

1 INTRODUCTION

On August 24-25, 2021 Interpoll Laboratories personnel conducted air emission compliance testing at the Louisiana Pacific Corporation (LP) OSB Plant Located in Sagola, Michigan. On-site testing was performed by Chris Warneke, Luke Frahm and Ryan Schuth. Coordination between testing activities and plant operation was provided by Rich Menard of Louisiana Pacific Corp. Testing was witnessed by Matthew Karl of the Michigan Department of Environment, Great Lakes and Energy.

The Sagola plant operates three TSI single pass dryers fired with Model 230 FYR Coen Inner Air Heater primary burners each coupled with Duel Air Zone DAZ-24 register burners, a press and one GEKA thermal oil heater. Dryer emissions are controlled by three parallel Geoenergy WESP's and a MEGTEC two-cell RTO. Press emissions are ducted to a Huntington Environmental Systems Inc., five cell RCO prior to exhaust to the atmosphere. The Geka bark burning thermal oil heater emissions are controlled by dry ESP particulate removal system.

Excluding the heat from the dryers, the thermal oil system provides a majority of the heat necessary for the waferboard production. The hogged bark fuels the thermal oil burner, which heats the thermal oil to an approximate temperature of 440°F - 500°F. Thermal oil is circulated through the press, the piping which surrounds the bulk wax storage tanks, and the heat exchangers. Heat exchangers are used to transfer heat from the thermal oil to water. Heated water is used to provide heat for the plant, space heaters, and log conditioning ponds.

PM-10 sampling was conducted in accordance with EPA Method 201A. An Interpoll Labs sampling train which meets or exceeds specifications in the above-cited reference was used to extract PM-10 samples by means of a PM-10 cyclone and a stainless steel probe. The cyclone used in this work meets or exceeds the specifications of Method 201A. Velocity pressure measurements were made prior to and during, each run to determine the proper dwell times at each traverse point. Condensable particulate was collected in the back half of the Method 201A sampling train and analyzed in accordance with EPA Method 202.

Carbon monoxide, oxides of nitrogen, oxygen and carbon dioxide concentrations were determined in accordance with Methods 10, 7E and 3A, CFR Title 40, Part 60, Appendix A (revised

ports (provided by the plant) on the stack using a heat-traced probe and filter assembly. After passing through the filter, the gas passed through two condenser-type moisture removal systems operating in series. The particulate-free dry gas was then transported to the analyzers with the excess exhausted to the atmosphere through a calibrated orifice which was used to ensure that the flow from the stack exceeds the requirements of the analyzers.

VOC concentrations were determined instrumentally in accordance with EPA Method 25A using a heated flame ionization detector (HFID) calibrated against propane in air standards. The THC concentration was continuously monitored by extracting a slipstream of exhaust gas by means of a heated probe and filter holder. A heat-traced Teflon line was used to transport the sample gas from the filter holder outlet to the analyzer inlet.

The analog response of each analyzer was recorded with a computer data logger. The O₂, CO₂, NO_x, THC and CO analyzers were calibrated with EPA Protocol I gases. The instruments were calibrated before and after each run as per EPA Method 3A, 7E, 10 and 25A.

Formaldehyde sampling was conducted using EPA Method 320 (FTIR). The on-line gas analysis was performed using a MKS MultiGas 2030 FTIR based analyzer. The MKS MultiGas 2030 FTIR has a fixed gas cell path length of 5.11 Meters and the detector was cooled by the use of liquid nitrogen. The gas was transported to the FTIR analyzer through a heat traced Teflon line originating from the manifold system described above. Three one-hour runs were conducted for each test condition. A leak-check was performed prior to and following the test on the sampling the system and was found to be acceptable. The Method 320 Data is contained in Appendix J. A dynamic spike was performed according to the guidelines spelled out in EPA Method 320. This was done using a compressed gas cylinder with certified quantities of acetaldehyde and sulfur hexafluoride. This data can be found in Appendix K.

Testing on the Press RCO Stack was conducted from two test ports oriented at 90 degrees on the stack. These test ports are located 5.5 stack diameters downstream and 4.3 stack diameters upstream of the nearest flow disturbances. A 12-point traverse was used to collect representative PM-10 samples. Testing on the Dryer RTO Outlet Stack was conducted from two test ports oriented at 90 degrees on the stack. These test ports are located 4.32 stack diameters downstream and 8.65 stack diameters upstream of the nearest flow disturbances. A 12-point traverse was used to collect

representative PM-10 samples. Formaldehyde sampling was conducted using a single-point traverse.

The important results of the test are summarized in Section 2. Detailed results are presented in Section 3. Field data and all other supporting information are presented in the appendices.

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2 SUMMARY AND DISCUSSION

The air emission results are summarized in the following tables. An overview of all results is presented below:

Table 1: Summary of the Test Results

Stack Vent No.: Emission Unit No.	Pollutant Tested and Applicable Emission Limit	Test Result
Press RCO (EUPRESS)	<u>VOC</u> 3.44 lb/hr 20 ppmvd (as C)	<u>VOC (EPA Method 25a)</u> 1.604 lb/hr ⁽¹⁾⁽²⁾ 10.63 ppmvd ⁽³⁾
	<u>NOx</u> 43.0 lb/hr	<u>NOx (EPA Method 7E)</u> 8.93 lb/hr
	<u>CO</u> 0.51 lb/TFP	<u>CO (EPA Method 10)</u> 0.132 lb/TFP
	<u>PM-10</u> 0.072 lb/TFP	<u>PM-10 (EPA Method 201A)</u> 0.0613 lb/TFP
	<u>Formaldehyde</u> 5.91 lb/hr	<u>Formaldehyde (EPA Method 320)</u> 2.278 lb/hr

- (1) Determined by EPA Method 25a and measured as THC on a carbon basis.
- (2) Based on Total Gaseous non-methane/ethane (TGNME).
- (3) PCWP NESHAP 40 CFR Part 63 Subpart DDDD.

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Table 2: Summary of the Test Results

Stack Vent No.: Emission Unit No.	Pollutant Tested and Applicable Emission Limit	Test Result
Dryers RTO Outlet (FGDRYERS)	<u>VOC</u> 0.34 lb/TFP* > 90 % THC (as C) reduction	<u>VOC (EPA Method 25a)</u> 0.020 lb/TFP ⁽¹⁾⁽²⁾ <u>VOC (EPA Method 25a)</u> 97.4% THC (as C) reduction ⁽³⁾
	<u>NOx</u> 0.99 lb/TFP*	<u>NOx (EPA Method 7E)</u> 0.506 lb/TFP
	<u>CO</u> 4.09 lb/TFP*	<u>CO (EPA Method 10)</u> 1.111 lb/TFP
	<u>Formaldehyde</u> 6.8 lb/hr	<u>Formaldehyde (EPA Method 320)</u> 0.391 lb/hr
	<u>PM - PM-10</u> 0.007 gr/dscf 10.0 lb/hr	<u>PM - PM-10 (EPA Method 201A)</u> 0.00157 gr/dscf 0.686 lb/hr

- (1) Determined by EPA Method 25a and measured as THC on a carbon basis.
- (2) Based on Total Gaseous non-methane/ethane (TGNME).
- (3) PCWP NESHAP 40 CFR Part 63 Subpart DDDD.
- (4) *LBC/TFP(VOC) and LB/TFP(CO/NOx) Limitations calculated based upon 60% softwood (Permit Limit) and 40% hardwood Dryer Feed Mix

No difficulties were encountered in the field by Interpoll Labs or in the laboratory evaluation of the samples which were conducted by Interpoll Labs. On the basis of these facts and a complete review of the data and results, it is our opinion that the results reported herein are accurate and closely reflect the actual values which existed at the time the test was performed.

Test 1 Summary of the Results of the August 24, 2021, PM10 Emission Test on the Dryer RTO Stack at the LP Facility Located in Sagola, Michigan

Item		Run 1	Run 2	Run 3	Average
Date of test		08-24-21	08-24-21	08-24-21	
Time Start	(Hrs)	0930	1205	1445	
Time Finish	(Hrs)	1143	1424	1714	
Volumetric Flow					
Actual	(ACFM)	104,570	105,610	112,807	107,663
Standard	(SCFM)	75,083	75,462	80,329	76,958
Standard	(DSCFM)	51,189	50,535	51,666	51,130
Gas Temperature	(°F)	241	245	247	244
Moisture Content	(%v/v)	31.82	33.03	35.68	34
Gas Composition (%v/v, dry)					
Carbon Dioxide		4.89	4.69	5.72	5.10
Oxygen		15.20	15.12	14.32	14.88
Nitrogen		79.91	80.19	79.96	80.02
Volume Though Gas Meter	(DSCF)	33.07	34.38	34.90	34.12
Isokinetic Variation	(%)	107.0	105.7	98.6	103.8
PM10 Results (EPA Method 201A & 202)					
<i>Filterable-Dry Catch Only</i>					
Sample Mass (Filter & rinse)	(g)	0.0009	0.0009	0.0011	
Concentration - Actual	(GR/ACF)	0.00021	0.00019	0.00022	0.0002
Concentration - Standard	(GR/DSCF)	0.00042	0.00040	0.00049	0.00044
Emission Rate	(LB/HR)	0.184	0.175	0.215	0.191
<i>Organic CPM</i>					
Sample Mass	(g)	0.0015	0.0018	0.0023	
Concentration - Actual	(GR/ACF)	0.00033	0.00038	0.00046	0.0004
Concentration - Standard	(GR/DSCF)	0.00068	0.00079	0.00100	0.00082
Emission Rate	(LB/HR)	0.299	0.342	0.442	0.361
<i>Inorganic CPM</i>					
Sample Mass	(g)	0.0007	0.0008	0.0004	
Concentration - Actual	(GR/ACF)	0.00017	0.00018	0.00009	0.0001
Concentration - Standard	(GR/DSCF)	0.00035	0.00038	0.00020	0.00031
Emission Rate	(LB/HR)	0.151	0.163	0.086	0.133
<i>PM10 (Dry + Organic + Inorganic)</i>					
Sample Mass	(g)	0.0031	0.0035	0.0038	
Concentration - Actual	(GR/ACF)	0.00071	0.00075	0.00077	0.0007
Concentration - Standard	(GR/DSCF)	0.00145	0.00157	0.00168	0.00157
Emission Rate	(LB/HR)	0.634	0.680	0.744	0.686

Test 2 Summary of the August 24, 2021, Oxides of Nitrogen, Carbon Monoxide and VOC's Test on the Dryer RTO Outlet Stack at the Louisiana-Pacific Corporation located in Sagola, Michigan.

Item	Run 1	Run 2	Run 3	Average
Date of test	08-24-21	08-24-21	08-24-21	
Time runs were done (Hrs)	0935 / 1035	1205 / 1305	1445 / 1545	
Volumetric Flow				
Actual (ACFM)	104,570	105,610	112,807	107,663
Standard (SCFM)	75,083	75,462	80,329	76,958
Standard (DSCFM)	51,189	50,535	51,666	51,130
Gas Temperature (°F)	241	245	247	244
Moisture Content (%v/v)	31.82	33.03	35.68	33.51
Gas Composition (%v/v, dry)				
Carbon Dioxide	4.89	4.69	5.72	5.10
Oxygen	15.20	15.12	14.32	14.88
Nitrogen	79.91	80.19	79.96	80.02
Tons of Finished Product / Hour (TFP/Hr)	37.2	37.2	33.8	36.1
Results:				
Oxides of Nitrogen (EPA Method 7E)				
Concentration (ppm, d)	51.36	52.27	46.02	49.88
Emission Rate (LB /HR)	18.83	18.92	17.03	18.26
Emission Factor (LB /TFP)	0.506	0.509	0.504	0.506
Carbon Monoxide (EPA Method 10)				
Concentration (ppm, d)	166.10	135.43	230.00	177.18
Emission Rate (LB /HR)	37.08	29.85	51.82	39.58
Emission Factor (LB /TFP)	0.997	0.802	1.533	1.111
VOC (EPA Method 25a)				
Concentration (ppm Carbon, d)	17.64	11.61	14.08	14.44
Concentration (TGNME ppm Carbon, d)	10.43	6.32	6.14	7.63
Emission Rate (Lb x/Hr) (LB Carbon/HR)	1.69	1.10	1.36	1.38
Emission Rate (Lb x/Hr) (TGNME LB Carbon/HR)	1.00	0.60	0.59	0.73
Emission Rate (Lb x/Hr) (TGNME LB Carbon/TFP)	0.027	0.016	0.018	0.020
Removal Efficiency (%)	96.26	97.48	98.57	97.44
Inlet VOC (EPA Method 25a)				
Concentration (TGNME LB Carbon/HR)	26.73	23.76	41.62	30.71

TGNME = Total Gaseous Non-methane/ethane
TFP = Total Finished Product

Test 4 Summary of the August 24, 2021, VOC's Test (EPA Method 25a) on the Dryer RTO Inlet stack at the Louisian-Pacific Corporation located in Sagola, MI.

Item		Run 1	Run 2	Run 3	Average
Date of test		08-24-21	08-24-21	08-24-21	
Time runs were done	(Hrs)	0935 / 1035	1205 / 1305	1445 / 1545	
Volumetric Flow					
Actual	(ACFM)	85,373	85,979	90,720	87,357
Standard	(SCFM)	68,654	69,303	72,355	70,104
Standard	(DSCFM)	47,634	49,669	46,014	47,772
Gas Temperature	(°F)	164	162	169	165
Moisture Content	(%v/v)	30.62	28.33	36.41	31.78
Gas Composition (%v/v, dry)					
Carbon Dioxide		4.40	4.44	5.26	4.70
Oxygen		15.04	15.15	14.37	14.85
Nitrogen		80.56	80.40	80.37	80.45
Results					
VOC - EPA Method 25a					
Concentration	(ppm Carbon, d)	655.00	497.93	681.41	611.45
Concentration	(TGNME ppm Carbon, d)	299.80	255.53	483.21	346.18
Emission Rate (Lb x/Hr)	(LB Carbon/HR)	58.41	46.30	58.69	54.47
Emission Rate (Lb x/Hr)	(TGNME LB Carbon/HR)	26.73	23.76	41.62	30.71

TGNME = Total Gaseous Non-methane/ethane

Test 3 Summary of the Results of the August 24, 2021, Method 320 Emission Test on the Dryer RTO Outlet stack at the Louisiana-Pacific Corporation located in Sagola, Michigan.

Item			Run 1	Run 2	Run 3	Average
Date of test			08-24-21	08-24-21	08-24-21	
Time runs were done (Hrs)			0935 / 1035	1205 / 1305	1445 / 1544	
Volumetric Flow						
	Actual	(ACFM)	104,570	105,610	112,807	107,663
	Standard	(SCFM)	81,067	82,003	86,731	83,267
	Standard	(DSCFM)	51,189	50,535	51,666	51,130
Gas Temperature (°F)			241	245	247	244
Gas Composition (%v/v, dry)						
	Carbon Dioxide		4.89	4.69	5.72	5.10
	Oxygen		15.20	15.12	14.32	14.88
	Nitrogen		79.91	80.19	79.96	80.02
Formaldehyde						
	Concentration	(ppm, d)	1.57	1.47	1.82	1.62
	Emission Rate	(LB /HR)	0.380	0.351	0.443	0.391
Methane						
	Concentration	(ppm, d)	6.87	4.95	7.56	6.46
Ethane						
	Concentration	(ppm, d)	0.17	0.17	0.19	0.18

Test 5 Summary of the Results of the August 25, 2021, PM10 Emission Test
on the Press RCO Stack at the LP Facility Located in Sagola, Michigan.

Item		Run 1	Run 2	Run 3	Average
Date of test		08-25-21	08-25-21	08-25-21	
Time Start	(Hrs)	0845	1035	1225	
Time Finish	(Hrs)	1014	1205	1354	
Volumetric Flow					
Actual	(ACFM)	110,332	110,492	109,385	110,070
Standard	(SCFM)	84,910	85,293	83,343	84,515
Standard	(DSCFM)	81,270	80,901	79,834	80,668
Gas Temperature	(°F)	195	193	202	197
Moisture Content	(%v/v)	4.29	5.15	4.21	5
Gas Composition (%v/v, dry)					
Carbon Dioxide		0.33	0.41	0.42	0.39
Oxygen		20.45	20.46	20.47	20.46
Nitrogen		79.23	79.14	79.11	79.16
Volume Though Gas Meter	(DSCF)	33.90	34.13	32.61	33.55
Isokinetic Variation	(%)	103.0	103.5	101.9	102.8
Tons of Finished Product	(TFP)	30.8	32.8	30.8	31.5
PM10 Results (EPA Method 201A & 202)					
<i>Filterable-Dry Catch Only</i>					
Sample Mass (Filter & rinse)	(g)	0.0009	0.0011	0.0013	
Concentration - Actual	(GR/ACF)	0.00030	0.00036	0.00045	0.0004
Concentration - Standard	(GR/DSCF)	0.00041	0.00050	0.00062	0.00051
Emission Rate	(LB/HR)	0.286	0.345	0.421	0.35067
<i>Organic CPM</i>					
Sample Mass	(g)	0.0031	0.0031	0.0040	
Concentration - Actual	(GR/ACF)	0.00105	0.00104	0.00139	0.0012
Concentration - Standard	(GR/DSCF)	0.00143	0.00142	0.00191	0.00158
Emission Rate	(LB/HR)	0.993	0.982	1.306	1.09367
<i>Inorganic CPM</i>					
Sample Mass	(g)	0.0011	0.0014	0.0021	
Concentration - Actual	(GR/ACF)	0.00036	0.00045	0.00071	0.0005
Concentration - Standard	(GR/DSCF)	0.00049	0.00062	0.00098	0.00069
Emission Rate	(LB/HR)	0.338	0.428	0.669	0.47833
<i>PM10 (Dry + Organic + Inorganic)</i>					
Sample Mass	(g)	0.0051	0.0056	0.0074	
Concentration - Actual	(GR/ACF)	0.00171	0.00185	0.00256	0.0020
Concentration - Standard	(GR/DSCF)	0.00232	0.00253	0.00350	0.00279
Emission Rate	(LB/HR)	1.617	1.755	2.396	1.92267
Emission Rate	(LB/TFP)	0.053	0.054	0.078	0.06127

Test 6 Summary of the August 25, 2021, Oxides of Nitrogen, Carbon Monoxide and VOC's Test on the Press RCO Outlet stack at the Louisiana-Pacific Corporation located in Sagola, Michigan.

Item		Run 1	Run 2	Run 3	Average
Date of test		08-25-21	08-25-21	08-25-21	
Time runs were done	(Hrs)	0845 / 0945	1035 / 1135	1225 / 1325	
Volumetric Flow					
Actual	(ACFM)	110,332	110,492	109,385	110,070
Standard	(SCFM)	84,910	85,293	83,343	84,515
Standard	(DSCFM)	81,270	80,901	79,834	80,668
Gas Temperature	(°F)	195	193	202	197
Moisture Content	(%v/v)	4.29	5.15	4.21	4.55
Gas Composition	(%v/v, dry)				
Carbon Dioxide		0.33	0.41	0.42	0.39
Oxygen		20.45	20.46	20.47	20.46
Nitrogen		79.23	79.14	79.11	79.16
Tons of Finished Product	(TFP)	30.8	32.8	30.8	31.5
Results:					
Oxides of Nitrogen (EPA Method 7E)					
Concentration	(ppm , d)	15.21	15.46	15.67	15.45
Emission Rate	(LB /HR)	8.86	8.96	8.96	8.93
Carbon Monoxide (EPA Method 10)					
Concentration	(ppm , d)	11.53	11.57	12.26	11.78
Emission Rate	(LB /HR)	4.09	4.08	4.27	4.14
Emission Rate	(LB/TFP)	0.133	0.124	0.139	0.132
VOC (EPA Method 25a)					
Concentration	(ppm Carbon, d)	9.65	14.49	13.89	12.67
Concentration	(TGNME ppm Carbon, d)	7.60	12.43	11.88	10.63
Emission Rate (Lb x/Hr)	(LB Carbon/HR)	1.47	2.19	2.07	1.911
Emission Rate (Lb x/Hr)	(TGNME LB Carbon/HR)	1.16	1.88	1.77	1.604

TGNME = Total Gaseous Non-methane/ethane

TFP = Total Finished Product

Test 7 Summary of the Results of the August 25, 2021, Method 320 Emission Test on the Press RCO Outlet stack at the Louisiana-Pacific Corporation located in Sagola, Michigan.

Item			Run 1	Run 2	Run 3	Average
Date of test			08-25-21	08-25-21	08-25-21	
Time runs were done (Hrs)			0845 / 0945	1035 / 1135	1225 / 1225	
Volumetric Flow						
	Actual	(ACFM)	110,332	110,492	109,385	110,070
	Standard	(SCFM)	84,910	85,293	83,343	84,515
	Standard	(DSCFM)	81,270	80,901	79,834	80,668
Gas Temperature (°F)			195	193	202	197
Gas Composition (%v/v, dry)						
	Carbon Dioxide		0.33	0.41	0.42	0.39
	Oxygen		20.45	20.46	20.47	20.46
	Nitrogen		79.23	79.14	79.11	79.16
Formaldehyde						
	Concentration	(ppm, d)	5.85	6.02	6.11	5.99
	Emission Rate	(LB /HR)	2.241	2.294	2.300	2.278
Methane						
	Concentration	(ppm, d)	1.83	1.84	1.79	1.82
Ethane						
	Concentration	(ppm, d)	0.11	0.11	0.11	0.11

3 *RESULTS*

The results of all field and laboratory evaluations are presented in this section. Orsat (gas composition) and moisture is presented first followed by the computer printout of the PM-10 results. Preliminary measurements including test port locations are given in the appendices.

The results have been calculated on a personal computer using programs written specifically for source testing calculations. EPA-published equations have been used as the basis of the calculation techniques in these programs. The emission rates have been calculated using the product of the concentration times flow method.

3.1 Results of Orsat and Moisture Determinations

Interpoll Laboratories Report Number 21-39465
Louisiana-Pacific Corporation
Sagola, MI

Test Number 1
Dryer RTO Outlet

Results of Gas Composition and Moisture Analyses — Methods 3A and 4 (% v/v)

Date of Run	Run 1	Run 2	Run 3
	08-24-21	08-24-21	08-24-21

Dry basis (Orsat)

Carbon Dioxide.....	4.89	4.69	5.72
Oxygen.....	15.20	15.12	14.32
Nitrogen.....	79.91	80.19	79.96

Wet basis (Orsat)

Carbon Dioxide.....	3.33	3.20	3.90
Oxygen.....	10.36	10.31	9.76
Nitrogen.....	54.48	53.46	50.66
Water Vapor.....	31.82	33.03	35.68

Dry Molecular Weight.....	29.39	29.36	29.49
Wet Molecular Weight.....	25.77	25.60	25.39
Specific Gravity.....	0.890	0.884	0.877
Water Mass Flow.....	67044	69944	80427

Fo.....	1.166		
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Interpoll Laboratories Report Number 21-39465
Louisiana Pacific Corporation
Sagola, MI

Test Number 5
Press RCO Outlet

Results of Gas Composition and Moisture Analyses --- Methods 3A and 4 (% v/v)

Date of Run	Run 1 08-25-21	Run 2 08-25-21	Run 3 08-25-21
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Dry basis (Orsat)

Carbon Dioxide.....	0.33	0.41	0.42
Oxygen.....	20.45	20.46	20.47
Nitrogen.....	79.23	79.14	79.11

Wet basis (Orsat)

Carbon Dioxide.....	0.31	0.39	0.41
Oxygen.....	19.57	19.58	19.59
Nitrogen.....	75.83	74.88	75.79
Water Vapor.....	4.29	5.15	4.21

Dry Molecular Weight.....	28.87	28.88	28.89
Wet Molecular Weight.....	28.40	28.32	28.43
Specific Gravity.....	0.981	0.978	0.982
Water Mass Flow.....	10213	12323	9847

Fo.....	1.394		
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3.2 Results of PM-10 Determinations

Test Number 1
Dryer RTO Outlet

EPA Method 201A Sampling Data

		Run 1	Run 2	Run 3
Date of Test		08-24-21	08-24-21	08-24-21
Time of Runs	(Hrs)	0930 / 1143	1205 / 1424	1445 / 1714
Static Pressure	(In. of WC)	-0.47	-0.47	-0.47
Cross Sectional Area	(Sq. ft)	37.80	37.80	37.80
Pitot Tube Coefficient		0.778	0.773	0.778
Water in Sample Gas				
Impingers	(g)	320.4	353.7	404.7
Desiccant	(g)	7.0	6.0	6.0
Total	(g)	327.4	359.7	410.7
Gas Meter Coefficient		0.9817	0.9817	0.9817
Barometric Pressure	(In. of Hg)	28.56	28.56	28.56
Avg. Orifice Pressure Drop	In. of WC)	0.23	0.22	0.21
Avg. Gas Meter Temperature	(°F)	77.1	78.1	77.3
Volume Through Gas Meter				
Meter Conditions	(CF)	35.88	37.37	37.88
Standard Conditions	(DSCF)	33.07	34.38	34.90
Total Sampling Time	(Min.)	129.11	137.61	146.49
Nozzle Diameter	(In.)	0.180	0.180	0.180
Avg. Stack Gas Temperature	(°F)	241	245	247
Volumetric Flow Rate				
Actual	(ACFM)	104,570	105,610	112,807
Standard	(SCFM)	75,083	75,462	80,329
Dry Standard	(DSCFM)	51,189	50,535	51,666
PM-10 cutpoint	(um)	10.23	10.26	10.23
PM-2.5 cutpoint	(um)	2.40	2.42	2.42
Isokinetic Variation	(%)	107.0	105.7	98.6

Test Number 5
Press RCO Outlet

EPA Method 201A Sampling Data

		Run 1	Run 2	Run 3
Date of Test		08-25-21	08-25-21	08-25-21
Time of Runs	(Hrs)	0845 / 1014	1035 / 1205	1225 / 1354
Static Pressure	(In. of WC)	-0.35	-0.35	-0.35
Cross Sectional Area	(Sq. ft)	31.50	31.50	31.50
Pitot Tube Coefficient		0.778	0.773	0.778
Water in Sample Gas				
Impingers	(g)	25.2	26.3	25.4
Desiccant	(g)	7.0	13.0	5.0
Total	(g)	32.2	39.3	30.4
Gas Meter Coefficient		0.9817	0.9817	0.9817
Barometric Pressure	(In. of Hg)	28.59	28.59	28.59
Avg. Orifice Pressure Drop	In. of WC)	0.51	0.51	0.48
Avg. Gas Meter Temperature	(°F)	77.5	78.9	78.8
Volume Through Gas Meter				
Meter Conditions	(CF)	36.74	37.09	35.43
Standard Conditions	(DSCF)	33.90	34.13	32.61
Total Sampling Time	(Min.)	89.08	89.65	88.16
Nozzle Diameter	(In.)	0.162	0.162	0.162
Avg. Stack Gas Temperature	(°F)	195	193	202
Volumetric Flow Rate				
Actual	(ACFM)	110,332	110,492	109,385
Standard	(SCFM)	84,910	85,293	83,343
Dry Standard	(DSCFM)	81,270	80,901	79,834
PM-10 cutpoint	(um)	10.62	10.52	10.85
PM-2.5 cutpoint	(um)	2.41	2.38	2.51
Isokinetic Variation	(%)	103.0	103.5	101.9