

**Lavington Pellet Limited Partnership
Lavington, BC**

**Total Particulate
2024 Annual Compliance Testing
RA-107369**

Our Job Number: ME2425-084

Report Author: Matt McCall
McCall Environmental



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October 30, 2024

Lavington Pellet Limited Partnership
9900 School Road
Coldstream, B.C.,
V1B 3C7

Attention: Brad Sampson
Re: Air Emission Testing of October 2-4, 2024
Permit 107369, ME2425-084

As requested our firm provided a series of air emission tests at your facility in Lavington BC.

Testing Parameters

- Dryer 1- North and South Stacks
 - o Total Particulate Testing (including Condensable Organics) State of Oregon Method 7
- Dryer 2- North and South Stacks
 - o Total Particulate Testing (including Condensable Organics) State of Oregon Method 7
- CF 12
 - o Total Particulate Testing (including Condensable Organics) State of Oregon Method 7

Key Personnel

- Report Generation: Matt McCall 250-542-5118
- Field Supervisor: Dan Lawrence 250-542-5118
- Plant Contact: Brad Sampson 250-542-1720

All testing procedures were conducted in accordance with acceptable methodologies as listed in the latest revision of the BC Field Sampling Manual. A copy of the method and/or Sampling Manual are digitally available upon request. All lab analysis for back half condensable organic fractions was analyzed by EXOVA Laboratories in Surrey BC. A copy of their report can be found in the Appendix of this report.

Results are summarized immediately following this cover letter. Please note that all results are expressed on a dry basis and reference conditions of 20 deg C, 1 atm pressure.

If you have any questions or concerns please don't hesitate to contact us at your earliest convenience.

Sincerely,

MCCALL ENVIRONMENTAL

Matt McCall

Summary of Test Results

Dryer 1

Total Particulate

Dryer 1 Summary

Parameter	Dryer 1 South	Dryer 1 North	Avg/Total	Permit	Aug-23
Test Date	03-Oct-24	03-Oct-24	N/A		N/A
Gas Temperature (°C)	32.1	42.5	37.3		38.8
% Moisture	2.94	3.52	3.23		3.18
Velocity (m/sec)	27.56	38.74	33.15		11.32
ACFM	60644	182563	243207		259054
Std. Dry Flow Rate (m ³ /sec)	25.40	73.47	98.87	132.00	108.16
Tot Part. Dry Basis ref. Cond. (mg/m ³)	6.08	2.92	4.50	15.00	6.32
Front Half Particulate (mg/m ³)	1.54	1.33	1.43		4.55
Back Half Condensibles (mg/m ³)	4.55	1.59	3.07		1.77
Mass Emission Rate (kg/hr)	0.56	0.77	1.33		2.88

*Volumetric flow rate and mass emission rates 'combined'. Concentrations/temperature/moisture 'averaged'

Results expressed on a dry basis and at reference conditions of 20 deg C and 29.92 inches Hg

Discussion:

The last time these sources were tested was in August of 2023. Results are provided in the summary tables above for comparison purposes. The plant was operating normally and field personnel did not notice anything abnormal around test testing site in relation to fly-ash or visible opacity.

Variations in test results from the 2023 year to the 2024 year in excess of 20% are negligible and can be attributed to any number of variables such as differences in production rates, material, fibre moisture, meteorological conditions, or slight differences in operating conditions, or degrees of error in testing. It should be noted that in comparing 2023 to 2024 all parameters are in compliance.

These sources are somewhat turbulent in nature but are considered as being 'non-cyclonic' and are tested with standard testing methodologies.

Dryer 2

Total Particulate

Dryer 2 Summary

Parameter	Dryer 2 South	Dryer 2 North	Avg./Total	Permit	Aug-23
Test Date	04-Oct-24	04-Oct-24	N/A		N/A
Gas Temperature (°C)	28.9	35.9	32.4		40.7
% Moisture	2.43	3.51	2.97		2.31
Velocity (m/sec)	31.58	43.28	37.43		10.54
ACFM	69476	203964	273440		251699
Std. Dry Flow Rate (m ³ /sec)	28.99	82.23	111.22	132.00	105.19
Tot Part. Dry Basis ref. Cond. (mg/m ³)	3.73	3.66	3.69	15.00	5.04
Front Half Particulate (mg/m ³)	1.58	1.86	1.72		3.17
Back Half Condensibles (mg/m ³)	2.15	1.80	1.98		1.87
Mass Emission Rate (kg/hr)	0.39	1.08	1.47		1.69

*Volumetric flow rate and mass emission rates 'combined'. Concentrations/temperature/moisture 'averaged'

Results expressed on a dry basis and at reference conditions of 20 deg C and 29.92 inches Hg

Discussion:

The last time these sources were tested was in August of 2023. Results are provided in the summary tables above for comparison purposes. The plant was operating normally and field personnel did not notice anything abnormal around test testing site in relation to fly-ash or visible opacity.

Variations in test results from the 2023 year to the 2024 year in excess of 20% are negligible and can be attributed to any number of variables such as differences in production rates, material, fibre moisture, meteorological conditions, or slight differences in operating conditions, or degrees of error in testing. It should be noted that in comparing 2023 to 2024 all parameters are in compliance.

These sources are somewhat turbulent in nature but are considered as being ‘non-cyclonic’ and are tested with standard testing methodologies.

CF-12 Cyclofilter

October 2, 2024

CF-12 Total Particulate Results

Parameter	Test 1	Test 2	Test 3	Average	Permit	10-Aug-24
Start Time	13:30	14:45	16:05	N/A		N/A
Stop Time	14:33	15:49	17:08	N/A		N/A
Gas Temperature (°C)	46.5	48.0	48.2	47.6		52.8
% Moisture	4.2	4.3	4.3	4.2		2.9
Velocity (m/sec)	19.72	19.74	19.75	19.74		19.04
ACFM	76216	76279	76327	76274		73580
Std. Dry Flow Rate (m³/sec)	30.02	29.89	29.88	29.93	34.00	28.48
Oxygen in % (dry basis)	21.00	21.00	21.00	21.00		21
Carbon Dioxide % (dry basis)	0.00	0.00	0.00	0.00		0
Tot Part. Dry Basis ref. Cond. (mg/m³)	3.10	2.63	3.47	3.06	10.00	3.09
Front Half Filterable Particulate (mg/m³)	1.16	0.61	1.43	1.07		0.93
Back Half Cond. Organics (mg/m³)	1.94	2.02	2.04	2.00		2.17
Mass Emission Rate (kg/hr)	0.34	0.28	0.37	0.33		0.32

Results expressed on a dry basis and at reference conditions of 20 deg C and 29.92 inches Hg

Discussion:

The last time these sources were tested was in August of 2023. Results from the previous testing event are included in the summary tables above for comparison purposes. The plant was operating normally and field personnel did not notice anything abnormal around test testing site in relation to fly-ash or visible opacity.

Variations in test results from the 2023 year to the 2024 year in excess of 20% are negligible and can be attributed to any number of variables such as differences in production rates, material, fibre moisture, meteorological conditions, or slight differences in operating conditions, or degrees of error in testing. It should be noted that in comparing 2023 to 2024 all parameters are in compliance.

This source is non-cyclonic and tested with standard testing methodologies.

AVERAGE OF AIR EMISSION TESTS 1 TO 3

Gas Temperature:	90 ° F	32 ° C
Moisture Content (by volume):	2.94 %	
Average Stack Gas Velocity:	27.6 ft/sec	8.4 m/sec
Total Actual Gas Flow Rate:	60644 ACFM	
Dry Gas flow Rate at Reference Conditions:	53820 SCFM	25.4 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	0.003 gr/ft ³	6.1 mg/m ³
Front Half Particulate	0.001 gr/ft ³	1.5 mg/m ³
Back Half Condensibles	0.002 gr/ft ³	4.5 mg/m ³
Mass Emission Rate	1.23 lbs/hr	0.56 kg/hr

SUMMARY OF AIR EMISSION TESTS
TEST 1:

Gas Temperature:	90 ° F	32 ° C
Moisture Content (by volume):	2.9 %	
Average Stack Gas Velocity:	27.6 ft/sec	8.4 m/sec
Total Actual Gas Flow Rate:	60812 ACFM	
Dry Gas flow Rate at Reference Conditions:	53962 SCFM	25.5 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.004 gr/ft ³	8.8 mg/m ³
Front Half Particulate	.001 gr/ft ³	2.5 mg/m ³
Back Half Condensibles	.003 gr/ft ³	6.3 mg/m ³
Mass Emission Rate	1.78 lbs/hr	0.81 kg/hr

TEST 2:

Gas Temperature:	92 ° F	33 ° C
Moisture Content (by volume):	3.0 %	
Average Stack Gas Velocity:	27.7 ft/sec	8.4 m/sec
Total Actual Gas Flow Rate:	60886 ACFM	
Dry Gas flow Rate at Reference Conditions:	53779 SCFM	25.4 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.002 gr/ft ³	3.8 mg/m ³
Front Half Particulate	.000 gr/ft ³	.6 mg/m ³
Back Half Condensibles	.001 gr/ft ³	3.2 mg/m ³
Mass Emission Rate	0.76 lbs/hr	0.35 kg/hr

TEST 3:

Gas Temperature:	87 ° F	31 ° C
Moisture Content (by volume):	3.0 %	
Average Stack Gas Velocity:	27.4 ft/sec	8.3 m/sec
Total Actual Gas Flow Rate:	60235 ACFM	
Dry Gas flow Rate at Reference Conditions:	53718 SCFM	25.4 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.002 gr/ft ³	5.6 mg/m ³
Front Half Particulate	.001 gr/ft ³	1.5 mg/m ³
Back Half Condensibles	.002 gr/ft ³	4.2 mg/m ³
Mass Emission Rate	1.14 lbs/hr	0.52 kg/hr

DATA FOR TESTS 1 TO 3

Client: Lavington Pellet Limited Partnership
Plant Location: Lavington, BC
Process: Dryer 1 South Stack
Permit Number: 107369
Job Number: ME2425-084
Pollution Control Permit: 15.0 mg/m3 33 m3/sec
Number of Tests: 3 tests
Minutes per Point: 2.5 minutes

Filter Number:
Date of Test:
Start Time:
Stop Time:
On-line Sampling Time:
Testing Personnel:
Sampler Model:
Barometric Pressure("Hg):
Static Pressure("H₂O):
%CO₂:
%O₂:
%CO:
%N₂:
Diameter of Nozzle(inches):
Meter Factor:
Type-S Pitot Tube Coefficient:
Cross Sectional Area of Stack(ft²):
Impinger Condensate(g):
Weight of Moisture in Silica Gel(g):
Weight of Filter Particulate(g):
Weight of Probe Washings(g):
Weight of Impinger Content Organic(g):
Total Weight of Particulate(g):

TEST 1	TEST 2	TEST 3
77	78	80
03-Oct-24	03-Oct-24	03-Oct-24
14:05	15:49	17:09
15:08	16:53	18:12
60	60	60
DL/KS	DL/KS	DL/KS
1012	1012	1012
28.50	28.50	28.50
-0.16	-0.16	-0.16
0.0	0.0	0.0
21.0	21.0	21.0
0.0	0.0	0.0
79.0	79.0	79.0
0.265	0.265	0.265
0.9961	0.9961	0.9961
0.83446	0.83446	0.83446
36.67	36.67	36.67
16	16	16
5.0	6.0	6.0
0.0007	0.0002	0.0009
0.0017	0.0004	0.0005
0.0060	0.0030	0.0040
0.0084	0.0036	0.0054

Sampling Data for - TEST 1
Lavington Pellet Limited Partnership
Dryer 1 South Stack
Lavington, BC

03-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.25	1.15	63	63	88	0.00	0.97
A-11	0.25	1.13	60	61	91	1.51	1.00
A-10	0.23	1.05	58	62	87	3.06	0.98
A-9	0.23	1.05	60	61	90	4.52	0.98
A-8	0.24	1.10	62	63	89	5.98	1.01
A-7	0.24	1.10	62	63	87	7.52	1.03
A-6	0.23	1.05	63	64	90	9.10	1.00
A-5	0.23	1.06	65	66	88	10.59	1.00
A-4	0.21	0.97	68	68	89	12.10	0.96
A-3	0.19	0.88	69	69	88	13.48	0.99
A-2	0.18	0.83	72	71	91	14.85	1.02
A-1	0.16	0.75	73	73	90	16.22	0.97
B-12	0.26	1.21	75	75	91	17.45	0.96
B-11	0.24	1.13	76	77	89	19.01	1.00
B-10	0.25	1.17	78	78	92	20.57	0.99
B-9	0.24	1.13	80	80	92	22.15	1.00
B-8	0.22	1.04	81	81	92	23.72	1.01
B-7	0.23	1.08	83	84	92	25.24	1.01
B-6	0.24	1.14	83	84	92	26.80	1.04
B-5	0.22	1.05	85	86	90	28.45	0.98
B-4	0.22	1.05	86	86	92	29.95	0.98
B-3	0.21	1.00	88	89	92	31.44	1.02
B-2	0.19	0.90	87	88	93	32.96	1.00
B-1	0.18	0.86	89	91	94	34.38	0.98
						35.74	

Sampling Data for - TEST 2
 Lavington Pellet Limited Partnership
 Dryer 1 South Stack
 Lavington, BC

03-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.26	1.22	78	78	92	0.00	1.01
A-11	0.24	1.12	69	80	91	1.64	1.00
A-10	0.24	1.12	70	78	91	3.20	1.04
A-9	0.23	1.08	72	80	90	4.82	0.97
A-8	0.23	1.08	72	81	91	6.30	0.99
A-7	0.23	1.08	74	80	91	7.81	1.00
A-6	0.24	1.12	75	80	91	9.34	0.98
A-5	0.22	1.03	77	79	91	10.87	1.01
A-4	0.22	1.03	77	79	91	12.39	1.00
A-3	0.20	0.94	78	80	90	13.89	0.98
A-2	0.19	0.90	80	81	91	15.30	1.07
A-1	0.17	0.80	81	81	91	16.80	1.06
B-12	0.25	1.19	85	84	92	18.21	1.01
B-11	0.24	1.13	84	83	93	19.85	0.97
B-10	0.25	1.18	86	86	93	21.38	0.96
B-9	0.23	1.09	85	86	93	22.94	0.94
B-8	0.24	1.13	85	89	93	24.40	1.04
B-7	0.24	1.14	86	90	94	26.05	0.99
B-6	0.22	1.05	87	91	94	27.62	1.03
B-5	0.22	1.05	88	88	94	29.20	0.95
B-4	0.20	0.95	89	91	94	30.65	1.01
B-3	0.20	0.95	89	90	94	32.12	0.99
B-2	0.18	0.86	88	92	94	33.57	1.01
B-1	0.19	0.81	88	93	93	34.97	0.95
						36.32	

Sampling Data for - TEST 3

03-Oct-24

Lavington Pellet Limited Partnership

Dryer 1 South Stack

Lavington, BC

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.26	1.25	88	88	88	0.00	1.02
A-11	0.25	1.19	78	85	88	1.70	1.00
A-10	0.23	1.09	80	88	90	3.31	1.01
A-9	0.24	1.14	78	89	89	4.88	1.01
A-8	0.23	1.10	81	88	86	6.48	1.04
A-7	0.23	1.11	82	90	86	8.10	0.96
A-6	0.21	1.01	83	88	84	9.60	1.08
A-5	0.22	1.06	84	91	86	11.21	0.96
A-4	0.22	1.06	85	89	85	12.68	0.95
A-3	0.2	0.96	86	91	85	14.14	0.99
A-2	0.18	0.87	86	91	85	15.59	1.01
A-1	0.16	0.77	87	92	87	17.00	1.04
B-12	0.24	1.17	88	93	85	18.37	0.99
B-11	0.25	1.21	88	94	85	19.96	1.00
B-10	0.24	1.16	89	93	86	21.61	0.99
B-9	0.23	1.11	90	95	88	23.20	1.02
B-8	0.23	1.11	90	94	87	24.81	1.00
B-7	0.24	1.16	90	95	88	26.39	1.01
B-6	0.22	1.07	91	97	88	28.02	0.99
B-5	0.22	1.07	91	96	88	29.56	1.01
B-4	0.21	1.02	93	98	90	31.12	1.00
B-3	0.21	1.02	92	97	87	32.64	1.04
B-2	0.18	0.88	93	98	88	34.22	0.98
B-1	0.17	0.82	93	98	88	35.60	0.99
						36.95	



Lavington Pellet Limited Partnership
 Dryer 1 South Stack
 Lavington Pellet Limited Partnership

Data for <i>TEST 1</i>		OVERALL ISOKINETICS - TEST 1 0.995	
Delta P:	0.222 "H ₂ O	Us avg:	27.64 ft/sec
Delta H:	1.037	ACFM:	60812 ft ³ /min
Tm avg:	533.9 °R	SDCFM:	53962 ft ³ /min
Ts avg:	550.4 °R	Vm std:	33.62 ft ³
Bwo:	0.029	Vm corr:	35.60 ft ³
Md:	28.84	Vm:	35.74 ft ³
Ms:	28.53	MF:	0.9961
Pb:	28.50 "Hg	PCON:	8.82 mg/m ³
Pm:	28.58 "Hg	ERAT:	0.81 kg/hr
Ps:	28.49 "Hg		

Data for <i>TEST 2</i>		OVERALL ISOKINETICS - TEST 2 0.999	
Delta P:	0.221 "H ₂ O	Us avg:	27.67 ft/sec
Delta H:	1.044	ACFM:	60886 ft ³ /min
Tm avg:	542.6 °R	SDCFM:	53779 ft ³ /min
Ts avg:	552.2 °R	Vm std:	33.63 ft ³
Bwo:	0.030	Vm corr:	36.18 ft ³
Md:	28.84	Vm:	36.32 ft ³
Ms:	28.52	MF:	0.9961
Pb:	28.50 "Hg	PCON:	3.78 mg/m ³
Pm:	28.58 "Hg	ERAT:	0.35 kg/hr
Ps:	28.49 "Hg		

Data for <i>TEST 3</i>		OVERALL ISOKINETICS - TEST 3 1.004	
Delta P:	0.219 "H ₂ O	Us avg:	27.38 ft/sec
Delta H:	1.059	ACFM:	60235 ft ³ /min
Tm avg:	549.7 °R	SDCFM:	53718 ft ³ /min
Ts avg:	547.0 °R	Vm std:	33.77 ft ³
Bwo:	0.030	Vm corr:	36.81 ft ³
Md:	28.84	Vm:	36.95 ft ³
Ms:	28.52	MF:	0.9961
Pb:	28.50 "Hg	PCON:	5.65 mg/m ³
Pm:	28.58 "Hg	ERAT:	0.52 kg/hr
Ps:	28.49 "Hg		

AVERAGE OF AIR EMISSION TESTS 1 TO 3

Gas Temperature:	109 ° F	43 ° C
Moisture Content (by volume):	3.52 %	
Average Stack Gas Velocity:	38.7 ft/sec	11.8 m/sec
Total Actual Gas Flow Rate:	182563 ACFM	
Dry Gas flow Rate at Reference Conditions:	155686 SCFM	73.5 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	0.001 gr/ft ³	2.9 mg/m ³
Front Half Particulate	0.001 gr/ft ³	1.3 mg/m ³
Back Half Condensibles	0.001 gr/ft ³	1.6 mg/m ³
Mass Emission Rate	1.70 lbs/hr	0.77 kg/hr

SUMMARY OF AIR EMISSION TESTS
TEST 1:

Gas Temperature:	106 ° F	41 ° C
Moisture Content (by volume):	3.5 %	
Average Stack Gas Velocity:	38.6 ft/sec	11.8 m/sec
Total Actual Gas Flow Rate:	181943 ACFM	
Dry Gas flow Rate at Reference Conditions:	155807 SCFM	73.5 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.002 gr/ft ³	3.7 mg/m ³
Front Half Particulate	.001 gr/ft ³	2.1 mg/m ³
Back Half Condensibles	.001 gr/ft ³	1.6 mg/m ³
Mass Emission Rate	2.18 lbs/hr	0.99 kg/hr

TEST 2:

Gas Temperature:	109 ° F	43 ° C
Moisture Content (by volume):	3.5 %	
Average Stack Gas Velocity:	38.9 ft/sec	11.9 m/sec
Total Actual Gas Flow Rate:	183394 ACFM	
Dry Gas flow Rate at Reference Conditions:	156278 SCFM	73.8 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.001 gr/ft ³	2.5 mg/m ³
Front Half Particulate	.000 gr/ft ³	1.0 mg/m ³
Back Half Condensibles	.001 gr/ft ³	1.6 mg/m ³
Mass Emission Rate	1.49 lbs/hr	0.68 kg/hr

TEST 3:

Gas Temperature:	110 ° F	43 ° C
Moisture Content (by volume):	3.6 %	
Average Stack Gas Velocity:	38.7 ft/sec	11.8 m/sec
Total Actual Gas Flow Rate:	182352 ACFM	
Dry Gas flow Rate at Reference Conditions:	154973 SCFM	73.1 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.001 gr/ft ³	2.5 mg/m ³
Front Half Particulate	.000 gr/ft ³	.9 mg/m ³
Back Half Condensibles	.001 gr/ft ³	1.6 mg/m ³
Mass Emission Rate	1.44 lbs/hr	0.66 kg/hr

DATA FOR TESTS 1 TO 3

Client: Lavington Pellet Limited Partnership
Plant Location: Lavington, BC
Process: Dryer 1 North Stack
Permit Number: 107369
Job Number: ME2425-084
Pollution Control Permit: 15.0 mg/m3 99 m3/sec
Number of Tests: 3 tests
Minutes per Point: 2.5 minutes

Filter Number:
Date of Test:
Start Time:
Stop Time:
On-line Sampling Time:
Testing Personnel:
Sampler Model:
Barometric Pressure("Hg):
Static Pressure("H₂O):
%CO₂:
%O₂:
%CO:
%N₂:
Diameter of Nozzle(inches):
Meter Factor:
Type-S Pitot Tube Coefficient:
Cross Sectional Area of Stack(ft²):
Impinger Condensate(g):
Weight of Moisture in Silica Gel(g):
Weight of Filter Particulate(g):
Weight of Probe Washings(g):
Weight of Impinger Content Organic(g):
Total Weight of Particulate(g):

TEST 1	TEST 2	TEST 3
74	75	79
03-Oct-24	03-Oct-24	03-Oct-24
14:05	15:30	16:49
15:07	16:33	17:52
60	60	60
DL/KS	DL/KS	DL/KS
1013	1021	1021
28.50	28.50	28.50
-0.30	-0.30	-0.30
0.0	0.0	0.0
21.0	21.0	21.0
0.0	0.0	0.0
79.0	79.0	79.0
0.258	0.258	0.258
0.9957	0.9957	0.9957
0.84295	0.84295	0.84295
78.54	78.54	78.54
28	28	27
6.0	6.0	8.0
0.0007	0.0008	0.0009
0.0020	0.0004	0.0002
0.0020	0.0020	0.0020
0.0047	0.0032	0.0031

Sampling Data for - TEST 1
Lavington Pellet Limited Partnership
Dryer 1 North Stack
Lavington, BC

03-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.32	1.65	53	53	104	0.00	1.02
A-11	0.36	1.81	54	54	101	1.65	0.99
A-10	0.37	1.84	53	53	107	3.37	1.01
A-9	0.33	1.66	54	53	101	5.13	1.03
A-8	0.40	2.02	56	54	100	6.84	0.96
A-7	0.48	2.41	60	56	106	8.60	0.96
A-6	0.52	2.64	64	60	105	10.52	1.03
A-5	0.51	2.61	66	64	105	12.69	1.02
A-4	0.50	2.56	68	65	105	14.83	1.05
A-3	0.48	2.47	70	65	103	17.02	1.05
A-2	0.31	1.59	74	68	107	19.16	1.07
A-1	0.31	1.58	73	68	110	20.93	1.00
B-12	0.37	1.90	74	70	109	22.58	0.97
B-11	0.36	1.87	75	72	105	24.32	1.02
B-10	0.39	2.03	77	74	104	26.14	1.10
B-9	0.37	1.93	80	74	107	28.20	0.99
B-8	0.46	2.39	82	75	109	30.00	0.99
B-7	0.52	2.73	85	76	106	32.02	1.03
B-6	0.54	2.81	84	78	111	34.25	0.99
B-5	0.51	2.68	85	79	108	36.43	1.11
B-4	0.49	2.58	85	80	106	38.81	1.05
B-3	0.41	2.15	86	82	110	41.03	1.09
B-2	0.33	1.72	85	82	114	43.14	1.06
B-1	0.31	1.62	85	83	112	44.98	1.08
						46.79	

Sampling Data for - TEST 2
 Lavington Pellet Limited Partnership
 Dryer 1 North Stack
 Lavington, BC

03-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.31	1.63	78	80	105	0.00	1.04
A-11	0.35	1.83	73	75	104	1.75	1.01
A-10	0.36	1.87	73	74	105	3.54	0.99
A-9	0.34	1.77	74	75	104	5.31	1.03
A-8	0.41	2.14	77	76	105	7.10	1.02
A-7	0.49	2.57	79	78	106	9.05	0.99
A-6	0.53	2.77	78	77	106	11.13	1.01
A-5	0.52	2.72	79	79	106	13.33	1.04
A-4	0.51	2.67	80	79	106	15.58	1.05
A-3	0.49	2.56	82	80	110	17.83	1.00
A-2	0.32	1.68	85	82	110	19.93	0.98
A-1	0.30	1.57	87	84	109	21.60	1.04
B-12	0.36	1.90	90	85	110	23.33	1.09
B-11	0.37	1.94	88	85	112	25.32	1.01
B-10	0.40	2.10	88	87	112	27.19	0.99
B-9	0.38	1.99	88	86	113	29.10	1.02
B-8	0.47	2.48	90	88	112	31.01	1.02
B-7	0.53	2.79	91	88	113	33.13	1.01
B-6	0.55	2.91	92	89	113	35.36	1.01
B-5	0.52	2.74	93	89	114	37.65	1.01
B-4	0.50	2.65	94	90	113	39.88	1.06
B-3	0.42	2.22	93	90	114	42.17	1.07
B-2	0.34	1.81	94	90	111	44.29	1.06
B-1	0.30	1.60	95	90	109	46.19	1.07
						48.00	

Sampling Data for - TEST 3

03-Oct-24

Lavington Pellet Limited Partnership

Dryer 1 North Stack

Lavington, BC

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.33	1.73	80	80	106	0.00	1.06
A-11	0.35	1.84	80	81	107	1.84	1.00
A-10	0.36	1.87	77	78	109	3.62	1.01
A-9	0.34	1.77	78	78	106	5.43	1.05
A-8	0.39	2.03	80	80	107	7.26	1.03
A-7	0.47	2.46	81	81	110	9.19	1.03
A-6	0.53	2.78	82	81	108	11.31	1.03
A-5	0.52	2.74	84	83	109	13.56	0.97
A-4	0.5	2.64	85	84	108	15.68	0.94
A-3	0.49	2.59	86	85	108	17.70	0.98
A-2	0.3	1.58	87	86	111	19.78	0.97
A-1	0.3	1.58	89	88	111	21.39	1.01
B-12	0.38	2.00	89	88	112	23.07	1.03
B-11	0.35	1.86	90	90	110	25.00	1.06
B-10	0.34	1.79	89	88	111	26.91	1.08
B-9	0.38	2.01	90	89	110	28.83	1.00
B-8	0.45	2.40	92	88	108	30.72	1.01
B-7	0.53	2.82	93	90	110	32.80	1.00
B-6	0.55	2.90	93	91	115	35.03	1.03
B-5	0.52	2.76	93	92	112	37.36	1.02
B-4	0.50	2.64	94	92	115	39.61	1.11
B-3	0.42	2.23	94	93	113	42.01	1.05
B-2	0.34	1.80	94	93	113	44.10	1.07
B-1	0.30	1.60	95	94	111	46.01	1.05
						47.78	



Lavington Pellet Limited Partnership
 Dryer 1 North Stack
 Lavington Pellet Limited Partnership

Data for <i>TEST 1</i>		OVERALL ISOKINETICS - TEST 1 1.028	
Delta P:	0.411 "H ₂ O	Us avg:	38.61 ft/sec
Delta H:	2.135	ACFM:	181943 ft ³ /min
Tm avg:	530.1 °R	SDCFM:	155807 ft ³ /min
Ts avg:	566.5 °R	Vm std:	44.44 ft ³
Bwo:	0.035	Vm corr:	46.59 ft ³
Md:	28.84	Vm:	46.79 ft ³
Ms:	28.46	MF:	0.9957
Pb:	28.50 "Hg	PCON:	3.73 mg/m ³
Pm:	28.66 "Hg	ERAT:	0.99 kg/hr
Ps:	28.48 "Hg		

Data for <i>TEST 2</i>		OVERALL ISOKINETICS - TEST 2 1.026	
Delta P:	0.415 "H ₂ O	Us avg:	38.92 ft/sec
Delta H:	2.205	ACFM:	183394 ft ³ /min
Tm avg:	544.1 °R	SDCFM:	156278 ft ³ /min
Ts avg:	569.3 °R	Vm std:	44.43 ft ³
Bwo:	0.035	Vm corr:	47.79 ft ³
Md:	28.84	Vm:	48.00 ft ³
Ms:	28.46	MF:	0.9957
Pb:	28.50 "Hg	PCON:	2.54 mg/m ³
Pm:	28.66 "Hg	ERAT:	0.68 kg/hr
Ps:	28.48 "Hg		

Data for <i>TEST 3</i>		OVERALL ISOKINETICS - TEST 3 1.025	
Delta P:	0.410 "H ₂ O	Us avg:	38.70 ft/sec
Delta H:	2.184	ACFM:	182352 ft ³ /min
Tm avg:	546.8 °R	SDCFM:	154973 ft ³ /min
Ts avg:	570.0 °R	Vm std:	44.00 ft ³
Bwo:	0.036	Vm corr:	47.57 ft ³
Md:	28.84	Vm:	47.78 ft ³
Ms:	28.45	MF:	0.9957
Pb:	28.50 "Hg	PCON:	2.49 mg/m ³
Pm:	28.66 "Hg	ERAT:	0.66 kg/hr
Ps:	28.48 "Hg		

Drax- Lavington Pellet Limited Partnership
Dryer 2 South Stack
Lavington, BC

04-Oct-24

Permit Number: 107369

AVERAGE OF AIR EMISSION TESTS 1 TO 3

Gas Temperature:	84 ° F	29 ° C
Moisture Content (by volume):	2.43 %	
Average Stack Gas Velocity:	31.6 ft/sec	9.6 m/sec
Total Actual Gas Flow Rate:	69476 ACFM	
Dry Gas flow Rate at Reference Conditions:	61428 SCFM	29.0 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	0.002 gr/ft ³	3.7 mg/m ³
Front Half Particulate	0.001 gr/ft ³	1.6 mg/m ³
Back Half Condensibles	0.001 gr/ft ³	2.2 mg/m ³
Mass Emission Rate	0.86 lbs/hr	0.39 kg/hr

SUMMARY OF AIR EMISSION TESTS

TEST 1:

Gas Temperature:	80 ° F	27 ° C
Moisture Content (by volume):	2.5 %	
Average Stack Gas Velocity:	31.8 ft/sec	9.7 m/sec
Total Actual Gas Flow Rate:	69913 ACFM	
Dry Gas flow Rate at Reference Conditions:	62171 SCFM	29.3 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.002 gr/ft ³	4.1 mg/m ³
Front Half Particulate	.001 gr/ft ³	1.9 mg/m ³
Back Half Condensibles	.001 gr/ft ³	2.2 mg/m ³
Mass Emission Rate	0.95 lbs/hr	0.43 kg/hr

TEST 2:

Gas Temperature:	86 ° F	30 ° C
Moisture Content (by volume):	2.4 %	
Average Stack Gas Velocity:	31.7 ft/sec	9.7 m/sec
Total Actual Gas Flow Rate:	69761 ACFM	
Dry Gas flow Rate at Reference Conditions:	61436 SCFM	29.0 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.002 gr/ft ³	4.3 mg/m ³
Front Half Particulate	.001 gr/ft ³	2.2 mg/m ³
Back Half Condensibles	.001 gr/ft ³	2.2 mg/m ³
Mass Emission Rate	0.99 lbs/hr	0.45 kg/hr

TEST 3:

Gas Temperature:	85 ° F	30 ° C
Moisture Content (by volume):	2.4 %	
Average Stack Gas Velocity:	31.2 ft/sec	9.5 m/sec
Total Actual Gas Flow Rate:	68755 ACFM	
Dry Gas flow Rate at Reference Conditions:	60675 SCFM	28.6 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.001 gr/ft ³	2.8 mg/m ³
Front Half Particulate	.000 gr/ft ³	.6 mg/m ³
Back Half Condensibles	.001 gr/ft ³	2.2 mg/m ³
Mass Emission Rate	0.64 lbs/hr	0.29 kg/hr

DATA FOR TESTS 1 TO 3

Client: Drax- Lavington Pellet Limited Partnership
Plant Location: Lavington, BC
Process: Dryer 2 South Stack
Permit Number: 107369
Job Number: ME2425-084
Pollution Control Permit: 15.0 mg/m3 33 m3/sec
Number of Tests: 3 tests
Minutes per Point: 2.5 minutes

Filter Number:
Date of Test:
Start Time:
Stop Time:
On-line Sampling Time:
Testing Personnel:
Sampler Model:
Barometric Pressure("Hg):
Static Pressure("H₂O):
%CO₂:
%O₂:
%CO:
%N₂:
Diameter of Nozzle(inches):
Meter Factor:
Type-S Pitot Tube Coefficient:
Cross Sectional Area of Stack(ft²):
Impinger Condensate(g):
Weight of Moisture in Silica Gel(g):
Weight of Filter Particulate(g):
Weight of Probe Washings(g):
Weight of Impinger Content Organic(g):
Total Weight of Particulate(g):

TEST 1	TEST 2	TEST 3
81	82	83
04-Oct-24	04-Oct-24	04-Oct-24
9:15	10:45	12:15
10:20	11:50	13:18
60	60	60
DL/KS	DL/KS	DL/KS
1012	1012	1012
27.95	27.95	27.95
-0.28	-0.28	-0.28
0.0	0.0	0.0
21.0	21.0	21.0
0.0	0.0	0.0
79.0	79.0	79.0
0.245	0.245	0.245
0.9961	0.9961	0.9961
0.83446	0.83446	0.83446
36.67	36.67	36.67
7	14	12
11.0	3.0	5.0
0.0007	0.0007	0.0002
0.0011	0.0013	0.0004
0.0020	0.0020	0.0020
0.0038	0.0040	0.0026

Sampling Data for - TEST 1
Drax- Lavington Pellet Limited Partnership
Dryer 2 South Stack
Lavington, BC

04-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.36	1.22	55	56	76	0.00	1.02
A-11	0.33	1.11	55	53	77	1.65	1.03
A-10	0.30	1.01	56	55	77	3.23	0.92
A-9	0.32	1.08	56	55	77	4.58	0.99
A-8	0.30	1.01	58	58	78	6.09	0.99
A-7	0.29	0.99	60	60	76	7.56	1.00
A-6	0.25	0.85	61	61	78	9.02	0.98
A-5	0.24	0.82	63	62	78	10.35	0.98
A-4	0.24	0.82	66	65	77	11.66	0.98
A-3	0.24	0.82	68	67	79	12.98	1.02
A-2	0.26	0.90	69	69	79	14.35	0.97
A-1	0.23	0.79	71	71	80	15.71	0.97
B-12	0.37	1.28	72	72	81	16.99	0.95
B-11	0.35	1.21	74	73	81	18.59	0.98
B-10	0.33	1.15	75	75	80	20.20	1.01
B-9	0.35	1.22	76	76	81	21.82	0.96
B-8	0.32	1.11	77	78	82	23.40	0.99
B-7	0.30	1.04	78	78	84	24.96	1.01
B-6	0.30	1.04	79	78	84	26.50	1.01
B-5	0.32	1.11	79	79	85	28.04	0.97
B-4	0.31	1.08	80	81	84	29.57	1.02
B-3	0.27	0.94	82	83	84	31.16	0.94
B-2	0.25	0.87	83	83	85	32.54	0.98
B-1	0.24	0.84	83	83	84	33.92	0.97
						35.26	

Sampling Data for - TEST 2
 Drax- Lavington Pellet Limited Partnership
 Dryer 2 South Stack
 Lavington, BC

04-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.35	1.27	84	84	82	0.00	0.99
A-11	0.33	1.20	75	84	85	1.65	1.00
A-10	0.29	1.04	76	84	85	3.25	1.00
A-9	0.30	1.08	79	85	86	4.76	0.99
A-8	0.31	1.12	80	84	86	6.28	1.00
A-7	0.30	1.09	82	86	83	7.84	1.00
A-6	0.26	0.94	84	85	84	9.39	1.03
A-5	0.24	0.87	85	85	85	10.88	1.00
A-4	0.23	0.84	87	88	85	12.26	1.04
A-3	0.24	0.88	88	89	85	13.68	1.02
A-2	0.25	0.92	91	92	85	15.10	0.96
A-1	0.25	0.88	89	91	86	16.47	0.98
B-12	0.35	1.28	91	94	87	17.86	0.95
B-11	0.35	1.28	91	92	89	19.47	1.00
B-10	0.33	1.21	91	95	89	21.15	1.04
B-9	0.34	1.24	91	94	89	22.86	0.99
B-8	0.31	1.13	91	95	89	24.50	1.00
B-7	0.28	1.02	90	95	88	26.09	0.99
B-6	0.29	1.06	91	98	89	27.58	1.02
B-5	0.30	1.09	92	98	87	29.16	0.99
B-4	0.30	1.10	93	99	87	30.72	0.98
B-3	0.28	1.02	92	98	87	32.27	0.97
B-2	0.25	0.91	94	99	87	33.75	1.03
B-1	0.23	0.84	94	98	87	35.23	0.99
						36.60	

Sampling Data for - TEST 3
 Drax- Lavington Pellet Limited Partnership
 Dryer 2 South Stack
 Lavington, BC

04-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.34	1.25	88	87	81	0.00	1.00
A-11	0.34	1.24	78	89	82	1.66	0.98
A-10	0.31	1.13	79	87	81	3.27	1.01
A-9	0.32	1.17	80	86	81	4.86	0.99
A-8	0.30	1.10	81	89	81	6.44	1.00
A-7	0.28	1.02	81	89	81	8.00	1.00
A-6	0.27	0.99	84	89	83	9.50	1.02
A-5	0.24	0.88	86	91	85	11.00	1.01
A-4	0.24	0.88	87	90	87	12.41	1.01
A-3	0.22	0.80	88	92	88	13.82	1.06
A-2	0.24	0.88	90	94	88	15.23	1.02
A-1	0.24	0.87	89	93	89	16.66	0.95
B-12	0.35	1.28	90	95	88	17.99	0.96
B-11	0.34	1.25	90	96	87	19.61	0.97
B-10	0.33	1.21	90	97	87	21.23	1.05
B-9	0.30	1.10	89	96	86	22.96	1.07
B-8	0.30	1.10	90	97	88	24.64	1.04
B-7	0.32	1.17	90	95	86	26.27	1.01
B-6	0.28	1.03	91	96	86	27.90	1.05
B-5	0.25	0.92	90	98	86	29.50	1.04
B-4	0.23	0.84	91	98	86	31.00	1.06
B-3	0.24	0.88	90	98	86	32.46	1.00
B-2	0.25	0.92	91	97	86	33.86	0.98
B-1	0.25	0.92	91	97	86	35.26	0.96
						36.64	



**Drax- Lavington Pellet Limited Partnership
 Dryer 2 South Stack
 Drax- Lavington Pellet Limited Partnership**

Data for TEST 1		OVERALL ISOKINETICS - TEST 1 0.985	
Delta P:	0.293 "H ₂ O	Us avg:	31.78 ft/sec
Delta H:	1.013	ACFM:	69913 ft ³ /min
Tm avg:	529.7 °R	SDCFM:	62171 ft ³ /min
Ts avg:	540.3 °R	Vm std:	32.79 ft ³
Bwo:	0.025	Vm corr:	35.12 ft ³
Md:	28.84	Vm:	35.26 ft ³
Ms:	28.57	MF:	0.9961
Pb:	27.95 "Hg	PCON:	4.09 mg/m ³
Pm:	28.02 "Hg	ERAT:	0.43 kg/hr
Ps:	27.93 "Hg		

Data for TEST 2		OVERALL ISOKINETICS - TEST 2 0.998	
Delta P:	0.289 "H ₂ O	Us avg:	31.71 ft/sec
Delta H:	1.055	ACFM:	69761 ft ³ /min
Tm avg:	549.4 °R	SDCFM:	61436 ft ³ /min
Ts avg:	546.3 °R	Vm std:	32.82 ft ³
Bwo:	0.024	Vm corr:	36.46 ft ³
Md:	28.84	Vm:	36.60 ft ³
Ms:	28.58	MF:	0.9961
Pb:	27.95 "Hg	PCON:	4.30 mg/m ³
Pm:	28.03 "Hg	ERAT:	0.45 kg/hr
Ps:	27.93 "Hg		

Data for TEST 3		OVERALL ISOKINETICS - TEST 3 1.010	
Delta P:	0.281 "H ₂ O	Us avg:	31.25 ft/sec
Delta H:	1.035	ACFM:	68755 ft ³ /min
Tm avg:	550.2 °R	SDCFM:	60675 ft ³ /min
Ts avg:	545.2 °R	Vm std:	32.81 ft ³
Bwo:	0.024	Vm corr:	36.50 ft ³
Md:	28.84	Vm:	36.64 ft ³
Ms:	28.58	MF:	0.9961
Pb:	27.95 "Hg	PCON:	2.80 mg/m ³
Pm:	28.03 "Hg	ERAT:	0.29 kg/hr
Ps:	27.93 "Hg		

Drax- Lavington Pellet Limited Partnership
Dryer 2 North Stack
Lavington, BC

04-Oct-24

Permit Number: 107369

AVERAGE OF AIR EMISSION TESTS 1 TO 3

Gas Temperature:	97 ° F	36 ° C
Moisture Content (by volume):	3.51 %	
Average Stack Gas Velocity:	43.3 ft/sec	13.2 m/sec
Total Actual Gas Flow Rate:	203964 ACFM	
Dry Gas flow Rate at Reference Conditions:	174238 SCFM	82.2 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	0.002 gr/ft ³	3.7 mg/m ³
Front Half Particulate	0.001 gr/ft ³	1.9 mg/m ³
Back Half Condensibles	0.001 gr/ft ³	1.8 mg/m ³
Mass Emission Rate	2.39 lbs/hr	1.08 kg/hr

SUMMARY OF AIR EMISSION TESTS

TEST 1:

Gas Temperature:	93 ° F	34 ° C
Moisture Content (by volume):	3.4 %	
Average Stack Gas Velocity:	43.3 ft/sec	13.2 m/sec
Total Actual Gas Flow Rate:	204111 ACFM	
Dry Gas flow Rate at Reference Conditions:	175665 SCFM	82.9 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.002 gr/ft ³	5.6 mg/m ³
Front Half Particulate	.002 gr/ft ³	3.8 mg/m ³
Back Half Condensibles	.001 gr/ft ³	1.8 mg/m ³
Mass Emission Rate	3.66 lbs/hr	1.66 kg/hr

TEST 2:

Gas Temperature:	97 ° F	36 ° C
Moisture Content (by volume):	3.9 %	
Average Stack Gas Velocity:	43.3 ft/sec	13.2 m/sec
Total Actual Gas Flow Rate:	204018 ACFM	
Dry Gas flow Rate at Reference Conditions:	173507 SCFM	81.9 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.001 gr/ft ³	2.3 mg/m ³
Front Half Particulate	.000 gr/ft ³	.5 mg/m ³
Back Half Condensibles	.001 gr/ft ³	1.8 mg/m ³
Mass Emission Rate	1.52 lbs/hr	0.69 kg/hr

TEST 3:

Gas Temperature:	100 ° F	38 ° C
Moisture Content (by volume):	3.3 %	
Average Stack Gas Velocity:	43.2 ft/sec	13.2 m/sec
Total Actual Gas Flow Rate:	203764 ACFM	
Dry Gas flow Rate at Reference Conditions:	173542 SCFM	81.9 m ³ /sec
Total Particulate Concentration:		
Dry Basis Actual at Reference Conditions	.001 gr/ft ³	3.1 mg/m ³
Front Half Particulate	.001 gr/ft ³	1.3 mg/m ³
Back Half Condensibles	.001 gr/ft ³	1.8 mg/m ³
Mass Emission Rate	1.99 lbs/hr	0.90 kg/hr

DATA FOR TESTS 1 TO 3

Client: Drax- Lavington Pellet Limited Partnership
Plant Location: Lavington, BC
Process: Dryer 2 North Stack
Permit Number: 107369
Job Number: ME2425-084
Pollution Control Permit: 15.0 mg/m3 99 m3/sec
Number of Tests: 3 tests
Minutes per Point: 2.5 minutes

Filter Number:
Date of Test:
Start Time:
Stop Time:
On-line Sampling Time:
Testing Personnel:
Sampler Model:
Barometric Pressure("Hg):
Static Pressure("H₂O):
%CO₂:
%O₂:
%CO:
%N₂:
Diameter of Nozzle(inches):
Meter Factor:
Type-S Pitot Tube Coefficient:
Cross Sectional Area of Stack(ft²):
Impinger Condensate(g):
Weight of Moisture in Silica Gel(g):
Weight of Filter Particulate(g):
Weight of Probe Washings(g):
Weight of Impinger Content Organic(g):
Total Weight of Particulate(g):

TEST 1	TEST 2	TEST 3
84	85	86
04-Oct-24	04-Oct-24	04-Oct-24
9:17	11:08	12:30
10:19	12:13	13:32
60	60	60
DL/KS	DL/KS	DL/KS
1013	1013	1013
27.95	27.95	27.95
-0.35	-0.35	-0.35
0.0	0.0	0.0
21.0	21.0	21.0
0.0	0.0	0.0
79.0	79.0	79.0
0.230	0.230	0.230
0.9957	0.9957	0.9957
0.84295	0.84295	0.84295
78.54	78.54	78.54
14	28	21
15.0	6.0	7.0
0.0008	0.0002	0.0010
0.0034	0.0004	0.0004
0.0020	0.0020	0.0020
0.0062	0.0026	0.0034

Sampling Data for - TEST 1
Drax- Lavington Pellet Limited Partnership
Dryer 2 North Stack
Lavington, BC

04-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.50	1.60	50	50	96	0.00	1.00
A-11	0.46	1.50	50	50	82	1.63	1.01
A-10	0.42	1.37	50	49	83	3.23	1.00
A-9	0.46	1.49	50	49	87	4.75	1.00
A-8	0.48	1.55	52	50	89	6.33	0.98
A-7	0.52	1.67	55	52	94	7.91	0.99
A-6	0.50	1.62	58	55	92	9.57	1.01
A-5	0.55	1.79	60	57	93	11.25	1.01
A-4	0.60	1.95	63	59	95	13.02	1.01
A-3	0.65	2.13	66	61	95	14.86	0.98
A-2	0.60	1.97	68	63	94	16.74	1.05
A-1	0.52	1.71	70	65	95	18.68	1.11
B-12	0.49	1.63	74	66	94	20.59	1.06
B-11	0.47	1.56	76	68	97	22.38	1.02
B-10	0.41	1.37	78	70	95	24.07	1.04
B-9	0.45	1.50	80	72	98	25.69	0.97
B-8	0.49	1.65	82	74	95	27.27	1.00
B-7	0.53	1.79	82	75	93	28.97	0.92
B-6	0.51	1.72	80	75	94	30.60	0.98
B-5	0.53	1.89	82	78	95	32.30	1.00
B-4	0.61	2.05	82	78	97	34.08	1.02
B-3	0.64	2.17	84	79	95	36.03	1.04
B-2	0.61	2.06	84	79	96	38.06	1.05
B-1	0.51	1.72	86	80	97	40.07	1.11
						42.01	

Sampling Data for - TEST 2
 Drax- Lavington Pellet Limited Partnership
 Dryer 2 North Stack
 Lavington, BC

04-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.51	1.73	69	72	94	0.00	1.04
A-11	0.47	1.59	70	69	92	1.77	1.07
A-10	0.41	1.39	70	70	93	3.52	1.08
A-9	0.45	1.53	73	71	92	5.18	1.04
A-8	0.47	1.60	75	72	93	6.86	1.02
A-7	0.51	1.74	76	75	95	8.55	0.95
A-6	0.49	1.67	78	76	95	10.19	0.97
A-5	0.54	1.85	80	77	95	11.83	1.08
A-4	0.61	2.06	81	78	98	13.76	0.95
A-3	0.64	2.19	83	80	98	15.55	1.10
A-2	0.59	2.03	84	80	97	17.69	0.96
A-1	0.48	1.65	86	83	98	19.48	1.03
B-12	0.48	1.65	86	83	100	21.22	1.03
B-11	0.46	1.59	88	84	98	22.97	1.04
B-10	0.40	1.39	88	85	97	24.70	1.06
B-9	0.44	1.52	87	86	101	26.35	1.02
B-8	0.48	1.66	89	88	100	28.01	1.03
B-7	0.54	1.87	89	88	100	29.76	1.02
B-6	0.50	1.73	90	88	98	31.60	1.01
B-5	0.55	1.92	89	87	96	33.37	1.03
B-4	0.60	2.09	91	88	97	35.25	1.06
B-3	0.63	2.20	90	89	97	37.28	1.00
B-2	0.60	2.09	91	90	98	39.25	1.02
B-1	0.55	1.92	91	90	100	41.21	1.06
						43.15	

Sampling Data for - TEST 3
 Drax- Lavington Pellet Limited Partnership
 Dryer 2 North Stack
 Lavington, BC

04-Oct-24

SAMPLE POINT	VELOCITY HEAD ("H ₂ O)	ORIFICE PRESSURE ("H ₂ O)	DRY GAS METER		STACK GAS TEMP (° F)	GAS SAMPLE VOLUME (ft ³)	ISOKINETICS
			TEMP IN (° F)	TEMP OUT (° F)			
A-12	0.52	1.80	84	84	95	0.00	1.07
A-11	0.46	1.58	79	83	96	1.91	1.06
A-10	0.40	1.38	81	83	92	3.67	1.04
A-9	0.44	1.52	83	83	95	5.29	0.99
A-8	0.46	1.59	85	84	96	6.90	1.00
A-7	0.50	1.73	86	85	96	8.57	0.98
A-6	0.48	1.66	87	86	98	10.28	1.08
A-5	0.53	1.83	88	87	100	12.13	1.08
A-4	0.60	2.07	90	88	101	14.08	1.02
A-3	0.63	2.19	91	88	99	16.03	0.97
A-2	0.58	2.00	89	88	100	17.93	1.00
A-1	0.47	1.62	93	89	102	19.82	1.02
B-12	0.49	1.69	92	89	104	21.56	1.04
B-11	0.47	1.63	94	92	102	23.36	0.98
B-10	0.41	1.42	92	90	100	25.03	1.01
B-9	0.45	1.56	95	92	103	26.64	1.01
B-8	0.49	1.70	93	91	102	28.33	0.96
B-7	0.55	1.91	96	93	103	30.00	1.08
B-6	0.51	1.78	96	91	102	32.00	1.06
B-5	0.54	1.88	96	92	102	33.89	1.03
B-4	0.55	1.92	97	92	102	35.78	1.04
B-3	0.64	2.23	95	91	102	37.71	1.03
B-2	0.60	2.09	95	91	102	39.76	1.05
B-1	0.56	1.95	95	91	101	41.79	1.01
						43.68	



**Drax- Lavington Pellet Limited Partnership
 Dryer 2 North Stack
 Drax- Lavington Pellet Limited Partnership**

Data for TEST 1

OVERALL ISOKINETICS - TEST 1 1.015

Delta P:	0.519 "H₂O	Us avg:	43.31 ft/sec
Delta H:	1.728	ACFM:	204111 ft³/min
Tm avg:	527.0 °R	SDCFM:	175665 ft³/min
Ts avg:	553.4 °R	Vm std:	39.33 ft³
Bwo:	0.034	Vm corr:	41.83 ft³
Md:	28.84	Vm:	42.01 ft³
Ms:	28.48	MF:	0.9957
Pb:	27.95 "Hg	PCON:	5.57 mg/m³
Pm:	28.08 "Hg	ERAT:	1.66 kg/hr
Ps:	27.92 "Hg		

Data for TEST 2

OVERALL ISOKINETICS - TEST 2 1.027

Delta P:	0.515 "H₂O	Us avg:	43.29 ft/sec
Delta H:	1.778	ACFM:	204018 ft³/min
Tm avg:	542.1 °R	SDCFM:	173507 ft³/min
Ts avg:	556.8 °R	Vm std:	39.27 ft³
Bwo:	0.039	Vm corr:	42.96 ft³
Md:	28.84	Vm:	43.15 ft³
Ms:	28.42	MF:	0.9957
Pb:	27.95 "Hg	PCON:	2.34 mg/m³
Pm:	28.08 "Hg	ERAT:	0.69 kg/hr
Ps:	27.92 "Hg		

Data for TEST 3

OVERALL ISOKINETICS - TEST 3 1.025

Delta P:	0.512 "H₂O	Us avg:	43.24 ft/sec
Delta H:	1.780	ACFM:	203764 ft³/min
Tm avg:	549.5 °R	SDCFM:	173542 ft³/min
Ts avg:	559.8 °R	Vm std:	39.22 ft³
Bwo:	0.033	Vm corr:	43.49 ft³
Md:	28.84	Vm:	43.68 ft³
Ms:	28.49	MF:	0.9957
Pb:	27.95 "Hg	PCON:	3.06 mg/m³
Pm:	28.08 "Hg	ERAT:	0.90 kg/hr
Ps:	27.92 "Hg		

Air Emission Monitoring Procedure **State Of Oregon Method 7**

Particulate Sampling (Napp-Baldwin Model 31 Sampler)

Particulate sampling and gas velocity measurements were conducted using a Napp-Baldwin Model 31 stack sampler in accordance with the methods specified in State of Oregon Method 7 (See Figure 1). The State of Oregon Method 7 sampling train is a modified Method 5 sample train with the addition of a non heated filter in-between the third and fourth impinger.

The air discharge was sampled isokinetically at the centroid of a series of equal area segments across the duct or stack. The stack gas velocity and temperature were recorded during the sample collection period with a calibrated pitot tube and thermocouple mounted on the sampling probe. The sample was delivered from the probe to a cyclone and a filter holder containing a 110mm Type A glass fiber filter. The gas sample was then drawn in through a series of four glass impingers which condensed and absorbed the water from the gas. A leakless vacuum pump carried the sampled gas through a dry gas test meter where the volume, temperature, and pressure were measured; and finally through a flow indicating orifice which allowed for the rapid adjustment to isokinetic sampling rates.

At the end of each test, the probe interior, cyclone and connecting tubing from the probe to the filter housing were rinsed with distilled water and acetone. These washings were evaporated to dryness and the resulting solids were weighed. The weight of the cyclone flask and the filter was used together with the weight of solids in the washings to calculate the filterable particulate concentration. The moisture content of the stack gas was determined from the quantity of water condensed in the impingers and absorbed in the silica gel.

Condensable Organics are collected in the impinger train and a rinsing procedure is employed utilizing solvents such as Hexane or Methylene Chloride in between tests. The rinsings and condensate are forwarded to a laboratory accredited to perform the analysis in accordance with the method and a copy of that report is included in the Appendix of any report issued.

O₂, CO₂, CO (where applicable)

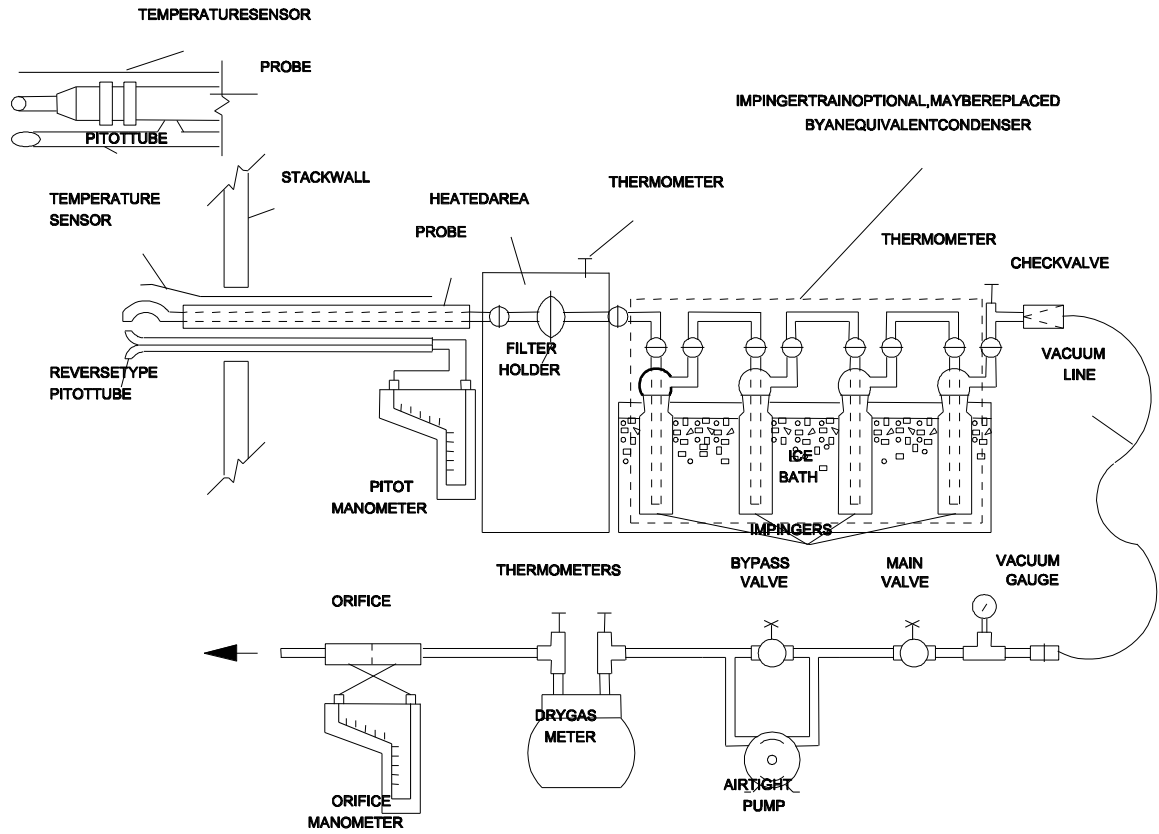
O₂, CO₂, and CO were found using either Fuji Analytical Analyzer by means of infrared and paramagnetic technology (EPA 3A) or by fyrite (EPA Method 3).

NO_x (where applicable)

NO_x was found using and API Model 252 NO_x analyzer that utilizes chemiluminescent technology. Stack gas was Samples were taken over a minimum period of three hours.

VOC's (where applicable)

Hydrocarbons were measured in accordance with EPA method 25A. Samples were drawn in one hour test runs using a total hydrocarbon analyzer that utilizes Flame Ionization Technology.



Modified EPA Method 5 Diagram (State of Oregon Method 7)- Figure 1

GENERAL CALCULATIONS

Carry out calculations, retaining at least one extra decimal figure beyond that of the acquired data. Round off figures after the final calculation. Other forms of the equations may be used as long as they give equivalent results.

Nomenclature.

- A_n = Cross-sectional area of nozzle, m^2 (ft^2).
 B_{ws} = Water vapor in the gas stream, proportion by volume.
 C_a = Acetone blank residue concentration, mg/g .
 c_s = Concentration of particulate matter in stack gas, dry basis, corrected to standard conditions, $g/dscm$ ($g/dscf$).
 I = Percent of isokinetic sampling.
 L_a = Maximum acceptable leakage rate for either a pretest leak check or for a leak check following a component change; equal to $0.00057 m^3/min$ ($0.02 cfm$) or 4 percent of the average sampling rate, whichever is less.
 L_i = Individual leakage rate observed during the leak check conducted prior to the " i^{th} " component change ($i = 1, 2, 3...n$), m^3/min (cfm).
 L_p = Leakage rate observed during the post-test leak check, m^3/min (cfm).
 m_a = Mass of residue of acetone after evaporation, mg .
 m_n = Total amount of particulate matter collected, mg .
 M_w = Molecular weight of water, $18.0 g/g\text{-mole}$ ($18.0 lb/lb\text{-mole}$).
 P_{bar} = Barometric pressure at the sampling site, $mm Hg$ ($in. Hg$).
 P_s = Absolute stack gas pressure, $mm Hg$ ($in. Hg$).
 P_{std} = Standard absolute pressure, $760 mm Hg$ ($29.92 in. Hg$).
 R = Ideal gas constant, $0.06236 \frac{[(mmHg)(m^3)]}{[(^{\circ}K)(g\text{-mole})]}$
 $\{21.85 \frac{[(in. Hg)(ft^3)]}{[(^{\circ}R)(lb\text{-mole})]}\}$.
 T_m = Absolute average DGM temperature (see Figure 5-2), $^{\circ}K$ ($^{\circ}R$).
 T_s = Absolute average stack gas temperature (see Figure 5-2), $^{\circ}K$ ($^{\circ}R$).
 T_{std} = Standard absolute temperature, $293^{\circ}K$ ($528^{\circ}R$).
 V_a = Volume of acetone blank, ml .
 V_{aw} = Volume of acetone used in wash, ml .
 V_{lc} = Total volume liquid collected in impingers and silica gel (see Figure 5-3), ml .
 V_m = Volume of gas sample as measured by dry gas meter, dcm (dcf).
 $V_{m(std)}$ = Volume of gas sample measured by the dry gas meter, corrected to standard conditions, $dscm$ ($dscf$).
 $V_{w(std)}$ = Volume of water vapor in the gas sample, corrected to standard conditions, scm (scf).
 v_s = Stack gas velocity, calculated by Method 2, Equation 2-9, using data obtained from Method 5, m/sec (ft/sec).
 W_a = Weight of residue in acetone wash, mg .
 Y = Dry gas meter calibration factor.
 ΔH = Average pressure differential across the orifice meter (see Figure 5-2), $mm H_2O$ ($in. H_2O$).
 ρ_a = Density of acetone, mg/ml (see label on bottle).
 ρ_w = Density of water, $0.9982 g/ml$ ($0.002201 lb/ml$).
 θ = Total sampling time, min .
 θ_1 = Sampling time interval, from the beginning of a run until the first component change, min .
 θ_i = Sampling time interval, between two successive component changes, beginning with the interval between the first and second changes, min .
 θ_p = Sampling time interval, from the final (n^{th}) component change until the end of the sampling run, min .
 13.6 = Specific gravity of mercury.
 60 = Sec/min .
 100 = Conversion to percent.

Average Dry Gas Meter Temperature and Average Orifice Pressure Drop.

Dry Gas Volume. Correct the sample volume measured by the dry gas meter to standard conditions (20°C, 760 mm Hg or 68°F, 29.92 in. Hg) by using Equation 5-1.

$$V_{m(\text{std})} = V_m Y \left(\frac{T_{\text{std}}}{T_m} \right) \left[\frac{P_{\text{bar}} + \frac{\Delta H}{13.6}}{P_{\text{std}}} \right]$$

$$= K_1 V_m Y \frac{P_{\text{bar}} + \left(\frac{\Delta H}{13.6} \right)}{T_m}$$

Eq. 5-1

where:

$$K_1 = 0.3858 \text{ } ^\circ\text{K/mm Hg for metric units,}$$

$$= 17.64 \text{ } ^\circ\text{R/in. Hg for English units.}$$

NOTE: Equation 5-1 can be used as written unless leakage rate observed during any of the mandatory leak checks (i.e., the post-test leak check or leak checks conducted prior to component changes) exceeds L_a . If L_p or L_i exceeds L_a , Equation 5-1 must be modified as follows:

(a) Case I. No component changes made during sampling run. In this case, replace V_m in Equation 5-1 with the expression:

$$[V_m - (L_p - L_a) \theta]$$

(b) Case II. One or more component changes made during the sampling run. In this case, replace V_m in Equation 5-1 by the expression:

$$\left[V_m - (L_1 - L_a) \theta_1 - \sum_{i=2}^n (L_i - L_a) \theta_i - (L_p - L_a) \theta_p \right]$$

and substitute only for those leakage rates (L_i or L_p) which exceed L_a .

Volume of Water Vapor.

$$V_{w(\text{std})} = \frac{V_{lc} \rho_w R T_{\text{std}}}{M_w P_{\text{std}}} = K_2 V_{lc}$$

Eq. 5-2

where:

$$K_2 = 0.001333 \text{ m}^3/\text{ml for metric units,}$$

$$= 0.04707 \text{ ft}^3/\text{ml for English units.}$$

Moisture Content.

$$B_{ws} = \frac{V_{w(std)}}{V_{m(std)} + V_{w(std)}} \quad \text{Eq. 5-3}$$

Acetone Blank Concentration.

$$C_a = \frac{m_a}{V_a \rho_a} \quad \text{Eq. 5-4}$$

Acetone Wash Blank.

$$W_a = C_a V_{aw} \rho_a \quad \text{Eq. 5-5}$$

Total Particulate Weight. Determine the total particulate matter catch from the sum of the weights obtained from Containers 1 and 2 less the acetone blank (see Figure 5-3).

Particulate Concentration.

$$C_s = (0.001 \text{ g/mg})(m_n / V_{m(std)}) \quad \text{Eq. 5-6}$$

Conversion Factors:

<u>From</u>	<u>To</u>	<u>Multiply by</u>
scf	m ³	0.02832
g/ft ³	gr/ft ³	15.43
g/ft ³	lb/ft ³	2.205 x 10 ⁻³
g/ft ³	g/m ³	35.31

Isokinetic Variation.**Calculation from Raw Data.**

$$I = \frac{100 T_s [K_3 V_{1c} + (V_m Y / T_m)(P_{bar} + \Delta H / 13.6)]}{60 \theta V_s P_s A_n} \quad \text{Eq. 5-7}$$

where:

$$K_3 = 0.003454 [(\text{mm Hg})(\text{m}^3)]/[(\text{ml})(^\circ\text{K})] \text{ for metric units,}$$

$$= 0.002669 [(\text{in. Hg})(\text{ft}^3)]/[(\text{ml})(^\circ\text{R})] \text{ for English units.}$$

Calculation from Intermediate Values.

$$I = \frac{100 T_s V_{m(\text{std})} P_{\text{std}}}{60 T_{\text{std}} v_s \theta A_n P_s (1 - B_{\text{ws}})} = \frac{K_4 T_s V_{m(\text{std})}}{P_s v_s A_n \theta (1 - B_{\text{ws}})}$$

Eq.5-8

where:

$K_4 = 4.320$ for metric units,

$= 0.09450$ for English units.

Acceptable Results. If 90 percent $\leq I \leq 110$ percent, the results are acceptable. If the PM results are low in comparison to the standard, and "I" is over 110 percent or less than 90 percent, the Administrator may opt to accept the results. Citation 4 in the Bibliography may be used to make acceptability judgments. If "I" is judged to unacceptable, reject the results, and repeat the test.

Average Stack Gas Velocity.

$$v_s = K_p C_p (\sqrt{\Delta p})_{\text{avg}} \sqrt{\frac{T_{s(\text{avg})}}{P_s M_s}}$$

Average Stack Gas Dry Volumetric Flow Rate.

$$Q_{\text{sd}} = 3,600(1 - B_{\text{ws}}) v_s A \frac{T_{\text{std}}}{T_{s(\text{avg})}} \frac{P_s}{P_{\text{std}}}$$

where:

- A = Cross-sectional area of stack, m² (ft²).
- B_{ws} = Water vapor in the gas stream (from Method 5 or Reference Method 4), proportion by volume.
- C_p = Pitot tube coefficient, dimensionless.
- K_p = Pitot tube constant,
- M_d = Molecular weight of stack gas, dry basis (see Section 3.6), g/gmole (lb/lb-mole).
- M_s = Molecular weight of stack gas, wet basis, g/g-mole (lb/lb-mole).

$$= M_d (1 - B_{\text{ws}}) + 18.0 B_{\text{ws}} \quad \text{Eq. 2-5}$$

- P_{bar} = Barometric pressure at measurement site, mm Hg (in. Hg).
- P_g = Stack static pressure, mm Hg (in. Hg).
- P_s = Absolute stack pressure, mm Hg (in. Hg),

$$= P_{\text{bar}} + P_g$$

- P_{std} = Standard absolute pressure, 760 mm Hg (29.92 in. Hg).
- Q_{sd} = Dry volumetric stack gas flow rate corrected to standard conditions, dsm³/hr (dscf/hr).
- t_s = Stack temperature, °C (°F).
- T_s = Absolute stack temperature, °K (°R).

Calibration Certificate for S-Type Pitot Tube

Date: 05-Jan-24 Barometric Pressure ("Hg): 28.25
Pitot I.D.: **248** Wind Tunnel Temperature ($^{\circ}$ F): 71.0
Nozzle: .

Wind Velocity (ft/sec)	Ref.Pitot ("H ₂ O)	S-Type Pitot ("H ₂ O)	Pitot Factor
12.83	0.03545	0.04995	0.83396
20.47	0.09017	0.12459	0.84223
41.56	0.37165	0.53192	0.82753
64.49	0.89496	1.25108	0.83732
83.83	1.51225	2.12472	0.83521
106.66	2.44834	3.47904	0.83050

Average= 0.83446

Note: The new pitot tip should be installed so that the serial number engraved is aligned directly into the gas stream.



Calibration Certificate for S-Type Pitot Tube

Date: 10-Jan-24 Barometric Pressure ("Hg): 28.25
Pitot I.D.: **294** Wind Tunnel Temperature ($^{\circ}$ F): 71.0
Nozzle: 0.250

Wind Velocity (ft/sec)	Ref.Pitot ("H ₂ O)	S-Type Pitot ("H ₂ O)	Pitot Factor
12.63	0.03431	0.04849	0.83276
21.19	0.09665	0.13581	0.83517
41.86	0.37711	0.51819	0.84455
65.41	0.92067	1.25359	0.84842
84.01	1.51873	2.06836	0.84833
105.94	2.41538	3.28817	0.84850

Average= 0.84295

Note: The new pitot tip should be installed so that the serial number engraved is aligned directly into the gas stream.



Calibration Certificate for S-Type Pitot Tube

<i>Date:</i>	05-Jan-24	<i>Barometric Pressure ("Hg):</i>	28.25
<i>Pitot I.D.:</i>	242	<i>Wind Tunnel Temperature (°F):</i>	71.0
<i>Nozzle:</i>	0.250		

<i>Wind Velocity (ft/sec)</i>	<i>Ref.Pitot ("H₂O)</i>	<i>S-Type Pitot ("H₂O)</i>	<i>Pitot Factor</i>
13.07	0.03676	0.05091	0.84120
19.56	0.08230	0.11495	0.83765
42.21	0.38343	0.53104	0.84123
64.61	0.89820	1.20776	0.85375
84.98	1.55395	2.11982	0.84763
106.66	2.44808	3.49980	0.82799

Average= 0.84158

Note: The new pitot tip should be installed so that the serial number engraved is aligned directly into the gas stream.



**CALIBRATION CERTIFICATE
DRY GAS METER**

DATE: 25-Jul-24

CONSOLE MANUF.: NAPP/MILLENNIUM MODEL 32

CONSOLE I.D.: MU 1012

PARAMETER SUMMARY	RUN #1	RUN #2	RUN #3
Ta = Ambient (WTM) Temperature (oF.)	72.0	72.0	72.0
P=Pres. Differential at WTM ("Hg)	0.0809	0.1545	0.2133
Pb= Atmospheric Pressure ("Hg)	28.15	28.15	28.15
Pv= Vapour Pressure Water at Temp. Ta ("Hg)	0.7910	0.7910	0.7910
H=Pres. Differential at Orifice	1.0	2.0	3.0
Ti= Dry Test Meter Inlet Temp. (oF.)	83.0	81.0	87.0
To= Dry Test Meter Outlet Temp. (oF.)	82.0	80.0	88.0
Ri= Initial Dry Test volume (ft3)	0.00	0.00	0.00
Rf= Final Dry Test Volume (ft3)	4.90	4.89	4.89
Vi= Initial Wet Test Volume (ft3)	0.0	0.0	0.0
Vf= Final Wet Test Volume (ft3)	5.000	5.000	5.000
Pw= Pb - (^P/13.59) "Hg	28.0691	27.9955	27.9317
Pd= Pb + (^H/13.59) "Hg	28.2236	28.2972	28.3658
Tw= Ta +460 (oR.)	532.0	532.0	532.0
Td= [(Ti + To)/2] + 460 (oR.)	542.5	540.5	547.5
Bw= Pv/Pb ("Hg)	0.0281	0.0281	0.0281
WET TEST METER FACTOR (WTMF)	0.9922	0.9922	0.9922
ated Y Value)(WTMF)	0.9979	0.9911	0.9992
Y (MEAN)(WTMF) =	0.9961		

N.R. MCCALL & ASSOCIATES LTD.

Calibrating Technician Signature:



ORIFICE METER CALIBRATION

DATE: July 25 /24

CONSOLE I.D. MU 1012

	RUN 1	RUN 2	RUN 3
MD= mol. wt. dry air	28.967	28.967	28.967
Pb=bar. pressure "Hg	28.15	28.15	28.15
Y=gas meter factor	0.9979	0.9979	0.9911
Delta H=	0.5	1	1.5
Ri=int. gas meter vol.	0	0	0
Rf=final gas meter vol.	2.11	2.99	3.68
min. samp	5	5	5
Qm=Y(Rf-Ri)/^T(FT3/MIN)	0.4211138	0.5967442	0.7294496
To=meter outlet Temp (oF)	87	88	89
Tm=meter out temp. (oR)	547	548	549
Pm=Pb + ^H	28.186792	28.2235835	28.2603753
SQRT(Tm/Pm*H/Md)	0.5787674	0.81871442	1.00297724
Ko=orifice const.	0.7276045	0.72887955	0.7272843

Ko MEAN = 0.7279228

Ko*4*144= 419.28353

McCALL ENVIRONMENTAL LTD.

Calibrating Technician Signature:



ORIFICE METER CALIBRATION

DATE: July 25 /24

CONSOLE I.D. MU 1012

	RUN 4	RUN 5	RUN 6
MD= mol. wt. dry air	28.967	28.967	28.967
Pb=bar. pressure "Hg	28.15	28.15	28.15
Y=gas meter factor	0.9911	0.9992	0.9992
Delta H=	2	2.5	3
Ri=int. gas meter vol.	0	0	0
Rf=final gas meter vol.	4.28	4.79	5.24
min. samp	5	5	5
Qm=Y(Rf-Ri)/^T(FT3/MIN)	0.8483816	0.9572336	1.0471616
To=meter outlet Temp (oF)	90	91	93
Tm=meter out temp. (oR)	550	551	553
Pm=Pb + ^H	28.297167	28.3339588	28.3707506
SQRT(Tm/Pm*H/Md)	1.1584388	1.29550894	1.42081005
Ko=orifice const.	0.7323491	0.73888614	0.73701731

Ko MEAN = 0.7360842

Ko*4*144= 423.98448

McCALL ENVIRONMENTAL LTD.

Calibrating Technician Signature:



**CALIBRATION CERTIFICATE
DRY GAS METER**

DATE: Aug 23/24

CONSOLE MANUF.: NAPP/MILLENNIUM MODEL 32

CONSOLE I.D.: MU 1013

PARAMETER SUMMARY	RUN #1	RUN #2	RUN #3
Ta = Ambient (WTM) Temperature (oF.)	70.0	70.0	70.0
P=Pres. Differential at WTM ("Hg)	0.0654	0.1250	0.1839
Pb= Atmospheric Pressure ("Hg)	27.65	27.65	27.65
Pv= Vapour Pressure Water at Temp. Ta ("Hg)	0.7390	0.7390	0.7390
H=Pres. Differential at Orifice	1.0	2.0	3.0
Ti= Dry Test Meter Inlet Temp. (oF.)	84.0	73.0	89.0
To= Dry Test Meter Outlet Temp. (oF.)	77.0	68.0	83.0
Ri= Initial Dry Test volume (ft3)	0.00	14.68	0.00
Rf= Final Dry Test Volume (ft3)	4.89	19.49	4.95
Vi= Initial Wet Test Volume (ft3)	0.0	0.0	0.0
Vf= Final Wet Test Volume (ft3)	5.000	5.000	5.000
Pw= Pb - (^P/13.59) "Hg	27.5846	27.5250	27.4661
Pd= Pb + (^H/13.59) "Hg	27.7236	27.7972	27.8708
Tw= Ta +460 (oR.)	530.0	530.0	530.0
Td= [(Ti + To)/2] + 460 (oR.)	540.5	530.5	546.0
Bw= Pv/Pb ("Hg)	0.0267	0.0267	0.0267
WET TEST METER FACTOR (WTMF)	0.9922	0.9922	0.9922
ated Y Value)(WTMF)	1.0019	0.9949	0.9903
Y (MEAN)(WTMF) =	0.9957		

N.R. MCCALL & ASSOCIATES LTD.

Calibrating Technician Signature:



ORIFICE METER CALIBRATION

DATE: Aug 23/24

CONSOLE I.D. MU 1013

	RUN 1	RUN 2	RUN 3
MD= mol. wt. dry air	28.967	28.967	28.967
Pb=bar. pressure "Hg	27.65	27.65	27.65
Y=gas meter factor	1.0019	1.0019	0.9949
Delta H=	0.5	1	1.5
Ri=int. gas meter vol.	0	0	0
Rf=final gas meter vol.	1.87	2.7	3.33
min. samp	5	5	5
Qm=Y(Rf-Ri)/^T(FT3/MIN)	0.3747106	0.541026	0.6626034
To=meter outlet Temp (oF)	86	87	89
Tm=meter out temp. (oR)	546	547	549
Pm=Pb + ^H	27.686792	27.7235835	27.7603753
SQRT(Tm/Pm*H/Md)	0.583436	0.82531022	1.01196939
Ko=orifice const.	0.642248	0.65554259	0.65476625

Ko MEAN = 0.6508523

Ko*4*144= 374.89091

McCALL ENVIRONMENTAL LTD.

Calibrating Technician Signature:



ORIFICE METER CALIBRATION

DATE: Aug 23/24

CONSOLE I.D. MU 1013

	RUN 4	RUN 5	RUN 6
MD= mol. wt. dry air	28.967	28.967	28.967
Pb=bar. pressure "Hg	27.65	27.65	27.65
Y=gas meter factor	0.9949	0.9903	0.9903
Delta H=	2	2.5	3
Ri=int. gas meter vol.	0	0	0
Rf=final gas meter vol.	3.92	4.38	4.81
min. samp	5	5	5
Qm=Y(Rf-Ri)/^T(FT3/MIN)	0.7800016	0.8675028	0.9526686
To=meter outlet Temp (oF)	91	92	94
Tm=meter out temp. (oR)	551	552	554
Pm=Pb + ^H	27.797167	27.8339588	27.8707506
SQRT(Tm/Pm*H/Md)	1.1698731	1.30827877	1.43479356
Ko=orifice const.	0.6667403	0.66308712	0.66397608

Ko MEAN = 0.6646012

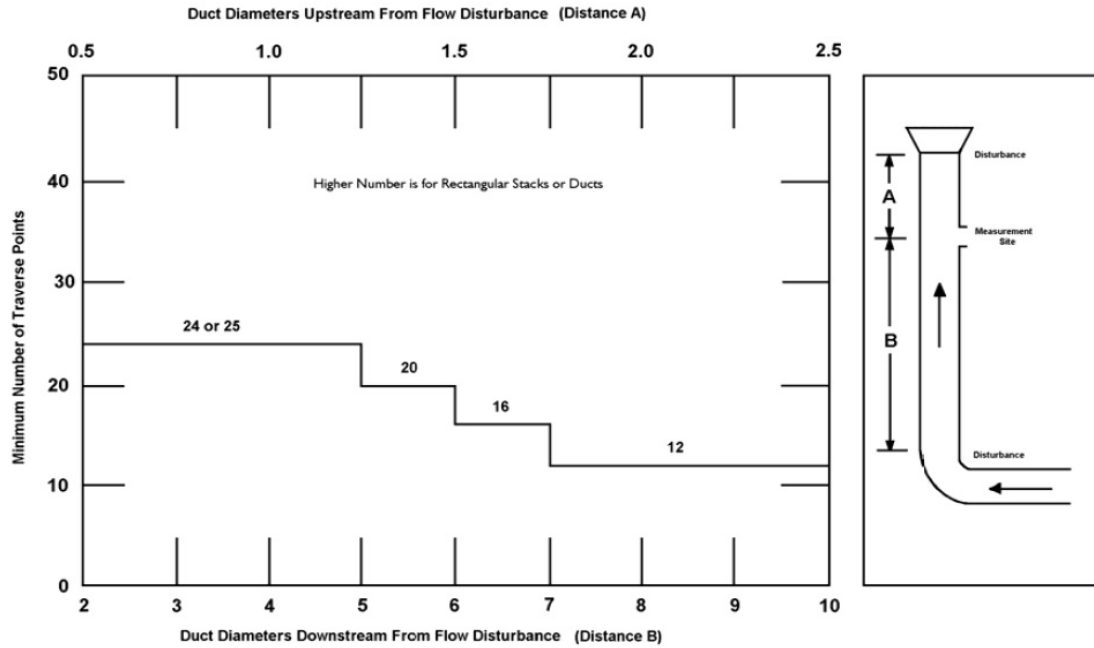
Ko*4*144= 382.81028

McCALL ENVIRONMENTAL LTD.

Calibrating Technician Signature:



Site Diagram & Sample Point Selection



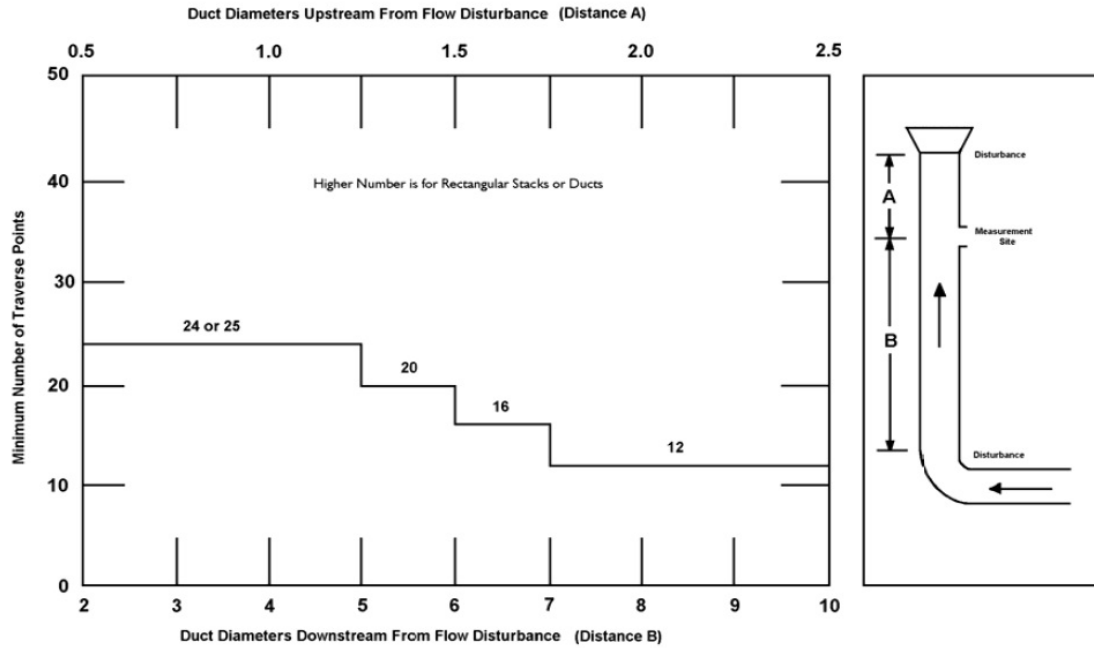
Client: [Pinnacle Pellet Lavington](#)
 Source: [Dryers 1 & 2 North Stacks](#)
 Pollution Abatement Equipment:
 Duct Diameters Up (A): >2
 Duct Diameters Down (B): 2
 Area of Stack (ft): 78.54
 Stack Diameter (in): 120
 Zero (in): 4
 Number of Points: 24

Traverse Points (in):	
PT-1	2.52
PT-2	8.04
PT-3	14.16
PT-4	21.24
PT-5	30
PT-6	42.6
PT-7	77.4
PT-8	90
PT-9	98.76
PT-10	105.84
PT-11	111.96
PT-12	117.48

Cyclonic Angle: 5°



Site Diagram & Sample Point Selection



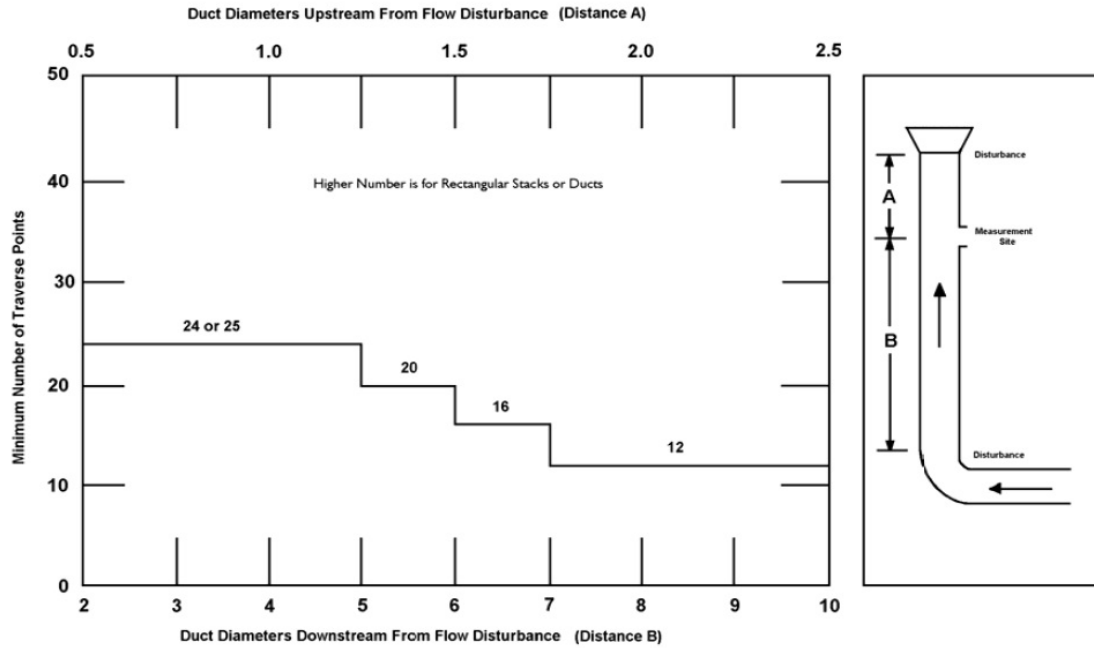
Client: **Pinnacle Pellet Lavington**
 Source: **Dryers 1 & 2 South Stacks**
 Pollution Abatement Equipment:
 Duct Diameters Up (A): **2**
 Duct Diameters Down (B): **3**
 Area of Stack (ft): **36.67**
 Stack Diameter (in): **82**
 Zero (in): **4**
 Number of Points: **24**

Traverse Points (in):	
PT-1	1.72
PT-2	5.49
PT-3	9.68
PT-4	14.52
PT-5	20.5
PT-6	29.1
PT-7	52.89
PT-8	61.5
PT-9	67.49
PT-10	72.32
PT-11	76.51
PT-12	80.28

Cyclonic Angle: **5°**



Site Diagram & Sample Point Selection



Client: Pinnacle Pellet Lavington
 Source: CF-12 Stack
 Pollution Abatement Equipment:
 Duct Diameters Up (A): >2
 Duct Diameters Down (B): 7
 Area of Stack (ft): 19.63
 Stack Diameter (in): 60
 Zero (in): 4
 Number of Points: 12

Traverse Points (in):
 PT-1 1.26
 PT-2 4.02
 PT-3 7.08
 PT-4 10.62
 PT-5 15
 PT-6 21.3
 PT-7 38.7
 PT-8 45
 PT-9 49.38
 PT-10 52.92
 PT-11 55.98
 PT-12 58.74

Cyclonic Angle: 5°



Lavington Pellet Limited Partnership

October 2, 2024

Daily production rate during stack test 37.7 MT/hr

Average for the previous month 36.6 MT/hr

90th percentile production rate 45.4 MT/hr

*Dryer exit gas temperature during stack test Included in Stack Test

October 3, 2024

Daily production rate during stack test 36.9 MT/hr

Average for the previous month 36.6 MT/hr

90th percentile production rate 45.4 MT/hr

*Dryer exit gas temperature during stack test Included in Stack Test

October 4, 2024

Daily production rate during stack test 36.6 MT/hr

Average for the previous month 36.6 MT/hr

90th percentile production rate 45.4 MT/hr

*Dryer exit gas temperature during stack test Included in Stack Test

Client: DRAX			Console: 1012		Pb: 28.50 "Hg		Filter: 77		RAP %:		Date: OCT 3/24		
Process: DRYER / SOUTH ST.			Mf: .9961		Static: -.16 "H ₂ O		Silica: 77		+		%CO ₂	%O ₂	CO
Test: 1 - COND.			K ₀ : .7279		Ps: 28.49				+		0	21	
Personnel: OL KS			Pitot: 243		Pm: 28.61		Total Vol: 316 ml						
Start time: 2:05			C _p : .83446		Area: 36.67 ft ²		Start Vol: 300 ml						
Stop time: 3:08			Nozzle: .265		Bwo: .03		Plant Type:						Mix:
Permitt #			up strm		down strm		Pollution Abatement Equip:						
Location: LAVINGTON, BC			Start Leakage Rate@ 1.5 "Hg .001 ft ³ /min		Burner:								
Job #: ME 2425-084			Finish Leakage Rate@ 1.5 "Hg .004 ft ³ /min		Load:								Fuel Type:
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= 2.5 ZERO=		
			IN	OUT									
A-12	.25	1.15	63	63	88	0.00	242	105D	145.	2			
11	.25	1.13	60	61	91	1.51							
10	.23	1.05	58	62	87	3.06							
9	.23	1.05	60	61	90	4.52				2			
8	.24	1.10	62	63	89	5.98							
7	.24	1.10	62	63	87	7.52	256						
6	.23	1.05	63	64	90	9.10							
5	.23	1.06	65	66	88	10.59				2			
4	.21	.97	68	68	89	12.10							
3	.19	.88	69	69	88	13.48							
2	.18	.83	72	71	91	14.85	269						
1	.16	.75	73	73	90	16.22				2			
B-12	.26	1.21	75	75	91	17.45							
11	.24	1.13	76	77	89	19.01							
10	.25	1.17	78	78	92	20.57							
9	.24	1.13	80	80	92	22.15				2			
8	.22	1.04	81	81	92	23.72	264						
7	.23	1.08	83	84	92	25.24							
6	.24	1.14	83	84	92	26.80							
5	.22	1.05	85	86	90	28.45				2			
4	.22	1.05	86	86	92	29.95							
3	.21	1.00	88	89	92	31.44							
2	.19	.90	87	88	93	32.96	267			2			
1	.18	.86	89	91	94	34.38							
						35.74							

Client: DRAY		Console: 1012		Pb: 28.50 "Hg		Filter: 78		RAP %:		Date: OCT 3/24		
Process: DRYER 1, SOUTH STALK		Mf: .99.61		Static: -.16 "H ₂ O		Silica: 78		+		%CO ₂	%O ₂	CO
Test: 2- COND-		K _o : .7279		Ps: 28.49				+		0	21	
Personnel: BL KS		Pitot: 248		Pm: 28.61		Total Vol: 316 ml						
Start time: 3:49		C _p : .83446		Area: 36.67 ft ²		Start Vol: 300 ml						
Stop time: 4:53		Nozzle: .265		Bwo: .03		Plant Type:				Mix:		
Permitt #		up strm		down strm		Pollution Abatement Equip:						
Location:		Start Leakage Rate@ 15 "Hg .006 ft ³ /min		Burner:								
Job #:		Finish Leakage Rate@ 15 "Hg .009 ft ³ /min		Load:						Fuel Type:		
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= 2.5 ZERO=	
			IN	OUT								
A-12	.26	1.22	78	78	92	0.00	242	1000	ACT	2		
11	.24	1.12	69	80	91	1.64						
10	.24	1.12	70	78	91	3.20						
9	.23	1.08	72	80	90	4.82						
8	.23	1.08	72	81	91	6.30				2		
7	.23	1.08	74	80	91	7.81	248					
6	.24	1.12	75	80	91	9.34						
5	.22	1.03	77	79	91	10.87						
4	.22	1.03	77	79	91	12.39				2		
3	.20	.94	78	80	90	13.89						
2	.19	.90	80	81	91	15.30						
1	.17	.80	81	81	91	16.80	265					
B-12	.25	1.19	85	84	92	18.21						
11	.24	1.13	84	83	93	19.85				2		
10	.25	1.18	86	86	93	21.58						
9	.23	1.09	85	86	93	22.94						
8	.24	1.13	85	89	93	24.40	269					
7	.24	1.14	86	90	94	26.05						
6	.22	1.05	87	91	94	27.62				2		
5	.22	1.05	88	88	94	29.20						
4	.20	.95	89	91	94	30.65						
3	.20	.95	89	90	94	32.12	269					
2	.18	.86	88	92	94	33.57				2		
1	.17	.81	88	93	93	34.97						
						36.32						

Client: DRAX		Console: 1012		Pb: 28.50 "Hg		Filter: 80		RAP %:		Date: Oct 3/24	
Process: DRYER 1, SOUTH ST.		Mf: .9961		Static: -.16 "H ₂ O		Silica: 80		+		%CO ₂	
Test: 3 - COND.		K _o : .7279		Ps: 28.49				+		%O ₂	
Personnel: 02 KS		Pitot: 248		Pm: 28.61		Total Vol: 316 ml				CO	
Start time: 5:09		C _p : .83446		Area: 36.67 ft ²		Start Vol: 300 ml					
Stop time: 6:12		Nozzle: .265		Bwo: .03		Plant Type:				Mix:	
Permitt #		up strm		down strm		Pollution Abatement Equip:					
Location:		Start Leakage Rate@ 15 "Hg .007 ft ³ /min		Burner:							
Job #:		Finish Leakage Rate@ 15 "Hg .002 ft ³ /min		Load:						Fuel Type:	
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT-ZERO=
			IN	OUT							
A-12	.26	1.25	88	88	88	0.00	241	1000	1000	2	
11	.25	1.19	78	85	88	1.70					
10	.23	1.09	80	88	90	3.31					
9	.24	1.14	79	89	89	4.88					
8	.23	1.10	81	88	86	6.48				2	
7	.23	1.11	82	90	86	8.10	244				
6	.21	1.01	83	88	84	9.60					
5	.22	1.06	84	91	86	11.21					
4	.22	1.06	85	89	85	12.68				2	
3	.20	.96	86	91	85	14.14					
2	.18	.87	86	91	85	15.59	261				
1	.16	.77	87	92	87	17.00					
B-12	.24	1.17	88	93	85	18.37				2	
11	.25	1.21	88	94	85	19.96					
10	.24	1.16	89	93	86	21.61					
9	.23	1.11	90	95	88	23.20	261				
8	.23	1.11	90	94	87	24.81				2	
7	.24	1.16	90	95	88	26.39					
6	.22	1.07	91	97	88	28.02					
5	.22	1.07	91	96	88	29.56					
4	.21	1.02	93	98	90	31.12	266				
3	.21	1.02	92	97	87	32.64				2	
2	.18	.88	93	98	88	34.22					
1	.17	.82	93	98	88	35.60					
						36.95					

Client: <i>Drey</i>		Console: 1013		Pb: 28.50 "Hg		Filter: 74		RAP %:		Date: <i>Oct 31 24</i>	
Process: <i>Dryer 1 North stack</i>		Mf: 0.9957		Static: -.30 "H ₂ O		Silica: 74		+		%CO ₂	
Test: <i>Cond</i>		K _o : 0.6509		Ps: 28.48				+		%O ₂	
Personnel: <i>KJ IDL</i>		Pitot: 294		Pm: 28.61		Total Vol: 328 ml				CO	
Start time: <i>2.05</i>		C _p : 84295		Area: 78.54 ft ²		Start Vol: 300 ml					
Stop time: <i>3.07</i>		Nozzle: .258		Bwo: .03		Plant Type:				Mix:	
Permitt#		up strm		down strm		Pollution Abatement Equip:					
Location: <i>Lavinton, BC</i>		Start Leakage Rate@ 15 "Hg .002 ft ³ /min		Burner:							
Job #: <i>ME2425 - 084</i>		Finish Leakage Rate@ 15 "Hg .006 ft ³ /min		Load:						Fuel Type:	
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT-ZERO=
			IN	OUT							
A 12	.32	1.65	53	53	104	0.00	270	±LED	HOT	4	
11	.36	1.81	54	54	101	1.65					
10	.37	1.84	53	53	107	3.37					
9	.33	1.66	54	53	101	5.13					
8	.40	2.02	56	54	100	6.84				3	
7	.48	2.41	60	56	106	8.60					
6	.52	2.64	64	60	105	10.52					
5	.51	2.61	66	64	105	12.69					
4	.50	2.56	68	65	105	14.83					
3	.48	2.47	70	65	103	17.02					
2	.31	1.59	74	68	107	19.16				5	
1	.31	1.58	73	68	110	20.93					
B 12	.37	1.90	74	70	109	22.58					
11	.36	1.87	75	72	105	24.32					
10	.39	2.03	77	74	104	26.14					
9	.37	1.93	80	74	107	28.20				5	
8	.46	2.39	82	75	109	30.00					
7	.52	2.73	85	76	106	32.02					
6	.54	2.81	84	78	111	34.25					
5	.51	2.68	85	79	108	36.43					
4	.49	2.58	85	80	106	38.81				5	
3	.41	2.15	86	82	110	41.03					
2	.33	1.72	85	82	114	43.14					
1	.31	1.62	85	83	112	44.98					
						46.79					

Client: <i>Drax Lavington</i>			Console: <i>1013</i>		Pb: <i>28.50</i>		"Hg	Filter: <i>75</i>	RAP %:		Date: <i>Oct 3/24</i>		
Process: <i>Dryer 1 North Stack</i>			Mf: <i>.9957</i>		Static: <i>-30</i>		"H ₂ O	Silica: <i>75</i>	+	%CO ₂	%O ₂	CO	
Test: <i>2' cond</i>			K ₀ : <i>6509</i>		Ps: <i>28.48</i>				+	<i>0</i>	<i>21</i>	<i>/</i>	
Personnel: <i>KS / DL</i>			Pitot: <i>0.294</i>		Pm: <i>28.61</i>			Total Vol: <i>328</i> ml					
Start time: <i>3:30</i>			C _p : <i>2.84295</i>		Area: <i>78.54</i> ft ²			Start Vol: <i>300</i> ml					
Stop time: <i>4:33</i>			Nozzle: <i>.258</i>		Bwo: <i>.03</i>			Plant Type:	Mix:				
Permitt #			up strm		down strm			Pollution Abatement Equip:					
Location: <i>Lavington, BC</i>			Start Leakage Rate@ <i>15</i> "Hg, <i>.004</i> ft ³ /min				Burner:						
Job #:			Finish Leakage Rate@ <i>15</i> "Hg, <i>.006</i> ft ³ /min				Load:				Fuel Type:		
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= <i>2.5</i> ZERO=		
			IN	OUT									
A 12	.31	1.63	78	80	105	0.06	249	100D	Hot.	4			
11	.35	1.83	73	75	104	1.75							
10	.36	1.87	73	74	105	3.54							
9	.34	1.77	74	75	104	5.31							
8	.41	2.14	77	76	105	7.10							
7	.49	2.57	79	78	106	9.05	248			4			
6	.53	2.77	78	77	106	11.13							
5	.52	2.72	79	79	106	13.33							
4	.51	2.67	80	79	106	15.58				5			
3	.49	2.56	82	80	110	17.83							
2	.32	1.68	85	82	110	19.93							
1	.30	1.57	87	84	109	21.60	250						
B 12	.36	1.90	90	85	110	23.33							
11	.37	1.94	88	85	112	25.32				5			
10	.46	2.10	88	87	112	27.19							
9	.38	1.99	88	86	113	29.10							
8	.47	2.48	90	88	112	31.01							
7	.53	2.79	91	88	113	33.13	260			6			
6	.55	2.91	92	89	113	35.36							
5	.52	2.74	93	89	114	37.65							
4	.50	2.65	94	90	113	39.89							
3	.42	2.22	93	90	114	42.17							
2	.34	1.81	94	90	111	44.29							
1	.30	1.60	95	90	109	46.19							
						48.00							

Client: <i>Draser</i>			Console: <i>1013</i>		Pb: <i>28.50</i> "Hg		Filter: <i>79</i>		RAP %:		Date: <i>Oct 31 24</i>			
Process: <i>Dryer 1 North Stack</i>			Mf: <i>0.9957</i>		Static: <i>-30</i> "H ₂ O		Silica: <i>79</i>		+		%CO ₂		%O ₂	CO
Test: <i>3 Cond</i>			K _o : <i>0.6509</i>		Ps: <i>28.48</i>				+		<i>0</i>		<i>21</i>	
Personnel: <i>KS/PL</i>			Pitot: <i>0.294</i>		Pm: <i>28.61</i>		Total Vol: <i>327</i> ml							
Start time: <i>4:49</i>			Cp: <i>0.84295</i>		Area: <i>78.54</i> ft ²		Start Vol: <i>300</i> ml							
Stop time: <i>5:52</i>			Nozzle: <i>0.258</i>		Bwo: <i>03</i>		Plant Type:						Mix:	
Permitt #			up strm		down strm		Pollution Abatement Equip:							
Location:			Start Leakage Rate@ <i>15</i> "Hg, <i>.004</i> ft ³ /min		Burner:									
Job #:			Finish Leakage Rate@ <i>15</i> "Hg, <i>.004</i> ft ³ /min		Load:								Fuel Type:	
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= <i>2.5</i> ZERO=			
			IN	OUT										
A 12	.33	1.73	80	80	106	00.00	256	105	Hot	4				
11	.35	1.84	80	81	107	1.84								
10	.36	1.87	77	78	109	3.62								
9	.34	1.77	78	78	106	5.43								
8	.39	2.03	80	80	107	7.26								
7	.47	2.46	81	81	110	9.19	255							
6	.53	2.78	82	81	108	11.31				4				
5	.52	2.74	84	83	109	13.56								
4	.50	2.64	85	84	108	15.68								
3	.49	2.59	86	85	108	17.70								
2	.30	1.58	87	86	111	19.78	252							
1	.30	1.58	89	88	111	21.39								
B 12	.38	2.00	89	88	112	23.07								
11	.35	1.86	90	90	110	25.00								
10	.34	1.79	89	88	111	26.91								
9	.38	2.01	90	89	110	28.83								
8	.45	2.40	92	88	108	30.72	256			6				
7	.53	2.82	93	90	110	32.80								
6	.55	2.90	93	91	115	35.03								
5	.52	2.76	93	92	112	37.36								
4	.50	2.64	94	92	115	39.69								
3	.42	2.23	94	93	113	42.01								
2	.34	1.80	94	93	113	44.10								
1	.30	1.60	95	94	111	46.01								
						47.78								

Client: <u>-DRAY</u>			Console: <u>1012</u>		Pb: <u>27.95</u> "Hg	Filter: <u>81</u>	RAP %:	Date: <u>OCT 4/24</u>			
Process: <u>DRYER 2, SMITH ST.</u>			Mf: <u>.9961</u>		Static: <u>-.28</u> "H ₂ O	Silica: <u>81</u>	+	%CO ₂	%O ₂	CO	
Test: <u>1-COND</u>			K ₀ : <u>.7279</u>		Ps: <u>27.93</u>		+	<u>0</u>	<u>21</u>		
Personnel: <u>AL KS</u>			Pitot: <u>248</u>		Pm: <u>28.06</u>	Total Vol: <u>307</u> ml					
Start time: <u>9:15</u>			C _P : <u>.83446</u>		Area: <u>36.67</u> ft ²	Start Vol: <u>300</u> ml					
Stop time: <u>10:20</u>			Nozzle: <u>.245</u>		Bwo: <u>.03</u>	Plant Type:	Mix:				
Permitt #			up strm		down strm	Pollution Abatement Equip:					
Location: <u>LAVINGTON, BC</u>			Start Leakage Rate@ <u>15</u> "Hg <u>.00</u> ft ³ /min			Burner:					
Job #: <u>ME 2425-084</u>			Finish Leakage Rate@ <u>15</u> "Hg <u></u> ft ³ /min			Load:				Fuel Type:	
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= <u>2.5</u> ZERO=
			IN	OUT							
A-12	.36	1.22	55	56	76	0.00	255	ICED	140T	2	
11	.33	1.11	55	53	77	1.05					
10	.30	1.01	56	55	77	3.23					
9	.32	1.08	56	55	77	4.58				2	
8	.30	1.01	58	58	78	6.09					
7	.29	.99	60	60	76	7.56	266				
6	.25	.85	61	61	78	9.02					
5	.24	.82	63	62	78	10.35				2	
4	.24	.82	66	65	77	11.66					
3	.24	.82	68	67	79	12.98					
2	.26	.90	69	69	79	14.35	268			2	
1	.23	.79	71	71	80	15.71					
B-12	.37	1.28	72	72	81	16.99					
11	.35	1.21	74	73	81	18.59				2	
10	.33	1.15	75	75	80	20.20					
9	.35	1.22	76	76	81	21.82	268				
8	.32	1.11	77	78	82	23.40				2	
7	.30	1.04	78	78	84	24.96					
6	.30	1.04	79	78	84	26.50					
5	.32	1.11	79	79	85	28.04				2	
4	.31	1.08	80	81	84	29.57					
3	.27	.94	82	83	84	31.16	267				
2	.25	.87	83	83	85	32.54					
1	.24	.84	83	83	84	33.92					
						35.26					

Client: DRAX			Console: 1012		Pb: 27.95 "Hg		Filter: 82		RAP %:		Date: Oct 4, 2024		
Process: DRYER 2, SOUTH ST.			Mf: 9961		Static: -28 "H ₂ O		Silica: 82		+		%CO ₂	%O ₂	CO
Test: 2-COND			K _o : 7279		Ps: 27.93				+				
Personnel: 02 KCS			Pitot: 248		Pm: 28.06		Total Vol: 304 ml						
Start time: 10:45			Cp: 83446		Area: 36.67 ft ²		Start Vol: 300 ml						
Stop time: 11:50			Nozzle: 245		Bwo: .01		Plant Type:						Mix:
Permitt #			up strm		down strm		Pollution Abatement Equip:						
Location:			Start Leakage Rate@ 15 "Hg .006 ft ³ /min		Burner:								
Job #:			Finish Leakage Rate@ 15 "Hg		ft ³ /min		Load:						Fuel Type:
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= 2.5 ZERO=		
			IN	OUT									
A-12	.35	1.27	84	84	82	0.00	236	ICED	WST	1			
11	.33	1.20	75	84	85	1.65							
10	.29	1.04	76	84	85	3.25							
9	.30	1.08	79	85	86	4.76							
8	.31	1.12	80	84	86	6.28				1			
7	.30	1.09	82	86	83	7.84	258						
6	.26	.94	84	85	84	9.39							
5	.24	.87	85	85	85	10.88							
4	.23	.84	87	88	85	12.26				2			
3	.24	.88	88	89	85	13.68							
2	.25	.92	91	92	85	15.10	265						
1	.24	.88	89	91	86	16.47							
B-12	.35	1.28	91	94	87	17.80				2			
11	.36	1.28	91	92	89	19.47							
10	.33	1.21	91	95	89	21.15							
9	.34	1.24	91	94	89	22.86	266						
8	.31	1.13	91	95	89	24.50				2			
7	.28	1.02	90	95	88	26.09							
6	.29	1.06	91	98	89	27.58							
5	.30	1.09	92	98	87	29.16							
4	.30	1.10	93	99	87	30.72							
3	.28	1.02	92	98	87	32.27	264			2			
2	.25	.91	94	99	87	33.75							
1	.23	.84	94	98	87	35.23							
						36.60							

Client: <u>DRAX</u>			Console: <u>1012</u>		Pb: <u>27.95</u> "Hg		Filter: <u>83</u>		RAP %:		Date: <u>OCT 4/24</u>			
Process: <u>DRYER 2, SOUTH ST.</u>			Mf: <u>.9961</u>		Static: <u>-.28</u> "H ₂ O		Silica: <u>83</u>		+		%CO ₂		%O ₂	CO
Test: <u>3- COND.</u>			K ₀ : <u>.7279</u>		Ps: <u>27.93</u>				+					
Personnel: <u>DL KS</u>			Pitot: <u>248</u>		Pm: <u>28.06</u>		Total Vol: <u>312</u> ml							
Start time: <u>12:15</u>			Cp: <u>.83446</u>		Area: <u>36.67</u> ft ²		Start Vol: <u>300</u> ml							
Stop time: <u>1:18</u>			Nozzle: <u>.245</u>		Bwo: <u>.101</u>		Plant Type:				Mix:			
Permitt #			up strm		down strm		Pollution Abatement Equip:							
Location:			Start Leakage Rate@ <u>15</u> "Hg <u>.004</u> ft ³ /min		Burner:									
Job #:			Finish Leakage Rate@ <u>15</u> "Hg <u>.007</u> ft ³ /min		Load:						Fuel Type:			
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= 2.5 ZERO=			
			IN	OUT										
A-12	.34	1.25	88	87	81	0.00	266	ICED	ADT.	2				
11	.34	1.24	78	89	82	1.66								
10	.31	1.13	79	87	81	3.27								
9	.32	1.17	80	86	81	4.86								
8	.30	1.10	81	89	81	6.44				2				
7	.28	1.02	81	89	81	8.00	268							
6	.27	.99	84	89	83	9.50								
5	.24	.88	86	91	85	11.00								
4	.24	.88	87	90	87	12.41								
3	.22	.80	88	92	88	13.82				2				
2	.24	.88	90	94	88	15.23								
1	.24	.87	89	93	89	16.66	270							
B-12	.35	1.28	90	95	88	17.99								
11	.34	1.25	90	96	87	19.61				2				
10	.33	1.21	90	97	87	21.23								
9	.30	1.10	89	96	86	22.96								
8	.30	1.10	90	97	88	24.64								
7	.32	1.17	90	95	86	26.27	268			2				
6	.28	1.03	91	96	86	27.90								
5	.25	.92	90	98	86	29.50								
4	.23	.84	91	98	86	31.00								
3	.24	.88	90	98	86	32.46				2				
2	.25	.92	91	97	86	33.86								
1	.25	.92	91	97	86	35.26								
						36.64								

Client: DRAX		Console: 1013		Pb: 27.95 "Hg		Filter: 84		RAP %:		Date: OCT 4/24		
Process: DRYER 2, NORTH ST.		Mf: 9957		Static: 7.35 "H ₂ O		Silica: 84		+ + %		%CO ₂	%O ₂	CO
Test: 1-COND		K _o : 6509		Ps: 27.92						0	21	
Personnel: DL KS		Pitot: 294		Pm: 28.06		Total Vol: 314 ml						
Start time: 9.17		C _p : 84295		Area: 78.54 ft ²		Start Vol: 300 ml						
Stop time: 10.14		Nozzle: .230		Bwo: .03		Plant Type:				Mix:		
Permitt #		up strm		down strm		Pollution Abatement Equip:						
Location: Irvington, BC		Start Leakage Rate@ 15"Hg .006 ft3/min		Burner:								
Job #: ME 2425-084		Finish Leakage Rate@ 15"Hg .006 ft3/min		Load:						Fuel Type:		
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= 2.5 ZERO=	
			IN	OUT								
A-12	.50	1.60	50	50	96	0.00	246	+CED	HOT	3		
11	.46	1.50	50	50	82	1.63						
10	.42	1.37	50	49	83	3.23						
9	.46	1.49	50	49	87	4.75						
8	.48	1.55	52	50	89	6.33						
7	.52	1.67	55	52	94	7.91						
6	.50	1.62	58	55	92	9.57	259			5		
5	.55	1.79	60	57	93	11.25						
4	.60	1.95	63	59	95	13.02						
3	.65	2.13	66	61	95	14.86						
2	.60	1.97	68	63	94	16.74	266			6		
1	.52	1.71	70	65	95	18.68						
B-12	.49	1.63	74	66	94	20.59						
11	.47	1.56	76	68	97	22.38						
10	.41	1.37	78	70	95	24.07						
9	.45	1.50	80	72	98	25.69						
8	.49	1.65	82	74	95	27.27	270			6		
7	.53	1.79	82	75	93	28.97						
6	.51	1.72	80	75	94	30.60						
5	.56	1.89	82	78	95	32.30						
4	.61	2.05	82	78	97	34.08						
3	.64	2.19	84	79	95	36.03						
2	.61	2.06	84	79	96	38.06						
1	.57	1.72	86	80	97	40.07						
						42.01						

Client: <i>Dray</i>		Console: <i>1013</i>		Pb: <i>27.95</i> "Hg		Filter: <i>85</i>		RAP %:		Date: <i>Oct 4/24</i>	
Process: <i>Dryer 2 North Stack</i>		Mf: <i>0.9957</i>		Static: <i>-35</i> "H ₂ O		Silica: <i>85</i>		+		%CO ₂ %O ₂ CO	
Test: <i>2-cond</i>		K _o : <i>0.6509</i>		Ps: <i>27.92</i>				+			
Personnel: <i>DL KS</i>		Pitot: <i>294</i>		Pm: <i>28.06</i>		Total Vol: <i>328</i> ml					
Start time: <i>11:08</i>		C _p : <i>0.84295</i>		Area: <i>78.54</i> ft ²		Start Vol: <i>300</i> ml					
Stop time: <i>12:13</i>		Nozzle: <i>0.230</i>		Bwo: <i>.02</i>		Plant Type:		Mix:			
Permitt #		up strm		down strm		Pollution Abatement Equip:					
Location: <i>Lavington</i>		Start Leakage Rate@ <i>15</i> "Hg <i>.006</i> ft ³ /min		Burner:							
Job #:		Finish Leakage Rate@ <i>15</i> "Hg <i>1007</i> ft ³ /min		Load:				Fuel Type:			
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= ZERO=
			IN	OUT							
A12	.51	1.73	69	72	94	0.00	245	ICED	HOT	3	
11	.47	1.59	70	69	92	1.77					
10	.41	1.39	70	70	93	3.52					
9	.45	1.53	73	71	92	5.18					
8	.47	1.60	75	72	93	6.86					
7	.51	1.74	76	75	95	8.55					
6	.49	1.67	78	76	95	10.11	254			5	
5	.54	1.85	80	77	95	11.83					
4	.61	2.06	81	78	98	13.76					
3	.64	2.19	83	80	98	15.55					
2	.59	2.03	84	80	97	17.69				4	
1	.48	1.65	86	83	98	19.48					
B12	.48	1.65	86	83	100	21.22	259				
11	.46	1.59	88	84	98	22.97					
10	.40	1.39	88	85	97	24.70					
9	.44	1.52	87	86	101	26.35				5	
8	.48	1.66	89	88	100	28.01					
7	.54	1.87	89	88	100	29.76					
6	.50	1.73	90	88	98	31.60					
5	.55	1.92	89	87	96	33.37	263				
4	.60	2.09	91	88	97	35.25				5	
3	.63	2.20	90	89	97	37.28					
2	.60	2.09	91	90	98	39.25					
1	.55	1.92	91	90	100	41.21					
						43.15					

Client: Drax		Console: 1013		Pb: 27.95 "Hg		Filter: 86		RAP %:		Date: OCT 4/24		
Process: Dryer 2 North stack		Mf: 0.9957		Static: -.35 "H ₂ O		Silica: 86		+		%CO ₂	%O ₂	CO
Test: 3-Cond		K _o : 0.6509		Ps: 27.92				+		0	21	
Personnel: KSIDL		Pitot: 294		Pm: 28.06		Total Vol: 321 ml						
Start time: 12:30		C _p : 84295		Area: 7854 ft ²		Start Vol: 300 ml						
Stop time: 1.32		Nozzle: .230		Bwo: .02		Plant Type:				Mix:		
Permitt #		up strm		down strm		Pollution Abatement Equip:						
Location: Lavington		Start Leakage Rate@ 15 "Hg .006 ft ³ /min		Burner:								
Job #:		Finish Leakage Rate@ 15 "Hg .006 ft ³ /min		Load:						Fuel Type:		
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT=2.5 ZERO=	
			IN	OUT								
A12	.52	1.80	84	84	95	0.00	255	100	100	5		
11	.46	1.58	79	83	96	1.91						
10	.40	1.38	81	83	92	3.67						
9	.44	1.52	83	83	95	5.29						
8	.46	1.59	85	84	96	6.90				5		
7	.50	1.73	86	85	96	8.57						
6	.48	1.66	87	86	98	10.28	258					
5	.53	1.83	88	87	100	12.13						
4	.60	2.07	90	88	101	14.08				5		
3	.63	2.19	91	88	99	16.03						
2	.58	2.00	89	88	100	17.93						
1	.47	1.62	93	89	102	19.82	262					
B12	.49	1.69	92	89	104	21.56						
11	.47	1.63	94	92	102	23.36				5		
10	.41	1.42	92	90	100	25.03						
9	.45	1.56	95	92	103	26.64						
8	.49	1.70	93	91	102	28.33						
7	.55	1.91	96	93	103	30.00	261			5		
6	.51	1.78	96	91	102	32.00						
5	.54	1.88	96	92	102	33.89						
4	.55	1.92	97	92	102	35.78						
3	.64	2.23	95	91	102	37.71						
2	.60	2.09	95	91	102	39.76	257			5		
1	.56	1.95	95	91	101	41.79						
						43.68						

Client: DRAX			Console: 1013		Pb: 28.40 "Hg		Filter: 30		RAP %:		Date: OCT 21/24	
Process: CF-12			Mf: .9957		Static: .30 "H ₂ O		Silica: 30		+ %CO ₂		%O ₂	CO
Test: 1-COND			K ₀ : .6589		Ps: 28.42				+ 0		21	
Personnel: JOL KS			Pitot: 242		Pm: 28.51		Total Vol: 328 ml					
Start time: 1:30			C _p : .84158		Area: 19.63 ft ²		Start Vol: 300 ml					
Stop time: 2:33			Nozzle: .180		Bwo: .01		Plant Type:				Mix:	
Permitt #			up strm		down strm		Pollution Abatement Equip:					
Location: LAVINGTON, BC			Start Leakage Rate@ 15 "Hg, .004 ft ³ /min		Burner:							
Job #:			Finish Leakage Rate@ 15 "Hg, .006 ft ³ /min		Load:						Fuel Type:	
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT=2.5 ZERO=	
			IN	OUT								
A 12	1.20	1.53	82	83	114	0.00	242	(COND)	1487	5		
11	1.20	1.53	84	84	114	1.71						
10	1.15	1.45	77	80	114	3.40						
9	1.10	1.39	80	81	114	5.05						
8	1.20	1.53	80	81	111	6.64				5		
7	1.15	1.47	81	82	113	8.30	257					
6	1.20	1.53	82	82	113	10.00						
5	1.15	1.46	84	83	117	11.64						
4	1.15	1.46	85	83	116	13.35						
3	1.20	1.53	87	85	116	15.00				6		
2	1.20	1.53	87	86	118	16.65						
1	1.10	1.40	88	87	119	18.40	255					
B-12	1.25	1.60	91	89	119	20.02						
11	1.20	1.54	91	90	117	21.76						
10	1.15	1.48	92	91	118	23.47						
9	1.15	1.49	93	91	114	25.16				6		
8	1.20	1.55	93	91	116	26.86						
7	1.15	1.48	93	91	116	28.56	252					
6	1.10	1.42	93	93	117	30.27						
5	1.10	1.42	93	92	117	31.96						
4	1.00	1.30	93	92	116	33.65						
3	1.00	1.30	94	93	115	35.26				6		
2	1.05	1.36	94	93	116	36.80						
1	.90	1.17	95	94	116	38.40						
						39.86						

Process: <u>DRAK</u>			Console: <u>1013</u>		Pb: <u>28.40</u> "Hg		Filter: <u>71</u>		RAP %:		Date: <u>Oct 2/24</u>	
Test: <u>CF-12</u>			Mf: <u>.9957</u>		Static: <u>.30</u> "H ₂ O		Silica: <u>71</u>		+ %CO ₂		%O ₂	
Personnel: <u>DL KS</u>			K ₀ : <u>11.509</u>		Ps: <u>20.42</u>		Total Vol: <u>3.28</u> ml		+ %CO ₂		%O ₂	
Start time: <u>245</u>			Pitot: <u>242</u>		Pm: <u>28.51</u>		Start Vol: <u>300</u> ml		+ %CO ₂		%O ₂	
Stop time: <u>3:49</u>			C _P : <u>.24158</u>		Area: <u>19.63</u> ft ²		Plant Type:		+ %CO ₂		Mix:	
Permitt #			Nozzle: <u>.180</u>		Bwo: <u>.04</u>		Pollution Abatement Equip:		+ %CO ₂		Mix:	
Location:			up strm		down strm		Burner:		+ %CO ₂		Mix:	
Job #:			Start Leakage Rate@ <u>15</u> "Hg. <u>.006</u> ft ³ /min		Finish Leakage Rate@ <u>15</u> "Hg. <u>.009</u> ft ³ /min		Load:		+ %CO ₂		Fuel Type:	
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT= ZERO=	
			IN	OUT								
A-17	1.15	1.40	89	90	119	0.00	250	ICED	HOT	2		
17	1.20	1.46	86	88	115	1.61						
16	1.20	1.48	87	86	109	3.25						
9	1.15	1.39	87	87	116	5.00						
8	1.15	1.41	89	88	109	6.60						
7	1.15	1.40	89	89	115	8.16				5		
6	1.20	1.46	93	90	116	9.76						
5	1.20	1.47	94	90	114	11.38						
4	1.15	1.40	93	91	118	13.03						
3	1.15	1.39	94	92	122	14.70						
2	1.20	1.47	97	95	120	16.38						
1	1.15	1.40	96	94	121	18.00				5		
B-17	1.15	1.41	97	94	120	19.64						
17	1.10	1.34	96	95	120	21.14						
16	1.15	1.40	97	96	122	22.71						
9	1.20	1.46	97	96	122	24.34				2		
8	1.20	1.47	98	97	121	26.03						
7	1.10	1.35	98	97	120	27.73						
6	1.05	1.29	100	99	120	29.29						
5	1.05	1.29	99	98	119	30.85						
4	1.00	1.23	100	98	120	32.37						
3	1.05	1.29	100	99	122	34.00				3		
2	1.10	1.36	102	100	121	35.61						
1	1.295	1.17	102	100	121	37.19						
						38.71						

Client: <i>Drax</i>			Console: <i>1013</i>		Pb: <i>28.40</i> "Hg		Filter: <i>72</i>		RAP %:		Date: <i>Oct 2/24</i>			
Process: <i>CF-12</i>			Mf: <i>9957</i>		Static: <i>+ .30</i> "H ₂ O		Silica: <i>72</i>		+		%CO ₂		%O ₂	CO
Test: <i>3-Cond</i>			K ₀ : <i>6509</i>		Ps: <i>28.47</i>				+		<i>0</i>		<i>21</i>	
Personnel: <i>DLKS</i>			Pitot: <i>242</i>		Pm: <i>28.51</i>		Total Vol: <i>328</i> ml							
Start time: <i>4:05</i>			C _P : <i>84158</i>		Area: <i>19.63</i> ft ²		Start Vol: <i>300</i> ml							
Stop time: <i>5:08</i>			Nozzle: <i>.180</i>		Bwo: <i>.04</i>		Plant Type:				Mix:			
Permitt #			up strm		down strm		Pollution Abatement Equip:							
Location:			Start Leakage Rate@ <i>15</i> "Hg, <i>.004</i> ft ³ /min		Burner:									
Job #:			Finish Leakage Rate@ <i>15</i> "Hg, <i>.005</i> ft ³ /min		Load:						Fuel Type:			
SAMPLE POINT	DELTA P ("H ₂ O)	DELTA H ("H ₂ O)	GAS METER TEMP (°F)		STACK (°F)	VOLUME (ft ³)	BOX TEMP (°F)	LAST IMP (°F)	PROBE (°F)	VACUUM ("Hg)	MIN/PT=2.5 ZERO=			
			IN	OUT										
<i>A-12</i>	<i>1.20</i>	<i>1.47</i>	<i>97</i>	<i>97</i>	<i>121</i>	<i>0.00</i>	<i>240</i>	<i>ICED</i>	<i>HOT</i>	<i>5</i>				
<i>11</i>	<i>1.15</i>	<i>1.40</i>	<i>94</i>	<i>94</i>	<i>122</i>	<i>1.65</i>								
<i>10</i>	<i>1.15</i>	<i>1.41</i>	<i>95</i>	<i>95</i>	<i>117</i>	<i>3.30</i>								
<i>9</i>	<i>1.20</i>	<i>1.47</i>	<i>92</i>	<i>92</i>	<i>116</i>	<i>4.95</i>								
<i>8</i>	<i>1.20</i>	<i>1.49</i>	<i>94</i>	<i>95</i>	<i>116</i>	<i>6.70</i>				<i>5</i>				
<i>7</i>	<i>1.10</i>	<i>1.35</i>	<i>95</i>	<i>96</i>	<i>116</i>	<i>8.36</i>								
<i>6</i>	<i>1.10</i>	<i>1.35</i>	<i>95</i>	<i>95</i>	<i>119</i>	<i>9.85</i>								
<i>5</i>	<i>1.15</i>	<i>1.41</i>	<i>96</i>	<i>96</i>	<i>117</i>	<i>11.34</i>								
<i>4</i>	<i>1.15</i>	<i>1.41</i>	<i>96</i>	<i>96</i>	<i>118</i>	<i>13.02</i>				<i>5</i>				
<i>3</i>	<i>1.10</i>	<i>1.35</i>	<i>98</i>	<i>97</i>	<i>119</i>	<i>14.62</i>								
<i>2</i>	<i>1.15</i>	<i>1.41</i>	<i>97</i>	<i>96</i>	<i>118</i>	<i>16.23</i>								
<i>1</i>	<i>1.10</i>	<i>1.35</i>	<i>97</i>	<i>96</i>	<i>119</i>	<i>17.77</i>								
<i>B-2</i>	<i>1.20</i>	<i>1.47</i>	<i>97</i>	<i>97</i>	<i>119</i>	<i>19.46</i>								
<i>11</i>	<i>1.15</i>	<i>1.41</i>	<i>98</i>	<i>98</i>	<i>120</i>	<i>21.07</i>				<i>5</i>				
<i>10</i>	<i>1.10</i>	<i>1.36</i>	<i>98</i>	<i>98</i>	<i>118</i>	<i>22.71</i>								
<i>9</i>	<i>1.15</i>	<i>1.42</i>	<i>98</i>	<i>98</i>	<i>118</i>	<i>24.42</i>								
<i>8</i>	<i>1.15</i>	<i>1.42</i>	<i>99</i>	<i>98</i>	<i>119</i>	<i>26.07</i>								
<i>7</i>	<i>1.15</i>	<i>1.42</i>	<i>100</i>	<i>99</i>	<i>120</i>	<i>27.73</i>								
<i>6</i>	<i>1.10</i>	<i>1.36</i>	<i>100</i>	<i>99</i>	<i>118</i>	<i>29.38</i>								
<i>5</i>	<i>1.10</i>	<i>1.36</i>	<i>101</i>	<i>99</i>	<i>119</i>	<i>31.03</i>								
<i>4</i>	<i>1.05</i>	<i>1.29</i>	<i>101</i>	<i>99</i>	<i>123</i>	<i>32.69</i>								
<i>3</i>	<i>1.10</i>	<i>1.36</i>	<i>102</i>	<i>100</i>	<i>120</i>	<i>34.18</i>								
<i>2</i>	<i>1.15</i>	<i>1.42</i>	<i>102</i>	<i>100</i>	<i>120</i>	<i>35.65</i>	<i>250</i>			<i>5</i>				
<i>1</i>	<i>1.00</i>	<i>1.24</i>	<i>103</i>	<i>100</i>	<i>119</i>	<i>37.14</i>								
						<i>38.65</i>								

Analytical Report

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYERS 1 & 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766791 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057631 Report Type: Final Report
Attn: Accounts Payable Sampled By: D. Lawrence Company: McCall Env.	Proj. Acct. code:	

Reference Number	1766791-1	1766791-2	1766791-3
Sample Date	Oct 04, 2024	Oct 04, 2024	Oct 04, 2024
Sample Time	NA	NA	NA
Sample Location			
Sample Description	DRAX / Dryer 2 South Stack Test 1 / 15.6 °C	DRAX / Dryer 2 South Stack Test 2 / 15.6 °C	DRAX / Dryer 2 South Stack Test 3 / 15.6 °C
Matrix	Water	Water	Water


Analyte	Units	Results	Results	Results	Nominal Detection Limit
Aggregate Organic Constituents					
Oil and Grease	Total	mg/sample	<2	<2	<2
Volume	Sample volume	mL	310	318	314
pH adjustment	required prior to O&G extraction		Yes	Yes	Yes

Analytical Report

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYERS 1 & 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766791 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057631 Report Type: Final Report
Attn: Accounts Payable Sampled By: D. Lawrence Company: McCall Env.	Proj. Acct. code:	

Reference Number	1766791-4	1766791-5	1766791-6
Sample Date	Oct 04, 2024	Oct 04, 2024	Oct 04, 2024
Sample Time	NA	NA	NA
Sample Location			
Sample Description	DRAX / Dryer 2 North Stack Test 1 / 15.6 °C	DRAX / Dryer 2 North Stack Test 2 / 15.6 °C	DRAX / Dryer 2 North Stack Test 3 / 15.6 °C
Matrix	Water	Water	Water

Analyte	Units	Results	Results	Results	Nominal Detection Limit
Aggregate Organic Constituents					
Oil and Grease	Total	mg/sample	<2	<2	2
Volume	Sample volume	mL	325	311	266
pH adjustment	required prior to O&G extraction		Yes	Yes	Yes

Approved by: 
 Rachel Eden, B. Sc.
 Operations Manager

Data have been validated by Analytical Quality Control and Element's Integrated Data Validation System (IDVS).

Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

Methodology and Notes

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYERS 1 & 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766791 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057631 Report Type: Final Report
Attn: Accounts Payable Sampled By: D. Lawrence Company: McCall Env.	Proj. Acct. code:	

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Oil and Grease in water (VAN)	BCELM	* Oil & Grease in Water - Direct Hexane Extraction (2023), Oil & Grease <i>* Reference Method Modified</i>	Oct 10, 2024	Element Vancouver

References

BCELM B.C. Environmental Laboratory Manual

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Report Transmission Cover Page

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYER 1 & 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766796 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057638 Report Type: Final Report
Attn: Accounts Payable Sampled By: Company:	Proj. Acct. code:	

Contact	Company	Address
Accounts Payable	McCall Environmental	6733 Buchanan Road Coldstream, BC V1B 3C5 Phone: (250) 542-5118 Fax: Email: invoicing@mccallenvironmental.net
<u>Delivery</u>	<u>Format</u>	<u>Deliverables</u>
Email - Merge	PDF	COC / Invoice
Matt McCall	McCall Environmental	6733 Buchanan Road Coldstream, BC V1B 3C5 Phone: (250) 542-5118 Fax: Email: matt@mccallenvironmental.net
<u>Delivery</u>	<u>Format</u>	<u>Deliverables</u>
Email - Merge	PDF	COA / COC
Email - Merge	PDF	COC / Test Report

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Analytical Report

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYER 1 & 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766796 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057638 Report Type: Final Report
Attn: Accounts Payable Sampled By: Company:	Proj. Acct. code:	

Reference Number	1766796-1	1766796-2	1766796-3
Sample Date	Oct 03, 2024	Oct 03, 2024	Oct 03, 2024
Sample Time	NA	NA	NA
Sample Location			
Sample Description	DRAX / Dryer 1 South Stack Test 1 / 15.6 °C	DRAX / Dryer 1 South Stack Test 2 / 15.6 °C	DRAX / Dryer 1 South Stack Test 3 / 15.6 °C
Matrix	Water	Water	Water

Analyte	Units	Results	Results	Results	Nominal Detection Limit	
Aggregate Organic Constituents						
Oil and Grease	Total	mg/sample	6	3	4	2
Volume	Sample volume	mL	314	324	320	
pH adjustment	required prior to O&G extraction		Yes	Yes	Yes	

Analytical Report

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYER 1& 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766796 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057638 Report Type: Final Report
Attn: Accounts Payable Sampled By: Company:	Proj. Acct. code:	

Reference Number	1766796-4	1766796-5	1766796-6
Sample Date	Oct 03, 2024	Oct 03, 2024	Oct 03, 2024
Sample Time	NA	NA	NA
Sample Location			
Sample Description	DRAX / Dryer 1 North Stack Test 1 / 15.6 °C	DRAX / Dryer 1 North Stack Test 2 / 15.6 °C	DRAX / Dryer 1 North Stack Test 3 / 15.6 °C
Matrix	Water	Water	Water


Analyte	Units	Results	Results	Results	Nominal Detection Limit
Aggregate Organic Constituents					
Oil and Grease	Total	mg/sample	<2	2	2
Volume	Sample volume	mL	329	331	329
pH adjustment	required prior to O&G extraction		Yes	Yes	Yes

Analytical Report

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYER 1& 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766796 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057638 Report Type: Final Report
Attn: Accounts Payable Sampled By: Company:	Proj. Acct. code:	

Reference Number	1766796-7	1766796-8	1766796-9
Sample Date	Oct 02, 2024	Oct 02, 2024	Oct 02, 2024
Sample Time	NA	NA	NA
Sample Location			
Sample Description	DRAX / CF-12 Test 1 / 15.6 °C	DRAX / CF-12 Test 2 / 15.6 °C	DRAX / CF-12 Test 3 / 15.6 °C
Matrix	Water	Water	Water

Analyte	Units	Results	Results	Results	Nominal Detection Limit
Aggregate Organic Constituents					
Oil and Grease	Total	mg/sample	<2	<2	2
Volume	Sample volume	mL	334	329	329
pH adjustment	required prior to O&G extraction		Yes	Yes	Yes

Approved by: 
 Rachel Eden, B. Sc.
 Operations Manager

Data have been validated by Analytical Quality Control and Element's Integrated Data Validation System (IDVS).

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Methodology and Notes

Bill To: McCall Environmental 6733 Buchanan Road Coldstream, BC, Canada V1B 3C5	Project ID: DRAX Project Name: DRYER 1& 2 Project Location: Lavington, BC LSD: P.O.:	Lot ID: 1766796 Control Number: Date Received: Oct 10, 2024 Date Reported: Oct 16, 2024 Report Number: 3057638 Report Type: Final Report
Attn: Accounts Payable Sampled By: Company:	Proj. Acct. code:	

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Oil and Grease in water (VAN)	BCELM	* Oil & Grease in Water - Direct Hexane Extraction (2023), Oil & Grease <i>* Reference Method Modified</i>	Oct 10, 2024	Element Vancouver

References

BCELM B.C. Environmental Laboratory Manual

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 Results relate only to samples as submitted.


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This is to verify that
Matthew McCall
has successfully completed
a course of study in
Source Testing for Particulates
(35 hours)

Endorsed by
The B.C. Ministry of Environment

Dated at Burnaby, British Columbia, Canada
December 14, 1990


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