

<b>RESULTS:</b> Karla Reesor PRAMP Committee	403 807 2995	<b>CLIENT SAMPLE ID</b> 986b-20170216	<b>CANISTER ID</b> 2658	<b>Matrix</b> Ambient Air	<b>Priority</b> Normal
<b>INVOICE:</b> Kenda Friesen		<b>DESCRIPTION:</b> 986b Station			
		<b>DATE SAMPLED:</b> 16-Feb-17	20:15	<b>DATE RECEIVED:</b> 23-Feb-17	
		<b>REPORT CREATED:</b> 03-Nov-17		<b>REPORT NUMBER:</b> 17020219	
				<b>VERSION:</b> Version 01	

Lab ID	Parameter	Qualifier	Result Units	RDL	Method	Analysis Date
17020219-001	1-Butene	K, T, U	< 0.19 ppmv	0.19	NA-025	23-Feb-17
17020219-001	Acetylene	K, T, U	< 0.4 ppmv	0.4	NA-025	23-Feb-17
17020219-001	n-Butane	K, T, U	< 0.4 ppmv	0.4	NA-025	23-Feb-17
17020219-001	cis-2-Butene	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	Ethane	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	Ethylacetylene	K, T, U	< 0.11 ppmv	0.11	NA-025	23-Feb-17
17020219-001	Ethylene	K, T, U	< 0.4 ppmv	0.4	NA-025	23-Feb-17
17020219-001	Isobutane	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	Isobutylene	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	Methane	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	n-Propane	K, T, U	< 0.13 ppmv	0.13	NA-025	23-Feb-17
17020219-001	Propylene	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	Propyne	K, T, U	< 0.2 ppmv	0.2	NA-025	23-Feb-17
17020219-001	trans-2-Butene	K, T, U	< 0.17 ppmv	0.17	NA-025	23-Feb-17
17020219-001	2,5-Dimethylthiophene	K, T, U	< 0.6 ppbv	0.6	NA-024	23-Feb-17
17020219-001	2-Ethylthiophene	K, T, U	< 0.4 ppbv	0.4	NA-024	23-Feb-17
17020219-001	2-Methylthiophene	K, T, U	< 0.4 ppbv	0.4	NA-024	23-Feb-17
17020219-001	3-Methylthiophene	K, T, U	< 0.6 ppbv	0.6	NA-024	23-Feb-17

**Report certified by:** Krista Gegolick, Account Coordinator

**On behalf of:** PJ Pretorius, Manager, Analysis and Testing Services

**Date:** November-03-17

**Inquiries:** (780) 632 8455

**E-mail:** EAS.Results@innotechalberta.ca

<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
986b-20170216	2658	Ambient Air	16-Feb-17	20:15
<b>DESCRIPTION:</b>	986b Station			
<b>REPORT NUMBER:</b>	17020219	<b>REPORT CREATED:</b>	03-Nov-17	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
17020219-001	Butyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Carbon disulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	23-Feb-17
17020219-001	Carbonyl sulphide		10.3	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Dimethyl disulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	23-Feb-17
17020219-001	Dimethyl sulphide	K, T, U	< 0.4	ppbv	0.4	NA-024	23-Feb-17
17020219-001	Ethyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Ethyl sulphide	K, T, U	< 0.6	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Hydrogen sulphide	K, T, U	< 0.2	ppbv	0.2	NA-024	23-Feb-17
17020219-001	Isobutyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Isopropyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Methyl mercaptan	K, T, U	< 0.4	ppbv	0.4	NA-024	23-Feb-17
17020219-001	Pentyl mercaptan	K, T, U	< 0.8	ppbv	0.8	NA-024	23-Feb-17
17020219-001	Propyl mercaptan	K, T, U	< 0.8	ppbv	0.8	NA-024	23-Feb-17
17020219-001	tert-Butyl mercaptan	K, T, U	< 0.6	ppbv	0.6	NA-024	23-Feb-17
17020219-001	Thiophene	K, T, U	< 0.4	ppbv	0.4	NA-024	23-Feb-17
17020219-001	1,1,1-Trichloroethane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,1,2,2-Tetrachloroethane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,1,2-Trichloroethane	I	0.17	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,1-Dichloroethane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,1-Dichloroethylene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	1,2,3-Trimethylbenzene	K, T, U	< 0.09	ppbv	0.09	AC-058	28-Feb-17
17020219-001	1,2,4-Trichlorobenzene	K, T, U	< 1.5	ppbv	1.5	AC-058	28-Feb-17
17020219-001	1,2,4-Trimethylbenzene	K, T, U	< 0.09	ppbv	0.09	AC-058	28-Feb-17
17020219-001	1,2-Dibromoethane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,2-Dichlorobenzene	K, T, U	< 0.06	ppbv	0.06	AC-058	28-Feb-17

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986b-20170216	2658	Ambient Air	16-Feb-17	20:15
<b>DESCRIPTION:</b>	986b Station			
<b>REPORT NUMBER:</b>	17020219	<b>REPORT CREATED:</b>	03-Nov-17	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
17020219-001	1,2-Dichloroethane	I	0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	1,2-Dichloropropane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	1,3,5-Trimethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,3-Butadiene	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1,3-Dichlorobenzene	K, T, U	< 0.6	ppbv	0.6	AC-058	28-Feb-17
17020219-001	1,4-Dichlorobenzene	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	1,4-Dioxane	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	1-Butene		0.50	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1-Hexene	I	0.09	ppbv	0.04	AC-058	28-Feb-17
17020219-001	1-Pentene		0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2,2,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2,2-Dimethylbutane		0.03	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2,3,4-Trimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2,3-Dimethylbutane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	2,3-Dimethylpentane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	2,4-Dimethylpentane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2-Methylheptane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2-Methylhexane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	2-Methylpentane		0.39	ppbv	0.02	AC-058	28-Feb-17
17020219-001	3-Methylheptane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	3-Methylhexane		0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	3-Methylpentane		0.30	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Acetone		4.7	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Acrolein	K, T, U	< 0.6	ppbv	0.6	AC-058	28-Feb-17
17020219-001	Benzene		0.29	ppbv	0.02	AC-058	28-Feb-17

**Report certified by:** Krista Gegolick, Account Coordinator

**On behalf of:** PJ Pretorius, Manager, Analysis and Testing Services

**Date:** November-03-17

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
986b-20170216	2658	Ambient Air	16-Feb-17	20:15
<b>DESCRIPTION:</b>	986b Station			
<b>REPORT NUMBER:</b>	17020219	<b>REPORT CREATED:</b>	03-Nov-17	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
17020219-001	Benzyl chloride	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Bromodichloromethane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Bromoform	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Bromomethane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Carbon disulfide	I	0.22	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Carbon tetrachloride	I	0.11	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Chlorobenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Chloroethane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Chloroform	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Chloromethane		0.60	ppbv	0.04	AC-058	28-Feb-17
17020219-001	cis-1,2-Dichloroethene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	cis-1,3-Dichloropropene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	cis-2-Butene		0.05	ppbv	0.04	AC-058	28-Feb-17
17020219-001	cis-2-Pentene	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Cyclohexane		0.10	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Cyclopentane		0.15	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Dibromochloromethane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Ethanol		1.6	ppbv	0.6	AC-058	28-Feb-17
17020219-001	Ethyl acetate	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Ethylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Freon-11	I	0.31	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Freon-113	I	0.12	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Freon-114	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Freon-12		0.64	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Hexachloro-1,3-butadiene	K, T, U	< 0.94	ppbv	0.94	AC-058	28-Feb-17

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986b-20170216	2658	Ambient Air	16-Feb-17	20:15
<b>DESCRIPTION:</b>	986b Station			
<b>REPORT NUMBER:</b>	17020219	<b>REPORT CREATED:</b>	03-Nov-17	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
17020219-001	Isobutane		1.02	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Isopentane		2.91	ppbv	0.06	AC-058	28-Feb-17
17020219-001	Isoprene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Isopropyl alcohol	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Isopropylbenzene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	m,p-Xylene		0.06	ppbv	0.06	AC-058	28-Feb-17
17020219-001	m-Diethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	m-Ethyltoluene	K, T, U	< 0.15	ppbv	0.15	AC-058	28-Feb-17
17020219-001	Methyl butyl ketone	K, T, U	< 0.94	ppbv	0.94	AC-058	28-Feb-17
17020219-001	Methyl ethyl ketone	K, T, U	< 0.6	ppbv	0.6	AC-058	28-Feb-17
17020219-001	Methyl isobutyl ketone		4.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Methyl methacrylate	K, T, U	< 0.13	ppbv	0.13	AC-058	28-Feb-17
17020219-001	Methyl tert butyl ether	I	0.13	ppbv	0.06	AC-058	28-Feb-17
17020219-001	Methylcyclohexane		0.06	ppbv	0.02	AC-058	28-Feb-17
17020219-001	Methylcyclopentane		0.42	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Methylene chloride	K, T, U	< 0.6	ppbv	0.6	AC-058	28-Feb-17
17020219-001	n-Butane		6.03	ppbv	0.06	AC-058	28-Feb-17
17020219-001	n-Decane	K, T, U	< 0.11	ppbv	0.11	AC-058	28-Feb-17
17020219-001	n-Dodecane	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	n-Heptane		0.05	ppbv	0.02	AC-058	28-Feb-17
17020219-001	n-Hexane		1.04	ppbv	0.02	AC-058	28-Feb-17
17020219-001	n-Octane	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	n-Pentane		2.6	ppbv	0.2	AC-058	28-Feb-17
17020219-001	n-Propylbenzene	K, T, U	< 0.09	ppbv	0.09	AC-058	28-Feb-17
17020219-001	n-Undecane	K, T, U	< 0.9	ppbv	0.9	AC-058	28-Feb-17

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<b>CLIENT SAMPLE ID</b>	<b>CANISTER ID</b>	<b>Matrix</b>	<b>DATE SAMPLED</b>	
986b-20170216	2658	Ambient Air	16-Feb-17	20:15
<b>DESCRIPTION:</b>	986b Station			
<b>REPORT NUMBER:</b>	17020219	<b>REPORT CREATED:</b>	03-Nov-17	<b>VERSION:</b> Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
17020219-001	Naphthalene	K, T, U	< 0.9	ppbv	0.9	AC-058	28-Feb-17
17020219-001	n-Nonane	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	o-Ethyltoluene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	o-Xylene		0.10	ppbv	0.02	AC-058	28-Feb-17
17020219-001	p-Diethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	p-Ethyltoluene	K, T, U	< 0.13	ppbv	0.13	AC-058	28-Feb-17
17020219-001	Styrene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	Tetrachloroethylene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	Tetrahydrofuran	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Toluene		0.09	ppbv	0.02	AC-058	28-Feb-17
17020219-001	trans-1,2-Dichloroethylene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	trans-1,3-Dichloropropylene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	trans-2-Butene	K, T, U	< 0.02	ppbv	0.02	AC-058	28-Feb-17
17020219-001	trans-2-Pentene	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17
17020219-001	Trichloroethylene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-17
17020219-001	Vinyl acetate	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-17
17020219-001	Vinyl chloride	K, T, U	< 0.04	ppbv	0.04	AC-058	28-Feb-17

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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

### Revision History

Order ID	Ver	Date	Reason
17020219	01	03-Nov-17	Report created

## **Methods**

<b>Method</b>	<b>Description</b>
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-024	Analysis for Reduced Sulfur Compounds in Air Samples
NA-025	Determination of Light Hydrocarbons (C1C4) in Ambient Air by Gas Chromatography Flame Ionization Detector



## Qualifiers

### Data Qualifier Translation

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B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank



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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Order Comments



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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### Sample Comments



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## ENVIRONMENTAL ANALYTICAL SERVICES

### TEST REPORT

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### **Result Comments**

*Note: Results relate only to items tested*