



LABORATORY REPORT

May 30, 2024

██████████
Stantec
27280 Haggerty Road, Suite C-11
Farmington, MI 48331

RE: Bristol VA / 182603807

Dear ██████:

Enclosed are the results of the samples submitted to our laboratory on May 16, 2024. For your reference, these analyses have been assigned our service request number P2401949.

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

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

ALS | Environmental

For Sarah Mock
Project Manager



Client: Stantec
Project: Bristol VA / 182603807

Service Request No: P2401949

CASE NARRATIVE

The samples were received intact under chain of custody on May 16, 2024 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Sulfur Analysis

The samples were analyzed for twenty sulfur compounds per ASTM D 5504-20 using a gas chromatograph equipped with a sulfur chemiluminescence detector (SCD). All compounds with the exception of hydrogen sulfide and carbonyl sulfide are quantitated against the initial calibration curve for methyl mercaptan. This method is included on the laboratory's NELAP scope of accreditation, however it is not part of the DoD-ELAP accreditation.

Volatile Organic Compound Analysis

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

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.4 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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

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



CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	https://dec.alaska.gov/spar/csp/lab-approval/list-of-approved-labs	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	https://internet.deq.louisiana.gov/portal/divisions/lalap/accredited-laboratories	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtm	2022028
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	006-999-456
New Jersey DEP (NELAP)	https://dep.nj.gov/dsr/oqa/certified-laboratories/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oklahoma DEQ (NELAP)	labaccreditation.deq.ok.gov/labaccreditation/	2207
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-23-14
Utah DOH (NELAP)	https://uphl.utah.gov/certifications/environmental-laboratory-certification/	CA016272023-15
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

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

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

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Stantec
Project ID: Bristol VA / 182603807

Service Request: P2401949

Date Received: 5/16/2024
Time Received: 09:39

								ASTM D 5504-20 - Sulfur Can	TO-15 - VOC Cans 62
Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)		
MP-1	P2401949-001	Air	5/15/2024	07:48	AS00757	-2.20	4.52	X	X
MP-2	P2401949-002	Air	5/15/2024	08:34	AS01031	-1.95	4.70	X	X
MP-3	P2401949-003	Air	5/15/2024	08:18	AS01611	-0.76	4.60	X	X
MP-4	P2401949-004	Air	5/15/2024	08:40	AS01652	-2.37	4.68	X	X

ALS Environmental
Sample Acceptance Check Form

Client: Stantec Work order: P2401949
Project: Bristol VA / 182603807
Sample(s) received on: 5/16/2024 Date opened: 5/16/2024 by: ANTHONY.VASQUEZ

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

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

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2401949-001.01	6.0 L Silonite Can					
P2401949-002.01	6.0 L Silonite Can					
P2401949-003.01	6.0 L Silonite Can					
P2401949-004.01	6.0 L Silonite Can					
P2401949-005.01	6.0 L Ambient Can					Return Unused
P2401949-006.01	6.0 L Ambient Can					Return Unused

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

Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-1
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-001

Test Code: ASTM D 5504-20
 Instrument ID: Agilent 7890A/GC22/SCD
 Analyst: Gilbert Gutierrez
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS00757

Date Collected: 5/15/24
 Time Collected: 07:48
 Date Received: 5/16/24
 Date Analyzed: 5/17/24
 Time Analyzed: 12:11
 Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -2.20 Final Pressure (psig): 4.52

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	11	ND	7.7	
463-58-1	Carbonyl Sulfide	ND	19	ND	7.7	
74-93-1	Methyl Mercaptan	ND	15	ND	7.7	
75-08-1	Ethyl Mercaptan	ND	20	ND	7.7	
75-18-3	Dimethyl Sulfide	ND	20	ND	7.7	
75-15-0	Carbon Disulfide	ND	12	ND	3.9	
75-33-2	Isopropyl Mercaptan	ND	24	ND	7.7	
75-66-1	tert-Butyl Mercaptan	ND	28	ND	7.7	
107-03-9	n-Propyl Mercaptan	ND	24	ND	7.7	
624-89-5	Ethyl Methyl Sulfide	ND	24	ND	7.7	
110-02-1	Thiophene	ND	26	ND	7.7	
513-44-0	Isobutyl Mercaptan	ND	28	ND	7.7	
352-93-2	Diethyl Sulfide	ND	28	ND	7.7	
109-79-5	n-Butyl Mercaptan	ND	28	ND	7.7	
624-92-0	Dimethyl Disulfide	ND	15	ND	3.9	
616-44-4	3-Methylthiophene	ND	31	ND	7.7	
110-01-0	Tetrahydrothiophene	ND	28	ND	7.7	
638-02-8	2,5-Dimethylthiophene	ND	35	ND	7.7	
872-55-9	2-Ethylthiophene	ND	35	ND	7.7	
110-81-6	Diethyl Disulfide	ND	19	ND	3.9	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-2
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-002

Test Code: ASTM D 5504-20
Instrument ID: Agilent 7890A/GC22/SCD
Analyst: Gilbert Gutierrez
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01031

Date Collected: 5/15/24
Time Collected: 08:34
Date Received: 5/16/24
Date Analyzed: 5/17/24
Time Analyzed: 12:29
Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -1.95 **Final Pressure (psig):** 4.70

Container Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	11	ND	7.6	
463-58-1	Carbonyl Sulfide	ND	19	ND	7.6	
74-93-1	Methyl Mercaptan	ND	15	ND	7.6	
75-08-1	Ethyl Mercaptan	ND	19	ND	7.6	
75-18-3	Dimethyl Sulfide	ND	19	ND	7.6	
75-15-0	Carbon Disulfide	ND	12	ND	3.8	
75-33-2	Isopropyl Mercaptan	ND	24	ND	7.6	
75-66-1	tert-Butyl Mercaptan	ND	28	ND	7.6	
107-03-9	n-Propyl Mercaptan	ND	24	ND	7.6	
624-89-5	Ethyl Methyl Sulfide	ND	24	ND	7.6	
110-02-1	Thiophene	ND	26	ND	7.6	
513-44-0	Isobutyl Mercaptan	ND	28	ND	7.6	
352-93-2	Diethyl Sulfide	ND	28	ND	7.6	
109-79-5	n-Butyl Mercaptan	ND	28	ND	7.6	
624-92-0	Dimethyl Disulfide	ND	15	ND	3.8	
616-44-4	3-Methylthiophene	ND	31	ND	7.6	
110-01-0	Tetrahydrothiophene	ND	27	ND	7.6	
638-02-8	2,5-Dimethylthiophene	ND	35	ND	7.6	
872-55-9	2-Ethylthiophene	ND	35	ND	7.6	
110-81-6	Diethyl Disulfide	ND	19	ND	3.8	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-3
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-003

Test Code: ASTM D 5504-20
Instrument ID: Agilent 7890A/GC22/SCD
Analyst: Gilbert Gutierrez
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01611

Date Collected: 5/15/24
Time Collected: 08:18
Date Received: 5/16/24
Date Analyzed: 5/17/24
Time Analyzed: 12:49
Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -0.76 **Final Pressure (psig):** 4.60

Container Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	9.6	ND	6.9	
463-58-1	Carbonyl Sulfide	ND	17	ND	6.9	
74-93-1	Methyl Mercaptan	ND	14	ND	6.9	
75-08-1	Ethyl Mercaptan	ND	18	ND	6.9	
75-18-3	Dimethyl Sulfide	ND	18	ND	6.9	
75-15-0	Carbon Disulfide	ND	11	ND	3.5	
75-33-2	Isopropyl Mercaptan	ND	21	ND	6.9	
75-66-1	tert-Butyl Mercaptan	ND	25	ND	6.9	
107-03-9	n-Propyl Mercaptan	ND	21	ND	6.9	
624-89-5	Ethyl Methyl Sulfide	ND	21	ND	6.9	
110-02-1	Thiophene	ND	24	ND	6.9	
513-44-0	Isobutyl Mercaptan	ND	25	ND	6.9	
352-93-2	Diethyl Sulfide	ND	25	ND	6.9	
109-79-5	n-Butyl Mercaptan	ND	25	ND	6.9	
624-92-0	Dimethyl Disulfide	ND	13	ND	3.5	
616-44-4	3-Methylthiophene	ND	28	ND	6.9	
110-01-0	Tetrahydrothiophene	ND	25	ND	6.9	
638-02-8	2,5-Dimethylthiophene	ND	32	ND	6.9	
872-55-9	2-Ethylthiophene	ND	32	ND	6.9	
110-81-6	Diethyl Disulfide	ND	17	ND	3.5	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-4
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-004

Test Code: ASTM D 5504-20
 Instrument ID: Agilent 7890A/GC22/SCD
 Analyst: Gilbert Gutierrez
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS01652

Date Collected: 5/15/24
 Time Collected: 08:40
 Date Received: 5/16/24
 Date Analyzed: 5/17/24
 Time Analyzed: 13:07
 Volume(s) Analyzed: 1.0 ml(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 4.68

Container Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	11	ND	7.9	
463-58-1	Carbonyl Sulfide	ND	19	ND	7.9	
74-93-1	Methyl Mercaptan	ND	15	ND	7.9	
75-08-1	Ethyl Mercaptan	ND	20	ND	7.9	
75-18-3	Dimethyl Sulfide	ND	20	ND	7.9	
75-15-0	Carbon Disulfide	ND	12	ND	3.9	
75-33-2	Isopropyl Mercaptan	ND	24	ND	7.9	
75-66-1	tert-Butyl Mercaptan	ND	29	ND	7.9	
107-03-9	n-Propyl Mercaptan	ND	24	ND	7.9	
624-89-5	Ethyl Methyl Sulfide	ND	24	ND	7.9	
110-02-1	Thiophene	ND	27	ND	7.9	
513-44-0	Isobutyl Mercaptan	ND	29	ND	7.9	
352-93-2	Diethyl Sulfide	ND	29	ND	7.9	
109-79-5	n-Butyl Mercaptan	ND	29	ND	7.9	
624-92-0	Dimethyl Disulfide	ND	15	ND	3.9	
616-44-4	3-Methylthiophene	ND	32	ND	7.9	
110-01-0	Tetrahydrothiophene	ND	28	ND	7.9	
638-02-8	2,5-Dimethylthiophene	ND	36	ND	7.9	
872-55-9	2-Ethylthiophene	ND	36	ND	7.9	
110-81-6	Diethyl Disulfide	ND	20	ND	3.9	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: Method Blank
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240517-MB

Test Code: ASTM D 5504-20
Instrument ID: Agilent 7890A/GC22/SCD
Analyst: Gilbert Gutierrez
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Time Collected: NA
Date Received: NA
Date Analyzed: 5/17/24
Time Analyzed: 09:38
Volume(s) Analyzed: 1.0 ml(s)

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
7783-06-4	Hydrogen Sulfide	ND	7.0	ND	5.0	
463-58-1	Carbonyl Sulfide	ND	12	ND	5.0	
74-93-1	Methyl Mercaptan	ND	9.8	ND	5.0	
75-08-1	Ethyl Mercaptan	ND	13	ND	5.0	
75-18-3	Dimethyl Sulfide	ND	13	ND	5.0	
75-15-0	Carbon Disulfide	ND	7.8	ND	2.5	
75-33-2	Isopropyl Mercaptan	ND	16	ND	5.0	
75-66-1	tert-Butyl Mercaptan	ND	18	ND	5.0	
107-03-9	n-Propyl Mercaptan	ND	16	ND	5.0	
624-89-5	Ethyl Methyl Sulfide	ND	16	ND	5.0	
110-02-1	Thiophene	ND	17	ND	5.0	
513-44-0	Isobutyl Mercaptan	ND	18	ND	5.0	
352-93-2	Diethyl Sulfide	ND	18	ND	5.0	
109-79-5	n-Butyl Mercaptan	ND	18	ND	5.0	
624-92-0	Dimethyl Disulfide	ND	9.6	ND	2.5	
616-44-4	3-Methylthiophene	ND	20	ND	5.0	
110-01-0	Tetrahydrothiophene	ND	18	ND	5.0	
638-02-8	2,5-Dimethylthiophene	ND	23	ND	5.0	
872-55-9	2-Ethylthiophene	ND	23	ND	5.0	
110-81-6	Diethyl Disulfide	ND	12	ND	2.5	

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

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

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Client: Stantec
Client Sample ID: Duplicate Lab Control Sample
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240517-DLCS

Test Code: ASTM D 5504-20
 Instrument ID: Agilent 7890A/GC22/SCD
 Analyst: Gilbert Gutierrez
 Sample Type: 6.0 L Silonite Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 5/17/24
 Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount	Result		% Recovery		ALS	RPD	RPD	Data
		LCS / DLCS ppbV	LCS ppbV	DLCS ppbV	LCS	DLCS	Acceptance Limits			
7783-06-4	Hydrogen Sulfide	1,000	1,040	1,030	104	103	72-122	1.0	18	
463-58-1	Carbonyl Sulfide	1,000	832	850	83	85	72-121	2	17	
74-93-1	Methyl Mercaptan	1,000	1,230	1,270	123	127	74-127	3	18	

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-1
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00757

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.20 Final Pressure (psig): 4.52

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m ³	MRL µg/m ³	MDL µg/m ³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	0.52	0.82	0.20	0.30	0.47	0.12	J
75-71-8	Dichlorodifluoromethane (CFC 12)	2.7	0.80	0.13	0.54	0.16	0.027	
74-87-3	Chloromethane	0.46	0.83	0.13	0.22	0.40	0.064	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.85	0.13	ND	0.12	0.019	
75-01-4	Vinyl Chloride	ND	0.82	0.20	ND	0.32	0.078	
106-99-0	1,3-Butadiene	ND	0.82	0.14	ND	0.37	0.061	
74-83-9	Bromomethane	ND	0.79	0.11	ND	0.20	0.029	
75-00-3	Chloroethane	ND	0.85	0.10	ND	0.32	0.039	
67-64-1	Acetone	5.6	7.9	1.8	2.4	3.3	0.78	J
75-69-4	Trichlorofluoromethane (CFC 11)	1.2	0.79	0.12	0.22	0.14	0.022	
67-63-0	2-Propanol (Isopropyl Alcohol)	0.56	1.5	0.34	0.23	0.62	0.14	J
75-35-4	1,1-Dichloroethene	ND	0.69	0.11	ND	0.17	0.029	
75-09-2	Methylene Chloride	0.37	0.71	0.23	0.11	0.20	0.067	J
76-13-1	Trichlorotrifluoroethane (CFC 113)	0.55	0.69	0.12	0.072	0.090	0.015	J
75-15-0	Carbon Disulfide	ND	1.6	0.25	ND	0.51	0.079	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	0.20	ND	0.21	0.051	
75-34-3	1,1-Dichloroethane	ND	0.80	0.17	ND	0.20	0.042	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	0.097	ND	0.23	0.027	
108-05-4	Vinyl Acetate	ND	8.3	1.8	ND	2.3	0.53	
78-93-3	2-Butanone (MEK)	0.76	1.6	0.37	0.26	0.53	0.13	J
156-59-2	cis-1,2-Dichloroethene	ND	0.80	0.12	ND	0.20	0.029	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 5

Client: Stantec
Client Sample ID: MP-1
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00757

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.20 Final Pressure (psig): 4.52

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	10	3.1	1.2	2.8	0.86	0.32	
110-54-3	n-Hexane	0.18	0.82	0.17	0.052	0.23	0.048	J
67-66-3	Chloroform	0.11	0.83	0.11	0.023	0.17	0.022	J
109-99-9	Tetrahydrofuran (THF)	ND	1.5	0.32	ND	0.52	0.11	
107-06-2	1,2-Dichloroethane	ND	0.79	0.091	ND	0.19	0.022	
71-55-6	1,1,1-Trichloroethane	ND	0.80	0.10	ND	0.15	0.019	
71-43-2	Benzene	1.2	0.79	0.12	0.39	0.25	0.037	
56-23-5	Carbon Tetrachloride	0.43	0.80	0.11	0.069	0.13	0.018	J
110-82-7	Cyclohexane	ND	1.7	0.23	ND	0.49	0.067	
78-87-5	1,2-Dichloropropane	ND	0.83	0.10	ND	0.18	0.022	
75-27-4	Bromodichloromethane	ND	0.82	0.12	ND	0.12	0.018	
79-01-6	Trichloroethene	ND	0.80	0.11	ND	0.15	0.021	
123-91-1	1,4-Dioxane	ND	0.80	0.22	ND	0.22	0.060	
142-82-5	n-Heptane	ND	0.82	0.13	ND	0.20	0.032	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	0.13	ND	0.18	0.028	
108-10-1	4-Methyl-2-pentanone	ND	1.6	0.29	ND	0.39	0.071	
10061-02-6	trans-1,3-Dichloropropene	ND	0.75	0.17	ND	0.17	0.037	
79-00-5	1,1,2-Trichloroethane	ND	0.85	0.083	ND	0.16	0.015	
108-88-3	Toluene	0.95	0.83	0.10	0.25	0.22	0.027	
591-78-6	2-Hexanone	ND	1.6	0.29	ND	0.38	0.071	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 3 of 5

Client: Stantec
Client Sample ID: MP-1
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00757

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.20 **Final Pressure (psig):** 4.52

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.79	0.11	ND	0.092	0.013	
106-93-4	1,2-Dibromoethane	ND	0.80	0.095	ND	0.10	0.012	
127-18-4	Tetrachloroethene	0.19	0.83	0.11	0.027	0.12	0.016	J
108-90-7	Chlorobenzene	ND	0.83	0.11	ND	0.18	0.024	
100-41-4	Ethylbenzene	0.20	0.85	0.12	0.047	0.20	0.027	J
179601-23-1	m,p-Xylenes	0.53	1.6	0.22	0.12	0.38	0.050	J
75-25-2	Bromoform	ND	0.85	0.17	ND	0.082	0.016	
100-42-5	Styrene	0.27	0.82	0.13	0.064	0.19	0.031	J
95-47-6	o-Xylene	0.22	0.83	0.12	0.050	0.19	0.027	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.83	0.11	ND	0.12	0.017	
98-82-8	Cumene	ND	0.80	0.12	ND	0.16	0.024	
622-96-8	4-Ethyltoluene	ND	0.80	0.13	ND	0.16	0.027	
108-67-8	1,3,5-Trimethylbenzene	ND	0.83	0.12	ND	0.17	0.024	
95-63-6	1,2,4-Trimethylbenzene	0.22	0.80	0.11	0.045	0.16	0.023	J
100-44-7	Benzyl Chloride	ND	3.2	0.54	ND	0.62	0.10	
541-73-1	1,3-Dichlorobenzene	ND	0.80	0.12	ND	0.13	0.020	
106-46-7	1,4-Dichlorobenzene	ND	0.80	0.13	ND	0.13	0.021	
95-50-1	1,2-Dichlorobenzene	ND	0.80	0.12	ND	0.13	0.020	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	0.52	ND	0.22	0.071	
91-20-3	Naphthalene	ND	0.79	0.20	ND	0.15	0.038	
87-68-3	Hexachlorobutadiene	ND	0.79	0.17	ND	0.074	0.016	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 4 of 5

Client: Stantec

Client Sample ID: MP-1

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-001

Tentatively Identified Compounds

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes: T

Container ID: AS00757

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.20

Final Pressure (psig): 4.52

Canister Dilution Factor: 1.54

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
9.38	2-Pentanone	8.2	
14.53	Hexamethylcyclotrisiloxane	22	
18.81	2-Ethyl-1-hexanol	18	
19.81	n-Nonanal	6.4	
20.35	3-Methylheptyl acetate	14	
	TVOC as Toluene	130	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 5 of 5

Client: Stantec

Client Sample ID: MP-1

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-001

Tentatively Identified Compounds

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes: T

Container ID: AS00757

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.20

Final Pressure (psig): 4.52

Canister Dilution Factor: 1.54

GC/MS Retention Time	Compound Identification	Concentration ppbV	Data Qualifier
9.38	2-Pentanone	2.3	
14.53	Hexamethylcyclotrisiloxane	2.4	
18.81	2-Ethyl-1-hexanol	3.4	
19.81	n-Nonanal	1.1	
20.35	3-Methylheptyl acetate	2.0	
	TVOC as Toluene	36	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 5

Client: Stantec
Client Sample ID: MP-2
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01031

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 **Final Pressure (psig):** 4.70

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m ³	MRL µg/m ³	MDL µg/m ³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	0.48	0.81	0.20	0.28	0.47	0.11	J
75-71-8	Dichlorodifluoromethane (CFC 12)	2.6	0.79	0.13	0.53	0.16	0.027	
74-87-3	Chloromethane	0.44	0.82	0.13	0.21	0.40	0.063	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.84	0.13	ND	0.12	0.018	
75-01-4	Vinyl Chloride	ND	0.81	0.20	ND	0.32	0.077	
106-99-0	1,3-Butadiene	ND	0.81	0.13	ND	0.36	0.060	
74-83-9	Bromomethane	ND	0.78	0.11	ND	0.20	0.029	
75-00-3	Chloroethane	ND	0.84	0.10	ND	0.32	0.038	
67-64-1	Acetone	6.0	7.8	1.8	2.5	3.3	0.77	J
75-69-4	Trichlorofluoromethane (CFC 11)	1.3	0.78	0.12	0.22	0.14	0.022	
67-63-0	2-Propanol (Isopropyl Alcohol)	0.96	1.5	0.33	0.39	0.61	0.14	J
75-35-4	1,1-Dichloroethene	ND	0.68	0.11	ND	0.17	0.028	
75-09-2	Methylene Chloride	0.37	0.70	0.23	0.11	0.20	0.066	J
76-13-1	Trichlorotrifluoroethane (CFC 113)	0.54	0.68	0.12	0.071	0.089	0.015	J
75-15-0	Carbon Disulfide	0.83	1.6	0.24	0.27	0.51	0.078	J
156-60-5	trans-1,2-Dichloroethene	ND	0.81	0.20	ND	0.20	0.050	
75-34-3	1,1-Dichloroethane	ND	0.79	0.17	ND	0.20	0.041	
1634-04-4	Methyl tert-Butyl Ether	ND	0.82	0.096	ND	0.23	0.027	
108-05-4	Vinyl Acetate	ND	8.2	1.8	ND	2.3	0.52	
78-93-3	2-Butanone (MEK)	0.85	1.6	0.36	0.29	0.53	0.12	J
156-59-2	cis-1,2-Dichloroethene	0.15	0.79	0.11	0.037	0.20	0.029	J

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 5

Client: Stantec
Client Sample ID: MP-2
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01031

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 **Final Pressure (psig):** 4.70

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	6.7	3.0	1.2	1.9	0.84	0.32	
110-54-3	n-Hexane	ND	0.81	0.17	ND	0.23	0.047	
67-66-3	Chloroform	0.12	0.82	0.11	0.025	0.17	0.022	J
109-99-9	Tetrahydrofuran (THF)	ND	1.5	0.32	ND	0.52	0.11	
107-06-2	1,2-Dichloroethane	ND	0.78	0.090	ND	0.19	0.022	
71-55-6	1,1,1-Trichloroethane	ND	0.79	0.10	ND	0.14	0.018	
71-43-2	Benzene	0.81	0.78	0.12	0.26	0.24	0.037	
56-23-5	Carbon Tetrachloride	0.42	0.79	0.11	0.066	0.13	0.018	J
110-82-7	Cyclohexane	ND	1.7	0.23	ND	0.49	0.066	
78-87-5	1,2-Dichloropropane	ND	0.82	0.10	ND	0.18	0.022	
75-27-4	Bromodichloromethane	ND	0.81	0.12	ND	0.12	0.017	
79-01-6	Trichloroethene	0.72	0.79	0.11	0.13	0.15	0.020	J
123-91-1	1,4-Dioxane	ND	0.79	0.21	ND	0.22	0.059	
142-82-5	n-Heptane	ND	0.81	0.13	ND	0.20	0.032	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	0.13	ND	0.18	0.028	
108-10-1	4-Methyl-2-pentanone	ND	1.6	0.29	ND	0.39	0.070	
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	0.17	ND	0.16	0.037	
79-00-5	1,1,2-Trichloroethane	ND	0.84	0.082	ND	0.15	0.015	
108-88-3	Toluene	0.71	0.82	0.099	0.19	0.22	0.026	J
591-78-6	2-Hexanone	ND	1.6	0.29	ND	0.38	0.071	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 3 of 5

Client: Stantec

Client Sample ID: MP-2

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-002

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS01031

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 Final Pressure (psig): 4.70

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.78	0.11	ND	0.091	0.012	
106-93-4	1,2-Dibromoethane	ND	0.79	0.094	ND	0.10	0.012	
127-18-4	Tetrachloroethene	0.24	0.82	0.10	0.035	0.12	0.015	J
108-90-7	Chlorobenzene	ND	0.82	0.11	ND	0.18	0.023	
100-41-4	Ethylbenzene	0.23	0.84	0.11	0.052	0.19	0.026	J
179601-23-1	m,p-Xylenes	0.42	1.6	0.21	0.098	0.37	0.049	J
75-25-2	Bromoform	ND	0.84	0.17	ND	0.081	0.016	
100-42-5	Styrene	0.29	0.81	0.13	0.068	0.19	0.031	J
95-47-6	o-Xylene	0.18	0.82	0.12	0.042	0.19	0.027	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	0.11	ND	0.12	0.016	
98-82-8	Cumene	ND	0.79	0.12	ND	0.16	0.024	
622-96-8	4-Ethyltoluene	ND	0.79	0.13	ND	0.16	0.026	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	0.12	ND	0.17	0.024	
95-63-6	1,2,4-Trimethylbenzene	0.16	0.79	0.11	0.032	0.16	0.023	J
100-44-7	Benzyl Chloride	ND	3.1	0.53	ND	0.61	0.10	
541-73-1	1,3-Dichlorobenzene	ND	0.79	0.12	ND	0.13	0.020	
106-46-7	1,4-Dichlorobenzene	ND	0.79	0.12	ND	0.13	0.021	
95-50-1	1,2-Dichlorobenzene	ND	0.79	0.12	ND	0.13	0.020	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	0.52	ND	0.22	0.070	
91-20-3	Naphthalene	ND	0.78	0.20	ND	0.15	0.038	
87-68-3	Hexachlorobutadiene	ND	0.78	0.17	ND	0.073	0.016	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-2
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-002

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
 Analyst: Simon Cao
 Sample Type: 6.0 L Silonite Canister
 Test Notes: T
 Container ID: AS01031

Date Collected: 5/15/24
 Date Received: 5/16/24
 Date Analyzed: 5/24/24
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 Final Pressure (psig): 4.70

Canister Dilution Factor: 1.52

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
5.76	unknown	3.6	
6.56	Acetic Acid	4.8	
9.61	Dimethylsilanediol	4.6	
14.53	Hexamethylcyclotrisiloxane	6.9	
18.81	2-Ethyl-1-hexanol	13	
19.81	n-Nonanal	13	
20.35	3-Methylheptyl acetate	13	
	TVOC as Toluene	110	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 5 of 5

Client: Stantec

Client Sample ID: MP-2

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-002

Tentatively Identified Compounds

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes: T

Container ID: AS01031

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.95 Final Pressure (psig): 4.70

Canister Dilution Factor: 1.52

GC/MS Retention Time	Compound Identification	Concentration ppbV	Data Qualifier
6.56	Acetic Acid	2.0	
9.61	Dimethylsilanediol	1.2	
14.53	Hexamethylcyclotrisiloxane	0.76	
18.81	2-Ethyl-1-hexanol	2.4	
19.81	n-Nonanal	2.2	
20.35	3-Methylheptyl acetate	1.9	
	TVOC as Toluene	30	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: MP-3
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-003

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
 Analyst: Simon Cao
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS01611

Date Collected: 5/15/24
 Date Received: 5/16/24
 Date Analyzed: 5/24/24
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.76 Final Pressure (psig): 4.60

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.73	0.18	ND	0.43	0.10	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.6	0.72	0.12	0.53	0.15	0.024	
74-87-3	Chloromethane	0.45	0.75	0.12	0.22	0.36	0.057	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.14	0.76	0.12	0.019	0.11	0.017	J
75-01-4	Vinyl Chloride	ND	0.73	0.18	ND	0.29	0.070	
106-99-0	1,3-Butadiene	ND	0.73	0.12	ND	0.33	0.055	
74-83-9	Bromomethane	ND	0.70	0.10	ND	0.18	0.026	
75-00-3	Chloroethane	ND	0.76	0.091	ND	0.29	0.035	
67-64-1	Acetone	6.8	7.1	1.7	2.9	3.0	0.70	J
75-69-4	Trichlorofluoromethane (CFC 11)	1.2	0.70	0.11	0.22	0.13	0.020	
67-63-0	2-Propanol (Isopropyl Alcohol)	1.1	1.4	0.30	0.45	0.56	0.12	J
75-35-4	1,1-Dichloroethene	ND	0.62	0.10	ND	0.16	0.026	
75-09-2	Methylene Chloride	0.38	0.63	0.21	0.11	0.18	0.060	J
76-13-1	Trichlorotrifluoroethane (CFC 113)	0.54	0.62	0.10	0.071	0.081	0.014	J
75-15-0	Carbon Disulfide	ND	1.4	0.22	ND	0.46	0.071	
156-60-5	trans-1,2-Dichloroethene	ND	0.73	0.18	ND	0.18	0.045	
75-34-3	1,1-Dichloroethane	ND	0.72	0.15	ND	0.18	0.038	
1634-04-4	Methyl tert-Butyl Ether	ND	0.75	0.087	ND	0.21	0.024	
108-05-4	Vinyl Acetate	ND	7.4	1.7	ND	2.1	0.47	
78-93-3	2-Butanone (MEK)	0.86	1.4	0.33	0.29	0.48	0.11	J
156-59-2	cis-1,2-Dichloroethene	ND	0.72	0.10	ND	0.18	0.026	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 5

Client: Stantec
Client Sample ID: MP-3
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-003

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
 Analyst: Simon Cao
 Sample Type: 6.0 L Silonite Canister
 Test Notes:
 Container ID: AS01611

Date Collected: 5/15/24
 Date Received: 5/16/24
 Date Analyzed: 5/24/24
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.76 Final Pressure (psig): 4.60

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	12	2.8	1.0	3.4	0.77	0.29	
110-54-3	n-Hexane	ND	0.73	0.15	ND	0.21	0.043	
67-66-3	Chloroform	0.10	0.75	0.098	0.021	0.15	0.020	J
109-99-9	Tetrahydrofuran (THF)	ND	1.4	0.29	ND	0.47	0.098	
107-06-2	1,2-Dichloroethane	0.081	0.70	0.081	0.020	0.17	0.020	J
71-55-6	1,1,1-Trichloroethane	ND	0.72	0.091	ND	0.13	0.017	
71-43-2	Benzene	0.48	0.70	0.11	0.15	0.22	0.033	J
56-23-5	Carbon Tetrachloride	0.42	0.72	0.10	0.067	0.11	0.016	J
110-82-7	Cyclohexane	ND	1.5	0.21	ND	0.44	0.060	
78-87-5	1,2-Dichloropropane	ND	0.75	0.091	ND	0.16	0.020	
75-27-4	Bromodichloromethane	ND	0.73	0.11	ND	0.11	0.016	
79-01-6	Trichloroethene	ND	0.72	0.099	ND	0.13	0.018	
123-91-1	1,4-Dioxane	ND	0.72	0.19	ND	0.20	0.054	
142-82-5	n-Heptane	ND	0.73	0.12	ND	0.18	0.029	
10061-01-5	cis-1,3-Dichloropropene	ND	0.73	0.11	ND	0.16	0.025	
108-10-1	4-Methyl-2-pentanone	ND	1.4	0.26	ND	0.35	0.064	
10061-02-6	trans-1,3-Dichloropropene	ND	0.68	0.15	ND	0.15	0.033	
79-00-5	1,1,2-Trichloroethane	ND	0.76	0.075	ND	0.14	0.014	
108-88-3	Toluene	0.82	0.75	0.090	0.22	0.20	0.024	
591-78-6	2-Hexanone	ND	1.4	0.26	ND	0.34	0.064	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec

Client Sample ID: MP-3

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-003

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS01611

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.76 Final Pressure (psig): 4.60

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.70	0.097	ND	0.083	0.011	
106-93-4	1,2-Dibromoethane	ND	0.72	0.086	ND	0.093	0.011	
127-18-4	Tetrachloroethene	0.11	0.75	0.095	0.016	0.11	0.014	J
108-90-7	Chlorobenzene	ND	0.75	0.098	ND	0.16	0.021	
100-41-4	Ethylbenzene	0.16	0.76	0.10	0.038	0.17	0.024	J
179601-23-1	m,p-Xylenes	0.41	1.5	0.19	0.095	0.34	0.044	J
75-25-2	Bromoform	ND	0.76	0.15	ND	0.073	0.015	
100-42-5	Styrene	0.14	0.73	0.12	0.033	0.17	0.028	J
95-47-6	o-Xylene	0.18	0.75	0.11	0.041	0.17	0.024	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.75	0.10	ND	0.11	0.015	
98-82-8	Cumene	ND	0.72	0.11	ND	0.15	0.022	
622-96-8	4-Ethyltoluene	ND	0.72	0.12	ND	0.15	0.024	
108-67-8	1,3,5-Trimethylbenzene	ND	0.75	0.11	ND	0.15	0.022	
95-63-6	1,2,4-Trimethylbenzene	0.19	0.72	0.10	0.038	0.15	0.021	J
100-44-7	Benzyl Chloride	ND	2.9	0.48	ND	0.55	0.093	
541-73-1	1,3-Dichlorobenzene	ND	0.72	0.11	ND	0.12	0.018	
106-46-7	1,4-Dichlorobenzene	ND	0.72	0.11	ND	0.12	0.019	
95-50-1	1,2-Dichlorobenzene	ND	0.72	0.11	ND	0.12	0.018	
120-82-1	1,2,4-Trichlorobenzene	ND	1.5	0.47	ND	0.20	0.063	
91-20-3	Naphthalene	ND	0.70	0.18	ND	0.13	0.034	
87-68-3	Hexachlorobutadiene	ND	0.70	0.15	ND	0.066	0.014	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 4 of 5

Client: Stantec
Client Sample ID: MP-3
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-003

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
 Analyst: Simon Cao
 Sample Type: 6.0 L Silonite Canister
 Test Notes: T
 Container ID: AS01611

Date Collected: 5/15/24
 Date Received: 5/16/24
 Date Analyzed: 5/24/24
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.76 Final Pressure (psig): 4.60

Canister Dilution Factor: 1.38

GC/MS Retention Time	Compound Identification	Concentration µg/m³	Data Qualifier
6.54	Acetic Acid	3.4	
9.16	1-Methoxy-2-propanol	3.3	
17.86	2,6-Dimethyl-4-heptanone	4.5	
18.81	2-Ethyl-1-hexanol	8.3	
19.81	n-Nonanal	5.8	
20.35	3-Methylheptyl acetate	16	
	TVOC as Toluene	92	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 5 of 5

Client: Stantec
Client Sample ID: MP-3
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-003

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
 Analyst: Simon Cao
 Sample Type: 6.0 L Silonite Canister
 Test Notes: T
 Container ID: AS01611

Date Collected: 5/15/24
 Date Received: 5/16/24
 Date Analyzed: 5/24/24
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.76 Final Pressure (psig): 4.60

Canister Dilution Factor: 1.38

GC/MS Retention Time	Compound Identification	Concentration ppbV	Data Qualifier
6.54	Acetic Acid	1.4	
9.16	1-Methoxy-2-propanol	0.88	
17.86	2,6-Dimethyl-4-heptanone	0.77	
18.81	2-Ethyl-1-hexanol	1.6	
19.81	n-Nonanal	1.0	
20.35	3-Methylheptyl acetate	2.2	
	TVOC as Toluene	24	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 5

Client: Stantec

Client Sample ID: MP-4

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-004

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS01652

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 4.68

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m ³	MRL µg/m ³	MDL µg/m ³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	2.9	0.83	0.20	1.7	0.48	0.12	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.7	0.82	0.14	0.55	0.17	0.028	
74-87-3	Chloromethane	0.81	0.85	0.14	0.39	0.41	0.065	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.86	0.13	ND	0.12	0.019	
75-01-4	Vinyl Chloride	ND	0.83	0.20	ND	0.33	0.080	
106-99-0	1,3-Butadiene	ND	0.83	0.14	ND	0.38	0.062	
74-83-9	Bromomethane	ND	0.80	0.12	ND	0.21	0.030	
75-00-3	Chloroethane	0.13	0.86	0.10	0.050	0.33	0.039	J
67-64-1	Acetone	14	8.0	1.9	6.0	3.4	0.79	
75-69-4	Trichlorofluoromethane (CFC 11)	1.3	0.80	0.13	0.23	0.14	0.023	
67-63-0	2-Propanol (Isopropyl Alcohol)	3.7	1.6	0.35	1.5	0.63	0.14	
75-35-4	1,1-Dichloroethene	ND	0.71	0.12	ND	0.18	0.029	
75-09-2	Methylene Chloride	0.41	0.72	0.24	0.12	0.21	0.068	J
76-13-1	Trichlorotrifluoroethane (CFC 113)	0.58	0.71	0.12	0.076	0.092	0.016	J
75-15-0	Carbon Disulfide	1.0	1.6	0.25	0.34	0.52	0.081	J
156-60-5	trans-1,2-Dichloroethene	ND	0.83	0.20	ND	0.21	0.051	
75-34-3	1,1-Dichloroethane	ND	0.82	0.17	ND	0.20	0.043	
1634-04-4	Methyl tert-Butyl Ether	ND	0.85	0.099	ND	0.24	0.027	
108-05-4	Vinyl Acetate	ND	8.4	1.9	ND	2.4	0.54	
78-93-3	2-Butanone (MEK)	6.2	1.6	0.38	2.1	0.54	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.82	0.12	ND	0.21	0.030	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 5

Client: Stantec
Client Sample ID: MP-4
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01652

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37 **Final Pressure (psig):** 4.68

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	22	3.1	1.2	6.0	0.87	0.33	
110-54-3	n-Hexane	0.39	0.83	0.17	0.11	0.24	0.049	J
67-66-3	Chloroform	0.12	0.85	0.11	0.024	0.17	0.023	J
109-99-9	Tetrahydrofuran (THF)	3.5	1.6	0.33	1.2	0.53	0.11	
107-06-2	1,2-Dichloroethane	0.096	0.80	0.093	0.024	0.20	0.023	J
71-55-6	1,1,1-Trichloroethane	ND	0.82	0.10	ND	0.15	0.019	
71-43-2	Benzene	20	0.80	0.12	6.3	0.25	0.038	
56-23-5	Carbon Tetrachloride	0.43	0.82	0.12	0.069	0.13	0.018	J
110-82-7	Cyclohexane	ND	1.7	0.24	ND	0.50	0.068	
78-87-5	1,2-Dichloropropane	ND	0.85	0.10	ND	0.18	0.022	
75-27-4	Bromodichloromethane	ND	0.83	0.12	ND	0.12	0.018	
79-01-6	Trichloroethene	ND	0.82	0.11	ND	0.15	0.021	
123-91-1	1,4-Dioxane	1.2	0.82	0.22	0.33	0.23	0.061	
142-82-5	n-Heptane	0.41	0.83	0.13	0.10	0.20	0.033	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	0.13	ND	0.18	0.029	
108-10-1	4-Methyl-2-pentanone	0.44	1.6	0.30	0.11	0.40	0.073	J
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	0.17	ND	0.17	0.038	
79-00-5	1,1,2-Trichloroethane	ND	0.86	0.085	ND	0.16	0.016	
108-88-3	Toluene	3.9	0.85	0.10	1.0	0.23	0.027	
591-78-6	2-Hexanone	0.51	1.6	0.30	0.12	0.39	0.073	J

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 3 of 5

Client: Stantec
Client Sample ID: MP-4
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01652

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37 **Final Pressure (psig):** 4.68

Canister Dilution Factor: 1.57

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.80	0.11	ND	0.094	0.013	
106-93-4	1,2-Dibromoethane	ND	0.82	0.097	ND	0.11	0.013	
127-18-4	Tetrachloroethene	0.19	0.85	0.11	0.029	0.13	0.016	J
108-90-7	Chlorobenzene	0.15	0.85	0.11	0.032	0.18	0.024	J
100-41-4	Ethylbenzene	4.3	0.86	0.12	0.99	0.20	0.027	
179601-23-1	m,p-Xylenes	2.7	1.7	0.22	0.62	0.39	0.051	
75-25-2	Bromoform	ND	0.86	0.17	ND	0.084	0.017	
100-42-5	Styrene	0.89	0.83	0.14	0.21	0.20	0.032	
95-47-6	o-Xylene	1.2	0.85	0.12	0.27	0.20	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.85	0.12	ND	0.12	0.017	
98-82-8	Cumene	0.75	0.82	0.12	0.15	0.17	0.025	J
622-96-8	4-Ethyltoluene	0.37	0.82	0.13	0.075	0.17	0.027	J
108-67-8	1,3,5-Trimethylbenzene	0.55	0.85	0.12	0.11	0.17	0.025	J
95-63-6	1,2,4-Trimethylbenzene	1.2	0.82	0.12	0.23	0.17	0.024	
100-44-7	Benzyl Chloride	ND	3.2	0.55	ND	0.63	0.11	
541-73-1	1,3-Dichlorobenzene	ND	0.82	0.13	ND	0.14	0.021	
106-46-7	1,4-Dichlorobenzene	0.29	0.82	0.13	0.049	0.14	0.021	J
95-50-1	1,2-Dichlorobenzene	ND	0.82	0.12	ND	0.14	0.021	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	0.53	ND	0.23	0.072	
91-20-3	Naphthalene	0.32	0.80	0.20	0.061	0.15	0.039	J
87-68-3	Hexachlorobutadiene	ND	0.80	0.17	ND	0.075	0.016	

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

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec

Client Sample ID: MP-4

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-004

Tentatively Identified Compounds

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes: T

Container ID: AS01652

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 4.68

Canister Dilution Factor: 1.57

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
5.22	Dimethyl Sulfide	12	
6.31	Trimethylsilanol	7.7	
6.57	Acetic Acid	5.0	
7.14	2-Methylfuran	3.1	
8.81	1-Butanol	3.0	
9.16	1-Methoxy-2-propanol	7.2	
9.38	2-Pentanone	6.5	
11.59	Dimethyl disulfide	3.2	
13.22	n-Hexanal	3.8	
18.51	unknown	4.6	
18.82	2-Ethyl-1-hexanol	21	
19.81	n-Nonanal	15	
19.99	n-Undecane	3.8	
20.35	3-Methylheptyl acetate	25	
20.58	unknown	3.1	
	TVOC as Toluene	300	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 5 of 5

Client: Stantec

Client Sample ID: MP-4

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-004

Tentatively Identified Compounds

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes: T

Container ID: AS01652

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37 Final Pressure (psig): 4.68

Canister Dilution Factor: 1.57

GC/MS Retention Time	Compound Identification	Concentration ppbV	Data Qualifier
5.22	Dimethyl Sulfide	4.6	
6.31	Trimethylsilanol	2.1	
6.57	Acetic Acid	2.1	
7.14	2-Methylfuran	0.92	
8.81	1-Butanol	0.98	
9.16	1-Methoxy-2-propanol	2.0	
9.38	2-Pentanone	1.9	
11.59	Dimethyl disulfide	0.82	
13.22	n-Hexanal	0.94	
18.82	2-Ethyl-1-hexanol	3.9	
19.81	n-Nonanal	2.5	
19.99	n-Undecane	0.59	
20.35	3-Methylheptyl acetate	3.5	
	TVOC as Toluene	80	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 5

Client: Stantec
Client Sample ID: Method Blank
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	MDL µg/m ³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
115-07-1	Propene	ND	0.53	0.13	ND	0.31	0.076	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	0.087	ND	0.11	0.018	
74-87-3	Chloromethane	ND	0.54	0.086	ND	0.26	0.042	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.55	0.084	ND	0.079	0.012	
75-01-4	Vinyl Chloride	ND	0.53	0.13	ND	0.21	0.051	
106-99-0	1,3-Butadiene	ND	0.53	0.088	ND	0.24	0.040	
74-83-9	Bromomethane	ND	0.51	0.074	ND	0.13	0.019	
75-00-3	Chloroethane	ND	0.55	0.066	ND	0.21	0.025	
67-64-1	Acetone	ND	5.1	1.2	ND	2.2	0.51	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.51	0.081	ND	0.091	0.014	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	0.99	0.22	ND	0.40	0.090	
75-35-4	1,1-Dichloroethene	ND	0.45	0.074	ND	0.11	0.019	
75-09-2	Methylene Chloride	ND	0.46	0.15	ND	0.13	0.043	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.45	0.076	ND	0.059	0.0099	
75-15-0	Carbon Disulfide	ND	1.0	0.16	ND	0.33	0.051	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	0.13	ND	0.13	0.033	
75-34-3	1,1-Dichloroethane	ND	0.52	0.11	ND	0.13	0.027	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	0.063	ND	0.15	0.017	
108-05-4	Vinyl Acetate	ND	5.4	1.2	ND	1.5	0.34	
78-93-3	2-Butanone (MEK)	ND	1.0	0.24	ND	0.35	0.081	
156-59-2	cis-1,2-Dichloroethene	ND	0.52	0.075	ND	0.13	0.019	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: Method Blank
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
141-78-6	Ethyl Acetate	ND	2.0	0.76	ND	0.56	0.21	
110-54-3	n-Hexane	ND	0.53	0.11	ND	0.15	0.031	
67-66-3	Chloroform	ND	0.54	0.071	ND	0.11	0.015	
109-99-9	Tetrahydrofuran (THF)	ND	1.0	0.21	ND	0.34	0.071	
107-06-2	1,2-Dichloroethane	ND	0.51	0.059	ND	0.13	0.015	
71-55-6	1,1,1-Trichloroethane	ND	0.52	0.066	ND	0.095	0.012	
71-43-2	Benzene	ND	0.51	0.077	ND	0.16	0.024	
56-23-5	Carbon Tetrachloride	ND	0.52	0.074	ND	0.083	0.012	
110-82-7	Cyclohexane	ND	1.1	0.15	ND	0.32	0.044	
78-87-5	1,2-Dichloropropane	ND	0.54	0.066	ND	0.12	0.014	
75-27-4	Bromodichloromethane	ND	0.53	0.077	ND	0.079	0.011	
79-01-6	Trichloroethene	ND	0.52	0.072	ND	0.097	0.013	
123-91-1	1,4-Dioxane	ND	0.52	0.14	ND	0.14	0.039	
142-82-5	n-Heptane	ND	0.53	0.085	ND	0.13	0.021	
10061-01-5	cis-1,3-Dichloropropene	ND	0.53	0.083	ND	0.12	0.018	
108-10-1	4-Methyl-2-pentanone	ND	1.1	0.19	ND	0.26	0.046	
10061-02-6	trans-1,3-Dichloropropene	ND	0.49	0.11	ND	0.11	0.024	
79-00-5	1,1,2-Trichloroethane	ND	0.55	0.054	ND	0.10	0.0099	
108-88-3	Toluene	ND	0.54	0.065	ND	0.14	0.017	
591-78-6	2-Hexanone	ND	1.0	0.19	ND	0.25	0.046	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: Method Blank
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
124-48-1	Dibromochloromethane	ND	0.51	0.070	ND	0.060	0.0082	
106-93-4	1,2-Dibromoethane	ND	0.52	0.062	ND	0.068	0.0081	
127-18-4	Tetrachloroethene	ND	0.54	0.069	ND	0.080	0.010	
108-90-7	Chlorobenzene	ND	0.54	0.071	ND	0.12	0.015	
100-41-4	Ethylbenzene	ND	0.55	0.075	ND	0.13	0.017	
179601-23-1	m,p-Xylenes	ND	1.1	0.14	ND	0.25	0.032	
75-25-2	Bromoform	ND	0.55	0.11	ND	0.053	0.011	
100-42-5	Styrene	ND	0.53	0.086	ND	0.12	0.020	
95-47-6	o-Xylene	ND	0.54	0.077	ND	0.12	0.018	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.54	0.074	ND	0.079	0.011	
98-82-8	Cumene	ND	0.52	0.077	ND	0.11	0.016	
622-96-8	4-Ethyltoluene	ND	0.52	0.085	ND	0.11	0.017	
108-67-8	1,3,5-Trimethylbenzene	ND	0.54	0.077	ND	0.11	0.016	
95-63-6	1,2,4-Trimethylbenzene	ND	0.52	0.074	ND	0.11	0.015	
100-44-7	Benzyl Chloride	ND	2.1	0.35	ND	0.40	0.068	
541-73-1	1,3-Dichlorobenzene	ND	0.52	0.080	ND	0.087	0.013	
106-46-7	1,4-Dichlorobenzene	ND	0.52	0.082	ND	0.087	0.014	
95-50-1	1,2-Dichlorobenzene	ND	0.52	0.079	ND	0.087	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	1.1	0.34	ND	0.14	0.046	
91-20-3	Naphthalene	ND	0.51	0.13	ND	0.097	0.025	
87-68-3	Hexachlorobutadiene	ND	0.51	0.11	ND	0.048	0.010	

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

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: Method Blank
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-MB

Tentatively Identified Compounds

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
3.32	Sulfur Dioxide	>3.8	!
	TVOC as Toluene	NF	

T = Analyte is a tentatively identified compound, result is estimated.

NF = Compound was searched for, but not found.

! = Previous studies have shown that EPA Method TO-15 is not an appropriate method for Quantifying Sulfur Dioxide. The TIC result for this compound is reported as "greater than" since the numeric value is probably biased low.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Stantec
Client Sample ID: Method Blank
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-MB

Tentatively Identified Compounds

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

GC/MS Retention Time	Compound Identification	Concentration ppbV	Data Qualifier
3.32	Sulfur Dioxide	>1.5	!
	TVOC as Toluene	NF	

T = Analyte is a tentatively identified compound, result is estimated.

NF = Compound was searched for, but not found.

! = Previous studies have shown that EPA Method TO-15 is not an appropriate method for Quantifying Sulfur Dioxide. The TIC result for this compound is reported as "greater than" since the numeric value is probably biased low.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: Stantec
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister(s)
Test Notes:

Date(s) Collected: 5/15/24
Date(s) Received: 5/16/24
Date(s) Analyzed: 5/24/24

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P240524-MB	104	107	108	70-130	
Lab Control Sample	P240524-LCS	104	106	109	70-130	
Duplicate Lab Control Sample	P240524-DLCS	103	105	108	70-130	
MP-1	P2401949-001	106	105	109	70-130	
MP-2	P2401949-002	106	105	109	70-130	
MP-3	P2401949-003	106	105	110	70-130	
MP-4	P2401949-004	107	105	109	70-130	
MP-4	P2401949-004DUP	106	106	109	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

Client: Stantec
Client Sample ID: Duplicate Lab Control Sample
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-DLCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount	Result		% Recovery		ALS	RPD	RPD	Data
		LCS / DLCS µg/m³	LCS µg/m³	DLCS µg/m³	LCS	DLCS	Acceptance Limits			
115-07-1	Propene	212	163	157	77	74	50-133	4	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	204	193	191	95	94	66-122	1	25	
74-87-3	Chloromethane	208	169	170	81	82	56-131	1	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	208	208	201	100	97	63-120	3	25	
75-01-4	Vinyl Chloride	212	195	192	92	91	57-129	1	25	
106-99-0	1,3-Butadiene	212	208	209	98	99	62-132	1	25	
74-83-9	Bromomethane	210	206	203	98	97	72-120	1	25	
75-00-3	Chloroethane	212	203	199	96	94	67-123	2	25	
67-64-1	Acetone	1,060	873	874	82	82	61-120	0	25	
75-69-4	Trichlorofluoromethane (CFC 11)	210	196	194	93	92	65-122	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	418	340	347	81	83	59-132	2	25	
75-35-4	1,1-Dichloroethene	208	206	206	99	99	75-120	0	25	
75-09-2	Methylene Chloride	208	172	172	83	83	71-123	0	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	210	210	208	100	99	65-121	1	25	
75-15-0	Carbon Disulfide	430	422	417	98	97	69-115	1	25	
156-60-5	trans-1,2-Dichloroethene	218	204	204	94	94	67-123	0	25	
75-34-3	1,1-Dichloroethane	216	205	203	95	94	66-120	1	25	
1634-04-4	Methyl tert-Butyl Ether	216	239	235	111	109	65-124	2	25	
108-05-4	Vinyl Acetate	1,090	1170	1160	107	106	76-147	0.9	25	
78-93-3	2-Butanone (MEK)	414	412	410	100	99	70-125	1	25	
156-59-2	cis-1,2-Dichloroethene	216	199	199	92	92	64-120	0	25	

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

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Client: Stantec
Client Sample ID: Duplicate Lab Control Sample
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-DLCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount	Result		% Recovery		ALS	RPD	RPD	Data
		LCS / DLCS µg/m³	LCS µg/m³	DLCS µg/m³	LCS	DLCS	Acceptance Limits			
141-78-6	Ethyl Acetate	398	391	389	98	98	56-120	0	25	
110-54-3	n-Hexane	212	190	190	90	90	60-125	0	25	
67-66-3	Chloroform	216	211	210	98	97	64-121	1	25	
109-99-9	Tetrahydrofuran (THF)	404	407	408	101	101	67-117	0	25	
107-06-2	1,2-Dichloroethane	206	199	197	97	96	64-138	1	25	
71-55-6	1,1,1-Trichloroethane	210	197	198	94	94	67-125	0	25	
71-43-2	Benzene	206	190	192	92	93	73-128	1	25	
56-23-5	Carbon Tetrachloride	210	201	201	96	96	71-134	0	25	
110-82-7	Cyclohexane	428	423	425	99	99	71-118	0	25	
78-87-5	1,2-Dichloropropane	214	196	198	92	93	68-121	1	25	
75-27-4	Bromodichloromethane	218	213	214	98	98	70-125	0	25	
79-01-6	Trichloroethene	214	190	190	89	89	68-124	0	25	
123-91-1	1,4-Dioxane	214	211	213	99	100	76-127	1	25	
142-82-5	n-Heptane	214	216	218	101	102	72-121	1	25	
10061-01-5	cis-1,3-Dichloropropene	212	216	219	102	103	87-137	1	25	
108-10-1	4-Methyl-2-pentanone	426	409	412	96	97	67-137	1	25	
10061-02-6	trans-1,3-Dichloropropene	196	212	213	108	109	73-127	0.9	25	
79-00-5	1,1,2-Trichloroethane	216	207	209	96	97	71-119	1	25	
108-88-3	Toluene	214	210	210	98	98	64-121	0	25	
591-78-6	2-Hexanone	426	411	414	96	97	70-136	1	25	

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

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

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Client: Stantec
Client Sample ID: Duplicate Lab Control Sample
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P240524-DLCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/24/24
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount	Result		% Recovery		ALS	RPD	RPD	Data
		LCS / DLCS µg/m³	LCS µg/m³	DLCS µg/m³	LCS	DLCS	Acceptance Limits			
124-48-1	Dibromochloromethane	214	212	210	99	98	67-128	1	25	
106-93-4	1,2-Dibromoethane	206	215	214	104	104	69-129	0	25	
127-18-4	Tetrachloroethene	214	210	209	98	98	55-132	0	25	
108-90-7	Chlorobenzene	218	205	204	94	94	63-124	0	25	
100-41-4	Ethylbenzene	218	216	216	99	99	64-119	0	25	
179601-23-1	m,p-Xylenes	432	432	431	100	100	64-121	0	25	
75-25-2	Bromoform	218	236	235	108	108	63-132	0	25	
100-42-5	Styrene	214	223	221	104	103	71-125	1	25	
95-47-6	o-Xylene	216	216	214	100	99	66-122	1	25	
79-34-5	1,1,2,2-Tetrachloroethane	216	224	223	104	103	71-128	1	25	
98-82-8	Cumene	212	210	209	99	99	66-126	0	25	
622-96-8	4-Ethyltoluene	218	216	215	99	99	67-128	0	25	
108-67-8	1,3,5-Trimethylbenzene	218	220	218	101	100	66-125	1	25	
95-63-6	1,2,4-Trimethylbenzene	212	214	214	101	101	67-130	0	25	
100-44-7	Benzyl Chloride	430	487	488	113	113	58-151	0	25	
541-73-1	1,3-Dichlorobenzene	214	213	210	100	98	57-135	2	25	
106-46-7	1,4-Dichlorobenzene	214	215	214	100	100	56-129	0	25	
95-50-1	1,2-Dichlorobenzene	212	213	212	100	100	57-138	0	25	
120-82-1	1,2,4-Trichlorobenzene	440	497	499	113	113	50-137	0	25	
91-20-3	Naphthalene	220	230	233	105	106	50-157	0.9	25	
87-68-3	Hexachlorobutadiene	214	208	207	97	97	50-133	0	25	

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

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

Client: Stantec
Client Sample ID: MP-4
Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949
 ALS Sample ID: P2401949-004DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS01652

Date Collected: 5/15/24
Date Received: 5/16/24
Date Analyzed: 5/24/24
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37

Final Pressure (psig): 4.68

Canister Dilution Factor: 1.57

Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
	µg/m³	ppbV	µg/m³	ppbV				
Propene	2.86	1.66	2.68	1.56	2.77	6	25	
Dichlorodifluoromethane (CFC 12)	2.74	0.554	2.66	0.537	2.7	3	25	
Chloromethane	0.813	0.394	0.711	0.345	0.762	13	25	J
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	0.132	0.0500	0.133	0.0506	0.1325	0.8	25	J
Acetone	14.2	5.98	13.9	5.84	14.05	2	25	
Trichlorofluoromethane	1.28	0.229	1.22	0.217	1.25	5	25	
2-Propanol (Isopropyl Alcohol)	3.73	1.52	3.61	1.47	3.67	3	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	0.414	0.119	0.386	0.111	0.4	7	25	J
Trichlorotrifluoroethane	0.579	0.0756	0.529	0.0691	0.554	9	25	J
Carbon Disulfide	1.05	0.337	0.950	0.305	1	10	25	J
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	6.20	2.10	5.99	2.03	6.095	3	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	

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

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

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

Client: Stantec

Client Sample ID: MP-4

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-004DUP

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS01652

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37

Final Pressure (psig): 4.68

Canister Dilution Factor: 1.57

Compound	Sample Result		Duplicate Sample Result		Average µg/m³	% RPD	RPD Limit	Data Qualifier
	µg/m³	ppbV	µg/m³	ppbV				
Ethyl Acetate	21.8	6.04	21.7	6.02	21.75	0.5	25	
n-Hexane	0.394	0.112	0.361	0.102	0.3775	9	25	J
Chloroform	0.119	0.0244	0.124	0.0254	0.1215	4	25	J
Tetrahydrofuran (THF)	3.48	1.18	3.38	1.15	3.43	3	25	
1,2-Dichloroethane	0.0958	0.0237	0.0958	0.0237	0.0958	0	25	J
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	20.2	6.33	19.9	6.24	20.05	1	25	
Carbon Tetrachloride	0.433	0.0689	0.413	0.0657	0.423	5	25	J
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	1.18	0.327	1.13	0.315	1.155	4	25	
n-Heptane	0.414	0.101	0.405	0.0989	0.4095	2	25	J
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	0.440	0.107	0.418	0.102	0.429	5	25	J
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	3.93	1.04	3.85	1.02	3.89	2	25	
2-Hexanone	0.506	0.123	0.501	0.122	0.5035	1	25	J

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

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

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

Client: Stantec

Client Sample ID: MP-4

Client Project ID: Bristol VA / 182603807

ALS Project ID: P2401949

ALS Sample ID: P2401949-004DUP

Test Code: EPA TO-15

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

Analyst: Simon Cao

Sample Type: 6.0 L Silonite Canister

Test Notes:

Container ID: AS01652

Date Collected: 5/15/24

Date Received: 5/16/24

Date Analyzed: 5/24/24

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.37

Final Pressure (psig): 4.68

Canister Dilution Factor: 1.57

Compound	Sample Result		Duplicate Sample Result		Average µg/m ³	% RPD	RPD Limit	Data Qualifier
	µg/m ³	ppbV	µg/m ³	ppbV				
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	0.195	0.0287	0.201	0.0296	0.198	3	25	J
Chlorobenzene	0.146	0.0317	0.154	0.0334	0.15	5	25	J
Ethylbenzene	4.30	0.992	4.20	0.967	4.25	2	25	
m,p-Xylenes	2.71	0.623	2.71	0.625	2.71	0	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	0.885	0.208	0.876	0.206	0.8805	1	25	
o-Xylene	1.18	0.271	1.17	0.270	1.175	0.9	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	0.749	0.152	0.750	0.153	0.7495	0.1	25	J
4-Ethyltoluene	0.367	0.0748	0.358	0.0728	0.3625	2	25	J
1,3,5-Trimethylbenzene	0.546	0.111	0.529	0.108	0.5375	3	25	J
1,2,4-Trimethylbenzene	1.15	0.235	1.14	0.232	1.145	0.9	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	0.294	0.0489	0.270	0.0449	0.282	9	25	J
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	0.322	0.0614	0.323	0.0617	0.3225	0.3	25	J
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

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