PERFORMANCE TESTING
June 2007

As Defined By The
Code of Federal Regulations; Title 40 Part 60 & 30 TAC 117.211

RMCEINC Project #2007-15029

WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE RDF
FERRIS, TEXAS

PREPARED FOR:
WASTE MANAGEMENT OF TEXAS, INC.
Waste Management Renewable Energy

BY:

RMC ENVIRONMENTAL, INC. – CHICAGO REGIONAL OFFICE

REPORT CERTIFICATION

The sampling, analysis, and data collection performed for this report were carried out under my direction and supervision, and I hereby certify that the test report is authentic and accurate, to the best of my knowledge.

Date 6/12/07

Signature

Rachel Chleborowicz
Project Manager
RMC ENVIRONMENTAL, INC.

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1.0 PROJECT INFORMATION

1.1 Company Information

Name and Address:	Waste Management, Inc. Skyline RDF 1201 North Central Ave Ferris, Texas 75125
Contact:	Allen Hunt
Telephone Number:	713-394-2269
Permit Number:	MSW 0042-C; Standard Air Permit for Plant 78639
Source Tested:	Four IC Engines (FIN: ENG01, ENG02, ENG03, ENG04) – Landfill Gas Treatment / Electric Generating Plant

1.2 Testing Firm Information

Name and Address:	RMC ENVIRONMENTAL, INC. 9226 North 2nd Street Machesney Park, Illinois 61115
Contact:	Rachel Chleborowicz
Telephone Number:	815-378-6150 Mobile 800-532-3391 Office RMCE@AirMonitoring.com / RMCEInc@aol.com

1.3 Test Information

Test Requested By:	Waste Management, Inc. – Skyline RDF	
Source Contact:	Allen Hunt	
Telephone Number:	713-394-2269	
Test Objective:	IC Engine Performance Testing	
Test Methods:	EPA Methods 1-4, 3A, 7E and 10	
Test Dates:	June 5 – 6, 2007	
Source Test Coordinators:	Greg Miles Mike Back	Site Coordinator, Waste Management, Inc. Waste Management, Inc.
Test Personnel:	Rachel Chleborowicz Gregory Chleborowicz	Sr. Project Manager, RMCEInc Project Manager, RMCEInc
Laboratory Analysis:	N/A	

2.0 SOURCE IDENTIFICATION

Name and Address:	Waste Management, Inc. Skyline RDF 1201 North Central Ave Ferris, Texas 75125
Contact:	Allen Hunt
Telephone Number:	713-394-2269

Air Quality Permit #:	MSW 0042-C; Standard Air Permit for Plant 78639
Source Tested:	Four IC Engines – Landfill Gas Treatment / Electric Generating Plant
Fuel:	Landfill Gas
Stack Dimensions:	Height 12' Internal Diameter – 16"
Sampling Location:	~ 60" Downstream and ~ 48" Upstream from any flow disturbance

- Senior Project Manager works directly with the site coordinator and the facility's operators during the testing to coordinate the testing. They are also responsible for operating and monitoring the instrumental test methods within the mobile test laboratory.
- Project Manager conducts, manages and/or supervises the wet test methods conducted at the sample location.
- The Site Coordinator is the facility's representative for the test program.

The individuals listed within above account for nearly 35 years of accumulative experience in the stack testing industry. Their experience expands nearly every state in the United States. It also includes most source categories such as aerospace facilities, waste incinerators, hazardous waste incinerators, trash incinerators, medical waste incinerators, crematories, cement kilns, paper mills, steel mills, combined cycle power plants, simple cycle power plants, coal fired power plants, Waste-to-energy facilities, natural gas compressor stations, diesel engines, ethanol plants, petro-chemical facilities and oil refineries.

3.0 SUMMARY AND DISCUSSION OF RESULTS

The compliance testing results for Waste Management, Inc. – Skyline RDF are shown in **Table 3-1**. The indicated pollutants are CO and NOx emissions in units of the emission standard (grams/BHP-Hr). This data is an average of the three one-hour test runs conducted on each engine.

The reference test data are enclosed in **Appendices A & B** and the corresponding process data collected from the engine operations screen and the portable GEM 1000 are included in **Appendix D**. Each engine is rated for 2233 horsepower with ~1600 Kw of power produced, the testing was conducted at those levels.

Table 3-1. Summary of Compliance Test Results

Parameter	Result	Permit Limit
Engine #1 [FIN:ENG01] – 6/5/07		
Engine #1 – NOx g/BHP-Hr	0.48	0.6 g NOx / BHP-Hr
Engine #1 – CO g/BHP-Hr	2.19	2.5 g CO / BHP-Hr
Engine #2 [FIN:ENG02] – 6/5/07		
Engine #2 - NOx g/BHP-Hr	0.52	0.6 g NOx / BHP-Hr
Engine #2 - CO g/BHP-Hr	2.14	2.5 g CO / BHP-Hr
Engine #3 [FIN:ENG03] – 6/6/07		
Engine #3 - NOx g/BHP-Hr	0.45	0.6 g NOx / BHP-Hr
Engine #3 - CO g/BHP-Hr	2.21	2.5 g CO / BHP-Hr
Engine #4 [FIN:ENG04] – 6/6/07		
Engine #4 - NOx g/BHP-Hr	0.52	0.6 g NOx / BHP-Hr
Engine #4 - CO g/BHP-Hr	2.30	2.5 g CO / BHP-Hr

4.0 POLLUTANTS AND TEST METHODS

Pollutant Tested:	NO_x	EPA Method 7E - 40 CFR 60, Appendix A
	CO	EPA Method 10 - 40 CFR 60, Appendix A

5.0 TEST PROCEDURES AND RESULTS

5.10 Sampling Procedures

Testing was completed per EPA test methods 1, 2, 3A, 4, 7E and 10 defined in 40 CFR Part 60 Appendix A.

5.11 Volumetric Flow Rates

RMCEINC determined the number and location of the traverse points for volumetric flow rate measurement according to the procedures outlined in EPA Method 1. When determining the location and number of sample points, RMCEINC took into account the number of sample ports, duct configuration, and location of upstream and downstream flow disturbances. **Figure 5-1**, below, is a diagram of the engine showing the exhaust to the silencer and the ports we used for testing. **Figure 5-2** illustrates the port location and points used for the Method 2 traverse.

The flue gas velocity and volumetric flow rate were determined according to the procedures of EPA Method 2. A Type S pitot tube with a Type K thermocouple was used to measure velocity pressure and stack gas temperature at each sample point. Each pitot tube conformed to the geometric specifications of EPA Method 2 and was assigned a coefficient of 0.84. An umbilical cord connected the pitot tube to the meter box inclined manometer and digital temperature readout. RMCEINC leak-checked the pitot tube prior to and after conducting the flow traverse.

RMCEINC determined the flue gas composition and molecular weight using EPA Methods 3A and 4 procedures.

Figure 5-1 – Engine Schematic / Diagram.

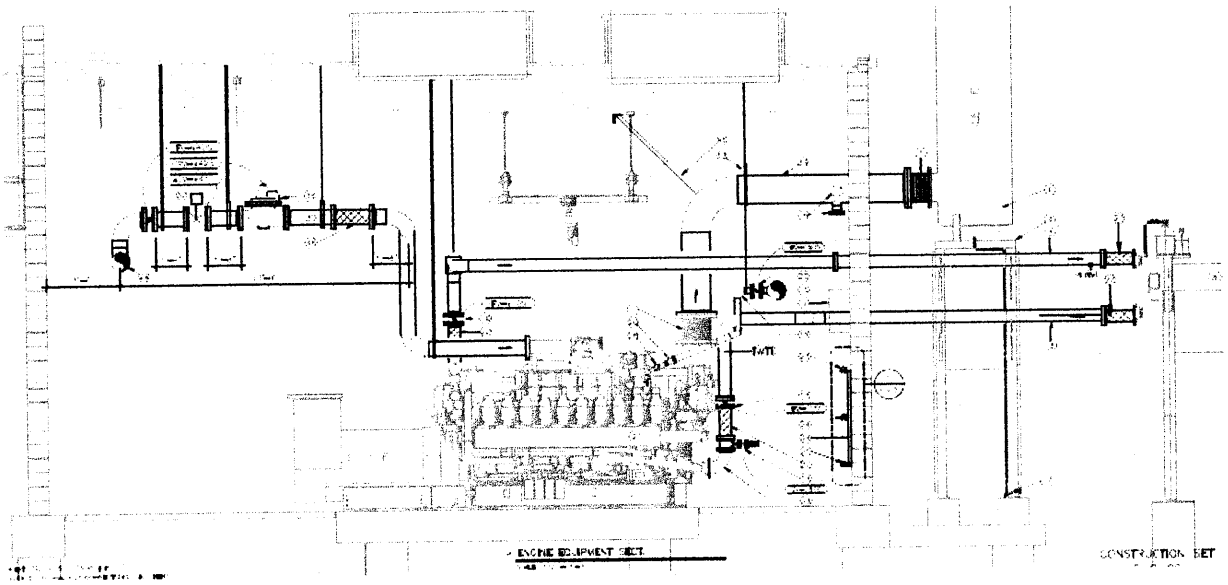
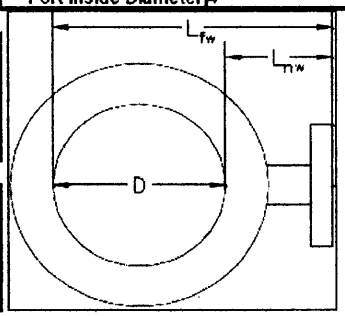


Figure 5-2. EPA Method 1 Information – Engines 1-4

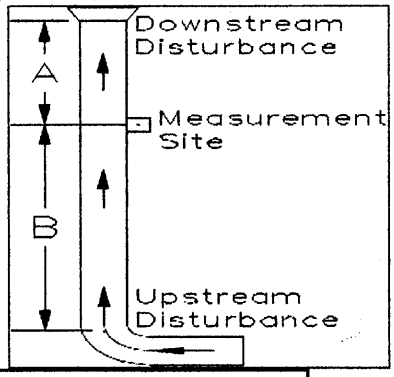
METHOD 1 - SAMPLE AND VELOCITY TRAVERSES FOR CIRCULAR SOURCES

Plant Name	Skyline RDF	Date	6/4/2007
Sampling Location	Engine Exhausts	Project #	2007-15029
Operator	GC/AC	# of Ports Available	2
Stack Type	Circular	# of Ports Used	2
Stack Size	Small	Port Inside Diameter	4

Circular Stack or Duct Diameter			
Distance to Far Wall of Stack	(L_{fw})	24.00	in
Distance to Near Wall of Stack	(L_{nw})	8.00	in
(=Lfw - Lnw) Diameter of Stack	(D)	16.00	in
(=3.14(D/2/Cunits)2) Area of Stack	(A_s)	1.40	ft^2



Distance from Port to Disturbances			
Distance Upstream	(B)	48.00	in
(=B/D) Diameters Upstream	(B_D)	3.00	diameters
Distance Downstream	(A)	60.00	in
(=A/D) Diameters Downstream	(A_D)	3.75	diameters



Number of Traverse Points Required			
Diameters to Flow Disturbance		Minimum Number of[1] Traverse Points	
Up Stream	Down Stream	Particulate Points	Velocity Points
2.00-4.99	0.50-1.24	24	16
5.00-5.99	1.25-1.49	20	16
6.00-6.99	1.50-1.74	16	12
7.00-7.99	1.75-1.99	12	12
>= 8.00	>=2.00	8 or 12[2]	8 or 12[2]
Upstream Spec		24	16
Downstream Spec		8	8
Traverse Pts Required		24	16

[1] Check Minimum Number of Points for the Upstream and Downstream conditions, then use the largest.
[2] 8 for Circular Stacks 12 to 24 inches
12 for Circular Stacks over 24 inches

Number of Traverse Points Used			
2	Ports by	8	Across
16	Pts Used	16	Required
☐	Particulate	☑	Velocity

Location of Traverse Points in Circular Stacks						
Traverse Point Number	(Fraction of Stack Diameter from Inside Wall to Traverse Point) Number of Traverse Points on a Diameter					
	2	4	6	8	10	12
1	.146	.067	.044	.032	.026	.021
2	.854	.250	.146	.105	.082	.067
3		.750	.296	.194	.146	.118
4		.933	.704	.323	.226	.177
5			.854	.677	.342	.250
6			.956	.806	.658	.356
7				.895	.774	.644
8				.968	.854	.750
9					.918	.823
10					.974	.882
11						.933
12						.979

Traverse Point Locations			
Traverse Point Number	Fraction of Stack Diameter	Distance from Inside Wall	Distance Including Nipple Length
		in	in
1	0.032	4/8	8 4/8
2	0.105	1 5/8	9 5/8
3	0.194	3 1/8	11 1/8
4	0.323	5 1/8	13 1/8
5	0.677	10 7/8	18 7/8
6	0.806	12 7/8	20 7/8
7	0.895	14 3/8	22 3/8
8	0.968	15 4/8	23 4/8
9			
10			
11			
12			

5.12 Instrumental Test Equipment and Procedures

The test program includes the measurement of exhaust gas concentrations of CO, NO_x, and O_2. RMCEINC used the procedures that conform to the requirements of CFR; Title 40 Part 60, Appendix A, Methods 1, 2, 3A, 4, 7E and 10. Each of the three test runs include a minimum of one hour of continuous flue gas sampling.

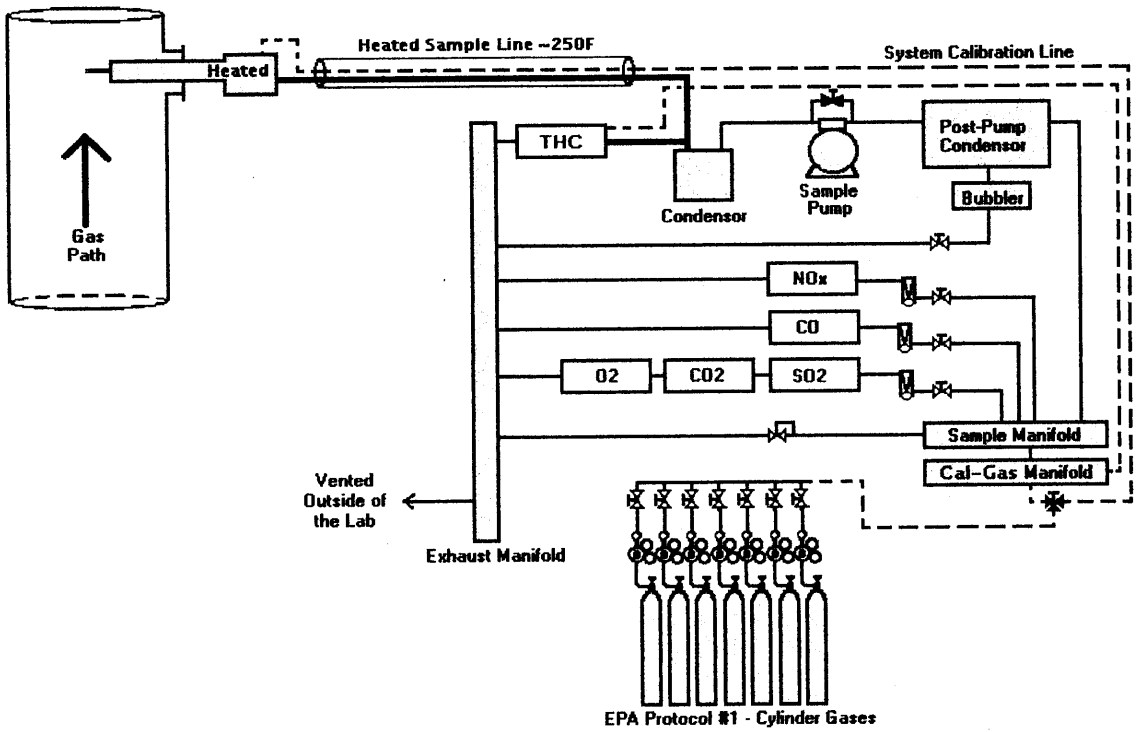
Concentration measurements of O_2, CO and NO_x, were made according to EPA Methods 3A, 7E and 10 using the analyzers listed in **Table 5-1. Figure 5-2** is a schematic of the wet/dry extractive reference measurement gas sampling system used by RMCEINC. All components of the sampling system that contact the sample are stainless steel, glass, or Teflon.

A sampling probe provides a method of drawing a continuous sample of flue gases. The probe assembly is temperature controlled to maintain the sample above the dew point and includes a calibration value and sample filter. A temperature controlled Teflon umbilical connects the probe assembly to an ice bath condenser. The condenser is equipped with a condensate discharge pump to continuously remove the condensate from the condenser traps. The dried sample is then transported to the mobile laboratory's sample manifold.

TABLE 5-1
REFERENCE METHOD ANALYZERS

Parameter	Analyzer	Analytical Technique	Instrument Span
NO_x	Thermo Environmental Instruments Model 10A	Chemiluminescence	0-500 / 1000, ppm
CO	Thermo Environmental Instruments Model 48	Gas Filter Correlation	0-1000 ppm
CO2	Fuji – California Analytical	Infra Rad	0-20 %
O_2	Teledyne – 3300	Fuel Cell	0-25 %

Figure 5-1. Reference Method Gas Sampling System Diagram



5.13 Instrumental Analytical Data

RMCEINC performed test runs to measures the flue gas for NO_x and CO in terms of an emission rate (lb/Hr). A three-point (zero, mid-range, and high-range) analyzer calibration error check on each reference analyzer was performed before initiating the testing. This check is conducted after final calibration adjustments are made by injecting the calibration gases directly into each gas analyzer and recording the responses on the reference data acquisition system.

RMCEINC conducts zero and upscale calibration checks both before and after each test run in order to quantify measurement system calibration drift and sampling system bias. Upscale is either the low-, mid- or high-range gas, whichever most closely approximates the flue gas level. During these checks, the calibration gases are introduced into the sampling system through a 3-way valve assembly at the probe outlet so that the calibration gases are analyzed in the same manner as the flue gas samples.

RMCEINC recorded the reference analyzer measurements as 1-minute and 60-minute averages on its DAS. All test run concentration results were determined from the average gas concentrations measured during the run and adjusted based on the zero and upscale sampling system bias check results (Equation 6C-1 presented in CFR; Title 40 Part 60, Method 6C, Section 8). The reference CO and NO_x emission values in terms of pounds per hour and grams per break horsepower hour were computed from each test run average of adjusted, dry basis CO, NO_x and percent O_2 using the CFR Title 40 Part 60 Appendix A Method 19.

6.0 EQUIPMENT CALIBRATION AND QUALITY ASSURANCE

RMCEINC followed the calibration and quality assurance procedures of EPA Methods 1, 2, 3A, 4, 5, 7E, 10 and throughout the test program. The maintenance for our meterboxes, probes, analyzers and a majority of our other test equipment is performed off site by either Clean Air Engineering or Millenium Instruments. These companies ensure that our equipment is operating correctly and within the specification of the respective methods. All equipment is calibrated in accordance with the EPA Methods and guidelines.

The results of sampling system bias and calibration drift tests for each test run are calculated and presented in the test report. Cylinder gases used during the testing are certified to meet or exceed EPA Protocol 1 requirements. The meter box calibrations, pitot tube inspections, calibration gas certificates of analysis and the analyzer quality assurance checks are included in **Appendix D**.

RMCEINC uses computers throughout the test program. Spreadsheets and software programs are checked in our office for accuracy. Software used by RMCEINC is structured to eliminate human errors in data entry where possible by automating the process. When possible RMCEINC, inputs field data directly into the DAS system and eliminates the hand written field data sheets. These systems provide an accurate measurement of the raw test data and are not used to modify or change test data in any manner. Equations used in these systems are taken directly from the CFR when possible and notations are provided if originated from an alternate source or customized in any manner.

APPENDIX A. TEST SUMMARY SHEETS

Emissions Summary

REFERENCE DATA SUMMARY

Company: Waste Management
Source: Engines 1-4

Date: 06/05/07
Project #: 2007-15029

CAL	RUN #	Start Time	End Time	O2 %	CO2 %	NOx ppm	CO ppm	NOx ppm @15% O2	CO ppm @15% O2	NOx lbs/mmBtu	CO lbs/mmBtu		
				DATA Link from the DATA Logger									
	1	06/05/07 08:20	09:20	7.62	12.70	68.00	510.60	30.22	226.88	0.111	0.508		Engine #1
00:12	2	06/05/07 09:32	10:32	7.74	9.38	61.70	502.20	27.67	225.18	0.102	0.830		Engine #1
00:13	3	06/05/07 10:45	11:45	7.76	10.30	68.88	487.23	30.93	218.77	0.114	0.806		Engine #1
00:57	4	06/05/07 12:42	13:42	7.82	15.35	66.80	485.10	30.14	218.86	0.111	0.806		Engine #2
00:18	5	06/05/07 14:00	15:00	7.80	11.96	73.20	487.80	32.98	219.75	0.121	0.810		Engine #2
00:10	6	06/05/07 15:10	16:10	7.77	13.11	73.70	486.90	33.11	218.76	0.122	0.806		Engine #2
16:00	7	06/06/07 08:10	09:10	7.49	13.34	60.83	517.30	26.76	227.55	0.099	0.838		Engine #3
00:10	8	06/06/07 09:20	10:20	7.59	10.17	60.74	492.70	26.93	218.45	0.099	0.805		Engine #3
00:07	9	06/06/07 10:27	11:27	7.83	12.44	62.98	492.90	28.43	222.50	0.105	0.820		Engine #3
00:18	10	06/06/07 11:45	12:45	7.76	12.02	69.51	516.20	31.22	231.83	0.115	0.854		Engine #4
00:06	11	06/06/07 12:51	13:51	7.75	12.07	67.77	505.00	30.39	226.49	0.112	0.834		Engine #4
00:07	12	06/06/07 13:58	14:58	7.77	12.41	71.66	502.20	32.21	225.72	0.119	0.832		Engine #4
	13												
	14												
	15												
			AVERAGE	7.73	12.10	67.15		30.08	223.40	0.111	0.796		

	Start Time	End Time	O2 %w	CO2 %w	NOx ppmw	CO ppmw	w	w	w	CO g/BHP-Hr	NOx g/BHP-Hr	CO lbs/Hr	NOx lbs/Hr	Outlet Flowrate DSCFM
			Wet based measurements corrected from DATA Logger											
1	06/05/07 08:20	09:20	6.46	10.77	57.67	433.02				2.23	0.49	10.99	2.41	4938
2	06/05/07 09:32	10:32	6.59	7.98	52.50	427.34				2.27	0.46	11.17	2.26	5104
3	06/05/07 10:45	11:45	6.64	8.82	58.98	417.21				2.08	0.48	10.25	2.38	4827
4	06/05/07 12:42	13:42	6.72	13.18	57.35	416.44				2.17	0.49	10.69	2.42	5055
5	06/05/07 14:00	15:00	6.74	10.33	63.23	421.34				2.19	0.54	10.81	2.67	5083
6	06/05/07 15:10	16:10	6.70	11.31	63.59	420.11				2.06	0.51	10.16	2.53	4789
7	06/06/07 08:10	09:10	6.39	11.38	51.89	441.30				2.34	0.45	11.54	2.23	5121
8	06/06/07 09:20	10:20	6.51	8.72	52.08	422.43				2.17	0.44	10.66	2.16	4964
9	06/06/07 10:27	11:27	6.71	10.65	53.93	422.11				2.12	0.45	10.44	2.19	4860
10	06/06/07 11:45	12:45	6.70	10.37	60.00	445.59				2.31	0.51	11.39	2.52	5062
11	06/06/07 12:51	13:51	6.59	10.27	57.68	429.82				2.29	0.50	11.27	2.49	5120
12	06/06/07 13:58	14:58	6.69	10.68	61.66	432.13				2.29	0.54	11.28	2.64	5152
13														
14														
15														
		AVERAGE	6.62	10.37	57.55	427.40				2.21	0.49	10.89	2.41	5006

APPENDIX B. FIELD TEST DATA W/ INSTRUMENTAL TEST DATA

Method 1-4 Field Data

Flow Rate Determinations

Calibration Summaries

Instrumental Test Run Data

Reference Data Summary

METHOD 4 RUN SUMMARY SHEET

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #1

Load: 1600 KW

Run:	**M4-R1**	**M4-R2**	**M4-R3**
Flow Runs:	1	2	3
Start Time:	06/05/07 08:20	06/05/07 09:32	06/05/07 10:45
End Time:	06/05/07 09:20	06/05/07 10:32	06/05/07 11:45

RUN DATA

Meter voume start (cu. ft.):	313.494	336.800	360.000
Meter volume finish (cu. ft.):	336.651	359.864	383.080
Meter calib. factor (Y):	0.9830	0.9830	0.9830
Barometric pressure (in. Hg):	29.95	29.95	29.95
Average Delta-H (in. H2O):	1.90	1.90	1.90
Gas meter temperature (deg F):	91.0	100.0	100.0
Sil-Gel total wt. H2O collected (grams):	21.5	9.0	8.7
Impinger total volume H2O collected (ml):	62	71	68

CALCULATED RESULTS

Gas volume sampled (DSCF)*:	21.937	21.489	21.504
Water vapor volume (SCF)*:	3.930	3.766	3.610
Moisture content (% volume):	**15.2**	**14.9**	**14.4**

* 68 deg F (20 deg C) - 29.92 in. Hg

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #1

Conducted By: GC/AC

Load: 1600 KW
Run: 1
Start Time: 06/05/07 08:20
End Time: 06/05/07 09:20

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	2.740	945	B-5	5.300	944
A-2	3.610	942	B-6	5.000	945
A-3	4.670	942	B-7	5.400	945
A-4	4.250	942	B-8	5.940	945
A-5	3.840	945			
A-6	3.460	945			
A-7	2.900	946			
A-8	3.160	946			
B-1	1.070	945			
B-2	4.650	946			
B-3	4.720	946			
B-4	5.060	944			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.95	(Pbar)	inches Hg
Static Pressure:	1.86	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.6	% O2	
Percent CO2:	12.7	% CO2	
Percent Nitrogen:	79.7	% N2	
Percent Moisture:	15.2	$\%H_20$	
Average Delta P:	4.11		inches H2O
Root Mean Sq. Delta P:	4.00	(Pavg)	inches H2O
Mean Temperature:	944.6	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.848	
ABSOLUTE STACK GAS PRESSURE: $Ps = Pbar + (Pg / 13.6)$	Ps =	30.09	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.34	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.46	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	183.9	ft/sec
DRY VOLUMETRIC FLOW RATE: $Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)$	Qsd =	4,938	DSCFM (DRY)
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd$	Qaw =	5,823.3	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd / 60$	Qaw =	97.1	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #1

Conducted By: GC/AC

Load: 1600 KW
Run: 2
Start Time: 06/05/07 09:32
End Time: 06/05/07 10:32

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	3.530	937	B-5	3.810	937
A-2	4.210	937	B-6	3.670	940
A-3	4.900	937	B-7	3.510	941
A-4	4.900	937	B-8	4.100	937
A-5	4.930	940			
A-6	5.070	940			
A-7	5.280	942			
A-8	5.080	942			
B-1	3.500	937			
B-2	3.510	939			
B-3	3.660	939			
B-4	3.370	937			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.95	(Pbar)	inches Hg
Static Pressure:	1.90	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.7	% O2	
Percent CO2:	9.4	% CO2	
Percent Nitrogen:	82.9	% N2	
Percent Moisture:	14.9	$\%H_20$	
Average Delta P:	4.19		inches H2O
Root Mean Sq. Delta P:	4.16	(Pavg)	inches H2O
Mean Temperature:	938.7	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.851	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.09	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	29.81	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.05	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	188.6	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	5,104	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	5,998.0	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	100.0	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #1

Conducted By: GC/AC

Load: 1600 KW
Run: 3
Start Time: 06/05/07 10:45
End Time: 06/05/07 11:45

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	2.170	925	B-5	3.510	925
A-2	2.650	925	B-6	4.140	925
A-3	2.900	925	B-7	4.440	925
A-4	3.120	925	B-8	4.510	925
A-5	3.400	924			
A-6	3.490	924			
A-7	4.540	926			
A-8	4.880	926			
B-1	4.000	925			
B-2	4.990	925			
B-3	3.850	924			
B-4	3.360	926			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.95	(Pbar)	inches Hg
Static Pressure:	1.90	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	10.3	% CO2	
Percent Nitrogen:	81.9	% N2	
Percent Moisture:	14.9	$\%H_20$	
Average Delta P:	3.75		inches H2O
Root Mean Sq. Delta P:	3.70	(Pavg)	inches H2O
Mean Temperature:	925.0	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.851	
ABSOLUTE STACK GAS PRESSURE: $Ps = Pbar + (Pg / 13.6)$	Ps =	30.09	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	29.96	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.18	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	176.6	ft/sec
DRY VOLUMETRIC FLOW RATE: $Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)$	Qsd =	4,827	DSCFM
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd$	Qaw =	5,673.1	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd / 60$	Qaw =	94.6	KSCFM (WET)

METHOD 4 RUN SUMMARY SHEET

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #2

Run:	**M4-R1**	**M4-R2**	**M4-R3**
Flow Runs:	1	2	3
Start Time:	6/5/2007 12:42	6/5/2007 14:00	6/5/2007 15:10
End Time:	6/5/2007 13:42	6/5/2007 15:00	6/5/2007 16:10

RUN DATA

Meter voume start (cu. ft.):	383.400	406.600	430.700
Meter volume finish (cu. ft.):	406.380	429.560	453.848
Meter calib. factor (Y):	0.9830	0.9830	0.9830
Barometric pressure (in. Hg):	29.87	29.87	29.87
Average Delta-H (in. H2O):	1.90	1.90	1.90
Gas meter temperature (deg F):	95.0	97.0	96.0
Sil-Gel total wt. H2O collected (grams):	7.7	4.1	4.4
Impinger total volume H2O collected (ml):	68	68	69

CALCULATED RESULTS

Gas volume sampled (DSCF)*:	21.546	21.450	21.665
Water vapor volume (SCF)*:	3.563	3.394	3.455
Moisture content (% volume):	**14.2**	**13.7**	**13.8**

* 68 deg F (20 deg C) - 29.92 in. Hg

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #2

Conducted By: GC/AC

Load: 1600 KW
Run: 1
Start Time: 06/05/07 12:42
End Time: 06/05/07 13:42

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	4.560	938	B-5	4.490	937
A-2	3.890	938	B-6	3.950	935
A-3	4.200	938	B-7	4.800	935
A-4	4.330	937	B-8	4.950	936
A-5	4.470	937			
A-6	4.700	939			
A-7	4.110	939			
A-8	3.710	937			
B-1	3.560	938			
B-2	4.240	938			
B-3	3.040	939			
B-4	3.480	937			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.95	(Pbar)	inches Hg
Static Pressure:	1.87	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	15.4	% CO2	
Percent Nitrogen:	76.9	% N2	
Percent Moisture:	14.2	$\%H_20$	
Average Delta P:	4.16		inches H2O
Root Mean Sq. Delta P:	4.14	(Pavg)	inches H2O
Mean Temperature:	937.4	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.858	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.09	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.77	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.96	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	185.0	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	5,055	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	5,889.3	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	98.2	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #2

Conducted By: GC/AC

Load: 1600 KW
Run: 2
Start Time: 06/05/07 14:00
End Time: 06/05/07 15:00

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	3.220	913	B-5	3.940	916
A-2	3.810	913	B-6	3.990	917
A-3	4.500	913	B-7	4.300	913
A-4	4.100	914	B-8	4.670	913
A-5	3.350	915			
A-6	4.560	915			
A-7	4.090	918			
A-8	4.520	919			
B-1	3.900	920			
B-2	4.120	920			
B-3	3.510	920			
B-4	3.800	913			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.95	(Pbar)	inches Hg
Static Pressure:	1.80	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	12.0	% CO2	
Percent Nitrogen:	80.3	% N2	
Percent Moisture:	13.6	$\%H_20$	
Average Delta P:	4.02		inches H2O
Root Mean Sq. Delta P:	4.01	(Pavg)	inches H2O
Mean Temperature:	915.8	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.864	
ABSOLUTE STACK GAS PRESSURE: $Ps = Pbar + (Pg / 13.6)$	Ps =	30.08	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.22	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.56	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	182.0	ft/sec
DRY VOLUMETRIC FLOW RATE: $Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)$	Qsd =	5,083	DSCFM
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd$	Qaw =	5,884.9	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd / 60$	Qaw =	98.1	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #2

Conducted By: GC/AC

Load: 1600 KW
Run: 3
Start Time: 06/05/07 15:10
End Time: 06/05/07 16:10

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	2.110	931	B-5	3.710	931
A-2	3.570	931	B-6	3.640	931
A-3	3.650	932	B-7	3.670	932
A-4	3.310	932	B-8	3.800	933
A-5	3.420	932			
A-6	3.540	934			
A-7	4.090	934			
A-8	4.540	934			
B-1	3.630	932			
B-2	3.910	932			
B-3	3.820	932			
B-4	3.980	931			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.95	(Pbar)	inches Hg
Static Pressure:	1.80	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	13.1	% CO2	
Percent Nitrogen:	79.1	% N2	
Percent Moisture:	13.7	$\%H_20$	
Average Delta P:	3.65		inches H2O
Root Mean Sq. Delta P:	3.63	(Pavg)	inches H2O
Mean Temperature:	932.1	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.863	
ABSOLUTE STACK GAS PRESSURE: $Ps = Pbar + (Pg / 13.6)$	Ps =	30.08	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.41	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.71	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	173.7	ft/sec
DRY VOLUMETRIC FLOW RATE: $Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)$	Qsd =	4,789	DSCFM
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd$	Qaw =	5,550.3	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd / 60$	Qaw =	92.5	KSCFM (WET)

METHOD 4 RUN SUMMARY SHEET

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #3

Run:	**M4-R1**	**M4-R2**	**M4-R3**
Flow Runs:	1	2	3
Start Time:	06/06/07 08:10	06/06/07 09:20	06/06/07 10:27
End Time:	06/06/07 09:10	06/06/07 10:20	06/06/07 11:27

RUN DATA

Meter voume start (cu. ft.):	454.000	477.000	500.100
Meter volume finish (cu. ft.):	476.653	499.930	522.840
Meter calib. factor (Y):	0.9830	0.9830	0.9830
Barometric pressure (in. Hg):	29.87	29.87	29.87
Average Delta-H (in. H2O):	1.90	1.90	1.90
Gas meter temperature (deg F):	80.0	90.0	95.0
Sil-Gel total wt. H2O collected (grams):	7.9	5.7	5.0
Impinger total volume H2O collected (ml):	72	71	71

CALCULATED RESULTS

Gas volume sampled (DSCF)*:	21.830	21.695	21.321
Water vapor volume (SCF)*:	3.761	3.610	3.577
Moisture content (% volume):	**14.7**	**14.3**	**14.4**

* 68 deg F (20 deg C) - 29.92 in. Hg

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #3

Conducted By: GC/AC

Load: 1600 KW
Run: 1
Start Time: 06/06/07 08:10
End Time: 06/06/07 09:10

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	3.410	945	B-5	4.560	943
A-2	3.830	945	B-6	3.720	943
A-3	4.920	945	B-7	4.220	942
A-4	4.400	945	B-8	3.130	943
A-5	4.990	950			
A-6	4.930	943			
A-7	4.930	943			
A-8	5.140	946			
B-1	4.150	943			
B-2	3.790	942			
B-3	4.280	945			
B-4	4.420	945			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.87	(Pbar)	inches Hg
Static Pressure:	1.90	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.5	% O2	
Percent CO2:	13.3	% CO2	
Percent Nitrogen:	79.2	% N2	
Percent Moisture:	14.7	$\%H_20$	
Average Delta P:	4.30		inches H2O
Root Mean Sq. Delta P:	4.28	(Pavg)	inches H2O
Mean Temperature:	944.3	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.853	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.01	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.43	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.61	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	190.0	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	5,121	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	6,003.7	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	100.1	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Skyline RDF

Conducted By: GC/AC

Load: 1600 KW
Run: 2
Start Time: 06/06/07 09:20
End Time: 06/06/07 10:20

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	3.530	938	B-5	4.190	940
A-2	3.650	937	B-6	4.300	941
A-3	3.820	939	B-7	3.330	939
A-4	3.920	939	B-8	3.080	938
A-5	3.360	937			
A-6	4.870	940			
A-7	3.950	940			
A-8	4.750	941			
B-1	4.280	938			
B-2	3.890	938			
B-3	3.910	937			
B-4	4.020	937			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.87	(Pbar)	inches Hg
Static Pressure:	1.80	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.6	% O2	
Percent CO2:	10.2	% CO2	
Percent Nitrogen:	82.2	% N2	
Percent Moisture:	14.3	$\%H_2O$	
Average Delta P:	3.93		inches H2O
Root Mean Sq. Delta P:	3.91	(Pavg)	inches H2O
Mean Temperature:	938.7	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.857	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.00	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	29.93	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.23	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	182.6	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	4,964	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	5,790.0	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	96.5	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Skyline RDF

Conducted By: GC/AC

Load: 1600 KW
Run: 3
Start Time: 06/06/07 10:27
End Time: 06/06/07 11:27

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	3.700	936	B-5	4.360	935
A-2	3.420	935	B-6	4.260	935
A-3	3.220	935	B-7	3.720	936
A-4	3.260	934	B-8	2.730	937
A-5	3.270	936			
A-6	3.870	937			
A-7	4.140	937			
A-8	4.810	937			
B-1	3.800	936			
B-2	3.900	936			
B-3	4.100	936			
B-4	4.420	937			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.87	(Pbar)	inches Hg
Static Pressure:	1.90	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	12.4	% CO2	
Percent Nitrogen:	79.7	% N2	
Percent Moisture:	14.4	$\%H_20$	
Average Delta P:	3.81		inches H2O
Root Mean Sq. Delta P:	3.79	(Pavg)	inches H2O
Mean Temperature:	935.9	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.856	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.01	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.30	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.54	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	178.6	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	4,860	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	5,675.2	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	94.6	KSCFM (WET)

METHOD 4 RUN SUMMARY SHEET

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #4

Run:	**M4-R1**	**M4-R2**	**M4-R3**
Flow Runs:	1	2	3
Start Time:	06/06/07 11:45	06/06/07 12:51	06/06/07 12:58
End Time:	06/06/07 12:45	06/06/07 13:51	06/06/07 13:58

RUN DATA

Meter voume start (cu. ft.):	523.200	547.000	570.000
Meter volume finish (cu. ft.):	546.780	569.780	593.005
Meter calib. factor (Y):	0.9830	0.9830	0.9830
Barometric pressure (in. Hg):	29.87	29.87	29.87
Average Delta-H (in. H2O):	1.90	1.90	1.90
Gas meter temperature (deg F):	94.0	95.0	96.0
Sil-Gel total wt. H2O collected (grams):	4.6	5.4	4.2
Impinger total volume H2O collected (ml):	70	74	70

CALCULATED RESULTS

Gas volume sampled (DSCF)*:	22.149	21.359	21.531
Water vapor volume (SCF)*:	3.511	3.737	3.493
Moisture content (% volume):	**13.7**	**14.9**	**14.0**

* 68 deg F (20 deg C) - 29.92 in. Hg

. VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #4

Conducted By: GC/AC

Load: 1600 KW
Run: 1
Start Time: 06/06/07 11:45
End Time: 06/06/07 12:45

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	4.010	945	B-5	4.280	945
A-2	3.700	945	B-6	4.740	945
A-3	3.850	946	B-7	5.250	945
A-4	3.900	946	B-8	4.790	946
A-5	3.850	946			
A-6	3.660	947			
A-7	4.010	948			
A-8	3.800	949			
B-1	3.700	949			
B-2	3.980	945			
B-3	3.900	945			
B-4	4.090	946			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.87	(Pbar)	inches Hg
Static Pressure:	1.90	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	12.0	% CO2	
Percent Nitrogen:	80.2	% N2	
Percent Moisture:	13.7	$\%H_2O$	
Average Delta P:	4.09		inches H2O
Root Mean Sq. Delta P:	4.08	(Pavg)	inches H2O
Mean Temperature:	946.1	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.863	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.01	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.23	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.56	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	185.9	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	5,062	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	5,864.6	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	97.7	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #4

Conducted By: GC/AC

Load: 1600 KW
Run: 2
Start Time: 06/06/07 12:51
End Time: 06/06/07 13:51

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	4.170	946	B-5	4.130	946
A-2	4.100	945	B-6	4.490	947
A-3	4.060	945	B-7	5.130	946
A-4	4.030	945	B-8	5.630	946
A-5	4.280	946			
A-6	4.380	947			
A-7	4.220	949			
A-8	3.590	949			
B-1	4.300	949			
B-2	4.240	946			
B-3	3.880	943			
B-4	3.990	946			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.87	(Pbar)	inches Hg
Static Pressure:	1.80	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	12.1	% CO2	
Percent Nitrogen:	80.2	% N2	
Percent Moisture:	14.9	$\%H_20$	
Average Delta P:	4.29		inches H2O
Root Mean Sq. Delta P:	4.28	(Pavg)	inches H2O
Mean Temperature:	946.3	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.851	
ABSOLUTE STACK GAS PRESSURE: Ps = Pbar + (Pg / 13.6)	Ps =	30.00	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.24	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.42	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	190.7	ft/sec
DRY VOLUMETRIC FLOW RATE: Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)	Qsd =	5,120	DSCFM
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd	Qaw =	6,015.6	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: Qsw = Qsd / Mfd / 60	Qaw =	100.3	KSCFM (WET)

VOLUMETRIC FLOW RATE DETERMINATION

Company: Waste Management, Inc.
Source: Skyline RDF
Test Location: Engine #4

Conducted By: GC/AC

Load: 1600 KW
Run: 3
Start Time: 06/06/07 12:58
End Time: 06/06/07 13:58

TEST DATA

Test Point	Delta P (in H2O)	Temp. (Deg F)	Test Point	Delta P (in H2O)	Temp. (Deg F)
A-1	3.830	947	B-5	3.920	949
A-2	4.280	949	B-6	3.810	949
A-3	4.010	949	B-7	3.950	947
A-4	4.800	949	B-8	3.800	947
A-5	5.000	950			
A-6	5.510	950			
A-7	5.420	947			
A-8	5.230	647			
B-1	3.760	950			
B-2	3.600	947			
B-3	3.450	949			
B-4	3.440	948			

Duct Area:	201.1	(A)	sq. inches
Barometric Pressure:	29.87	(Pbar)	inches Hg
Static Pressure:	1.70	(PG)	inches H2O
Pitot Tube Coefficient:	0.84	(Cp)	
Percent O2:	7.8	% O2	
Percent CO2:	12.4	% CO2	
Percent Nitrogen:	79.8	% N2	
Percent Moisture:	14.0	$\%H_2O$	
Average Delta P:	4.24		inches H2O
Root Mean Sq. Delta P:	4.21	(Pavg)	inches H2O
Mean Temperature:	929.6	(Ts)	Degrees F
Number Of Traverse Points:	16		

CALCULATIONS

DRY MOLE FRACTION OF STACK GAS: $Mfd = 1 - (\%H_2O / 100)$	Mfd =	0.860	
ABSOLUTE STACK GAS PRESSURE: $Ps = Pbar + (Pg / 13.6)$	Ps =	30.00	in. Hg
DRY MOLECULAR WEIGHT OF STACK GAS: $Md = 0.44 (\%CO_2) + 0.32 (\%O_2) + 0.28 (\%N_2)$	Md =	30.30	lb/lb-mole
WET MOLECULAR WEIGHT OF STACK GAS: $Ms = (Md)(Mfd) + 0.18 (\%H_2O)$	Ms =	28.58	lb/lb-mole
AVERAGE STACK GAS VELOCITY: $Vs = 85.49(Cp) X \{(Pavg)(Ts + 460)/[(Ps)(Ms)]\}^{\wedge 0.5}$	Vs =	187.6	ft/sec
DRY VOLUMETRIC FLOW RATE: $Qsd = 7.353(60)(Mfd)(Vs)(A)(Ps) / (Ts + 460)$	Qsd =	5,152	DSCFM
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd$	Qaw =	5,987.5	KSCFH (WET)
WET VOLUMETRIC FLOW RATE: $Qsw = Qsd / Mfd / 60$	Qaw =	99.8	KSCFM (WET)

REFERENCE M4 DATA SUMMARY

Company: Waste Management
Source: Engines 1-4
Operating Level: HIGH LOAD

Date: 06/05/07
Project #: 2007-15029

Run #	Start Time	End Time	Meter Volume Start	Meter Volume Finish	Meter Cal Value (y)	BP ("Hg)	Delt-H ("H20)	Gas Meter Temp (F)	Sil-Gel H20 wt (Grams)	Impinger Total Vol H2O (ml)	Gas Volume Sampled (dscf)*	Water Vapor Vol. (scf)*	Moisure Content (% Volume)
1	06/05/07 08:20	09:20	313.494	336.651	0.9830	29.95	1.900	91.0	21.5	62.0	21.937	3.930	**15.2%**
2	06/05/07 09:32	10:32	336.800	359.864	0.9830	29.95	1.900	100.0	9.0	71.0	21.498	3.766	**14.9%**
3	06/05/07 10:45	11:45	360.000	383.080	0.9830	29.95	1.900	100.0	8.7	68.0	21.513	3.610	**14.4%**
4	06/05/07 12:42	13:42	383.400	406.380	0.9830	29.95	1.900	95.0	7.7	68.0	21.612	3.563	**14.2%**
5	06/05/07 14:00	15:00	406.600	429.560	0.9830	29.95	1.900	97.0	4.1	68.0	21.516	3.394	**13.6%**
6	06/05/07 15:10	16:10	430.700	453.848	0.9830	29.95	1.900	96.0	4.4	69.0	21.731	3.455	**13.7%**
7	06/06/07 08:10	09:10	454.000	476.653	0.9830	29.87	1.900	80.0	7.9	72.0	21.838	3.761	**14.7%**
8	06/06/07 09:20	10:20	477.000	499.930	0.9830	29.87	1.900	90.0	5.7	71.0	21.703	3.610	**14.3%**
9	06/06/07 10:27	11:27	500.100	522.840	0.9830	29.87	1.900	95.0	5.0	71.0	21.330	3.577	**14.4%**
10	06/06/07 11:45	12:45	523.200	546.780	0.9830	29.87	1.900	94.0	4.6	70.0	22.158	3.511	**13.7%**
11	06/06/07 12:51	13:51	547.000	569.780	0.9830	29.87	1.900	95.0	5.4	74	21.367	3.737	**14.9%**
12	06/06/07 13:58	14:58	570.000	593.005	0.9830	29.87	1.900	96.0	4.2	70	21.539	3.493	**14.0%**
13													
14													
15													

* 68 Degrees F (20 Degrees C) - 29.92 "HG

Calibration Error Test at Run 1 . STRATA Version 2.01

Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #1

Reference Cylinder Numbers

	Zero	Low-range	Mid-range	High-range
O2	ALM021827	ALM000323	CC52824	ALM051950
CO2	ALM021827		CC52824	ALM051950
NOx	CC52824	ALM021827	AAL002710	ALM002710
CO	ALM021827	CC195391	CC164983	XC026080B

Date/Time 06/05/07 07:48:43 PASSED

Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Avg	0.00	-0.10	-4.00	3.80
Zero Error%	0.00	0.50	0.40	0.40
Low Ref Cyl			240.00	299.70
Low Avg			239.00	297.20
Low Error%			0.10	0.30
Mid Ref Cyl	12.32	9.39	450.00	606.60
Mid Avg	12.28	9.32	448.80	598.50
Mid Error%	0.20	0.40	0.10	0.80
High Ref Cyl	20.90	17.30	943.00	898.90
High Avg	20.75	17.43	948.10	881.60
High Error%	0.60	0.70	0.50	1.70

Initial System Bias Check for Run 1 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #1	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	07:54:31 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.00	-0.41	-2.50	3.80
Zero Bias%	0.00	1.60	0.10	0.00
Zero Drift%				
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.38	9.34	249.40	298.20
Span Bias%	0.40	0.10	1.00	0.10
Span Drift%				

Test Run 1 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #1

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	08:21:07	7.607	12.58	72.2	507.4
06/05/07	08:22:07	7.607	12.617	72.3	506.9
06/05/07	08:23:07	7.607	12.643	71.9	504.2
06/05/07	08:24:07	7.607	12.677	71.9	506.6
06/05/07	08:25:08	7.607	12.717	71.2	503
06/05/07	08:26:08	7.607	12.743	71.9	504.3
06/05/07	08:27:08	7.607	12.766	71	503.3
06/05/07	08:28:08	7.607	12.789	70.2	503.2
06/05/07	08:29:08	7.607	12.815	70.4	503.1
06/05/07	08:30:09	7.607	12.842	69.8	504.3
06/05/07	08:31:07	7.607	12.865	70.2	503.8
06/05/07	08:32:07	7.607	12.881	70.9	504.6
06/05/07	08:33:07	7.607	12.894	71.5	506.4
06/05/07	08:34:07	7.607	12.914	71.7	504.2
06/05/07	08:35:07	7.607	12.928	72.5	502.9
06/05/07	08:36:07	7.607	12.939	72.4	506.2
06/05/07	08:37:08	7.607	12.944	71.7	503.4
06/05/07	08:38:08	7.607	12.965	72.2	502.8
06/05/07	08:39:08	7.607	12.955	73.5	503.1
06/05/07	08:40:08	7.607	12.968	72.4	504.3
06/05/07	08:41:08	7.607	12.974	73.3	503.3
06/05/07	08:42:08	7.607	12.99	72.2	501.8
06/05/07	08:43:08	7.607	13	72.5	503.4
06/05/07	08:44:08	7.607	12.999	71.5	504.6
06/05/07	08:45:09	7.607	12.989	69.5	502
06/05/07	08:46:09	7.607	13.001	70.2	503.6
06/05/07	08:47:07	7.607	13.005	68.8	502.5
06/05/07	08:48:07	7.607	13.01	69.8	502.6
06/05/07	08:49:07	7.556	13.015	69.3	501.8
06/05/07	08:50:07	7.573	13.02	68.6	502
06/05/07	08:51:07	7.566	13.015	69.3	504.3
06/05/07	08:52:07	7.529	13.03	69.2	503.7
06/05/07	08:53:07	7.509	13.035	70.2	504.5
06/05/07	08:54:07	7.543	13.031	70	503.3
06/05/07	08:55:08	7.593	13.027	70.4	503.1
06/05/07	08:56:08	7.566	13.035	70.7	501.9
06/05/07	08:57:08	7.543	13.043	72	502.7
06/05/07	08:58:08	7.563	13.049	72.3	502.9
06/05/07	08:59:08	7.603	13.051	71.8	502
06/05/07	09:00:08	7.586	13.053	71.8	501.2
06/05/07	09:01:08	7.539	13.058	72.3	499.7
06/05/07	09:02:08	7.546	13.066	72.4	500.5
06/05/07	09:03:09	7.539	13.067	73.4	502.2
06/05/07	09:04:07	7.513	13.08	73.4	502.6
06/05/07	09:05:07	7.509	13.082	73.2	501.5

06/05/07	09:06:07	7.543	13.081	72.9	500.3
06/05/07	09:07:07	7.509	13.09	73.1	500.3
06/05/07	09:08:07	7.509	13.092	73.6	501.3
06/05/07	09:09:07	7.509	13.092	74.2	502
06/05/07	09:10:08	7.509	13.103	73.8	500.8
06/05/07	09:11:08	7.509	13.111	74.1	501.3
06/05/07	09:12:08	7.516	13.103	74.4	500.6
06/05/07	09:13:08	7.509	13.107	73.9	499.6
06/05/07	09:14:08	7.509	13.115	73.5	499.2
06/05/07	09:15:09	7.509	13.126	74	500.2
06/05/07	09:16:09	7.509	13.119	74.8	503.3
06/05/07	09:17:07	7.509	13.118	74.9	501.5
06/05/07	09:18:07	7.509	13.119	75.1	502.5
06/05/07	09:19:07	7.509	13.116	74.8	502.1
06/05/07	09:20:07	7.509	13.119	75	500.8

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	09:20:07	7.568	12.98	72	502.8

Test Run 1 End

Final System Bias Check for Run 1 . STRATA Version 2.01

Operator:	RMCEInc
Plant Name:	WMI - Skyline
Location:	Engine #1

Reference Cylinder Numbers

	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	09:30:27 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.00	-0.03	6.30	2.70
Zero Bias%	0.00	0.30	1.00	0.10
Zero Drift%	0.00	1.90	0.90	-0.10
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.09	9.74	249.90	294.70
Span Bias%	0.80	2.10	1.10	0.20
Span Drift%	-1.20	2.00	0.00	-0.30
Ini Zero Avg	0.00	-0.41	-2.50	3.80
Ini Span Avg	12.38	9.34	249.40	298.20
Run Avg	7.57	12.98	72.00	502.80
Co	0.00	-0.22	1.90	3.30
Cm	12.23	9.54	249.70	296.50
Correct Avg	7.62	12.70	68.00	510.60

Test Run 2 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #1

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	09:33:28	7.609	8.301	68.2	497.9
06/05/07	09:34:28	7.606	8.384	68.4	499.5
06/05/07	09:35:28	7.606	8.477	67.4	495.5
06/05/07	09:36:28	7.606	8.581	67.4	495.1
06/05/07	09:37:28	7.606	8.661	66.6	496.3
06/05/07	09:38:28	7.606	8.754	67.2	494.8
06/05/07	09:39:29	7.606	8.831	68.7	496.4
06/05/07	09:40:29	7.606	8.901	68.3	494.3
06/05/07	09:41:29	7.606	8.977	68.4	494.4
06/05/07	09:42:29	7.606	9.052	68	493.5
06/05/07	09:43:29	7.606	9.116	68.4	494.9
06/05/07	09:44:29	7.606	9.178	68.9	494.3
06/05/07	09:45:30	7.569	9.233	68.7	494.3
06/05/07	09:46:28	7.606	9.28	68.9	493.2
06/05/07	09:47:28	7.605	9.325	68.5	492.5
06/05/07	09:48:28	7.575	9.375	68.9	493.9
06/05/07	09:49:28	7.605	9.408	68.7	492.7
06/05/07	09:50:28	7.599	9.442	68.5	493.1
06/05/07	09:51:28	7.592	9.473	68.2	492.3
06/05/07	09:52:28	7.528	9.519	68.3	491.7
06/05/07	09:53:28	7.525	9.554	68	491.9
06/05/07	09:54:28	7.542	9.581	69.2	493.2
06/05/07	09:55:29	7.508	9.618	68.6	491.9
06/05/07	09:56:29	7.555	9.628	69.3	495.5
06/05/07	09:57:29	7.568	9.642	69.6	493.4
06/05/07	09:58:29	7.575	9.655	68	490.7
06/05/07	09:59:29	7.562	9.679	68.5	493
06/05/07	10:00:29	7.605	9.677	68.5	493.6
06/05/07	10:01:29	7.605	9.684	67.6	489.4
06/05/07	10:02:28	7.605	9.697	69.6	490.8
06/05/07	10:03:28	7.605	9.703	69.4	491.3
06/05/07	10:04:28	7.605	9.705	69.5	491.1
06/05/07	10:05:28	7.605	9.724	68	486.8
06/05/07	10:06:28	7.605	9.737	68.9	490
06/05/07	10:07:29	7.605	9.73	68.5	488.4
06/05/07	10:08:29	7.604	9.736	68.7	487.8
06/05/07	10:09:29	7.604	9.742	70.2	490.2
06/05/07	10:10:29	7.604	9.738	68.8	487.3
06/05/07	10:11:29	7.604	9.752	69.3	486.8
06/05/07	10:12:29	7.604	9.753	68.8	486.6
06/05/07	10:13:29	7.604	9.762	69	485
06/05/07	10:14:29	7.604	9.767	70.2	487.3
06/05/07	10:15:29	7.604	9.76	70.1	487.8
06/05/07	10:16:28	7.604	9.759	70.7	487.2
06/05/07	10:17:28	7.604	9.762	70.4	487.7

06/05/07	10:18:28	7.604	9.764	70.1	488.3
06/05/07	10:19:28	7.604	9.766	70.4	486.8
06/05/07	10:20:28	7.604	9.771	70.9	487.7
06/05/07	10:21:28	7.577	9.783	72	490.4
06/05/07	10:22:28	7.59	9.784	70.3	488.1
06/05/07	10:23:28	7.593	9.781	72	489.7
06/05/07	10:24:28	7.587	9.775	72.5	490.6
06/05/07	10:25:29	7.557	9.785	71.1	489.6
06/05/07	10:26:29	7.56	9.786	72.5	489.3
06/05/07	10:27:29	7.603	9.78	72.8	490
06/05/07	10:28:29	7.603	9.778	72.1	486.9
06/05/07	10:29:29	7.603	9.772	72	486.8
06/05/07	10:30:29	7.603	9.766	72.7	486.7
06/05/07	10:31:29	7.603	9.759	72	483.1
06/05/07	10:32:29	7.603	9.762	72.7	483.7
Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	10:32:29	7.593	9.49	69.5	490.9

Test Run 2 End

Final System Bias Check for Run 2 . STRATA Version 2.01

Operator:	RMCEInc
Plant Name:	WMI - Skyline
Location:	Engine #1

Reference Cylinder Numbers

	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	10:37:47 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.00	-0.02	8.10	0.10
Zero Bias%	0.00	0.40	1.20	0.40
Zero Drift%	0.00	0.10	0.20	-0.30
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.08	9.27	249.30	292.40
Span Bias%	0.80	0.20	1.00	0.50
Span Drift%	0.00	-2.40	-0.10	-0.20
Ini Zero Avg	0.00	-0.03	6.30	2.70
Ini Span Avg	12.09	9.74	249.90	294.70
Run Avg	7.59	9.49	69.50	490.90
Co	0.00	-0.03	7.20	1.40
Cm	12.08	9.51	249.60	293.50
Correct Avg	7.74	9.38	61.70	502.20

Test Run 3 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #1

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	10:46:03	7.704	9.288	70.6	480.6
06/05/07	10:47:03	7.704	9.378	70.4	482.7
06/05/07	10:48:03	7.704	9.461	70.6	479.3
06/05/07	10:49:03	7.704	9.533	71.5	481.4
06/05/07	10:50:03	7.687	9.616	71.6	482.4
06/05/07	10:51:04	7.687	9.676	71.3	482.8
06/05/07	10:52:04	7.66	9.738	71.7	483
06/05/07	10:53:04	7.69	9.784	71.3	481.6
06/05/07	10:54:04	7.704	9.833	70.9	478.5
06/05/07	10:55:04	7.704	9.878	72	480.7
06/05/07	10:56:05	7.704	9.912	70.9	482.3
06/05/07	10:57:05	7.7	9.963	71	479.4
06/05/07	10:58:03	7.69	10.011	71.5	481.2
06/05/07	10:59:03	7.704	10.038	71.2	478.8
06/05/07	11:00:03	7.663	10.097	70.7	480.8
06/05/07	11:01:04	7.632	10.142	70.6	481.4
06/05/07	11:02:04	7.612	10.177	71.2	482.9
06/05/07	11:03:04	7.605	10.205	70	483.3
06/05/07	11:04:04	7.659	10.222	70.5	482.5
06/05/07	11:05:04	7.615	10.248	70.2	481.4
06/05/07	11:06:05	7.622	10.267	70.2	479.8
06/05/07	11:07:05	7.605	10.305	71.8	482.1
06/05/07	11:08:03	7.686	10.301	71.5	483.9
06/05/07	11:09:03	7.652	10.321	71	479.4
06/05/07	11:10:03	7.635	10.34	70.3	482
06/05/07	11:11:03	7.642	10.354	70.3	479.2
06/05/07	11:12:03	7.612	10.382	70.8	480.9
06/05/07	11:13:03	7.656	10.392	72	485.2
06/05/07	11:14:04	7.646	10.396	70.6	480.5
06/05/07	11:15:04	7.68	10.411	72.5	483.9
06/05/07	11:16:04	7.703	10.397	71	481.8
06/05/07	11:17:04	7.703	10.397	71.2	479.3
06/05/07	11:18:04	7.703	10.394	71	476.4
06/05/07	11:19:04	7.703	10.4	71.6	478.5
06/05/07	11:20:04	7.703	10.415	72	478.1
06/05/07	11:21:04	7.703	10.431	71.9	477.8
06/05/07	11:22:05	7.703	10.439	71.8	479.1
06/05/07	11:23:05	7.703	10.45	73.1	477.6
06/05/07	11:24:05	7.703	10.444	73.5	479.4
06/05/07	11:25:03	7.703	10.455	72.8	478.7
06/05/07	11:26:03	7.703	10.46	73.7	480.4
06/05/07	11:27:03	7.703	10.452	69.9	476.9
06/05/07	11:28:03	7.703	10.467	70.9	475.9
06/05/07	11:29:03	7.703	10.458	70	478.5
06/05/07	11:30:03	7.703	10.454	71.6	477.5

06/05/07	11:31:04	7.703	10.441	71.8	477.7
06/05/07	11:32:04	7.703	10.438	71.5	474.6
06/05/07	11:33:04	7.703	10.442	72.6	476.6
06/05/07	11:34:04	7.703	10.443	72.4	474.4
06/05/07	11:35:04	7.703	10.451	73	475.6
06/05/07	11:36:04	7.703	10.44	73.8	478.5
06/05/07	11:37:05	7.703	10.44	74.5	478.5
06/05/07	11:38:05	7.703	10.448	72.9	474.9
06/05/07	11:39:03	7.702	10.439	74.3	475.7
06/05/07	11:40:03	7.692	10.44	73.7	478
06/05/07	11:41:03	7.702	10.451	74.9	478.3
06/05/07	11:42:03	7.702	10.418	75	476.9
06/05/07	11:43:03	7.702	10.425	75.1	474.8
06/05/07	11:44:04	7.668	10.447	74.7	478.3
06/05/07	11:45:04	7.638	10.447	73.7	476.9

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	11:45:04	7.682	10.23	71.8	479.5

Test Run 3 End

Final System Bias Check for Run 3 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #1	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	11:56:10 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.000	0.000	0.000	0.000
Zero Cal	0.001	-0.096	-4.000	3.800
Zero Avg	0.075	-0.165	6.300	-3.400
Zero Bias%	0.300	-0.930	1.030	-0.410
Zero Drift%	0.290	-0.330	1.030	-0.040
Span Ref Cyl	12.320	9.390	240.000	299.700
Span Cal	12.281	9.316	239.000	297.200
Span Avg	12.278	9.350	245.300	297.400
Span Bias%	0.000	0.150	0.630	0.020
Span Drift%	0.800	0.400	-0.400	0.500
Ini Zero Avg	0.000	-0.034	-4.000	0.100
Ini Span Avg	12.085	9.270	249.300	292.400
Run Avg	7.680	10.230	71.800	479.500
Co	0.000	-0.130	1.150	1.200
Cm	12.180	9.310	247.300	294.900
Correct Avg	7.760	10.300	68.880	487.230

Initial System Bias Check for Run 3 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #1	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	11:56:10 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.08	-0.17	6.30	-3.40
Zero Bias%	0.30	0.30	1.00	0.70
Zero Drift%				
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.28	9.35	245.30	297.40
Span Bias%	0.00	0.20	0.60	0.00
Span Drift%				

Test Run 4 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #2

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	12:43:20	7.898	12.835	70	474.3
06/05/07	12:44:20	7.898	13.057	71.9	473.1
06/05/07	12:45:20	7.898	13.25	73.6	474.7
06/05/07	12:46:20	7.898	13.414	72.2	470.8
06/05/07	12:47:20	7.853	13.615	73.5	470.6
06/05/07	12:48:21	7.887	13.79	77.3	476.9
06/05/07	12:49:21	7.898	13.892	75.4	473.9
06/05/07	12:50:21	7.864	14.062	74	469
06/05/07	12:51:21	7.891	14.215	75.1	474.7
06/05/07	12:52:19	7.799	14.357	75	470.2
06/05/07	12:53:20	7.799	14.504	76.4	476.2
06/05/07	12:54:20	7.799	14.62	75.3	475.8
06/05/07	12:55:20	7.799	14.751	76.1	474.3
06/05/07	12:56:20	7.799	14.836	77.4	477.4
06/05/07	12:57:20	7.799	14.916	75.8	474.2
06/05/07	12:58:20	7.799	15.025	76.7	474.9
06/05/07	12:59:20	7.779	15.106	76.1	475.6
06/05/07	13:00:21	7.72	15.184	76	474.4
06/05/07	13:01:21	7.779	15.252	76.7	477.3
06/05/07	13:02:21	7.703	15.315	75.8	474.4
06/05/07	13:03:21	7.703	15.39	76	475
06/05/07	13:04:21	7.703	15.462	77.6	479.2
06/05/07	13:05:21	7.703	15.483	77.6	477.7
06/05/07	13:06:21	7.756	15.53	81.1	481.8
06/05/07	13:07:21	7.799	15.525	78.1	478.8
06/05/07	13:08:19	7.768	15.579	77.1	474.4
06/05/07	13:09:20	7.799	15.594	71.8	476.5
06/05/07	13:10:20	7.72	15.657	70.4	471.5
06/05/07	13:11:20	7.729	15.724	74.8	484.6
06/05/07	13:12:20	7.753	15.726	74.3	481.6
06/05/07	13:13:20	7.799	15.727	73.8	481.4
06/05/07	13:14:20	7.799	15.743	72.7	477.9
06/05/07	13:15:20	7.846	15.76	75.1	481
06/05/07	13:16:21	7.809	15.746	71.8	475.5
06/05/07	13:17:21	7.799	15.801	72	475.3
06/05/07	13:18:21	7.799	15.847	71.6	478
06/05/07	13:19:21	7.799	15.86	73	477.4
06/05/07	13:20:21	7.799	15.851	71.9	480.4
06/05/07	13:21:21	7.799	15.863	67.9	471.6
06/05/07	13:22:21	7.703	15.939	68	470.3
06/05/07	13:23:21	7.713	16.003	73.4	482.3
06/05/07	13:24:19	7.799	15.953	71.1	485.3
06/05/07	13:25:19	7.776	15.943	66.9	471.3
06/05/07	13:26:20	7.703	16.009	69.5	472.5
06/05/07	13:27:20	7.703	16.029	70.8	480.1

06/05/07	13:28:20	7.726	16.026	69.9	477.4
06/05/07	13:29:20	7.766	16.013	71.7	477.5
06/05/07	13:30:20	7.772	16.016	70.1	477
06/05/07	13:31:20	7.703	16.052	69.1	473.2
06/05/07	13:32:20	7.703	16.094	71.5	478.1
06/05/07	13:33:20	·7.73	15.936	72.2	482
06/05/07	13:34:21	7.703	16.028	70.5	475.5
06/05/07	13:35:21	7.769	15.981	73.9	479.6
06/05/07	13:36:21	7.799	15.91	74.3	481.5
06/05/07	13:37:21	7.799	15.812	75.1	478.2
06/05/07	13:38:21	7.836	15.729	73.3	475.5
06/05/07	13:39:21	7.776	15.653	72.3	471.4
06/05/07	13:40:21	7.799	15.62	77.4	482
06/05/07	13:41:21	7.86	15.509	77.8	485.9
06/05/07	13:42:19	7.841	15.368	69.7	469.1

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	13:42:19	7.787	15.291	73.6	476.5

Test Run 4 End

Final System Bias Check for Run 4 . STRATA Version 2.01

Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #2

Reference Cylinder Numbers

	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time 06/05/07 13:47:10 PASSED

Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.00	-0.07	8.00	-1.50
Zero Bias%	0.00	0.10	1.20	0.50
Zero Drift%	-0.30	0.50	0.20	0.20
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.21	9.27	246.50	289.50
Span Bias%	0.30	0.20	0.80	0.80
Span Drift%	-0.30	-0.40	0.10	-0.80
Ini Zero Avg	0.08	-0.17	6.30	-3.40
Ini Span Avg	12.28	9.35	245.30	297.40
Run Avg	7.79	15.29	73.60	476.50
Co	0.04	-0.12	7.20	-2.50
Cm	12.24	9.31	245.90	293.40
Correct Avg	7.82	15.35	66.80	485.10

Test Run 5 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #2

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	14:01:03	7.877	11.593	74.8	467.5
06/05/07	14:02:04	7.802	11.623	77.2	474.5
06/05/07	14:03:04	7.799	11.654	76.2	473.7
06/05/07	14:04:04	7.799	11.685	79.2	472.7
06/05/07	14:05:04	7.877	11.574	86.2	485.6
06/05/07	14:06:04	7.948	11.496	81.2	475.7
06/05/07	14:07:05	7.867	11.587	73.9	460.2
06/05/07	14:08:05	7.739	11.726	78.6	463.6
06/05/07	14:09:05	7.809	11.655	83.1	481.7
06/05/07	14:10:05	7.86	11.601	78.4	473.8
06/05/07	14:11:03	7.747	11.707	76.4	461.5
06/05/07	14:12:03	7.716	11.725	80.5	471.2
06/05/07	14:13:04	7.799	11.669	83.7	477.5
06/05/07	14:14:04	7.785	11.672	77.4	471.4
06/05/07	14:15:04	7.703	11.745	80.1	468.4
06/05/07	14:16:04	7.782	11.692	82.7	480
06/05/07	14:17:04	7.799	11.647	81.4	473.1
06/05/07	14:18:04	7.799	11.668	79.1	468.5
06/05/07	14:19:05	7.799	11.675	80.5	469.5
06/05/07	14:20:05	7.792	11.661	78.7	468.9
06/05/07	14:21:05	7.703	11.704	79.8	471.4
06/05/07	14:22:03	7.789	11.641	83.5	475.6
06/05/07	14:23:03	7.819	11.589	80.3	471.7
06/05/07	14:24:04	7.799	11.654	78.6	464.9
06/05/07	14:25:04	7.799	11.63	82.6	473.1
06/05/07	14:26:04	7.884	11.527	87.5	477.4
06/05/07	14:27:04	7.935	11.464	83.7	470.7
06/05/07	14:28:04	7.816	11.601	76	459.2
06/05/07	14:29:04	7.753	11.646	85.3	473.6
06/05/07	14:30:05	7.878	11.492	87	486.7
06/05/07	14:31:05	7.854	11.546	77.1	465.9
06/05/07	14:32:05	7.72	11.683	79.5	464.6
06/05/07	14:33:05	7.8	11.595	89	485.8
06/05/07	14:34:03	7.898	11.464	84.8	481.6
06/05/07	14:35:03	7.908	11.471	79.9	466.2
06/05/07	14:36:04	7.733	11.66	76	457.9
06/05/07	14:37:04	7.74	11.645	86.7	479.4
06/05/07	14:38:04	7.885	11.483	85.4	483.7
06/05/07	14:39:04	7.82	11.575	75.6	462.7
06/05/07	14:40:04	7.707	11.684	82.6	468.9
06/05/07	14:41:04	7.844	11.535	88.9	488.4
06/05/07	14:42:05	7.902	11.431	85.5	476
06/05/07	14:43:05	7.892	11.481	77.8	461.6
06/05/07	14:44:05	7.74	11.643	75.1	456
06/05/07	14:45:05	7.727	11.656	81.4	472.9

06/05/07	14:46:03	7.799	11.609	80.5	476.7
06/05/07	14:47:03	7.763	11.641	78.5	467.9
06/05/07	14:48:04	7.704	11.675	79.3	468.8
06/05/07	14:49:04	7.75	11.626	82.8	474.5
06/05/07	14:50:04	7.799	11.557	82.2	472.2
06/05/07	14:51:04	7.786	11.598	77.7	462.3
06/05/07	14:52:04	7.704	11.678	79	463.8
06/05/07	14:53:05	7.724	11.646	83.5	473.2
06/05/07	14:54:05	7.799	11.573	83.8	473.5
06/05/07	14:55:05	7.763	11.621	78.2	463.4
06/05/07	14:56:05	7.704	11.705	83.2	468.6
06/05/07	14:57:03	7.748	11.621	89.7	483.1
06/05/07	14:58:03	7.834	11.522	84.1	475.8
06/05/07	14:59:04	7.73	11.663	77	457.9
06/05/07	15:00:04	7.606	11.753	82.4	468.8
Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	15:00:04	7.794	11.617	81	471.4

Test Run 5 End

Final System Bias Check for Run 5 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #2	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	15:03:17 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.22	-0.58	9.60	-5.00
Zero Bias%	0.90	2.40	1.40	0.90
Zero Drift%	0.90	-2.50	0.20	-0.30
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.28	8.84	244.70	287.30
Span Bias%	0.00	2.40	0.60	1.00
Span Drift%	0.30	-2.20	-0.20	-0.20
Ini Zero Avg	0.00	-0.07	8.00	-1.50
Ini Span Avg	12.21	9.27	246.50	289.50
Run Avg	7.79	11.62	81.00	471.40
Co	0.11	-0.33	8.80	-3.20
Cm	12.24	9.05	245.60	288.40
Correct Avg	7.80	11.96	73.20	487.80

Test Run 6 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #2

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	15:11:05	7.802	12.885	79.2	469.4
06/05/07	15:12:05	7.799	12.944	80.1	471.7
06/05/07	15:13:06	7.799	12.989	80	469.6
06/05/07	15:14:06	7.772	13.026	81.9	471.7
06/05/07	15:15:06	7.726	13.059	81.9	471.5
06/05/07	15:16:06	7.795	13.049	82.9	472.8
06/05/07	15:17:06	7.772	13.08	80.7	470
06/05/07	15:18:06	7.716	13.122	81.6	469.9
06/05/07	15:19:06	7.799	13.092	82.4	472.1
06/05/07	15:20:07	7.723	13.14	80.6	468.5
06/05/07	15:21:07	7.703	13.182	81.5	467.8
06/05/07	15:22:07	7.703	13.165	83.1	473
06/05/07	15:23:07	7.723	13.194	81.6	469.3
06/05/07	15:24:05	7.703	13.204	81.7	469.2
06/05/07	15:25:05	7.703	13.206	80.5	468.1
06/05/07	15:26:06	7.703	13.254	81.9	467.6
06/05/07	15:27:06	7.703	13.237	82.5	473.3
06/05/07	15:28:06	7.703	13.266	81.7	468.6
06/05/07	15:29:06	7.7	13.312	80.4	470
06/05/07	15:30:06	7.676	13.302	82.8	471.1
06/05/07	15:31:07	7.713	13.278	82.9	473.8
06/05/07	15:32:07	7.696	13.3	79.5	468.7
06/05/07	15:33:07	7.659	13.357	83.5	470.1
06/05/07	15:34:05	7.72	13.279	87.3	480.9
06/05/07	15:35:05	7.829	13.154	85.3	476.9
06/05/07	15:36:06	7.732	13.282	74.4	458.6
06/05/07	15:37:06	7.605	13.43	79.8	467.1
06/05/07	15:38:06	7.689	13.347	85.5	485.4
06/05/07	15:39:06	7.823	13.196	84.4	484.5
06/05/07	15:40:06	7.81	13.224	73.4	462.7
06/05/07	15:41:06	7.625	13.442	74.9	456.7
06/05/07	15:42:07	7.666	13.396	82	481.4
06/05/07	15:43:07	7.703	13.324	78.3	475
06/05/07	15:44:07	7.703	13.368	75.6	465
06/05/07	15:45:05	7.668	13.426	77.1	466.8
06/05/07	15:46:05	7.686	13.431	77.6	471.6
06/05/07	15:47:05	7.703	13.397	79.4	477
06/05/07	15:48:06	7.703	13.352	77.6	472.7
06/05/07	15:49:06	7.703	13.31	74.4	466
06/05/07	15:50:06	7.703	13.023	74.5	467.7
06/05/07	15:51:06	7.703	12.811	77.9	475.5
06/05/07	15:52:06	7.707	12.662	74.7	473.2
06/05/07	15:53:06	7.703	12.551	77.3	472
06/05/07	15:54:06	7.792	12.439	79.8	477.1
06/05/07	15:55:06	7.766	12.345	72.2	464.1

06/05/07	15:56:07	7.629	12.256	72.3	459.8
06/05/07	15:57:07	7.652	12.169	80.9	481.1
06/05/07	15:58:07	7.792	12.08	78.8	481.1
06/05/07	15:59:07	7.759	11.998	70.5	459.6
06/05/07	16:00:07	7.619	11.923	73.6	460.2
06/05/07	16:01:05	7.72	11.858	79.2	481.7
06/05/07	16:02:06	7.799	11.789	72.1	471.7
06/05/07	16:03:06	7.716	11.721	71.3	459.2
06/05/07	16:04:06	7.72	11.655	77.2	470.3
06/05/07	16:05:06	7.799	11.59	75.7	471.9
06/05/07	16:06:06	7.733	11.528	69.2	457.4
06/05/07	16:07:06	7.704	11.475	77	468.8
06/05/07	16:08:07	7.769	11.424	78.5	477.2
06/05/07	16:09:07	7.753	11.372	68.9	462.2
06/05/07	16:10:07	7.605	11.322	73.7	461.7

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/05/07	16:10:07	7.722	12.8	78.6	470.3

Test Run 6 End

Final System Bias Check for Run 6 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #2	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/05/07	16:13:26 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.10	-4.00	3.80
Zero Avg	0.00	-0.70	3.50	-3.40
Zero Bias%	0.00	3.00	0.70	0.70
Zero Drift%	-0.90	-0.60	-0.60	0.20
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.32	239.00	297.20
Span Avg	12.08	9.14	238.00	288.40
Span Bias%	0.80	0.90	0.10	0.90
Span Drift%	-0.80	1.50	-0.70	0.10
Ini Zero Avg	0.22	-0.58	9.60	-5.00
Ini Span Avg	12.28	8.84	244.70	287.30
Run Avg	7.72	12.80	78.60	470.30
Co	0.11	-0.64	6.50	-4.20
Cm	12.18	8.99	241.30	287.90
Correct Avg	7.77	13.11	73.70	486.90

Calibration Error Test at Run 7 . STRATA Version 2.01

Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #3

Reference Cylinder Numbers

	Zero	Low-range	Mid-range	High-range
O2	ALM021827		CC52824	ALM051950
CO2	ALM021827		CC52824	ALM051950
NOx	CC52824	ALM021827	AAL002710	
CO	ALM021827	CC195391	CC164983	XC026080B

Date/Time 06/06/07 07:51:30 PASSED

Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Avg	0.00	-0.01	-3.86	1.90
Zero Error%	0.00	0.00	0.80	0.20
Low Ref Cyl			240.00	299.70
Low Avg			240.43	297.70
Low Error%			0.10	0.20
Mid Ref Cyl	12.32	9.39	450.00	606.60
Mid Avg	12.28	9.21	447.04	598.00
Mid Error%	0.20	0.90	0.60	0.90
High Ref Cyl	20.90	17.30		898.90
High Avg	20.65	17.56		891.70
High Error%	1.00	1.30		0.70

Initial System Bias Check for Run 7 . STRATA Version 2.01

Initial System Bias Check for Run 7

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #3	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/06/07	07:55:35 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.00	-0.03	-3.23	1.30
Zero Bias%	0.00	0.10	0.10	0.10
Zero Drift%				
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	12.47	9.39	240.05	295.80
Span Bias%	0.80	0.90	0.10	0.20
Span Drift%				

Test Run 7 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #3

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	08:11:09	7.607	13.004	57.98	513.7
06/06/07	08:12:09	7.56	13.064	58.13	513.7
06/06/07	08:13:09	7.51	13.124	57.52	512.8
06/06/07	08:14:09	7.51	13.184	57.34	512.8
06/06/07	08:15:10	7.51	13.24	57.5	512.1
06/06/07	08:16:10	7.51	13.298	56.85	513
06/06/07	08:17:10	7.51	13.341	57.27	512.1
06/06/07	08:18:10	7.509	13.391	57.48	512.5
06/06/07	08:19:10	7.509	13.43	56.64	511.6
06/06/07	08:20:08	7.509	13.468	56.28	513.5
06/06/07	08:21:08	7.482	13.508	56.6	514.1
06/06/07	08:22:09	7.458	13.539	56.66	513.6
06/06/07	08:23:09	7.481	13.57	56.73	514.1
06/06/07	08:24:09	7.457	13.601	57.4	514.1
06/06/07	08:25:09	7.45	13.629	57.5	514.9
06/06/07	08:26:09	7.481	13.651	57.38	511.9
06/06/07	08:27:09	7.508	13.677	56.72	512.6
06/06/07	08:28:09	7.416	13.736	56.86	510
06/06/07	08:29:10	7.409	13.761	58.2	514.8
06/06/07	08:30:10	7.409	13.784	58.29	513.8
06/06/07	08:31:10	7.409	13.823	59.69	511.8
06/06/07	08:32:10	7.409	13.847	60.31	514.1
06/06/07	08:33:10	7.409	13.886	60.22	510.8
06/06/07	08:34:08	7.409	13.919	61.02	513.1
06/06/07	08:35:09	7.409	13.952	61.39	513.6
06/06/07	08:36:09	7.409	13.975	62.06	514.1
06/06/07	08:37:09	7.409	13.99	61.21	514.6
06/06/07	08:38:09	7.409	14.014	61.58	511.9
06/06/07	08:39:09	7.409	13.822	61.56	512.9
06/06/07	08:40:09	7.41	13.678	62.28	513.7
06/06/07	08:41:09	7.41	13.601	62	514.1
06/06/07	08:42:09	7.41	13.543	61.96	512.9
06/06/07	08:43:10	7.41	13.492	62.17	512.4
06/06/07	08:44:10	7.41	13.44	63.03	516.2
06/06/07	08:45:10	7.41	13.394	61.63	515.7
06/06/07	08:46:10	7.41	13.346	62.53	513.7
06/06/07	08:47:10	7.41	13.296	62.88	514.8
06/06/07	08:48:10	7.41	13.248	63.04	515.3
06/06/07	08:49:10	7.41	13.208	63.34	514.4
06/06/07	08:50:09	7.41	13.17	63.11	514.5
06/06/07	08:51:09	7.41	13.136	63.89	515.2
06/06/07	08:52:09	7.41	13.105	63.66	514.9
06/06/07	08:53:09	7.41	13.073	64.21	516.1
06/06/07	08:54:10	7.411	13.042*	64.47	513.9
06/06/07	08:55:10	7.411	13.003	64.08	512.6

06/06/07	08:56:10	7.411	12.97	64.21	514.7
06/06/07	08:57:10	7.411	12.941	64.14	513.9
06/06/07	08:58:08	7.411	12.915	63.97	512.6
06/06/07	08:59:09	7.411	12.894	64.49	513.7
06/06/07	09:00:09	7.411	12.871	64.7	514.3
06/06/07	09:01:09	7.411	12.846	64.02	513.8
06/06/07	09:02:09	7.411	12.821	64.37	512.8
06/06/07	09:03:09	7.411	12.791	64.96	512.3
06/06/07	09:04:10	7.411	12.762	64.55	511.6
06/06/07	09:05:10	7.412	12.734	65.81	512.8
06/06/07	09:06:10	7.412	12.708	65.12	514.3
06/06/07	09:07:10	7.412	12.69	65.64	513.3
06/06/07	09:08:10	7.412	12.667	64.82	510.5
06/06/07	09:09:08	7.412	12.642	66.43	510.9
06/06/07	09:10:09	7.412	12.621	66.06	513.4

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	09:10:09	7.437	13.315*	61.26	513.4

Test Run 7 End

Final System Bias Check for Run 7 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #3	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/06/07	09:13:40 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.03	0.00	2.83	0.30
Zero Bias%	0.10	0.00	1.30	0.20
Zero Drift%	0.10	0.10	1.20	-0.10
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	11.99	9.34	244.56	299.80
Span Bias%	1.20	0.60	0.80	0.20
Span Drift%	-1.90	-0.30	0.90	0.40
Ini Zero Avg	0.00	-0.03	-3.23	1.30
Ini Span Avg	12.47	9.39	240.05	295.80
Run Avg	7.44	13.32	61.26	513.40
Co	0.01	-0.02	-0.20	0.80
Cm	12.23	9.37	242.30	297.80
Correct Avg	7.49	13.34	60.83	517.30

Test Run 8 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #3

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	09:21:33	7.627	9.062	62.25	507.5
06/06/07	09:22:33	7.537	9.162	62.93	509.1
06/06/07	09:23:33	7.51	9.21	63.18	510.3
06/06/07	09:24:34	7.51	9.254	63.35	508.8
06/06/07	09:25:34	7.51	9.283	62.37	507.5
06/06/07	09:26:34	7.483	9.316	62.82	507.1
06/06/07	09:27:34	7.411	9.353	63.08	506.8
06/06/07	09:28:34	7.411	9.373	63.81	508.8
06/06/07	09:29:35	7.411	9.41	63.46	507.5
06/06/07	09:30:35	7.411	9.447	63.5	508.2
06/06/07	09:31:35	7.411	9.487	63.89	509.9
06/06/07	09:32:33	7.411	9.536	63.16	506.7
06/06/07	09:33:33	7.411	9.582	63.97	507.1
06/06/07	09:34:33	7.411	9.622	64.35	508.1
06/06/07	09:35:33	7.411	9.678	63.64	505.9
06/06/07	09:36:33	7.411	9.716	63.77	506.6
06/06/07	09:37:33	7.411	9.748	65.33	507.8
06/06/07	09:38:34	7.411	9.784	63.58	506.6
06/06/07	09:39:34	7.411	9.835	61.9	503.9
06/06/07	09:40:34	7.411	9.876	62.76	504.4
06/06/07	09:41:34	7.411	9.909	62.19	506
06/06/07	09:42:34	7.411	9.932	62.91	506.2
06/06/07	09:43:34	7.428	9.962	62.21	505.4
06/06/07	09:44:34	7.411	10.011	61.75	504.7
06/06/07	09:45:34	7.411	10.054	62.01	506.2
06/06/07	09:46:34	7.411	10.079	61.88	507.3
06/06/07	09:47:35	7.411	10.093	61.43	505.9
06/06/07	09:48:35	7.411	10.136	60.83	503.1
06/06/07	09:49:35	7.411	10.177	61.37	505.9
06/06/07	09:50:33	7.411	10.197	60.93	506.5
06/06/07	09:51:33	7.411	10.241	60.42	501.6
06/06/07	09:52:33	7.411	10.267	61.93	505.9
06/06/07	09:53:33	7.411	10.287	60.71	504
06/06/07	09:54:33	7.411	10.307	61.27	504
06/06/07	09:55:33	7.411	10.33	60.95	503.4
06/06/07	09:56:34	7.411	10.347	60.61	502.9
06/06/07	09:57:34	7.418	10.373	58.99	501.3
06/06/07	09:58:34	7.411	10.396	59.11	502
06/06/07	09:59:34	7.411	10.414	59.86	506.3
06/06/07	10:00:34	7.411	10.433	58.08	501.6
06/06/07	10:01:34	7.411	10.458	59.52	503.4
06/06/07	10:02:34	7.411	10.472	59.42	504.2
06/06/07	10:03:34	7.411	10.494	58.83	501.9
06/06/07	10:04:35	7.411	10.514	59.29	502.1
06/06/07	10:05:35	7.411	10.527	59.64	501.2

06/06/07	10:06:35	7.411	10.545	59.09	503.6
06/06/07	10:07:33	7.411	10.546	58.95	502.7
06/06/07	10:08:33	7.411	10.568	59.19	500.7
06/06/07	10:09:33	7.411	10.579	59.99	503.5
06/06/07	10:10:33	7.411	10.594	59.13	502.2
06/06/07	10:11:33	7.411	10.601	58.35	502.2
06/06/07	10:12:33	7.411	10.599	57.57	503.9
06/06/07	10:13:33	7.411	10.606	57.96	503
06/06/07	10:14:34	7.411	10.607	59.82	503.4
06/06/07	10:15:34	7.411	10.605	60.73	502.7
06/06/07	10:16:34	7.411	10.601	61.21	504.5
06/06/07	10:17:34	7.411	10.608	60.77	501.8
06/06/07	10:18:34	7.411	10.62	60.53	502.3
06/06/07	10:19:34	7.411	10.628	60.75	502.3
06/06/07	10:20:34	7.411	10.618	58.21	503.3

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	10:20:34	7.423	10.085	61.26	504.9

Test Run 8 End

Final System Bias Check for Run 8 . STRATA Version 2.01

Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #3

Reference Cylinder Numbers

	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time 06/06/07 10:23:39 PASSED

Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.08	0.19	-1.71	-1.30
Zero Bias%	0.30	1.00	0.40	0.30
Zero Drift%	0.20	0.90	-0.90	-0.20
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	12.04	9.31	236.25	314.10
Span Bias%	1.00.	0.50	0.80	1.60
Span Drift%	0.20	-0.20	-1.70	1.40
Ini Zero Avg	0.03	0.00	2.83	0.30
Ini Span Avg	11.99	9.34	244.56	299.80
Run Avg	7.42	10.09	61.26	504.90
Co	0.05	0.09	0.56	-0.50
Cm	12.01	9.32	240.41	306.90
Correct Avg	7.59	10.17	60.74	492.70

Test Run 9 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #3

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	10:28:11	7.801	12.286	62.62	506.2
06/06/07	10:29:11	7.8	12.308	61.15	503.1
06/06/07	10:30:11	7.8	12.313	61.37	502.7
06/06/07	10:31:11	7.784	12.347	61.38	501.1
06/06/07	10:32:12	7.705	12.374	60.17	498.7
06/06/07	10:33:12	7.705	12.409	60.86	501.8
06/06/07	10:34:12	7.705	12.41	58.69	500.5
06/06/07	10:35:12	7.705	12.422	58.64	498.8
06/06/07	10:36:13	7.704	12.449	60.01	499.1
06/06/07	10:37:11	7.704	12.469	61.02	501.3
06/06/07	10:38:11	7.704	12.472	60.43	502
06/06/07	10:39:11	7.704	12.507	60.99	501.1
06/06/07	10:40:11	7.704	12.495	60.42	500.3
06/06/07	10:41:11	7.704	12.507	60.71	499.1
06/06/07	10:42:12	7.704	12.512	61.19	498.7
06/06/07	10:43:12	7.704	12.542	61.22	498.8
06/06/07	10:44:12	7.704	12.544	61.5	501.7
06/06/07	10:45:12	7.704	12.557	61.53	499.5
06/06/07	10:46:12	7.704	12.557	61.53	500
06/06/07	10:47:12	7.704	12.547	60.61	499.4
06/06/07	10:48:13	7.704	12.549	60.44	499
06/06/07	10:49:11	7.704	12.574	60.84	497.6
06/06/07	10:50:11	7.704	12.579	61.16	499.6
06/06/07	10:51:11	7.704	12.584	60.92	498.8
06/06/07	10:52:11	7.704	12.584	61.19	497.7
06/06/07	10:53:11	7.704	12.61	60.38	497.1
06/06/07	10:54:12	7.704	12.606	61.53	498.4
06/06/07	10:55:12	7.703	12.6	61.1	498.4
06/06/07	10:56:12	7.703	12.617	62.39	499.2
06/06/07	10:57:12	7.703	12.618	61.52	498.6
06/06/07	10:58:12	7.703	12.633	61.89	497.2
06/06/07	10:59:13	7.703	12.639	62.38	497
06/06/07	11:00:11	7.703	12.64	62.23	498.6
06/06/07	11:01:11	7.703	12.65	62.68	499.1
06/06/07	11:02:11	7.703	12.658	62.31	498.4
06/06/07	11:03:11	7.703	12.662	62.86	497
06/06/07	11:04:11	7.703	12.662	63.81	499.5
06/06/07	11:05:12	7.703	12.662	63.05	498
06/06/07	11:06:12	7.703	12.661	64.43	498.2
06/06/07	11:07:12	7.703	12.682	64.08	497.9
06/06/07	11:08:12	7.703	12.675	65	499.2
06/06/07	11:09:12	7.703	12.673	64.58	497.5
06/06/07	11:10:12	7.703	12.665	66.88	500.9
06/06/07	11:11:13	7.762	12.633	64.96	499.3
06/06/07	11:12:11	7.703	12.659	64.33	494.2

06/06/07	11:13:11	7.716	12.665	64.42	495.8
06/06/07	11:14:11	7.703	12.682	64.93	496.7
06/06/07	11:15:11	7.706	12.676	65.08	498
06/06/07	11:16:11	7.71	12.676	64.6	496.9
06/06/07	11:17:12	7.785	12.664	64.1	495.7
06/06/07	11:18:12	7.723	12.683	64.69	496.7
06/06/07	11:19:12	7.779	12.67	63.55	496
06/06/07	11:20:12	7.742	12.682	63.71	494.9
06/06/07	11:21:12	7.739	12.678	63.49	494.3
06/06/07	11:22:12	7.778	12.665	64.47	496.8
06/06/07	11:23:13	7.792	12.653	63.51	495.3
06/06/07	11:24:11	7.754	12.674	63.18	493.6
06/06/07	11:25:11	7.752	12.677	63.27	494.9
06/06/07	11:26:11	7.712	12.696	63.33	493.9
06/06/07	11:27:11	7.719	12.701	64.62	497.2

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	11:27:11	7.72	12.582	62.4	498.5

Test Run 9 End

Final System Bias Check for Run 9 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #3	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/06/07	11:30:57 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.10	0.21	3.07	1.10
Zero Bias%	0.40	1.10	1.40	0.10
Zero Drift%	0.10	0.10	1.00	0.20
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	12.16	9.79	235.50	292.00
Span Bias%	0.50	2.90	1.00	0.60
Span Drift%	0.50	2.40	-0.10	-2.20
Ini Zero Avg	0.08	0.19	-1.71	-1.30
Ini Span Avg	12.04	9.31	236.25	314.10
Run Avg	7.72	12.58	62.40	498.50
Co	0.09	0.20	0.68	-0.10
Cm	12.10	9.55	235.88	303.00
Correct Avg	7.83	12.44	62.98	492.90

Test Run 10 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #4

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	11:46:03	7.8	12	68.14	511.6
06/06/07	11:47:03	7.777	12.049	68.43	511.7
06/06/07	11:48:04	7.8	12.077	70.12	513.6
06/06/07	11:49:04	7.8	12.091	70.78	514.4
06/06/07	11:50:04	7.8	12.114	70.5	511.9
06/06/07	11:51:04	7.707	12.186	70.35	511.5
06/06/07	11:52:05	7.714	12.199	72.15	514.3
06/06/07	11:53:05	7.75	12.217	71.29	513.5
06/06/07	11:54:05	7.733	12.246	71.45	512.5
06/06/07	11:55:03	7.704	12.289	70.19	507.6
06/06/07	11:56:03	7.704	12.314	70.61	509.8
06/06/07	11:57:03	7.704	12.342	70.98	510.3
06/06/07	11:58:04	7.707	12.346	71.79	513.5
06/06/07	11:59:04	7.707	12.363	71.5	511.3
06/06/07	12:00:04	7.723	12.38	71.32	510
06/06/07	12:01:04	7.704	12.421	72.11	511.3
06/06/07	12:02:04	7.717	12.409	72.3	514.8
06/06/07	12:03:05	7.704	12.432	72.43	510.8
06/06/07	12:04:05	7.704	12.462	71.73	510.2
06/06/07	12:05:05	7.704	12.497	71.79	510.1
06/06/07	12:06:03	7.704	12.524	71.71	509.7
06/06/07	12:07:03	7.704	12.537	72.62	510.8
06/06/07	12:08:04	7.704	12.547	71.93	511.2
06/06/07	12:09:04	7.704	12.56	72.97	509.3
06/06/07	12:10:04	7.704	12.566	72.92	510.3
06/06/07	12:11:04	7.704	12.573	73.13	511.5
06/06/07	12:12:04	7.704	12.587	72.74	509
06/06/07	12:13:05	7.704	12.635	72.5	510.7
06/06/07	12:14:05	7.704	12.643	71.87	513.1
06/06/07	12:15:05	7.703	12.652	71.87	512.9
06/06/07	12:16:05	7.703	12.657	72.43	511.1
06/06/07	12:17:03	7.703	12.658	72.04	510.9
06/06/07	12:18:03	7.703	12.699	71.4	507.9
06/06/07	12:19:04	7.703	12.699	73.47	512.1
06/06/07	12:20:04	7.749	12.677	73.65	514.6
06/06/07	12:21:04	7.713	12.704	73.03	507.5
06/06/07	12:22:04	7.703	12.71	73.76	511
06/06/07	12:23:04	7.703	12.714	73.6	510.6
06/06/07	12:24:05	7.703	12.747	71.33	505.1
06/06/07	12:25:05	7.703	12.786	72.93	507.3
06/06/07	12:26:05	7.703	12.795	73.56	511.3
06/06/07	12:27:03	7.703	12.81	74.04	511.7
06/06/07	12:28:03	7.703	12.81	74.64	512.4
06/06/07	12:29:04	7.703	12.829	74.27	508.8
06/06/07	12:30:04	7.703	12.826	75.21	513.8

06/06/07	12:31:04	7.703	12.855	75.12	510.6
06/06/07	12:32:04	7.703	12.869	74.59	511.7
06/06/07	12:33:04	7.703	12.88	75.42	511.1
06/06/07	12:34:05	7.703	12.885	74.75	512.3
06/06/07	12:35:05	7.703	12.888	76.54	512.5
06/06/07	12:36:05	7.703	12.878	75.01	512.5
06/06/07	12:37:05	7.703	12.913	74.11	508.8
06/06/07	12:38:03	7.703	12.937	74.63	509
06/06/07	12:39:03	7.703	12.924	76.41	513.9
06/06/07	12:40:03	7.703	12.913	75.69	512.1
06/06/07	12:41:04	7.703	12.949	75.46	510.1
06/06/07	12:42:04	7.703	12.954	76.13	511.9
06/06/07	12:43:04	7.703	12.932	78.38	515.7
06/06/07	12:44:04	7.746	12.896	77.03	516.8
06/06/07	12:45:04	7.779	12.894	74.02	509.8

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	12:45:04	7.716	12.599	72.95	511.3

Test Run 10 End

Final System Bias Check for Run 10 . STRATA Version 2.01

Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #4

Reference Cylinder Numbers

	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time 06/06/07 12:48:27 PASSED

Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.00	0.33	5.61	-1.50
Zero Bias%	0.00	1.70	1.90	0.30
Zero Drift%	-0.40	0.60	0.50	-0.30
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	12.28	10.02	246.93	301.50
Span Bias%	0.00	4.10	1.30	0.40
Span Drift%	0.50	1.20	2.30	1.00
Ini Zero Avg	0.10	0.21	3.07	1.10
Ini Span Avg	12.16	9.79	235.50	292.00
Run Avg	7.72	12.60	72.95	511.30
Co	0.05	0.27	4.34	-0.20
Cm	12.22	9.91	241.22	296.80
Correct Avg	7.76	12.02	69.51	516.20

Test Run 11 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #4

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	12:52:07	7.901	12.414	71.96	504.4
06/06/07	12:53:07	7.897	12.446	70.75	507.6
06/06/07	12:54:07	7.89	12.483	71.67	508.2
06/06/07	12:55:07	7.798	12.557	70.95	504.1
06/06/07	12:56:08	7.798	12.582	73.94	513.1
06/06/07	12:57:08	7.798	12.602	71.75	511.4
06/06/07	12:58:08	7.798	12.628	74.78	513.8
06/06/07	12:59:08	7.798	12.612	73.65	514.2
06/06/07	13:00:08	7.798	12.641	72.84	511.3
06/06/07	13:01:09	7.798	12.663	73.31	511.4
06/06/07	13:02:09	7.798	12.654	75.44	515.4
06/06/07	13:03:07	7.798	12.629	75.23	514.4
06/06/07	13:04:07	7.798	12.663	73.99	510.4
06/06/07	13:05:07	7.798	12.658	74.09	510.8
06/06/07	13:06:08	7.798	12.681	73.2	509.4
06/06/07	13:07:08	7.798	12.718	72.65	507.6
06/06/07	13:08:08	7.798	12.734	73.35	511.3
06/06/07	13:09:08	7.798	12.739	73.72	513.2
06/06/07	13:10:08	7.798	12.752	73.03	512.1
06/06/07	13:11:09	7.791	12.771	73.7	510.3
06/06/07	13:12:09	7.798	12.774	73.03	511.4
06/06/07	13:13:09	7.798	12.787	73.48	510.3
06/06/07	13:14:07	7.798	12.765	75.44	516.7
06/06/07	13:15:07	7.798	12.773	71.74	511.3
06/06/07	13:16:07	7.762	12.841	70.15	504.2
06/06/07	13:17:08	7.768	12.85	73.78	515.4
06/06/07	13:18:08	7.798	12.834	72.5	516.1
06/06/07	13:19:08	7.798	12.852	72.5	511.3
06/06/07	13:20:08	7.798	12.834	73.23	514.2
06/06/07	13:21:08	7.768	12.873	71.42	510.3
06/06/07	13:22:09	7.748	12.893	72.22	510.8
06/06/07	13:23:09	7.791	12.87	73.74	513
06/06/07	13:24:09	7.798	12.868	73.86	513.8
06/06/07	13:25:07	7.798	12.881	72.84	510.9
06/06/07	13:26:07	7.798	12.884	73.92	512.4
06/06/07	13:27:07	7.798	12.877	72.13	510.1
06/06/07	13:28:08	7.745	12.924	73.19	509.6
06/06/07	13:29:08	7.798	12.881	74.4	514.1
06/06/07	13:30:08	7.798	12.866	73.76	512.4
06/06/07	13:31:08	7.798	12.869	74.16	510.7
06/06/07	13:32:08	7.798	12.881	71.64	510.6
06/06/07	13:33:08	7.798	12.91	72.49	508.3
06/06/07	13:34:09	7.798	12.934	73.68	514.7
06/06/07	13:35:09	7.798	12.91	74.9	515.6
06/06/07	13:36:07	7.798	12.9	72.83	515.4

06/06/07	13:37:07	7.798	12.897	73.76	512.1
06/06/07	13:38:07	7.798	12.916	73.46	511.1
06/06/07	13:39:08	7.798	12.927	73.83	514
06/06/07	13:40:08	7.798	12.928	73.48	512.3
06/06/07	13:41:08	7.798	12.937	73.55	512.4
06/06/07	13:42:08	7.798	12.945	73.66	511.7
06/06/07	13:43:08	7.828	12.947	73.7	515.2
06/06/07	13:44:08	7.798	12.965	74.21	513.6
06/06/07	13:45:09	7.866	12.947	74.81	516.6
06/06/07	13:46:09	7.897	12.941	72.55	514.7
06/06/07	13:47:07	7.815	12.983	73.39	509.7
06/06/07	13:48:07	7.897	12.95	74.99	515.8
06/06/07	13:49:07	7.897	12.965	73.46	510.1
06/06/07	13:50:08	7.897	12.969	74.35	513.4
06/06/07	13:51:08	7.897	12.978	74.89	514.2

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	13:51:08	7.809	12.806	73.32	511.9

Test Run 11 End

Final System Bias Check for Run 11 . STRATA Version 2.01

Operator:	RMCEInc	
Plant Name:	WMI - Skyline	
Location:	Engine #4	
	Reference Cylinder Numbers	
	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/06/07	13:54:16 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.17	0.42	6.32	-7.50
Zero Bias%	0.70	2.20	2.00	0.90
Zero Drift%	0.70	0.40	0.10	-0.60
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	12.47	10.07	242.01	302.40
Span Bias%	0.70	4.30	0.30	0.50
Span Drift%	0.80	0.20	-1.00	0.10
Ini Zero Avg	0.00	0.33	5.61	-1.50
Ini Span Avg	12.28	10.02	246.93	301.50
Run Avg	7.81	12.81	73.32	511.90
Co	0.09	0.38	5.97	-4.50
Cm	12.37	10.04	244.47	302.00
Correct Avg	7.75	12.07	67.77	505.00

Test Run 12 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #4

Begin calculating run averages

		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	13:59:01	8.062	12.341	72.27	510.1
06/06/07	14:00:01	7.994	12.41	72.63	511.9
06/06/07	14:01:01	7.994	12.42	74.1	515.8
06/06/07	14:02:01	7.994	12.438	72.83	514
06/06/07	14:03:01	7.984	12.501	73.98	509.7
06/06/07	14:04:01	7.994	12.493	73.82	514.5
06/06/07	14:05:01	7.943	12.541	74.31	509.5
06/06/07	14:06:02	7.994	12.539	73.96	513.1
06/06/07	14:07:02	7.903	12.599	73.68	510.6
06/06/07	14:08:02	7.896	12.643	72.77	511.3
06/06/07	14:09:02	7.896	12.643	76.37	516.9
06/06/07	14:10:02	7.943	12.61	74.49	517.1
06/06/07	14:11:03	7.896	12.66	73.83	507.5
06/06/07	14:12:01	7.896	12.687	75.62	513.5
06/06/07	14:13:01	7.896	12.682	76.85	514.4
06/06/07	14:14:01	7.913	12.688	76.33	512.3
06/06/07	14:15:01	7.93	12.689	76.89	512.6
06/06/07	14:16:01	7.897	12.722	75.62	512.4
06/06/07	14:17:02	7.903	12.724	75.28	512.9
06/06/07	14:18:02	7.897	12.745	75.92	513.2
06/06/07	14:19:02	7.91	12.753	77.42	516.6
06/06/07	14:20:02	7.923	12.745	79	518.6
06/06/07	14:21:02	7.994	12.714	75.83	512.7
06/06/07	14:22:01	7.931	12.781	73.82	505.9
06/06/07	14:23:01	7.897	12.829	76.27	510.8
06/06/07	14:24:01	7.896	12.822	77.1	517
06/06/07	14:25:01	7.896	12.813	76.92	514.5
06/06/07	14:26:01	7.897	12.822	79.37	516.9
06/06/07	14:27:02	7.923	12.821	78.29	515.4
06/06/07	14:28:02	7.933	12.822	77.69	513
06/06/07	14:29:02	7.987	12.824	78.86	512.7
06/06/07	14:30:02	7.994	12.819	78.47	513
06/06/07	14:31:02	7.994	12.827	79.26	509.4
06/06/07	14:32:02	7.99	12.839	77.36	510.9
06/06/07	14:33:03	7.896	12.901	78.96	508.4
06/06/07	14:34:01	7.962	12.87	81.04	516.6
06/06/07	14:35:01	7.994	12.872	78.66	515
06/06/07	14:36:01	7.947	12.893	78.03	513.4
06/06/07	14:37:01	7.994	12.889	76.75	514.6
06/06/07	14:38:01	7.993	12.88	75.37	513.9
06/06/07	14:39:01	7.963	12.908	75.63	513.1
06/06/07	14:40:01	7.949	12.92	74.18	512.6
06/06/07	14:41:01	7.912	12.93	74.48	511.6
06/06/07	14:42:02	7.969	12.921	75.66	514.3
06/06/07	14:43:02	7.962	12.926	74.15	510.5

06/06/07	14:44:02	7.915	12.933	75.37	511.6
06/06/07	14:45:02	7.894	12.935	75.17	512.9
06/06/07	14:46:02	7.894	12.962	75.95	513.5
06/06/07	14:47:02	7.894	12.963	71.57	510.8
06/06/07	14:48:02	7.893	12.957	72.93	507
06/06/07	14:49:02	7.893	12.876	72.99	511.5
06/06/07	14:50:02	7.893	12.818	72.49	509.1
06/06/07	14:51:03	7.852	12.714	74.39	512.9
06/06/07	14:52:01	7.889	12.584	74.66	515
06/06/07	14:53:01	7.83	12.528	71.5	509.8
06/06/07	14:54:01	7.793	12.411	73.32	512.8
06/06/07	14:55:01	7.854	12.248	73.38	516.8
06/06/07	14:56:01	7.84	12.156	72.35	513.4
06/06/07	14:57:01	7.792	12.078	72.38	511.8
06/06/07	14:58:01	7.791	11.983	71.18	512.8

Average of Test Run		O2 %	CO2 %	NOx ppm	CO ppm
06/06/07	14:58:01	7.924	12.701	75.33	512.8

Test Run 12 End

Final System Bias Check for Run 12 . STRATA Version 2.01

Operator:	RMCEInc
Plant Name:	WMI - Skyline
Location:	Engine #4

Reference Cylinder Numbers

	Zero	Span
O2	ALM021827	CC52824
CO2	ALM021827	CC52824
NOx	CC52824	ALM021827
CO	ALM021827	CC195391

Date/Time	06/06/07	15:03:12 PASSED		
Analyte	O2	CO2	NOx	CO
Units	%	%	ppm	ppm
Zero Ref Cyl	0.00	0.00	0.00	0.00
Zero Cal	0.00	-0.01	-3.86	1.90
Zero Avg	0.00	-0.08	4.06	-7.30
Zero Bias%	0.00	0.30	1.60	0.90
Zero Drift%	-0.70	-2.50	-0.50	0.00
Span Ref Cyl	12.32	9.39	240.00	299.70
Span Cal	12.28	9.21	240.43	297.70
Span Avg	12.56	9.24	238.14	303.70
Span Bias%	1.10	0.10	0.50	0.60
Span Drift%	0.40	-4.10	-0.80	0.10
Ini Zero Avg	0.17	0.42	6.32	-7.50
Ini Span Avg	12.47	10.07	242.01	302.40
Run Avg	7.92	12.70	75.33	512.80
Co	0.09	0.17	5.19	-7.40
Cm	12.51	9.65	240.07	303.00
Correct Avg	7.77	12.41	71.66	502.20

APPENDIX C. TEST QA/ QC FORMS

Calibration Gas Certificates of Analysis

Example Calculations

Meterbox Calibrations

Pitot Calibrations

EXAMPLE CALCULATIONS

Company: Waste Management
Source: Skyline Facility
Test Location: Engines 1-4
RMCEInc Project #: 2007-15029

Normal Load: HIGH LOAD
Run: 1
Start Time: 06/05/07 08:20
End Time: 09:20
Run Duration (Min.) : 01:00

Emission Rate (lbs/mmBtu)

NO_x lbs/mmbtu = F-Factor * Conv-Factor * NOxppmd * 20% O2 / (20.9% O2 -O2%d)

NOx lbs/mmbtu = 68.0 * 1.1194E-7 * 8710 * (20.9/(20.9-7.62))

NOx lbs/mmbtu = 0.076

Emission Rate (ppm@15% O_2)

NO_x ppm@15% O_2 = NOx ppmd * 5.9 / (20.9% O2 -O2%d)

NO_x ppm@15% O_2 = 68.0 * 5.9 / (20.9 - 7.62)

NO_x ppm@15% O_2 = 30.215

Emission Rate (Tons/Year)

NO_x tons/Yr = lb/Hr * 1ton/2000 lbs * 8760 Hrs/Yr

NOx tons/Yr = 2.406 lb/Hr* 1 ton/2000 lb * 8760 Hrs/Yr

NOx tons/Yr = 10.538

Emission Rate (lbs/Hr)

NO_x lbs/Hr = NOx ppmd * DSCFM * 60 * Conv. Factor

NOx lbs/Hr = 68.0 * 4938 * 60 * 1.194 e-7

NOx lbs/Hr = 2.406

Emission Rate (g/BHP-Hr)

NO_x g/BHP-Hr = NOx lb/Hr * BHP

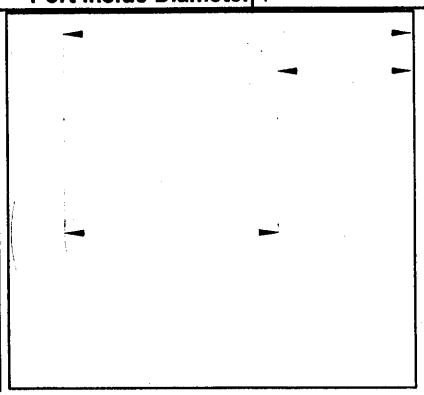
NOx g/BHP-Hr = 2.406 * 2233

NOx g/BHP-Hr = 0.489

METHOD 1 - SAMPLE AND VELOCITY TRAVERSES FOR CIRCULAR SOURCES

Plant Name	Skyline RDF	**Date**	06/04/07
Sampling Location	Engine Exhausts	**Project #**	2007-15029
Operator	GC/AC	**# of Ports Available**	2
Stack Type	Circular	**# of Ports Used**	2
Stack Size	Small	**Port Inside Diameter**	4

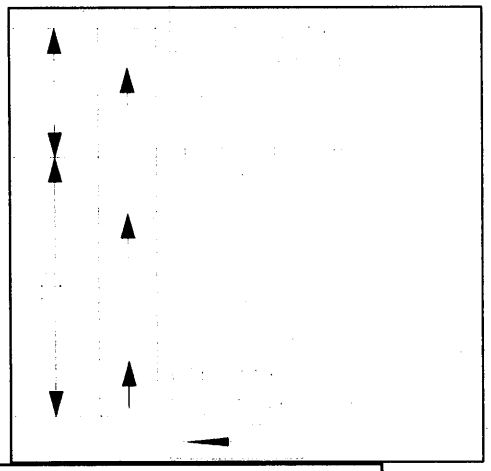
Circular Stack or Duct Diameter			
Distance to Far Wall of Stack	(L_{fw})	24.00	in
Distance to Near Wall of Stack	(L_{nw})	8.00	in
(=Lfw - Lnw) **Diameter of Stack**	(D)	16.00	in
(=3.14(D/2/Cunits)2) **Area of Stack**	(A_s)	1.40	ft^2



Distance from Port to Disturbances			
Distance Upstream	(B)	48.00	in
(=B/D) **Diameters Upstream**	(B_D)	3.00	diameters
Distance Downstream	(A)	60.00	in
(=A/D) **Diameters Downstream**	(A_D)	3.75	diameters

Number of Traverse Points Required			
Diameters to Flow Disturbance		**Minimum Number of[1] Traverse Points**	
Up Stream	**Down Stream**	**Particulate Points**	**Velocity Points**
2.00-4.99	0.50-1.24	24	16
5.00-5.99	1.25-1.49	20	16
6.00-6.99	1.50-1.74	16	12
7.00-7.99	1.75-1.99	12	12
>= 8.00	>=2.00	8 or 12[2]	8 or 12[2]
Upstream Spec		24	16
Downstream Spec		8	8
Traverse Pts Required		24	16

[1] Check Minimum Number of Points for the Upstream and Downstream conditions, then use the largest.
[2] 8 for Circular Stacks 12 to 24 inches
12 for Circular Stacks over 24 inches



Number of Traverse Points Used			
2	**Ports by**	8	**Across**
16	**Pts Used**	16	**Required**
☐	**Particulate**	☑	**Velocity**

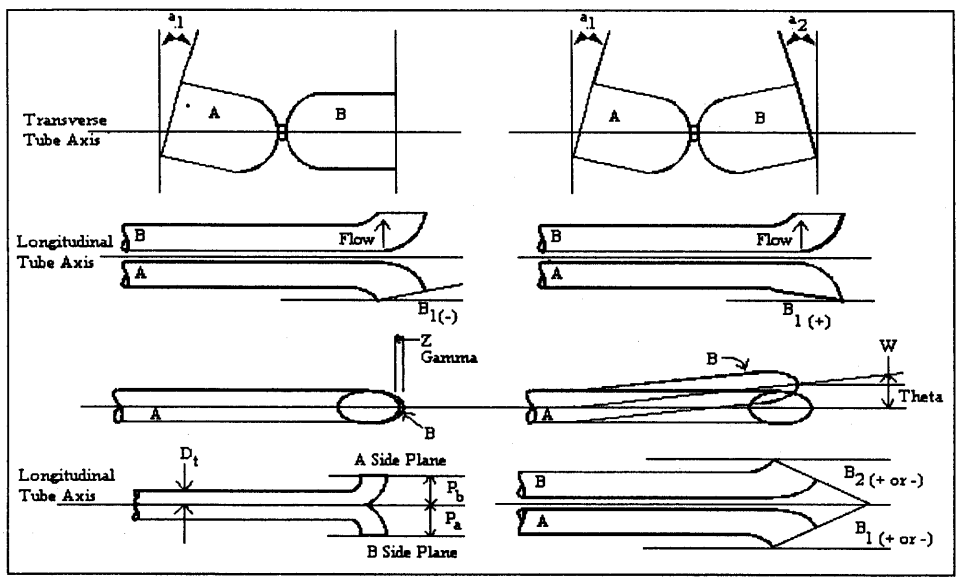
Location of Traverse Points in Circular Stacks						
Traverse Point Number	(Fraction of Stack Diameter from Inside Wall to Traverse Point) Number of Traverse Points on a Diameter					
	2	4	6	8	10	12
1	.146	.067	.044	.032	.026	.021
2	.854	.250	.146	.105	.082	.067
3		.750	.296	.194	.146	.118
4		.933	.704	.323	.226	.177
5			.854	.677	.342	.250
6			.956	.806	.658	.356
7				.895	.774	.644
8				.968	.854	.750
9					.918	.823
10					.974	.882
11						.933
12						.979

Traverse Point Locations			
Traverse Point Number	**Fraction of Stack Diameter**	**Distance from Inside Wall**	**Distance Including Nipple Length**
		in	in
1	0.032	4/8	8 4/8
2	0.105	1 5/8	9 5/8
3	0.194	3 1/8	11 1/8
4	0.323	5 1/8	13 1/8
5	0.677	10 7/8	18 7/8
6	0.806	12 7/8	20 7/8
7	0.895	14 3/8	22 3/8
8	0.968	15 4/8	23 4/8
9			
10			
11			
12			

S-TYPE PITOT TUBE INSPECTION

Project Number	**15029**		
Pitot Tube Number	**M2-4**		
Level	Y	(Y/N)	PASS
Obstructions	N	(Y/N)	PASS
Damaged	N	(Y/N)	PASS
Type of material	SS		
-10 < alpha1 < +10	0.5	Degrees	PASS
-10 < alpha2 < +10	0.5	Degrees	PASS
-5 < Beta1 < +5	0.0	Degrees	PASS
-5 < Beta2 < +5	0.0	Degrees	PASS
z or Gamma	0.0	Degrees	
w or Theta	0.5	Degrees	
A	0.795	Inches	
{z = A Tan (Gamma)} < 0.125	0.000	Inches	PASS
{w = A Tan (Theta)} < 0.03125	0.008	Inches	PASS
$0.1875 < D_t < 0.375$	0.375	Inches	PASS
$1.05\ D_t < P_a < 1.5\ D_t$	0.395	Inches	PASS
$1.05\ D_t < P_b < 1.5\ D_t$	0.394	Inches	PASS
$\lvert P_a - P_b \rvert < 0.0625$	0.001	Inches	PASS
Distance T/C set back > 2.0	2.445	Inches	PASS

alpha1 & alpha 2	are the angles of deflection that faces of the pitot tube are off from the perpendicular line of the traverse axis.
Beta1 & Beta2	are the angles of deflection that faces of the pitot tube from the line parallel to the longitudinal tube axis.
Gamma	is the angle between the line between the two pitot tips and the theoretical level line between the tips.
Theta	is the angle between the two center lines of the pitot faces.
A	is the distance between the two pitot tips.
z	is the distance between the two lengths of the pitot tips.
w	is the distance between the two center lines of each of the pitot tubes.
D_t	is the outside diameter of the tubing used.
P_a & P_b	is the distance between the pitot tube face and the longitudinal tube axis.



COMMENTS:

I certify that this pitot tube meets or exceeds all specifications, criteria and/ or applicable design features and is hereby assigned a pitot tube calibration factor of 0.84.

Signature:

Date: 6/4/07

RMC Environmental, Inc.

PreTest Meterbox Audit

Plant: Waste Management, Inc.
Location: Skyline RDF .

Test Date: 06/06/07
Auditor: RC
Project #: 15029

Meterbox I.D.: RMC001	**Level Manometer:** Yes
Gamma: 0.983	**Zero Manometer:** Yes
Delta H@ 1.890	**Barometric Pressure:** 29.86

	Audit Time (Min)	Dry Gas Meter Reading (Ft^3)	Dry Gas Meter Temperature (^oF)
Initial Readings =	0.0	313.494	88
Final Readings =	10.0	321.250	90

Run Time (Minutes) **Theta** =	10
Gas Volume Sampled V_m =	7.7560
Average T_m =	89.0

	Audit Gamma Limits
Lower Gamma Limit **LGL**=	*0.96 * Y =* 0.944
Upper Gamma Limit **UGL**=	*1.04 * Y =* 1.022

Audit Gamma Y_c =	**0.9870**
Meter Box Audit =	**Passed**

Ideal Sampling Rate = 0.75

$$Y_c = (Theta/V_m) * [\{(29.92/(460+68) * 0.75^2) * (T_m + 460)\} / P_{bar}]^{0.5}$$

Passed = LGL < Y_c < UGL

Failed = LGL > Y_c or Y_c > UGL

Audit Performed By: _____

RMC Environmental, Inc.

NO2-NO CONVERSION EFFICIENCY

RMCEInc-Air Monitoring Division

Manufacture/ Model: TECO 10
Serial Number: 10S-17186-278

Instrument Span: 1000
Date Of Test: 6/4/07

RESULTS	
Peak response recorded during converter efficiency test:	106.90 ppm
Response recorded at the end of the 30-minute test:	106.50 ppm
Percent decrease from the peak response:	0.4%
CONVERTER EFFICIENCY:	**99.63%**

NO Final: **105.80**

Alt Converter Efficiency: **98.97**

SPECIFICATIONS (EPA METHOD 20): RESPONSE AT 30 MINUTES MUST NOT DECREASE BY MORE THAN 2% OF THE PEAK RESPONSE VALUE.

NO2-NO CONVERTER EFFICIENCY TEST PROCEDURES

RMCEInc-AMD followed the manufacturer's recommended set-up procedures contained in the analyzer manual. After the initial set-up procedures were completed, the electronics of the monitor were adjusted according to the manufacturer's guidelines. The monitor was then calibrated by flowing NO calibration gases into the instrument. A calibration gas was then diluted (1:1) with purified compressed air. The gas mixture was routed through a manifold into a Tedlar bag, which was previously leak tested and evacuated. This arrangement afforded sufficient volume to allow the sampling system to operate for the required 30 minutes. Immediately after the bag was filled, the manifold was connected to the sampling system. The system was turned on and the analyzer response was recorded on a data acquisition system. The one minute averages from the data acquisition system was analyzed for the peak response and the response at the end of the 30-minute sampling period.

6/4/07

Test Run 2 Begin. STRATA Version 2.01
Operator: RMCEInc
Plant Name: WMI - Skyline
Location: Engine #1

		O2 %	CO2 %	NOx ppm	CO ppm
Start Averaging					
06/04/07	15:51:17	20.464	0.668	106.2	6.1
06/04/07	15:52:17	20.637	0.747	106.4	5.4
06/04/07	15:53:18	20.674	0.837	106.2	4.9
06/04/07	15:54:18	20.746	0.933	106.8	4.6
06/04/07	15:55:18	20.745	0.961	106.5	3.8
06/04/07	15:56:18	20.766	0.035	106.5	3.4
06/04/07	15:57:19	20.842	0.401	106.1	2.9
06/04/07	15:58:19	20.842	0.653	106.5	2.6
06/04/07	15:59:19	20.842	0.085	106.9	2.2
06/04/07	16:00:17	20.842	0.203	106.4	2.2
06/04/07	16:01:17	20.464	0.026	106.7	2.2
06/04/07	16:02:18	20.637	0.794	106.5	2.1
06/04/07	16:03:18	20.674	0.379	106.5	2.1
06/04/07	16:04:18	20.746	0.408	105.4	2.4
06/04/07	16:05:18	20.745	0.543	106.1	2.9
06/04/07	16:06:18	20.766	0.556	106.6	2.6
06/04/07	16:07:19	20.842	0.177	105.4	3.8
06/04/07	16:08:19	20.842	0.559	106.2	3.4
06/04/07	16:09:19	20.842	0.342	106.5	2.9
06/04/07	16:10:19	20.842	0.141	106.1	2.6
06/04/07	16:11:19	20.746	-0.059	106.5	2.2
06/04/07	16:12:19	20.745	-0.255	106.5	1.9
06/04/07	16:13:17	20.766	-0.444	106.7	1.8
06/04/07	16:14:17	20.842	-0.631	106.5	1.1
06/04/07	16:15:17	20.842	-0.811	105.5	1.6
06/04/07	16:16:18	20.842	-0.984	106.5	1.5
06/04/07	16:17:18	20.842	-0.15	106.5	1.4
06/04/07	16:18:18	20.842	-0.311	106.5	1.4
06/04/07	16:19:18	20.876	-0.464	106.9	1.8
06/04/07	16:20:18	20.941	-0.614	105.7	1.4
06/04/07	16:21:18	20.941	-0.757	106.7	1.9
06/04/07	16:22:18	20.942	-0.889	106.5	1.6
Average	934 sampl	13.631	0.62	105.8	1.7

Test Run 2 End

APPENDIX D. PROCESS DATA

PROCESS DATA FOR CATERPILLAR ENGINES

Company: Waste Management - Skyline Facility
Source: Engines 1-4

DATE: 6/5-6/2007

Start Time		HP	KW	Fuel Flow	Air Flow ppm	BTU	CH4 %	CO2 %	O2 %	ENGINE #
06/05/07 08:20	Run 1	2233	1597	563	4312	485	52.2	40.1	0.2	1
06/05/07 08:40		2233	1602	560	4324	485				1
06/05/07 09:00		2233	1620	562	4327	485				1
06/05/07 09:20		2233	1627	564	4322	485				1
06/05/07 09:32	Run 2	2233	1607	563	4321	485	51.4	40.2	0.1	1
06/05/07 09:52		2233	1627	565	4328	485				1
06/05/07 10:12		2233	1618	560	4331	485				1
06/05/07 10:32		2233	1599	564	4322	485				1
06/05/07 10:45	Run 3	2233	1606	563	4317	485	52.0	40.4	0.1	1
06/05/07 11:05		2233	1620	560	4382	485				1
06/05/07 11:25		2233	1618	562	4328	485				1
06/05/07 11:45		2233	1571	559	4348	485				1
Engine 1 AVERAGE		2233	1609	562	4330	485	51.9	40.2	0.1	
06/05/07 12:42	Run 1	2233	1641	565	4350	485	52.3	39.9	0.1	2
06/05/07 13:02		2233	1657	546	4325	485				2
06/05/07 13:22		2233	1652	551	4386	485				2
06/05/07 13:42		2233	1651	548	4319	485				2
06/05/07 14:00	Run 2	2233	1625	549	4401	485	52.4	40.3	0.1	2
06/05/07 14:20		2233	1585	551	4378	485				2
06/05/07 14:40		2233	1625	548	4289	485				2
06/05/07 15:00		2233	1651	548	4342	485				2
06/05/07 15:10	Run 3	2233	1622	551	4342	485	51.8	40.6	0.1	2
06/05/07 15:30		2233	1618	548	4327	485				2
06/05/07 15:50		2233	1628	550	4342	485				2
06/05/07 16:10		2233	1596	548	4335	485				2
Engine 2 AVERAGE		2233	1629	550	4345	485	52.2	40.3	0.1	

Start Time		HP	KW	Fuel Flow	Air Flow ppm	BTU	CH4 %	CO2 %	O2 %	ENGINE #
06/06/07 08:10	Run 1	2233	1629	543	4312	491	52.6	40.4	0.1	3
06/06/07 08:30		2233	1593	551	4329	491				3
06/06/07 08:50		2233	1659	550	4318	491				3
06/06/07 09:10		2233	1621	550	4335	491				3
06/06/07 09:20	Run 2	2233	1602	554	4305	491	52.5	40.8	0.1	3
06/06/07 09:40		2233	1628	550	4295	491				3
06/06/07 10:00		2233	1596	548	4293	491				3
06/06/07 10:20		2233	1601	555	4304	491				3
06/06/07 10:27	Run 3	2233	1570	550	4307	491	51.6	39.8	0.1	3
06/06/07 10:47		2233	1639	549	4298	491				3
06/06/07 11:07		2233	1635	547	4301	491				3
06/06/07 11:27		2233	1565	549	4320	491				3
Engine 3 AVERAGE		2233	1612	550	4310	491	52.2	40.3	0.1	
06/06/07 11:45	Run 1	2233	1618	547	4262	491	51.9	39.7	0.2	4
06/06/07 12:05		2233	1624	544	4252	491				4
06/06/07 12:25		2233	1610	546	4248	491				4
06/06/07 12:45		2233	1598	540	4192	491				4
06/06/07 12:51	Run 2	2233	1546	545	4267	491	52.4	40.6	0.1	4
06/06/07 13:11		2233	1610	546	4270	491				4
06/06/07 13:31		2233	1628	550	4304	491				4
06/06/07 13:51		2233	1584	543	4237	491				4
06/06/07 13:58	Run 3	2233	1597	546	4236	491	51.1	40.2	0.2	4
06/06/07 14:18		2233	1560	539	4267	491				4
06/06/07 14:38		2233	1632	554	4272	491				4
06/06/07 14:58		2233	1612	542	4406	491				4
Engine 4 AVERAGE		2233	1602	545	4268	491	51.8	40.2	0.2	