxane	BRL	0.20									
2,2,4-Trimethylpentane	BRL	0.20									
2-Butanone	BRL	0.20									
2-Hexanone	BRL	0.20									
4-Ethyltoluene	BRL	0.20									
4-Methyl-2-pentanone	BRL	0.20									
Acetone	BRL	1.0									
Allyl chloride	BRL	0.20									
Benzene	BRL	0.20									
Benzyl chloride	BRL	0.20									
Bromodichloromethane	BRL	0.20									
Bromoform	BRL	0.20									

Qualifiers:
> Greater than Result value
BRL Below reporting limit
J Estimated value detected below Reporting Limit
Rpt Lim Reporting Limit
< Less than Result value
E Estimated (value above quantitation range)
N Analyte not NELAC certified
S Spike Recovery outside limits due to matrix
B Analyte detected in the associated method blank
H Holding times for preparation or analysis exceeded
R RPD outside limits due to matrix

Analytical Environmental Services, Inc

Date: 22-Aug-17

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: **247235**

Sample ID: **MB-247235** Client ID: Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **MBLK** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/18/2017** Seq No: **7695119**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Bromomethane	BRL	0.20									
Carbon disulfide	BRL	0.20									
Carbon tetrachloride	BRL	0.20									
Chlorobenzene	BRL	0.20									
Chloroethane	BRL	0.20									
Chloroform	BRL	0.20									
Chloromethane	BRL	0.20									
cis-1,2-Dichloroethene	BRL	0.20									
cis-1,3-Dichloropropene	BRL	0.20									
Cyclohexane	BRL	0.20									
Dibromochloromethane	BRL	0.20									
Dichlorodifluoromethane	BRL	0.20									
Ethyl acetate	BRL	0.20									
Ethylbenzene	BRL	0.20									
Freon-113	BRL	0.20									
Freon-114	BRL	0.20									
Hexachlorobutadiene	BRL	0.20									
Isopropyl alcohol	BRL	1.5									
m,p-Xylene	BRL	0.40									
Methyl tert-butyl ether	BRL	0.20									
Methylene chloride	BRL	0.20									
n-Heptane	BRL	0.20									
n-Hexane	BRL	0.20									
o-Xylene	BRL	0.20									
Propene	BRL	0.20									
Styrene	BRL	0.20									
Tetrachloroethene	BRL	0.20									

Qualifiers:
> Greater than Result value
BRL Below reporting limit
J Estimated value detected below Reporting Limit
Rpt Lim Reporting Limit
< Less than Result value
E Estimated (value above quantitation range)
N Analyte not NELAC certified
S Spike Recovery outside limits due to matrix
B Analyte detected in the associated method blank
H Holding times for preparation or analysis exceeded
R RPD outside limits due to matrix

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: 247235

Sample ID: **MB-247235** Client ID: Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **MBLK** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/18/2017** Seq No: **7695119**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Tetrahydrofuran	BRL	0.20									
Toluene	BRL	0.20									
trans-1,2-Dichloroethene	BRL	0.20									
trans-1,3-Dichloropropene	BRL	0.20									
Trichloroethene	BRL	0.20									
Trichlorofluoromethane	BRL	0.20									
Vinyl acetate	BRL	0.20									
Vinyl bromide	BRL	0.20									
Vinyl chloride	BRL	0.20									
Xylenes, Total	BRL	0.60									
Surr: 4-Bromofluorobenzene	3.720	0	4.000		93.0	70	130				

Sample ID: **LCS-247235** Client ID: Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **LCS** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/18/2017** Seq No: **7696793**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1.620	0.20	2.000		81.0	70	130				
1,1,2,2-Tetrachloroethane	1.680	0.20	2.000		84.0	70	130				
1,1,2-Trichloroethane	1.790	0.20	2.000		89.5	70	130				
1,1-Dichloroethane	1.660	0.20	2.000		83.0	70	130				
1,1-Dichloroethene	1.930	0.20	2.000		96.5	70	130				
1,2,4-Trichlorobenzene	1.420	0.20	2.000		71.0	70	130				
1,2,4-Trimethylbenzene	1.600	0.20	2.000		80.0	70	130				
1,2-Dibromoethane	1.660	0.20	2.000		83.0	70	130				
1,2-Dichlorobenzene	1.530	0.20	2.000		76.5	70	130				
1,2-Dichloroethane	1.910	0.20	2.000		95.5	70	130				
1,2-Dichloropropane	1.840	0.20	2.000		92.0	70	130				
1,3,5-Trimethylbenzene	1.630	0.20	2.000		81.5	70	130				

Qualifiers:
> Greater than Result value
< Less than Result value
B Analyte detected in the associated method blank
BRL Below reporting limit
E Estimated (value above quantitation range)
H Holding times for preparation or analysis exceeded
J Estimated value detected below Reporting Limit
N Analyte not NELAC certified
R RPD outside limits due to matrix
Rpt Lim Reporting Limit
S Spike Recovery outside limits due to matrix

Analytical Environmental Services, Inc

Date: 22-Aug-17

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: 247235

Sample ID: **LCS-247235** Client ID: Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **LCS** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/18/2017** Seq No: **7696793**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,3-Butadiene	2.180	0.20	2.000		109	70	130				
1,3-Dichlorobenzene	1.560	0.20	2.000		78.0	70	130				
1,4-Dichlorobenzene	1.540	0.20	2.000		77.0	70	130				
1,4-Dioxane	1.670	0.20	2.000		83.5	70	130				
2,2,4-Trimethylpentane	1.810	0.20	2.000		90.5	70	130				
2-Butanone	1.560	0.20	2.000		78.0	70	130				
2-Hexanone	1.760	0.20	2.000		88.0	70	130				
4-Ethyltoluene	1.640	0.20	2.000		82.0	70	130				
4-Methyl-2-pentanone	1.840	0.20	2.000		92.0	70	130				
Acetone	2.100	1.0	2.000		105	70	130				
Allyl chloride	2.300	0.20	2.000		115	70	130				
Benzene	1.750	0.20	2.000		87.5	70	130				
Benzyl chloride	1.480	0.20	2.000		74.0	70	130				
Bromodichloromethane	1.870	0.20	2.000		93.5	70	130				
Bromoform	1.550	0.20	2.000		77.5	70	130				
Bromomethane	1.960	0.20	2.000		98.0	70	130				
Carbon disulfide	2.090	0.20	2.000		104	70	130				
Carbon tetrachloride	1.830	0.20	2.000		91.5	70	130				
Chlorobenzene	1.600	0.20	2.000		80.0	70	130				
Chloroethane	2.180	0.20	2.000		109	70	130				
Chloroform	1.640	0.20	2.000		82.0	70	130				
Chloromethane	2.210	0.20	2.000		110	70	130				
cis-1,2-Dichloroethene	1.530	0.20	2.000		76.5	70	130				
cis-1,3-Dichloropropene	1.800	0.20	2.000		90.0	70	130				
Cyclohexane	1.580	0.20	2.000		79.0	70	130				
Dibromochloromethane	1.640	0.20	2.000		82.0	70	130				
Dichlorodifluoromethane	2.160	0.20	2.000		108	70	130				

Qualifiers:
> Greater than Result value
< Less than Result value
B Analyte detected in the associated method blank
BRL Below reporting limit
E Estimated (value above quantitation range)
H Holding times for preparation or analysis exceeded
J Estimated value detected below Reporting Limit
N Analyte not NELAC certified
R RPD outside limits due to matrix
Rpt Lim Reporting Limit
S Spike Recovery outside limits due to matrix

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: **247235**

Sample ID: **LCS-247235** Client ID: Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **LCS** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/18/2017** Seq No: **7696793**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethyl acetate	1.620	0.20	2.000		81.0	70	130				
Ethylbenzene	1.640	0.20	2.000		82.0	70	130				
Freon-113	1.990	0.20	2.000		99.5	70	130				
Freon-114	2.160	0.20	2.000		108	70	130				
Hexachlorobutadiene	1.430	0.20	2.000		71.5	70	130				
Isopropyl alcohol	2.360	1.5	2.000		118	70	130				
m,p-Xylene	3.290	0.40	4.000		82.2	70	130				
Methyl tert-butyl ether	1.560	0.20	2.000		78.0	70	130				
Methylene chloride	1.980	0.20	2.000		99.0	70	130				
n-Heptane	1.800	0.20	2.000		90.0	70	130				
n-Hexane	1.610	0.20	2.000		80.5	70	130				
o-Xylene	1.670	0.20	2.000		83.5	70	130				
Propene	1.590	0.20	2.000		79.5	70	130				
Styrene	1.560	0.20	2.000		78.0	70	130				
Tetrachloroethene	1.550	0.20	2.000		77.5	70	130				
Tetrahydrofuran	1.610	0.20	2.000		80.5	70	130				
Toluene	1.710	0.20	2.000		85.5	70	130				
trans-1,2-Dichloroethene	1.550	0.20	2.000		77.5	70	130				
trans-1,3-Dichloropropene	1.790	0.20	2.000		89.5	70	130				
Trichloroethene	1.690	0.20	2.000		84.5	70	130				
Trichlorofluoromethane	2.130	0.20	2.000		106	70	130				
Vinyl acetate	1.630	0.20	2.000		81.5	70	130				
Vinyl bromide	1.970	0.20	2.000		98.5	70	130				
Vinyl chloride	2.220	0.20	2.000		111	70	130				
Xylenes, Total	4.960	0.60	6.000		82.7	70	130				
Surr: 4-Bromofluorobenzene	3.770	0	4.000		94.2	70	130				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: **247235**

Sample ID: **1708F75-005ADUP** Client ID: **SVE-1** Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **DUP** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/19/2017** Seq No: **7696814**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2.050	1.0						1.900	7.59	25	
1,1,2,2-Tetrachloroethane	BRL	1.0						0	0	25	
1,1,2-Trichloroethane	5.750	1.0						5.750	0	25	
1,1-Dichloroethane	43.65	1.0						42.30	3.14	25	
1,1-Dichloroethene	35.70	1.0						34.05	4.73	25	
1,2,4-Trichlorobenzene	BRL	1.0						0	0	25	
1,2,4-Trimethylbenzene	2.900	1.0						2.950	1.71	25	
1,2-Dibromoethane	BRL	1.0						0	0	25	
1,2-Dichlorobenzene	BRL	1.0						0	0	25	
1,2-Dichloroethane	BRL	1.0						0	0	25	
1,2-Dichloropropane	BRL	1.0						0	0	25	
1,3,5-Trimethylbenzene	BRL	1.0						0.3500	0	25	
1,3-Butadiene	BRL	1.0						0	0	25	
1,3-Dichlorobenzene	BRL	1.0						0	0	25	
1,4-Dichlorobenzene	BRL	1.0						0	0	25	
1,4-Dioxane	BRL	1.0						0	0	25	
2,2,4-Trimethylpentane	BRL	1.0						0	0	25	
2-Butanone	3.500	1.0						3.400	2.90	25	
2-Hexanone	BRL	1.0						0	0	25	
4-Ethyltoluene	BRL	1.0						0	0	25	
4-Methyl-2-pentanone	BRL	1.0						0.7500	0	25	
Acetone	24.65	5.0						23.95	2.88	25	
Allyl chloride	BRL	1.0						0	0	25	
Benzene	2.200	1.0						2.150	2.30	25	
Benzyl chloride	BRL	1.0						0	0	25	
Bromodichloromethane	BRL	1.0						0	0	25	
Bromoform	BRL	1.0						0	0	25	

Qualifiers:
> Greater than Result value
BRL Below reporting limit
J Estimated value detected below Reporting Limit
Rpt Lim Reporting Limit
< Less than Result value
E Estimated (value above quantitation range)
N Analyte not NELAC certified
S Spike Recovery outside limits due to matrix
B Analyte detected in the associated method blank
H Holding times for preparation or analysis exceeded
R RPD outside limits due to matrix

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: **247235**

Sample ID: **1708F75-005ADUP** Client ID: **SVE-1** Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **DUP** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/19/2017** Seq No: **7696814**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Bromomethane	BRL	1.0						0	0	25	
Carbon disulfide	5.800	1.0						5.600	3.51	25	
Carbon tetrachloride	BRL	1.0						0	0	25	
Chlorobenzene	BRL	1.0						0	0	25	
Chloroethane	BRL	1.0						0	0	25	
Chloroform	5.800	1.0						5.750	0.866	25	
Chloromethane	3.950	1.0						3.900	1.27	25	
cis-1,2-Dichloroethene	271.5	1.0						262.0	3.54	25	E
cis-1,3-Dichloropropene	BRL	1.0						0	0	25	
Cyclohexane	2.150	1.0						2.100	2.35	25	
Dibromochloromethane	BRL	1.0						0	0	25	
Dichlorodifluoromethane	BRL	1.0						0	0	25	
Ethyl acetate	39.55	1.0						38.00	4.00	25	
Ethylbenzene	2.200	1.0						2.150	2.30	25	
Freon-113	BRL	1.0						0	0	25	
Freon-114	BRL	1.0						0	0	25	
Hexachlorobutadiene	BRL	1.0						0	0	25	
Isopropyl alcohol	53.90	7.5						53.15	1.40	25	
m,p-Xylene	5.600	2.0						5.450	2.71	25	
Methyl tert-butyl ether	BRL	1.0						0	0	25	
Methylene chloride	BRL	1.0						0	0	25	
n-Heptane	1.200	1.0						1.250	4.08	25	
n-Hexane	BRL	1.0						0	0	25	
o-Xylene	2.250	1.0						2.200	2.25	25	
Propene	3.800	1.0						3.650	4.03	25	
Styrene	BRL	1.0						0.6500	0	25	
Tetrachloroethene	BRL	1.0						0.9500	0	25	

Qualifiers:
> Greater than Result value
< Less than Result value
B Analyte detected in the associated method blank
BRL Below reporting limit
E Estimated (value above quantitation range)
H Holding times for preparation or analysis exceeded
J Estimated value detected below Reporting Limit
N Analyte not NELAC certified
R RPD outside limits due to matrix
Rpt Lim Reporting Limit
S Spike Recovery outside limits due to matrix

Client: CDM Smith Inc.
Project Name: Cessna
Workorder: 1708F75

ANALYTICAL QC SUMMARY REPORT

BatchID: **247235**

Sample ID: **1708F75-005ADUP** Client ID: **SVE-1** Units: **ppbv** Prep Date: **08/18/2017** Run No: **350174**
SampleType: **DUP** TestCode: **Toxic Organic Compounds in Air by GCMS TO-15** BatchID: **247235** Analysis Date: **08/19/2017** Seq No: **7696814**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Tetrahydrofuran	3.700	1.0						3.500	5.56	25	
Toluene	17.00	1.0						16.45	3.29	25	
trans-1,2-Dichloroethene	14.65	1.0						14.15	3.47	25	
trans-1,3-Dichloropropene	BRL	1.0						0	0	25	
Trichloroethene	5824	1.0						5682	2.48	25	E
Trichlorofluoromethane	BRL	1.0						0.3500	0	25	
Vinyl acetate	BRL	1.0						0	0	25	
Vinyl bromide	BRL	1.0						0	0	25	
Vinyl chloride	1.700	1.0						1.550	9.23	25	
Xylenes, Total	7.850	3.0						7.650	2.58	25	
Surr: 4-Bromofluorobenzene	18.20	0	20.00		91.0	70	130	18.25	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Attachment B-2

VISL Calculator Output

CDM Smith

EPA-OLEM VAPOR INTRUSION ASSESSMENT
Vapor Intrusion Screening Level (VISL) Calculator Version 3.5.1 (May 2016 RSLs)

The primary objective of risk-based screening is to identify sites or buildings unlikely to pose a health concern through the vapor intrusion pathway. Generally, at properties where subsurface concentrations of vapor-forming chemicals (e.g., groundwater or "near source" soil gas concentrations) fall below screening levels (i.e., VISLs), no further action or study is warranted, so long as the exposure assumptions match those taken into account by the calculations and the site fulfills the conditions and assumptions of the generic conceptual model underlying the screening levels. In a similar fashion, the results of risk-based screening can help the data review team identify areas, buildings, and/or chemicals that can be eliminated from further assessment. The generic conceptual model underlying these screening levels is described in OSWER Publication 9200.2-154 (OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air) (EPA 2015; Section 6.5)

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Commercial	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-05	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	0.1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (°C)	Tgw	19.4	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

CAS		Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? Cvp > Cia,target?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? Chc > Cia,target?	Target Indoor Air Conc. @ TCR = 10E-06 or THQ = 0.1 MIN(Cia,c;Cia,nc)	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 10E-06 or THQ = 0.1 Csg	Target Ground Water Conc. @ TCR = 10E-06 or THQ = 0.1 Cgw	Is Target Ground Water Conc. < MCL? Cgw<MCL?	Pure Phase Vapor Conc. @ 25°C Cvp	Maximum Groundwater Vapor Conc. Chc	Temperature for Max. Groundwater Vapor Conc. Tgw or 25	Lower Explosive Limit** LEL	LEL Source	Inhalation Unit Risk IUR	IUR Source*	Reference Concentration RfC	RFC Source*	Mutagenic Indicator i	Target Indoor Air Conc. for Carcinogens @ TCR = 10E-06 Cia,c	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.1 Cia,nc
67-64-1	Acetone	Yes	Yes	Yes	Yes	1.4E+04	NC	4.5E+05	1.2E+07	--	7.23E+08	1.13E+09	19.4	2.6	E			3.10E+01	A			1.4E+04
71-43-2	Benzene	Yes	Yes	Yes	Yes	1.3E+01	NC	4.4E+02	7.5E+01	No (5)	3.98E+08	3.13E+08	19.4	1.2	N	7.80E-06	I	3.00E-02	I		1.6E+01	1.3E+01
75-15-0	Carbon Disulfide	Yes	Yes	Yes	Yes	3.1E+02	NC	1.0E+04	6.4E+02	--	1.47E+09	1.03E+09	19.4	1.3	N			7.00E-01	I			3.1E+02
67-66-3	Chloroform	Yes	Yes	Yes	Yes	5.3E+00	C	1.8E+02	4.5E+01	Yes (8.0E+01(F))	1.27E+09	9.37E+08	19.4			2.30E-05	I	9.80E-02	A		5.3E+00	4.3E+01
75-34-3	Dichloroethane, 1,1-	Yes	Yes	Yes	Yes	7.7E+01	C	2.6E+03	4.2E+02	--	1.21E+09	9.13E+08	19.4	5.4	N	1.60E-06	CA				7.7E+01	
75-35-4	Dichloroethylene, 1,1-	Yes	Yes	Yes	Yes	8.8E+01	NC	2.9E+03	1.0E+02	No (7)	3.13E+09	2.10E+09	19.4	6.5	N			2.00E-01	I			8.8E+01
156-59-2	Dichloroethylene, 1,2-cis-	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info										M							
156-60-5	Dichloroethylene, 1,2-trans-	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info						1.73E+09	1.38E+09	19.4	9.7	M							
141-78-6	Ethyl Acetate	Yes	Yes	Yes	Yes	3.1E+01	NC	1.0E+03	7.4E+03	--	4.42E+08	3.33E+08	19.4	2	N			7.00E-02	P			3.1E+01
100-41-4	Ethylbenzene	Yes	Yes	Yes	Yes	4.9E+01	C	1.6E+03	2.1E+02	Yes (700)	5.48E+07	3.93E+07	19.4	0.8	N	2.50E-06	CA	1.00E+00	I		4.9E+01	4.4E+02
67-63-0	Isopropanol	Yes	Yes	Yes	Yes	8.8E+01	NC	2.9E+03	4.0E+05	--	1.47E+08	2.21E+08	19.4	2	N			2.00E-01	P			8.8E+01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	Yes	Yes	2.2E+03	NC	7.3E+04	1.2E+06	--	3.52E+08	3.97E+08	19.4	1.4	N			5.00E+00	I			2.2E+03
127-18-4	Tetrachloroethylene	Yes	Yes	Yes	Yes	1.8E+01	NC	5.8E+02	3.3E+01	No (5)	1.65E+08	1.10E+08	19.4			2.60E-07	I	4.00E-02	I		4.7E+02	1.8E+01
109-99-9	Tetrahydrofuran	Yes	Yes	Yes	Yes	8.8E+02	NC	2.9E+04	3.9E+05	--	6.29E+08	2.25E+09	19.4	2	N			2.00E+00	I			8.8E+02
108-88-3	Toluene	Yes	Yes	Yes	Yes	2.2E+03	NC	7.3E+04	1.1E+04	No (1000)	1.41E+08	1.07E+08	19.4	1.1	N			5.00E+00	I			2.2E+03
76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	Yes	Yes	Yes	Yes	1.3E+04	NC	4.4E+05	7.6E+02	--	3.65E+09	2.93E+09	19.4					3.00E+01	H			1.3E+04
71-55-6	Trichloroethane, 1,1,1-	Yes	Yes	Yes	Yes	2.2E+03	NC	7.3E+04	4.0E+03	No (200)	8.90E+08	7.05E+08	19.4	7.5	N			5.00E+00	I			2.2E+03
79-00-5	Trichloroethane, 1,1,2-	Yes	Yes	Yes	Yes	8.8E-02	NC	2.9E+00	3.5E+00	Yes (5)	1.65E+08	1.14E+08	19.4	6	N	1.60E-05	I	2.00E-04	X		7.7E+00	8.8E-02
79-01-6	Trichloroethylene	Yes	Yes	Yes	Yes	8.8E-01	NC	2.9E+01	2.9E+00	Yes (5)	4.88E+08	3.92E+08	19.4	8	N	see note	I	2.00E-03	I	TCE	3.0E+01	8.8E-01
75-69-4	Trichlorofluoromethane	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info																	
95-63-6	Trimethylbenzene, 1,2,4-	Yes	Yes	Yes	Yes	3.1E+00	NC	1.0E+02	1.8E+01	--	1.36E+07	9.87E+06	19.4	0.9	N			7.00E-03	P			3.1E+00
75-01-4	Vinyl Chloride	Yes	Yes	Yes	Yes	2.8E+01	C	9.3E+02	2.9E+01	No (2)	1.00E+10	8.54E+09	19.4	3.6	N	4.40E-06	I	1.00E-01	I	VC	2.8E+01	4.4E+01
108-38-3	Xylene, m-	Yes	Yes	Yes	Yes	4.4E+01	NC	1.5E+03	2.1E+02	--	4.74E+07	3.40E+07	19.4	1.1	N			1.00E-01	S			4.4E+01
95-47-6	Xylene, o-	Yes	Yes	Yes	Yes	4.4E+01	NC	1.5E+03	2.9E+02	--	3.78E+07	2.71E+07	19.4	0.9	N			1.00E-01	S			4.4E+01
106-42-3	Xylene, P-	Yes	Yes	Yes	Yes	4.4E+01	NC	1.5E+03	2.2E+02	--	5.05E+07	3.29E+07	19.4	1	N			1.00E-01	S			4.4E+01
1330-20-7	Xylenes	Yes	Yes	Yes	Yes	4.4E+01	NC	1.5E+03	2.2E+02	Yes (10000)	4.56E+07	2.07E+07	19.4					1.00E-01	I			4.4E+01

Notes:

(1) **Inhalation Pathway Exposure Parameters (RME):**

Exposure Scenario	Units	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell G10) Symbol	Selected Value
Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	25
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	25
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	250
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	8

(2) **Generic Attenuation Factors:**

Source Medium of Vapors		Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell G10) Symbol	Selected Value
Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.03	AFss_C	0.03	AFss	0.03

(3) **Formulas**

Cia, target = MIN(Cia,c; Cia,nc)
Cia,c (ug/m3) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)
Cia,nc (ug/m3) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RfC x (1000 ug/mg) / (ED x EF x ET)

(4) **Special Case Chemicals**

Trichloroethylene	Residential Symbol	Residential Value	Commercial Symbol	Commercial Value	Selected (based on scenario in cell G10) Symbol	Selected Value
	mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	0.00E+00
	IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	4.10E-06

Mutagenic Chemicals

The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.

Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
0 - 2 years	2	10
2 - 6 years	4	3
6 - 16 years	10	3
16 - 26 years	10	1

Mutagenic-mode-of-action (MMOA) adjustment factor 25 This factor is used in the equations for mutagenic chemicals.

See the Navigation Guide equation for Cia,c for vinyl chloride.

Notation:
NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
C = Carcinogenic
NC = Non-carcinogenic
I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: http://www.epa.gov/iris/subst/index.html
P = PPRTV. EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: http://hhpprtv.ornl.gov/pprtv.shtml
A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: http://www.atsdr.cdc.gov/mrls/index.html
CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at: http://www.oehha.ca.gov/risk/ChemicalDB/index.asp
H = HEAST. EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: http://epa-heast.ornl.gov/heast.shtml
S = See RSL User Guide, Section 5
X = PPRTV Appendix
E = The Engineering ToolBox. Available online at http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html
N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at: http://www.cdc.gov/niosh/npg/default.html http://www.cdc.gov/niosh/npg/default.html
M = Chemical-specific MSDS
Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
Yellow highlighting indicates site-specific parameters that may be edited by the user.
Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.
**Lower explosive limit is the minimum concentration of the compound in air (% by volume) that is needed for the gas to ignite and explode.

Attachment C
Professional Certification

Professional Certification

I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer / professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors / Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances.

Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division.

The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

J. Thomas Duffey, P.G.
Vice President
CDM Smith

Date: September 8, 2017

Summary of Oversight Provided by Georgia Licensed Engineers and Geologists

Engineer / Geologist	License Type and No.	Week Ending Date	Number of Hours	Description of Hours
Tom Duffey	Geologist PG000899	3/4/17	10	Senior hydrogeologist and technical lead for Voluntary Remediation Plan development
		3/11/17	8	
		3/18/17	4	
		3/25/17	2	
		4/15/17	7.5	
		4/22/17	9.5	
		4/29/17	4	
		5/6/17	10.5	
		5/13/17	1.5	
		5/27/17	0.5	
		6/10/17	0.5	
		8/26/17	1	
		9/2/17	4.5	
John Reichling	Engineer PE017367	3/11/17	1	CDM Smith Officer in Charge and person overall responsible for project execution and quality
		5/6/17	2	
		5/13/17	1	
		5/27/17	1	
		6/3/17	1	
		6/10/17	1	
		6/24/17	1	
		7/1/17	1	
		7/22/17	1	
Andrew Romanek	Engineer PE029287	3/4/17	0.5	Project manager and CDM Smith primary point of contact. Involved in all aspects of the project, including SVE design, SVE installation, and Voluntary Remediation Plan development.
		3/11/17	2	
		3/18/17	3	
		4/1/17	2	
		4/22/17	3.5	
		4/29/17	0.5	
		5/6/17	1.5	
		5/13/17	1.5	
		5/20/17	1	
		5/27/17	0.5	
		6/10/17	0.5	
Jeff Weeber	Engineer PE032278	3/25/17	1	Design engineer, including SVE system and associated troubleshooting