

ATTACHMENT A

MAY 27 15
RTE AIR FORCE MONT

AIR EMISSION TEST REPORT

**Amory, Mississippi Wood Pellet Production Facility
Enviva Pellets Amory, LLC**

Submitted to

Enviva Pellets Amory, LLC

Submitted by

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Definitions

Total Hydrocarbons	All organic compounds containing hydrogen and carbon that are detected by a flame ionization detector operated in accordance with U.S. EPA Method 25A.
Volatile Organic Compounds	All organic compounds that are emitted to the atmosphere in a gaseous or vapor form that can participate in photochemical reactions to produce ozone. All volatile organic compounds are considered VOCs unless specifically exempted in 40 CFR 51.100(s). Relevant excluded compounds include methane, ethane, and acetone.
VOC Emissions	Mass emissions of VOC measured on a pounds of carbon basis.

Acronyms

DHM	Dry Hammermill
EPA	U.S. Environmental Protection Agency
FID	Flame Ionization Detector
FTIR	Fourier Transform Infrared Spectrometer
GHM	Green Hammermill
HAP	Hazardous Air Pollutant
MC	Moisture Content
MDEQ	Mississippi Department of Environmental Quality
ODT	Oven Dried Tons
THC	Total Hydrocarbons
VOC	Volatile Organic Compounds
C1	Carbon

Units of Measure

ppm	Parts per million (wet basis)
ppmvd	Parts per million (dry basis)
ppm C ₃	Parts per million as propane
ppm C ₁	Parts per million as carbon
mg	Milligram
kg	Kilogram
µg	Micrograms

Permit Designations/Titles

Green Hammermill	AA-001, Wet Wood Hammermill
Dryer	AA-002, Wood-Fired Rotary Dryer
Dry Hammermill	AA-003, Dry Wood Hammermill
Aspiration System	AA-004, Pellet Cooler Process and AA-005 Pellet Mill Aspiration System

Air Emission Test Report Amory, Mississippi Wood Pellet Production Facility

1. SUMMARY

Enviva Pellets, Amory, LLC (Enviva) has sponsored air emission testing to satisfy the requirements of Agreed Order 6267-13 dated June 16, 2013 (the "Order"). These test results are being submitted to the Mississippi Department of Environmental Quality (MDEQ) by October 31, 2013 in accordance with the Order.

The scope of the testing program included volatile organic compounds (VOCs) and six organic hazardous air pollutants (HAPs). Annual emissions of each analyte have been calculated and compared to applicable permit limits. The results of the testing program are summarized in Table 1-1 based on the present maximum permitted production limit of 99,000 output tons per year in the permit.

Analyte	Dryer	Dry Hammermill	Green Hammermill	Aspirator	Total
Total VOC	29.9	41.72	12.71	100.89	185.3
Methanol	2.50	0.34	1.37	0.73	4.94
Acetaldehyde	0.00	0.00	0.00	0.00	0.00
Acrolein	0.00	0.00	0.00	0.00	0.00
Formaldehyde	0.64	0.00	0.00	0.00	0.64
Phenol	0.00	0.00	0.00	0.00	0.00
Propionaldehyde	0.00	0.00	0.00	0.00	0.00
Total HAPS	3.14	0.34	1.37	0.73	5.58

At the current maximum permitted production limit, VOC emissions are above the facility wide limit of 99.0 tons per year but are below the PSD threshold of 250 tons per year. The total HAP emissions are under 25 tons per year, and each of the HAPs has an emission rate less than 10 tons per year.

The air emission tests were conducted by Air Control Techniques, P.C. using EPA Reference Methods 1, 2, 3, 4, 25A, and 320 in accordance with the test protocol submitted to MDEQ on July 31, 2013^[1]. The emission tests were conducted from Monday, October 14 through Wednesday, October 16, 2013. This report summarizes the emissions test data, quality assurance data, test method procedures, sampling equipment calibrations, process operating conditions, and test program participants.

2. EMISSION TEST PROGRAM DESCRIPTION

2.1 Amory, Mississippi Plant Description

Enviva operates a plant producing wood pellets. The plant consists of a wood receiving yard, log debarkers and chippers, a rotary dryer, a hammermill, and an aspiration system serving the pellet presses and coolers. The plant processes wood composed of a range of hardwoods and softwoods.

2.2 Purpose and Scope of the Emission Test Program

Based on a voluntary self-evaluation, Enviva reported to the Mississippi Department of Environmental Quality (MDEQ) that it may have underreported emissions of volatile organic compounds (VOCs) in its permit application. Enviva's concern was based on a set of engineering-oriented tests^[2] conducted in November 2012 that indicated that VOC emissions from a hammermill source and a press cooler aspiration vent may be higher than previously known. While emissions from specific wood pellet plants are highly dependent on the specific equipment employed and, to a lesser degree, the hardwood/softwood mix of raw material, Enviva's preliminary findings in the November 2012 engineering test are generally consistent with other recent findings in the Wood Pellet Industry, specifically the engineering-oriented tests^[3] at a Georgia Biomass, Inc. plant in Waycross, Georgia and Green Circle Bio Energy in Cottondale, Florida.

This air emission testing program is intended to address Enviva's concern and fulfills the requirements of the Order. Specifically, Enviva agreed to generate VOC emissions data for the following sources.

- Dryer stack
- Dry Hammermill stack
- Green Hammermill stack
- Pellet Mill and Cooler Aspiration System

2.3 Test Participants

The Enviva project manager for this project was Mr. Michael Doniger, Director of Plant Operations. He was assisted by Mr. Joe Harrell, Environmental Manager, Mr. Mike Jones, and Mr. John Burns, Amory Plant Manager.

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Legal counsel for Enviva is Mr. Alan McConnell. Mr. McConnell participated in this study to ensure that it addressed the requirements of the Order.

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Enviva retained Air Control Techniques, P.C. to conduct the air emission testing program at the Amory plant. The Air Control Techniques, P.C. project manager was John Richards, Ph.D., P.E., QSTI. He was assisted by David Goshaw, P.E., QSTI, Todd Brozell, P.E., QSTI, and Jonas Gilbert. Tom Holder, QSTI provided quality assurance services for the test program. Contact information for Air Control Techniques, P.C. includes the following.

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Enthalpy, Inc. provided Method 320 consulting support. The Enthalpy project manager for this project was Mr. Bryan Tyler. He was assisted by Dr. Grant Plummer, Mr. Clint Thrasher, and Mr. Steve Eckert, President.

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3. TEST MATRIX AND TEST RESULTS

3.1 Test Matrix

Table 3-1 summarizes the test program analytes, sampling methods, and analytical methods used for the four sources listed in Section 1.1.

Analyte	Test Method	Number of Runs	Run Length	Analytical Method
Acetaldehyde, Acrolein, Formaldehyde, Methanol, Phenol, Propionaldehyde	EPA Method 320	3	60 min	FTIR
Gas Flow	EPA Method 2	3	60 min	Manometer
Gas Molecular Weight, Oxygen, Carbon Dioxide	EPA Method 3	3	60 min	Fyrite® Analyzer
Gas Moisture	EPA Method 4	3	60 min	Gravimetric
Total Hydrocarbons (THC)	EPA Method 25A	3	60 min	FID

The tests were conducted on Monday, October 14 through Wednesday October 16, 2013.

3.2 Test Results

The VOC and organic HAP test results and calculated annual emission rates are summarized in Tables 3-2 through 3-5. VOC and HAP emissions were measured simultaneously at each of the four emission units tested.

The VOC emissions have been calculated based on the total hydrocarbon data provided by Method 25A. The Method 25A data have been converted from a wet to a dry basis to account for the moisture in the stack gas stream. Total hydrocarbon concentrations (THC) have been used as a surrogate for VOCs.

The VOC emission calculations do not include any corrections for methane, ethane, or acetone despite the fact that these compounds are detected by Method 25A but are not classified as VOCs. Accordingly, the reported VOC emissions are biased to higher-than-true levels to the extent that these three compounds affected the Method 25A results.

The Method 25A data reflect the combined THC concentrations consisting of (1) alpha and beta pinene, (2) numerous other terpenes such as limonene and 3-carene, and (3) the organic HAPs. The organic HAP emissions discussed later in this report are also classified as VOCs and represent a small fraction of the total VOC emissions reported.

Method 320 was used to measure six organic compounds. Several of the organic compounds were below the detection limits of Method 320 in this matrix of gaseous constituents. These non-detection concentrations are designated by shading in Tables 3-2 through 3-5.

Parameter	Run 1	Run 2	Run 3	Average
Date	10/14/2013	10/14/2013	10/14/2013	N/A
Start	15:15	16:49	17:58	N/A
Stop	16:15	17:49	19:02	N/A
Throughput, tons/hour	12.8	12.8	12.8	12.8
Moisture Content Outlet, %wt.	8.5	11.6	13.2	11.1
Throughput, ODT/hour	11.71	11.32	11.11	11.4
ACFM	70,382	69,968	68,852	69,734
DSCFM	49,036	49,728	48,642	49,135
Stack Temperature, °F	199.6	189.6	187.8	192.3
O ₂ , %	19	19.5	19	19.2
% Moisture	12.05	11.64	12.06	11.9
VOC, ppmvd as Propane	33.6	24.8	25.2	27.9
VOC, ppmvd as C1	100.8	74.4	75.6	83.6
VOC, lbs/hour as C1	9.2	6.9	6.9	7.7
VOC, lbs/ODT	0.79	0.61	0.62	0.7
Methanol, ppmvd	3.61	1.83	2.43	2.62
Acetaldehyde, ppmvd	0.99	0.98	0.99	0.98
Acrolein, ppmvd	3.05	3.03	3.05	3.04
Formaldehyde, ppmvd	0.82	0.57	0.74	0.71
Phenol, ppmvd	4.15	4.13	4.15	4.14
Propionaldehyde, ppmvd	0.63	0.63	0.63	0.63
Methanol, lbs/hour	0.88	0.45	0.59	0.64
Acetaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Acrolein, lbs/hour	0.00	0.00	0.00	0.00
Formaldehyde, lbs/hour	0.19	0.13	0.17	0.16
Phenol, lbs/hour	0.00	0.00	0.00	0.00
Propionaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Methanol, lbs/ODT	0.075	0.040	0.053	0.056
Acetaldehyde, lbs/ODT	0.000	0.000	0.000	0.000
Acrolein, lbs/ODT	0.000	0.000	0.000	0.000
Formaldehyde, lbs/ODT	0.016	0.012	0.015	0.014
Phenol, lbs/ODT	0.000	0.000	0.000	0.000
Propionaldehyde, lbs/ODT	0.000	0.000	0.000	0.000

1. Note: Shaded area indicates a calculated minimum detection limit. Emissions were calculated based on zero for non-detect values.

Parameter	Run 1	Run 2	Run 3	Average
Date	10/15/2013	10/15/2013	10/15/2013	N/A
Start	9:11	10:22	11:40	N/A
Stop	10:11	11:22	12:40	N/A
Throughput, tons/hour	9.9	9.9	9.9	9.9
Moisture Content Outlet, %wt.	48	48	48	48.0
Throughput, ODT/hour	5.148	5.148	5.148	5.1
ACFM	12,277	12,367	12,326	12,323
DSCFM	11,630	11,634	11,490	11,585
Stack Temperature, °F	87.4	87.5	88.4	87.8
O ₂ , %	20.9	20.9	20.9	20.9
% Moisture	2.25	2.92	3.64	2.94
VOC, ppmvd as Propane	17.9	21.8	28.2	22.6
VOC, ppmvd as C1	53.6	65.5	84.7	67.9
VOC, lbs/hour as C1	1.16	1.42	1.82	1.47
VOC, lbs/ODT	0.23	0.28	0.35	0.29
Methanol, ppmvd	2.68	2.77	2.79	2.74
Acetaldehyde, ppmvd	0.89	0.89	0.90	0.00
Acrolein, ppmvd	2.74	2.76	2.78	0.00
Formaldehyde, ppmvd	0.21	0.21	0.21	0.00
Phenol, ppmvd	3.73	3.76	3.79	0.00
Propionaldehyde, ppmvd	0.57	0.57	0.58	0.00
Methanol, lbs/hour	0.16	0.16	0.16	0.159
Acetaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Acrolein, lbs/hour	0.00	0.00	0.00	0.00
Formaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Phenol, lbs/hour	0.00	0.00	0.00	0.00
Propionaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Methanol, lbs/ODT	0.030	0.031	0.031	0.031
Acetaldehyde, lbs/ODT	0.000	0.000	0.000	0.000
Acrolein, lbs/ODT	0.000	0.000	0.000	0.000
Formaldehyde, lbs/ODT	0.000	0.000	0.000	0.000
Phenol, lbs/ODT	0.000	0.000	0.000	0.000
Propionaldehyde, lbs/ODT	0.000	0.000	0.000	0.000

1. Note: Shaded area indicates a calculated minimum detection limit. Emissions were calculated based on zero for non-detect values.

Table 3-4. Aspiration System Emission Test Results				
Parameter	Run 1	Run 2	Run 3	Average
Date	10/15/2013	10/15/2013	10/15/2013	N/A
Start	17:36	18:49	20:00	N/A
Stop	18:36	19:49	21:00	N/A
Throughput, tons/hour	16	16	16	16.0
Moisture Content Outlet, %wt.	9.1	9.1	9.1	9.1
Throughput, ODT/hour	14.54	14.54	14.54	14.5
ACFM	14,422	14,387	14,397	14,402.0
DSCFM	11,294	11,235	11,210	11,246
Stack Temperature, °F	138.9	138.3	138.6	138.6
O ₂ , %	20.9	20.9	20.9	20.9
% Moisture	7.73	8.08	8.32	8.0
VOC, ppmvd as Propane	376.9	413.8	303.6	364.8
VOC, ppmvd as C1	1130.7	1241.4	910.8	1,094.3
VOC, lbs/hour as C1	23.9	26.1	19.1	23.0
VOC, lbs/ODT	1.64	1.79	1.31	1.6
Methanol, ppmvd	2.83	3.11	2.94	2.96
Acetaldehyde, ppmvd	0.94	0.94	0.95	0.94
Acrolein, ppmvd	2.90	2.91	2.92	2.91
Formaldehyde, ppmvd	0.91	0.89	0.87	0.89
Phenol, ppmvd	3.95	3.97	3.98	3.97
Propionaldehyde, ppmvd	0.60	0.61	0.61	0.61
Methanol, lbs/hour	0.16	0.17	0.16	0.17
Acetaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Acrolein, lbs/hour	0.00	0.00	0.00	0.00
Formaldehyde, lbs/hour	0.05	0.05	0.05	0.05
Phenol, lbs/hour	0.00	0.00	0.00	0.00
Propionaldehyde, lbs/hour	0.00	0.00	0.00	0.00
Methanol, lbs/ODT	0.011	0.012	0.011	0.011
Acetaldehyde, lbs/ODT	0.000	0.000	0.000	0.000
Acrolein, lbs/ODT	0.000	0.000	0.000	0.000
Formaldehyde, lbs/ODT	0.003	0.003	0.003	0.003
Phenol, lbs/ODT	0.000	0.000	0.000	0.000
Propionaldehyde, lbs/ODT	0.000	0.000	0.000	0.000

1. Note: Shaded area indicates a calculated minimum detection limit. Emissions were calculated based on zero for non-detect values.

Four test runs were conducted on the dry hammermill. During the first run conducted on October 15, 2013, problems relating to either stones entering the hammermill or problems with the hammers were causing the system to malfunction. The unit was inspected overnight and found in good condition. Three additional runs were conducted on October 16, 2013. All four runs were included in the test averages.

Table 3-5. Dry Hammermill Emission Test Results					
Parameter	Run 1	Run 2	Run 3	Run 4	Average
Date	10/15/2013	10/16/2013	10/16/2013	10/16/2013	N/A
Start	13:48	10:54	12:07	13:21	N/A
Stop	14:48	11:54	13:07	14:21	N/A
Throughput, tons/hour	17.6	16.1	16.1	16.1	16.5
Moisture Content Outlet, %wt.	10	10	10	10	10.0
Throughput, ODT/hour	15.84	14.49	14.49	14.49	14.8
ACFM	19,757	18,980	19,427	19,321	19,371.3
DSCFM	17,849	17,591	17,745	17,421	17,652
Stack Temperature, °F	100.8	88.6	93.8	96.1	94.8
O ₂ , %	20.9	20.9	20.9	20.9	20.9
% Moisture	3.57	2.89	3.4	4.25	3.5
VOC, ppmvd as Propane	122.3	82.7	88.6	91.5	96.3
VOC, ppmvd as C1	366.9	248.1	265.8	274.5	288.8
VOC, lbs/hour as C1	12.2	8.2	8.8	8.9	9.5
VOC, lbs/ODT	0.77	0.57	0.61	0.61	0.6
Methanol, ppmvd	1.04	0.71	0.83	0.9	0.87
Acetaldehyde, ppmvd	0.90	0.89	0.90	0.75	0.86
Acrolein, ppmvd	2.83	2.76	2.77	2.80	2.80
Formaldehyde, ppmvd	0.21	0.21	0.21	0.14	0.19
Phenol, ppmvd	3.78	3.76	3.78	0.42	2.93
Propionaldehyde, ppmvd	0.58	0.57	0.58	0.24	0.49
Methanol, lbs/hour	0.06	0.04	0.05	0.06	0.05
Acetaldehyde, lbs/hour	0	0	0	0	0.00
Acrolein, lbs/hour	0	0	0	0	0
Formaldehyde, lbs/hour	0	0	0	0	0.00
Phenol, lbs/hour	0	0	0	0	0.00
Propionaldehyde, lbs/hour	0	0	0	0	0.00
Methanol, lbs/ODT	0.004	0.003	0.003	0.004	0.004
Acetaldehyde, lbs/ODT	0.000	0.000	0.000	0.000	0.000
Acrolein, lbs/ODT	0.004	0.004	0.004	0.004	0.004
Formaldehyde, lbs/ODT	0.000	0.000	0.000	0.000	0.000
Phenol, lbs/ODT	0.000	0.000	0.000	0.000	0.000
Propionaldehyde, lbs/ODT	0.000	0.000	0.000	0.000	0.000

1. Note: Shaded area indicates a calculated minimum detection limit. Emissions were calculated based on zero for non-detect values.

3.3 Emissions Data Evaluation

Method 25A VOC Concentrations

The VOC emissions from the various process units ranged from 0.03 to 1.6 pounds per ODT. VOC emissions expressed on a pounds per ODT basis were highest from the aspiration system.

The data summarized in Tables 3-2 through 3-5 indicate that the total VOC emissions from the Amory Plant exceed 100 tons per year calculated as carbon. These tests confirm that the plant is a Title V major source for VOCs.

The accuracy of the VOC data is demonstrated by a Method 25A response factor of approximately 1 for the group of compounds present in the gas stream. The Method 25A response is expressed in terms of a response factor that is defined as the observed Method 25A concentration divided by the true concentration. The Method 25A FID has a response factor close to 1.0 for a large set of organic compounds. Some high molecular weight organics have a response factor larger than 1, and in some cases, approaching 1.5. For these compounds, Method 25A is biased to higher-than-true concentrations. Some low molecular weight-highly oxygenated organic compounds such as methanol and formaldehyde have very low response factors in the range of 0.1 to 0.4. For these compounds, Method 25A is biased to lower-than-true concentrations.

As part of the laboratory tests reported to MDEQ in Enviva’s Phase I emission study dated July 31, 2013^[4] (the “Phase I Study”), Air Control Techniques, P.C. has taken the following two independent approaches in assessing the Method 25A response factors: (1) direct measurement of the Method 25A response factor using an alpha-pinene gas standard, the dominant organic compound measured during the laboratory tests and (2) a comparison of the Method 25A concentration data with the summed concentrations of all of the specific organics measured simultaneously using NCASI Method 98.01 and EPA Method 18. The results of these response factor analyses are presented in Tables 3-6 and 3-7.

Alpha-Pinene Gas Standard, as C ₁₀ H ₁₆	259 ppm
Alpha-Pinene Gas Standard, as C ₃	863 ppm
FID Response, as C ₃	888 ppm
Response Factor as C ₃	1.03

1. Note: This table was included in the Phase I Study report to MDEQ.

Run	Process Type	Softwood Content, %	Method 25A versus Combined NCASI 98.01 and Method 18	Dominant Compounds	Other Important Compounds
4	Dryer	10	0.72	α -and β -Pinene	Acetone, Methanol
5	Dryer	10	0.70	α -and β -Pinene	Acetone, Methanol
6	Dryer	10	0.75	α -and β -Pinene	Methanol, Formaldehyde
21	Dryer	10	1.23	α -and β -Pinene	Acetone, Methanol
22	Press	10	1.05	α -and β -Pinene	Acetone, Methanol
7	Dryer	70	0.85	α -and β -Pinene	Acetone
8	Dryer	70	0.90	α -and β -Pinene	Acetone
9	Dryer	70	1.02	α -and β -Pinene	Acetone
10	Dryer	70	0.91	α -and β -Pinene	Acetone
24	Press	70	1.51	α -and β -Pinene	Acetone, Methanol
11	Dryer	100	0.99	α -and β -Pinene	Acetone
12	Dryer	100	0.96	α -and β -Pinene	Acetone
13	Dryer	100	0.85	α -and β -Pinene	Acetone
14	Dryer	100	0.87	α -and β -Pinene	Acetone
16	Dryer	100	1.09	α -and β -Pinene	Methanol, Acetone
19	Dryer	100	1.21	α -and β -Pinene	Methanol, Acetone
20	Press	100	1.13	α -and β -Pinene	Methanol, Acetone
Test Program Average			0.98		

1. Note: This table was included in the Phase I Study report to MDEQ.

The excellent agreement between the Method 25A total concentration and the combined concentrations of all of the organics measured by NCASI 98.01 and EPA Method 18 demonstrate that Method 25A is an appropriate VOC measurement technique for wood pellet production facilities.

Method 320 HAP Concentrations

At the maximum permitted production limit of 99,000 ODT per year for the dryer/GHM, and maximum potential operations of 8,760 hours for the DHM/aspiration sources, all six of the organic HAPs are each emitted at less than 10 tons per year. The total HAP emissions for the plant are less than 25 tons per year.

The list of HAPs specifically included in the test protocol included methanol, acetaldehyde, acrolein, formaldehyde, phenol, and propionaldehyde. This list was compiled based on (1) the organic compounds identified in laboratory analyses of pellet production facilities emissions, (2) previous emission tests conducted in the Pellet Manufacturing Industry, and (3) organic HAPs identified in studies of other wood products industries—specifically, MDF production.

The results of this test program indicate that this list of HAPs compounds needs to be amended. Phenol was not detected in any of the tests of the four process units. Propionaldehyde was also not detected in any of the tests.

The non-detectable phenol emissions data are consistent with the results of the Phase I Study. Phenol was not identified at detectable concentrations in any of the laboratory studies summarized in the Phase I Study report. The emission rates of phenol reported in a November 2012 Wiggins report [2] ranged from 0.0002 to 0.0018 pounds per hour—all insignificant emission rates. Phenol was also not listed in previous emission tests reviewed in preparation for this test program. Phenol was included in the test protocol primarily because other researchers such as Beauchemin and Tampier, [5] Milot, [6] and Milot and Mosher [7] listed phenol due to its inclusion in tests conducted at MDF and particleboard facilities. However, phenol emissions in MDF and particleboard production are due to the use of phenolic resins and similar binders. There is no reason to expect any appreciable phenol formation in pellet production considering (1) the lack of binders of any type in pellet production, (2) the higher moisture levels in pellet production as compared to MDF and particleboard processes, and (3) the lower material temperatures in pellet process equipment. Air Control Techniques, P.C. has assigned zero values to non-detected concentrations.

Acetaldehyde, propionaldehyde, and acrolein had very low concentrations in most of the emission tests summarized in this report. The IR absorption spectra of both water and the terpene compounds overlap the absorption spectra of acetaldehyde, propionaldehyde, and acrolein. Accordingly, the reported concentrations of these three compounds are biased to higher-than-true levels to the extent that this interference could not be avoided by Method 320 spectral absorption modeling. Zero values have been assigned when these concentrations were below detection limits of Method 320 due, in part, to the interference bias.

The use of zero values for non-detected compounds is an appropriate approach for any source, such as pellet production, where there are a few dominant compounds (i.e. methanol and formaldehyde) and a large number of possible compounds at extremely low levels such as phenol, acetaldehyde, and propionaldehyde. The use of non-detect or one-half non-detect concentrations in emission calculations for a large number of compounds potentially present at trace levels inherently makes any source “major” regardless of the actual emissions, size, or operations characteristics of the emission unit.

3.4 VOC and Organic HAP Emission Summary

Table 3-8 summaries annual emissions of VOC and organic HAP compounds. The annual emission rates are based on operation at the permit limited production rate of 99,000 ODT for the dryer/GHM, and maximum operations of 8,760 hours per year for the DHM/aspiration sources.

Analyte	Dryer	Dry Hammermill	Green Hammermill	Aspirator	Total
Total VOC	29.9	41.72	12.71	100.89	185.3
Methanol	2.50	0.34	1.37	0.73	4.94
Acetaldehyde	0.00	0.00	0.00	0.00	0.00
Acrolein	0.00	0.00	0.00	0.00	0.00
Formaldehyde	0.64	0.00	0.00	0.00	0.64
Phenol	0.00	0.00	0.00	0.00	0.00
Propionaldehyde	0.00	0.00	0.00	0.00	0.00
Total HAPS	3.14	0.34	1.37	0.73	5.58

4. SAMPLING LOCATIONS

4.1 Dryer Stack Sampling Location

The dryer sampling location meets EPA Method 1 location requirements as indicated in Figure 4-1. Twelve sampling points were used to measure the gas flow rate.

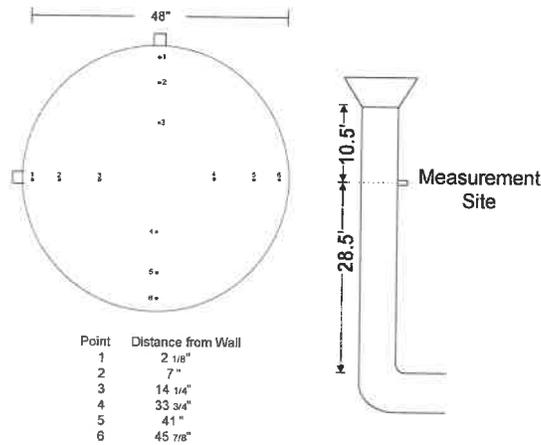


Figure 4-1 Dryer # 1 Stack Sampling Location

The downstream¹ flow disturbance is the stack discharge. The upstream flow disturbance is the duct from the fan entering the base of the stack.

During the sampling program, only the port facing south was used. The port facing east was blocked by the stack support cable.

No cyclonic flow conditions were observed in the Dryer stack. The point-by-point cyclonic flow checks indicated an average flow angle 1.9 degrees. This meets the requirements of Section 11.4 of Method 1. A photograph of the Dryer stack is shown in Figure 4-2.

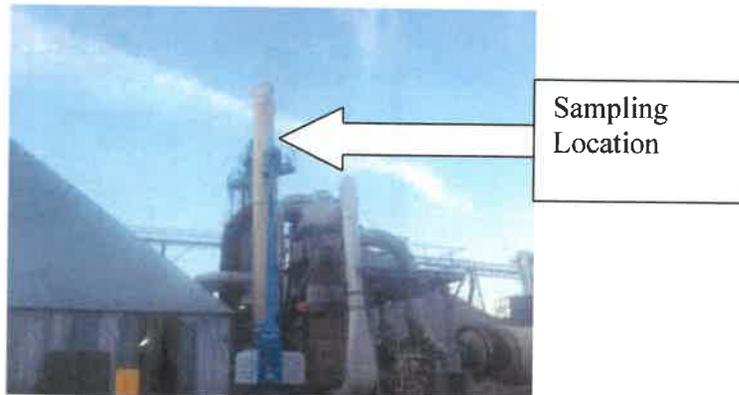


Figure 4-2. Photograph of the Dryer Stack

¹ "Upstream" and "downstream" are defined based on the sampling location as the reference point.

4.2 Dry Hammermill Stack Sampling Location

The Dry Hammermill sampling location meets EPA Method 1 location requirements as indicated in Figure 4-3. Twelve sampling points were used to measure the gas flow rate.

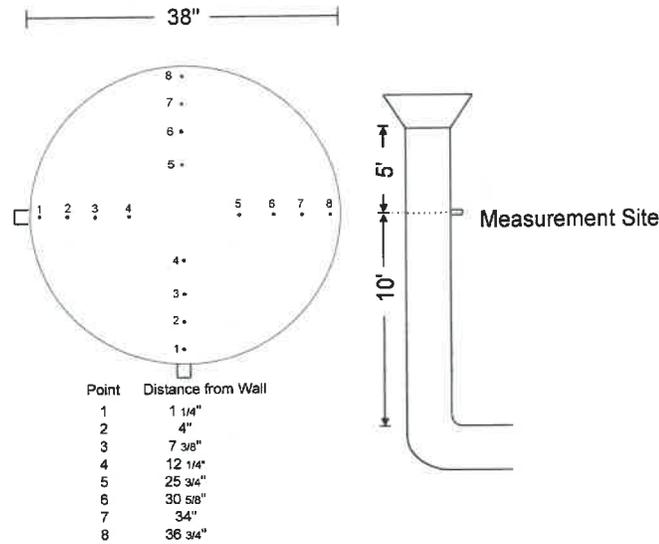


Figure 4-3. Dry Hammermill Sampling Location

The downstream flow disturbance is the stack discharge. The upstream flow disturbance is the fan discharge duct. During the sampling program, both ports were accessible.

No cyclonic flow conditions were observed in the Dry Hammermill stack. The point-by-point cyclonic flow checks indicated an average flow angle of 1.9 degrees. This meets the requirements of Section 11.4 of Method 1. A photograph of the Dry Hammermill stack is shown in Figure 4-4.

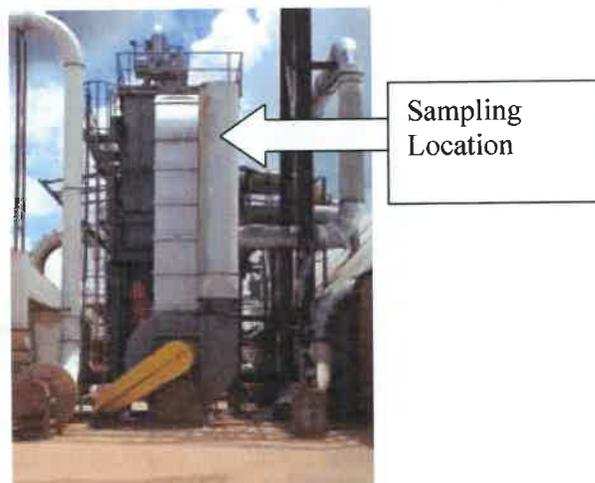


Figure 4-4. Photograph of the Dry Hammermill Sampling Location

4.3 Pellet Mill Aspiration System Sampling Location

The Aspiration System sampling location meets EPA Method 1 location requirements as indicated in Figure 4-5. Twelve sampling points were used to measure the gas flow rate.

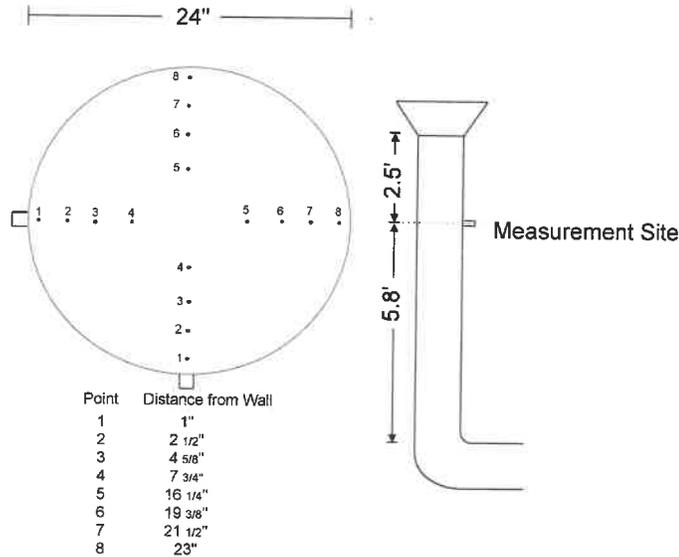


Figure 4-5. Pellet Mill Aspiration System Sampling Location

The upstream flow disturbance was an entry duct to the fan inlet. The downstream flow disturbance was an elbow from the multicyclone collector.

No cyclonic flow conditions were observed in the Aspiration System outlet duct. The point-by-point cyclonic flow checks indicated an average flow angle of 3.1 degrees. This meets the requirements of Section 11.4 of Method 1. A photograph of the Aspiration System sampling location is shown in Figure 4-6.

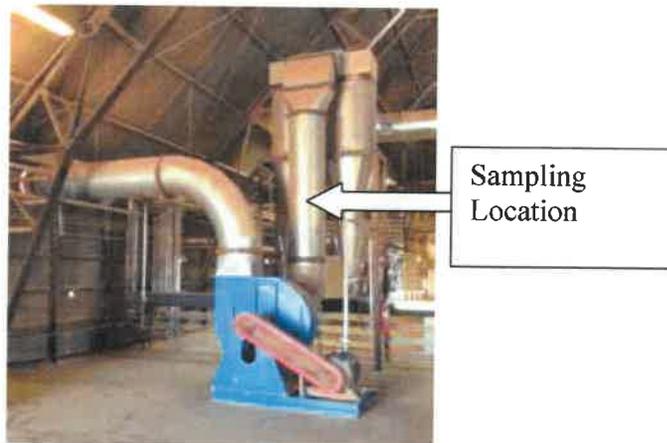


Figure 4-6. Photograph of the Pellet Mill Aspiration System Sampling Location

4.4 Green Hammermill Stack Sampling Location

The Green Hammermill stack sampling location shown in Figure 4-7 meets the minimum requirements for a downstream flow disturbance specified in Method 1, Section 11.1. The downstream flow disturbance is the fan discharge duct. The upstream flow disturbance is the stack discharge. Both ports were accessible for sampling.

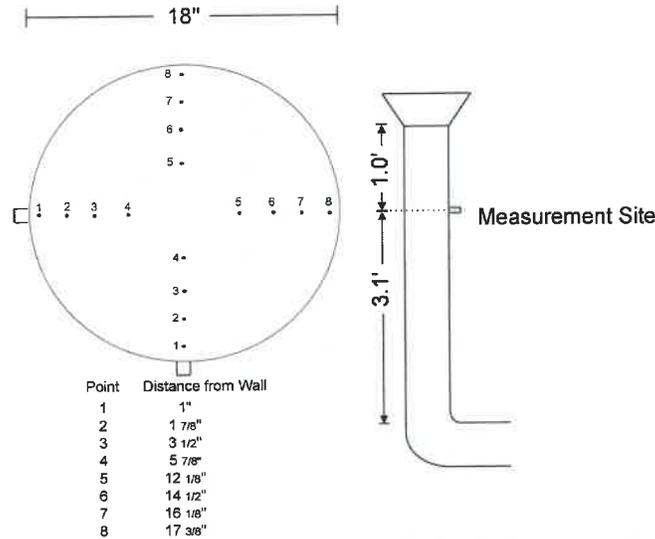


Figure 4-7. Green Hammermill Stack Sampling Location

No cyclonic flow conditions were observed in the Green Hammermill stack. The point-by-point cyclonic flow checks indicated an average flow angle of 2.6 degrees. This meets the requirements of Section 11.4 of Method 1. A photograph of the Green Hammermill stack is shown in Figure 4-8.



Figure 4-8. Green Hammermill Stack

5. TESTING PROCEDURES

5.1 Flue Gas Velocity and Volumetric Flow Rate - EPA Method 2

The flue gas velocities and volumetric flow rates during all of the emission tests were determined according to the procedures outlined in U.S. EPA Reference Method 2. Velocity measurements were made using S-Type Pitot tubes conforming to the geometric specifications outlined in Method 2. Accordingly, each Pitot was assigned a coefficient of 0.84. Velocity pressures were measured with fluid manometers. Effluent gas temperatures were measured with chromel-alumel thermocouples attached to digital readouts.

5.2 Flue Gas Composition and Molecular Weight - EPA Method 3

Flue gas analyses and calculation of flue gas dry molecular weights were performed in accordance with EPA Method 3. A stainless steel probe was inserted into the gas stream to collect a representative sample of the flue gas during each test run. The samples were analyzed using a Fyrite gas analyzer. Moisture was removed from the sample gas by means of a knockout jar located prior to the sample pump.

5.3 Flue Gas Moisture Content - EPA Method 4

The flue gas moisture content was determined in conjunction with each test run according to the sampling and analytical procedures outlined in EPA Method 4. Wet impinger sampling trains were used to withdraw and analyze the stack gas. The impingers were connected in series and contained water in the first two impingers followed by an empty impinger and then a silica gel impinger. The impingers were contained in an ice bath to assure condensation of the flue gas stream moisture. Any moisture that was not condensed in the impingers was captured in the silica gel; therefore, all moisture was weighed and entered into moisture content calculations.

5.4 Total Hydrocarbons – EPA Method 25A

Continuous emissions monitoring was conducted for volatile organic compounds. The sampling and analytical procedures for VOCs were conducted in accordance with EPA 25A. The CEM system consisted of a sample acquisition system, the THC emission monitor, and a data acquisition system (DAS). A California Analytical Model 300 flame ionization detector was used for the Method 25A tests.

The sample acquisition system included an in-stack probe, a heated out-of-stack glass mat filter for particulate matter removal, a heat-traced Teflon® sample line, a Teflon® heated-head pump, a moisture removal system, and a gas manifold board. All components of the sample acquisition system that contacted the sampled gas were constructed of Type 316 stainless steel or Teflon®. The sample gas was continuously extracted from a central point within the duct at a constant rate ($\pm 10\%$) for the duration of each test run. The wet, filtered gas was transported to a heated-head pump located at the CEM laboratory. The sample gas was sent directly to the VOC analyzer. Care was taken to ensure that the sample gas was greater than 220°F during transport from the stack to the VOC monitor. All pretest and posttest calibration procedures were performed as outlined in the applicable EPA Reference Methods.

Total organic hydrocarbon concentrations were measured on a wet basis using a California Analytical 300 FID continuous emission monitor. The THC concentrations were monitored on a propane (C₃) basis using a flame ionization detector (FID). The FID was fueled by a gas mixture

consisting of 40% helium and 60% hydrogen to reduce the effect of oxygen synergism. The THC analyzer was calibrated with a set of four gas standards. Calibration tests were performed prior to and following each test run.

Outputs from the individual emission monitors were connected to a computerized data acquisition system. Outputs from the analyzer were sent to a portable computer via a National Instruments™ FieldPoint controller. The signals were downloaded to a STRATA® software program every two seconds. The two-second readings were averaged for the duration of the test run.

Total mass emissions of VOCs were determined based on the Method 25A total hydrocarbon concentration data. The mass emissions were expressed on a pounds mass of carbon per hour.

5.5 Organic HAP Compounds – EPA Method 320

Testing for wet-basis organic HAP concentrations was conducted by extractive Fourier transform infrared (FTIR) spectroscopy using EPA Method 320 (40CFR, Part 63, Appendix A). Sample gas was continuously passed through the sampling system, which included an in-stack probe, a heated out-of-stack glass mat filter for particulate matter removal, a Teflon® heat-traced sample line, a MIDAC Fourier Transform Infrared (FTIR) spectrometer, a Teflon® heated-head pump, and a gas manifold board as shown in Figure 5-1. All components of the sample acquisition system that contacted the sampled gas were Type 316 stainless steel or Teflon®. All components of the sampling system and the FTIR cell were maintained at or above 120° C. Air Control Techniques, P.C. took great care to ensure that the sampling system contained no “cold spots” to prevent organic HAP loss. The sampling rate was maintained at greater than 10 liters per minute.

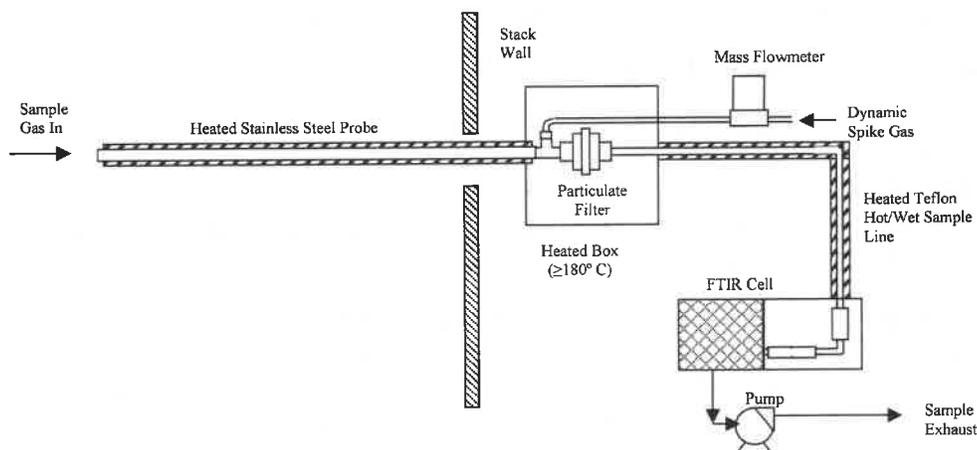


Figure 5-1. Method 320 Organic HAP Sampling System

The FTIR system included a MIDAC Corporation I-1301 spectrometer equipped with a heated, nominal 10-meter path absorption cell, a potassium bromide (KBr) beam splitter, zinc selenide (ZnSe) non-hygroscopic windows, and a liquid nitrogen-cooled Mercury Cadmium Telluride detector. Measurements were made using a MIDAC Model I-1301 high resolution Michelson interferometer with AutoQuant Pro software. Sample gas continuously passed through the sampling system, and sample spectra (based on 50 co-added interferograms) were recorded every

minute. The system's nominal spectral resolution was 0.5 cm^{-1} . Samples and standards were analyzed at temperatures greater than 120°C and near ambient pressures.

The inside walls of the cells were polished stainless steel to minimize interaction of the sample with the cell walls, and the cell mirrors were of bare gold. The gas pressure in the FTIR sample cell was monitored with a pressure transducer connected directly to the sample cell. The heated sample cell was wrapped in an insulating thermal jacket, and the temperature was controlled with type J thermocouples. The absorption cell volume was approximately 2 liters.

The FTIR system was operated via a portable computer, and a data archive storage system (USB Mass Storage Drive) was used for data backup. All interferograms, single beams, absorbance spectra, and background single beams were stored and have been archived. The filename, time, pressure and temperature of the sample cell, scan rate, background identification and other pertinent information was recorded by hand during the test program.

Air Control Techniques used the program AutoquantPro™ Version 4.5.0.195, (©Midac Corporation, 2012) to collect and analyze all the infrared field data. The program allows the development and storage of analytical "methods" for analysis of spectral data (absorbance) files. The reference spectra used for these analyses were developed by MIDAC Corporation, EPA, and Enthalpy Analytical, Inc. One "model" was developed for determining the absorption path length and one additional "method" for determining the concentrations of the target compounds for each source.

The concentration uncertainty reported by AutoquantPro is called the Standard Error of the Estimated Concentration, or SEC; it is also known as the Marginal Standard Deviation. The uncertainties in the concentration are proportional to the square root of the sums of the squares of the residual. After the residual spectrum is obtained, which we will call R, the error variance for the case of a single reference spectrum is calculated as follows.

$$\sigma^2 = \frac{\sum_i R_i^2}{(n-1)}$$

Where n is the number of observations. The SEC is given by the following.

$$SEC = \frac{\sigma C}{\sqrt{\sum_i A_i^2}}$$

Where A is the spectrum and C is the known concentration of the reference.

The 95% confidence interval is 1.96 times the SEC.

6. QUALITY ASSURANCE

6.1 Method 1 Quality Assurance

All S-type Pitot tubes used in this project conformed to EPA guidelines concerning construction and geometry. Pitot tubes were inspected prior to use. Information pertaining to S-type Pitot tubes is presented in detail in Section 3.1.1 of EPA Publication No. 600/4-77-027b. Only S-type Pitot tubes meeting the required EPA specifications were used in this project.

The thermocouples used in this project were calibrated using the procedures described in Section 3.4.2 of EPA Publication No. 600/4-77-027b. Each temperature sensor was calibrated at a minimum of three points over the anticipated range of use against NIST-traceable mercury in glass thermometer.

6.2 Method 4 Quality Assurance

Pretest and posttest leak checks were conducted on each Method 4 sampling train used. The observed leak rates for the sampling trains were below 0.02 actual cubic feet per minute as required by Method 4.

All dry gas meters were fully calibrated to determine the volume correction factor prior to field use. Post-tests calibration checks were performed as soon as possible after the equipment was returned to the laboratory. Pre-and post-test calibrations agreed within ± 5 percent. The calibration procedure is documented in Section 3.3.2 of EPA Publication No. 600/4-77-237b.

The scales used at the test location to determine flue gas moisture content were calibrated using a standard set of weights.

6.3 Method 25A Quality Assurance

At the beginning of the test day, a linearity calibration test was performed on each analyzer. The continuous emission monitoring instrument response did not differ by more ± 5 from the propane calibration standard. Linearity results for the test program are provided in Table 6-1 through 6-8.

Prior to and following each test run, a system calibration test was performed. The system test was performed to verify that the sampling system did not contain leaks (system bias) and to measure a change in analyzer response during the test program (system drift). The system bias was less than $\pm 5\%$ of full-scale, and system drift was less than $\pm 3\%$ of full scale. System calibration results for the test program are provided in Tables 6-1 through 6-8.

Table 6-1. Dryer Quality Assurance Results, Total Hydrocarbons, Method 25A				
Linearity Tests				
Parameter	Allowable	Test Series		
Zero, %	±5	0.1		
Low, %	±5	1.1		
Mid, %	±5	0.2		
High, %	±5	0.1		
System Tests				
Parameter	Allowable	Run 1	Run 2	Run 3
Zero Bias (Pre), %	±5	0.0	0.1	0.2
Zero Bias (Post), %	±5	0.1	0.2	0.2
Up-scale Bias (Pre), %	±5	0.0	0.0	0.1
Up-scale Bias (Post), %	±5	0.0	0.1	0.1
Zero Drift, %	±3	0.1	0.1	0.0
Up-scale Drift, %	±3	0.1	0.1	0.0
Response Time, sec	N/A	30		

Table 6-2. Dry Hammermill Quality Assurance Results, Total Hydrocarbons, Method 25A, Low Range					
Linearity Tests					
Parameter	Allowable	Test Series			
Zero, %	±5	0.1	0.1		
Low, %	±5	0.4	1.1		
Mid, %	±5	0.5	1.0		
High, %	±5	0.3	0.5		
System Tests					
Parameter	Allowable	Run 1	Run 2	Run 3	Run 4
Zero Bias (Pre), %	±5	0	0	-0.2	0.0
Zero Bias (Post), %	±5	0.1	-0.2	0.0	0.0
Up-scale Bias (Pre), %	±5	0.0	0.0	0.3	0.2
Up-scale Bias (Post), %	±5	0.3	0.3	0.2	0.1
Zero Drift, %	±3	0.1	-0.2	0.2	0.0
Up-scale Drift, %	±3	0.3	0.3	-0.1	0.0
Response Time, sec	N/A	30			

Table 6-3. Dry Hammermill Quality Assurance Results, Total Hydrocarbons, Method 25A, High Range					
Linearity Tests					
Parameter	Allowable	Test Series			
Zero, %	±5	0.0	0.0		
Low, %	±5	0.2	0.3		
Mid, %	±5	0.1	0.2		
High, %	±5	0.0	0.0		
System Tests					
Parameter	Allowable	Run 1	Run 2	Run 3	Run 4
Zero Bias (Pre), %	±5	0.0	0.0	0.0	0.0
Zero Bias (Post), %	±5	0.0	0.0	0.0	0.0
Up-scale Bias (Pre), %	±5	0.0	0.0	0.1	0.0
Up-scale Bias (Post), %	±5	0.0	0.1	0.0	0.0
Zero Drift, %	±3	0.0	0.0	0.0	0.0
Up-scale Drift, %	±3	0.0	0.1	-0.1	0.0
Response Time, sec	N/A	30			

Table 6-4. Aspiration System Quality Assurance Results, Total Hydrocarbons, Method 25A				
Linearity Tests				
Parameter	Allowable	Test Series		
Zero, %	±5	0.0		
Low, %	±5	0.3		
Mid, %	±5	-0.2		
High, %	±5	0.0		
System Tests				
Parameter	Allowable	Run 1	Run 2	Run 3
Zero Bias (Pre), %	±5	0.0	0.1	0.1
Zero Bias (Post), %	±5	0.1	0.1	0.1
Up-scale Bias (Pre), %	±5	0.0	0.1	0.2
Up-scale Bias (Post), %	±5	0.1	0.2	0.2
Zero Drift, %	±3	0.1	0.0	0.0
Up-scale Drift, %	±3	0.1	0.0	0.0
Response Time, sec	N/A	30		

Table 6-5. Green Hammermill Quality Assurance Results, Total Hydrocarbons, Method 25A				
Linearity Tests				
Parameter	Allowable	Test Series		
Zero, %	±8	0.1		
Low, %	±8	-1.2		
Mid, %	±8	0.0		
High, %	±8	0.1		
System Tests				
Parameter	Allowable	Run 1	Run 2	Run 3
Zero Bias (Pre), %	±5	0.0	0.0	-0.2
Zero Bias (Post), %	±5	0.0	-0.2	-0.1
Up-scale Bias (Pre), %	±5	0.0	0.1	0.5
Up-scale Bias (Post), %	±5	0.1	0.5	0.3
Zero Drift, %	±3	0.0	-0.2	0.1
Up-scale Drift, %	±3	0.1	0.5	-0.3
Response Time, sec	N/A	30		

6.4 Method 320 Quality Assurance

Air Control Techniques, P.C. performed daily quality assurance checks. Background scans and calibration transfer standard (CTS) spectra tests were performed prior to and following each test series. An analyte spike was performed using methanol.

The flow rate at the outlet of the pump was measured while the probe was plugged to verify that the sampling system was leak free. The flow rate was less than 200 ml/min.

The FTIR cell was tested for leaks by closing the valve while the cell was at minimum absolute pressure.

Background Spectra

Sample spectra were divided point-by-point by a 128-scan background recorded using N₂. The single beam spectrum was constantly monitored, and a new background was generated following each test series or when residual and absorbance spectra indicated component build-up on the optical surfaces or alignment-related baseline shifts.

Calibration Transfer Standards and Absorption Path Lengths

A cylinder of 100 ppm ethylene in nitrogen served as the CTS. A CTS gas was introduced to the FTIR and allowed to reach steady state. The CTS was used to determine effective cell path length based on comparisons of the “field” CTS spectra to a laboratory CTS spectrum recorded by MIDAC. As shown in Table 6-6, the maximum path length deviation was less than 5% of the average.

Date	Time	CTS Scan (pathlength)	SEC (ppm)	Cell Press. (psi)	Cell Temp (°C)	Deviation from Previous	Deviation from Average
14-Oct	1215	8.693	0.133	14.75	121	-0.2%	-0.2%
	1923	8.685	0.133	14.77	121	-0.1%	-0.1%
15-Oct	750	8.659	0.132	14.19	121	0.2%	0.2%
	1311	8.705	0.134	14.62	121	-0.4%	-0.4%
	1627	8.739	0.133	14.6	121	-0.7%	-0.7%
	2115	8.673	0.132	14.6	121	0.0%	0.0%
16-Oct	0830	8.614	0.134	14.81	121	0.7%	0.7%
	1510	8.624	0.132	14.77	121	0.6%	0.6%
Average		8.674	0.133			Maximum	-0.7%

Background Spectra

On-site test personnel performed matrix spiking using a certified calibration standard of methanol and SF₆. The methanol gas standard was introduced into the sampling system upstream of the particulate matter filter at an average dilution ratio of less than 10% of the total sample volume. Analyte spiking was performed to demonstrate the suitability of the sampling system. The dilution factor was calculated based on the ratio of the SF₆ tracer gas analyzed directly by the FTIR and the in-stack measured concentration.

$$\frac{SF_6 \text{ during spike}}{SF_6 \text{ direct}} = DF$$

The recovery was calculated using the mean concentration of the spiked analyte (S_m), the native concentration of the analyte in the stack (S_u), the dilution factor (DF), and the cylinder concentration (C_s).

$$\text{Recovery}(\%) = \frac{S_m - S_u (1 - DF)}{DF \times C_s}$$

As shown in Table 6-7, the percent recovery was 100±30% as required by Method 320.

Direct Cylinder Spike, ppm		System Spiked Gas, ppm		Native Concentration, ppm		Recovery, %
methanol	SF ₆	methanol	SF ₆	methanol	SF ₆	
102.30	2.86	9.000	0.224	2.017	0.012769	94.5

Minimum Detectable Concentration

EPA Method 320 and the equivalent ASTM Standard D6348-03 specify a number of analytical uncertainty parameters that the analyst may calculate to characterize the FTIR system performance.

QA Review

Before the test program began, an analysis of possible analytical interferents (e.g., H₂O, CO₂, CO, pinenes) was conducted. Analytical wavelengths were determined to minimize analytical uncertainty and detection limits using reference spectra and the FTIR instrument that was used for the field testing.

At the conclusion of the testing, a quality assurance review of the test data was performed. This review included examination of the sample spectra and the quantitative analytical results. It also included spot-checking the analysis results by hand. These examinations included visual comparisons of the sample and reference spectra.

7. PROCESS DOCUMENTATION

Enviva Pellets Amory, LLC personnel logged the following process data during each test run of each process unit.

- Throughput in tons per hour (all process units)
- Inlet temperature (dryer)
- Outlet temperature (dryer)
- Cyclone static pressure drop (dryer, hammermill, presses)
- Wood feed % softwood content

8. REFERENCES

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APPENDIX A

Moisture and Gas Flow Rate Data

Air Control Techniques, PC: Emissions Calculations
Job # 1909

Envia	PARAMETER	Amory	Dryer 1	Dryer 2	Dryer 3	Green Hammermill 4	Green Hammermill 5	Green Hammermill 6
	NOMENCLATURE		10/14/2013	10/14/2013	10/14/2013	10/15/2013	10/15/2013	10/15/2013
	Sampling Location		Dryer	Dryer	Dryer	Green Hammermill	Green Hammermill	Green Hammermill
Date			10/14/2013	10/14/2013	10/14/2013	10/15/2013	10/15/2013	10/15/2013
Run Time	θ		60	60	60	60	60	60
Nozzle Diameter	inches		N/A	N/A	N/A	N/A	N/A	N/A
Stack Area	As - sq. ft.		12.6	12.6	12.6	1.767	1.767	1.767
Pitot Tube Coefficient	Cp		0.84	0.84	0.84	0.84	0.84	0.84
Meter Calibration Factor	Y		0.9828	0.9828	0.9828	0.9828	0.9828	0.9828
Barometric Pressure, inches Hg	Bp - in Hg		29.80	29.80	29.80	29.80	29.80	29.80
Static Pressure	Pg - in. H ₂ O		-2.6	-2.6	-2.6	3.6	3.6	3.6
Stack Pressure	Ps		29.61	29.61	29.61	30.06	30.06	30.06
Meter Box Pressure Differential	Δ H - in. H ₂ O		1.00	1.00	1.00	1.00	1.00	1.00
Average Velocity Head	Δ p - in. H ₂ O		2.104	2.111	2.034	4.082	4.132	4.086
Volume of Gas Sampled	Vm - cu. ft.		30.692	35.129	31.084	32.963	34.696	33.800
Dry Gas Meter Temperature	Tm - °F		91.5	93.5	88.0	68.8	76.0	79.8
Stack Temperature	Ts - °F		199.6	189.6	187.8	87.4	87.5	88.4
Liquid Collected	grams		83.8	91.9	85.5	15.8	21.4	26
Carbon Dioxide	% CO ₂		2	1.5	2	0	0	0
Oxygen	% O ₂		19	19.5	19	20.9	20.9	20.9
Carbon Monoxide	% CO		0	0	0	0	0	0
Nitrogen	% N ₂		79	79	79	79.1	79.1	79.1
Volume of Gas Sampled, Dry	Vmstd - cu. ft.		28.834	32.883	29.389	32.300	33.538	32.445
Volume of Water Vapor	Vwstd - cu. ft.		3.951	4.333	4.031	0.745	1.009	1.226
Moisture Content	% H ₂ O		12.05	11.64	12.06	2.25	2.92	3.64
Saturation Moisture	% H ₂ O		78.5	63.5	61.2	4.4	4.4	4.5
Dry Mole Fraction	Mfd		0.879	0.884	0.879	0.977	0.971	0.964
Gas Molecular Weight, Dry	Md		29.08	29.02	29.08	28.84	28.84	28.84
Gas Molecular Weight, Wet	Ms		27.74	27.74	27.74	28.59	28.52	28.44
Gas Velocity	vs - ft./sec.		93.35	92.80	90.96	115.79	116.64	116.25
Volumetric Air Flow, Actual	Qaw - ACFM		70,382	69,968	68,582	12,277	12,367	12,326
Volumetric Air Flow, Standard	Qsd - DSCFM		49,036	49,728	48,642	11,630	11,634	11,490

Air Control Techniques, PC: Emissions Calculations
 Job # 1909

Enviva	PARAMETER	Amory	Pellet Mill 2	Pellet Mill 2	Pellet Mill 2	Pellet Mill 2	Dry	Dry	Dry	Dry	Dry	Dry
	NOMENCLATURE		Cooler	Cooler	Cooler	Cooler	Baghouse	Baghouse	Baghouse	Baghouse	Baghouse	Baghouse
	Sampling Location		8	9	10	11	7	11	12	13	13	13
Date			10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/15/2013	10/16/2013	10/16/2013	10/16/2013	10/16/2013
Run Time			60	60	60	60	60	60	60	60	60	61
Nozzle Diameter		inches	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Stack Area		As - sq. ft.	3.1	3.1	3.1	3.1	7.9	7.9	7.9	7.9	7.9	7.9
Pitot Tube Coefficient		Cp	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Meter Calibration Factor		Y	0.9828	0.9828	0.9828	0.9828	0.9828	0.9828	0.9828	0.9828	0.9828	0.9828
Barometric Pressure, inches Hg		Bp - in Hg	29.80	29.80	29.80	29.80	29.80	29.70	29.70	29.70	29.70	29.70
Static Pressure		Pg - in. H ₂ O	-13.5	-13.5	-13.5	-13.5	-0.38	-0.4	-0.4	-0.4	-0.4	-0.4
Stack Pressure		Ps	28.81	28.81	28.81	28.81	29.77	29.67	29.67	29.67	29.67	29.67
Meter Box Pressure Differential		Δ H - in. H ₂ O	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Average Velocity Head		Δ p - in. H ₂ O	1.529	1.521	1.521	1.521	0.512	0.483	0.500	0.491	0.491	0.491
Volume of Gas Sampled		Vm - cu. ft.	33,483	34,393	33,824	34,918	34,918	33,393	37,275	33,409	33,409	33,409
Dry Gas Meter Temperature		Tm - °F	81,000	81.3	80.8	80.0	80.0	68.0	74.0	75.5	75.5	75.5
Stack Temperature		Ts - °F	138.9	138.3	138.6	100.8	100.8	88.6	93.8	96.1	96.1	96.1
Liquid Collected		grams	57	61.4	62.4	26.3	26.3	20.6	26.9	30.3	30.3	30.3
Carbon Dioxide		% CO ₂	0	0	0	0	0	0	0	0	0	0
Oxygen		% O ₂	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
Carbon Monoxide		% CO	0	0	0	0	0	0	0	0	0	0
Nitrogen		% N ₂	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1
Volume of Gas Sampled, Dry		Vmstd - cu. ft.	32,066	32,923	32,408	33,503	33,503	32,658	36,045	32,216	32,216	32,216
Volume of Water Vapor		Vwstd - cu. ft.	2,688	2,895	2,942	1,240	1,240	0,971	1,268	1,429	1,429	1,429
Moisture Content		% H ₂ O	7.73	8.08	8.32	3.57	3.57	2.89	3.40	4.25	4.25	4.25
Saturation Moisture		% H ₂ O	19.8	19.5	19.6	6.6	6.6	4.6	5.4	5.8	5.8	5.8
Dry Mole Fraction		Mfd	0.923	0.919	0.917	0.964	0.964	0.971	0.966	0.958	0.958	0.958
Gas Molecular Weight, Dry		Mld	28.84	28.84	28.84	28.84	28.84	28.84	28.84	28.84	28.84	28.84
Gas Molecular Weight, Wet		Ms	28.00	27.96	27.93	28.45	28.45	28.52	28.47	28.38	28.38	28.38
Gas Velocity		vs - ft./sec.	76.51	76.33	76.38	41.81	41.81	40.17	41.11	40.89	40.89	40.89
Volumetric Air Flow, Actual		Qaw - ACFM	14,422	14,387	14,397	19,757	19,757	18,980	19,427	19,321	19,321	19,321
Volumetric Air Flow, Standard		Qsd - DSCFM	11,294	11,236	11,210	17,849	17,849	17,591	17,745	17,421	17,421	17,421

Method 1 - Air Control Techniques, P.C.

Date

10/14/2013

Client	ENVIVA
Job #	1909
Plant Name	Amory
State	Mississippi
City	Amory
Sampling Location	Dryer
No. of Ports Available	2
No. of Ports Used	2
Port Inside Diameter, inches	1.5
Distance From Far Wall To Outside Of Port, inches	50
Nipple Length And/Or Wall Thickness, inches	2
Depth Of Stack Or Duct, inches	48
Stack Or Duct Width (if rectangular), inches	48
Equiv. Diameter = 2DW(D+W), inches	12.57
Stack/Duct Area, Square Feet	
(□ x R ² or L x W)	
Distance to Flow Disturbances, inches	Upstream 342
Diameters	Downstream 126
	7.13
	2.63

Point	% of Duct Depth	Distance From	
		Inside Wall	Outside of Port
1	4.4	2 1/8	4 1/8
2	14.6	7	9
3	29.6	14 2/8	16 2/8
4	70.4	35 6/8	35 6/8
5	85.4	41	43
6	95.6	45 7/8	47 7/8
7			
8			
9			
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11			
12			
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14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

Velocity	Diameters								Particulate
	12	12	12	16	16	20	24 or 25		
	12	7	6	1.75	2	1.5	0.5		
	16	5	5	1.25	2	0.5			
	16	2	2	0.5					

Point	Location of Points in Circular Stacks or Ducts															
	4	6	8	10	12	14	16	18	20	22	24					
1	6.7	4.4	3.2	2.6	2.1	1.8	1.6	1.4	1.3	1.1	1.1					
2	25.0	14.6	10.6	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2					
3	75.0	29.6	19.4	14.6	11.6	9.9	8.5	7.5	6.7	6.0	5.5					
4	85.3	70.4	32.3	22.6	17.7	14.6	12.5	10.9	9.7	8.7	7.9					
5		85.4	67.7	34.2	25.0	20.1	16.9	14.6	12.9	11.6	10.5					
6		95.6	80.6	66.6	35.5	28.9	22.0	18.8	16.5	14.6	13.2					
7			88.5	77.4	64.4	36.6	28.3	23.9	20.4	18.0	16.1					
8			96.5	85.4	75.0	63.4	37.5	29.6	25.9	21.8	19.4					
9				91.8	82.3	73.1	62.5	30.6	26.2	23.0	20.9					
10				97.4	88.2	78.9	71.7	61.8	38.6	31.5	27.2					
11					93.3	85.4	76.0	70.4	51.2	39.3	32.3					
12						97.9	89.1	83.1	76.4	60.7	39.9					
13						94.3	87.6	81.2	71.0	65.5	60.2					
14						99.2	91.5	85.4	79.6	73.6	67.7					
15							89.1	83.1	78.2	72.6						
16							93.4	87.1	82.0	77.0						
17								95.6	90.3	85.4	80.6					
18								96.6	93.3	89.4	83.9					
19									96.1	91.3	85.9					
20										98.7	94.0					
21										96.5	92.1					
22										98.9	94.5					
23											98.9					
24											98.9					

Point	Location of Points in Rectangular Stacks or Ducts											
	2	3	4	5	6	7	8	9	10	11	12	
1	16.7	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2		
2	75	50	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	12.5	
3		83.3	62.5	50.0	41.7	35.7	31.3	27.8	25.0	22.7	20.8	
4			87.5	70.0	58.3	50	43.8	38.9	35.0	31.8	29.2	
5				80.0	65	54.3	46.3	40	35.0	31.8	29.2	
6					91.7	78.8	68.8	61.1	55.0	50	45.8	
7						92.9	81.3	72.2	65.0	59.1	54.2	
8							95.8	83.3	75.0	68.2	62.5	
9								94.4	85.0	77.3	70.6	
10									95.0	86.4	78.2	
11										95.5	87.3	
12											98.6	

- 0.0000 - 0.0625 - 0
- 0.0625 - 0.1875 - 1/8
- 0.1875 - 0.3125 - 1/4
- 0.3125 - 0.4375 - 3/8
- 0.4375 - 0.5625 - 1/2
- 0.5625 - 0.6875 - 5/8
- 0.6875 - 0.8125 - 3/4
- 0.8125 - 0.9375 - 7/8
- 0.9375 - 1.0000 - 1

Dryer Run 1

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	1
Plant	Amory		Date	10/14/2013
City/State	Amory, MS		Gauge ID	909033
Location	Dryer		Pitot ID	4Pext
Averages	2.104	199.6	Thermocouple ID	TC25

Point No.	Delta P In Water	Temp Deg F	Angle		
A-1	2.700	195	-3	Oxygen %	19
2	2.900	200	-2	Carbon Dioxide %	2
3	2.800	202	0	Moisture %	12.05172839
4	2.800	201	-3	Stack Area sq.in.	1809.557395
5	1.300	200	0	Pbar	29.80
6	0.980	198	0	Static Pressure	-2.6
B-1	1.300	201	-4	Pitot Coef.	0.84
2	1.100	198	-2	Start Time	1428
3	1.900	200	3	Stop Time	1434
4	3.000	200	0		
5	2.800	200	4		
6	2.600	200	2		

Absolute Gas Pressure inches water	Ps =	29.61
Dry Mole Fraction of Gas	Mfd =	0.87948
Dry Molecular Weight of Gas lb/lb Mole	Md =	29.08
Wet Molecular Weight of Gas lb/lb Mole	Ms =	27.74
Average Gas Velocity ft/sec	vs =	93.35
Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd =	49036
Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw =	70382
Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH =	3345299

LKCH		
Pre	3-4	good
Post	5-3	good

Dryer Run 2

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	2
Plant	Amory		Date	10/14/13
City/State	Amory, MS		Gauge ID	909033
Location	Dryer		Pitot ID	4Pext
Averages	2.111	189.6	Thermocouple ID	TC25
	Delta P	Temp		
Point No.	In Water	Deg F		
A-1	2.700	189	Oxygen %	19.5
2	3.200	188	Carbon Dioxide %	1.5
3	3.000	188	Moisture %	11.64
4	1.800	188	Stack Area sq.in.	1809.557395
5	1.600	190	Pbar	29.80
6	1.200	189	Static Pressure	-2.6
B-1	1.300	189	Pitot Coef.	0.84
2	1.700	190	Start Time	1621
3	2.100	190	Stop Time	1624
4	2.500	192		
5	2.600	192		
6	2.200	190		
0				
0				
0				
0				
0				
0				
0				
0			Absolute Gas Pressure inches water	Ps = 29.61
0			Dry Mole Fraction of Gas	Mfd = 0.88357
0			Dry Molecular Weight of Gas lb/lb Mole	Md = 29.02
0			Wet Molecular Weight of Gas lb/lb Mole	Ms = 27.74
0			Average Gas Velocity ft/sec	vs = 92.80
0			Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 49728
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 69968
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 3376837
0			LKCH	
0			Pre	3-4 good
0			Post	5-3 good

Dryer Run 3

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number		1909
Client	Enviva		ACT Run Number		3
Plant	Amory		Date		10/14/13
City/State	Amory, MS		Gauge ID		909033
Location	Dryer		Pitot ID		4Pext
Averages			Thermocouple ID		TC25
	2.034	187.8			
	Delta P	Temp			
Point No.	In Water	Deg F			
A-1	2.600	185	Oxygen % 19		
2	3.000	187	Carbon Dioxide % 2		
3	3.000	188	Moisture % 11.64		
4	1.700	188	Stack Area sq.in. 1809.557395		
5	1.300	187	Pbar 29.80		
6	1.050	185	Static Pressure -2.6		
B-1	1.200	187	Pitot Coef. 0.84		
2	1.600	190	Start Time 1746		
3	2.000	189	Stop Time 1751		
4	2.800	190			
5	2.800	189			
6	2.100	189			
0					
0					
0					
0					
0			Absolute Gas Pressure inches water Ps = 29.61		
0			Dry Mole Fraction of Gas Mfd = 0.88357		
0			Dry Molecular Weight of Gas lb/lb Mole Md = 29.08		
0			Wet Molecular Weight of Gas lb/lb Mole Ms = 27.79		
0			Average Gas Velocity ft/sec vs = 90.88		
0			Dry Volumetric Gas Flow Rate		
0			at Standard Conditions SCFM Qsd = 48833		
0			Wet Volumetric Flue Gas Flow Rate		
0			at Stack Conditions ACFM Qaw = 68524		
0			Wet Volumetric Gas Flow Rate		
0			at Standard Conditions WSCFH WSCFH = 3316084		
0					
0			LKCH		
0			Pre	3-4	good
0			Post	5-3	good

Method 1 - Air Control Techniques, P.C.

Date

10/14/2013

Client	ENVIVA
Job #	1909
Plant Name	ANNOTY
State	Mississippi
City	ANNOCY
Sampling Location	Dry Hammertmill Bathroom

Note: If more than 8 and 2 diameters and if ducts is less than 2" use 8 or 9 points

Velocity	UP				Down				Particulate
	8	10	12	14	16	18	20	22	
12	12	12	12	12	2	2	2	2	12
12	12	12	12	12	1.75	1.75	1.75	1.75	12
12	12	12	12	12	1.5	1.5	1.5	1.5	16
16	16	16	16	16	1.25	1.25	1.25	1.25	20
20	20	20	20	20	0.5	0.5	0.5	0.5	24 or 25

Point	Location of Points in Circular Stacks or Ducts											
	4	6	8	10	12	14	16	18	20	22	24	25
1	6.7	4.4	3.2	2.6	2.1	1.8	1.6	1.4	1.3	1.1	1.1	1.1
2	25.0	14.6	10.6	8.2	6.7	5.7	4.8	4.4	3.9	3.5	3.2	3.2
3	75.0	29.6	19.4	14.8	11.6	9.9	8.5	7.5	6.7	6.0	5.5	5.5
4	83.3	70.4	32.3	22.6	17.7	14.8	12.5	10.9	9.7	8.7	7.9	7.9
5	85.4	65.4	67.7	54.2	25.0	20.1	16.9	14.8	12.9	11.6	10.5	10.5
6	85.6	65.6	65.6	55.6	35.6	29.8	22.0	18.8	16.5	14.6	13.2	13.2
7	88.5	77.4	88.5	77.4	64.4	38.6	28.3	23.6	20.4	18.0	16.1	16.1
8	91.8	85.4	91.8	85.4	75.0	63.4	57.5	50.6	30.6	25.2	23.0	23.0
9	97.4	88.2	97.4	88.2	82.3	73.1	71.7	61.6	58.8	51.5	47.2	47.2
10	97.9	88.2	97.9	88.2	85.4	79.0	76.4	61.2	58.3	51.5	47.2	47.2
11	98.1	88.2	98.1	88.2	90.1	83.1	78.4	60.7	58.4	51.5	47.2	47.2
12	98.2	88.2	98.2	88.2	94.3	87.6	81.2	75.0	68.5	60.2	55.8	55.8
13	98.2	88.2	98.2	88.2	91.5	85.4	79.6	73.8	67.7	60.2	55.8	55.8
14	98.2	88.2	98.2	88.2	95.1	89.1	83.5	79.2	72.8	65.5	60.2	60.2
15	98.4	88.4	98.4	88.4	92.5	87.1	82.0	77.0	70.6	63.3	58.0	58.0
16	98.6	88.6	98.6	88.6	95.6	90.3	85.4	80.6	74.2	66.9	61.6	61.6
17	98.6	88.6	98.6	88.6	98.6	93.3	88.4	83.9	77.5	70.2	64.9	64.9
18	98.6	88.6	98.6	88.6	96.1	91.3	86.4	81.9	75.5	68.2	62.9	62.9
19	98.7	88.7	98.7	88.7	98.7	94.0	89.1	84.0	77.6	70.3	65.0	65.0
20	98.9	88.9	98.9	88.9	98.9	94.5	89.6	84.5	78.1	70.8	65.5	65.5
21	98.9	88.9	98.9	88.9	98.9	94.5	89.6	84.5	78.1	70.8	65.5	65.5
22	98.9	88.9	98.9	88.9	98.9	94.5	89.6	84.5	78.1	70.8	65.5	65.5
23	98.9	88.9	98.9	88.9	98.9	94.5	89.6	84.5	78.1	70.8	65.5	65.5
24	98.9	88.9	98.9	88.9	98.9	94.5	89.6	84.5	78.1	70.8	65.5	65.5

No. of Ports Available	2
No. of Ports Used	2
Port Inside Diameter, inches	38
Distance From Far Wall To Outside Of Port, inches	0
Nipple Length And/Or Wall Thickness, inches	38
Depth Of Stack Or Duct, inches	38
Stack Or Duct Width (if rectangular) inches	38
Equip. Diameter = 2D(WID+W), inches	7.9
Stack/Duct Area, Square Feet	
(□ x R ² or L x W)	
Upstream	120
Downstream	60
Distance to Flow Disturbances, inches	3.16
Diameters	1.58

Point	% of Duct Depth	Distance From	
		Inside Wall	Outside of Port
1	3.2	1 2/8	1 2/8
2	10.6	4	4
3	19.4	7 3/8	7 3/8
4	32.3	12 2/8	12 2/8
5	67.7	25 6/8	25 6/8
6	80.6	30 5/8	30 5/8
7	89.5	34	34
8	96.8	36 6/8	36 6/8
9			
10			
11			
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21			
22			
23			
24			
25			

Point	Location of Points in Rectangular Stacks or Ducts											
	2	3	4	5	6	7	8	9	10	11	12	
1	25	16.7	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2	
2	75	50	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	12.5	
3	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
4	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
5	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
6	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
7	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
8	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
9	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
10	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
11	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	
12	83.3	62.5	46.9	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	

- 0.0000 - 0.0625 - 0 0.5625 - 0.6875 - 5/8
- 0.0625 - 0.1875 - 1/8 0.6875 - 0.8125 - 3/4
- 0.1875 - 0.3125 - 1/4 0.8125 - 0.9375 - 7/8
- 0.3125 - 0.4375 - 3/8 0.9375 - 1.0000 - 1
- 0.4375 - 0.5625 - 1/2

DHM Run 1

Air Control Techniques EPA Method 2 Data Sheet				ACT Job Number		1909	
Client		Enviva		ACT Run Number		7	
Plant		Amory		Date		10/15/2013	
City/State		Amory, MS		Gauge ID		909033	
Location		Dry Hammermill Baghouse		Pitot ID		4Pext	
Averages		0.512 100.8		Thermocouple ID		TC25	
		Delta P	Temp				
Point No.		In Water	Deg F	Angle			
A-1		0.440	99	0	Oxygen %		20.9
2		0.460	100	0	Carbon Dioxide %		0
3		0.520	100	3	Moisture %		3.57
4		0.530	101	4	Stack Area sq.in.		1134.114965
5		0.520	101	3	Pbar		29.80
6		0.520	101	0	Static Pressure		-0.38
7		0.430	101	0	Pitot Coef.		0.84
8		0.350	99	-5	Start Time		1316
B-1		0.230	99	4	Stop Time		1322
2		0.270	101	0			
3		0.320	101	2			
4		0.520	102	3			
5		0.750	102	4			
6		0.940	102	3			
7		0.950	102	0			
8		0.760	102	0			
0							
0							
0					Absolute Gas Pressure inches water	Ps =	29.77
0					Dry Mole Fraction of Gas	Mfd =	0.96431
0					Dry Molecular Weight of Gas lb/lb Mole	Md =	28.84
0					Wet Molecular Weight of Gas lb/lb Mole	Ms =	28.45
0					Average Gas Velocity ft/sec	vs =	41.81
0					Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd =	17849
0					Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw =	19757
0					Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH =	1110565
0							
0					LKCH		
0					Pre	3-4	good
0					Post	5-3	good
0							
0							

DHM Run 2

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909	
Client	Enviva	ACT Run Number			11
Plant	Amory	Date	10/16/2013		
City/State	Amory, MS	Gauge ID	909033		
Location	Dry Hammermill Baghouse		Pitot ID	4Pext	
Averages	0.483	88.6	Thermocouple ID	TC25	
Point No.	Delta P In Water	Temp Deg F	Oxygen %	20.9	
A-1	0.450	87	Carbon Dioxide %	0	
2	0.470	88	Moisture %	2.89	
3	0.510	88	Stack Area sq.in.	1134.114965	
4	0.530	88	Pbar	29.70	
5	0.520	88	Static Pressure	-0.4	
6	0.520	88	Pitot Coef.	0.84	
7	0.480	88	Start Time	1045	
8	0.450	87	Stop Time	1052	
B-1	0.230	87			
2	0.270	89			
3	0.320	91			
4	0.520	91			
5	0.610	90			
6	0.650	90			
7	0.680	89			
8	0.660	89			
0					
0					
0			Absolute Gas Pressure inches water	Ps = 29.67	
0			Dry Mole Fraction of Gas	Mfd = 0.97112	
0			Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84	
0			Wet Molecular Weight of Gas lb/lb Mole	Ms = 28.52	
0			Average Gas Velocity ft/sec	vs = 40.17	
0			Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 17591	
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 18980	
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 1086846	
0					
0			LKCH		
0			Pre	3-4 good	
0			Post	5-3 good	
0					
0					

DHM Run 3

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	12
Plant	Amory		Date	10/16/2013
City/State	Amory, MS		Gauge ID	909033
Location	Dry Hammermill Baghouse		Pitot ID	4Pext
Averages	0.500	93.8	Thermocouple ID	TC25
Point No.	Delta P In Water	Temp Deg F		
A-1	0.560	91	Oxygen %	20.9
2	0.600	93	Carbon Dioxide %	0
3	0.600	94	Moisture %	3.40
4	0.610	95	Stack Area sq.in.	0
5	0.550	95	Pbar	29.70
6	0.480	95	Static Pressure	-0.4
7	0.410	94	Pitot Coef.	0.84
8	0.320	87	Start Time	1155
B-1	0.280	91	Stop Time	1204
2	0.310	94		
3	0.330	95		
4	0.430	95		
5	0.520	95		
6	0.680	95		
7	0.740	95		
8	0.760	96		
0				
0				
0			Absolute Gas Pressure inches water	Ps = 29.67
0			Dry Mole Fraction of Gas	Mfd = 0.96601
0			Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84
0			Wet Molecular Weight of Gas lb/lb Mole	Ms = 28.47
0			Average Gas Velocity ft/sec	vs = 41.11
0			Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 0
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 0
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 0
0				
0			LKCH	
0			Pre	3-4 good
0			Post	5-3 good
0				
0				

DHM Run 4

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	13
Plant	Amory		Date	10/16/2013
City/State	Amory, MS		Gauge ID	909033
Location	Dry Hammermill Baghouse		Pitot ID	4Pext
Averages	0.491	96.1	Thermocouple ID	TC25
	Delta P	Temp		
Point No.	In Water	Deg F		
A-1	0.520	95	Oxygen %	20.9
2	0.490	96	Carbon Dioxide %	0
3	0.480	96	Moisture %	4.25
4	0.440	97	Stack Area sq.in.	1134.114965
5	0.480	97	Pbar	29.70
6	0.440	97	Static Pressure	-0.4
7	0.380	94	Pitot Coef.	0.84
8	0.633	91	Start Time	1310
B-1	0.340	93	Stop Time	
2	0.380	95		
3	0.390	97		
4	0.420	97		
5	0.570	98		
6	0.660	98		
7	0.680	98		
8	0.640	98		
0				
0				
0			Absolute Gas Pressure inches water	Ps = 29.67
0			Dry Mole Fraction of Gas	Mfd = 0.95754
0			Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84
0			Wet Molecular Weight of Gas lb/lb Mole	Ms = 28.38
0			Average Gas Velocity ft/sec	vs = 40.89
0			Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 17421
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 19321
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 1091591
0				
0			LKCH	
0			Pre	3-4 good
0			Post	5-3 good
0				
0				

Method 1 - Air Control Techniques, P.C.

Date 10/14/2013

Client: Enviva	
Job #	1909
Plant Name	Amory
State	Mississippi
City	Amory
Sampling Location	Pellet Mill 2 Cooler
No. of Ports Available	2
No. of Ports Used	2
Port Inside Diameter, inches	24
Distance From Far Wall To Outside Of Port, inches	0
Nipple Length And/Or Wall Thickness, inches	24
Depth Of Stack Or Duct, inches	24
Stack Or Duct Width (if rectangular), inches	24
Equiv. Diameter = 2D(W+D+W), inches	3.1
Stack/Duct Area, Square Feet	
(\square x R ² or L x W)	
Distance to Flow Disturbances, inches	Upstream 7.0 Downstream 3.0
Diameters	2.92 1.25

Velocity	Diameters	
	UP	Down
12	8	2
12	7	1.75
12	6	1.5
16	5	1.25
16	2	0.5
24 or 25		

Note: If more than 6 and 2 diameters and if duct dia. is less than 24" use 8 or 9 points.

Location of Points in Circular Stacks or Ducts												
	4	6	8	10	12	14	16	18	20	22	24	
1	6.7	4.4	3.2	2.6	2.1	1.8	1.8	1.8	1.4	1.3	1.1	24
2	25.0	14.6	10.8	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2	1.1
3	75.0	28.6	19.4	14.6	11.8	9.9	8.5	7.5	6.7	6.0	5.5	3.2
4	93.3	70.4	33.3	22.6	17.7	14.8	12.5	10.8	8.7	8.7	7.9	5.5
5	65.4	65.4	67.7	34.2	25.0	20.1	16.9	14.8	12.9	11.6	10.5	7.9
6	95.6	95.6	95.6	65.8	55.8	28.9	22.0	18.8	16.5	14.8	13.2	10.5
7	86.5	77.4	64.4	39.8	28.3	20.4	16.1	14.8	13.2	11.6	10.5	7.9
8	96.8	85.4	64.4	39.8	28.3	20.4	16.1	14.8	13.2	11.6	10.5	7.9
9	91.8	62.3	73.1	62.5	30.6	26.2	23.0	20.8	19.4	18.0	16.1	14.8
10	66.2	79.9	71.7	61.8	38.8	31.5	27.2	23.0	20.8	19.4	18.0	16.1
11	92.3	85.4	78.0	70.4	61.2	50.7	40.7	30.7	20.7	10.7	10.5	7.9
12	97.6	90.1	83.1	76.4	68.4	60.7	53.8	46.9	39.8	32.3	25.3	18.3
13	94.3	87.6	81.2	75.0	68.5	62.0	55.5	49.0	42.5	36.0	29.5	23.0
14	96.2	89.2	81.5	73.8	65.4	57.8	50.2	42.6	35.0	27.4	20.8	14.2
15	85.1	85.1	83.5	83.5	81.9	80.3	78.7	77.1	75.5	73.9	72.3	70.7
16	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4
17												
18												
19												
20												
21												
22												
23												
24												

Location of Points in Rectangular Stacks or Ducts												
	2	3	4	5	6	7	8	9	10	11	12	
1	25	16.7	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2	24
2	75	50	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	12.5	1.1
3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	83.3	1.1
4	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	1.1
5	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	1.1
6	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	1.1
7	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	1.1
8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	1.1
9	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	1.1
10	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4	1.1
11	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	1.1
12	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	85.5	1.1

Point Location Data			
Point	% of Duct Depth	Distance From Inside Wall	Distance From Outside of Port
1	3.2	6/8	6/8
2	10.6	2 4/8	2 4/8
3	19.4	4 5/8	4 5/8
4	32.3	7 6/8	7 6/8
5	67.7	16 2/8	16 2/8
6	80.6	19 3/8	19 3/8
7	89.5	21 4/8	21 4/8
8	96.8	23 2/8	23 2/8
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

2 diff nipples probe marked to inside of port

Too Close

1

23

- 0.0000 - 0.0625 - 0
- 0.0625 - 0.1875 - 1/8
- 0.1875 - 0.3125 - 1/4
- 0.3125 - 0.4375 - 3/8
- 0.4375 - 0.5625 - 1/2
- 0.5625 - 0.6875 - 5/8
- 0.6875 - 0.8125 - 3/4
- 0.8125 - 0.9375 - 7/8
- 0.9375 - 1.0000 - 1

PMC Run 1

Air Control Techniques EPA Method 2 Data Sheet				ACT Job Number	1909
Client	Enviva			ACT Run Number	8
Plant	Amory			Date	10/15/2013
City/State	Amory, MS			Gauge ID	909033
Location	Pellet Mill 2 Cooler			Pitot ID	4Pext
Averages	1.529	138.9		Thermocouple ID	TC25
	Delta P	Temp			
Point No.	In Water	Deg F	Angle		
A-1	1.600	139	-5	Oxygen %	20.9
2	1.600	139	0	Carbon Dioxide %	0
3	1.500	139	0	Moisture %	7.73
4	1.300	139	0	Stack Area sq.in.	452.3893488
5	1.300	140	-10	Pbar	29.80
6	1.600	139	-2	Static Pressure	-13.5
7	1.500	135	-5	Pitot Coef.	0.84
8	1.600	135	0	Start Time	1650
B-1	1.500	137	0	Stop Time	1702
2	1.500	138	-5		
3	1.400	139	-3		
4	1.400	140	4		
5	1.700	140	2		
6	1.700	141	3		
7	1.700	141	6		
8	1.600	142	5		
0					
0					
0				Absolute Gas Pressure inches water	Ps = 28.81
0				Dry Mole Fraction of Gas	Mfd = 0.92267
0				Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84
0				Wet Molecular Weight of Gas lb/lb Mole	Ms = 28.00
0				Average Gas Velocity ft/sec	vs = 76.51
0				Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 11294
0				Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 14422
0				Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 734451
0				LKCH	
0				Pre	3-4 good
0				Post	5-3 good
0					
0					

PMC Run 2

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client Enviva			ACT Run Number	9
Plant Amory			Date	10/15/2013
City/State Amory, MS			Gauge ID	909033
Location Pellet Mill 2 Cooler			Pitot ID	4Pext
Averages 1.521 138.3			Thermocouple ID	TC25
Point No.	Delta P In Water	Temp Deg F		
A-1	1.600	137	Oxygen % 20.9	
2	1.700	138	Carbon Dioxide % 0	
3	1.500	139	Moisture % 8.08	
4	1.400	139	Stack Area sq.in. 452.3893488	
5	1.400	138	Pbar 29.80	
6	1.700	136	Static Pressure -13.5	
7	1.700	137	Pitot Coef. 0.84	
8	1.600	138	Start Time 1839	
B-1	1.700	137	Stop Time 1843	
2	1.800	138	Absolute Gas Pressure inches water Ps = 28.81	
3	1.500	139	Dry Mole Fraction of Gas Mfd = 0.91917	
4	1.300	138	Dry Molecular Weight of Gas lb/lb Mole Md = 28.84	
5	1.300	139	Wet Molecular Weight of Gas lb/lb Mole Ms = 27.96	
6	1.500	140	Average Gas Velocity ft/sec vs = 76.33	
7	1.400	140	Dry Volumetric Gas Flow Rate at Standard Conditions SCFM Qsd = 11236	
8	1.300	140	Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM Qaw = 14387	
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH = 733451	
0			LKCH	
0			Pre 3-4 good	
0			Post 5-3 good	
0				
0				

PMC Run 3

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	10
Plant	Amory		Date	10/15/2013
City/State	Amory, MS		Gauge ID	909033
Location	Pellet Mill 2 Cooler		Pitot ID	4Pext
Averages	1.539	138.6	Thermocouple ID	TC25
	Delta P	Temp		
Point No.	In Water	Deg F		
A-1	1.700	137	Oxygen %	20.9
2	1.700	138	Carbon Dioxide %	0
3	1.600	139	Moisture %	8.08
4	1.400	140	Stack Area sq.in.	452.3893488
5	1.400	138	Pbar	29.80
6	1.600	137	Static Pressure	-13.5
7	2.100	136	Pitot Coef.	0.84
8	1.800	135	Start Time	1952
B-1	1.800	137	Stop Time	1956
2	1.900	138		
3	1.400	139		
4	1.100	140		
5	1.300	140		
6	1.400	141		
7	1.300	141		
8	1.300	141		
0				
0				
0			Absolute Gas Pressure inches water	Ps = 28.81
0			Dry Mole Fraction of Gas	Mfd = 0.91917
0			Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84
0			Wet Molecular Weight of Gas lb/lb Mole	Ms = 27.96
0			Average Gas Velocity ft/sec	vs = 76.80
0			Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 11302
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 14477
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 737732
0				
0			LKCH	
0			Pre	3-4 good
0			Post	5-3 good
0				
0				

Method 1 - Air Control Techniques, P.C.

Date 10/14/2013

Client: Enviva
 Job #: 1909
 Plant Name: Amory
 State: Mississippi
 City: Amory
 Sampling Location: Green Hammernill

No. of Ports Available: 2
 No. of Ports Used: 2
 Port Inside Diameter, inches: 2
 Distance From Fan Wall To Outside Of Port, inches: 18
 Nipple Length And/O: Wall Thickness, inches: 0
 Depth Of Stack Or Duct, inches: 18
 Stack Or Duct Width (if rectangular), inches: 18
 Equiv. Diameter = 2D_W/(D+W), inches: 18
 Stack/Duct Area, Square feet: 18
 (□ x R² or L x W)
 Distance to Flow Disturbances, inches: Upstream 37.5 Downstream 11.5
 Diameters: 2.08 0.64

Velocity	Diameters		Down	Particulate
	UP	8		
12	7	2	2	12
12	6	1.75	7	12
16	5	1.5	5	16
16	2	1.25	20	20
		0.5	24 or 25	

Note: If more than 8 and 2 diameters and if duct dia. is less than 24" use 8 or 9 points

Location of Points in Circular Stacks or Ducts											
	4	6	8	10	12	14	16	18	20	22	24
1	6.7	4.4	3.2	2.8	2.1	1.8	1.6	1.4	1.3	1.1	1.1
2	25.0	14.8	10.6	8.2	6.7	5.7	4.8	4.4	3.9	3.5	3.2
3	75.0	28.6	18.4	14.8	11.8	9.9	8.5	7.5	6.7	6.0	5.5
4	93.3	70.4	39.3	23.8	17.7	14.8	12.5	10.8	9.7	8.7	7.8
5	85.4	67.7	34.2	25.0	20.1	16.8	14.8	12.8	11.8	10.5	10.5
6	86.6	66.8	35.6	22.0	18.9	16.5	14.8	12.8	11.8	10.5	10.5
7	86.5	77.4	64.4	38.8	28.3	23.8	20.4	18.0	16.1	15.1	14.1
8	86.4	85.4	75.0	65.4	57.5	49.6	42.8	36.2	30.8	26.2	23.0
9	81.8	82.3	75.1	68.2	61.8	55.4	49.6	44.2	39.2	34.2	30.2
10	88.2	78.9	71.7	61.8	55.4	49.6	44.2	39.2	34.2	30.2	27.2
11	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4
12	93.3	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4	85.4
13	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9	97.9
14	94.3	87.8	81.2	75.0	68.6	62.2	55.8	49.4	43.0	36.6	30.2
15	91.5	85.4	79.0	72.6	66.2	59.8	53.4	47.0	40.6	34.2	27.8
16	88.2	82.3	75.9	69.5	63.1	56.7	50.3	43.9	37.5	31.1	24.7
17	85.4	79.0	72.6	66.2	59.8	53.4	47.0	40.6	34.2	27.8	21.4
18	82.3	75.9	69.5	63.1	56.7	50.3	43.9	37.5	31.1	24.7	18.3
19	81.2	74.8	68.4	62.0	55.6	49.2	42.8	36.4	30.0	23.6	17.2
20	80.6	74.2	67.8	61.4	55.0	48.6	42.2	35.8	29.4	23.0	16.6
21	89.5	81.8	74.1	66.4	58.7	51.0	43.3	35.6	27.9	20.2	12.5
22	89.5	81.8	74.1	66.4	58.7	51.0	43.3	35.6	27.9	20.2	12.5
23	96.8	89.1	81.4	73.7	66.0	58.3	50.6	42.9	35.2	27.5	19.8
24	96.8	89.1	81.4	73.7	66.0	58.3	50.6	42.9	35.2	27.5	19.8
25	96.8	89.1	81.4	73.7	66.0	58.3	50.6	42.9	35.2	27.5	19.8

Point Location Data			
Point	% of Duct Depth	Distance From Inside Wall	Distance From Outside of Port
1	3.2	5/8	5/8
2	10.6	1 7/8	1 7/8
3	19.4	3 4/8	3 4/8
4	32.3	5 7/8	5 7/8
5	67.7	12 1/8	12 1/8
6	80.6	14 4/8	14 4/8
7	89.5	16 1/8	16 1/8
8	96.8	17 3/8	17 3/8
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

Too Close

1

17

Location of Points in Rectangular Stacks or Ducts											
	2	3	4	5	6	7	8	9	10	11	12
1	25	16.7	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2
2	75	50	37.5	30.0	25	21.4	18.8	16.7	15.0	13.6	12.5
3	65.3	62.5	60.0	57.5	55.0	52.5	50.0	47.5	45.0	42.5	40.0
4	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5
5	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
6	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1	81.1
7	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
8	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3	81.3
9	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8	83.8
10	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
11	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4
12	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5

- 0.0000 - 0.0625 - 0 0.5625 - 0.6875 - 5/8
- 0.0625 - 0.1875 - 1/8 0.6875 - 0.8125 - 3/4
- 0.1875 - 0.3125 - 1/4 0.8125 - 0.9375 - 7/8
- 0.3125 - 0.4375 - 3/8 0.9375 - 1.0000 - 1
- 0.4375 - 0.5625 - 1/2

GHM Run 1

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	4
Plant	Amory		Date	10/15/2013
City/State	Amory, MS		Gauge ID	909033
Location	Green Hammermill		Pitot ID	4Pext
Averages	4.082	87.4	Thermocouple ID	TC25
	Delta P	Temp	Angle	
Point No.	In Water	Deg F		
A-1	3.700	86	2	Oxygen % 20.9
2	4.300	88	5	
3	5.300	88	-3	Carbon Dioxide % 0
4	5.500	89	-3	
5	2.700	88	0	Moisture % 2.25
6	2.500	87	0	
7	2.600	86	3	Stack Area sq.in. 254.4690087
8	2.200	84	5	
B-1	2.100	86	2	Pbar 29.80
2	2.200	88	4	
3	2.500	88	5	Static Pressure 3.6
4	6.500	88	-3	
5	6.500	89	-3	Pitot Coef. 0.84
6	6.300	88	0	
7	5.900	88	1	Start Time 855
8	7.900	88	2	Stop Time 902
0				
0				
0				Absolute Gas Pressure inches water Ps = 30.06
0				
0				Dry Mole Fraction of Gas Mfd = 0.97746
0				
0				Dry Molecular Weight of Gas lb/lb Mole Md = 28.84
0				
0				Wet Molecular Weight of Gas lb/lb Mole Ms = 28.59
0				
0				Average Gas Velocity ft/sec vs = 115.79
0				
0				Dry Volumetric Gas Flow Rate
0				at Standard Conditions SCFM Qsd = 11630
0				
0				Wet Volumetric Flue Gas Flow Rate
0				at Stack Conditions ACFM Qaw = 12277
0				
0				Wet Volumetric Gas Flow Rate
0				at Standard Conditions WSCFH WSCFH = 713880
0				
0				LKCH
0				Pre 3-4 good
0				Post 5-3 good
0				
0				

GHM Run 2

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	5
Plant	Amory		Date	10/15/2013
City/State	Amory, MS		Gauge ID	909033
Location	Green Hammermill		Pitot ID	4Pext
Averages	4.132	87.5	Thermocouple ID	TC25
Point No.	Delta P In Water	Temp Deg F		
A-1	4.300	88	Oxygen %	20.9
2	5.000	88	Carbon Dioxide %	0
3	5.900	88	Moisture %	2.92
4	3.100	88	Stack Area sq.in.	254.4690087
5	2.600	87	Pbar	29.80
6	2.600	87	Static Pressure	3.6
7	2.600	87	Pitot Coef.	0.84
8	2.500	85	Start Time	1013
B-1	2.200	86	Stop Time	1017
2	2.300	87		
3	4.100	88		
4	5.300	89		
5	5.700	88		
6	6.400	88		
7	6.500	88		
8	7.900	88		
0			Absolute Gas Pressure inches water	Ps = 30.06
0			Dry Mole Fraction of Gas	Mfd = 0.97079
0			Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84
0			Wet Molecular Weight of Gas lb/lb Mole	Ms = 28.52
0			Average Gas Velocity ft/sec	vs = 116.64
0			Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 11634
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 12367
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 719063
0			LKCH	
0			Pre	3-4 good
0			Post	5-3 good
0				
0				

GHM Run 3

Air Control Techniques EPA Method 2 Data Sheet			ACT Job Number	1909
Client	Enviva		ACT Run Number	6
Plant	Amory		Date	10/15/2013
City/State	Amory, MS		Gauge ID	909033
Location	Green Hammermill		Pitot ID	4Pext
			Thermocouple ID	TC25
Averages	4.086	88.4		
	Delta P	Temp		
Point No.	In Water	Deg F		
A-1	4.000	87	Oxygen %	20.9
2	4.200	89	Carbon Dioxide %	0
3	4.800	89	Moisture %	2.92
4	6.400	89	Stack Area sq.in.	254.4690087
5	3.300	89	Pbar	29.80
6	2.700	89	Static Pressure	3.6
7	2.600	87	Pitot Coef.	0.84
8	2.400	85	Start Time	1124
B-1	1.600	87	Stop Time	1130
2	2.300	89		
3	4.000	89	Absolute Gas Pressure inches water	Ps = 30.06
4	5.300	89	Dry Mole Fraction of Gas	Mfd = 0.97079
5	5.400	89	Dry Molecular Weight of Gas lb/lb Mole	Md = 28.84
6	6.000	89	Wet Molecular Weight of Gas lb/lb Mole	Ms = 28.52
7	7.100	89	Average Gas Velocity ft/sec	vs = 116.09
8	5.900	90	Dry Volumetric Gas Flow Rate at Standard Conditions SCFM	Qsd = 11560
0			Wet Volumetric Flue Gas Flow Rate at Stack Conditions ACFM	Qaw = 12309
0			Wet Volumetric Gas Flow Rate at Standard Conditions WSCFH	WSCFH = 714468
0				
0			LKCH	
0			Pre	3-4 good
0			Post	5-3 good
0				
0				

Air Control Techniques, P.C.
Moisture Sampling Train Field Data Sheet

Date 10/14/13

SOURCE IDENTIFICATION				EQUIPMENT IDENTIFICATION			
Facility	ENVIVA			Umbilical ID	90		
City, State	Amory, MS			Meterbox ID	909033		
Test Location				ΔH@	1.917		
Personnel	TJB JBG			Gamma (γ)	0.9828		

Run Identification				Actual					Req'd		Vac
M4-1				Pre Leak Check	0.000	< 0.02 or 4%		16			
				Post Leak Check	0.000	< 0.02 or 4%		18			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)			
1513	180.200	0	85	1.0	N/A	N/A	59	3			
1530	188.51	15	92				53	3			
1545	197.26	30	94				54	3			
1600	204.42	45	95				56	3			
1615	210.892	60									

Run Identification				Actual					Req'd		Vac
M4-2				Pre Leak Check	0.000	< 0.02 or 4%		13			
				Post Leak Check	0.004	< 0.02 or 4%		10			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)			
1640	0	211.600	95	1.0	N/A	N/A	55	3			
1655	15	217.71	94				51	3			
1710	30	221.56	93				53	3			
1725	45	237.91	92				54	3			
1740	60	246.729									

Run Identification				Actual					Req'd		Vac
M4-3				Pre Leak Check	0.000	< 0.02 or 4%		10			
				Post Leak Check	0.000	< 0.02 or 4%		7			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)			
1758	0	247.000	89	1.0	N/A	N/A	54	3			
1813	15	255.44	88				53	3			
1828	30	263.25	88				52	3			
1843	45	269.87	87				55	3			
1858	60	278.084									

Method 4 - Air Control Techniques, P.C.

Date

Identification Information

Client	ENDUVA	Job	1909
Plant Name	AMPERY	Process	DRYER
City	AMPERY	State	MS

Sampling Information

Run Number		Balance Number	Video
Sampling Date		Balance Type	Electronic
Recovery Date		Balance Level	✓
Personnel	TTB JBG	Recovery Area	✓

Location Moisture Data

	Run Number	1	2	3
Impinger 1				
Final Weight, grams/mls	780.4	796.5	854.4	
Initial Weight, grams/mls	709.5	717.2	780.4	
Condensed Water, grams	70.9	79.3	74.0	
Impinger 2				
Final Weight, grams/mls	679.3	724.1	683.8	
Initial Weight, grams/mls	673.6	718.4	679.3	
Condensed Water, grams	5.7	5.2	4.5	
Impinger 3				
Final Weight, grams/mls	604.5	613.3	605.5	
Initial Weight, grams/mls	603.1	612.5	604.5	
Condensed Water, grams	1.4	0.8	1.0	
Condensed Water, grams				
Silica Gel				
Final Weight, grams	802.5	823.0	808.5	
Initial Weight, grams	796.7	816.4	802.5	
Adsorbed Water, grams	5.8	6.6	6.0	
Adsorbed Water, grams				
Total Water, grams	83.8	91.9		

$V_m(\text{std}) = \text{Volume of gas sampled at standard conditions (dscf)}$
 $V_m(\text{std}) = ((\text{Gamma} * 17.64 * V_m * (\text{Pbar} + (\Delta H / 13.6)))) / (\text{Tm} + 460)$
 $V_{wc}(\text{std}) = \text{volume of water vapor at standard conditions (scf)}$
 $V_{wc}(\text{std}) = (0.04707) * (\text{volume of water collected (mls)})$
 $B_{ws} = \text{Mole fraction of water vapor}$
 $B_{ws} = V_{wc}(\text{std}) / (V_m(\text{std}) + V_{wc}(\text{std}))$
 $\text{Percent Moisture} = 100 * B_{ws}$

Air Control Techniques, P.C.
Moisture Sampling Train Field Data Sheet

Date 10/16/13

SOURCE IDENTIFICATION		EQUIPMENT IDENTIFICATION	
Facility	ENVIVA	Umbilical ID	90
City, State	AMORY, MS	Meterbox ID	909033
Test Location	Green Hammer mill	$\Delta H @$	1.917
Personnel	TJB, JBG	Gamma (γ)	0.9828

Run Identification <u>4</u>				Actual			Req'd		Vac
Pre Leak Check				0.000	< 0.02 or 4%	15			
Post Leak Check				0.000	< 0.02 or 4%	12			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
911	0	278.300	66	1.0	N/A	N/A	52	3	
926	15	286.65	67				60	3	
	30	294.87	70				64	3	
	45	303.11	72				65	3	
	60	311.263							

Run Identification <u>5</u>				Actual			Req'd		Vac
Pre Leak Check				0.000	< 0.02 or 4%	16			
Post Leak Check				0.000	< 0.02 or 4%	9			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
1032	0	311.600	73	1.0	N/A	N/A	59	3	
1037	15	320.11	76				60	3	
1052	30	329.01	77				60	3	
1107	45	337.70	78				61	3	
1122	60	346.296							

Run Identification <u>6</u>				Actual			Req'd		Vac
Pre Leak Check				0.000	< 0.02 or 4%	14			
Post Leak Check				0.110	< 0.02 or 4%	10			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
1140	0	346.500	78	1.0	N/A	N/A	61	3	
1155	15	355.02	80				60	3	
1210	30	363.61	80				62	3	
1225	45	372.43	81				64	3	
1240	60	380.300							

Method 4 - Air Control Techniques, P.C.

Date

Identification Information

Client	ENDIVA	Job	1989
Plant Name	Amory	Process	Greenhamms Mill
City	Amory	State	MS

Sampling Information

Run Number		Balance Number	V1000
Sampling Date		Balance Type	Electronic
Recovery Date		Balance Level	<input checked="" type="checkbox"/>
Personnel	TJB JBG	Recovery Area	<input checked="" type="checkbox"/>

Location Moisture Data

	Run Number	4	5	6
<u>Impinger 1</u>				
Final Weight, grams/mls		809.0	868.8	823.5
Initial Weight, grams/mls		796.5	854.4	809.0
Condensed Water, grams		12.5	14.4	14.5
<u>Impinger 2</u>				
Final Weight, grams/mls		724.2	685.4	727.2
Initial Weight, grams/mls		724.1	683.8	724.2
Condensed Water, grams		0.1 0.1	1.6	3.0
<u>Impinger 3</u>				
Final Weight, grams/mls		612.5	605.2	614.0
Initial Weight, grams/mls		613.3	605.5	612.5
Condensed Water, grams		-0.8	-0.3	1.5
Condensed Water, grams				
<u>Silica Gel</u>				
Final Weight, grams		827.0	814.2	834.0
Initial Weight, grams		823.0	808.5	827.0
Adsorbed Water, grams		4.0	5.7	7.0
Adsorbed Water, grams		—	—	—
Total Water, grams		15.6	21.4	26.0

$Vm(std) = \text{Volume of gas sampled at standard conditions (dscf)}$
 $Vm(std) = ((\text{Gamma} * 17.64 * Vm * (Pbar + (\Delta H / 13.6)))) / (Tm + 460)$
 $Vwc(std) = \text{volume of water vapor at standard conditions (scf)}$
 $Vwc(std) = (0.04707) * (\text{volume of water collected (mls)})$
 $Bws = \text{Mole fraction of water vapor}$
 $Bws = Vwc(std) / (Vm(std) + Vwc(std))$
 $\text{Percent Moisture} = 100 * Bws$

Air Control Techniques, P.C.
Moisture Sampling Train Field Data Sheet

Date 10/15/13

SOURCE IDENTIFICATION				EQUIPMENT IDENTIFICATION			
Facility	<u>ENVIVA</u>			Umbilical ID	<u>90</u>		
City, State	<u>Amory, MS</u>			Meterbox ID	<u>909033</u>		
Test Location	<u>DRY Hammermill</u>			ΔH@	<u>1.917</u>		
Personnel	<u>TJB, JRG</u>			Gamma (γ)	<u>0.9820</u>		

Run Identification <u>114-7</u>				Pre Leak Check			Post Leak Check		
				Actual	Req'd	Vac			
				0.000	< 0.02 or 4%	12			
				0.003	< 0.02 or 4%	10			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
<u>1349</u>	<u>0</u>	<u>380.500</u>	<u>78</u>	<u>1.0</u>	<u>N/A</u>	<u>N/A</u>	<u>60</u>	<u>3</u>	
<u>1403</u>	<u>15</u>	<u>398.92</u>	<u>77</u>	↓	↓	↓	<u>56</u>	<u>3</u>	
<u>1438</u>	<u>30</u>	<u>398.03</u>	<u>82</u>	↓	↓	↓	<u>55</u>	<u>3</u>	
<u>1433</u>	<u>45</u>	<u>406.56</u>	<u>83</u>	↓	↓	↓	<u>56</u>	<u>3</u>	
<u>1448</u>	<u>60</u>	<u>415.418</u>							

Run Identification 8				Pre Leak Check			Post Leak Check		
				Actual	Req'd	Vac			
					< 0.02 or 4%				
					< 0.02 or 4%				
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
	<u>0</u>			<u>1.0</u>	<u>N/A</u>	<u>N/A</u>			
	<u>15</u>			↓	↓	↓			
	<u>30</u>			↓	↓	↓			
	<u>45</u>			↓	↓	↓			
	<u>60</u>								

Run Identification 9				Pre Leak Check			Post Leak Check		
				Actual	Req'd	Vac			
					< 0.02 or 4%				
					< 0.02 or 4%				
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
	<u>0</u>			<u>1.0</u>	<u>N/A</u>	<u>N/A</u>			
	<u>15</u>			↓	↓	↓			
	<u>30</u>			↓	↓	↓			
	<u>45</u>			↓	↓	↓			
	<u>60</u>								

Method 4 - Air Control Techniques, P.C.

Date 10/15/13

Identification Information			
Client	<u>ENDURA</u>	Job	<u>1909</u>
Plant Name	<u>AMORY</u>	Process	<u>Dry Hammer Mill</u>
City	<u>AMORY</u>	State	<u>MS</u>

Sampling Information			
Run Number		Balance Number	<u>V1200</u>
Sampling Date		Balance Type	<u>Electronic</u>
Recovery Date		Balance Level	<input checked="" type="checkbox"/>
Personnel	<u>TTB JBG</u>	Recovery Area	<input checked="" type="checkbox"/>

Location Moisture Data			
Run Number	<u>7</u>	8	9
<u>Impinger 1</u>			
Final Weight, grams/mls	<u>887.0</u>	887.0	887.0
Initial Weight, grams/mls	<u>868.8</u>	823.5	887.0
Condensed Water, grams	<u>18.2</u>		
<u>Impinger 2</u>			
Final Weight, grams/mls	<u>687.2</u>	687.2	687.2
Initial Weight, grams/mls	<u>685.4</u>	727.2	687.2
Condensed Water, grams	<u>1.8</u>		
<u>Impinger 3</u>			
Final Weight, grams/mls	<u>605.8</u>	605.8	605.8
Initial Weight, grams/mls	<u>605.2</u>	614.0	605.8
Condensed Water, grams	<u>0.6</u>		
Condensed Water, grams			
<u>Silica Gel</u>			
Final Weight, grams	<u>819.9</u>	819.9	819.9
Initial Weight, grams	<u>814.2</u>	834.0	819.9
Adsorbed Water, grams	<u>5.7</u>		
Adsorbed Water, grams	<u>—</u>	<u>—</u>	<u>—</u>
Total Water, grams	<u>26.3</u>		

$V_m(\text{std}) = \text{Volume of gas sampled at standard conditions (dscf)}$
 $V_m(\text{std}) = ((\text{Gamma} * 17.64 * V_m * (\text{Pbar} + (\Delta H / 13.6)))) / (\text{Tm} + 460)$
 $V_{wc}(\text{std}) = \text{volume of water vapor at standard conditions (scf)}$
 $V_{wc}(\text{std}) = (0.04707) * (\text{volume of water collected (mls)})$
 $B_{ws} = \text{Mole fraction of water vapor}$
 $B_{ws} = V_{wc}(\text{std}) / (V_m(\text{std}) + V_{wc}(\text{std}))$
 $\text{Percent Moisture} = 100 * B_{ws}$

Air Control Techniques, P.C.
Moisture Sampling Train Field Data Sheet

Date 10/15/13

SOURCE IDENTIFICATION		EQUIPMENT IDENTIFICATION	
Facility	ENVIWA	Umbilical ID	90
City, State	AMDRY #15	Meterbox ID	929033
Test Location	Pellet Mill Cooler Aspirator	ΔH@	1.917
Personnel	TJB JB6	Gamma (y)	0.9838

Run Identification		Actual	Req'd	Vac
M4-8		Pre Leak Check	0.000 < 0.02 or 4%	15
		Post Leak Check	0.000 < 0.02 or 4%	7

Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)
1736	0	416.000	77	N/A	N/A	N/A	64	3
1751	15	424.31	86	↓	↓	↓	50	3
1806	30	432.72	80	↓	↓	↓	51	3
1821	45	441.21	81	↓	↓	↓	52	3
1836	60	449.483						

Run Identification		Actual	Req'd	Vac
98		Pre Leak Check	0.000 < 0.02 or 4%	9
		Post Leak Check	0.000 < 0.02 or 4%	12

Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)
1849	0	449.600	80	1.0	N/A	N/A	53	3
1904	15	452.600	81	↓	↓	↓	62	3
1919	30	460.62	82	↓	↓	↓	61	3
1934	45	475.25	82	↓	↓	↓	61	3
1949	60	483.943						

Run Identification		Actual	Req'd	Vac
10		Pre Leak Check	0.000 < 0.02 or 4%	11
		Post Leak Check	0.000 < 0.02 or 4%	7

Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)
2000	0	484.100	80	1.0	N/A	N/A	51	3
2015	15	492.71	81	↓	↓	↓	60	3
2030	30	501.11	81	↓	↓	↓	64	3
2045	45	509.43	81	↓	↓	↓	64	3
2100	60	517.924						

Method 4 - Air Control Techniques, P.C.

Date 10/15/13

Identification Information			
Client	EQUIVA	Job	1909
Plant Name	AMORY	Process	ASPIRATOR
City	AMORY	State	MS

Sampling Information			
Run Number		Balance Number	V1000
Sampling Date		Balance Type	Electronic
Recovery Date		Balance Level	✓
Personnel	TJB JBK	Recovery Area	✓

Location Moisture Data			
Run Number	8	9	10
Impinger 1			
Final Weight, grams/mls	874.7	937.5	926.5
Initial Weight, grams/mls	823.5	887.0	874.7
Condensed Water, grams	51.2	50.2	51.2 51.8
Impinger 2			
Final Weight, grams/mls	729.3	692.2	734.1
Initial Weight, grams/mls	727.2	687.2	729.3
Condensed Water, grams	2.1	5.0	4.8
Impinger 3			
Final Weight, grams/mls	614.2	606.3	615.2
Initial Weight, grams/mls	614.0	605.8	614.2
Condensed Water, grams	0.2	0.5	1.0
Condensed Water, grams	53.5		
Silica Gel			
Final Weight, grams	838.3	825.6	843.1
Initial Weight, grams	834.0	819.9	838.3
Adsorbed Water, grams	4.3	5.7	4.8
Adsorbed Water, grams	—	—	—
Total Water, grams	57.8	61.4	62.4

$V_m(\text{std}) = \text{Volume of gas sampled at standard conditions (dscf)}$
 $V_m(\text{std}) = ((\text{Gamma} * 17.64 * V_m * (\text{Pbar} + (\Delta H / 13.6))) / (\text{Tm} + 460))$
 $V_{wc}(\text{std}) = \text{volume of water vapor at standard conditions (scf)}$
 $V_{wc}(\text{std}) = (0.04707) * (\text{volume of water collected (mls)})$
 $B_{ws} = \text{Mole fraction of water vapor}$
 $B_{ws} = V_{wc}(\text{std}) / (V_m(\text{std}) + V_{wc}(\text{std}))$
 $\text{Percent Moisture} = 100 * B_{ws}$

Air Control Techniques, P.C.
Moisture Sampling Train Field Data Sheet

Date 10/16/13

SOURCE IDENTIFICATION		EQUIPMENT IDENTIFICATION	
Facility	AMORY ENVI VA	Umbilical ID	90
City, State	AMORY MS	Meterbox ID	909033
Test Location	DRY Hammer Mill	ΔH_e	1.97
Personnel	MS JB5	Gamma (γ)	0.4828

Run Identification <u>11</u>				Pre Leak Check			Post Leak Check		
				Actual	Req'd	Vac			
				0.000	< 0.02 or 4%	10			
				0.000	< 0.02 or 4%	19			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
1054	0	518.300	64	1.0	N/A	N/A	61	3	
1109	15	526.70	67	↓	↓	↓	60	3	
1224	30	535.13	70	↓	↓	↓	61	3	
1137	45	543.05	71	↓	↓	↓	61	3	
1154	60	551.693					61	3	

Run Identification <u>12</u>				Pre Leak Check			Post Leak Check		
				Actual	Req'd	Vac			
				0.000	< 0.02 or 4%	12			
				0.000	< 0.02 or 4%	7			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
1207	0	551.900	72	1.0	N/A	N/A	62	3	
1222	15	561.92	75	↓	↓	↓	61	4	
1237	30	571.82	74	↓	↓	↓	62	3	
1252	45	580.91	75	↓	↓	↓	61	3	
1307	60	589.175					61	3	

Run Identification <u>13</u>				Pre Leak Check			Post Leak Check		
				Actual	Req'd	Vac			
				0.000	< 0.02 or 4%	9			
				0.000	< 0.02 or 4%	8			
Clock Time	Elapsed Time (min)	Volume Metered (ft ³)	Meter Temp. (°F)	ΔH (in. W.C.)	Probe Temp. (°F)	Filter Temp. (°F)	Impinger Temp. (°F)	Vacuum (in. Hg)	
1321	0	587.400	74	1.0	N/A	N/A	57	3	
1336	15	597.865	75	↓	↓	↓	60	3	
1351	30	606.43	76	↓	↓	↓	61	3	
1406	45	614.61	77	↓	↓	↓	60	3	
1421	60	622.809					60	3	

Method 4 - Air Control Techniques, P.C.

Date

Identification Information			
Client	ENVIVA	Job	1909
Plant Name	AMDRI	Process	DRY Hammer Mill
City	AMDRI	State	MS

Sampling Information			
Run Number		Balance Number	V1200
Sampling Date		Balance Type	Electronic
Recovery Date		Balance Level	L
Personnel		Recovery Area	L

Location Moisture Data				
	Run Number	11	12	13
<u>Impinger 1</u>				
Final Weight, grams/mls	763.5	934.0	786.3	
Initial Weight, grams/mls	746.5	926.5	763.5	
Condensed Water, grams	17.0	7.5	22.8	
<u>Impinger 2</u>				
Final Weight, grams/mls	693.1	748.7	694.4	
Initial Weight, grams/mls	692.2	734.1	693.1	
Condensed Water, grams	0.9	14.6	1.3	
<u>Impinger 3</u>				
Final Weight, grams/mls	605.6	616.1	607.2	
Initial Weight, grams/mls	614.2	615.2	605.6	
Condensed Water, grams	-0.7	0.9	1.6	
Condensed Water, grams	606.3			
<u>Silica Gel</u>				
Final Weight, grams	829.0	847.0	832.6	
Initial Weight, grams	825.6	843.1	829.0	
Adsorbed Water, grams	3.4	3.9	3.6	
Adsorbed Water, grams	—	—	—	
Total Water, grams	3.4 20.6	26.9	30.3	

$V_m(\text{std}) = \text{Volume of gas sampled at standard conditions (dscf)}$
 $V_m(\text{std}) = ((\text{Gamma} * 17.64 * V_m * (\text{Pbar} + (\Delta H / 13.6))) / (\text{Tm} + 460))$
 $V_{wc}(\text{std}) = \text{volume of water vapor at standard conditions (scf)}$
 $V_{wc}(\text{std}) = (0.04707) * (\text{volume of water collected (mls)})$
 $B_{ws} = \text{Mole fraction of water vapor}$
 $B_{ws} = V_{wc}(\text{std}) / (V_m(\text{std}) + V_{wc}(\text{std}))$
 $\text{Percent Moisture} = 100 * B_{ws}$

APPENDIX B
Method 25A Data

Test Run 1 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: Dryer Run 1

THC
ppm

Start Averaging

10/14/2013	15:16:06	29.84
10/14/2013	15:17:06	29.38
10/14/2013	15:18:07	29.23
10/14/2013	15:19:08	29.5
10/14/2013	15:20:06	29.43
10/14/2013	15:21:06	29.07
10/14/2013	15:22:06	28.69
10/14/2013	15:23:07	28.19
10/14/2013	15:24:07	28.8
10/14/2013	15:25:07	29.25
10/14/2013	15:26:08	29.42
10/14/2013	15:27:06	29.42
10/14/2013	15:28:06	29.37
10/14/2013	15:29:06	29.27
10/14/2013	15:30:07	28.87
10/14/2013	15:31:07	28.67
10/14/2013	15:32:07	29.34
10/14/2013	15:33:07	29.91
10/14/2013	15:34:06	29.97
10/14/2013	15:35:06	29.72
10/14/2013	15:36:06	29.81
10/14/2013	15:37:07	30.15
10/14/2013	15:38:07	30.47
10/14/2013	15:39:07	30.79
10/14/2013	15:40:07	30.98
10/14/2013	15:41:08	31.24
10/14/2013	15:42:06	30.95
10/14/2013	15:43:06	30.53
10/14/2013	15:44:06	29.96
10/14/2013	15:45:07	29.76
10/14/2013	15:46:07	30.29
10/14/2013	15:47:07	30.72
10/14/2013	15:48:07	31.05
10/14/2013	15:49:06	31.74
10/14/2013	15:50:06	31.76
10/14/2013	15:51:06	31.92
10/14/2013	15:52:06	31.8
10/14/2013	15:53:07	30.91
10/14/2013	15:54:07	30.34
10/14/2013	15:55:07	30.66
10/14/2013	15:56:08	31.37
10/14/2013	15:57:06	31.66
10/14/2013	15:58:06	31.75
10/14/2013	15:59:06	31.88

10/14/2013	16:00:07	32.01
10/14/2013	16:01:07	32.08
10/14/2013	16:02:07	31.95
10/14/2013	16:03:07	31
10/14/2013	16:04:06	29.66
10/14/2013	16:05:06	28.44
10/14/2013	16:06:06	27.74
10/14/2013	16:07:06	27.01
10/14/2013	16:08:07	26.17
10/14/2013	16:09:07	25.71
10/14/2013	16:10:07	25.36
10/14/2013	16:11:08	25.84
10/14/2013	16:12:06	26.07
10/14/2013	16:13:06	25.76
10/14/2013	16:14:06	25.89
10/14/2013	16:15:06	26.02
Average	1803 sampl	29.55
Test Run 1 End		

Test Run 2 Begin. STRATA Version 3.2

Operator: DGG
Plant Name: Enviva Amory
Location: Dryer Run 2

THC
ppm

Start Averaging

10/14/2013	16:41:35	18.65
10/14/2013	16:42:35	17.55
10/14/2013	16:43:35	17.23
10/14/2013	16:44:36	17.41
10/14/2013	16:45:36	17.14
10/14/2013	16:46:36	17.01
10/14/2013	16:47:36	17.98
10/14/2013	16:48:35	19.26
10/14/2013	16:49:35	20.5
10/14/2013	16:50:36	20.97
10/14/2013	16:51:36	21.28
10/14/2013	16:52:36	22.13
10/14/2013	16:53:36	22.77
10/14/2013	16:54:37	22.83
10/14/2013	16:55:35	21.93
10/14/2013	16:56:35	21.3
10/14/2013	16:57:35	21.57
10/14/2013	16:58:36	21.17
10/14/2013	16:59:36	20.54
10/14/2013	17:00:36	21.27
10/14/2013	17:01:36	22.16
10/14/2013	17:02:35	22.73
10/14/2013	17:03:35	22.84
10/14/2013	17:04:35	23.05
10/14/2013	17:05:35	22.88
10/14/2013	17:06:36	22.19
10/14/2013	17:07:36	21.93
10/14/2013	17:08:36	22.4
10/14/2013	17:09:37	22.75
10/14/2013	17:10:35	22.57
10/14/2013	17:11:35	22.65
10/14/2013	17:12:35	22.63
10/14/2013	17:13:36	22.69
10/14/2013	17:14:36	22.76
10/14/2013	17:15:36	22.66
10/14/2013	17:16:36	22.62
10/14/2013	17:17:35	22.57
10/14/2013	17:18:35	22.52
10/14/2013	17:19:35	22.7
10/14/2013	17:20:36	23.2

10/14/2013	17:21:36	23.48
10/14/2013	17:22:36	23.29
10/14/2013	17:23:36	23.28
10/14/2013	17:24:37	23.34
10/14/2013	17:25:35	23.06
10/14/2013	17:26:35	22.67
10/14/2013	17:27:35	21.3
10/14/2013	17:28:36	20.48
10/14/2013	17:29:36	20.59
10/14/2013	17:30:36	21.05
10/14/2013	17:31:36	21.38
10/14/2013	17:32:35	21.75
10/14/2013	17:33:35	22.32
10/14/2013	17:34:35	23.55
10/14/2013	17:35:36	24.22
10/14/2013	17:36:36	24.7
10/14/2013	17:37:36	24.87
10/14/2013	17:38:36	24.87
10/14/2013	17:39:35	24.85
10/14/2013	17:40:35	24.86
Average	1795 samp	21.88
Test Run 2 End		

Test Run 3 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: Dryer Run 3

THC
ppm

Start Averaging

10/14/2013	17:59:03	23.65
10/14/2013	18:00:03	23.59
10/14/2013	18:01:01	23.24
10/14/2013	18:02:01	23.09
10/14/2013	18:03:02	23.36
10/14/2013	18:04:02	23.94
10/14/2013	18:05:02	24.25
10/14/2013	18:06:03	24.43
10/14/2013	18:07:03	23.91
10/14/2013	18:08:01	20.3
10/14/2013	18:09:01	14.03
10/14/2013	18:10:02	21.86
10/14/2013	18:11:02	21.83
10/14/2013	18:12:02	22.05
10/14/2013	18:13:02	22.48
10/14/2013	18:14:03	22.72
10/14/2013	18:15:01	22.91
10/14/2013	18:16:01	23.55
10/14/2013	18:17:01	24
10/14/2013	18:18:02	23.83
10/14/2013	18:19:02	23.35
10/14/2013	18:20:02	22.91
10/14/2013	18:21:03	22.53
10/14/2013	18:22:03	22.03
10/14/2013	18:23:01	21.72
10/14/2013	18:24:01	21.54
10/14/2013	18:25:02	21.53
10/14/2013	18:26:02	21.59
10/14/2013	18:27:02	21.11
10/14/2013	18:28:02	20.57
10/14/2013	18:29:03	20.16
10/14/2013	18:30:03	19.45
10/14/2013	18:31:01	18.75
10/14/2013	18:32:02	18.57
10/14/2013	18:33:02	19.09
10/14/2013	18:34:02	20.04
10/14/2013	18:35:02	20.84
10/14/2013	18:36:03	21.29
10/14/2013	18:37:01	22.01
10/14/2013	18:38:01	22.75

10/14/2013	18:39:02	23.32
10/14/2013	18:40:02	23.31
10/14/2013	18:41:02	23.03
10/14/2013	18:42:02	22.55
10/14/2013	18:43:03	22.03
10/14/2013	18:44:03	21.77
10/14/2013	18:45:01	21.28
10/14/2013	18:46:01	20.78
10/14/2013	18:47:02	21.1
10/14/2013	18:48:02	21.25
10/14/2013	18:49:02	21.74
10/14/2013	18:50:03	22.33
10/14/2013	18:51:03	22.64
10/14/2013	18:52:01	22.32
10/14/2013	18:53:01	22.09
10/14/2013	18:54:02	21.95
10/14/2013	18:55:02	21.78
10/14/2013	18:56:02	22
10/14/2013	18:57:02	22.84
10/14/2013	18:58:03	23.45
10/14/2013	18:59:01	23.63
10/14/2013	19:00:01	23.84
Average	1862 sampl	22.2

Test Run 3 End

Test Run 4 Begin. STRATA Version 3.2

Operator: DGG
Plant Name: Enviva Amory
Location: GHM Run 1

		THC ppm
Start Averaging		
10/15/2013	9:11:26	15.95
10/15/2013	9:12:26	17.8
10/15/2013	9:13:26	21.03
10/15/2013	9:14:25	18.51
10/15/2013	9:15:25	18.26
10/15/2013	9:16:25	16.45
10/15/2013	9:17:25	16.65
10/15/2013	9:18:26	18.64
10/15/2013	9:19:26	18.53
10/15/2013	9:20:26	19.32
10/15/2013	9:21:25	19.84
10/15/2013	9:22:25	18.28
10/15/2013	9:23:25	17.88
10/15/2013	9:24:25	20.19
10/15/2013	9:25:25	20.74
10/15/2013	9:26:26	17.95
10/15/2013	9:27:26	17.47
10/15/2013	9:28:26	17.23
10/15/2013	9:29:25	17.82
10/15/2013	9:30:25	17.99
10/15/2013	9:31:25	16.51
10/15/2013	9:32:25	16
10/15/2013	9:33:26	17.44
10/15/2013	9:34:26	18.18
10/15/2013	9:35:26	17.55
10/15/2013	9:36:25	17.15
10/15/2013	9:37:25	15.8
10/15/2013	9:38:25	14.6
10/15/2013	9:39:25	14.94
10/15/2013	9:40:26	15.11
10/15/2013	9:41:26	16.85
10/15/2013	9:42:26	16.16
10/15/2013	9:43:26	16.03
10/15/2013	9:44:25	15.09
10/15/2013	9:45:25	15.75
10/15/2013	9:46:25	15.88
10/15/2013	9:47:25	15.06
10/15/2013	9:48:26	14.84
10/15/2013	9:49:26	16.07
10/15/2013	9:50:26	17

10/15/2013	9:51:26	17.1
10/15/2013	9:52:25	17.27
10/15/2013	9:53:25	17.34
10/15/2013	9:54:25	19.1
10/15/2013	9:55:25	20.4
10/15/2013	9:56:26	17.18
10/15/2013	9:57:26	17.29
10/15/2013	9:58:26	16.76
10/15/2013	9:59:26	17.77
10/15/2013	10:00:25	18.76
10/15/2013	10:01:25	19.29
10/15/2013	10:02:25	19.76
10/15/2013	10:03:26	18.99
10/15/2013	10:04:26	18.63
10/15/2013	10:05:26	18.15
10/15/2013	10:06:26	18.46
10/15/2013	10:07:25	17.84
10/15/2013	10:08:25	16.74
10/15/2013	10:09:25	15.89
10/15/2013	10:10:25	17.2
Average	1794 samp	17.47

Test Run 4 End

Test Run 5 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: GHM Run 2

THC
ppm

Start Averaging

10/15/2013	10:23:15	21.64
10/15/2013	10:24:16	22.79
10/15/2013	10:25:16	21.11
10/15/2013	10:26:16	20.44
10/15/2013	10:27:17	20.36
10/15/2013	10:28:15	19
10/15/2013	10:29:15	17.55
10/15/2013	10:30:15	18.13
10/15/2013	10:31:15	18.99
10/15/2013	10:32:16	19.11
10/15/2013	10:33:16	20.15
10/15/2013	10:34:16	20.97
10/15/2013	10:35:16	20.98
10/15/2013	10:36:15	22.77
10/15/2013	10:37:15	24.15
10/15/2013	10:38:15	22.1
10/15/2013	10:39:16	22.37
10/15/2013	10:40:16	21.25
10/15/2013	10:41:16	21.46
10/15/2013	10:42:16	22.62
10/15/2013	10:43:15	22.74
10/15/2013	10:44:15	19.79
10/15/2013	10:45:15	19.21
10/15/2013	10:46:15	18.83
10/15/2013	10:47:16	16.99
10/15/2013	10:48:16	18.07
10/15/2013	10:49:16	17.81
10/15/2013	10:50:16	16.86
10/15/2013	10:51:15	17.4
10/15/2013	10:52:15	18.8
10/15/2013	10:53:15	19.99
10/15/2013	10:54:16	20.83
10/15/2013	10:55:16	20.93
10/15/2013	10:56:16	22.63
10/15/2013	10:57:16	25.91
10/15/2013	10:58:17	28.69
10/15/2013	10:59:15	27.11
10/15/2013	11:00:15	28.57
10/15/2013	11:01:15	29.23
10/15/2013	11:02:16	28.67

10/15/2013	11:03:16	28.01
10/15/2013	11:04:16	27.22
10/15/2013	11:05:17	23.74
10/15/2013	11:06:15	25.25
10/15/2013	11:07:15	25.76
10/15/2013	11:08:15	23.95
10/15/2013	11:09:15	20.65
10/15/2013	11:10:16	18.9
10/15/2013	11:11:16	17.21
10/15/2013	11:12:16	16.78
10/15/2013	11:13:16	18.22
10/15/2013	11:14:15	18.64
10/15/2013	11:15:15	18.69
10/15/2013	11:16:15	17.69
10/15/2013	11:17:15	16.78
10/15/2013	11:18:16	18.28
10/15/2013	11:19:16	20.17
10/15/2013	11:20:16	20.31
10/15/2013	11:21:17	19.73
10/15/2013	11:22:15	18.97
Average	1795 samç	21.19

Test Run 5 End

Test Run 6 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: GHM Run 3

THC

ppm

Start Averaging

10/15/2013	11:41:04	17.41
10/15/2013	11:42:04	17.84
10/15/2013	11:43:04	19.12
10/15/2013	11:44:04	18.76
10/15/2013	11:45:03	19.51
10/15/2013	11:46:03	20.52
10/15/2013	11:47:03	19.63
10/15/2013	11:48:03	21.38
10/15/2013	11:49:04	24.22
10/15/2013	11:50:04	23.15
10/15/2013	11:51:04	25.62
10/15/2013	11:52:04	24.73
10/15/2013	11:53:03	23.15
10/15/2013	11:54:03	25.71
10/15/2013	11:55:03	26.11
10/15/2013	11:56:03	25.65
10/15/2013	11:57:04	26.27
10/15/2013	11:58:04	28
10/15/2013	11:59:04	27.79
10/15/2013	12:00:04	29.58
10/15/2013	12:01:03	32.75
10/15/2013	12:02:03	33.15
10/15/2013	12:03:03	28.65
10/15/2013	12:04:04	27.44
10/15/2013	12:05:04	27.12
10/15/2013	12:06:04	28.95
10/15/2013	12:07:04	27.85
10/15/2013	12:08:03	24.16
10/15/2013	12:09:03	23.8
10/15/2013	12:10:03	24.68
10/15/2013	12:11:03	24.73
10/15/2013	12:12:04	24.19
10/15/2013	12:13:04	22.35
10/15/2013	12:14:04	22.07
10/15/2013	12:15:05	23.04
10/15/2013	12:16:03	23.37
10/15/2013	12:17:03	23.16
10/15/2013	12:18:03	23.44
10/15/2013	12:19:03	24.88
10/15/2013	12:20:04	25.97

10/15/2013	12:21:04	26.79
10/15/2013	12:22:04	29.86
10/15/2013	12:23:04	29.65
10/15/2013	12:24:03	28.11
10/15/2013	12:25:03	28.32
10/15/2013	12:26:03	28.34
10/15/2013	12:27:04	30.11
10/15/2013	12:28:04	33.06
10/15/2013	12:29:04	31.12
10/15/2013	12:30:04	31.31
10/15/2013	12:31:03	33.58
10/15/2013	12:32:03	33.89
10/15/2013	12:33:03	31.81
10/15/2013	12:34:03	34
10/15/2013	12:35:04	35.41
10/15/2013	12:36:04	34.64
10/15/2013	12:37:04	37.89
10/15/2013	12:38:04	37.35
10/15/2013	12:39:03	37.29
10/15/2013	12:40:03	37.09
Average	1805 sampl	27.22

Test Run 6 End

Test Run 7 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: DHM Run 1

THC
ppm

Start Averaging

10/15/2013	13:48:31	107.89
10/15/2013	13:49:32	110.03
10/15/2013	13:50:32	116.38
10/15/2013	13:51:32	120.33
10/15/2013	13:52:32	113.69
10/15/2013	13:53:33	113.15
10/15/2013	13:54:33	116.63
10/15/2013	13:55:31	119.67
10/15/2013	13:56:31	117.6
10/15/2013	13:57:32	111.59
10/15/2013	13:58:32	109.24
10/15/2013	13:59:32	105.16
10/15/2013	14:00:32	102.32
10/15/2013	14:01:33	101.17
10/15/2013	14:02:33	101.12
10/15/2013	14:03:31	103.02
10/15/2013	14:04:32	105.51
10/15/2013	14:05:32	105.07
10/15/2013	14:06:32	105.27
10/15/2013	14:07:32	104.71
10/15/2013	14:08:33	101.88
10/15/2013	14:09:33	104.45
10/15/2013	14:10:31	98.55
10/15/2013	14:11:32	93.63
10/15/2013	14:12:32	103.55
10/15/2013	14:13:32	111.82
10/15/2013	14:14:32	111.66
10/15/2013	14:15:33	114.77
10/15/2013	14:16:33	119.41
10/15/2013	14:17:31	112.88
10/15/2013	14:18:31	100.76
10/15/2013	14:19:32	110.26
10/15/2013	14:20:32	115.88
10/15/2013	14:21:32	121.53
10/15/2013	14:22:32	133.41
10/15/2013	14:23:33	138.3
10/15/2013	14:24:33	135.21
10/15/2013	14:25:31	136.51
10/15/2013	14:26:31	136.73
10/15/2013	14:27:32	132.16

10/15/2013	14:28:32	132.89
10/15/2013	14:29:32	124.24
10/15/2013	14:30:32	121.97
10/15/2013	14:31:33	127.27
10/15/2013	14:32:33	125.19
10/15/2013	14:33:31	122.01
10/15/2013	14:34:32	130.07
10/15/2013	14:35:32	131.88
10/15/2013	14:36:32	131.23
10/15/2013	14:37:32	132.47
10/15/2013	14:38:33	127.67
10/15/2013	14:39:33	124.08
10/15/2013	14:40:31	129.18
10/15/2013	14:41:31	148.63
10/15/2013	14:42:32	142.77
10/15/2013	14:43:32	113.23
10/15/2013	14:44:32	115.39
10/15/2013	14:45:33	127.23
10/15/2013	14:46:33	121.07
10/15/2013	14:47:33	120.79
Average	1794 samp	117.88

Test Run 7 End

Test Run 8 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: Aspirator Run 1

THC

ppm

Start Averaging

10/15/2013	17:36:54	337.1
10/15/2013	17:37:55	338.4
10/15/2013	17:38:55	336.2
10/15/2013	17:39:55	341.3
10/15/2013	17:40:56	351.7
10/15/2013	17:41:56	352.1
10/15/2013	17:42:56	351.1
10/15/2013	17:43:54	349.9
10/15/2013	17:44:55	350.1
10/15/2013	17:45:55	351
10/15/2013	17:46:55	353.4
10/15/2013	17:47:55	355.3
10/15/2013	17:48:56	358
10/15/2013	17:49:56	359.9
10/15/2013	17:50:56	360.4
10/15/2013	17:51:54	361.5
10/15/2013	17:52:55	364.1
10/15/2013	17:53:55	365.9
10/15/2013	17:54:55	366.6
10/15/2013	17:55:56	364
10/15/2013	17:56:56	365.4
10/15/2013	17:57:56	366.7
10/15/2013	17:58:54	366.1
10/15/2013	17:59:54	367.5
10/15/2013	18:00:55	370.4
10/15/2013	18:01:55	370.8
10/15/2013	18:02:55	373.5
10/15/2013	18:03:55	374.6
10/15/2013	18:04:56	375.5
10/15/2013	18:05:56	375
10/15/2013	18:06:54	375.7
10/15/2013	18:07:54	372.6
10/15/2013	18:08:55	364.6
10/15/2013	18:09:55	346.5
10/15/2013	18:10:55	321.4
10/15/2013	18:11:56	295.2
10/15/2013	18:12:56	268.5
10/15/2013	18:13:56	260.9
10/15/2013	18:14:54	267.1
10/15/2013	18:15:55	277.6

10/15/2013	18:16:55	293.7
10/15/2013	18:17:55	305
10/15/2013	18:18:55	313.7
10/15/2013	18:19:56	321.6
10/15/2013	18:20:56	325.9
10/15/2013	18:21:56	329.8
10/15/2013	18:22:54	333.8
10/15/2013	18:23:55	337.9
10/15/2013	18:24:55	343.3
10/15/2013	18:25:55	349.5
10/15/2013	18:26:55	354.7
10/15/2013	18:27:56	358.5
10/15/2013	18:28:56	362.4
10/15/2013	18:29:54	365.4
10/15/2013	18:30:54	367.6
10/15/2013	18:31:55	371.2
10/15/2013	18:32:55	373.7
10/15/2013	18:33:55	374
10/15/2013	18:34:55	375.1
10/15/2013	18:35:56	374.5
Average	1805 sampl	347.8

Test Run 8 End

Test Run 9 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: Aspirator Run 2

THC

ppm

Start Averaging

10/15/2013	18:50:01	362.1
10/15/2013	18:51:01	364.8
10/15/2013	18:52:02	367.6
10/15/2013	18:53:02	370.4
10/15/2013	18:54:02	373.2
10/15/2013	18:55:03	379.6
10/15/2013	18:56:01	389.5
10/15/2013	18:57:01	397.9
10/15/2013	18:58:01	407.9
10/15/2013	18:59:02	416.4
10/15/2013	19:00:02	417.6
10/15/2013	19:01:02	417.3
10/15/2013	19:02:02	416.8
10/15/2013	19:03:03	418.1
10/15/2013	19:04:01	419.9
10/15/2013	19:05:01	423.1
10/15/2013	19:06:01	424.7
10/15/2013	19:07:02	424.2
10/15/2013	19:08:02	419.1
10/15/2013	19:09:02	415.2
10/15/2013	19:10:02	406.7
10/15/2013	19:11:03	400.6
10/15/2013	19:12:01	392.2
10/15/2013	19:13:01	387.1
10/15/2013	19:14:01	384.1
10/15/2013	19:15:02	382.8
10/15/2013	19:16:02	386.5
10/15/2013	19:17:02	385.7
10/15/2013	19:18:02	383.6
10/15/2013	19:19:03	381
10/15/2013	19:20:01	377.4
10/15/2013	19:21:01	371
10/15/2013	19:22:01	365.9
10/15/2013	19:23:02	365.8
10/15/2013	19:24:02	366.4
10/15/2013	19:25:02	368.3
10/15/2013	19:26:02	370.1
10/15/2013	19:27:02	370.4
10/15/2013	19:28:01	369.9
10/15/2013	19:29:01	369.8

10/15/2013	19:30:01	370.6
10/15/2013	19:31:02	373.7
10/15/2013	19:32:02	376.2
10/15/2013	19:33:02	381.4
10/15/2013	19:34:02	384.9
10/15/2013	19:35:03	387.6
10/15/2013	19:36:01	387.4
10/15/2013	19:37:01	383.3
10/15/2013	19:38:01	377.1
10/15/2013	19:39:02	368.2
10/15/2013	19:40:02	362.2
10/15/2013	19:41:02	357
10/15/2013	19:42:02	349.9
10/15/2013	19:43:01	345.2
10/15/2013	19:44:01	341.2
10/15/2013	19:45:01	337.9
10/15/2013	19:46:01	338.9
10/15/2013	19:47:02	336.4
10/15/2013	19:48:02	332.1
10/15/2013	19:49:02	330.8
Average	1797 sampl	380.4

Test Run 9 End

Test Run 10 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: Aspirator Run 3

THC

ppm

Start Averaging

10/15/2013	20:01:06	305.7
10/15/2013	20:02:06	309.3
10/15/2013	20:03:07	306.7
10/15/2013	20:04:07	303.9
10/15/2013	20:05:07	301.2
10/15/2013	20:06:07	296.7
10/15/2013	20:07:08	294.1
10/15/2013	20:08:08	295.9
10/15/2013	20:09:06	300.7
10/15/2013	20:10:07	306.1
10/15/2013	20:11:07	310
10/15/2013	20:12:07	311
10/15/2013	20:13:07	308.6
10/15/2013	20:14:07	302
10/15/2013	20:15:08	296.2
10/15/2013	20:16:08	292.6
10/15/2013	20:17:06	288
10/15/2013	20:18:06	282.5
10/15/2013	20:19:07	283.6
10/15/2013	20:20:07	291.5
10/15/2013	20:21:07	299.6
10/15/2013	20:22:07	308.1
10/15/2013	20:23:08	309.4
10/15/2013	20:24:06	307.6
10/15/2013	20:25:06	307.1
10/15/2013	20:26:07	304.6
10/15/2013	20:27:07	304.7
10/15/2013	20:28:07	301.7
10/15/2013	20:29:07	297
10/15/2013	20:30:08	293.4
10/15/2013	20:31:08	289.3
10/15/2013	20:32:06	284.5
10/15/2013	20:33:07	280.3
10/15/2013	20:34:07	276
10/15/2013	20:35:07	272
10/15/2013	20:36:07	268.9
10/15/2013	20:37:08	266.9
10/15/2013	20:38:08	266.7
10/15/2013	20:39:06	267
10/15/2013	20:40:06	268.3

10/15/2013	20:41:07	267.8
10/15/2013	20:42:07	266.1
10/15/2013	20:43:07	260.8
10/15/2013	20:44:07	256.5
10/15/2013	20:45:08	253.7
10/15/2013	20:46:08	250.8
10/15/2013	20:47:06	249.6
10/15/2013	20:48:06	250.4
10/15/2013	20:49:07	249.6
10/15/2013	20:50:07	250.2
10/15/2013	20:51:07	250.4
10/15/2013	20:52:07	247.3
10/15/2013	20:53:08	245.7
10/15/2013	20:54:08	243.1
10/15/2013	20:55:06	242
10/15/2013	20:56:07	239.9
10/15/2013	20:57:07	236.5
10/15/2013	20:58:07	231.5
10/15/2013	20:59:07	228
10/15/2013	21:00:07	227.4
Average	1799 samp	278.3
Test Run 10 End		

Test Run 11 Begin. STRATA Version 3.2

Operator: DGG

Plant Name: Enviva Amory

Location: DHM Run 2

THC
ppm

Start Averaging

10/16/2013	10:55:03	49.7
10/16/2013	10:56:04	43.5
10/16/2013	10:57:04	57.5
10/16/2013	10:58:04	66.6
10/16/2013	10:59:05	68.8
10/16/2013	11:00:05	73.6
10/16/2013	11:01:03	69.8
10/16/2013	11:02:03	65.2
10/16/2013	11:03:04	69.8
10/16/2013	11:04:04	74.2
10/16/2013	11:05:04	74
10/16/2013	11:06:04	70.3
10/16/2013	11:07:05	72.8
10/16/2013	11:08:05	76.2
10/16/2013	11:09:03	76.3
10/16/2013	11:10:03	68.9
10/16/2013	11:11:04	65.8
10/16/2013	11:12:04	68.1
10/16/2013	11:13:04	69
10/16/2013	11:14:05	69.9
10/16/2013	11:15:05	73.9
10/16/2013	11:16:05	73.1
10/16/2013	11:17:03	74.8
10/16/2013	11:18:04	75.9
10/16/2013	11:19:04	68.4
10/16/2013	11:20:04	66.9
10/16/2013	11:21:04	70.6
10/16/2013	11:22:05	77.4
10/16/2013	11:23:05	75.8
10/16/2013	11:24:05	79.2
10/16/2013	11:25:03	78.8
10/16/2013	11:26:04	72.8
10/16/2013	11:27:04	65.8
10/16/2013	11:28:04	75
10/16/2013	11:29:04	89.4
10/16/2013	11:30:05	103.9
10/16/2013	11:31:05	110.1
10/16/2013	11:32:03	116.7
10/16/2013	11:33:03	116.5
10/16/2013	11:34:04	116.1

10/16/2013	11:35:04	113.4
10/16/2013	11:36:04	95.8
10/16/2013	11:37:05	88.7
10/16/2013	11:38:05	93.6
10/16/2013	11:39:05	93.4
10/16/2013	11:40:03	94.6
10/16/2013	11:41:03	93.6
10/16/2013	11:42:04	91.5
10/16/2013	11:43:04	88.6
10/16/2013	11:44:04	82.2
10/16/2013	11:45:04	72.4
10/16/2013	11:46:05	85.6
10/16/2013	11:47:05	92.9
10/16/2013	11:48:05	87.5
10/16/2013	11:49:03	83.9
10/16/2013	11:50:04	84.4
10/16/2013	11:51:04	83.4
10/16/2013	11:52:04	86.2
10/16/2013	11:53:04	88.5
10/16/2013	11:54:05	85.5
Average	1802 samp	80.3

Test Run 11 End

Test Run 12 Begin. STRATA Version 3.2

Operator: DGG
Plant Name: Enviva Amory
Location: DHM Run 3

THC
ppm

Start Averaging

10/16/2013	12:07:40	92.8
10/16/2013	12:08:40	94
10/16/2013	12:09:41	95.8
10/16/2013	12:10:41	91.5
10/16/2013	12:11:41	88.4
10/16/2013	12:12:41	78.2
10/16/2013	12:13:42	77.6
10/16/2013	12:14:40	75.3
10/16/2013	12:15:40	75.5
10/16/2013	12:16:40	75.9
10/16/2013	12:17:41	78.5
10/16/2013	12:18:41	78
10/16/2013	12:19:41	82.9
10/16/2013	12:20:41	88.1
10/16/2013	12:21:42	93.7
10/16/2013	12:22:40	93
10/16/2013	12:23:40	91.7
10/16/2013	12:24:40	92.8
10/16/2013	12:25:41	92.5
10/16/2013	12:26:41	87.6
10/16/2013	12:27:41	87.2
10/16/2013	12:28:41	85.2
10/16/2013	12:29:40	84.7
10/16/2013	12:30:40	88.1
10/16/2013	12:31:40	87.7
10/16/2013	12:32:41	84.8
10/16/2013	12:33:41	79.7
10/16/2013	12:34:41	82.4
10/16/2013	12:35:41	85.7
10/16/2013	12:36:40	87.6
10/16/2013	12:37:40	84.7
10/16/2013	12:38:40	60.6
10/16/2013	12:39:41	59.6
10/16/2013	12:40:41	73.9
10/16/2013	12:41:41	76.5
10/16/2013	12:42:41	79.2
10/16/2013	12:43:42	80.6
10/16/2013	12:44:40	80
10/16/2013	12:45:40	73.8
10/16/2013	12:46:41	68.4

10/16/2013	12:47:41	70.9
10/16/2013	12:48:41	74.7
10/16/2013	12:49:41	75.5
10/16/2013	12:50:41	76.4
10/16/2013	12:51:40	78.9
10/16/2013	12:52:40	85
10/16/2013	12:53:40	89.5
10/16/2013	12:54:41	85.3
10/16/2013	12:55:41	84.6
10/16/2013	12:56:41	87.9
10/16/2013	12:57:41	96.6
10/16/2013	12:58:42	100.4
10/16/2013	12:59:40	100
10/16/2013	13:00:40	95.4
10/16/2013	13:01:40	97
10/16/2013	13:02:41	104.2
10/16/2013	13:03:41	106.8
10/16/2013	13:04:41	108
10/16/2013	13:05:42	100
10/16/2013	13:06:40	94.7
Average	1820 samp	85.6
Test Run 12 End		

Test Run 13 Begin. STRATA Version 3.2

Operator: DGG
Plant Name: Enviva Amory
Location: DHM Run 4

THC
ppm

Start Averaging

10/16/2013	13:21:35	81.3
10/16/2013	13:22:35	90.1
10/16/2013	13:23:36	82.9
10/16/2013	13:24:36	76.5
10/16/2013	13:25:36	93.5
10/16/2013	13:26:36	109.2
10/16/2013	13:27:35	116
10/16/2013	13:28:35	111.4
10/16/2013	13:29:35	111.3
10/16/2013	13:30:35	103.7
10/16/2013	13:31:36	107.3
10/16/2013	13:32:36	107.4
10/16/2013	13:33:36	111.1
10/16/2013	13:34:36	113.2
10/16/2013	13:35:35	117.8
10/16/2013	13:36:35	118.7
10/16/2013	13:37:35	118.1
10/16/2013	13:38:35	117.6
10/16/2013	13:39:36	122.1
10/16/2013	13:40:36	118
10/16/2013	13:41:36	105.1
10/16/2013	13:42:36	100.8
10/16/2013	13:43:35	93.8
10/16/2013	13:44:35	87.8
10/16/2013	13:45:35	79.1
10/16/2013	13:46:35	73.2
10/16/2013	13:47:36	67.9
10/16/2013	13:48:36	66.4
10/16/2013	13:49:36	67.9
10/16/2013	13:50:34	71.2
10/16/2013	13:51:35	72.9
10/16/2013	13:52:35	77.4
10/16/2013	13:53:35	76.7
10/16/2013	13:54:36	71.8
10/16/2013	13:55:36	68.2
10/16/2013	13:56:36	66.4
10/16/2013	13:57:36	66.5
10/16/2013	13:58:35	69.6
10/16/2013	13:59:35	71.7
10/16/2013	14:00:35	71.6

10/16/2013	14:01:35	67.6
10/16/2013	14:02:36	63
10/16/2013	14:03:36	70.8
10/16/2013	14:04:36	75.9
10/16/2013	14:05:34	79
10/16/2013	14:06:35	82.1
10/16/2013	14:07:35	82.3
10/16/2013	14:08:35	83.2
10/16/2013	14:09:36	83.4
10/16/2013	14:10:36	81.3
10/16/2013	14:11:36	76.7
10/16/2013	14:12:36	76.3
10/16/2013	14:13:35	80.1
10/16/2013	14:14:35	84
10/16/2013	14:15:35	87.6
10/16/2013	14:16:35	86.6
10/16/2013	14:17:36	87.3
10/16/2013	14:18:36	85.2
10/16/2013	14:19:36	82.5
10/16/2013	14:20:34	85.2
Average	1804 samp	87.6
Test Run 13 End		

Enviva - Amory
Run 1

Date: 14-Oct
Run Time: 1515-1615

Parameter	Symbol	Dryer Stack
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Calibration Standards		
Zero Gas	$C_{v, zero}$	0.0
Low-Level Gas	$C_{v, low}$	27.99
Mid-Level Gas	$C_{v, mid}$	50
High-Level Gas	$C_{v, high}$	86.13
Calibration Span	CS	100

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.1
Low-Level Gas	$C_{Dir, low}$	28.3
Mid-Level Gas	$C_{Dir, mid}$	50.12
High-Level Gas	$C_{Dir, high}$	86.2

1415

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.1
Low-Level Gas	ACE_{low}	1.1
Mid-Level Gas	ACE_{mid}	0.2
High-Level Gas	ACE_{high}	0.1
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	0.1
Final Zero	$C_{s, zero (post)}$	0.24
Upscale Gas Standard	C_{MA}	50.0
Initial Upscale	$C_{v, up (pre)}$	50.12
Final Upscale	$C_{v, up (post)}$	50.1

System Bias - Results (Percent)		
Zero (pre)	$SB_i (zero)$	0.0
Zero (post)	$SB_{final} (zero)$	0.1
Upscale (pre)	$SB_i (upscale)$	0.0
Upscale (post)	$SB_{final} (upscale)$	0.0
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.1
Upscale	$D_{upscale}$	0.0
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	29.6
Bias Average - Zero	C_0	NA
Bias Average - Upscale	C_M	NA
Corrected Run Average	C_{Gas}	29.6

Enviva - Amory
Run 2

Date: 14-Oct
Run Time: 1649-1749

Parameter	Symbol	Dryer Stack
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.1
Low-Level Gas	$C_{Dir, low}$	28.3
Mid-Level Gas	$C_{Dir, mid}$	50.1
High-Level Gas	$C_{Dir, high}$	86.2

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.1
Low-Level Gas	ACE_{low}	1.1
Mid-Level Gas	ACE_{mid}	0.2
High-Level Gas	ACE_{high}	0.1
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	0.24
Final Zero	$C_{s, zero (post)}$	0.3
Upscale Gas Standard	C_{MA}	50.0
Initial Upscale	$C_{v, up (pre)}$	50.1
Final Upscale	$C_{v, up (post)}$	50.2

System Bias - Results (Percent)		
Zero (pre)	$SB_i (zero)$	0.1
Zero (post)	$SB_{final} (zero)$	0.2
Upscale (pre)	$SB_i (upscale)$	0.0
Upscale (post)	$SB_{final} (upscale)$	0.1
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.1
Upscale	$D_{upscale}$	0.1
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	21.88
Bias Average - Zero	C_0	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	21.9

Enviva - Amory
Run 3

Date: 14-Oct
Run Time: 1758-1900
paused for two minutes

Parameter	Symbol	Dryer Stack
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.1
Low-Level Gas	$C_{Dir, low}$	28.3
Mid-Level Gas	$C_{Dir, mid}$	50.1
High-Level Gas	$C_{Dir, high}$	86.2

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.1
Low-Level Gas	ACE_{low}	1.1
Mid-Level Gas	ACE_{mid}	0.2
High-Level Gas	ACE_{high}	0.1
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	0.30
Final Zero	$C_{s, zero (post)}$	0.34
Upscale Gas Standard	C_{MA}	50.0
Initial Upscale	$C_{v, up (pre)}$	50.2
Final Upscale	$C_{v, up (post)}$	50.18

System Bias - Results (Percent)		
Zero (pre)	$SB_{i (zero)}$	0.2
Zero (post)	$SB_{final (zero)}$	0.2
Upscale (pre)	$SB_{i (upscale)}$	0.1
Upscale (post)	$SB_{final (upscale)}$	0.1
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.0
Upscale	$D_{upscale}$	0.0
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	22.20
Bias Average - Zero	C_0	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	22.2

Enviva - Amory
Run 4

Date: 15-Oct
Run Time: 0911-1011

Parameter	Symbol	GHM
		THC (as C ₃ H ₈) ppm _w

Analyzer Calibration Error - Calibration Standards		
Zero Gas	$C_{v, zero}$	0.0
Low-Level Gas	$C_{v, low}$	27.99
Mid-Level Gas	$C_{v, mid}$	50
High-Level Gas	$C_{v, high}$	86.13
Calibration Span	CS	100

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.1
Low-Level Gas	$C_{Dir, low}$	27.65
Mid-Level Gas	$C_{Dir, mid}$	50
High-Level Gas	$C_{Dir, high}$	86.2

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.1
Low-Level Gas	ACE_{low}	-1.2
Mid-Level Gas	ACE_{mid}	0.0
High-Level Gas	ACE_{high}	0.1
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	0.1
Final Zero	$C_{s, zero (post)}$	0.1
Upscale Gas Standard	C_{MA}	50.0
Initial Upscale	$C_{v, up (pre)}$	50
Final Upscale	$C_{v, up (post)}$	50.08

System Bias - Results (Percent)		
Zero (pre)	$SB_i (zero)$	0.0
Zero (post)	$SB_{final} (zero)$	0.0
Upscale (pre)	$SB_i (upscale)$	0.0
Upscale (post)	$SB_{final} (upscale)$	0.1
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.0
Upscale	$D_{upscale}$	0.1
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	17.5
Bias Average - Zero	C_0	NA
Bias Average - Upscale	C_M	NA
Corrected Run Average	C_{Gas}	17.5

Enviva - Amory
Run 5

Date: 15-Oct
Run Time: 1022-1122

Parameter	Symbol	GHM
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.1
Low-Level Gas	$C_{Dir, low}$	27.7
Mid-Level Gas	$C_{Dir, mid}$	50.0
High-Level Gas	$C_{Dir, high}$	86.2

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.1
Low-Level Gas	ACE_{low}	-1.2
Mid-Level Gas	ACE_{mid}	0.0
High-Level Gas	ACE_{high}	0.1
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	0.10
Final Zero	$C_{s, zero (post)}$	-0.05
Upscale Gas Standard	C_{MA}	50.0
Initial Upscale	$C_{v, up (pre)}$	50.08
Final Upscale	$C_{v, up (post)}$	50.54

System Bias - Results (Percent)		
Zero (pre)	$SB_{i (zero)}$	0.0
Zero (post)	$SB_{final (zero)}$	-0.2
Upscale (pre)	$SB_{i (upscale)}$	0.1
Upscale (post)	$SB_{final (upscale)}$	0.5
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	-0.2
Upscale	$D_{upscale}$	0.5
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	21.19
Bias Average - Zero	C_0	NA
Bias Average - Upscale	C_M	NA
Corrected Run Average	C_{Gas}	21.2

Enviva - Amory
Run 6

Date: 15-Oct
Run Time: 1140-1240

Parameter	Symbol	GHM
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.1
Low-Level Gas	$C_{Dir, low}$	27.65
Mid-Level Gas	$C_{Dir, mid}$	50.0
High-Level Gas	$C_{Dir, high}$	86.2

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.1
Low-Level Gas	ACE_{low}	-1.2
Mid-Level Gas	ACE_{mid}	0.0
High-Level Gas	ACE_{high}	0.1
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	-0.05
Final Zero	$C_{s, zero (post)}$	0.05
Upscale Gas Standard	C_{MA}	50.0
Initial Upscale	$C_{v, up (pre)}$	50.54
Final Upscale	$C_{v, up (post)}$	50.25

System Bias - Results (Percent)		
Zero (pre)	$SB_i (zero)$	-0.2
Zero (post)	$SB_{final} (zero)$	-0.1
Upscale (pre)	$SB_i (upscale)$	0.5
Upscale (post)	$SB_{final} (upscale)$	0.3
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.1
Upscale	$D_{upscale}$	-0.3
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	27.22
Bias Average - Zero	C_D	NA
Bias Average - Upscale	C_M	NA
Corrected Run Average	C_{Gas}	27.2

Enviva - Amory
Run 8

Date: 15-Oct
Run Time: 1736-1836

Parameter	Symbol	Aspirator
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Calibration Standards		
Zero Gas	$C_{v, zero}$	0.0
Low-Level Gas	$C_{v, low}$	258.1
Mid-Level Gas	$C_{v, mid}$	507.1
High-Level Gas	$C_{v, high}$	836.9
Calibration Span	CS	1000

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.4
Low-Level Gas	$C_{Dir, low}$	259
Mid-Level Gas	$C_{Dir, mid}$	506.1
High-Level Gas	$C_{Dir, high}$	837

1650

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.0
Low-Level Gas	ACE_{low}	0.3
Mid-Level Gas	ACE_{mid}	-0.2
High-Level Gas	ACE_{high}	0.0
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	0.4
Final Zero	$C_{s, zero (post)}$	1.2
Upscale Gas Standard	C_{MA}	507.1
Initial Upscale	$C_{v, up (pre)}$	506.1
Final Upscale	$C_{v, up (post)}$	507.5

System Bias - Results (Percent)		
Zero (pre)	$SB_i (zero)$	0.0
Zero (post)	$SB_{final} (zero)$	0.1
Upscale (pre)	$SB_i (upscale)$	0.0
Upscale (post)	$SB_{final} (upscale)$	0.1
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.1
Upscale	$D_{upscale}$	0.1
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{avg}	347.8
Bias Average - Zero	C_0	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	347.8

Enviva - Amory
Run 9

Date: 15-Oct
Run Time: 1849-1949

Parameter	Symbol	Aspirator
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Instrument Response		
Zero Gas	$C_{Dir, zero}$	0.4
Low-Level Gas	$C_{Dir, low}$	259.0
Mid-Level Gas	$C_{Dir, mid}$	506.1
High-Level Gas	$C_{Dir, high}$	837.0

Analyzer Calibration Error - Results (Percent of Span)		
Zero Gas	ACE_{zero}	0.0
Low-Level Gas	ACE_{low}	0.3
Mid-Level Gas	ACE_{mid}	-0.2
High-Level Gas	ACE_{high}	0.0
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response		
Initial Zero	$C_{s, zero (pre)}$	1.20
Final Zero	$C_{s, zero (post)}$	1.35
Upscale Gas Standard	C_{MA}	507.1
Initial Upscale	$C_{v, up (pre)}$	507.5
Final Upscale	$C_{v, up (post)}$	507.9

System Bias - Results (Percent)		
Zero (pre)	$SB_{i (zero)}$	0.1
Zero (post)	$SB_{final (zero)}$	0.1
Upscale (pre)	$SB_{i (upscale)}$	0.1
Upscale (post)	$SB_{final (upscale)}$	0.2
Specification	SB_{spec}	NA

System Drift - Results (Percent)		
Zero	D_{zero}	0.0
Upscale	$D_{upscale}$	0.0
Specification	D_{spec}	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	380.40
Bias Average - Zero	C_0	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	380.4

Enviva - Amory
Run 10

Date: 15-Oct
Run Time: 2000-2100

Parameter	Symbol	Aspirator
		THC (as C ₃ H ₈)
		ppm _w

Analyzer Calibration Error - Instrument Response

Zero Gas	$C_{Dir, zero}$	0.4
Low-Level Gas	$C_{Dir, low}$	259.0
Mid-Level Gas	$C_{Dir, mid}$	506.1
High-Level Gas	$C_{Dir, high}$	837.0

Analyzer Calibration Error - Results (Percent of Span)

Zero Gas	ACE_{zero}	0.0
Low-Level Gas	ACE_{low}	0.3
Mid-Level Gas	ACE_{mid}	-0.2
High-Level Gas	ACE_{high}	0.0
Specification	ACE_{spec}	±5

System Calibrations - Instrument Response

Initial Zero	$C_{s, zero (pre)}$	1.35
Final Zero	$C_{s, zero (post)}$	1
Upscale Gas Standard	C_{MA}	507.1
Initial Upscale	$C_{v, up (pre)}$	507.9
Final Upscale	$C_{v, up (post)}$	508.2

System Bias - Results (Percent)

Zero (pre)	$SB_i (zero)$	0.1
Zero (post)	$SB_{final} (zero)$	0.1
Upscale (pre)	$SB_i (upscale)$	0.2
Upscale (post)	$SB_{final} (upscale)$	0.2
Specification	SB_{spec}	NA

System Drift - Results (Percent)

Zero	D_{zero}	0.0
Upscale	$D_{upscale}$	0.0
Specification	D_{spec}	±3

Response Test - Results (seconds)

Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction

Raw Average	C_{ave}	278.30
Bias Average - Zero	C_o	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	278.3

Enviva - Amory
Run 7

Date: 15-Oct
Run Time: 1348-1448

Parameter	Symbol	Dry Hammermill	
		THC (as C ₃ H ₈)	
		ppm _w	

Analyzer Calibration Error - Calibration Standards			
Zero Gas	$C_{v, zero}$	0.0	0.0
Low-Level Gas	$C_{v, low}$	27.99	258.1
Mid-Level Gas	$C_{v, mid}$	50	507.1
High-Level Gas	$C_{v, high}$	86.13	836.9
Calibration Span	CS	100	1000

Analyzer Calibration Error - Instrument Response			
Zero Gas	$C_{Dir, zero}$	0.1	0.1
Low-Level Gas	$C_{Dir, low}$	28.1	258.6
Mid-Level Gas	$C_{Dir, mid}$	50.24	507.78
High-Level Gas	$C_{Dir, high}$	86.45	836.8

Analyzer Calibration Error - Results (Percent of Span)			
Zero Gas	ACE_{zero}	0.1	0.0
Low-Level Gas	ACE_{low}	0.4	0.2
Mid-Level Gas	ACE_{mid}	0.5	0.1
High-Level Gas	ACE_{high}	0.3	0.0
Specification	ACE_{spec}	±5	±5

System Calibrations - Instrument Response			
Initial Zero	$C_{s, zero (pre)}$	0.1	0.1
Final Zero	$C_{s, zero (post)}$	0.15	0.15
Upscale Gas Standard	C_{MA}	50.0	507.1
Initial Upscale	$C_{v, up (pre)}$	50.24	507.78
Final Upscale	$C_{v, up (post)}$	50.55	508

System Bias - Results (Percent)			
Zero (pre)	$SB_{i (zero)}$	0.0	0.0
Zero (post)	$SB_{final (zero)}$	0.1	0.0
Upscale (pre)	$SB_{i (upscale)}$	0.0	0.0
Upscale (post)	$SB_{final (upscale)}$	0.3	0.0
Specification	SB_{spec}	NA	NA

System Drift - Results (Percent)			
Zero	D_{zero}	0.1	0.0
Upscale	$D_{upscale}$	0.3	0.0
Specification	D_{spec}	±3	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	117.9
Bias Average - Zero	C_0	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	117.9

Enviva - Amory
Run 11

Date: 16-Oct
Run Time: 1054-1154

Parameter	Symbol	Dry Hammemill	
		THC (as C ₃ H ₈)	
		ppm _w	

Analyzer Calibration Error - Calibration Standards			
Zero Gas	$C_{v, zero}$	0.0	0.0
Low-Level Gas	$C_{v, low}$	28.0	258.1
Mid-Level Gas	$C_{v, mid}$	50.0	507.1
High-Level Gas	$C_{v, high}$	86.1	836.9
Calibration Span	CS	100.0	1000.0

Analyzer Calibration Error - Instrument Response			
Zero Gas	$C_{Dr, zero}$	0.1	0.1
Low-Level Gas	$C_{Dr, low}$	28.3	259.0
Mid-Level Gas	$C_{Dr, mid}$	50.5	508.0
High-Level Gas	$C_{Dr, high}$	86.6	837.0

Analyzer Calibration Error - Results (Percent of Span)			
Zero Gas	ACE_{zero}	0.1	0.0
Low-Level Gas	ACE_{low}	1.1	0.3
Mid-Level Gas	ACE_{mid}	1.0	0.2
High-Level Gas	ACE_{high}	0.5	0.0
Specification	ACE_{spec}	±5	±5

System Calibrations - Instrument Response			
Initial Zero	$C_{s, zero (pre)}$	0.10	0.10
Final Zero	$C_{s, zero (post)}$	-0.1	-0.1
Upscale Gas Standard	C_{MA}	50.0	507.1
Initial Upscale	$C_{v, up (pre)}$	50.5	508
Final Upscale	$C_{v, up (post)}$	50.78	508.5

System Bias - Results (Percent)			
Zero (pre)	$SB_{i (zero)}$	0.0	0.0
Zero (post)	$SB_{final (zero)}$	-0.2	0.0
Upscale (pre)	$SB_{i (upscale)}$	0.0	0.0
Upscale (post)	$SB_{final (upscale)}$	0.3	0.1
Specification	SB_{spec}	NA	NA

System Drift - Results (Percent)			
Zero	D_{zero}	-0.2	0.0
Upscale	$D_{upscale}$	0.3	0.1
Specification	D_{spec}	±3	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	80.30
Bias Average - Zero	C_{δ}	N/A
Bias Average - Upscale	C_M	N/A
Corrected Run Average	C_{Gas}	80.3

Enviva - Amory
Run 12

Date: 16-Oct
Run Time: 1207-1307

Parameter	Symbol	Dry Hammermill	
		THC (as C ₃ H ₈)	
		ppm _w	

Analyzer Calibration Error - Calibration Standards			
Zero Gas	$C_{v, zero}$	0.0	0.0
Low-Level Gas	$C_{v, low}$	28.0	258.1
Mid-Level Gas	$C_{v, mid}$	50.0	507.1
High-Level Gas	$C_{v, high}$	86.1	836.9
Calibration Span	CS	100.0	1000.0

Analyzer Calibration Error - Instrument Response			
Zero Gas	$C_{Dir, zero}$	0.1	0.1
Low-Level Gas	$C_{Dir, low}$	28.3	259.0
Mid-Level Gas	$C_{Dir, mid}$	50.5	508.0
High-Level Gas	$C_{Dir, high}$	86.6	837.0

Analyzer Calibration Error - Results (Percent of Span)			
Zero Gas	ACE_{zero}	0.1	0.0
Low-Level Gas	ACE_{low}	1.1	0.3
Mid-Level Gas	ACE_{mid}	1.0	0.2
High-Level Gas	ACE_{high}	0.5	0.0
Specification	ACE_{spec}	±5	±5

System Calibrations - Instrument Response			
Initial Zero	$C_{s, zero (pre)}$	-0.10	-0.10
Final Zero	$C_{s, zero (post)}$	0.1	0.1
Upscale Gas Standard	C_{MA}	50.0	507.1
Initial Upscale	$C_{v, up (pre)}$	50.78	508.5
Final Upscale	$C_{v, up (post)}$	50.7	508

System Bias - Results (Percent)			
Zero (pre)	$SB_i (zero)$	-0.2	0.0
Zero (post)	$SB_{final} (zero)$	0.0	0.0
Upscale (pre)	$SB_i (upscale)$	0.3	0.1
Upscale (post)	$SB_{final} (upscale)$	0.2	0.0
Specification	SB_{spec}	NA	NA

System Drift - Results (Percent)			
Zero	D_{zero}	0.2	0.0
Upscale	$D_{upscale}$	-0.1	-0.1
Specification	D_{spec}	±3	±3

Response Test - Results (seconds)		
Upscale Test		NA
Zero Test		NA
Response Time		30

Calibration Correction		
Raw Average	C_{ave}	85.60
Bias Average - Zero	C_o	NA
Bias Average - Upscale	C_M	NA
Corrected Run Average	C_{Gas}	85.6

Enviva - Amory
Run 13

Date: 16-Oct
Run Time: 1321-1421

Parameter	Symbol	Dry Hammermill THC (as C ₃ H ₈) ppm _w	
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Analyzer Calibration Error - Calibration Standards			
Zero Gas	$C_{v, zero}$	0.0	0.0
Low-Level Gas	$C_{v, low}$	28.0	258.1
Mid-Level Gas	$C_{v, mid}$	50.0	507.1
High-Level Gas	$C_{v, high}$	86.1	836.9
Calibration Span	CS	100.0	1000.0

Analyzer Calibration Error - Instrument Response			
Zero Gas	$C_{Dir, zero}$	0.1	0.1
Low-Level Gas	$C_{Dir, low}$	28.3	259.0
Mid-Level Gas	$C_{Dir, mid}$	50.5	508.0
High-Level Gas	$C_{Dir, high}$	86.6	837.0

Analyzer Calibration Error - Results (Percent of Span)			
Zero Gas	ACE_{zero}	0.1	0.0
Low-Level Gas	ACE_{low}	1.1	0.3
Mid-Level Gas	ACE_{mid}	1.0	0.2
High-Level Gas	ACE_{high}	0.5	0.0
Specification	ACE_{spec}	±5	±5

System Calibrations - Instrument Response			
Initial Zero	$C_{s, zero (pre)}$	0.10	0.10
Final Zero	$C_{s, zero (post)}$	0.1	0.1
Upscale Gas Standard	C_{MA}	0.0	507.1
Initial Upscale	$C_{v, up (pre)}$	50.70	508.00
Final Upscale	$C_{v, up (post)}$	50.6	508

System Bias - Results (Percent)			
Zero (pre)	$SB_i (zero)$	0.0	0.0
Zero (post)	$SB_{final} (zero)$	0.0	0.0
Upscale (pre)	$SB_i (upscale)$	0.2	0.0
Upscale (post)	$SB_{final} (upscale)$	0.1	0.0
Specification	SB_{spec}	NA	NA

System Drift - Results (Percent)			
Zero	D_{zero}	0.0	0.0
Upscale	$D_{upscale}$	-0.1	0.0
Specification	D_{spec}	±3	±3

Response Test - Results (seconds)			
Upscale Test		0	NA
Zero Test		0	NA
Response Time		30	30

Calibration Correction		
Raw Average	C_{ave}	87.60
Bias Average - Zero	C_0	NA
Bias Average - Upscale	C_M	NA
Corrected Run Average	C_{Gas}	87.6

APPENDIX C
Method 320 Data

Company ACT
 Analyst Initials STG
 Parameters EPA Method 320

Client # Amory
 Job # 0913-173
 sample # 4

Sample ID / Concentration (ppmv wet)

Compound	Data Runs					
	Dryer Stack Run 1	Dryer Stack Run 2	Dryer Stack Run 3	GHM Run 1	GHM Run 2	GHM Run 3
Acrolein	2.679 ND	2.679 ND	2.679 ND	2.679 ND	2.679 ND	2.679 ND
Formaldehyde	0.725	0.507	0.647	0.205 ND	0.205 ND	0.205 ND
Methanol	3.172	1.615	2.141	2.622	2.686	2.909
Phenol	3.648 ND	3.648 ND	3.648 ND	3.648 ND	3.648 ND	3.648 ND
Propionaldehyde	0.558 ND	0.558 ND	0.558 ND	0.558 ND	0.558 ND	0.558 ND
acetaldehyde	0.867 ND	0.867 ND	0.867 ND	0.867 ND	0.867 ND	0.867 ND

Compound	Data Runs					
	DHM Run 1	Aspirator Run 1	Aspirator Run 2	Aspirator Run 3	DHM Run 2	DHM Run 3
Acrolein	2.725 J	2.679 ND	2.679 ND	2.679 ND	2.679 J	2.679 J
Formaldehyde	0.205 ND	0.838	0.821	0.794	0.205 ND	0.205 ND
Methanol	0.999	2.611	2.861	2.696	0.693	0.803
Phenol	3.648 ND	3.648 ND	3.648 ND	3.648 ND	3.648 ND	3.648 ND
Propionaldehyde	0.558 ND	0.558 ND	0.558 ND	0.558 ND	0.558 ND	0.558 ND
acetaldehyde	0.867 ND	0.867 ND	0.867 ND	0.867 ND	0.867 ND	0.867 ND

Compound	Data Runs			
	DHM Run 4	Aspirator Run 1	Aspirator Run 2	Aspirator Run 3
Acrolein	2.679 J	2.679 ND	2.679 ND	2.679 ND
Formaldehyde	0.205 ND	0.838	0.821	0.794
Methanol	0.858	2.611	2.861	2.696
Phenol	3.648 ND	3.648 ND	3.648 ND	3.648 ND

Company ACT
Analyst Initials STG
Parameters EPA Method 320

Client # Amory
Job # 0913-173
sample # 4

Compound	Sample ID / Concentration (ppmv wet)
Propionaldehyde	0.558 ND
acetaldehyde	0.867 ND

Company | ACT
 Analyst Initials | JCG
 Parameters | EPA Method 320

Client # | Amury
 Job # | 0913-173
 Sample # | 4

Minimum Detectable Concentrations

Run	Average SEC	Acrolein (ppm)	Formaldehyde (ppm)	Methanol (ppm)	Phenol (ppm)	Propionaldehyde (ppm)	acetaldehyde (ppm)
Dryer Stack Run 1	1.788	0.097	0.283	2.150	0.164	0.525	0.501
Dryer Stack Run 2	1.686	0.094	0.351	1.936	0.157	0.531	0.531
Dryer Stack Run 3	1.795	0.099	0.281	2.206	0.164	0.360	0.360
GHM Run 1	1.133	0.067	0.083	1.663	0.114	0.348	0.348
GHM Run 2	1.130	0.067	0.085	1.708	0.115	0.345	0.345
GHM Run 3	1.114	0.067	0.085	1.756	0.121	0.339	0.339
DHM Run 1	1.074	0.083	0.079	1.544	0.246	0.674	0.579
Aspirator Run 1	1.476	0.182	0.139	2.029	0.752	0.590	0.525
Aspirator Run 2	1.465	0.201	0.152	1.986	0.552	0.525	0.525
Aspirator Run 3	1.446	0.158	0.129	1.982	0.186	0.330	0.330
DHM Run 2	1.083	0.072	0.072	1.538	0.190	0.333	0.333
DHM Run 3	1.090	0.073	0.075	1.580	0.190	0.333	0.333
DHM Run 4	1.131	0.074	0.080	1.651	0.184	0.333	0.333
	Average SEC over Runs (ppm):	1.339	0.138	1.824	0.279	0.433	0.433
	MDC(ppm):	2.679	0.205	3.698	0.538	0.867	0.867

Company	ACT
Analyst Initials	STG
Parameters	EPA Method 320

Client #	Amory
Job #	0913-173
sample #	4

Data

Sm --Spiked Data

Date	Method	FileName	Methanol (ppm)	SEC (ppm)	Sulfur_Hexafluoride (ppm)	SEC (ppm)
10/14/2013 13:54	0917-173_Non-Phenol_D	13_10_14_1354_43_956	8.83	0.281	0.222	0.01400
10/14/2013 13:55	0917-173_Non-Phenol_D	13_10_14_1355_44_666	8.64	0.281	0.228	0.01400
10/14/2013 13:56	0917-173_Non-Phenol_D	13_10_14_1356_45_486	8.38	0.271	0.223	0.01300
10/14/2013 13:57	0917-173_Non-Phenol_D	13_10_14_1357_46_206	8.43	0.264	0.223	0.01200
10/14/2013 13:58	0917-173_Non-Phenol_D	13_10_14_1358_47_056	8.42	0.274	0.222	0.01300
10/14/2013 13:59	0917-173_Non-Phenol_D	13_10_14_1359_47_806	8.26	0.286	0.222	0.01400
10/14/2013 14:00	0917-173_Non-Phenol_D	13_10_14_1400_48_546	2.81	0.301	0.0340	0.0150

Avg. Conc. (ppm) **7.68**

0.196

Su -- Native Conc. Of analyte

Date	Method	FileName	Methanol (ppm)	SEC (ppm)	Sulfur_Hexafluoride (ppm)	SEC (ppm)
10/14/2013 14:06	0917-173_Non-Phenol_D	13_10_14_1406_53_137	1.51	0.310	0.0070	0.0160
10/14/2013 14:07	0917-173_Non-Phenol_D	13_10_14_1407_53_877	1.36	0.306	0.0030	0.0160
10/14/2013 14:08	0917-173_Non-Phenol_D	13_10_14_1408_54_687	1.39	0.305	0.0050	0.0160
10/14/2013 14:09	0917-173_Non-Phenol_D	13_10_14_1409_55_387	1.32	0.296	0.0080	0.0150
10/14/2013 14:10	0917-173_Non-Phenol_D	13_10_14_1410_56_217	1.34	0.286	0.0090	0.0150
10/14/2013 14:11	0917-173_Non-Phenol_D	13_10_14_1411_56_937	1.40	0.287	0.0030	0.01400
10/14/2013 14:12	0917-173_Non-Phenol_D	13_10_14_1412_57_727	1.41	0.294	0.00200	0.0150

Avg. Conc. (ppm) **1.39**

0.0053

$$\text{Recovery (\%)} = \frac{\text{Sm} - \text{Su}(1-\text{DF})}{\text{DF} \times \text{Cs}}$$

$$\text{Ce} = \text{DF} \times \text{Cs} + \text{Su}(1-\text{DF})$$

Sm	7.68 ppm	Mean concentration of spiked analyte
Su	1.39 ppm	Native concentration of analyte
DF	0.0656 %	Dilution Factor (Target < 10%)
CS	99 ppm	Cylinder of spiked gas
	2.91 ppm	Cylinder of tracer gas (SF6)
Ce	7.82 ppm	Expected concentration of analyte

Recovery (%) **97.9%** 70 - 130%

Direct Spike Cylinder

Date	Method	FileName	Methanol (ppm)	SEC (ppm)	Sulfur_Hexafluoride (ppm)	SEC (ppm)
10/14/2013 12:51	0917-173_Non-Phenol_D	13_10_14_1251_51_320	99	0.823	2.91	0.0190
10/14/2013 12:52	0917-173_Non-Phenol_D	13_10_14_1252_52_020	99	0.822	2.91	0.0210
10/14/2013 12:53	0917-173_Non-Phenol_D	13_10_14_1253_52_871	99	0.824	2.91	0.0180
10/14/2013 12:54	0917-173_Non-Phenol_D	13_10_14_1254_53_581	100	0.816	2.91	0.0200
10/14/2013 12:55	0917-173_Non-Phenol_D	13_10_14_1255_54_371	100	0.825	2.92	0.0200
10/14/2013 12:56	0917-173_Non-Phenol_D	13_10_14_1256_55_131	100	0.827	2.91	0.0200
10/14/2013 12:57	0917-173_Non-Phenol_D	13_10_14_1257_55_951	100	0.836	2.91	0.0210

Avg. Conc. (ppm) **99**

2.91

Company/ACT
Analyst Initials STG
Parameters EPA Method 320

Client # Amercy
Job # 1015-173
sample # 4

Table with columns for Date, Method, Filename, DF, Acrolein (ppm), SEC (ppm), Formaldehyde (ppm), SEC (ppm), Methanol (ppm), SEC (ppm), Phenol (ppm), SEC (ppm), Propionaldehyde (ppm), SEC (ppm), acetaldehyde (ppm), SEC (ppm). Rows show data for various dates in 2013 and an Average Conc. (ppm) row.

Table titled 'Dryer Stack Run 3' with columns for Date, Method, Filename, DF, Acrolein (ppm), SEC (ppm), Formaldehyde (ppm), SEC (ppm), Methanol (ppm), SEC (ppm), Phenol (ppm), SEC (ppm), Propionaldehyde (ppm), SEC (ppm), acetaldehyde (ppm), SEC (ppm). Rows show data for various dates in 2013 and an Average Conc. (ppm) row.

Table titled 'GHM Run 1' with columns for Date, Method, Filename, DF, Acrolein (ppm), SEC (ppm), Formaldehyde (ppm), SEC (ppm), Methanol (ppm), SEC (ppm), Phenol (ppm), SEC (ppm), Propionaldehyde (ppm), SEC (ppm), acetaldehyde (ppm), SEC (ppm). Rows show data for various dates in 2013 and an Average Conc. (ppm) row.

Company/ACT
Analyst Initials STG
Parameters EPA Method 300

Client # Amory
Job # 0913-173
Sample # 4

Date	Method	Filename	DF	Aroclorin (ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Methanol (ppm)	SEC (ppm)	Phenol (ppm)	SEC (ppm)	Propionaldehyde (ppm)	SEC (ppm)	acetaldehyde (ppm)	SEC (ppm)
10/15/2013 11:50	173_Non-Phe	13_10_15_1150_22_751	1	2.679	1.120	0.205	0.070	2.672	0.082	3.648	1.713	0.558	0.120	0.867	0.356
10/15/2013 11:51	173_Non-Phe	13_10_15_1151_22_422	1	2.679	1.225	0.205	0.088	2.696	0.084	3.648	1.706	0.558	0.122	0.867	0.340
10/15/2013 11:52	173_Non-Phe	13_10_15_1152_24_122	1	2.679	1.106	0.205	0.066	3.032	0.082	3.648	1.736	0.558	0.122	0.867	0.364
10/15/2013 11:53	173_Non-Phe	13_10_15_1153_34_872	1	2.679	1.182	0.205	0.070	3.084	0.084	3.648	1.730	0.558	0.122	0.867	0.350
10/15/2013 11:54	173_Non-Phe	13_10_15_1154_35_682	1	2.679	1.191	0.205	0.069	2.978	0.087	3.648	1.739	0.558	0.123	0.867	0.360
10/15/2013 11:55	173_Non-Phe	13_10_15_1155_36_432	1	2.679	1.078	0.205	0.065	3.083	0.084	3.648	1.733	0.558	0.119	0.867	0.346
10/15/2013 11:56	173_Non-Phe	13_10_15_1156_37_172	1	2.679	1.128	0.205	0.070	2.930	0.085	3.648	1.735	0.558	0.124	0.867	0.348
10/15/2013 11:57	173_Non-Phe	13_10_15_1157_37_932	1	2.679	1.112	0.205	0.073	3.056	0.086	3.648	1.742	0.558	0.125	0.867	0.362
10/15/2013 11:58	173_Non-Phe	13_10_15_1158_38_582	1	2.679	1.129	0.205	0.071	3.313	0.086	3.648	1.748	0.558	0.129	0.867	0.346
10/15/2013 11:59	173_Non-Phe	13_10_15_1159_39_342	1	2.679	1.140	0.205	0.073	3.185	0.087	3.648	1.759	0.558	0.132	0.867	0.359
10/15/2013 12:00	173_Non-Phe	13_10_15_1200_40_092	1	2.679	1.131	0.205	0.064	2.745	0.084	3.648	1.741	0.558	0.117	0.867	0.343
10/15/2013 12:01	173_Non-Phe	13_10_15_1201_40_852	1	2.679	1.131	0.205	0.066	2.902	0.086	3.648	1.748	0.558	0.117	0.867	0.341
10/15/2013 12:02	173_Non-Phe	13_10_15_1202_41_642	1	2.679	1.115	0.205	0.070	2.981	0.083	3.648	1.727	0.558	0.119	0.867	0.340
10/15/2013 12:03	173_Non-Phe	13_10_15_1203_42_383	1	2.679	1.070	0.205	0.067	2.979	0.085	3.648	1.724	0.558	0.118	0.867	0.338
10/15/2013 12:04	173_Non-Phe	13_10_15_1204_43_183	1	2.679	1.126	0.205	0.068	3.046	0.086	3.648	1.730	0.558	0.122	0.867	0.361
10/15/2013 12:05	173_Non-Phe	13_10_15_1205_43_893	1	2.679	1.114	0.205	0.069	2.800	0.085	3.648	1.729	0.558	0.119	0.867	0.355
10/15/2013 12:06	173_Non-Phe	13_10_15_1206_44_713	1	2.679	1.071	0.205	0.064	2.783	0.082	3.648	1.726	0.558	0.112	0.867	0.325
10/15/2013 12:07	173_Non-Phe	13_10_15_1207_45_493	1	2.679	1.034	0.205	0.065	2.829	0.083	3.648	1.726	0.558	0.116	0.867	0.319
10/15/2013 12:08	173_Non-Phe	13_10_15_1208_46_233	1	2.679	1.075	0.205	0.066	3.030	0.082	3.648	1.717	0.558	0.112	0.867	0.344
10/15/2013 12:09	173_Non-Phe	13_10_15_1209_46_983	1	2.679	1.090	0.205	0.061	2.758	0.083	3.648	1.719	0.558	0.111	0.867	0.341
10/15/2013 12:10	173_Non-Phe	13_10_15_1210_47_703	1	2.679	1.073	0.205	0.064	2.795	0.080	3.648	1.715	0.558	0.109	0.867	0.339
10/15/2013 12:11	173_Non-Phe	13_10_15_1211_48_473	1	2.679	1.033	0.205	0.060	2.824	0.083	3.648	1.720	0.558	0.108	0.867	0.312
10/15/2013 12:12	173_Non-Phe	13_10_15_1212_49_233	1	2.679	1.036	0.205	0.064	2.739	0.080	3.648	1.726	0.558	0.110	0.867	0.342
10/15/2013 12:13	173_Non-Phe	13_10_15_1213_50_073	1	2.679	1.039	0.205	0.063	2.905	0.083	3.648	1.732	0.558	0.113	0.867	0.334
10/15/2013 12:14	173_Non-Phe	13_10_15_1214_50_783	1	2.679	1.037	0.205	0.063	2.992	0.083	3.648	1.726	0.558	0.112	0.867	0.335
10/15/2013 12:15	173_Non-Phe	13_10_15_1215_51_544	1	2.679	1.105	0.205	0.065	2.889	0.081	3.648	1.732	0.558	0.111	0.867	0.338
10/15/2013 12:16	173_Non-Phe	13_10_15_1216_52_314	1	2.679	1.038	0.205	0.062	2.898	0.081	3.648	1.717	0.558	0.115	0.867	0.325
10/15/2013 12:17	173_Non-Phe	13_10_15_1217_53_134	1	2.679	1.085	0.205	0.067	2.911	0.082	3.648	1.725	0.558	0.119	0.867	0.341
10/15/2013 12:18	173_Non-Phe	13_10_15_1218_53_834	1	2.679	1.000	0.205	0.064	2.922	0.082	3.648	1.731	0.558	0.118	0.867	0.330
10/15/2013 12:19	173_Non-Phe	13_10_15_1219_54_544	1	2.679	1.042	0.205	0.065	2.851	0.082	3.648	1.735	0.558	0.114	0.867	0.334
10/15/2013 12:20	173_Non-Phe	13_10_15_1220_55_293	1	2.679	1.053	0.205	0.066	2.920	0.084	3.648	1.740	0.558	0.122	0.867	0.332
10/15/2013 12:21	173_Non-Phe	13_10_15_1221_56_164	1	2.679	1.160	0.205	0.069	2.670	0.084	3.648	1.730	0.558	0.123	0.867	0.349
10/15/2013 12:22	173_Non-Phe	13_10_15_1222_56_874	1	2.679	1.045	0.205	0.065	2.907	0.083	3.648	1.732	0.558	0.114	0.867	0.331
10/15/2013 12:23	173_Non-Phe	13_10_15_1223_57_684	1	2.679	1.037	0.205	0.066	2.881	0.083	3.648	1.732	0.558	0.121	0.867	0.320
10/15/2013 12:24	173_Non-Phe	13_10_15_1224_58_414	1	2.679	1.107	0.205	0.067	3.059	0.088	3.648	1.746	0.558	0.123	0.867	0.347
10/15/2013 12:25	173_Non-Phe	13_10_15_1225_59_224	1	2.679	1.017	0.205	0.068	2.945	0.088	3.648	1.744	0.558	0.122	0.867	0.327
10/15/2013 12:27	173_Non-Phe	13_10_15_1227_00_094	1	2.679	1.189	0.205	0.067	2.909	0.086	3.648	1.764	0.558	0.124	0.867	0.354
10/15/2013 12:28	173_Non-Phe	13_10_15_1228_11_590	1	2.679	1.145	0.205	0.066	3.025	0.087	3.648	1.762	0.558	0.126	0.867	0.339
10/15/2013 12:29	173_Non-Phe	13_10_15_1229_12_390	1	2.679	1.077	0.205	0.074	3.034	0.089	3.648	1.756	0.558	0.130	0.867	0.347
10/15/2013 12:30	173_Non-Phe	13_10_15_1230_13_200	1	2.679	1.115	0.205	0.069	3.016	0.088	3.648	1.759	0.558	0.135	0.867	0.343
10/15/2013 12:31	173_Non-Phe	13_10_15_1231_13_000	1	2.679	1.064	0.205	0.069	2.885	0.085	3.648	1.755	0.558	0.130	0.867	0.340
10/15/2013 12:32	173_Non-Phe	13_10_15_1232_13_940	1	2.679	1.064	0.205	0.069	2.885	0.085	3.648	1.755	0.558	0.130	0.867	0.342
10/15/2013 12:33	173_Non-Phe	13_10_15_1233_14_750	1	2.679	1.043	0.205	0.070	2.944	0.086	3.648	1.749	0.558	0.127	0.867	0.346
10/15/2013 12:34	173_Non-Phe	13_10_15_1234_15_450	1	2.679	1.043	0.205	0.068	2.936	0.085	3.648	1.754	0.558	0.127	0.867	0.346
10/15/2013 12:35	173_Non-Phe	13_10_15_1235_16_170	1	2.679	1.205	0.205	0.069	3.033	0.088	3.648	1.779	0.558	0.134	0.867	0.352
10/15/2013 12:36	173_Non-Phe	13_10_15_1236_16_880	1	2.679	1.147	0.205	0.069	3.016	0.090	3.648	1.774	0.558	0.139	0.867	0.349
10/15/2013 12:37	173_Non-Phe	13_10_15_1237_17_630	1	2.679	1.050	0.205	0.070	2.967	0.088	3.648	1.776	0.558	0.132	0.867	0.347
10/15/2013 12:38	173_Non-Phe	13_10_15_1238_18_480	1	2.679	1.134	0.205	0.068	2.996	0.088	3.648	1.762	0.558	0.130	0.867	0.354
10/15/2013 12:39	173_Non-Phe	13_10_15_1239_19_230	1	2.679	1.154	0.205	0.070	2.884	0.086	3.648	1.776	0.558	0.130	0.867	0.353
10/15/2013 12:40	173_Non-Phe	13_10_15_1240_19_910	1	2.679	1.146	0.205	0.071	2.915	0.090	3.648	1.778	0.558	0.137	0.867	0.363
Average Conc. (ppm):	1	2.688	1.114	0.205	0.067	2.909	0.085	3.648	1.736	0.558	0.121	0.867	0.345		

DHMRun 1

Company ACT
 Analyst initials STG
 Parameters EPA Method 302

Client # Amery
 Job # 0813-173
 Sample # 4

10/16/2013 13:24	173_Non-Phe 13_10_16_1324_05_200	1	2.679	1.091	0.205	0.072	0.851	0.077	3.648	1.598	0.558	0.207	0.867	0.338
10/16/2013 13:25	173_Non-Phe 13_10_16_1325_06_110	1	2.679	1.065	0.205	0.076	0.926	0.078	3.648	1.604	0.558	0.232	0.867	0.320
10/16/2013 13:26	173_Non-Phe 13_10_16_1326_06_890	1	2.679	1.114	0.205	0.080	0.982	0.079	3.648	1.613	0.558	0.244	0.867	0.327
10/16/2013 13:27	173_Non-Phe 13_10_16_1327_07_651	1	2.679	1.172	0.205	0.076	0.993	0.079	3.648	1.615	0.558	0.232	0.867	0.339
10/16/2013 13:28	173_Non-Phe 13_10_16_1328_08_371	1	2.679	1.178	0.205	0.080	1.037	0.081	3.648	1.633	0.558	0.231	0.867	0.343
10/16/2013 13:29	173_Non-Phe 13_10_16_1329_09_101	1	2.679	1.160	0.205	0.077	0.920	0.081	3.648	1.656	0.558	0.239	0.867	0.341
10/16/2013 13:30	173_Non-Phe 13_10_16_1330_09_901	1	2.679	1.135	0.205	0.080	0.940	0.083	3.648	1.670	0.558	0.230	0.867	0.341
10/16/2013 13:31	173_Non-Phe 13_10_16_1331_10_691	1	2.679	1.152	0.205	0.083	0.911	0.081	3.648	1.674	0.558	0.231	0.867	0.355
10/16/2013 13:32	173_Non-Phe 13_10_16_1332_11_411	1	2.679	1.101	0.205	0.080	0.954	0.084	3.648	1.682	0.558	0.231	0.867	0.338
10/16/2013 13:33	173_Non-Phe 13_10_16_1333_12_131	1	2.679	1.237	0.205	0.082	0.912	0.082	3.648	1.676	0.558	0.239	0.867	0.353
10/16/2013 13:34	173_Non-Phe 13_10_16_1334_12_951	1	2.679	1.143	0.205	0.082	0.937	0.084	3.648	1.667	0.558	0.248	0.867	0.352
10/16/2013 13:35	173_Non-Phe 13_10_16_1335_13_701	1	2.679	1.140	0.205	0.082	1.005	0.083	3.648	1.653	0.558	0.247	0.867	0.340
10/16/2013 13:36	173_Non-Phe 13_10_16_1336_14_461	1	2.679	1.188	0.205	0.085	0.929	0.082	3.648	1.648	0.558	0.245	0.867	0.345
10/16/2013 13:37	173_Non-Phe 13_10_16_1337_15_271	1	2.679	1.127	0.205	0.081	1.013	0.082	3.648	1.652	0.558	0.246	0.867	0.341
10/16/2013 13:38	173_Non-Phe 13_10_16_1338_16_941	1	2.679	1.121	0.205	0.084	1.067	0.081	3.648	1.655	0.558	0.257	0.867	0.342
10/16/2013 13:39	173_Non-Phe 13_10_16_1339_16_752	1	2.679	1.070	0.205	0.080	0.951	0.081	3.648	1.634	0.558	0.234	0.867	0.327
10/16/2013 13:40	173_Non-Phe 13_10_16_1340_17_442	1	2.679	1.159	0.205	0.076	0.950	0.083	3.648	1.634	0.558	0.218	0.867	0.350
10/16/2013 13:41	173_Non-Phe 13_10_16_1341_18_272	1	2.679	1.124	0.205	0.075	0.874	0.079	3.648	1.636	0.558	0.215	0.867	0.340
10/16/2013 13:42	173_Non-Phe 13_10_16_1342_18_982	1	2.679	1.106	0.205	0.076	0.824	0.080	3.648	1.625	0.558	0.200	0.867	0.330
10/16/2013 13:43	173_Non-Phe 13_10_16_1343_19_792	1	2.679	1.074	0.205	0.070	0.787	0.076	3.648	1.625	0.558	0.181	0.867	0.326
10/16/2013 13:44	173_Non-Phe 13_10_16_1344_20_512	1	2.679	1.102	0.205	0.071	0.724	0.079	3.648	1.615	0.558	0.173	0.867	0.342
10/16/2013 13:45	173_Non-Phe 13_10_16_1345_21_232	1	2.679	1.027	0.205	0.069	0.766	0.080	3.648	1.637	0.558	0.163	0.867	0.336
10/16/2013 13:46	173_Non-Phe 13_10_16_1346_22_022	1	2.679	1.092	0.205	0.071	0.780	0.081	3.648	1.653	0.558	0.160	0.867	0.335
10/16/2013 13:47	173_Non-Phe 13_10_16_1347_22_792	1	2.679	1.159	0.205	0.067	0.894	0.080	3.648	1.671	0.558	0.160	0.867	0.342
10/16/2013 13:48	173_Non-Phe 13_10_16_1348_23_542	1	2.679	1.138	0.205	0.068	0.842	0.082	3.648	1.686	0.558	0.164	0.867	0.346
10/16/2013 13:49	173_Non-Phe 13_10_16_1349_24_252	1	2.679	1.145	0.205	0.068	0.842	0.084	3.648	1.692	0.558	0.179	0.867	0.329
10/16/2013 13:50	173_Non-Phe 13_10_16_1350_25_052	1	2.679	1.181	0.205	0.076	0.886	0.084	3.648	1.692	0.558	0.179	0.867	0.341
10/16/2013 13:51	173_Non-Phe 13_10_16_1351_25_803	1	2.679	1.140	0.205	0.069	0.840	0.082	3.648	1.694	0.558	0.179	0.867	0.337
10/16/2013 13:52	173_Non-Phe 13_10_16_1352_26_503	1	2.679	1.105	0.205	0.074	0.795	0.081	3.648	1.675	0.558	0.179	0.867	0.341
10/16/2013 13:53	173_Non-Phe 13_10_16_1353_27_313	1	2.679	1.177	0.205	0.069	0.885	0.079	3.648	1.675	0.558	0.165	0.867	0.337
10/16/2013 13:54	173_Non-Phe 13_10_16_1354_28_013	1	2.679	1.152	0.205	0.069	0.902	0.079	3.648	1.674	0.558	0.162	0.867	0.345
10/16/2013 13:55	173_Non-Phe 13_10_16_1355_28_823	1	2.679	1.186	0.205	0.066	0.868	0.083	3.648	1.673	0.558	0.161	0.867	0.343
10/16/2013 13:56	173_Non-Phe 13_10_16_1356_29_593	1	2.679	1.103	0.205	0.070	0.913	0.082	3.648	1.681	0.558	0.160	0.867	0.336
10/16/2013 13:57	173_Non-Phe 13_10_16_1357_30_333	1	2.679	1.129	0.205	0.073	0.868	0.083	3.648	1.699	0.558	0.170	0.867	0.336
10/16/2013 13:58	173_Non-Phe 13_10_16_1358_31_053	1	2.679	1.104	0.205	0.070	0.968	0.084	3.648	1.702	0.558	0.170	0.867	0.346
10/16/2013 13:59	173_Non-Phe 13_10_16_1359_31_863	1	2.679	1.263	0.205	0.070	0.881	0.084	3.648	1.692	0.558	0.162	0.867	0.346
10/16/2013 14:00	173_Non-Phe 13_10_16_1400_32_603	1	2.679	1.189	0.205	0.071	0.772	0.083	3.648	1.680	0.558	0.157	0.867	0.356
10/16/2013 14:01	173_Non-Phe 13_10_16_1401_33_323	1	2.679	1.147	0.205	0.068	0.749	0.082	3.648	1.656	0.558	0.159	0.867	0.341
10/16/2013 14:02	173_Non-Phe 13_10_16_1402_34_073	1	2.679	1.143	0.205	0.074	0.823	0.079	3.648	1.642	0.558	0.174	0.867	0.340
10/16/2013 14:03	173_Non-Phe 13_10_16_1403_34_794	1	2.679	1.079	0.205	0.067	0.857	0.078	3.648	1.631	0.558	0.187	0.867	0.316
10/16/2013 14:04	173_Non-Phe 13_10_16_1404_35_484	1	2.679	1.046	0.205	0.074	0.855	0.079	3.648	1.637	0.558	0.192	0.867	0.350
10/16/2013 14:05	173_Non-Phe 13_10_16_1405_36_184	1	2.679	1.091	0.205	0.076	0.825	0.079	3.648	1.631	0.558	0.190	0.867	0.349
10/16/2013 14:06	173_Non-Phe 13_10_16_1406_36_954	1	2.679	1.115	0.205	0.075	0.840	0.079	3.648	1.636	0.558	0.185	0.867	0.338
10/16/2013 14:07	173_Non-Phe 13_10_16_1407_37_704	1	2.679	1.192	0.205	0.077	0.828	0.079	3.648	1.631	0.558	0.180	0.867	0.342
10/16/2013 14:08	173_Non-Phe 13_10_16_1408_38_404	1	2.679	1.132	0.205	0.069	0.789	0.081	3.648	1.670	0.558	0.187	0.867	0.343
10/16/2013 14:09	173_Non-Phe 13_10_16_1409_39_214	1	2.679	1.171	0.205	0.074	0.812	0.078	3.648	1.681	0.558	0.196	0.867	0.352
10/16/2013 14:10	173_Non-Phe 13_10_16_1410_39_914	1	2.679	1.132	0.205	0.073	0.824	0.080	3.648	1.651	0.558	0.180	0.867	0.343
10/16/2013 14:11	173_Non-Phe 13_10_16_1411_40_714	1	2.679	1.171	0.205	0.074	0.812	0.078	3.648	1.681	0.558	0.196	0.867	0.352
10/16/2013 14:12	173_Non-Phe 13_10_16_1412_41_424	1	2.679	1.165	0.205	0.075	0.824	0.082	3.648	1.663	0.558	0.188	0.867	0.350
10/16/2013 14:13	173_Non-Phe 13_10_16_1413_42_174	1	2.679	1.102	0.205	0.074	0.826	0.081	3.648	1.663	0.558	0.188	0.867	0.350
10/16/2013 14:14	173_Non-Phe 13_10_16_1414_42_985	1	2.679	1.164	0.205	0.076	0.743	0.079	3.648	1.656	0.558	0.189	0.867	0.334
10/16/2013 14:15	173_Non-Phe 13_10_16_1415_43_685	1	2.679	1.088	0.205	0.074	0.793	0.077	3.648	1.652	0.558	0.198	0.867	0.332
10/16/2013 14:16	173_Non-Phe 13_10_16_1416_44_315	1	2.679	1.115	0.205	0.074	0.693	0.079	3.648	1.636	0.558	0.192	0.867	0.339
10/16/2013 14:17	173_Non-Phe 13_10_16_1417_45_225	1	2.679	1.147	0.205	0.075	0.662	0.078	3.648	1.629	0.558	0.187	0.867	0.347
10/16/2013 14:18	173_Non-Phe 13_10_16_1418_45_945	1	2.679	1.111	0.205	0.072	0.713	0.077	3.648	1.646	0.558	0.187	0.867	0.332
10/16/2013 14:19	173_Non-Phe 13_10_16_1419_46_755	1	2.679	1.208	0.205	0.077	0.841	0.081	3.648	1.663	0.558	0.203	0.867	0.357
Average Conc. (ppm):		1	2.679	1.131	0.205	0.074	0.858	0.080	3.648	1.651	0.558	0.194	0.867	0.339

Location Dec. # Star/Bsp Instrument

Date Run Start A

Label 1-Analysis Label 2-Analysis Label 3-Analysis/Spine Label 4-Analysis Label 5-Analysis Label Tracer Label 6-Analysis

DF Acrtion (ppm) SEC (ppm) Formaldehyde (ppm) SEC (ppm) Methanol (ppm) SEC (ppm) Phenylethyl (ppm) SEC (ppm) Propionaldehyde (ppm) SEC (ppm) Sulfur Hexafluoride (ppm) SEC (ppm) Toluene (ppm) SEC (ppm) Xanthoxanthol (ppm) SEC (ppm) Diene (ppm)

Main data table with columns for Date, Method, PName, and various chemical analysis parameters (DF, Acrtion, SEC, etc.) for multiple samples.

Table with columns: Location, Date, Method, Filename, OF, Azimutal (ppm), SEC (ppm), Formaldehyde (ppm), SEC (ppm), Methanol (ppm), SEC (ppm), Phenol (ppm), SEC (ppm), Propanoaldehyde (ppm), SEC (ppm), Sulfur, Fluoride, SEC (ppm), Acetaldehyde (ppm), SEC (ppm), Pinene (iso), Data, Ctrl, 1, Start, A.

Table with columns: Location, Date, Method, Filename, DF, Acquire (ppm), SEC (ppm), Formaldelhyde (ppm), SEC (ppm), Methanol (ppm), SEC (ppm), Phenol (ppm), SEC (ppm), Freonodenehyde (ppm), SEC (ppm), Sulfur_fomaldelhyde (ppm), SEC (ppm), acetaldelhyde (ppm), SEC (ppm), penane (ppm). Rows include data for various dates and methods, with 'Stop' and 'Data Run' markers.

Table with columns: Location, Date, Run, Start, A, Method, Filename, and various numerical values across 17 columns.

Location	Dir.	F	Start/Stop	Instrument	Date	Method	Filename	DF	Acquire (ppm)	SFC (ppm)	Label 1-Analyte	Label 2-Analyte	Label 3-Analyte	Label 4-Analyte	Label 5-Analyte	Label Tracer	Label 8-Analyte
10/15/2013					1855	0917-173	Mei13_10_18_1855_20_197	1	-0.85	1.927	0.000	0.202	2.75	0.190	-0.188	1.84	2.88
10/15/2013					1856	0917-173	Mei13_10_18_1856_20_209	1	-0.83	1.866	0.006	0.207	2.85	0.150	-0.250	1.90	2.49
10/15/2013					1857	0917-173	Mei13_10_18_1857_21_717	1	-0.82	1.982	0.074	0.168	2.87	0.261	0.381	1.93	2.87
10/15/2013					1858	0917-173	Mei13_10_18_1858_21_447	1	-0.80	1.624	0.842	0.206	2.84	0.152	-0.204	2.84	-0.48
10/15/2013					1859	0917-173	Mei13_10_18_1859_21_207	1	-0.82	1.427	0.067	0.111	2.88	0.154	-0.345	1.92	2.54
10/15/2013					1860	0917-173	Mei13_10_18_1860_21_390	1	-1.88	1.451	0.064	0.192	2.84	0.142	-0.444	1.93	0.81
10/15/2013					1861	0917-173	Mei13_10_18_1861_21_847	1	-0.87	1.448	1.077	0.210	2.94	0.133	-0.360	1.88	-0.39
10/15/2013					1862	0917-173	Mei13_10_18_1862_21_427	1	-1.54	1.621	0.889	0.207	2.87	0.152	-0.356	1.89	-0.39
10/15/2013					1863	0917-173	Mei13_10_18_1863_21_187	1	-2.18	1.404	0.060	0.217	2.82	0.128	-0.518	1.98	-0.21
10/15/2013					1864	0917-173	Mei13_10_18_1864_21_367	1	-2.13	1.500	0.872	0.208	2.94	0.118	-0.461	1.92	-0.39
10/15/2013					1865	0917-173	Mei13_10_18_1865_21_578	1	-1.89	1.353	0.847	0.211	2.90	0.118	-0.382	1.94	-0.32
10/15/2013					1866	0917-173	Mei13_10_18_1866_21_568	1	-1.11	1.434	0.807	0.213	2.92	0.128	-0.431	1.84	-0.31
10/15/2013					1867	0917-173	Mei13_10_18_1867_21_148	1	-1.40	1.425	0.773	0.210	2.92	0.136	-0.298	1.94	-0.31
10/15/2013					1868	0917-173	Mei13_10_18_1868_21_878	1	-1.54	1.421	0.841	0.198	2.95	0.134	-0.370	1.98	-0.39
10/15/2013					1869	0917-173	Mei13_10_18_1869_21_387	1	-0.87	1.401	0.060	0.204	2.91	0.144	-0.318	1.91	-0.38
10/15/2013					1870	0917-173	Mei13_10_18_1870_21_309	1	-1.42	1.410	0.867	0.213	2.92	0.128	-0.431	1.84	-0.31
10/15/2013					1871	0917-173	Mei13_10_18_1871_21_938	1	-0.77	1.451	0.754	0.186	2.85	0.150	-0.323	1.84	-0.31
10/15/2013					1872	0917-173	Mei13_10_18_1872_21_598	1	-1.59	1.189	0.814	0.195	2.81	0.149	-0.361	1.93	-0.39
10/15/2013					1873	0917-173	Mei13_10_18_1873_21_479	1	-1.04	1.429	0.804	0.209	2.87	0.145	-0.400	1.90	-0.37
10/15/2013					1874	0917-173	Mei13_10_18_1874_21_584	1	-0.84	1.461	0.801	0.193	1.88	0.147	-0.333	1.93	-0.42
10/15/2013					1875	0917-173	Mei13_10_18_1875_21_297	1	-0.58	1.482	0.828	0.197	1.82	0.150	-0.389	1.95	-0.40
10/15/2013					1876	0917-173	Mei13_10_18_1876_21_878	1	-0.79	1.425	0.853	0.197	2.77	0.150	-0.335	1.89	-0.44
10/15/2013					1877	0917-173	Mei13_10_18_1877_21_308	1	-0.38	1.464	0.879	0.199	2.79	0.148	-0.318	1.91	-0.41
10/15/2013					1878	0917-173	Mei13_10_18_1878_21_598	1	-1.32	1.424	0.790	0.188	2.87	0.143	-0.354	1.89	-0.42
10/15/2013					1879	0917-173	Mei13_10_18_1879_21_198	1	-0.81	1.438	0.901	0.188	2.84	0.144	-0.318	1.94	-0.40
10/15/2013					1880	0917-173	Mei13_10_18_1880_21_209	1	-1.51	1.448	0.870	0.190	2.84	0.148	-0.310	1.85	-0.40
10/15/2013					1881	0917-173	Mei13_10_18_1881_21_509	1	-1.88	1.388	0.808	0.187	2.84	0.144	-0.250	1.88	-0.40
10/15/2013					1882	0917-173	Mei13_10_18_1882_21_718	1	-1.18	1.424	0.811	0.189	2.81	0.143	-0.276	1.89	-0.40
10/15/2013					1883	0917-173	Mei13_10_18_1883_21_529	1	-0.00	1.344	0.860	0.188	2.85	0.145	-0.147	1.90	-0.38
10/15/2013					1884	0917-173	Mei13_10_18_1884_21_249	1	-0.49	1.482	0.921	0.188	2.56	0.146	-0.214	1.88	-0.47
10/15/2013					1885	0917-173	Mei13_10_18_1885_21_878	1	-0.89	1.429	0.740	0.200	2.81	0.148	-0.267	1.94	-0.41
10/15/2013					1886	0917-173	Mei13_10_18_1886_21_530	1	-2.10	1.389	0.810	0.189	2.69	0.146	-0.214	1.91	-0.41
10/15/2013					1887	0917-173	Mei13_10_18_1887_21_000	1	-1.28	1.447	0.732	0.180	2.81	0.150	-0.242	1.88	-0.41
10/15/2013					1888	0917-173	Mei13_10_18_1888_21_749	1	-0.88	1.411	0.863	0.194	3.05	0.137	-0.183	1.93	-0.42
10/15/2013					1889	0917-173	Mei13_10_18_1889_21_465	1	-1.78	1.482	0.811	0.189	3.08	0.136	-0.191	1.84	-0.42
10/15/2013					1890	0917-173	Mei13_10_18_1890_21_250	1	-0.47	1.341	0.713	0.188	3.01	0.158	-0.148	1.94	-0.40
10/15/2013					1891	0917-173	Mei13_10_18_1891_21_509	1	-1.87	1.447	0.560	0.195	3.01	0.154	-0.484	1.84	-0.41
10/15/2013					1892	0917-173	Mei13_10_18_1892_21_198	1	-1.00	1.440	0.710	0.180	2.98	0.151	-0.277	1.93	-0.41
10/15/2013					1893	0917-173	Mei13_10_18_1893_21_150	1	-0.49	1.389	0.700	0.189	2.84	0.148	-0.213	1.88	-0.40
10/15/2013					1894	0917-173	Mei13_10_18_1894_21_311	1	-0.25	1.476	0.881	0.179	1.82	0.145	-0.072	1.84	-0.40
10/15/2013					1895	0917-173	Mei13_10_18_1895_21_511	1	-0.85	1.458	0.748	0.192	2.82	0.145	-0.265	1.89	-0.40
10/15/2013					1896	0917-173	Mei13_10_18_1896_21_511	1	-0.85	1.308	0.720	0.174	2.76	0.141	-0.097	1.93	-0.40
10/15/2013					1897	0917-173	Mei13_10_18_1897_21_878	1	0.36	1.447	0.836	0.189	2.78	0.145	-0.178	1.94	-0.40
10/15/2013					1898	0917-173	Mei13_10_18_1898_21_311	1	0.00	1.405	0.748	0.178	2.78	0.141	-0.000	1.92	-0.40
10/15/2013					1899	0917-173	Mei13_10_18_1899_21_188	1	-1.10	1.402	0.859	0.190	2.70	0.143	-0.149	1.94	-0.40
10/15/2013					1900	0917-173	Mei13_10_18_1900_21_188	1	-0.78	1.414	0.823	0.188	2.70	0.143	-0.149	1.94	-0.40
10/15/2013					1901	0917-173	Mei13_10_18_1901_21_188	1	0.78	1.414	0.785	0.186	2.65	0.137	-0.000	1.92	-0.40
10/15/2013					1902	0917-173	Mei13_10_18_1902_21_188	1	-0.96	1.405	-0.989	0.227	0.790	0.139	1.007		-0.40
10/15/2013					1903	0917-173	Mei13_10_18_1903_21_463	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1904	0917-173	Mei13_10_18_1904_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1905	0917-173	Mei13_10_18_1905_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1906	0917-173	Mei13_10_18_1906_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1907	0917-173	Mei13_10_18_1907_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1908	0917-173	Mei13_10_18_1908_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1909	0917-173	Mei13_10_18_1909_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1910	0917-173	Mei13_10_18_1910_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1911	0917-173	Mei13_10_18_1911_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1912	0917-173	Mei13_10_18_1912_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1913	0917-173	Mei13_10_18_1913_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1914	0917-173	Mei13_10_18_1914_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1915	0917-173	Mei13_10_18_1915_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1916	0917-173	Mei13_10_18_1916_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1917	0917-173	Mei13_10_18_1917_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1918	0917-173	Mei13_10_18_1918_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1919	0917-173	Mei13_10_18_1919_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1920	0917-173	Mei13_10_18_1920_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1921	0917-173	Mei13_10_18_1921_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1922	0917-173	Mei13_10_18_1922_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1923	0917-173	Mei13_10_18_1923_21_249	1	-1.82	1.480	-0.951	0.226	0.790	0.139	1.007		-0.40
10/15/2013					1924	0917-173	Mei13_10_18_1924_21_249	1	-1.82	1.480	-0.951	0.226	0.790				

Location Det. # Surf/Step Instrument

Date	Method	Filename	DF	Azelefin (ppm)	Label 1-Analyte	SEC (ppm)	Formaldehyde (ppm)	Label 2-Analyte	SEC (ppm)	Methanol (ppm)	Label 3-Analyte/Spike	SEC (ppm)	Phenol (ppm)	Label 4-Analyte	SEC (ppm)	Propionaldehyde (ppm)	Label 5-Analyte	SEC (ppm)	Sulfur Hexafluoride (ppm)	Label 6-Analyte	SEC (ppm)	Acetate/dehyde (ppm)	Label 7-Analyte	SEC (ppm)	Pinene (ppm)	
10/16/2013 15:50	0917-173	M013_10_16_1550_561	1	5.090	0.072	0.141	0.0290	0.1950	0.869	1.768	0.222	0.210	0.0090	0.0500	0.068	0.70	0.271	-0.0180	0.0020	1.18	0.68	0.216	0.46	2.72	1.919	
10/16/2013 15:51	0917-173	M013_10_16_1551_574	1	4.890	0.454	0.124	0.221	0.0080	0.180	0.872	1.732	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_581	1	9.008	2.554	-0.0420	-0.137	-0.0500	0.1090	0.815	1.752	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_584	1	1.8970	2.548	-0.1640	-0.132	-0.0530	0.1080	0.855	1.749	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_591	1	3.870	1.437	-0.2500	-0.134	-0.074	0.110	0.887	1.737	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_594	1	6.100	2.410	-0.120	-0.137	-0.0500	0.109	1.066	1.765	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_598	1	3.2410	2.517	-0.237	-0.128	-0.1350	0.1090	1.192	1.748	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_601	1	4.990	2.510	-0.029	-0.134	-0.0300	0.112	0.950	1.719	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_604	1	2.128	2.486	-0.253	-0.137	-0.137	0.1060	0.515	1.801	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_608	1	3.879	2.540	-0.088	-0.135	-0.052	0.1060	0.710	1.707	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_611	1	2.006	2.055	-0.115	-0.129	-0.128	0.1090	0.604	1.663	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_614	1	7.159	2.701	-0.169	-0.127	-0.155	0.100	0.810	1.659	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_618	1	0.884	2.411	0.1760	0.135	0.161	0.1050	0.675	1.682	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_621	1	4.426	2.421	-0.117	-0.127	-0.0100	0.1050	0.676	1.643	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_624	1	6.214	2.599	0.210	0.131	-0.028	0.1050	0.254	1.646	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_628	1	-2.187	2.385	0.148	0.136	0.180	0.1050	0.676	1.688	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_631	1	0.016	2.143	0.079	0.135	-0.187	0.101	1.044	1.823	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_634	1	2.228	2.565	-0.0940	-0.132	-0.148	0.1040	0.259	1.818	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_638	1	0.6030	2.557	0.0620	0.130	0.233	0.0990	0.933	1.589	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_641	1	3.600	2.689	0.176	0.128	0.1580	0.1050	0.833	1.650	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_644	1	-4.532	2.150	0.001	0.135	-0.228	0.0970	0.709	1.604	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_648	1	7.34	2.228	-0.374	-0.134	-0.1340	0.0950	0.548	1.613	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_651	1	4.45	2.271	0.217	0.137	0.239	0.1030	0.768	1.597	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_654	1	6.983	2.618	0.155	0.148	-0.188	0.128	0.21	1.621	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_658	1	-2.505	2.517	0.370	0.133	-0.0140	0.0980	0.568	1.651	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_661	1	5.308	2.492	0.490	0.137	0.244	0.117	0.790	1.713	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_664	1	3.622	2.623	-0.0440	-0.160	-0.033	0.101	0.819	1.728	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_668	1	4.119	2.819	0.180	-0.121	0.132	0.102	0.620	1.600	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_671	1	4.9780	2.772	0.0550	0.138	-0.210	0.128	0.917	1.538	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_674	1	-0.547	2.602	0.139	0.140	-0.002	0.124	0.242	1.518	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_678	1	-1.01	2.841	0.418	0.160	-0.089	0.139	0.961	1.579	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_681	1	-4.856	2.808	0.0830	0.135	-0.199	0.128	0.20	1.579	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_684	1	-2.069	2.717	-0.14	0.154	-0.122	0.125	0.720	1.583	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_688	1	1.463	2.658	0.444	0.139	-0.203	0.130	0.801	1.581	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_691	1	-1.645	2.675	0.1200	0.145	0.019	0.128	0.755	1.678	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_694	1	0.50	2.731	-0.088	0.140	-0.112	0.113	0.671	1.675	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_698	1	-0.95	2.681	-0.151	-0.132	-0.028	0.129	0.263	1.646	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_701	1	-1.780	2.523	0.003	0.141	-0.271	0.128	0.696	1.600	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_704	1	0.410	2.927	0.130	0.144	-0.210	0.129	0.116	1.722	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_708	1	-0.49	2.853	-0.201	-0.146	-0.196	0.130	0.548	1.623	0.217	0.217	-0.0090	0.0040	0.847	0.71	0.235	-0.0090	0.0040	0.847	0.71	0.235	0.822	0.75	0.277
10/16/2013 15:51	0917-173	M013_10_16_1551_711	1	-2.14	2.666	0.168	0.																			

Location	Disc	#	Start/Stop	Instrument	Label 1-Analyte	Label 2-Analyte	Label 3-Analyte	Label 4-Analyte	Label 5-Analyte	Label Tracer	Label 6-Analyte						
Date	Method	File Name	DSP Acronym (ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Methanol (ppm)	Phenol (ppm)	Propionaldehyde (ppm)	SEC (ppm)	Surfur_Hexafluoride (ppm)	SEC (ppm)	Acetamide (ppm)	SEC (ppm)	onine (pp)		
10/14/2013 12:14	0917-173	10_14_1214_34_291	-3.9	3.3	0.058	0.073	0.27	1.42	0.0410	0.3100	-0.404	0.118	0.058	0.271	0.287	1.776	
10/14/2013 12:14	0917-173	10_14_1214_34_311	-1.5	1.3	0.100	0.077	0.26	1.47	0.1410	0.0800	-0.062	0.126	0.045	0.190	1.44	0.621	1.894
10/14/2013 12:14	0917-173	10_14_1214_34_311	0.5	1.4	0.113	0.076	-0.57	1.49	0.045	0.1110	0.213	0.133	0.049	0.196	-0.23	0.110	1.688
10/14/2013 12:14	0917-173	10_14_1214_34_311	-1.0	1.3	0.117	0.079	-0.51	1.51	-0.001	0.1000	-0.188	0.125	0.060	0.064	0.049	0.408	-1.94
10/14/2013 12:14	0917-173	10_14_1214_34_311	-0.1	1.4	0.244	0.071	0.40	1.51	0.107	0.2000	-0.040	0.123	0.052	0.050	1.84	0.111	1.94
10/14/2013 12:15	0917-173	10_14_1215_35_281	-3.9	1.4	0.1370	0.080	-0.42	1.52	0.10100	0.070	0.205	0.118	0.056	0.068	0.385	0.408	-1.842
10/14/2013 12:16	0917-173	10_14_1216_36_291	-0.4	1.4	-0.039	0.076	0.46	1.51	-0.000	0.2090	0.336	0.124	0.044	0.063	1.10	0.127	-3.928
10/14/2013 12:16	0917-173	10_14_1216_36_291	-1.9	1.4	0.0510	0.077	0.46	1.51	0.2040	0.1000	-0.4900	0.127	0.051	0.053	0.202	0.419	-1.93
10/14/2013 12:16	0917-173	10_14_1216_36_291	-6.0	1.3	-0.21	0.075	-0.52	1.52	0.130	0.1000	0.056	0.122	0.050	0.108	0.576	0.399	-1.95
10/14/2013 12:17	0917-173	10_14_1217_37_301	-0.1	1.4	0.1970	0.070	0.44	1.52	0.293	0.0900	0.176	0.118	0.152	0.067	0.531	0.399	-1.915
10/14/2013 12:17	0917-173	10_14_1217_37_311	-1.7	1.5	0.151	0.078	-0.47	1.51	0.062	0.2090	0.218	0.121	0.056	0.057	0.990	0.434	-1.913
10/14/2013 12:17	0917-173	10_14_1217_37_321	-1.9	1.5	0.209	0.072	0.36	1.52	0.154	0.1000	0.118	0.119	0.061	0.068	1.17	0.418	-1.951
10/14/2013 12:17	0917-173	10_14_1217_37_321	0.8	1.4	0.153	0.078	0.48	1.51	0.158	0.3010	-0.107	0.127	0.057	0.059	1.33	0.411	-1.962
10/14/2013 12:18	0917-173	10_14_1218_38_181	-1.8	1.4	0.0090	0.070	-0.30	1.52	-0.035	0.1000	-0.619	0.121	0.048	0.068	1.85	0.390	-1.942
10/14/2013 12:18	0917-173	10_14_1218_38_181	-1.8	1.4	0.170	0.072	0.46	1.52	0.090	0.0900	-0.159	0.102	0.055	0.068	0.602	0.394	-1.944
10/14/2013 12:18	0917-173	10_14_1218_38_181	0.6	1.4	0.2170	0.073	0.70	1.53	0.085	0.0900	-0.124	0.114	0.057	0.068	0.444	0.413	-1.958
10/14/2013 12:19	0917-173	10_14_1219_39_741	0.1	1.3	-0.070	0.072	-0.28	1.51	0.148	0.1000	-0.113	0.118	0.064	0.068	1.85	0.390	-1.942
10/14/2013 12:19	0917-173	10_14_1219_39_741	1.8	1.4	0.122	0.073	0.76	1.52	0.100	0.1000	-0.069	0.125	0.068	0.065	0.602	0.394	-1.945
10/14/2013 12:19	0917-173	10_14_1219_39_741	0.6	1.4	0.1890	0.071	0.52	1.52	0.027	0.1000	0.111	0.118	0.052	0.068	0.050	0.407	-1.918
10/14/2013 12:20	0917-173	10_14_1220_40_371	1.2	1.4	0.055	0.075	-0.20	1.52	-0.194	0.0900	-0.190	0.124	0.045	0.068	0.587	0.410	-1.980
10/14/2013 12:20	0917-173	10_14_1220_40_371	-1.8	1.4	0.064	0.075	0.34	1.52	0.050	0.1000	-0.293	0.124	0.059	0.064	0.65	0.420	-1.957
10/14/2013 12:20	0917-173	10_14_1220_40_371	-1.2	1.3	0.012	0.072	-0.42	1.52	-0.036	0.0950	-0.058	0.117	0.058	0.067	0.91	0.391	-1.978
10/14/2013 12:21	0917-173	10_14_1221_41_901	-1.6	1.5	0.117	0.073	-0.28	1.52	0.165	0.1110	0.139	0.125	0.098	0.613	-0.276	0.431	-1.959
10/14/2013 12:21	0917-173	10_14_1221_41_901	-1.9	1.3	0.035	0.075	0.40	1.52	0.000	0.0900	-0.211	0.122	0.058	0.068	1.848	0.397	-1.983
10/14/2013 12:21	0917-173	10_14_1221_41_901	0.3	1.4	0.1700	0.077	-0.40	1.52	0.127	0.0870	-0.186	0.117	0.098	0.617	0.13	0.416	-1.977
10/14/2013 12:21	0917-173	10_14_1221_41_901	-0.5	1.3	0.039	0.076	-0.54	1.52	0.190	0.0900	0.200	0.123	0.067	0.067	0.120	0.413	-1.958
10/14/2013 12:22	0917-173	10_14_1222_42_181	0.7	1.4	-0.25	0.162	1.02	1.63	0.051	0.3200	0.180	0.120	0.090	0.608	0.361	0.434	-1.993
10/14/2013 12:22	0917-173	10_14_1222_42_181	0.5	1.4	0.064	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:22	0917-173	10_14_1222_42_181	1.7	1.3	0.095	0.075	0.46	1.51	0.110	0.0900	0.118	0.121	0.056	0.067	0.551	0.413	-1.954
10/14/2013 12:22	0917-173	10_14_1222_42_181	-1.9	1.3	0.073	0.075	0.46	1.51	0.120	0.1000	-0.181	0.121	0.052	0.067	0.640	0.413	-1.954
10/14/2013 12:23	0917-173	10_14_1223_43_311	0.5	1.4	0.064	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:23	0917-173	10_14_1223_43_311	1.5	1.3	0.095	0.075	0.46	1.51	0.110	0.0900	0.118	0.121	0.056	0.067	0.551	0.413	-1.954
10/14/2013 12:23	0917-173	10_14_1223_43_311	-1.9	1.3	0.073	0.075	0.46	1.51	0.120	0.1000	-0.181	0.121	0.052	0.067	0.640	0.413	-1.954
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.5	1.4	0.064	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	1.0	1.3	0.117	0.075	0.46	1.51	0.110	0.0900	0.118	0.121	0.056	0.067	0.551	0.413	-1.954
10/14/2013 12:24	0917-173	10_14_1224_44_310	-1.9	1.3	0.073	0.075	0.46	1.51	0.120	0.1000	-0.181	0.121	0.052	0.067	0.640	0.413	-1.954
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0	1.4	0.088	0.072	-0.53	1.51	0.210	0.0800	-0.400	0.110	0.245	0.067	0.110	0.406	-1.979
10/14/2013 12:24	0917-173	10_14_1224_44_310	0.0</														

Location	Disc	#	Start/Stop	Instrument	Label	1-Analyte	Label	2-Analyte	Label	3-Analyte	Sp/Rate	Label	4-Analyte	Label	5-Analyte	Label	6-Analyte
Date	Method	Filename	DF	Acroline (ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Methanol (ppm)	SEC (ppm)	Pheno (ppm)	SEC (ppm)	Propionaldehyde (ppm)	SEC (ppm)	Sulfur Hexafluoride (ppm)	acetaldehyde (ppm)	SEC (ppm)	pinene (ppm)
15/7/2013 15:02	0817-173	10_14_1512_21_185	1	-1.2800	1.840	0.085	0.059	2.95	0.286	0.13	1.95	-0.075	0.154	0.00800	0.01300	1.294	0.84
15/7/2013 15:03	0817-173	10_14_1512_21_185	1	-2.8700	1.840	0.068	0.095	2.89	0.286	0.15	1.86	-0.811	0.149	0.00400	0.01300	0.63	0.75
15/7/2013 15:07	0817-173	10_14_1512_21_185	1	-1.8400	1.840	0.778	0.084	2.82	0.283	0.10	1.96	-0.7800	0.149	0.00400	0.01300	-0.74	0.483
15/7/2013 15:08	0817-173	10_14_1512_21_185	1	-1.5800	1.840	0.749	0.087	2.76	0.250	0.25	1.87	-0.811	0.143	0.00500	0.01300	-0.84	0.448
15/7/2013 15:09	0817-173	10_14_1512_21_185	1	-2.590	1.840	0.76	0.091	2.81	0.254	0.19	1.86	-0.547	0.147	-0.01000	0.01300	-1.07	0.408
15/7/2013 15:10	0817-173	10_14_1512_21_185	1	-0.516	1.840	0.758	0.088	3.10	0.272	0.07	1.84	-0.90700	0.148	0.00400	0.0130	-0.17	0.472
15/7/2013 15:11	0817-173	10_14_1512_21_185	1	-2.581	1.840	0.610	0.084	3.01	0.284	0.00	1.82	-0.862	0.156	0.00400	0.0140	-0.201	0.486
15/7/2013 15:12	0817-173	10_14_1512_21_185	1	-3.8500	1.870	0.551	0.086	2.98	0.272	0.04	1.95	-0.9100	0.151	0.00400	0.01300	-0.503	0.486
15/7/2013 15:13	0817-173	10_14_1512_21_185	1	-1.8600	1.840	0.807	0.087	2.99	0.260	0.00	1.94	-0.847	0.152	0.00400	0.01300	-0.84	0.488
15/7/2013 15:14	0817-173	10_14_1512_21_185	1	-0.715	1.840	0.808	0.089	2.97	0.263	0.03	1.95	-0.837	0.151	0.00400	0.01300	-1.302	0.488
15/7/2013 15:15	0817-173	10_14_1512_21_185	1	-1.722	1.708	0.638	0.087	3.02	0.253	0.18	1.95	-0.618	0.152	0.00100	0.01300	-1.00	0.479
15/7/2013 15:16	0817-173	10_14_1512_21_185	1	-1.8600	1.840	0.807	0.087	2.99	0.260	0.00	1.94	-0.792	0.152	0.00400	0.01300	-0.762	0.483
15/7/2013 15:17	0817-173	10_14_1512_21_185	1	-2.248	1.840	0.742	0.081	3.17	0.278	0.11	1.95	-0.8400	0.153	0.00200	0.01300	-1.53	0.483
15/7/2013 15:18	0817-173	10_14_1512_21_185	1	-4.93000	1.833	0.671	0.081	3.04	0.279	0.22	1.94	-0.8400	0.153	0.00200	0.01300	-0.101	0.483
15/7/2013 15:19	0817-173	10_14_1512_21_185	1	-1.708	1.870	0.598	0.088	3.20	0.283	0.10	1.94	-0.823	0.150	-0.00100	0.0140	-1.482	0.481
15/7/2013 15:20	0817-173	10_14_1512_21_185	1	-1.280	1.870	0.594	0.088	3.28	0.290	0.13	1.94	-0.9120	0.152	0.00000	0.01300	-1.08	0.483
15/7/2013 15:21	0817-173	10_14_1512_21_185	1	-3.777	1.810	0.609	0.090	3.07	0.282	0.30	1.85	-0.820	0.151	0.00000	0.01300	-0.101	0.483
15/7/2013 15:22	0817-173	10_14_1512_21_185	1	-3.580	1.870	0.610	0.088	2.98	0.272	0.04	1.95	-0.718	0.147	0.00200	0.01300	-0.88	0.483
15/7/2013 15:23	0817-173	10_14_1512_21_185	1	-0.821	1.642	0.618	0.087	2.96	0.260	0.07	1.97	-0.890	0.148	0.00000	0.01300	-1.026	0.488
15/7/2013 15:24	0817-173	10_14_1512_21_185	1	-3.8870	1.593	0.584	0.087	3.09	0.270	0.11	1.89	-1.024	0.148	0.00300	0.01300	-0.56	0.485
15/7/2013 15:25	0817-173	10_14_1512_21_185	1	-1.840	1.840	0.752	0.088	3.11	0.269	0.16	1.86	-0.710	0.149	-0.00200	0.01200	-0.854	0.475
15/7/2013 15:26	0817-173	10_14_1512_21_185	1	-2.944	1.888	0.598	0.086	3.09	0.254	0.33	1.86	-0.89000	0.147	0.00000	0.01200	-1.280	0.481
15/7/2013 15:27	0817-173	10_14_1512_21_185	1	-0.485	1.718	0.681	0.091	3.12	0.282	0.13	1.94	-0.799	0.156	0.00200	0.01300	-0.42	0.488
15/7/2013 15:28	0817-173	10_14_1512_21_185	1	-3.810	1.475	0.689	0.091	3.15	0.269	0.42	1.95	-0.649	0.155	0.00000	0.01300	-1.284	0.444
15/7/2013 15:29	0817-173	10_14_1512_21_185	1	-1.840	1.840	0.618	0.088	3.09	0.264	0.18	1.86	-0.788	0.156	0.00200	0.01300	-1.118	0.509
15/7/2013 15:30	0817-173	10_14_1512_21_185	1	-0.377	1.707	0.611	0.091	3.17	0.277	0.18	1.82	-0.649	0.155	0.00000	0.0140	-1.443	0.485
15/7/2013 15:31	0817-173	10_14_1512_21_185	1	-0.279	1.700	0.512	0.092	3.11	0.282	0.28	1.82	-0.887	0.156	0.00000	0.01300	-0.73	0.490
15/7/2013 15:32	0817-173	10_14_1512_21_185	1	-1.595	1.861	0.680	0.081	2.81	0.271	0.32	1.86	-0.613	0.154	0.00200	0.01300	-1.13	0.490
15/7/2013 15:33	0817-173	10_14_1512_21_185	1	-1.172	1.801	0.601	0.085	2.95	0.258	0.14	1.91	-0.851	0.151	0.00000	0.01300	-0.77	0.486
15/7/2013 15:34	0817-173	10_14_1512_21_185	1	-2.847	1.843	0.688	0.087	2.93	0.255	0.12	1.86	-0.884	0.149	-0.00100	0.01300	-1.17	0.483
15/7/2013 15:35	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:36	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:37	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:38	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:39	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:40	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:41	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:42	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:43	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:44	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:45	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:46	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:47	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:48	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:49	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:50	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:51	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:52	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:53	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:54	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300	-0.646	0.483
15/7/2013 15:55	0817-173	10_14_1512_21_185	1	-3.900	1.885	0.688	0.085	3.00	0.280	0.22	1.95	-0.793	0.153	0.00100	0.0140	-1.217	0.481
15/7/2013 15:56	0817-173	10_14_1512_21_185	1	-2.870	1.820	0.624	0.090	3.00	0.258	0.14	1.97	-0.713	0.152	0.00200	0.01300	-1.546	0.482
15/7/2013 15:57	0817-173	10_14_1512_21_185	1	-2.164	1.840	0.618	0.088	2.94	0.254	0.14	1.91	-0.717	0.155	0.00000	0.01300		

Location	Disc	#	Start/Stop	Instrument	Date	Method	Filename	DSF Acronim (ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Methanol (ppm)	SEC (ppm)	Phenol (ppm)	SEC (ppm)	Propionalsdehyde (ppm)	SEC (ppm)	Sulfur_tetrafluoride (ppm)	SEC (ppm)	Acetaldehyde (ppm)	SEC (ppm)	Uracine (pp)		
Data	Run	3	Start	A				1-Analyte	2-Analyte	3-Analyte/Spin	4-Analyte	5-Analyte	6-Analyte											
10/4/2013	1757	0017-175	10_14_13	1757_46_402	1	1.284	1.775	0.371	0.085	1.96	0.173	0.33	1.99	0.7600	0.151	0.116	0.0300	0.0100	0.116	0.496	1.873			
10/4/2013	1758	0017-175	10_14_13	1758_46_081	1	2.733	1.354	0.554	0.050	1.26	0.286	1.98	0.891	0.267	0.899	2.130	0.361	0.0000	0.120	0.471	1.818			
10/4/2013	1759	0017-175	10_14_13	1759_46_001	1	1.232	1.882	0.550	0.090	1.88	0.258	0.48	1.20	0.552	0.147	0.0000	0.0130	0.0000	0.0000	0.137	0.466	1.773		
10/4/2013	1800	0017-175	10_14_13	1800_47_001	1	1.800	1.668	0.438	0.082	1.98	0.158	0.48	1.28	0.405	0.153	0.0000	0.0130	0.0000	0.0000	0.148	0.484	1.768		
10/4/2013	1801	0017-175	10_14_13	1801_46_462	1	1.486	1.611	0.600	0.089	1.88	0.147	0.42	1.20	0.423	0.118	0.0000	0.0130	0.0000	0.0000	0.150	0.488	1.809		
10/4/2013	1802	0017-175	10_14_13	1802_46_142	1	1.518	1.695	0.385	0.091	2.00	0.290	0.38	1.98	0.410	0.152	0.0000	0.0130	0.0000	0.0000	0.140	0.488	1.907		
10/4/2013	1803	0017-175	10_14_13	1803_46_311	1	-0.916	1.897	0.477	0.088	1.89	0.270	0.38	2.00	0.400	0.151	0.0000	0.0130	0.0000	0.0000	0.158	0.499	1.944		
10/4/2013	1804	0017-175	10_14_13	1804_46_701	1	1.604	1.819	0.408	0.055	2.02	0.272	0.375	1.98	0.400	0.153	0.0000	0.0130	0.0000	0.0000	0.42	0.498	1.973		
10/4/2013	1805	0017-175	10_14_13	1805_46_502	1	-0.460	1.745	0.440	0.061	1.88	0.272	0.37	1.99	0.473	0.154	0.0000	0.0130	0.0000	0.0000	0.130	0.498	1.866		
10/4/2013	1806	0017-175	10_14_13	1806_46_222	1	1.984	1.619	0.539	0.092	1.80	0.247	0.44	2.01	-0.583	0.140	0.0000	0.0130	0.0000	0.0000	0.123	0.485	1.696		
10/4/2013	1807	0017-175	10_14_13	1807_46_083	1	-1.143	1.579	0.428	0.056	1.78	0.238	0.336	2.22	-0.715	0.144	0.0000	0.0130	0.0000	0.0000	0.140	0.472	1.577		
10/4/2013	1808	0017-175	10_14_13	1808_46_781	1	1.482	1.359	0.484	0.067	1.80	0.230	0.416	2.04	-0.184	0.148	0.0000	0.0130	0.0000	0.0000	0.115	0.475	1.501		
10/4/2013	1809	0017-175	10_14_13	1809_46_468	1	-0.772	1.566	0.408	0.069	1.86	0.232	0.416	2.03	-0.578	0.148	0.0000	0.0130	0.0000	0.0000	0.148	0.485	1.646		
10/4/2013	1810	0017-175	10_14_13	1810_46_313	1	-0.353	1.884	0.526	0.089	1.76	0.239	0.417	2.01	-0.411	0.149	0.0000	0.0130	0.0000	0.0000	0.140	0.481	1.478		
10/4/2013	1811	0017-175	10_14_13	1811_46_503	1	-2.024	1.695	0.706	0.098	1.99	0.239	0.254	2.02	0.822	0.144	0.0000	0.0130	0.0000	0.0000	0.198	0.474	1.555		
10/4/2013	1812	0017-175	10_14_13	1812_46_683	1	-0.713	1.629	0.873	0.089	1.95	0.248	0.389	2.00	-0.670	0.149	0.0000	0.0130	0.0000	0.0000	0.160	0.481	1.567		
10/4/2013	1813	0017-175	10_14_13	1813_46_683	1	-0.518	1.873	0.685	0.090	1.90	0.234	0.167	2.08	-0.850	0.151	0.0000	0.0130	0.0000	0.0000	0.222	0.488	1.595		
10/4/2013	1814	0017-175	10_14_13	1814_46_508	1	-1.281	1.896	0.696	0.092	2.15	0.271	0.288	1.88	0.651	0.152	0.0000	0.0130	0.0000	0.0000	0.428	0.496	1.743		
10/4/2013	1815	0017-175	10_14_13	1815_46_133	1	-0.990	1.730	0.571	0.091	2.21	0.282	0.30	1.97	0.481	0.154	0.0000	0.0130	0.0000	0.0000	0.28	0.499	1.803		
10/4/2013	1816	0017-175	10_14_13	1816_46_683	1	1.985	1.792	0.484	0.092	2.07	0.232	0.48	1.86	-0.758	0.154	0.0000	0.0130	0.0000	0.0000	0.140	0.485	1.747		
10/4/2013	1817	0017-175	10_14_13	1817_46_508	1	-1.289	1.822	0.899	0.092	2.36	0.276	0.244	1.88	0.704	0.152	0.0000	0.0130	0.0000	0.0000	0.322	0.485	1.881		
10/4/2013	1818	0017-175	10_14_13	1818_46_463	1	-0.401	1.738	0.571	0.093	2.02	0.264	0.220	2.01	0.890	0.156	0.0000	0.0130	0.0000	0.0000	0.063	0.493	1.615		
10/4/2013	1819	0017-175	10_14_13	1819_46_244	1	0.367	1.674	0.333	0.091	1.93	0.254	0.263	2.00	0.880	0.153	0.0000	0.0130	0.0000	0.0000	0.037	0.478	1.575		
10/4/2013	1820	0017-175	10_14_13	1820_46_264	1	-0.209	1.586	0.411	0.089	1.88	0.255	0.418	2.22	0.812	0.158	0.0000	0.0130	0.0000	0.0000	0.058	0.488	1.648		
10/4/2013	1821	0017-175	10_14_13	1821_46_794	1	-1.607	1.557	0.427	0.090	1.80	0.245	0.242	2.03	-0.882	0.156	0.0000	0.0130	0.0000	0.0000	-0.118	0.474	1.545		
10/4/2013	1822	0017-175	10_14_13	1822_46_504	1	-0.217	1.680	0.480	0.091	1.98	0.248	0.261	2.02	-0.743	0.152	0.0000	0.0130	0.0000	0.0000	0.127	0.492	1.395		
10/4/2013	1823	0017-175	10_14_13	1823_46_206	1	-0.700	1.601	0.484	0.087	1.98	0.248	0.285	1.93	-0.488	0.153	0.0000	0.0130	0.0000	0.0000	0.140	0.488	1.648		
10/4/2013	1824	0017-175	10_14_13	1824_46_064	1	-1.185	1.553	0.726	0.090	1.98	0.245	0.243	2.03	-0.680	0.146	0.0000	0.0130	0.0000	0.0000	0.130	0.488	1.773		
10/4/2013	1825	0017-175	10_14_13	1825_46_684	1	-0.440	1.588	0.548	0.085	1.98	0.248	0.243	2.03	-0.590	0.143	0.0000	0.0130	0.0000	0.0000	0.128	0.483	1.548		
10/4/2013	1826	0017-175	10_14_13	1826_46_684	1	-1.495	1.687	0.785	0.092	1.86	0.237	0.246	2.04	-0.548	0.147	0.0000	0.0130	0.0000	0.0000	0.140	0.478	1.511		
10/4/2013	1827	0017-175	10_14_13	1827_46_344	1	-2.481	1.661	0.514	0.089	1.83	0.242	0.654	2.03	-0.714	0.149	0.0000	0.0130	0.0000	0.0000	0.102	0.481	1.614		
10/4/2013	1828	0017-175	10_14_13	1828_46_206	1	-1.800	1.844	0.870	0.085	1.79	0.235	0.484	2.05	0.321	0.144	0.0000	0.0130	0.0000	0.0000	0.180	0.472	1.788		
10/4/2013	1829	0017-175	10_14_13	1829_46_206	1	-1.840	1.589	0.861	0.087	1.98	0.232	0.485	1.98	-0.989	0.152	0.0000	0.0130	0.0000	0.0000	0.140	0.478	1.659		
10/4/2013	1830	0017-175	10_14_13	1830_46_515	1	-0.308	1.577	0.877	0.081	1.88	0.238	0.288	2.01	0.5710	0.148	0.0000	0.0130	0.0000	0.0000	0.488	0.488	1.812		
10/4/2013	1831	0017-175	10_14_13	1831_46_515	1	-0.758	1.854	0.785	0.092	1.86	0.242	0.291	1.98	-0.910	0.151	0.0000	0.0130	0.0000	0.0000	0.140	0.488	1.812		
10/4/2013	1832	0017-175	10_14_13	1832_46_515	1	-0.758	1.758	0.840	0.091	2.01	0.295	0.252	1.98	-0.541	0.155	0.0000	0.0130	0.0000	0.0000	0.145	0.485	1.815		
10/4/2013	1833	0017-175	10_14_13	1833_46_683	1	-1.881	1.688	0.838	0.085	1.54	0.287	0.234	1.86	-0.559	0.156	0.0000	0.0130	0.0000	0.0000	0.42	0.488	1.519		
10/4/2013	1834	0017-175	10_14_13	1834_46_206	1	-0.960	1.747	0.810	0.088	2.28	0.290	0.346	1.97	-0.490	0.153	0.0000	0.0130	0.0000	0.0000	0.140	0.488	1.619		
10/4/2013	1835	0017-175	10_14_13	1835_46_147	1	-0.209	1.824	0.815	0.089	2.46	0.295	0.246	1.98	-0.628	0.154	0.0000	0.0130	0.0000	0.0000	0.120	0.488	1.651		
10/4/2013	1836	0017-175	10_14_13	1836_46_515	1	-2.299	1.704	0.785	0.100	2.24	0.308	0.24	1.98	0.523	0.150	0.0000	0.0130	0.0000	0.0000	0.082	0.518	1.732		
10/4/2013	1837	0017-175	10_14_13	1837_46_515	1	-0.869	1.897	0.931	0.092	2.22	0.298	0.227	1.98	-0.982	0.150	0.0000	0.0130	0.0000	0.0000	0.140	0.483	1.748		
10/4/2013	1838	0017-175	10_14_13	1838_46_206	1	-0.869	1.897	0.931	0.092	2.22	0.298	0.227	1.98	-0.982	0.150	0.0000	0.0130	0.0000	0.0000	0.140	0.483	1.748		
10/4/2013	1839	0017-175	10_14_13	1839_46_206	1	-0.869																		

Location	UIC	#	Start/Stop	Instrument	Label 1-Analyte	Label 2-Analyte	Label 3-Analyte/Spila	Label 4-Analyte	Label 5-Analyte	Label Tracer	Label 6-Analyte								
Date	Method	File Name	DSF Acetolon (ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Methano (ppm)	SEC (ppm)	Phenal (ppm)	SEC (ppm)	Propionaldehyde (ppm)	SEC (ppm)	Sulfur Hexafluoride (ppm)	SEC (ppm)	Kuliv Hexafluoride (ppm)	SEC (ppm)	acrolehyde (ppm)	SEC (ppm)	pinene (ppm)
10/14/2013 18:47	0917-173	M13_10_14_1947_21_005	9.338	3.433	0.023	0.187	-0.383	0.141	0.553	0.539	0.311	0.137	-0.180	0.0000	0.0000	1.06	1.07	0.875	0.875
10/14/2013 18:47	0917-173	M13_10_14_1947_21_085	21.200	3.587	0.466	2.190	-0.713	0.142	1.012	0.364	0.735	0.230	-0.240	0.0000	0.0000	2.58	1.07	0.621	0.621
10/14/2013 18:47	0917-173	M13_10_14_1947_40_205	8.513	3.308	0.092	0.185	0.227	0.150	0.614	0.559	0.308	0.106	-0.0400	0.0000	0.0000	1.8030	1.00	0.558	0.558
10/14/2013 18:47	0917-173	M13_10_14_1947_46_545	11.356	3.778	0.199	0.183	-0.471	0.138	1.003	0.64	0.502	0.106	-0.0700	0.0000	0.0000	-1.215	1.00	0.366	0.366
10/14/2013 18:47	0917-173	M13_10_14_1947_52_005	3.62	3.207	-0.255	0.176	-2.86000	0.145	0.865	0.714	-0.155	0.281	-0.0200	0.0000	0.0000	1.34	0.88	-0.388	-0.388
10/14/2013 18:47	0917-173	M13_10_14_1947_58_785	-11.781	3.189	-0.200	0.198	0.402	0.142	0.960	0.63	-0.560	0.14	-0.210	0.0000	0.0000	-1.14	1.01	-0.277	-0.277
10/14/2013 18:48	0917-173	M13_10_14_1948_05_005	1.640	3.088	-0.299	0.180	0.074	0.133	0.854	0.82	0.18	0.393	-0.0220	0.0000	0.0000	0.338	0.88	0.216	0.216
10/14/2013 18:48	0917-173	M13_10_14_1948_11_245	-8.270	3.653	-0.233	0.179	-0.1100	0.131	0.936	0.98	0.286	0.188	-0.0300	0.0000	0.0000	-1.18	0.95	-0.223	-0.223
10/14/2013 18:48	0917-173	M13_10_14_1948_17_045	-14.68	3.337	-0.073	0.172	-0.180	0.143	0.847	0.93	-0.044	0.192	-0.0300	0.0000	0.0000	-2.42	0.99	-0.443	-0.443
10/14/2013 18:48	0917-173	M13_10_14_1948_23_505	7.51	3.200	0.0370	0.171	-0.186	0.132	0.428	0.95	0.028	0.186	-0.0080	0.0000	0.0000	-1.46	0.83	-0.165	-0.165
10/14/2013 18:48	0917-173	M13_10_14_1948_29_045	4.803	3.211	-0.132	0.172	-0.410	0.141	0.583	0.99	0.114	0.285	-0.0100	0.0000	0.0000	-0.53	0.97	-0.138	-0.138
10/14/2013 18:48	0917-173	M13_10_14_1948_35_005	4.017	3.089	0.190	0.177	-0.180	0.140	0.56	1.04	0.202	0.186	-0.0200	0.0000	0.0000	-0.64	0.94	-0.264	-0.264
10/14/2013 18:48	0917-173	M13_10_14_1948_41_075	7.082	3.404	0.046	0.178	-0.090	0.138	0.828	1.04	0.13	0.296	-0.0600	0.0000	0.0000	-0.070	1.00	-0.075	-0.075
10/14/2013 18:48	0917-173	M13_10_14_1948_46_245	-0.974	3.089	0.077	0.178	-0.230	0.139	1.001	1.06	0.38	0.284	-0.0100	0.0000	0.0000	-4.24	0.95	0.088	0.088
10/14/2013 18:48	0917-173	M13_10_14_1948_51_305	9.999	3.022	-0.141	0.174	-0.010	0.142	1.053	1.09	-0.288	0.283	-0.0200	0.0000	0.0000	0.237	0.95	0.294	0.294
10/14/2013 18:49	0917-173	M13_10_14_1949_05_585	-14.832	3.363	-0.140	0.179	-0.010	0.133	1.008	1.03	-0.19	0.298	-0.0000	0.0000	0.0000	-0.588	0.99	-0.318	-0.318
10/14/2013 18:49	0917-173	M13_10_14_1949_06_775	-4.784	3.354	-0.159	0.186	-0.271	0.141	0.797	1.07	-0.186	0.279	-0.0100	0.0000	0.0000	-1.990	0.95	-0.095	-0.095
10/14/2013 18:49	0917-173	M13_10_14_1949_11_303	1.382	3.218	-0.125	0.175	-0.1200	0.142	1.012	1.19	-0.060	0.287	-0.0100	0.0000	0.0000	-1.790	0.97	-0.445	-0.445
10/14/2013 18:49	0917-173	M13_10_14_1949_16_205	-9.759	3.003	-0.064	0.179	-0.222	0.135	1.395	1.07	0.37	0.282	-0.0500	0.0000	0.0000	-1.790	0.98	-0.004	-0.004
10/14/2013 18:49	0917-173	M13_10_14_1949_21_385	9.820	3.010	0.039	0.176	-0.141	0.138	0.16	1.15	-0.105	0.290	-0.0700	0.0000	0.0000	0.81	0.97	0.091	0.091
10/14/2013 18:49	0917-173	M13_10_14_1949_26_485	2.24	2.983	0.160	0.184	-0.266	0.141	1.246	1.25	-0.137	0.271	-0.0200	0.0000	0.0000	-0.25	0.91	-0.219	-0.219
10/14/2013 18:49	0917-173	M13_10_14_1949_31_715	0.988	3.010	0.157	0.175	-0.150	0.137	1.113	1.33	-0.427	0.282	-0.0200	0.0000	0.0000	-1.240	0.95	0.14	0.14
10/14/2013 18:49	0917-173	M13_10_14_1949_36_905	9.102	2.955	-0.014	0.159	-0.099	0.138	0.644	1.38	0.346	0.282	-0.0100	0.0000	0.0000	1.10	0.87	0.066	0.066
10/14/2013 18:49	0917-173	M13_10_14_1949_41_985	1.572	2.975	0.033	0.160	-0.238	0.138	0.623	1.43	0.32	0.283	-0.0100	0.0000	0.0000	2.81	0.88	0.109	0.109
10/14/2013 18:49	0917-173	M13_10_14_1949_47_175	-5.534	3.102	-0.040	0.162	-0.040	0.141	1.089	1.52	-0.618	0.279	-0.0400	0.0000	0.0000	-1.17	0.91	-0.217	-0.217
10/14/2013 18:50	0917-173	M13_10_14_1950_01_265	6.120	3.024	-0.192	0.166	-0.070	0.128	0.112	1.576	-0.381	0.283	-0.0300	0.0000	0.0000	-0.919	0.90	0.121	0.121
10/14/2013 18:50	0917-173	M13_10_14_1950_06_385	3.741	2.816	0.070	0.161	-0.090	0.139	1.189	1.588	0.014	0.279	-0.0200	0.0000	0.0000	-1.703	0.88	-0.214	-0.214
10/14/2013 18:50	0917-173	M13_10_14_1950_11_475	2.82	2.801	-0.003	0.162	-0.150	0.133	1.070	1.60	-0.187	0.248	-0.0100	0.0000	0.0000	-0.519	0.94	-0.219	-0.219
10/14/2013 18:50	0917-173	M13_10_14_1950_16_565	-0.214	2.768	0.184	0.161	0.0500	0.141	0.819	1.640	0.495	0.255	-0.0100	0.0000	0.0000	-0.482	0.83	-0.263	-0.263
10/14/2013 18:50	0917-173	M13_10_14_1950_21_655	-4.118	2.703	-0.110	0.163	-0.100	0.139	1.213	1.619	0.137	0.279	-0.0100	0.0000	0.0000	-0.417	0.91	-0.275	-0.275
10/14/2013 18:50	0917-173	M13_10_14_1950_26_745	1.48	2.808	-0.418	0.162	-0.230	0.133	0.479	1.561	-0.318	0.254	-0.0100	0.0000	0.0000	-0.984	0.68	-0.113	-0.113
10/14/2013 18:50	0917-173	M13_10_14_1950_31_835	-8.509	2.783	0.186	0.172	0.123	0.133	1.011	1.557	0.117	0.273	-0.01	0.0000	0.0000	-1.605	0.90	-0.213	-0.213
10/14/2013 18:50	0917-173	M13_10_14_1950_36_925	0.010	2.657	-0.020	0.167	-0.300	0.139	1.281	1.61	-0.178	0.278	-0.0100	0.0000	0.0000	-0.423	0.90	-0.165	-0.165
10/14/2013 18:50	0917-173	M13_10_14_1950_41_985	-3.04	3.185	-0.091	0.164	-0.130	0.144	0.811	1.555	0.030	0.274	-0.0700	0.0000	0.0000	-1.010	0.90	-0.215	-0.215
10/14/2013 18:50	0917-173	M13_10_14_1950_47_075	-1.018	2.783	-0.010	0.164	-0.238	0.143	0.888	1.567	-0.06	0.256	-0.02	0.0000	0.0000	-1.190	0.88	-0.201	-0.201
10/14/2013 18:50	0917-173	M13_10_14_1950_52_165	8.045	2.816	0.000	0.167	-0.118	0.128	1.268	1.586	0.167	0.274	-0.0100	0.0000	0.0000	-0.68	0.93	-0.259	-0.259
10/14/2013 18:50	0917-173	M13_10_14_1950_57_255	-6.85	2.933	-0.010	0.161	-0.130	0.139	0.37	1.696	0.347	0.262	-0.0100	0.0000	0.0000	-0.440	0.90	-0.269	-0.269
10/14/2013 18:50	0917-173	M13_10_14_1951_01_375	-4.81	2.993	0.040	0.166	-0.110	0.127	0.967	1.717	0.274	0.264	-0.0200	0.0000	0.0000	-0.901	0.90	-0.241	-0.241
10/14/2013 18:50	0917-173	M13_10_14_1951_06_465	3.297	2.854	0.162	0.157	0.020	0.142	1.217	1.605	0.402	0.257	-0.0080	0.0000	0.0000	-0.58	0.90	-0.286	-0.286
10/14/2013 18:50	0917-173	M13_10_14_1951_11_555	8.045	2.816	0.000	0.167	-0.118	0.128	1.268	1.586	0.167	0.274	-0.0100	0.0000	0.0000	-0.68	0.93	-0.259	-0.259
10/14/2013 18:50	0917-173	M13_10_14_1951_16_645	-6.85	2.933	-0.010	0.161	-0.130	0.139	0.37	1.696	0.347	0.262	-0.0100	0.0000	0.0000	-0.440	0.90	-0.269	-0.269
10/14/2013 18:50	0917-173	M13_10_14_1951_21_735	-4.81	2.993	0.040	0.166	-0.110	0.127	0.967	1.717	0.274	0.264	-0.0200	0.0000	0.0000	-0.901	0.90	-0.241	-0.241
10/14/2013 18:50	0917-173	M13_10_14_1951_26_825	3.297	2.854	0.162	0.157	0.020	0.142	1.217	1.605	0.402	0.257	-0.0080	0.0000	0.0000	-0.58	0.90	-0.286	-0.286
10/14/2013 18:50	0917-173	M13_10_14_1951_31_915	8.045	2.816	0.000	0.167	-0.118	0.128	1.268	1.586	0.167	0.274	-0.0100	0.0000	0.0000	-0.68	0.93	-0.259	-0.259
10/14/2013 18:50	0917-173	M13_10_14_1951_37_005	-6.85	2.933	-0.010	0.161	-0.130	0.139	0.37	1.696	0.347	0.262	-0.0100	0.0000	0.0000	-0.440	0.90	-0.269	-0.269
10/14/2013 18:50	0917-173	M13_10_14_1951_42_095	-4.81	2.993	0.040	0.166	-0.110	0.127	0.967	1.717	0.274	0.264	-0.0200	0.0000	0.0000	-0.901	0.90	-0.241	-0.241
10/14/2013 18:50	0917-173	M13_10_14_1951_47_185	3.297	2.854	0.162	0.157	0.020	0.142	1.217	1.605	0.402	0.257							

Location	Disc	#	Start/Stop	Instrument	Label 1-Analyte	Label 2-Analyte	Label 3-Analyte/Split	Label 4-Analyte	Label 5-Analyte	Label 6-Analyte	Label 7-Analyte	Label Tracer	Label 8-Analyte							
Date	Method	Reference	OSV	Acronm	(ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Methanol (ppm)	SEC (ppm)	Phenol (ppm)	SEC (ppm)	Propionaldehyde (ppm)	SEC (ppm)	Sulfur Hexafluoride (ppm)	SEC (ppm)	acetylaldehyde (ppm)	SEC (ppm)	pinene (pp)	
10/15/2013 18:00	0917-173	No.13_10_15_1856_20_207	1	0.85	1.31	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
10/15/2013 18:06	0917-173	No.13_10_15_1856_30_207	1	-0.40	1.415	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
10/15/2013 18:12	0917-173	No.13_10_15_1857_21_217	1	-0.85	1.412	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
10/15/2013 18:18	0917-173	No.13_10_15_1858_21_497	1	0.00	1.476	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
10/15/2013 18:24	0917-173	No.13_10_15_1859_20_207	1	-0.80	1.480	1.023	0.119	2.84	0.158	-0.112	2.01	-0.212	0.83	-0.0000	0.0000	-0.0000	0.0000	-5.4	0.88	123.139
10/15/2013 18:30	0917-173	No.13_10_15_1860_20_207	1	-2.78	1.508	0.999	0.220	2.95	0.157	-0.502	2.01	-0.110	0.84	-0.0000	0.0000	-0.0000	0.0000	-5.7	0.82	123.753
10/15/2013 18:36	0917-173	No.13_10_15_1861_20_207	1	-1.18	1.501	1.075	0.218	3.65	0.159	-0.717	2.01	-0.117	0.84	-0.0000	0.0000	-0.0000	0.0000	-5.7	0.82	123.883
10/15/2013 18:42	0917-173	No.13_10_15_1862_21_427	1	-1.59	1.474	0.865	0.214	2.87	0.237	-0.286	2.01	-0.138	0.84	-0.0000	0.0000	-0.0000	0.0000	-4.8	0.82	124.2
10/15/2013 18:48	0917-173	No.13_10_15_1863_20_207	1	-1.24	1.455	0.913	0.225	3.69	0.163	-0.144	1.99	-0.248	0.85	-0.0000	0.0000	-0.0000	0.0000	-5.8	0.81	125.134
10/15/2013 18:54	0917-173	No.13_10_15_1864_20_207	1	-2.21	1.555	0.904	0.210	3.05	0.164	-0.478	1.99	-0.248	0.84	-0.0000	0.0000	-0.0000	0.0000	-5.7	0.82	125.700
10/15/2013 19:00	0917-173	No.13_10_15_1865_20_207	1	-1.13	1.408	0.862	0.200	3.01	0.169	-0.293	2.01	-0.130	0.65	-0.0000	0.0000	-0.0000	0.0000	-5.7	0.80	124.333
10/15/2013 19:06	0917-173	No.13_10_15_1866_20_207	1	-1.22	1.449	0.861	0.221	3.02	0.162	-0.537	2.00	-0.238	0.64	-0.0000	0.0000	-0.0000	0.0000	-5.6	0.82	125.793
10/15/2013 19:12	0917-173	No.13_10_15_1867_20_207	1	-1.46	1.448	0.861	0.218	3.02	0.162	-0.509	2.01	-0.135	0.82	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.81	124.994
10/15/2013 19:18	0917-173	No.13_10_15_1868_20_207	1	-1.90	1.515	0.899	0.211	3.02	0.169	-0.811	1.99	-0.105	0.81	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.82	119.966
10/15/2013 19:24	0917-173	No.13_10_15_1869_20_207	1	-1.51	1.462	0.873	0.208	2.85	0.160	-0.284	2.00	-0.177	0.79	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.82	127.977
10/15/2013 19:30	0917-173	No.13_10_15_1870_20_207	1	-1.88	1.514	0.782	0.203	1.96	0.156	-0.233	2.01	-0.185	0.78	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.80	116.126
10/15/2013 19:36	0917-173	No.13_10_15_1871_20_207	1	-1.84	1.477	0.865	0.203	2.85	0.156	-0.378	2.00	-0.156	0.78	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.82	119.966
10/15/2013 19:42	0917-173	No.13_10_15_1872_20_207	1	-2.21	1.372	0.832	0.198	3.00	0.154	-0.426	2.00	-0.147	0.78	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.82	114.561
10/15/2013 19:48	0917-173	No.13_10_15_1873_20_207	1	-2.11	1.411	0.830	0.202	2.88	0.158	-0.242	2.00	-0.161	0.78	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.82	114.742
10/15/2013 19:54	0917-173	No.13_10_15_1874_20_207	1	-2.86	1.466	0.863	0.187	2.87	0.154	-0.229	2.00	-0.149	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.8	0.80	115.365
10/15/2013 20:00	0917-173	No.13_10_15_1875_20_207	1	-2.81	1.477	0.867	0.205	2.87	0.159	-0.243	2.00	-0.143	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.3	0.82	114.142
10/15/2013 20:06	0917-173	No.13_10_15_1876_20_207	1	-3.84	1.518	0.884	0.198	2.83	0.253	-0.189	2.00	-0.171	0.75	-0.0000	0.0000	-0.0000	0.0000	-5.2	0.82	111.170
10/15/2013 20:12	0917-173	No.13_10_15_1877_20_207	1	-1.10	1.410	1.013	0.200	2.77	0.150	-0.159	2.00	-0.121	0.75	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.81	112.904
10/15/2013 20:18	0917-173	No.13_10_15_1878_20_207	1	-1.37	1.476	0.819	0.195	2.77	0.148	-0.114	2.00	-0.083	0.73	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.80	109.253
10/15/2013 20:24	0917-173	No.13_10_15_1879_20_207	1	-0.84	1.394	0.594	0.198	2.74	0.150	-0.185	2.01	-0.081	0.72	-0.0000	0.0000	-0.0000	0.0000	-5.3	0.80	102.51
10/15/2013 20:30	0917-173	No.13_10_15_1880_20_207	1	-2.85	1.515	0.795	0.194	2.72	0.148	-0.200	2.00	-0.108	0.73	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.80	110.000
10/15/2013 20:36	0917-173	No.13_10_15_1881_20_207	1	-1.64	1.517	0.905	0.197	2.74	0.150	-0.095	2.00	-0.087	0.73	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.81	110.321
10/15/2013 20:42	0917-173	No.13_10_15_1882_20_207	1	-1.18	1.487	0.892	0.210	2.82	0.152	-0.209	2.00	-0.124	0.74	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.81	110.699
10/15/2013 20:48	0917-173	No.13_10_15_1883_20_207	1	-4.31	1.490	0.804	0.195	1.83	0.147	-0.237	2.00	-0.082	0.74	-0.0000	0.0000	-0.0000	0.0000	-5.1	0.81	110.987
10/15/2013 20:54	0917-173	No.13_10_15_1884_20_207	1	-0.02	1.488	0.884	0.195	1.80	0.150	-0.236	2.00	-0.107	0.73	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.80	111.811
10/15/2013 21:00	0917-173	No.13_10_15_1885_20_207	1	-1.18	1.488	0.884	0.195	1.80	0.150	-0.236	2.00	-0.107	0.73	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.80	111.811
10/15/2013 21:06	0917-173	No.13_10_15_1886_20_207	1	-1.32	1.442	0.776	0.201	1.71	0.151	-0.219	2.01	-0.122	0.74	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.81	112.972
10/15/2013 21:12	0917-173	No.13_10_15_1887_20_207	1	-2.41	1.440	0.748	0.197	1.79	0.152	-0.149	2.01	-0.133	0.75	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.80	111.212
10/15/2013 21:18	0917-173	No.13_10_15_1888_20_207	1	-0.83	1.444	0.833	0.201	1.81	0.150	-0.172	1.98	-0.135	0.75	-0.0000	0.0000	-0.0000	0.0000	-4.6	0.81	111.914
10/15/2013 21:24	0917-173	No.13_10_15_1889_20_207	1	-1.12	1.412	0.730	0.208	1.70	0.150	-0.183	1.98	-0.110	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.6	0.81	113.827
10/15/2013 21:30	0917-173	No.13_10_15_1890_20_207	1	-1.13	1.300	0.729	0.207	3.08	0.150	-0.248	2.00	-0.100	0.77	-0.0000	0.0000	-0.0000	0.0000	-5.0	0.80	114.157
10/15/2013 21:36	0917-173	No.13_10_15_1891_20_207	1	-1.44	1.468	0.709	0.213	3.18	0.151	-0.249	2.00	-0.120	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.8	0.81	114.900
10/15/2013 21:42	0917-173	No.13_10_15_1892_20_207	1	-1.84	1.308	0.680	0.206	3.04	0.148	-0.18	2.01	-0.118	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.2	0.81	114.421
10/15/2013 21:48	0917-173	No.13_10_15_1893_20_207	1	-4.07	1.433	0.758	0.208	3.24	0.165	-0.20	2.01	-0.218	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.6	0.81	114.900
10/15/2013 21:54	0917-173	No.13_10_15_1894_20_207	1	-1.84	1.308	0.680	0.206	3.04	0.148	-0.18	2.01	-0.118	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.2	0.81	114.421
10/15/2013 22:00	0917-173	No.13_10_15_1895_20_207	1	-1.58	1.444	0.800	0.202	1.12	0.164	-0.502	2.01	-0.243	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.7	0.81	114.900
10/15/2013 22:06	0917-173	No.13_10_15_1896_20_207	1	-1.84	1.308	0.746	0.199	3.04	0.156	-0.219	2.01	-0.118	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.7	0.81	114.900
10/15/2013 22:12	0917-173	No.13_10_15_1897_20_207	1	-1.84	1.308	0.746	0.199	3.04	0.156	-0.219	2.01	-0.118	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.7	0.81	114.900
10/15/2013 22:18	0917-173	No.13_10_15_1898_20_207	1	-1.84	1.308	0.746	0.199	3.04	0.156	-0.219	2.01	-0.118	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.7	0.81	114.900
10/15/2013 22:24	0917-173	No.13_10_15_1899_20_207	1	-1.84	1.308	0.746	0.199	3.04	0.156	-0.219	2.01	-0.118	0.78	-0.0000	0.0000	-0.0000	0.0000	-4.7	0.81	114.900
10/15/2013 22:30	0917-173	No.13_10_15_1900_20_207	1	-1.84	1.308	0.746	0.199	3.04	0.156	-0.219	2.01	-0.118	0.78	-0.0000	0.0000					

Location	Obs.	F	Start/Stop	Instrument	Label 1-Analyte	Label 2-Analyte	Label 3-Analyte/Split	Label 4-Analyte	Label 5-Analyte	Label 6-Analyte	Label 7-Analyte	Label 8-Analyte	Label 9-Analyte	Label 10-Analyte	Label 11-Analyte	Label 12-Analyte	Label 13-Analyte	Label 14-Analyte	Label 15-Analyte	Label 16-Analyte	Label 17-Analyte	Label 18-Analyte	Label 19-Analyte	Label 20-Analyte	Label 21-Analyte	Label 22-Analyte	Label 23-Analyte	Label 24-Analyte	Label 25-Analyte	Label 26-Analyte	Label 27-Analyte	Label 28-Analyte	Label 29-Analyte	Label 30-Analyte	Label 31-Analyte	Label 32-Analyte	Label 33-Analyte	Label 34-Analyte	Label 35-Analyte	Label 36-Analyte	Label 37-Analyte	Label 38-Analyte	Label 39-Analyte	Label 40-Analyte	Label 41-Analyte	Label 42-Analyte	Label 43-Analyte	Label 44-Analyte	Label 45-Analyte	Label 46-Analyte	Label 47-Analyte	Label 48-Analyte	Label 49-Analyte	Label 50-Analyte	Label 51-Analyte	Label 52-Analyte	Label 53-Analyte	Label 54-Analyte	Label 55-Analyte	Label 56-Analyte	Label 57-Analyte	Label 58-Analyte	Label 59-Analyte	Label 60-Analyte	Label 61-Analyte	Label 62-Analyte	Label 63-Analyte	Label 64-Analyte	Label 65-Analyte	Label 66-Analyte	Label 67-Analyte	Label 68-Analyte	Label 69-Analyte	Label 70-Analyte	Label 71-Analyte	Label 72-Analyte	Label 73-Analyte	Label 74-Analyte	Label 75-Analyte	Label 76-Analyte	Label 77-Analyte	Label 78-Analyte	Label 79-Analyte	Label 80-Analyte	Label 81-Analyte	Label 82-Analyte	Label 83-Analyte	Label 84-Analyte	Label 85-Analyte	Label 86-Analyte	Label 87-Analyte	Label 88-Analyte	Label 89-Analyte	Label 90-Analyte	Label 91-Analyte	Label 92-Analyte	Label 93-Analyte	Label 94-Analyte	Label 95-Analyte	Label 96-Analyte	Label 97-Analyte	Label 98-Analyte	Label 99-Analyte	Label 100-Analyte
					OSF Acrolein (ppm)	SEC (ppm)	Formaldehyde (ppm)	SEC (ppm)	Metanoal (ppm)	SEC (ppm)	Phenol (ppm)	SEC (ppm)	Propanoaldehyde (ppm)	SEC (ppm)	Sulfur_hexafluoride (ppm)	SEC (ppm)	Acetaldehyde (ppm)	SEC (ppm)	pinene (pp)																																																																																					
10/15/2013 21:10	0917-173	1013	10_15_2130_22_494	1	0.851	2.561	0.128	0.143	0.000	0.118	1.293	0.231	0.228	0.224	0.000	0.070	0.000	0.77																																																																																						
10/15/2013 21:10	0917-173	1013	10_15_2130_22_494	2	4.39	2.654	0.03	0.152	0.000	0.115	0.44	1.839	0.446	0.246	-0.202	0.200	0.77																																																																																							
10/15/2013 21:10	0917-173	1013	10_15_2130_24_894	1	2.18	2.856	-0.081	0.148	0.322	0.118	0.856	1.794	0.18	0.249	-0.200	0.200	0.77																																																																																							
10/15/2013 21:10	0917-173	1013	10_15_2130_24_894	2	0.565	2.626	-0.048	0.153	0.280	0.118	0.29	1.728	0.200	0.251	-0.150	0.000	0.77																																																																																							
10/15/2013 21:10	0917-173	1013	10_15_2130_24_144	1	2.95	2.953	0.000	0.158	0.064	0.110	0.877	1.623	0.187	0.254	-0.140	0.000	0.77																																																																																							
10/15/2013 21:10	0917-173	1013	10_15_2130_25_384	1	2.91	2.952	0.064	0.158	0.228	0.119	0.133	1.571	0.400	0.261	-0.180	0.000	0.77																																																																																							
10/15/2013 21:10	0917-173	1013	10_15_2130_25_384	2	0.150	2.859	0.003	0.157	0.000	0.119	0.569	1.476	0.046	0.257	0.21	0.070	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_26_784	1	1.43	2.948	0.066	0.147	0.000	0.11	0.51	1.889	-0.13	0.248	0.000	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_26_784	2	0.481	2.770	-0.020	0.164	-0.357	0.121	0.679	1.34	-0.146	0.260	0.000	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_18_044	1	0.610	2.725	0.173	0.164	-0.128	0.122	0.24	1.21	-0.335	0.246	0.000	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_18_044	2	2.13	2.661	0.128	0.167	0.100	0.11	1.904	1.19	0.502	0.260	-0.100	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_18_434	1	-4.876	2.869	-0.000	0.160	0.327	0.133	1.561	1.16	0.071	0.261	-0.000	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_18_434	2	-1.776	2.500	0.118	0.169	-0.361	0.135	0.45	1.11	-0.5	0.268	-0.100	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_18_884	1	3.611	3.096	-0.105	0.152	0.120	0.119	1.254	1.25	0.04	0.263	-0.000	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_18_884	2	0.117	3.129	0.105	0.155	-0.221	0.128	1.208	1.30	0.284	0.274	-0.100	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_19_204	1	4.79	2.997	0.165	0.173	0.212	0.128	0.966	1.29	0.413	0.278	-0.100	0.000	0.77																																																																																							
10/15/2013 21:11	0917-173	1013	10_15_2130_19_204	2	3.777	2.897	0.210	0.182	0.120	0.135	1.270	1.265	0.062	0.267	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_20_394	1	-4.555	3.016	0.309	0.157	-0.070	0.134	1.239	1.442	0.05	0.262	-0.000	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_20_394	2	-0.211	2.965	0.083	0.159	0.132	0.129	0.939	1.381	-0.048	0.265	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_20_794	1	-4.466	2.558	0.183	0.162	0.128	0.137	1.426	1.426	0.11	0.274	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_20_794	2	0.007	3.184	0.175	0.155	0.201	0.128	1.170	1.461	0.119	0.264	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_21_244	1	-3.267	3.024	0.021	0.157	0.204	0.131	1.165	1.443	0.299	0.261	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_21_244	2	0.38	2.772	-0.187	0.158	-0.103	0.129	0.969	1.419	0.49	0.257	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_21_644	1	-0.650	2.997	0.098	0.165	-0.080	0.127	0.703	1.453	0.25	0.271	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_21_644	2	1.883	3.081	0.045	0.161	-0.170	0.124	0.686	1.466	0.287	0.267	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_22_044	1	2.867	2.814	0.241	0.148	0.154	0.122	1.458	1.335	-0.01	0.244	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_22_044	2	4.414	2.934	-0.190	0.160	-0.280	0.122	1.379	1.426	-0.11	0.246	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_22_444	1	3.18	3.155	0.207	0.156	0.080	0.133	1.434	1.364	0.00	0.244	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_22_444	2	-0.963	2.962	0.063	0.160	0.158	0.134	1.131	1.394	0.313	0.261	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_22_844	1	3.890	2.802	0.248	0.164	-0.261	0.134	0.747	1.399	0.03	0.261	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_22_844	2	0.533	2.868	0.208	0.148	-0.030	0.133	0.847	1.493	0.312	0.261	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_23_244	1	-1.49	2.969	0.241	0.156	0.131	0.129	0.999	1.492	0.234	0.237	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_23_244	2	-5.281	2.836	-0.082	0.159	-0.105	0.129	0.999	1.439	-0.212	0.230	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_23_644	1	-1.109	2.935	0.110	0.160	-0.040	0.136	0.824	1.541	0.263	0.230	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_23_644	2	0.023	2.829	-0.155	0.161	-0.118	0.129	0.958	1.619	0.11	0.235	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_24_044	1	2.179	2.827	-0.048	0.149	-0.118	0.118	1.155	1.727	0.06	0.230	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_24_044	2	0.238	2.854	0.311	0.146	0.130	0.119	0.987	1.762	0.00	0.246	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_24_444	1	5.580	2.844	-0.140	0.162	-0.140	0.132	0.843	1.811	0.37	0.239	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_24_444	2	-10.053	2.496	0.305	0.147	-0.122	0.128	1.043	1.784	-0.319	0.238	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_24_844	1	0.97	2.485	0.278	0.155	-0.040	0.133	0.933	1.884	-0.261	0.244	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_24_844	2	-4.14	2.761	-0.140	0.164	-0.205	0.120	0.814	1.878	0.44	0.244	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_25_244	1	1.10	2.670	0.030	0.143	-0.141	0.131	0.899	1.833	-0.349	0.234	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_25_244	2	-4.370	2.720	0.199	0.156	-0.000	0.131	1.135	1.814	-0.073	0.230	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_25_644	1	-4.654	2.760	0.114	0.160	0.030	0.141	0.888	1.868	0.241	0.231	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_25_644	2	-1.77	2.814	0.088	0.149	-0.080	0.131	1.300	1.720	0.46	0.232	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_26_044	1	-0.921	3.196	-0.190	0.137	-0.282	0.124	1.155	1.606	-0.050	0.247	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_26_044	2	0.320	3.282	0.282	0.159	-0.235	0.123	1.055	1.565	-0.033	0.249	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173	1013	10_15_2130_26_444	1	-4.410	3.016	0.223	0.150	-0.180	0.132	0.812	1.573	0.331	0.248	-0.100	0.000	0.77																																																																																							
10/15/2013 21:12	0917-173																																																																																																							

Location Doc. # Start/Stop Instrument

Date Method Name

Data Run 11 Start A

Label	Label	Label	Label	Label	Label	Label	Label	Label	Label
1-Analyte	2-Analyte	3-Analyte	4-Analyte	5-Analyte	6-Analyte	7-Analyte	8-Analyte	9-Analyte	10-Analyte
02/27/2013 12:08 0917-173_N013_10_16_1309_43_091	0.167 0.848	0.042 0.095	0.07800 0.0110	0.0127 0.0670	3.98 0.18	0.00000 0.00100	0.00000 0.00100	1.04 0.188 16.954	
02/27/2013 12:08 0917-173_N013_10_16_1310_44_001	1.667 0.848	0.3790 0.070	0.0130 0.0510	0.0124 0.0740	2.401 0.11	0.00120 0.00100	0.00000 0.00100	-1.09 0.288 16.919	
02/27/2013 12:08 0917-173_N013_10_16_1311_44_181	1.531 0.843	0.102 0.048	0.0060 0.0010	0.0110 0.0730	1.635 0.08	0.00120 0.00100	0.00000 0.00100	2.421 0.314 16.923	
02/27/2013 12:08 0917-173_N013_10_16_1312_45_091	1.194 0.806	0.008 0.000	0.0130 0.0580	0.0110 0.0660	3.096 0.428	0.00000 0.00000	0.00000 0.00000	0.67 0.266 16.926	
02/27/2013 12:08 0917-173_N013_10_16_1313_46_112	1.42 1.155	0.009 0.081	1.101 0.080	0.124 1.706	1.681 0.26	0.00000 0.00000	0.00000 0.00000	0.5 0.440 16.941	
02/27/2013 12:08 0917-173_N013_10_16_1314_46_340	0.37 1.116	0.07500 0.066	1.139 0.060	0.211 1.720	1.721 0.20	0.00000 0.00000	0.00000 0.00000	0.58 0.348 17.008	
02/27/2013 12:08 0917-173_N013_10_16_1315_46_350	0.285 1.100	0.014 0.280	1.013 0.010	0.217 1.708	1.584 0.23	0.00000 0.00000	0.00000 0.00000	0.52 0.334 17.048	
02/27/2013 12:08 0917-173_N013_10_16_1317_46_800	0.24 1.035	0.010 0.076	0.889 0.030	0.235 1.673	1.277 0.21	0.00000 0.00000	0.00000 0.00000	0.58 0.348 17.058	
02/27/2013 12:08 0917-173_N013_10_16_1318_46_800	0.134 1.163	0.0100 0.071	0.853 0.070	0.241 1.661	1.174 0.17	0.00000 0.00000	0.00000 0.00000	0.52 0.334 17.058	
02/27/2013 12:08 0917-173_N013_10_16_1320_47_431	0.87 1.222	0.204 0.861	0.739 0.070	0.431 1.643	1.053 0.19	0.00000 0.00000	0.00000 0.00000	0.58 0.348 17.067	
02/27/2013 12:08 0917-173_N013_10_16_1321_48_140	0.03 1.073	0.007 0.073	0.807 0.070	0.281 1.645	0.021 0.20	0.00000 0.00000	0.00000 0.00000	0.51 0.327 16.937	
02/27/2013 12:08 0917-173_N013_10_16_1322_48_770	0.11 1.172	0.028 0.070	0.787 0.070	0.281 1.643	1.70 0.34	0.00000 0.00000	0.00000 0.00000	0.58 0.348 17.067	
02/27/2013 12:08 0917-173_N013_10_16_1323_49_290	0.22 1.082	0.020 0.078	0.756 0.070	0.281 1.643	1.67 0.21	0.00000 0.00000	0.00000 0.00000	0.66 0.339 17.015	
02/27/2013 12:08 0917-173_N013_10_16_1324_49_290	0.83 1.131	0.033 0.074	0.882 0.070	0.281 1.643	1.67 0.21	0.00000 0.00000	0.00000 0.00000	0.66 0.339 17.015	
02/27/2013 12:08 0917-173_N013_10_16_1325_49_110	2.48 1.104	0.063 0.079	0.960 0.060	0.212 1.663	2.54 0.24	0.00000 0.00000	0.00000 0.00000	0.71 0.352 16.706	
02/27/2013 12:08 0917-173_N013_10_16_1326_49_890	0.318 1.156	0.016 0.080	0.854 0.090	0.241 1.715	1.133 0.25	0.00000 0.00000	0.00000 0.00000	0.89 0.336 16.401	
02/27/2013 12:08 0917-173_N013_10_16_1327_49_461	0.25 1.215	0.018 0.079	0.928 0.060	0.268 1.674	1.47 0.24	0.00000 0.00000	0.00000 0.00000	0.73 0.352 16.706	
02/27/2013 12:08 0917-173_N013_10_16_1328_49_371	0.27 1.221	0.028 0.083	0.903 0.060	0.214 1.698	2.305 0.24	0.00000 0.00000	0.00000 0.00000	0.73 0.352 16.706	
02/27/2013 12:08 0917-173_N013_10_16_1329_49_101	0.47 1.262	0.040 0.080	0.854 0.090	0.241 1.715	1.133 0.25	0.00000 0.00000	0.00000 0.00000	0.89 0.336 16.401	
02/27/2013 12:08 0917-173_N013_10_16_1330_49_801	0.01 1.277	0.028 0.083	0.975 0.060	0.334 1.732	1.354 0.24	0.00000 0.00000	0.00000 0.00000	0.73 0.352 16.706	
02/27/2013 12:08 0917-173_N013_10_16_1331_49_091	1.38 1.294	0.002 0.084	0.944 0.090	0.308 1.739	3.21 0.24	0.00000 0.00000	0.00000 0.00000	0.86 0.356 16.123	
02/27/2013 12:08 0917-173_N013_10_16_1332_49_111	0.58 1.141	0.070 0.070	0.945 0.090	0.407 1.727	1.465 0.25	0.00000 0.00000	0.00000 0.00000	0.81 0.366 15.727	
02/27/2013 12:08 0917-173_N013_10_16_1333_49_181	0.43 1.282	0.016 0.080	0.945 0.090	0.407 1.727	1.465 0.25	0.00000 0.00000	0.00000 0.00000	0.81 0.366 15.727	
02/27/2013 12:08 0917-173_N013_10_16_1334_49_951	0.409 1.185	0.084 0.083	0.971 0.090	0.220 1.728	2.588 0.26	0.00000 0.00000	0.00000 0.00000	0.54 0.340 17.441	
02/27/2013 12:08 0917-173_N013_10_16_1335_49_701	1.89 1.182	0.060 0.083	1.042 0.090	0.228 1.724	1.468 0.26	0.00000 0.00000	0.00000 0.00000	0.51 0.332 17.658	
02/27/2013 12:08 0917-173_N013_10_16_1336_49_290	0.27 1.233	0.013 0.080	0.950 0.050	0.108 1.709	2.34 0.25	0.00000 0.00000	0.00000 0.00000	1.16 0.337 16.671	
02/27/2013 12:08 0917-173_N013_10_16_1337_49_271	1.154 1.168	0.035 0.084	1.036 0.080	0.156 1.713	2.41 0.26	0.00000 0.00000	0.00000 0.00000	0.88 0.334 17.111	
02/27/2013 12:08 0917-173_N013_10_16_1338_49_941	0.61 1.162	0.110 0.087	1.107 0.090	0.243 1.746	2.72 0.27	0.00000 0.00000	0.00000 0.00000	0.64 0.338 16.814	
02/27/2013 12:08 0917-173_N013_10_16_1339_49_790	1.49 1.139	0.060 0.078	1.098 0.080	0.178 1.684	1.481 0.24	0.00000 0.00000	0.00000 0.00000	0.78 0.339 15.811	
02/27/2013 12:08 0917-173_N013_10_16_1340_49_442	0.28 1.242	0.030 0.079	0.985 0.080	0.338 1.896	1.899 0.23	0.00000 0.00000	0.00000 0.00000	0.80 0.340 16.871	
02/27/2013 12:08 0917-173_N013_10_16_1341_49_272	1.01 1.269	0.032 0.077	0.908 0.050	0.188 1.896	1.899 0.23	0.00000 0.00000	0.00000 0.00000	0.80 0.340 16.871	
02/27/2013 12:08 0917-173_N013_10_16_1342_49_290	0.24 1.217	0.028 0.078	0.964 0.090	0.344 1.843	1.874 0.21	0.00000 0.00000	0.00000 0.00000	1.14 0.342 16.464	
02/27/2013 12:08 0917-173_N013_10_16_1343_49_792	0.10 1.114	0.020 0.072	0.118 0.070	0.238 1.885	1.763 0.19	0.00000 0.00000	0.00000 0.00000	0.88 0.347 16.244	
02/27/2013 12:08 0917-173_N013_10_16_1344_49_517	2.174 1.243	0.050 0.078	0.750 0.050	0.100 1.875	1.911 0.17	0.00000 0.00000	0.00000 0.00000	1.02 0.336 17.566	
02/27/2013 12:08 0917-173_N013_10_16_1345_49_290	0.282 1.264	0.071 0.080	0.794 0.080	0.287 1.877	1.169 0.17	0.00000 0.00000	0.00000 0.00000	0.44 0.348 16.252	
02/27/2013 12:08 0917-173_N013_10_16_1346_49_102	0.30 1.132	0.039 0.073	0.809 0.040	0.257 1.734	1.251 0.17	0.00000 0.00000	0.00000 0.00000	0.44 0.348 16.252	
02/27/2013 12:08 0917-173_N013_10_16_1347_49_792	1.096 1.191	0.040 0.070	0.809 0.080	0.264 1.739	1.17 0.17	0.00000 0.00000	0.00000 0.00000	0.44 0.348 16.252	
02/27/2013 12:08 0917-173_N013_10_16_1348_49_290	0.730 1.202	0.071 0.080	0.807 0.080	0.407 1.748	1.21 0.17	0.00000 0.00000	0.00000 0.00000	0.47 0.349 16.616	
02/27/2013 12:08 0917-173_N013_10_16_1349_49_292	0.82 1.187	0.040 0.071	0.878 0.080	0.283 1.734	1.346 0.17	0.00000 0.00000	0.00000 0.00000	0.48 0.349 16.252	
02/27/2013 12:08 0917-173_N013_10_16_1350_49_502	1.06 1.225	0.015 0.079	0.919 0.090	0.263 1.739	1.510 0.16	0.00000 0.00000	0.00000 0.00000	0.48 0.349 16.252	
02/27/2013 12:08 0917-173_N013_10_16_1351_49_290	1.162 1.181	0.026 0.077	0.871 0.080	0.312 1.738	1.25 0.18	0.00000 0.00000	0.00000 0.00000	0.48 0.349 16.252	
02/27/2013 12:08 0917-173_N013_10_16_1352_49_310	1.44 1.148	0.040 0.077	0.824 0.080	0.339 1.734	1.346 0.19	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1353_49_291	0.844 1.184	0.016 0.081	0.823 0.090	0.295 1.727	1.148 0.17	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1354_49_291	0.44 1.219	0.019 0.085	0.823 0.090	0.295 1.727	1.148 0.17	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1355_49_291	0.47 1.229	0.000 0.088	0.880 0.080	0.335 1.735	1.257 0.17	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1356_49_588	0.33 1.244	0.010 0.082	0.880 0.080	0.335 1.735	1.257 0.17	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1357_49_290	0.64 1.179	0.017 0.077	0.820 0.080	0.335 1.735	1.257 0.17	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1358_49_003	0.84 1.214	0.000 0.080	0.820 0.080	0.335 1.735	1.257 0.17	0.00000 0.00000	0.00000 0.00000	0.49 0.354 16.287	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_183	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072	0.808 0.070	0.346 1.764	1.185 0.17	0.00000 0.00000	0.00000 0.00000	0.15 0.338 16.833	
02/27/2013 12:08 0917-173_N013_10_16_1359_49_290	1.01 1.209	0.061 0.072							

Location Dec. # Start/Stop Instrument

Date	Method	Filename	DFP Area/Sum	Label 1-Analyte	Label 2-Analyte	Label 3-Analyte/Solite	Label 4-Analyte	Label 5-Analyte	Label 6-Analyte
10/16/2013 15:10	0917-173	Me13_10_16_1530_56_553	1	5.277	2.340	0.274	0.197	0.901	0.0000
10/16/2013 15:11	0917-173	Me13_10_16_1531_20_793	1	4.650	1.543	0.119	0.236	0.090	0.1110
10/16/2013 15:11	0917-173	Me13_10_16_1531_20_793	1	4.942	1.648	0.040	0.242	0.0210	0.1110
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	1.9670	0.643	0.188	0.134	0.0550	0.1110
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	4.118	1.528	-0.1570	0.137	-0.076	0.114
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	2.499	0.899	0.124	0.142	-0.0050	0.119
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	3.814	1.004	0.251	0.140	-0.054	0.1100
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	4.758	1.803	-0.300	0.139	0.0270	0.118
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	1.12	2.432	-0.261	0.147	-0.142	0.1000
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	2.909	1.311	-0.119	0.131	0.133	0.1080
10/16/2013 15:31	0917-173	Me13_10_16_1531_15_041	1	7.588	2.800	0.175	0.132	0.161	0.1010
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	6.917	2.500	0.1820	0.139	0.166	0.1040
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	0.243	2.051	0.1310	0.136	0.029	0.1090
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	2.287	2.680	0.154	0.241	0.288	0.1090
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	0.025	2.428	0.076	0.140	0.158	0.1020
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	1.414	1.699	-0.0980	0.226	-0.154	0.1090
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	0.806	1.851	0.0850	0.224	0.242	0.1030
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.732	2.788	0.1530	0.132	0.1810	0.1090
10/16/2013 15:32	0917-173	Me13_10_16_1532_23_291	1	2.091	2.095	0.001	0.140	0.137	0.1010
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.821	2.111	-0.188	0.229	0.247	0.1090
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	4.60	2.584	0.225	0.142	0.139	0.1000
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-4.751	2.436	0.155	0.138	0.124	0.1070
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	2.297	2.610	0.234	0.138	0.137	0.1090
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	5.503	2.583	-0.4650	0.142	-0.150	0.1010
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-7.240	2.774	0.171	0.151	-0.193	0.131
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	6.221	2.813	-0.264	0.146	-0.241	0.131
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.47	3.050	-0.066	0.161	0.090	0.140
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.609	2.705	-0.0450	0.172	-0.235	0.136
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-2.297	2.610	-0.179	0.162	-0.382	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.494	2.307	0.076	0.166	0.150	0.140
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.694	2.307	-0.210	0.164	-0.150	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.010	3.010	-0.339	0.165	-0.187	0.117
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-4.171	2.812	-0.208	0.184	-0.218	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	0.587	3.113	0.165	0.151	-0.002	0.138
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.02	2.940	-0.441	0.185	-0.292	0.134
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	5.024	2.911	0.0850	0.158	0.0850	0.118
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-2.249	2.817	-0.35	0.159	-0.127	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.048	2.849	-0.135	0.157	-0.285	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.705	2.874	-0.274	0.164	-0.218	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	0.52	2.843	0.071	0.152	-0.117	0.138
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	2.61	2.740	0.0020	0.158	-0.018	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	2.01	2.816	0.213	0.147	0.218	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.036	2.422	-0.126	0.140	-0.218	0.133
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	5.135	2.528	-0.58	0.151	-0.640	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.43	2.788	-0.379	0.149	-0.379	0.140
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-5.9070	2.876	-0.209	0.142	-0.190	0.135
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.82	2.800	0.208	0.148	0.048	0.134
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-0.150	2.860	-0.127	0.152	-0.127	0.138
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-2.14	2.795	-0.099	0.149	-0.040	0.137
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	2.340	2.807	0.138	0.150	0.138	0.137
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.720	2.812	-0.184	0.158	-0.115	0.138
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	7.0660	2.761	0.1420	0.155	0.123	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	4.688	2.702	0.370	0.148	0.051	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-2.163	2.760	-0.070	0.145	-0.308	0.128
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	4.20	2.613	0.190	0.148	0.107	0.137
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.21	2.856	-0.049	0.146	-0.022	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-0.849	2.819	-0.281	0.143	-0.157	0.122
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.657	2.410	-0.042	0.143	-0.042	0.140
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.4790	2.705	0.038	0.158	0.200	0.119
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-0.940	2.811	-0.046	0.149	0.194	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.709	2.661	0.111	0.140	0.170	0.137
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-3.60	2.821	-0.045	0.141	-0.178	0.124
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.937	2.618	-0.083	0.138	-0.181	0.131
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-2.14	2.492	-0.046	0.149	0.194	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.802	2.851	-0.177	0.143	-0.102	0.123
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-8.840	2.498	-0.201	0.136	-0.129	0.114
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.199	2.816	0.283	0.141	0.284	0.119
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	5.092	2.413	-0.112	0.133	-0.112	0.139
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-3.17	2.849	-0.100	0.138	-0.100	0.138
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.18	2.619	-0.210	0.149	-0.118	0.140
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	6.57	2.697	0.782	0.140	-0.080	0.144
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.888	2.444	0.110	0.145	0.280	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-0.12	2.418	-0.119	0.141	-0.076	0.140
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	0.017	2.812	-0.013	0.140	-0.013	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.276	2.448	0.1990	0.130	-0.128	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.806	2.511	0.131	0.143	0.030	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	5.073	2.493	0.203	0.141	0.132	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-1.516	2.377	-0.115	0.123	-0.010	0.132
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.304	2.693	0.156	0.133	0.060	0.131
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-0.890	2.158	-0.138	0.144	-0.040	0.133
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.428	2.894	-0.164	0.144	0.149	0.112
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	2.74	2.494	0.243	0.136	-0.209	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	1.358	2.564	-0.173	0.143	-0.090	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	2.776	2.477	0.126	0.147	-0.040	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.97	2.322	-0.147	0.139	-0.070	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	6.430	2.195	0.448	0.141	0.158	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	4.360	2.631	0.191	0.149	0.090	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-4.718	2.656	-0.210	0.144	-0.137	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	0.375	2.385	0.203	0.140	0.107	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	0.772	2.558	0.078	0.136	0.070	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	3.096	2.536	0.109	0.134	0.050	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	-7.242	2.324	-0.050	0.137	-0.090	0.130
10/16/2013 15:31	0917-173	Me13_10_16_1532_23_291	1	0.980	2.368	0.140	0.138		

Location	Disc	#	Inst	Start row	stop row
Data	CYL	1	A	43	49
Data	SPK	1	A	91	97
Data	UNSPK	1	A	103	109
Data	Run	1	A	145	205
Data	Run	2	A	238	296
Data	Run	3	A	305	364
Data	MDC	1		506	512
Data	Run	4	A	538	597
Data	Run	5	A	608	667
Data	Run	6	A	685	743
Data	Run	13	A	781	840
Data	Run	7	A	971	1030
Data	Run	8	A	1043	1102
Data	Run	9	A	1113	1173
Data	Run	10	A	1362	1422
Data	Run	11	A	1435	1494
Data	Run	12	A	1506	1564

APPENDIX D
Method 320 Log Sheet

FTIR Log - Enviva Amory

Date	Time	Filename	Method	Pressure	Notes	Run ID
14-Oct	1207	13.10.14.1207.07.590	CTS	14.62	Background	
	1214	13.10.14.1214.07.635	CTS	14.75	CTS (pathlength = 8.693 m)	
	1237	13.10.14.1237.34.593	0913-177A	14.61	Background	
	1244	13.10.14.1244.42.467	0913-177A	14.74	Methanol Direct (Response = 102.3 ppm/ 2.86 ppm)	
	1345-1400	13.10.14.1313.07.480	0913-177A	12.48	Methanol Spike	
	1400	13.10.14.1313.07.480	0913-177A	12.48	Native Sampling (Dryer)	
	1421	13.10.14.1421.39.358	0913-177A	14.76	Background	
	1515	13.10.14.1439.35.902	0913-177A	12.44	Sampling Dryer Stack - Run 1 (1515-1615)	1
	1649	13.10.14.1439.35.902	0913-177A	12.45	Sampling Dryer Stack - Run 2 (1649-1749)	2
	1758	13.10.14.1439.35.902	0913-177A	12.43	Sampling Dryer Stack - Run 3 (1758-1858)	3
	1919	13.10.14.1919.11.369	CTS	14.75	Background	
	1923	13.10.14.1923.43.600	CTS	14.77	CTS (pathlength = 8.69 m)	
	1935	13.10.14.1935.06.334	0913-177A	14.77	Background	
	1953	13.10.14.1953.35.0678	0913-177A	14.67	Water Spectra (Dryer)	
	15-Oct	748	13.10.15.0747.33.901	CTS	14.84	Background
751		13.10.15.751.24.798	CTS	14.82	CTS (pathlength = 8.659 m)	
801		13.10.15.0801.49.212	0913-177A	14.75	Background	
911		13.10.15.0906.12.604	0913-177A	14.19	Sampling GHM- Run 1 (0911-1011)	4
1022		13.10.15.0906.12.604	0913-177A	14.12	Sampling GHM- Run 2 (1022-1122)	5
1140		13.10.15.0906.12.604	0913-177A	14.15	Sampling GHM- Run 1 (1140-1240)	6
1303		13.10.15.1303.31.934	CTS	14.53	Background	
1311		13.10.15.1311.04.345	CTS	14.62	CTS (pathlength = 8.705222 m)	
1321		13.10.15.1321.30.008	0913-177A	14.62	Background	
1348		13.10.15.1332.44.520	0913-177A	14.23	Sampling DHM - Run 1 (1348-1448)	7
1623		13.10.15.1623.38.363	CTS	14.49	Background	
1627		13.10.15.1627.16.305	CTS	14.6	CTS (pathlength = 8.7387 m)	
1639		13.10.15.1639.08.005	0913-177A	14.59	Background	
1736		13.10.15.1705.34.481	0913-177A	13.73	Sampling Aspirator - Run 1 (1736-1836)	8
1849		13.10.15.1705.34.481	0913-177A	13.64	Sampling Aspirator - Run 2 (1849-1949)	9
2000		13.10.15.1705.34.481	0913-177A	13.72	Sampling Aspirator - Run 3 (2000-2100)	10
2111		13.10.15.2111.32.062	CTS	14.78	Background	
2115		13.10.15.2115.01.112	CTS	14.70	CTS (pathlength = 8.673 m)	
2126		13.10.15.2125.43.313	0913-177A	14.75	Background	
2140		13.10.15.2140.31.123	0913-177A	14.57	Water Spectra (Aspirator)	
2152	13.10.15.2152.01.616	0913-177A	14.58	Water Spectra (GHM)		
16-Oct	831	13.10.16.0831.24.910	CTS	14.68	Background	
	834	13.10.16.0834.58.007	CTS	14.81	CTS (pathlength = 8.614 m)	
	848	13.10.16.0848.20.179	0913-177A	14.70	Background	
	1054	13.10.16.1052.55.014	0913-177A	14.16	Sampling DHM - Run 2 (1054-1154)	11
	1207	13.10.16.1052.55.015	0913-177A	14.02	Sampling DHM - Run 3 (1207-1307)	12
	1321	13.10.16.1052.55.016	0913-177A	14.03	Sampling DHM - Run 4 (1321-1421)	13
	1506	13.10.16.1503.27.589	CTS	14.70	Background	
	1507	13.10.16.1507.23.086	CTS	14.77	CTS (pathlength = 8.624 m)	
	1519	13.10.16.1519.05.95	0913-177A	14.75	Background	
	1541	13.10.16.1541.15.467	0913-177A	14.65	Water Spectra (DHM)	

FTIR compl.

MAY 27 15
 1500 AIR RECORDS MGMT

Spiking and CTS Record

Date	Time	Direct Cylinder Spike		System Spiked Gas		Native Conc.		SF6 Recovery	Methanol Recovery
		(ppm methanol)	(ppm SF6)	(ppm methanol)	(ppm SF6)	(ppm methanol)	(ppm SF6)		
14-Oct	1245	102.30	2.86	9.000	0.224	2.017	0.012769	7.4%	94.5%

91.71 ppm std

Date	Time	CTS Scan (pathlength)	SEC (ppm)	Cell Pressure (psi)	Cell Temp (deg C)	Deviation from Previous	Deviation from Average
14-Oct	1215	8.693	0.133	14.75	121	NA	-0.2%
	1923	8.685	0.133	14.77	121	0.1%	-0.1%
15-Oct	750	8.659	0.132	14.19	121	0.3%	0.2%
	1311	8.705	0.134	14.62	121	-0.5%	-0.4%
	1627	8.739	0.133	14.6	121	-0.4%	-0.7%
	2115	8.673	0.132	14.6	121	0.8%	0.0%
16-Oct	0830	8.614	0.134	14.81	121	0.7%	0.7%
	1510	8.624	0.132	14.77	121	-0.1%	0.6%
Average						Maximum Deviation	-0.7%

APPENDIX E
Example Calculations

EXAMPLE CALCULATIONS

Run Number: Dryer – Run 1

Stack Gas Temperature, °R

$$T_s = 460 + t_s$$

$$T_s = 460 + 199.6 = 659.6 \text{ °R}$$

Volume of Dry Gas Sampled at Standard Conditions, Dry Standard Cubic Feet

$$V_{\text{mstd}} = [17.64] \left[\frac{\left(P_{\text{bar}} + \frac{\Delta H}{13.6} \right)}{T_m + 460} \right]$$

$$V_{\text{mstd}} = [17.64] [0.9828] [30.692] \left[\frac{\left(29.80 + \frac{1.00}{13.6} \right)}{543.8} \right]$$

$$V_{\text{mstd}} = 28.834 \text{ ft}^3$$

Volume of Water Sampled, SCF

$$V_{\text{wstd}} = 0.04715 \text{ [Weight of Condensed Moisture]}$$

$$V_{\text{wstd}} = 0.04715 [83.8]$$

$$V_{\text{wstd}} = 3.951 \text{ ft}^3$$

Fraction of Water Vapor in Sample Gas Stream

$$\% \text{H}_2\text{O} = \left[\frac{V_{\text{wstd}}}{V_{\text{mstd}} + V_{\text{wstd}}} \right] \times 100$$

$$\% \text{H}_2\text{O} = \left[\frac{3.951}{28.834 + 3.951} \right] \times 100$$

$$\% \text{H}_2\text{O} = 12.05$$

Dry Mole Fraction of Flue Gas

$$M_{fd} = 1 - \%H_2O/100$$

$$M_{fd} = 1 - [12.05/100]$$

$$M_{fd} = 0.879$$

Molecular Weight of Sample Gas, Dry

$$M_d = 0.44[\%CO_2] + 0.32[\%O_2] + 0.28[100 - \%O_2 - \%CO_2]$$

$$M_d = 0.44[2.0] + 0.32[19.0] + 0.28[100 - 19.0 - 2.0]$$

$$M_d = 29.08 \text{ pounds/pound-mole}$$

Molecular Weight of Sample Gas, Actual Conditions

$$M_s = [M_d \times M_{fd}] + [0.18 \times \%H_2O]$$

$$M_s = [29.08 \times 0.879] + [0.18 \times 12.05]$$

$$M_s = 27.74 \text{ pounds/pound-mole}$$

Average Stack Gas Velocity, Feet/second

$$v_s = K_p C_p \left(\sqrt{\Delta p} \right)_{avg} \left[\sqrt{\frac{T_s + 460}{P_s M_s}} \right]$$

$$v_s = (85.49)(0.84) \left(\sqrt{2.104} \right) \left[\sqrt{\frac{659.6}{(29.61)(27.74)}} \right]$$

$$v_s = 93.35 \text{ feet/second}$$

Wet Volumetric Flue Gas Flow Rate at Stack Conditions, Cubic Feet per Minute

$$Q_{aw} = 60 \times v_s \times A$$

$$Q_{aw} = 60 \times 70.18 \times 12.57$$

$$Q_{aw} = 70,382 \text{ Actual Cubic Feet per Minute}$$

Dry Volumetric Flue Gas Flow Rate at Standard Conditions, Cubic Feet per Minute

$$Q_{sd} = 60 \times Mfd \times vs \times A \times \left[\frac{528}{ts + 460} \right] \left[\frac{Ps}{29.92} \right]$$

$$Q_{sd} = 60 \times 0.879 \times 93.35 \times 12.57 \left[\frac{528}{659.6} \right] \left[\frac{29.61}{29.92} \right]$$

$$Q_{sd} = 49,036 \text{ Dry Standard Cubic Feet per Minute}$$

Average THC Dry Basis Concentration as Propane

$$C_{THCD} = (C_{THCW}) / (M_{fd})$$

Where: C_{THCd} = dry basis concentration of THC in ppm
 M_{fd} = dry mole fraction from Method 4 concurrent run

$$C_{THCD} = 29.6 / 0.879 = 33.6 \text{ ppm THC as propane}$$

Average THC Dry Basis Concentration as Carbon

$$C_{THCD} = (C_{THCW}) \times (3) / (M_{fd})$$

Where: C_{THCd} = dry basis concentration of THC in ppm
 M_{fd} = dry mole fraction from Method 4 concurrent run

$$C_{THCD} = (29.6) \times (3) / 0.879 = 100.8 \text{ ppm THC as Carbon}$$

VOC Emission Rate in Pounds Per Hour

$$E_{VOC} = (C_{VOC}) (Q_{SD}) (60 \text{ min/hr}) (C_F)$$

Where: Q_{SD} = measured flow rate in stack in dscfm
 C_F = Conversion factor in lb/scf – ppm
 $C_F = 3.117 \times 10^{-8}$ for Carbon

$$E_{VOC} = (100.8) (49,036) (60 \text{ min/hr}) (3.117 \times 10^{-8}) = 9.24 \text{ lb/hr as Carbon}$$

APPENDIX F

Gas Cylinder Certification Sheets

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number	E02AI99E15A00A6	Reference Number	122-124323950-1
Cylinder Number	CC410934	Cylinder Volume	146 Cu.Ft.
Laboratory	ASG - Durham - NC	Cylinder Pressure	2015 PSIG
PGVP Number	B22012	Valve Outlet	590
Gas Code	APPVD	Analysis Date	Jul 02, 2012

Expiration Date: Jul 02, 2015

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed. Analytical Methodology does not require correction for analytical interferences. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.
 Do Not Use This Cylinder below 150 psig (1 Mega Pascal)

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
PROPANE	28.00 PPM	27.99 PPM	G1	+/- 1% NIST Traceable
Air	Balance			

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	080610	CC263046	49.62PPM PROPANE/AIR	May 14, 2018

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AHR0801333 C3H8	FTIR	Jun 19, 2012

Triad Data Available Upon Request

Notes: ANW PN 781077



Approved for Release



Praxair Distribution Mid-Atlantic
 145 Shiversville Rd.
 Bethlehem, PA 18015
 Tel: (610) 317-1608 Fax: (610) 758 8382
 PGVP ID:

DocNumber: 000003740

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

Customer & Order Information:

CHEROKEE INSTRUMENTS INC ^
 901 BRIDGE ST
 FUQUAY VARINA NC 275260

Praxair Order Number: 13003732
 Customer P. O. Number: 10429
 Customer Reference Number:

Fill Date: 4/7/2010
 Part Number: EV AIPR60ME-AS
 Lot Number: 917009747
 Cylinder Style & Outlet: AS CGA 590
 Cylinder Pressure & Volume: 2000 psig 140 cu. ft.

Certified Concentration:

Expiration Date:	4/12/2018	NIST Traceable
Cylinder Number:	CC283143	Analytical Uncertainty:
50.0 ppm	PROPANE	± 1 %
Balance	AIR	

Certification Information: Certification Date: 4/12/2010 Term: 96 Months Expiration Date: 4/12/2018

This cylinder was certified according to the 1997 EPA Traceability Protocol, Document #EPA-600/R-97/121, using Procedure G1. Do Not Use this Standard if Pressure is less than 150 PSIG.

Analytical Data:

(R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

1. Component: PROPANE

Requested Concentration: 50 ppm
 Certified Concentration: 50.0 ppm
 Instrument Used: VARIAN 3300 INST 023 (PROPANE)
 Analytical Method: FID
 Last Multipoint Calibration: 3/16/2010

First Analysis Data:		Date: 4/12/2010	
Z: 0	R: 50.39	C: 49.84	Conc: 49.777
R: 50.38	Z: 0	C: 50.21	Conc: 50.147
Z: 0	C: 50.2	R: 50.34	Conc: 50.137
UOM: PPM	Mean Test Assay: 50.02 PPM		

Reference Standard Type: GMS
 Ref. Std. Cylinder #: CC182336
 Ref. Std. Conc: 50.3 PPM
 Ref. Std. Traceable to SRM #: 1668c
 SRM Sample #: 82-J-49
 SRM Cylinder #: XFC03734B

Second Analysis Data:		Date:	
Z: 0	R: 0	C: 0	Conc: 0
R: 0	Z: 0	C: 0	Conc: 0
Z: 0	C: 0	R: 0	Conc: 0
UOM: PPM	Mean Test Assay: 0 PPM		

Analyzed by:

Megha Patel for
 John Pribish

Certified by:

[Signature]
 Robin Morgan

Information contained herein has been prepared at your request by qualified experts within Praxair Distribution, Inc. While we believe that the information is accurate within the limits of the analytical methods employed and is complete to the extent of the specific analyses performed, we make no warranty or representation as to the suitability of the use of the information for any purpose. The information is offered with the understanding that any use of the information is at the sole discretion and risk of the user. In no event shall the liability of Praxair Distribution, Inc., arising out of the use of the information contained herein exceed the fee established for providing such information.

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Part Number	E02AI99E15A3227	Reference Number	122-124370084-1
Cylinder Number	SG9164792BAL	Cylinder Volume	146.2 CF
Laboratory	ASG - Durham - NC	Cylinder Pressure	2015 PSIG
PGVP Number	B22013	Valve Outlet	590
Gas Code	PPN	Certification Date	Apr 17, 2013

Expiration Date: Apr 17, 2021

Certification performed in accordance with "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)" document EPA 600/R-12/531 using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder below 100 psig, i.e. 0.7 megapascals.

ANALYTICAL RESULTS					
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty	Assay Dates
PROPANE	86.00 PPM	86.13 PPM	G1	+/- 1% NIST Traceable	04/17/2013
AIR	Balance				

CALIBRATION STANDARDS					
Type	Lot ID	Cylinder No	Concentration	Uncertainty	Expiration Date
NTRM	09081735	CC304058	97.82 PPM PROPANE/AIR	+/- 0.5%	Oct 02, 2013

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AHR0801333 C3H8	FTIR	Mar 20, 2013

Triad Data Available Upon Request

Notes



Approved for Release



Praxair Distribution Mid-Atlantic
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 Bethlehem, PA 18015
 Telephone: (610) 317-1608
 Facsimile: (610) 758-8382

DocNumber: 000007981

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

Customer & Order Information

CHEROKEE INSTRUMENTS INC *
 901 BRIDGE ST
 FUQUAY VARINA NC 27526

Praxair Order Number: 15303079
 Customer P.O. Number: 11036
 Customer Reference Number:

Fill Date: 12/02/2010
 Part Number: AI PR260ZE AS
 Lot Number: 951034265
 Cylinder Style & Outlet: AS CGA 580
 Cylinder Pressure & Volume: 2000 psig 140 cu ft

Certified Concentration:

Expiration Date	12/13/2013	NIST Traceable
Cylinder Number	CC109519	Analytical Uncertainty
258.1 ppm	PROPANE	± 1 %
Balance	AIR	

Certification Information: Certification Date: 12/13/2010 Term: 36 Months Expiration Date: 12/13/2013

This cylinder was certified according to the 1997 EPA Traceability Protocol, Document #EPA-600/R-97/121, using Procedure G1
 Do Not Use this Standard if Pressure is less than 150 PSIG

Analytical Data:

(R=Reference Standard Z=Zero Gas C=Gas Candidate)

Component: PROPANE

Requested Concentration: 260 ppm
 Certified Concentration: 258.1 ppm
 Instrument Used: VARIAN 3300 INST 023 (PROPANE)
 Analytical Method: FID
 Last Multipoint Calibration: 11/19/2010

Reference Standard Type: GMIS
 Ref Std Cylinder #: CG136736
 Ref Std Conc: 499.9 PPM
 Ref Std Traceable to SRM #: 1669b
 SRM Sample #: 81-H 14
 SRM Cylinder #: XF004157b

First Analysis Data Date: 12/13/2010

Z:	0	R:	501.2	C:	258.6	Conc:	258.07
R:	501.4	Z:	0	C:	258.5	Conc:	257.97
Z:	0	C:	258.7	R:	500.2	Conc:	258.17

UOM: PPM Mean Test Assay: 258.07 PPM

Second Analysis Data Date:

Z:	0	R:	0	C:	0	Conc:	0
R:	0	Z:	0	C:	0	Conc:	0
Z:	0	C:	0	R:	0	Conc:	0

UOM: PPM Mean Test Assay: 0 PPM

Analyzed by: 
 John Pridish 12/13/10

Certified by: 
 Ashley Davila

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DocNumber: 000009995

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

Customer & Order Information:

CHEROKEE INSTRUMENTS INC *
 901 BRIDGE ST
 FUQUAY VARINA NC 275260

Praxair Order Number: 16230993
 Customer P. O. Number: 31207
 Customer Reference Number:

Fill Date: 3/17/2011
 Part Number: EV AIPR500ME-AS
 Lot Number: 912117668
 Cylinder Style & Outlet: AS CGA 590
 Cylinder Pressure & Volume: 2000 psig 140 cu ft

Certified Concentration:

Expiration Date	3/21/2014	NIST Traceable
Cylinder Number	SA20675	Analytical Uncertainty
507.1 ppm PROPANE		± 1 %
Balance AIR		

Certification Information: Certification Date: 3/21/2011 Term: 36 Months Expiration Date: 3/21/2014

This cylinder was certified according to the 1997 EPA Traceability Protocol, Document #EPA-600/R-97/121, using Procedure G1
 Do Not Use this Standard if Pressure is less than 150 PSIG

Analytical Data:

(R=Reference Standard, Z=Zero Gas, C=Gas Candidate)

1. Component: PROPANE

Requested Concentration: 500 ppm
 Certified Concentration: 507.1 ppm
 Instrument Used: VARIAN 3300 INST 023 (PROPANE)
 Analytical Method: FID
 Last Multiport Calibration: 3/16/2011

Reference Standard Type: GMIS
 Ref. Std. Cylinder #: CC103865
 Ref. Std. Conc.: 749.3 PPM
 Ref. Std. Traceable to SRM #: 2646a
 SRM Sample #: 103 C-23
 SRM Cylinder #: XF000820B

First Analysis Data: Date: 3/21/2011

Z:	0	R:	749.9	C:	508.2	Conc:	507.86
R:	749.1	Z:	0	C:	507.2	Conc:	506.80
Z:	0	C:	505.8	R:	750.4	Conc:	505.46

UOM: PPM Mean Test Assay: 507.06 PPM

Second Analysis Data: Date:

Z:	0	R:	0	C:	0	Conc:	0
R:	0	Z:	0	C:	0	Conc:	0
Z:	0	C:	0	R:	0	Conc:	0

UOM: PPM Mean Test Assay: 0 PPM

Analyzed by


 John Prubish
 3/21/11

Certified by


 Michelle Kostik

Information contained herein has been prepared at your request by qualified experts within Praxair Distribution, Inc. While we believe that the information is accurate within the limits of the analytical methods employed and is complete to the extent of the specific analyses performed, we make no warranty or representation as to the suitability of the use of the information for any purpose. The information is offered with the understanding that any use of the information is at the sole discretion and risk of the user. In no event shall the liability of Praxair Distribution, Inc. arising out of the use of the information can in any event exceed the fee established for providing such information.

CERTIFICATE OF ANALYSIS

Grade of Product: EPA Protocol

Airgas Specialty Gases

830 United Drive
 Durham, NC 27713
 919-544-3773 Fax 919-544-3774
 www.airgas.com

Part Number	E02AI99E15A0333	Reference Number	122-124344171-1
Cylinder Number	CC148274	Cylinder Volume	146 Cu.Ft.
Laboratory	ASG - Durham - NC	Cylinder Pressure	2015 PSIG
PGVP Number	B22012	Valve Outlet	590
Gas Code	APPVD	Analysis Date	Nov 05, 2012

Expiration Date: Nov 05, 2020

Certification performed in accordance with 'EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards (May 2012)' document EPA 800/R-12/531, using the assay procedures listed. Analytical Methodology does not require correction for analytical interference. This cylinder has a total analytical uncertainty as stated below with a confidence level of 95%. There are no significant impurities which affect the use of this calibration mixture. All concentrations are on a volume/volume basis unless otherwise noted.

Do Not Use This Cylinder Below 100 psig, i.e. 7 megapascals.

ANALYTICAL RESULTS				
Component	Requested Concentration	Actual Concentration	Protocol Method	Total Relative Uncertainty
PROPANE	850.0 PPM	836.9 PPM	G1	+/- 1% NIST Traceable
Air	Balance			

CALIBRATION STANDARDS				
Type	Lot ID	Cylinder No	Concentration	Expiration Date
NTRM	110609	CC343416	1000.3PPM PROPANE/NITROGEN	Mar 04, 2017

ANALYTICAL EQUIPMENT		
Instrument/Make/Model	Analytical Principle	Last Multipoint Calibration
Nicolet 6700 AHR0801333 C3H8	FTIR	Oct 11, 2012

Triad Data Available Upon Request

Notes ANW PN 781018



Approved for Release

6141 EASTON ROAD, BLDG 1, PLUMSTEADVILLE, PA 18949-0310

Phone: 800-331-4953 Fax: 215-766-7226

CERTIFICATE OF ACCURACY: Certified Working Class Calibration Standard

Product Information

Document # : 46628943-001
Item No.: MM301080-T-30AL
P.O. No.: 06081203

Cylinder Number: ALM018055
Cylinder Size: 30AL
Certification Date: 21Jun2012
Expiration Date: 21Jun2014
Lot Number: PLU0109851

Customer

ENTHALPY ANAYTICAL, INC.
06081203
800-1 CAPITOLA DRIVE
DURHAM, NC 27703
US

CERTIFIED CONCENTRATION

<u>Component Name</u>	<u>Concentration (Moles)</u>	<u>Accuracy (+/-%)</u>
METHANOL	105. PPM	5
SULFUR HEXAFLUORIDE	3.0 PPM	5
NITROGEN	BALANCE	

TRACEABILITY

Traceable To

Scott Reference Standard

APPROVED BY: 
DAVID ASHNOFF

DATE: 6-21-2012

CERTIFICATE OF ANALYSIS

Grade of Product: **CERTIFIED STANDARD-SPEC**

Part Number:	X03NI99C15A1FX5	Reference Number:	83-124390037-1A
Cylinder Number:	CC90659	Cylinder Volume:	144.4 CF
Laboratory:	ASG - Port Allen - LA	Cylinder Pressure:	2015 PSIG
Analysis Date:	Sep 30, 2013	Valve Outlet:	350S
Lot Number:	83-124390037-1A		

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration (Mole %)	Analytical Uncertainty
SULFUR HEXAFLUORIDE	3.000 PPM	3.127 PPM	+/- 5%
METHANOL	100.0 PPM	91.71 PPM	+/- 2%
NITROGEN	Balance		

Notes:


Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

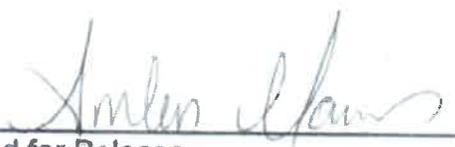
Part Number:	X02NI99C15A1268	Reference Number:	122-124373993-1
Cylinder Number:	CC432538	Cylinder Volume:	144.4 CF
Laboratory:	ASG - Durham - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	May 08, 2013	Valve Outlet:	350
Lot Number:	122-124373993-1		

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Requested Concentration	Actual Concentration (Mole %)	Analytical Uncertainty
ETHYLENE	100.0 PPM	99.88 PPM	+/- 2%
NITROGEN	Balance		

Notes:



Approved for Release

APPENDIX F

Equipment Calibration Sheets

**APEX INSTRUMENTS METHOD 5 POST-TEST CONSOLE CALIBRATION
USING CALIBRATED CRITICAL ORIFICES
3-POINT ENGLISH UNITS**

Meter Console Information	
Console Model Number	522
Console Serial Number	909033
DGM Model Number	RW 110
DGM Serial Number	961167

Calibration Conditions	
Date	10/23/13
Time	10:30
Barometric Pressure	29.46 in Hg
Theoretical Critical Vacuum ¹	13.91 in Hg
Calibration Technician	TTB

Factors/Conversions	
Std Temp	528 °R
Std Press	29.92 in Hg
K ₁	17.647 or/in Hg

¹For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.

²The Critical Orifice Coefficient, K', must be entered in English units, (ft³•°R^{1/2})/(in•Hg•min).

Calibration Data											
Run Time	Metering Console				Calibration Factor				Critical Orifice		
	Elapsed (g) min	DGM Orifice ΔH (P _{in}) in H ₂ O	Volume Initial (V _{in}) cubic feet	Volume Final (V _{out}) cubic feet	Outlet Temp Initial (T _{in}) °F	Outlet Temp Final (T _{out}) °F	Serial Number	Coefficient	Amb Temp Initial (T _{amb}) °F	Amb Temp Final (T _{amb}) °F	Actual Vacuum
16.0		1.20	637.000	646.659	62	63	FO55	see above ²	63	65	19.00
13.0		1.20	647.000	654.859	64	64	FO55	0.4594	65	65	19.00
13.0		1.20	655.100	662.965	64	65	FO55	0.4594	65	66	19.00

Standardized Data				Results			
Dry Gas Meter (V _{meas}) cubic feet	Critical Orifice (Q _{meas}) cfm	Volume Initial (V _{in}) cubic feet	Volume Final (V _{out}) cubic feet	Calibration Factor		Dry Gas Meter	
				Value (Y)	Variation (ΔY)	Flowrate Std & Corr (Q _{meas/corr}) cfm	ΔH @ 0.75 SCFM (ΔH@) in H ₂ O
9.639	0.602	9.460	0.591	0.981	0.000	0.591	1.934
7.821	0.602	7.679	0.591	0.982	0.000	0.591	1.933
7.819	0.601	7.675	0.590	0.982	0.000	0.590	1.933
Pretest Gamma	0.9828	% Deviation	0.1	0.982	Y Average	0.590	ΔH@ Average

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is ±0.02.

I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Methods, CFR Title 40, Part 60, Appendix A-3, Method 5, 16.2.3

Signature Todd Brozell

Date

10/23/2013

**Type S Pitot Tube Inspection and
Stack Thermocouple Calibration**

GENERAL INFORMATION

Probe ID
Date

Personnel
Coefficient Value

PITOT TUBE INSPECTION

Pitot Tube assembly level? (yes/no)
Pitot Tube obstruction? (yes/no)
Pitot Tube openings damaged? (yes/no)

α_1 $\leq \pm 10^\circ$
 α_2 $\leq \pm 10^\circ$
 β_1 $\leq \pm 5^\circ$
 β_2 $\leq \pm 5^\circ$
 γ
 θ
 $z = A \tan(\gamma)$ $\leq \pm \frac{1}{16}''$
 $\omega = A \tan(\theta)$ $\leq \pm \frac{1}{32}''$
 D_t
 ($\frac{3}{16}'' < D_t < \frac{3}{8}''$ Recommended)
 A
 P_A
 P_B
 ($1.05 < P/D_t < 1.50$ Recommended)

STACK THERMOCOUPLE CALIBRATION

Ref. Type Ref. ID

Source	Ref., °F	Stack TC, °F	Abs. Diff., °F
Ice bath	43	45	2
Ambient	75	75	0
Hot water	193	194	1
Maximum Temp. Difference, °F			2

**Type S Pitot Tube Inspection and
Stack Thermocouple Calibration**

GENERAL INFORMATION			
Probe ID	<input type="text" value="6H"/>	Personnel	<input type="text" value="DLS"/>
Date	<input type="text" value="9/21/2011"/>	Coefficient Value	<input type="text" value="0.84"/>

PITOT TUBE INSPECTION	
Pitot Tube assembly level? (yes/no)	<input type="text" value="yes"/>
Pitot Tube obstruction? (yes/no)	<input type="text" value="no"/>
Pitot Tube openings damaged? (yes/no)	<input type="text" value="no"/>

		<input type="text" value="1.4"/> $\leq \pm 10^\circ$
		<input type="text" value="0.4"/> $\leq \pm 10^\circ$
		<input type="text" value="1.9"/> $\leq \pm 5^\circ$
		<input type="text" value="1.2"/> $\leq \pm 5^\circ$
		<input type="text" value="2.9"/>
		<input type="text" value="0.2"/>
		<input type="text" value="0.049"/> $\leq \pm 1/8"$
		<input type="text" value="0.003"/> $\leq \pm 1/32"$
		<input type="text" value="0.375"/>
		($3/16" < D_t < 3/8"$ Recommended)
		<input type="text" value="0.9375"/>
		<input type="text" value="1.29"/>
		($1.05 < P/D_t < 1.50$ Recommended)

STACK THERMOCOUPLE CALIBRATION			
Ref. Type	<input type="text" value="Hg Thermometer"/>	Ref. ID	<input type="text" value="Hg-1"/>
Source	Ref., °F	Stack TC, °F	Abs. Diff., °F
Ice bath	43	45	2
Ambient	75	75	0
Hot water	193	192	1
Maximum Temp. Difference, °F			2

ATTACHMENT B