TEST REPORT

COMPLIANCE EMISSION TEST PROGRAM
SRU NO. 546 INCINERATOR

VALERO REFINING PORT ARTHUR REFINERY
PORT ARTHUR, TEXAS

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ARI Project No. H453-21
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January 25 and 26, 2007 Test Program

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ACRONYMS AND ABBREVIATIONS

acfm	Actual cubic feet per minute, at stack conditions
CEMS	Continuous emission monitoring system
CO_2	Carbon dioxide
CO	Carbon monoxide
COS	Carbonyl sulfide
COC	Chain of custody
CFR	Code of Federal Regulations
CS_2	Carbon Disulfide
EPA	Environmental protection agency
EPN	Emission point number
°F	Degrees Fahrenheit
ft/sec	feet per second
dscf	Dry standard cubic feet, standard conditions = 29.92 in. Hg and 68°F
dscfh	Dry standard cubic feet per minute, standard conditions = 29.92 in. Hg and 68°F
g	Gram
GC	Gas chromatography
GC-FPD	Gas chromatography – flame photometric detector
gr/dscf	Grains per dry standard cubic feet, standard conditions = 29.92 in. Hg and 68°F
HCl	Hydrogen chloride
H_2S	Hydrogen sulfide
lb/dscf	pounds per dry standard cubic foot, standard conditions = 29.92 in. Hg and 68°F
lb/hr	pounds per hour
ltpd	Long tons per day
mg	Milligram
min	Minute
mL	Milliliter
NDIR	Non-dispersive infrared

ACRONYMS AND ABBREVIATIONS

NO	Nitric oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
N_2	Nitrogen
O_2	Oxygen
% by vol, db	Percent by volume, dry basis
PM	Total particulate matter
PS	Performance specification
PST	Performance specification test
ppm	Parts per million
ppmv db	Parts per million by volume, dry basis
ppmv db @ 0% O_2	parts per million by volume corrected to 0% exhaust oxygen, dry basis
ppmv db @ 3% O_2	parts per million by volume corrected to 3% exhaust oxygen, dry basis
PSD	Prevention of Significant Deterioration
RA	Relative accuracy
RSC	Reduced sulfur compounds
scfh	Standard cubic feet per hour, standard conditions = 29.92 in. Hg and 68°F including moisture (wet)
SN	Serial number
SO_2	Sulfur dioxide
SRU	Sulfur Recovery Unit
TCEQ	Texas Commission on Environmental Quality
TGI	Tailgas Incinerator
ton/yr	Tons per year
USEPA	United States Environmental Protection Agency

SECTIONONE Introduction and Summary

ARI Environmental, Inc. (ARI) conducted a Compliance Emission Test Program at the Valero Refining Port Arthur Refinery (Valero) located in Port Arthur, Texas. The test program was conducted on the SRU No. 546 Incinerator Exhaust.

Compliance testing at the SRU No.1 Incinerator was conducted to determine the concentrations and mass emission rates of sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO) and hydrogen sulfide (H_2S). The test programs followed the regulatory requirements and sampling procedures listed below:

- Title 40 of the Code of Federal Regulations (40 CFR), Part 60, 2006, Appendix A - USEPA Methods 1-4, 6C, 7E, 10 and 11
- 40 CFR, Part 60, 2006, Subpart J – Standards of Performance for Petroleum Refineries
- 40 CFR, Part 51, 2006, Appendix M, USEPA Method 205
- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III - Stationary Source Specific Methods
- Texas Air Control Board (TACB) Sampling Procedures Manual

Under the direction of Mr. Daniel Loubiere the ARI field test team consisted of Mr. Zach Lillie, Mr. Shawn Moody and Mr. Cameron Withers. Mr. Robin Hill of Valero coordinated the test activities with plant operations and provided process data to ARI for inclusion in this report. Testing activities were conducted on January 25 and 26, 2007.

The results of the compliance test program are summarized in Table 1-1.

TABLE 1-1. SUMMARY OF SRU NO. 546 INCINERATOR COMPLIANCE TEST RESULTS

RUN NO.:	1	2	3	Average
Sulfur Dioxide				
ppmv db @ 0% O_2	97.8	96.0	95.9	96.6
lb/hr	24.49	24.03	24.28	24.27
Nitrogen Oxides				
lb/hr	2.92	3.16	3.04	3.04
Carbon Monoxide				
lb/hr	8.99	6.69	7.27	7.65
Hydrogen Sulfide				
lb/hr	0.175	0.258	0.214	0.216

SECTIONTWO Compliance Test Procedures

2.1 OVERVIEW

ARI conducted a compliance emission test on the SRU No. 546 Incinerator exhaust at Valero's East Refinery located in Port Arthur, Texas. The purpose of the test program was to determine various pollutant concentrations and mass emission rates to atmosphere.

Test methods followed those as detailed in 40CFR, Part 60, 2006, Appendix A, USEPA Methods 1-4, 6C, 7E, 10 and 11; 40CFR, Part 60, 2006, Subpart J; 40CFR, Part 51, 2006, Appendix M, USEPA Method 205; the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods; and the TACB Sampling Procedures Manual. The sample methods are listed below:

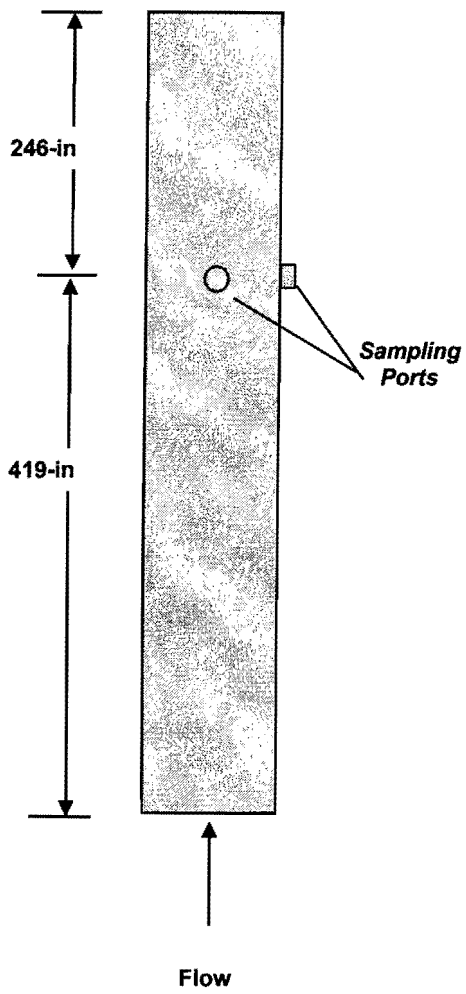
USEPA Method	Description
1	Sample and Velocity Traverses for Stationary Sources
2	Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)
3A	Determination of Oxygen and Carbon Dioxide Concentrations in Emission from Stationary Sources (Instrumental Analyzer Procedure)
4	Determination of Moisture Content in Stack Gases
6C	Determination of Sulfur Dioxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)
7E	Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)
10	Determination of Carbon Monoxide Emissions from Stationary Sources
11	Determination of Hydrogen Sulfide from Stationary Sources
205	Verification of Gas Dilution Systems for Field Instrument Calibrations

Pursuant to the requirements of 40CFR, Part 60, Subpart J – Standards of Performance for Petroleum Refineries, § 60.106(f)(1), a test run consisted of four (4) 60-minute samples and the average of three (3) test runs was used to determine compliance. Testing for the remaining diluents and pollutants was conducted in such a manner that the SO_2 test runs encompassed the procedures and methodologies used for the other constituents.

2.2 SAMPLE AND VELOCITY TRAVERSE LOCATIONS (USEPA METHOD 1)

Sampling at the SRU No. 546 Incinerator was conducted using the two (2) 4-inch diameter sampling ports provided on the exhaust duct. The sampling port locations on the 48-inch diameter stack are located approximately 419 inches upstream and approximately 246 inches downstream from the nearest flow disturbances. The sampling point locations were determined following USEPA Method 1 procedures. Specifically, six (6) sampling points were used for each sample port for a total of 12 sampling points. See Figure 2-1.

FIGURE 2-1. SRU NO. 546 INCINERATOR SAMPLING LOCATION



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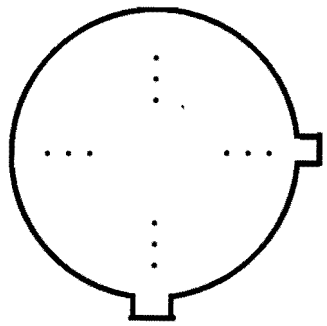


TRAVERSE POINTS: 12
NUMBER OF PORTS: 2
POINTS/PORT: 8
STACK ID: 48 in.
PORT LENGTH: 8 in.

TRAVERSE POINT NO.	DISTANCE FROM INSIDE WALL, in.
1	2-1/8
2	7-
3	14-1/4
4	33-3/4
5	41-
6	45-7/8

FIGURE 2-1. VALERO PORT ARTHUR REFINERY SRU 546 INCINERATOR SAMPLING LOCATION

2.3 VELOCITY AND VOLUMETRIC FLOW RATE DETERMINATION (USEPA METHOD 2)

Velocity traverses were performed using a Type "S" pitot tube with the velocity head pressure measured on a Dwyer oil gauge inclined manometer to the nearest 0.01 in. H_2O. Temperature measurements in the ducts were performed with a Chromel-Alumel thermocouple connected to a digital direct read-out potentiometer.

2.4 CO_2, O_2 AND MOLECULAR WEIGHT DETERMINATION (USEPA METHOD 3A)

The molecular weight of the stack gas was determined following USEPA Method 3A. Specifically for each sampling run, the exhaust gas was analyzed for CO_2, O_2 and N_2 (by difference) using the analyzers described in Subsection 2.6.

2.5 STACK GAS MOISTURE CONTENT (USEPA METHOD 4)

The stack gas moisture content was determined following USEPA Method 4 procedures. Stack gas was extracted through a series of chilled impingers. The first two impingers initially contained 100 mLs of deionized/distilled water; the third was initially empty, and the final impinger contained approximately 200 grams of silica gel for water vapor removal. Total moisture collected was determined gravimetrically from the difference of the initial and final sampling train weights. See Figure 2-2.

2.6 USEPA METHODS 3A, 6C, 7E, and 10 - O_2, SO_2, CO_2, NO_x and CO

ARI's sampling system consisted of a heated probe with in-stack filter followed by a three-way calibration valve connected to a heated Teflon sample line. The Teflon sample line was connected to an electronic sample conditioner (Universal Analyzer Model No. 3082) to remove moisture. A sample manifold was connected to the exhaust side of the sample conditioner with intake lines for ARI's O_2, CO_2, SO_2, NO_x and CO analyzers. See Figure 2-3.

Continuous O_2 sampling was conducted following USEPA Method 3A. O_2 was measured using ARI's Servomex, Inc. Model 1440C paramagnetic analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted O_2 balance nitrogen standards of zero, 5.00% and 9.00% at an analyzer span of 9%.

Continuous CO_2 sampling was conducted following USEPA Method 3A. CO_2 was measured using ARI's Servomex, Inc. Model 1440C non-dispersive infrared (NDIR) gas analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted CO_2 balance nitrogen standards of zero, 7.00% and 14.00% at an analyzer span of 14%.

Continuous SO_2 sampling was conducted following USEPA Method 6C. SO_2 was measured using ARI's Ametek/Bovar Model 721-ATM non-dispersive ultraviolet gas analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted SO_2 balance nitrogen standards of zero, 100.0 ppm and 180.0 ppm at an analyzer span of 180 ppm.

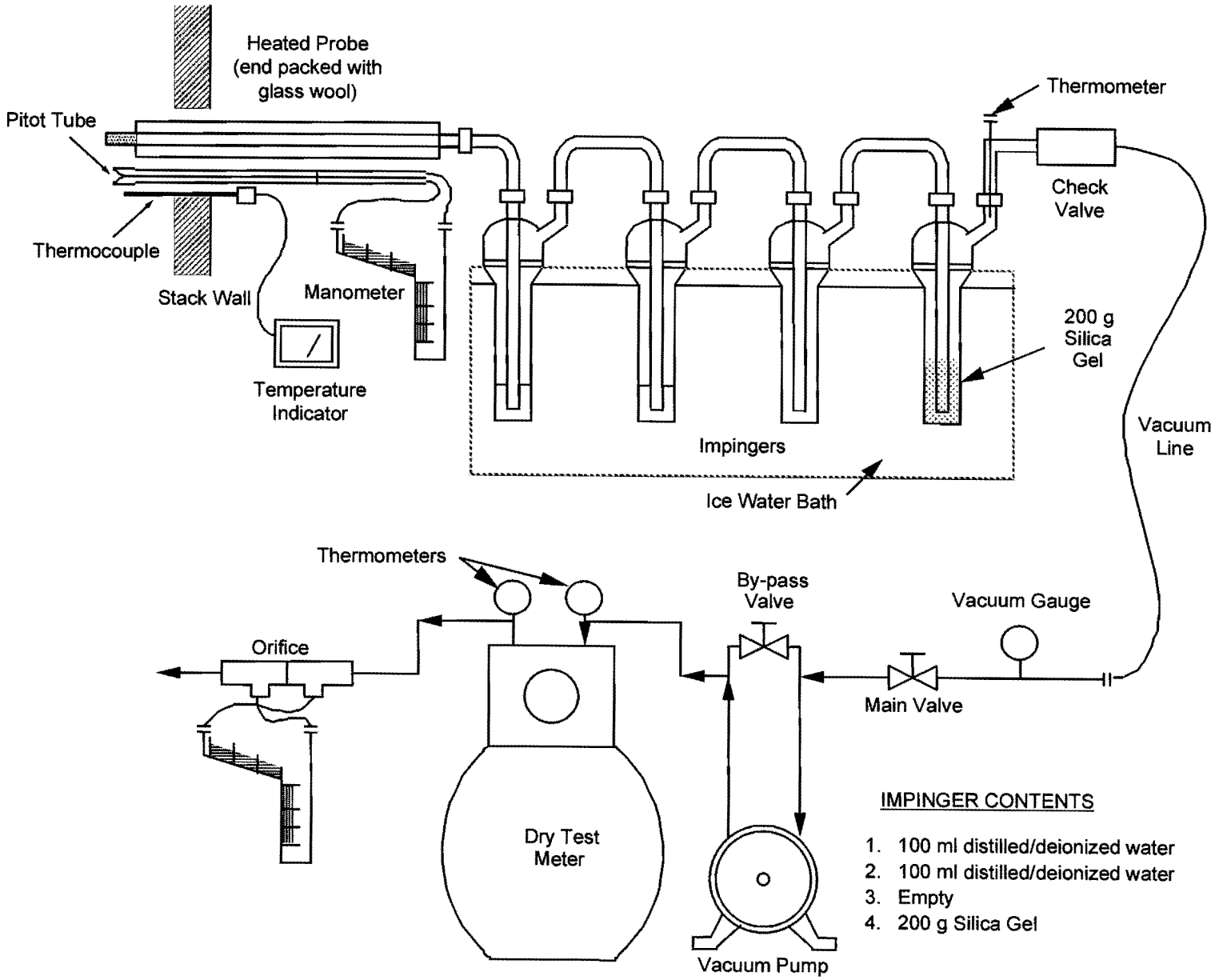


FIGURE 2-2. USEPA METHOD 4 SAMPLING TRAIN (MOISTURE)

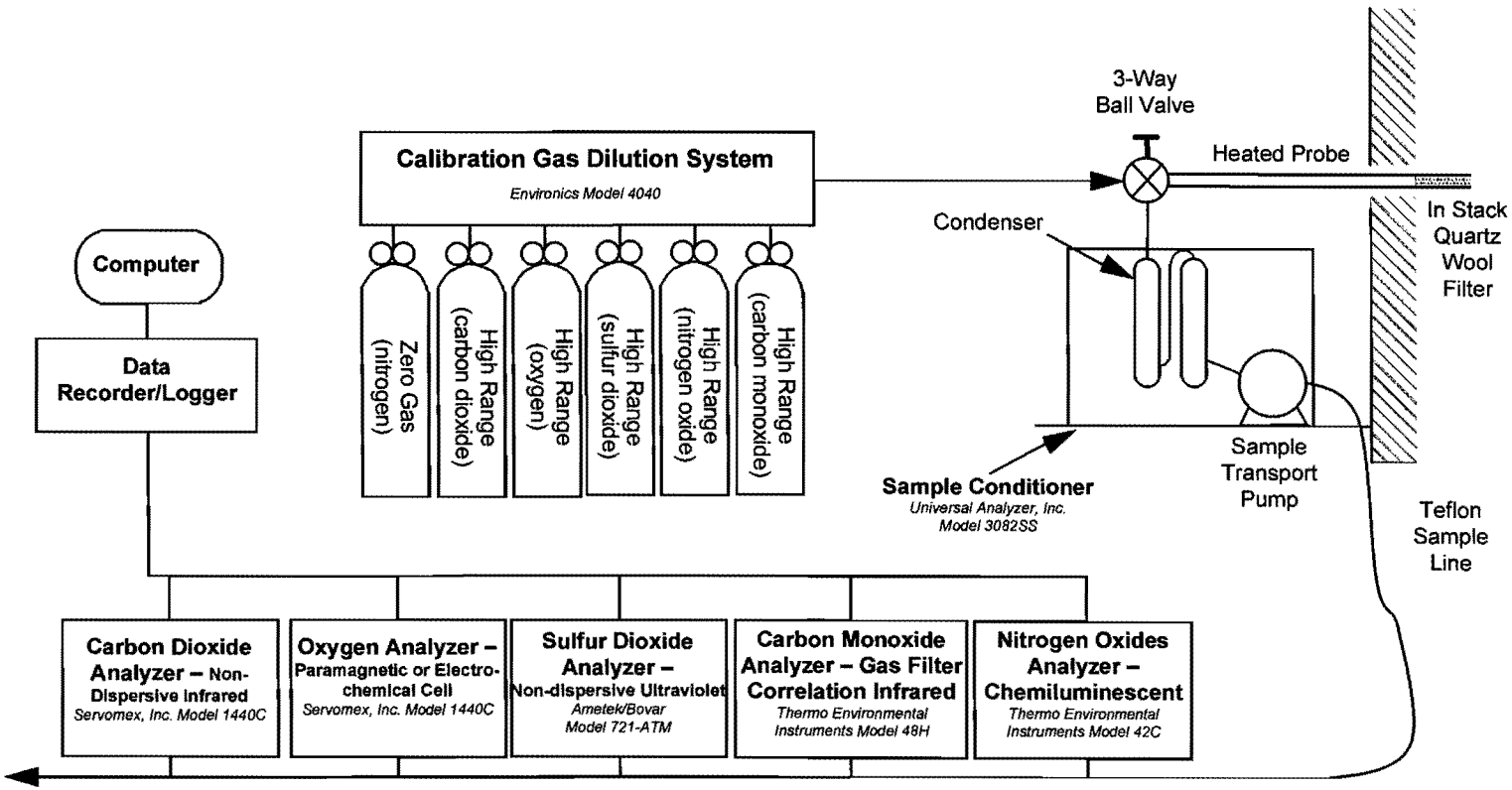


FIGURE 2-3. ARI REFERENCE METHOD CO_2, O_2, SO_2, NO_X AND CO SAMPLING SYSTEM

Continuous NO_x sampling was conducted following USEPA Method 7E procedures. NO_x was measured using ARI's Thermo Environmental Instruments, Inc. Model 42C chemiluminescent analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted NO_x balance nitrogen standards of zero, 50.0 ppm and 90.0 ppm at an analyzer span of 90 ppm. A pre-test converter efficiency test was conducted following procedures described in paragraph 5.6.2 of USEPA Method 20 (40 CFR 60, Appendix A). An alternative procedure was used by introducing a known concentration of nitrogen dioxide (NO_2) in nitrogen (N_2) to the sample port of the analyzer. Detailed procedures and actual data are presented in Section 3 - Quality Assurance.

Continuous CO sampling was conducted following USEPA Method 10 procedures. CO was measured using ARI's Thermo Environmental Instruments, Inc. Model 48H analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted CO balance nitrogen standards of zero, 250.0 ppm and 450.0 ppm at an analyzer span of 450 ppm.

Calibration gases were introduced at the three-way valve located at the exit end of the sample probe to perform the system bias test. The results of the initial calibration error test performed before the test program were within 2% of span for each calibration gas. The pre-test and post-test system bias results were within the 5% of span allowed for each calibration gas. The system bias drift results were within the 3% of span allowed for each test run. The zero and upscale calibration gas system bias values obtained before and after each run were averaged and used to correct the data for that test run.

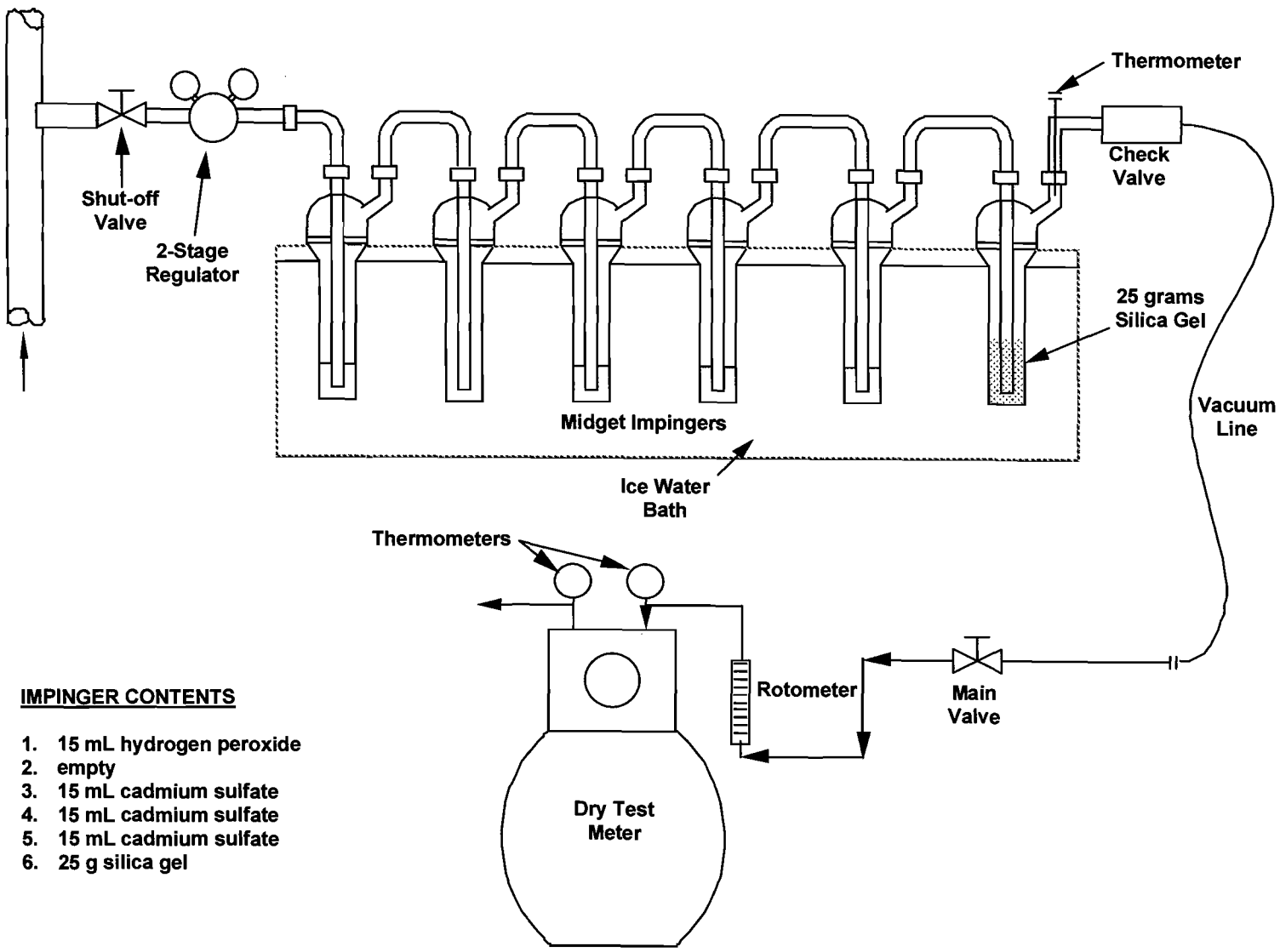
2.7 USEPA METHOD 11 – HYDROGEN SULFIDE

The hydrogen sulfide (H_2S) concentration was determined following USEPA Method 11 procedures. The sampling train consisted of a sampling valve connected to a series of six midget impingers followed by a rotameter, dry gas meter and a sampling pump. See Figure 2-4. Initially, the first midget impinger contained 15 mLs of hydrogen peroxide; the second impinger was empty, the third, fourth and fifth impingers each contained 15 mLs of cadmium sulfate absorbing solution and the sixth impinger contained 25 grams of silica gel. After purging the sample line, the sample valve was opened to maintain a sample rate of 1 liter per minute.

After the sampling run was completed, the solutions in the third, fourth and fifth impingers were recovered with acidified iodine and transferred into an iodine flask. The iodine flask was placed in a dark for 30 minutes to allow for the absorption of the H_2S into the iodine. The solution was then titrated with sodium thiosulfate until the blue color of the starch indicator disappeared.

2.8 GAS DILUTION SYSTEM VERIFICATION

All diluted calibration standards were prepared using an Environics Model 4040 Dilution System that was verified by a field evaluation at the job site prior to testing following the requirements of USEPA Method 205 (40 CFR 51, Appendix M).



IMPINGER CONTENTS

1. 15 mL hydrogen peroxide
2. empty
3. 15 mL cadmium sulfate
4. 15 mL cadmium sulfate
5. 15 mL cadmium sulfate
6. 25 g silica gel

FIGURE 2-4. USEPA METHOD 11 - HYDROGEN SULFIDE SAMPLING TRAIN

ARI's Servomex Model 1440 CO_2 gas analyzer was calibrated following USEPA Method 3A procedures using CO_2 in nitrogen standards. After the calibration procedure was complete, diluted standards of 7.00% and 12.00% and a mid-range EPA Protocol 1 standard of 7.44% were alternately introduced in triplicate and an average instrument response was calculated for each standard.

No single response differed by more than ±2% from the average response for each standard. The difference between the instrument average and the predicted concentration was less than ±2% for each diluted standard. The difference between the certified gas concentration and the average instrument response for the mid-range EPA Protocol 1 standard was less than ±2%.

Actual results of the USEPA Method 205 Dilution System Verifications are presented in Appendix E - Calibration Data.

SECTIONTHREE Test Results

The data collected for the compliance emission testing are presented in Table 3-1. The test runs represent data collected on the exhaust of the SRU No. 546 Incinerator.

Appendix A presents example calculations and computer generated printouts of calculated values from the field data. Appendix B presents the field data including raw handwritten sheets. The process data provide by Valero personnel are presented in Appendix C. Appendix D contains the 15-second interval data recorded from each of ARI's reference method analyzers. Appendix E presents the calibration data and cylinder gas certification sheets. Appendix F presents a brief description of personnel qualifications for ARI's test crew.

TABLE 3-1. SRU NO. 546 TAILGAS INCINERATOR TEST RESULTS

Company : Valero Port Arthur Refinery – Port Arthur, Texas
Source : SRU No. 546 Tailgas Incinerator Exhaust Stack
Operators : D. Loubiere, C. Withers, Z. Lillie, S. Moody

Test Run	1	2	3	
Sample 1 Date/Time	1/25 1125-1225	1/25 1703-1803	1/25 2244-2344	
Sample 2 Date/Time	1/25 1250-1350	1/25 1829-1929	1/26 0800-0900	
Sample 3 Date/Time	1/25 1414-1514	1/25 1953-2053	1/26 0924-1024	
Sample 4 Date/Time	1/25 1539-1639	1/25 2119-2219	1/26 1050-1150	Average
PROCESS DATA				
600 Train Acid Gas, Mscfh	214.9	215.1	215.0	215.0
600 Train SWS Gas, Mscfh	56.3	55.0	55.0	55.4
700 Train SWS Gas, Mscfh	214.8	215.0	215.0	214.9
700 Train SWS Gas, Mscfh	56.3	55.0	55.0	55.4
Recycle Acid Gas, Mscfh	12.5	11.8	11.8	12.0
Natural Gas Flow, Mscfh	34.7	34.4	34.4	34.5
Incinerator Temp., °F	1,420.0	1,419.6	1,419.8	1,419.8
STACK GAS PARAMETERS				
Temperature, av. °F	514.1	514.6	514.6	514.4
Velocity, av. ft/sec	70.36	69.57	69.94	69.96
Volume flow, acfm	53,053	52,456	52,734	52,748
Volume flow, scfh	1,728,983	1,708,609	1,718,949	1,718,847
Volume flow, dscfh	1,552,431	1,533,622	1,551,217	1,545,757
Moisture, av. % vol	10.21	10.24	9.76	10.1
CO_2, av. % vol, db	3.54	3.61	3.60	3.58
O_2, av. % vol, db	0.61	0.36	0.36	0.44
SULFUR DIOXIDE				
Concentration				
ppmv db @ 0% O_2	97.8	96.0	95.9	96.6
ppmv db	94.9	94.3	94.2	94.5
lb/dscf x 10^{-6}	15.77	15.67	15.65	15.70
Emission rate				
lb/hr	24.49	24.03	24.28	24.27
NITROGEN OXIDE				
Concentration				
ppmv db	15.8	17.3	16.4	16.5
lb/dscf x 10^{-6}	1.88	2.06	1.96	1.97
Emission rate				
lb/hr	2.92	3.16	3.04	3.04

TABLE 3-1 (CONTINUED). SRU NO. 546 INCINERATOR TEST RESULTS

Test Run	:	1	2	3	
Sample 1 Date/Time	:	1/25 1125-1225	1/25 1703-1803	1/25 2244-2344	
Sample 2 Date/Time	:	1/25 1250-1350	1/25 1829-1929	1/26 0800-0900	
Sample 3 Date/Time	:	1/25 1414-1514	1/25 1953-2053	1/26 0924-1024	
Sample 4 Date/Time	:	1/25 1539-1639	1/25 2119-2219	1/26 1050-1150	Average
CARBON MONOXIDE					
Concentration					
ppmv db		79.8	60.0	64.5	68.1
lb/dscf x 10^{-6}		5.80	4.36	4.68	4.95
Emission rate					
lb/hr		8.99	6.69	7.27	7.65
HYDROGEN SULFIDE					
Concentration					
ppmv db		1.28	1.91	1.56	1.58
lb/dscf x 10^{-6}		0.113	0.168	0.138	0.140
Emission rate					
lb/hr		0.175	0.258	0.214	0.216

APPENDIX A Calculation Summaries

Example Calculations for Pollutant Emissions

1. Volume of dry gas sampled, corrected to standard conditions. Note: V_m must be corrected for leakage if any leakage rates exceed L_a.

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \lambda \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right]$$

2. Volume of water vapor at standard conditions, ft^3.

$$V_{wstd} = 0.04707 \times V_{lc}$$

3. Moisture content in stack gas.

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}}$$

4. Dry molecular weight of stack gas, lb/lb- mole.

$$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$$

5. Molecular weight of stack gas, lb/lb-mole.

$$M_s = M_d(1 - B_{ws}) + 18B_{ws}$$

6. Stack velocity at stack conditions, ft/s.

$$V_s = (85.49)(C_p)(avg\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$$

7. Stack gas volumetric flow rate at stack conditions, acfm. Note: $A_s = ft^2$.

$$Q_s = 60 \times V_s \times A_s$$

8. Dry stack gas volumetric flow rate at standard conditions, dscfm.

$$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$$

9. Concentration in grains per dry standard cubic foot, (gr/dscf)

$$C_s = (0.01543)\left(\frac{M_n}{V_{mstd}}\right)$$

10. Pollutant mass emission rate, lb/h.

$$pmr = \left(\frac{C_s}{7000}\right)(Q_{std})(60)$$

11. Isokinetic variation, %.

$$\%ISO = \frac{(100)(T_s)\left[(0.002669 \times V_{lc}) + \left(\frac{V_m}{T_m}\right)(\lambda)\left(P_{bar} + \left(\frac{\Delta H}{13.6}\right)\right)\right]}{(60)(\theta)(V_s)(P_s)(A_n)}$$

12. F-Factor, dscf/10^6 Btu.

$$F = \frac{10^6\left[(3.64 \times \%H) + (1.53 \times \%C) + (0.57 \times \%S) + (0.14 \times \%N) - (0.46 \times \%O)\right]}{GCV}$$

13. Particulate mass emission rate, lb/10^6 Btu.

$$E = \left(\frac{C_s}{7000}\right)(F)\left(\frac{20.9}{20.9 - \%O_2}\right)$$

14. Total heat input, 10^6 Btu/h (million Btu per hour).

Equation #1 $$Q_H = \frac{(Q_{std})(60)(20.9 - \%O_2)}{(F)(20.9)}$$

Equation #2 $$Q_H = \frac{(m_f)(HHV)}{(10^6)}$$

Nomenclature and Dimensions for Pollutant Emissions

A_n = Cross-sectional area of nozzle, ft^2

A_s = Cross-sectional area of stack, ft^2

acfm = Actual cubic feet per minute

B_{ws} = Proportion by volume of water vapor in the gas stream, dimensionless

C_p = Pitot tube coefficient, dimensionless

C_s = Concentration of pollutant matter in stack gas - grains per dry standard cubic foot, gr/dscf

%C = Percent of carbon by weight, dry basis

%CO = Percent of carbon monoxide by volume, dry basis

$\%CO_2$ = Percent of carbon dioxide by volume, dry basis

D_n = Sampling nozzle diameter, inches

dscf = Dry standard cubic feet

dscfm = Dry standard cubic feet per minute

dscfh = Dry standard cubic feet per hour

F = Factor representing a ratio of the volume of dry flue gases generated to the calorific value of the fuel combusted, expressed as dry standard cubic feet per million Btu of heat input, dscf/10^6 Btu.

ft/sec = feet per second

GCV = Gross calorific value of the fuel combusted on a dry basis, Btu/lb

gr/dscf = Grains per dry standard cubic feet

%H = Percent of hydrogen by weight, dry basis

ΔH = Average pressure drop across the sampling meter flow orifice - inches of water, in.H_2O

HHV = Higher heating value on an as-received basis, Btu/lb

%ISO = Percent of isokinetic sampling

L_a = Maximum acceptable leakage rate for either a pretest leak check or for a leak check following a component change; equal to 0.020 cubic foot per minute of 4% of the average sampling rate, whichever is less

lb/hr = Pounds per hour

lb/dscf = Pounds per dry standard cubic feet

λ = Dry gas meter calibration correction factor

M_d = Dry molecular weight, lb/lb-mole

$\mathbf{m_f}$ = fuel firing rate, pounds of fuel per hour, lb/h

$\mathbf{M_n}$ = Total amount of pollutant matter collected - milligrams, mg

$\mathbf{M_s}$ = Molecular weight of stack gas (wet basis), lb/lb-mole

mg = Milligrams

%N = Percent of nitrogen by weight, dry basis

$\mathbf{\%N_2}$ = Percent of nitrogen by volume, dry basis

%O = Percent of oxygen by weight, dry basis

$\mathbf{\%O_2}$ = Percent of oxygen by volume, dry basis

$\mathbf{\Delta P}$ = Velocity head (pitot pressure differential) of stack gas - inches of water, in.H_2O

$\mathbf{P_{bar}}$ = Barometric pressure - inches of mercury, in.Hg

$\mathbf{P_s}$ = Absolute stack gas pressure - inches of mercury, in.Hg

$\mathbf{P_{std}}$ = Gas pressure at standard conditions - 29.92 inches of mercury, in.Hg

pmr = Pollutant matter emission rate - pounds per hour, lb/h

$\mathbf{Q_H}$ = Total heat input - million Btu per hour. 10^6 Btu/h

$\mathbf{Q_s}$ = Volumetric flow rate - wet basis at stack conditions - actual cubic feet per minute, acfm

$\mathbf{Q_{std}}$ = Volumetric flow rate - dry basis at standard conditions - dry standard cubic feet per minute, dscfm

°R = Degrees Rankine = degrees Fahrenheit + 460, °F +460

%S = Percent of sulfur by weight, dry basis

$\mathbf{T_m}$ = Average temperature of dry gas meter, °R

$\mathbf{T_s}$ = Average temperature of stack gas, °R

$\mathbf{T_{std}}$ = Temperature at standard conditions, 528 °R

θ = Total sampling time, minutes

$\mathbf{V_{lc}}$ = Total volume of liquid collected in impingers and silica gel, ml

$\mathbf{V_m}$ = Volume of dry gas sampled at meter conditions - cubic feet, ft^3

$\mathbf{V_{mstd}}$ = Volume of dry gas sampled at standard conditions, cubic feet, ft^3

$\mathbf{V_s}$ = Average stack gas velocity at stack conditions - feet per second, f/s

$\mathbf{V_{wstd}}$ = Volume of water vapor at standard conditions - cubic feet, ft^3

SRU 546 Incinerator
Summary Sheet

Run No. 1 Summary

Date	1/25/2007	1/25/2007	1/25/2007	1/25/2007	
Start Time	11:25	12:50	14:14	15:39	
End Time	12:25	13:50	15:14	16:39	
SAMPLE	**1**	**2**	**3**	**4**	**AVERAGE**
Sulfur Dioxide					
Concentration					
ppm db @ 0% O2	97.0	101.4	97.6	95.0	97.8
ppmv db	91.6	99.1	95.8	93.3	94.9
lb/dscf x 10E-6	15.21	16.46	15.92	15.50	15.77
Total Emission Rate					
lb/hr	23.43	25.72	24.76	24.04	24.49
ton/yr	102.6	112.7	108.4	105.3	107.3
Nitrogen Oxide					
Concentration					
ppmv db	13.95	15.86	16.49	16.76	15.77
lb/dscf x 10E-6	1.666	1.894	1.969	2.002	1.882
Total Emission Rate					
lb/hr	2.566	2.959	3.063	3.105	2.923
ton/yr	11.24	12.96	13.42	13.60	12.80
Carbon Monoxide					
Concentration					
ppmv db	129.6	73.4	57.3	58.8	79.8
lb/dscf x 10E-6	9.42	5.34	4.17	4.27	5.80
Total Emission Rate					
lb/hr	14.51	8.34	6.48	6.63	8.99
ton/yr	63.57	36.5	28.4	29.0	39.4
Hydrogen Sulfide					
Concentration					
ppmv db	1.27	0.58	1.34	1.94	1.28
lb/dscf x 10E-6	0.112	0.051	0.119	0.171	0.113
Total Emission Rate					
lb/hr	0.173	0.079	0.184	0.265	0.175
Stack Gas					
Temperature, deg F	516.9	512.4	514	513.1	514.1
Velocity, ft/sec	70.07	70.65	70.50	70.24	70.36
Volume Flow, acfm	52,832	53,265	53,158	52,959	53,053
Volume Flow, scfh	1,716,714	1,738,803	1,732,446	1,727,970	1,728,983
Volume Flow, dscfh	1,540,357	1,562,614	1,555,613	1,551,141	1,552,431
Moisture, % vol.	10.27	10.13	10.21	10.23	10.21
CO2, % vol db	3.56	3.57	3.54	3.50	3.54
O2, % vol db	1.17	0.48	0.39	0.39	0.61

SRU 546 Incinerator
Summary Sheet

Run No. 2 Summary

Date	1/25/2007	1/25/2007	1/25/2007	1/25/2007	
Start Time	17:03	18:29	19:53	21:19	
End Time	18:03	19:29	20:53	22:19	
SAMPLE	**5**	**6**	**7**	**8**	**AVERAGE**
Sulfur Dioxide					
Concentration					
ppm db @ 0% O2	95.1	96.6	96.8	95.5	96.0
ppmv db	93.4	95.0	95.0	93.8	94.3
lb/dscf x 10E-6	15.52	15.79	15.78	15.59	15.67
Total Emission Rate					
lb/hr	23.63	24.17	24.42	23.90	24.03
ton/yr	103.5	105.9	107.0	104.7	105.3
Nitrogen Oxide					
Concentration					
ppmv db	17.28	17.58	17.20	17.02	17.27
lb/dscf x 10E-6	2.063	2.099	2.054	2.033	2.062
Total Emission Rate					
lb/hr	3.141	3.214	3.179	3.117	3.163
ton/yr	13.76	14.08	13.92	13.65	13.85
Carbon Monoxide					
Concentration					
ppmv db	59.3	60.1	59.6	61.0	60.0
lb/dscf x 10E-6	4.31	4.36	4.33	4.44	4.36
Total Emission Rate					
lb/hr	6.56	6.68	6.71	6.80	6.69
ton/yr	28.7	29.3	29.38	29.8	29.3
Hydrogen Sulfide					
Concentration					
ppmv db	1.70	0.57	1.99	3.37	1.91
lb/dscf x 10E-6	0.150	0.050	0.176	0.297	0.168
Total Emission Rate					
lb/hr	0.228	0.077	0.272	0.455	0.258
Stack Gas					
Temperature, deg F	515.9	516.8	511.4	514.1	514.6
Velocity, ft/sec	69.32	69.23	69.78	69.95	69.57
Volume Flow, acfm	52,267	52,198	52,615	52,742	52,456
Volume Flow, scfh	1,700,525	1,696,295	1,719,329	1,718,287	1,708,609
Volume Flow, dscfh	1,522,350	1,531,322	1,547,654	1,533,162	1,533,622
Moisture, % vol.	10.48	9.73	9.98	10.77	10.24
CO2, % vol db	3.62	3.62	3.61	3.60	3.61
O2, % vol db	0.36	0.34	0.38	0.36	0.36

SRU 546 Incinerator
Summary Sheet

Run No. 3 Summary

Date	1/25/2007	1/26/2007	1/26/2007	1/26/2007	
Start Time	22:44	8:00	9:24	10:50	
End Time	23:44	9:00	10:24	11:50	
SAMPLE	**9**	**10**	**11**	**12**	**AVERAGE**
Sulfur Dioxide					
Concentration					
ppm db @ 0% O2	97.1	94.7	95.2	96.6	95.9
ppmv db	95.4	93.1	93.6	94.8	94.2
lb/dscf x 10E-6	15.85	15.47	15.55	15.75	15.65
Total Emission Rate					
lb/hr	24.56	24.14	23.96	24.47	24.28
ton/yr	107.6	105.7	104.9	107.2	106.4
Nitrogen Oxide					
Concentration					
ppmv db	17.09	16.06	16.44	16.16	16.44
lb/dscf x 10E-6	2.040	1.917	1.963	1.929	1.962
Total Emission Rate					
lb/hr	3.162	2.992	3.025	2.997	3.044
ton/yr	13.85	13.10	13.25	13.13	13.33
Carbon Monoxide					
Concentration					
ppmv db	63.3	67.2	65.4	61.9	64.5
lb/dscf x 10E-6	4.60	4.88	4.76	4.50	4.68
Total Emission Rate					
lb/hr	7.13	7.62	7.33	6.99	7.27
ton/yr	31.2	33.4	32.10	30.6	31.8
Hydrogen Sulfide					
Concentration					
ppmv db	0.38	2.04	2.52	1.32	1.56
lb/dscf x 10E-6	0.033	0.180	0.222	0.116	0.138
Total Emission Rate					
lb/hr	0.051	0.280	0.342	0.181	0.214
Stack Gas					
Temperature, deg F	514.3	512.4	516.2	515.3	514.6
Velocity, ft/sec	70.04	70.07	69.62	70.04	69.94
Volume Flow, acfm	52,806	52,831	52,489	52,809	52,734
Volume Flow, scfh	1,720,458	1,726,348	1,708,501	1,720,489	1,718,949
Volume Flow, dscfh	1,549,765	1,560,396	1,541,087	1,553,620	1,551,217
Moisture, % vol.	9.92	9.61	9.80	9.70	9.76
CO2, % vol db	3.60	3.62	3.61	3.59	3.60
O2, % vol db	0.36	0.34	0.35	0.38	0.36

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	1
TEST DATE :	1/25/2007
STARTING HOUR :	11:25

GAS ANALYZER — **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	50.10
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**13.95**

GAS ANALYZER — **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	248.95
AVERAGE ZERO BIAS (C_o):	0.30
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**129.6**

GAS ANALYZER — **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	98.70
AVERAGE ZERO BIAS (C_o):	-0.30
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**91.6**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**97.0**

GAS ANALYZER — **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.02
AVERAGE ZERO BIAS (C_o):	-0.04
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**1.17**

GAS ANALYZER — **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	7.05
AVERAGE ZERO BIAS (C_o):	0.02
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.56**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
11:25	0	-------	-------	-------	-------	-------
11:26	1	13.0	155.6	89.1	1.20	3.46
11:27	2	13.4	146.0	90.4	1.21	3.47
11:28	3	13.3	158.3	89.9	1.22	3.48
11:29	4	13.3	156.0	89.9	1.19	3.50
11:30	5	13.7	144.9	91.2	1.23	3.47
11:31	6	13.5	137.7	90.1	1.14	3.49
11:32	7	13.4	147.9	91.1	1.13	3.50
11:33	8	13.7	146.4	91.3	1.20	3.46
11:34	9	13.2	149.8	91.4	1.14	3.49
11:35	10	13.4	145.1	91.6	1.17	3.52
11:36	11	13.6	142.4	92.1	1.18	3.52
11:37	12	13.2	153.2	90.7	1.16	3.53
11:38	13	13.7	143.2	90.5	1.16	3.55
11:39	14	14.0	136.8	90.4	1.18	3.54
11:40	15	13.8	135.2	89.7	1.12	3.57
11:41	16	13.7	133.6	88.8	1.12	3.58
11:42	17	13.7	143.2	89.1	1.17	3.55
11:43	18	13.9	136.7	89.5	1.13	3.60
11:44	19	14.2	132.3	90.3	1.17	3.58
11:45	20	14.0	131.3	90.3	1.14	3.59
11:46	21	14.2	120.7	89.7	1.09	3.61
11:47	22	14.6	121.1	89.6	1.14	3.59
11:48	23	14.3	127.3	89.2	1.14	3.59
11:49	24	14.5	120.1	90.8	1.10	3.60
11:50	25	14.7	117.0	89.5	1.10	3.63
11:51	26	14.3	126.6	90.0	1.12	3.62
11:52	27	14.3	122.7	89.3	1.15	3.60
11:53	28	14.7	118.4	88.2	1.14	3.60
11:54	29	14.4	122.4	87.7	1.10	3.64
11:55	30	14.4	129.5	88.6	1.17	3.61
11:56	31	14.3	132.0	89.2	1.16	3.62
11:57	32	14.3	127.3	88.6	1.13	3.61
11:58	33	14.4	124.9	89.3	1.15	3.59
11:59	34	14.0	125.7	88.6	1.11	3.59
12:00	35	14.3	122.4	88.6	1.12	3.59
12:01	36	14.6	110.6	89.1	1.09	3.61
12:02	37	14.2	120.9	89.0	1.07	3.62
12:03	38	14.4	123.7	88.7	1.12	3.59
12:04	39	14.4	124.6	89.0	1.12	3.60
12:05	40	14.3	123.6	89.6	1.11	3.61
12:06	41	14.4	125.5	90.4	1.12	3.58
12:07	42	14.4	124.9	88.7	1.12	3.59
12:08	43	14.3	121.8	89.3	1.12	3.60
12:09	44	14.5	118.1	90.1	1.18	3.59
12:10	45	14.3	114.1	90.0	1.12	3.64
12:11	46	14.5	107.8	90.5	1.16	3.63
12:12	47	14.1	117.1	90.3	1.14	3.64
12:13	48	13.8	131.2	103.4	1.17	3.61
12:14	49	14.2	122.3	104.3	1.19	3.61
12:15	50	14.1	123.9	91.7	1.15	3.64
12:16	51	14.2	120.8	90.7	1.15	3.64
12:17	52	14.7	114.4	90.5	1.16	3.64
12:18	53	14.3	125.4	90.3	1.13	3.66
12:19	54	14.6	121.9	91.1	1.18	3.66
12:20	55	14.6	121.8	90.6	1.18	3.66
12:21	56	14.3	118.9	89.7	1.16	3.67
12:22	57	14.4	122.8	91.3	1.20	3.63
12:23	58	14.0	132.0	90.0	1.19	3.63
12:24	59	14.2	112.4	89.7	1.13	3.66
12:25	60	14.1	120.1	89.8	1.15	3.64
	AVG (C) =	**14.09**	**129.24**	**90.4**	**1.148**	**3.586**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	2
TEST DATE :	1/25/2007
STARTING HOUR :	12:50

GAS ANALYZER **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	49.55
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**15.86**

GAS ANALYZER **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	249.05
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**73.4**

GAS ANALYZER **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	99.95
AVERAGE ZERO BIAS (C_o):	-0.75
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**99.1**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**101.4**

GAS ANALYZER **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.01
AVERAGE ZERO BIAS (C_o):	-0.05
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.48**

GAS ANALYZER **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	7.14
AVERAGE ZERO BIAS (C_o):	0.02
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.57**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
12:50	0	-------	-------	-------	-------	-------
12:51	1	14.8	101.1	94.99	1.05	3.64
12:52	2	15.2	98.0	99.29	1.10	3.61
12:53	3	14.9	101.9	94.32	1.07	3.63
12:54	4	15.0	104.2	97.74	1.09	3.64
12:55	5	14.9	111.2	93.88	1.14	3.61
12:56	6	14.8	102.3	93.70	1.07	3.64
12:57	7	15.2	102.0	93.06	1.12	3.61
12:58	8	15.6	160.0	94.87	1.09	3.61
12:59	9	15.5	111.4	95.89	0.71	3.67
13:00	10	16.6	111.6	97.83	0.69	3.65
13:01	11	16.4	74.7	98.39	0.46	3.68
13:02	12	18.0	297.0	99.32	0.34	3.71
13:03	13	16.4	72.7	101.28	0.21	3.71
13:04	14	16.1	59.0	99.92	0.29	3.68
13:05	15	16.2	56.2	98.25	0.33	3.65
13:06	16	16.1	62.8	99.12	0.32	3.66
13:07	17	16.6	76.0	99.80	0.23	3.69
13:08	18	16.1	65.6	100.12	0.27	3.66
13:09	19	16.0	66.5	99.64	0.23	3.67
13:10	20	16.5	79.4	100.27	0.23	3.66
13:11	21	15.8	64.1	101.27	0.24	3.65
13:12	22	16.3	68.5	100.53	0.26	3.66
13:13	23	16.1	63.9	99.74	0.29	3.64
13:14	24	16.2	61.8	99.36	0.26	3.65
13:15	25	16.3	59.3	99.89	0.34	3.62
13:16	26	16.1	60.9	100.30	0.30	3.65
13:17	27	16.3	61.2	100.77	0.34	3.65
13:18	28	15.7	60.1	101.13	0.33	3.66
13:19	29	16.0	59.0	100.59	0.34	3.65
13:20	30	15.9	59.4	100.56	0.32	3.65
13:21	31	15.6	59.9	100.21	0.29	3.65
13:22	32	15.7	59.9	99.43	0.35	3.62
13:23	33	15.5	57.9	99.80	0.31	3.65
13:24	34	15.8	56.8	99.17	0.34	3.65
13:25	35	15.8	59.4	101.26	0.35	3.64
13:26	36	15.4	58.2	102.95	0.31	3.66
13:27	37	15.6	59.9	100.84	0.37	3.62
13:28	38	15.3	57.9	101.56	0.32	3.65
13:29	39	15.8	55.8	99.86	0.35	3.63
13:30	40	15.4	57.0	100.37	0.35	3.64
13:31	41	15.6	57.8	101.08	0.35	3.65
13:32	42	15.6	59.2	100.70	0.38	3.62
13:33	43	15.5	57.8	99.93	0.31	3.65
13:34	44	15.5	58.5	100.48	0.38	3.61
13:35	45	15.3	57.0	99.89	0.34	3.62
13:36	46	15.5	57.1	99.09	0.37	3.60
13:37	47	15.2	61.2	99.33	0.35	3.61
13:38	48	15.9	58.8	99.23	0.33	3.64
13:39	49	15.8	60.1	98.98	0.37	3.63
13:40	50	15.7	59.1	99.00	0.34	3.64
13:41	51	16.1	60.6	99.71	0.38	3.62
13:42	52	15.8	58.6	98.40	0.31	3.65
13:43	53	16.3	59.8	98.90	0.36	3.63
13:44	54	16.1	59.0	98.04	0.29	3.66
13:45	55	15.9	60.1	98.40	0.29	3.66
13:46	56	15.8	61.1	98.10	0.34	3.62
13:47	57	15.9	60.4	97.71	0.27	3.63
13:48	58	16.2	58.0	98.01	0.33	3.62
13:49	59	15.5	59.2	98.34	0.32	3.63
13:50	60	16.2	56.1	97.75	0.37	3.60
	AVG (C) =	**15.82**	**73.23**	**99.040**	**0.436**	**3.644**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	3
TEST DATE :	1/25/2007
STARTING HOUR :	14:14

GAS ANALYZER **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.75
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**16.49**

GAS ANALYZER **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	249.65
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**57.3**

GAS ANALYZER **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.20
AVERAGE ZERO BIAS (C_o):	-0.90
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**95.8**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**97.6**

GAS ANALYZER **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.00
AVERAGE ZERO BIAS (C_o):	-0.05
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.39**

GAS ANALYZER **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	7.13
AVERAGE ZERO BIAS (C_o):	0.02
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.54**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
14:14	0	-------	-------	-------	-------	-------
14:15	1	16.0	57.7	100.31	0.32	3.61
14:16	2	16.3	56.0	98.24	0.36	3.61
14:17	3	16.1	56.1	97.87	0.32	3.65
14:18	4	16.3	56.9	97.64	0.36	3.62
14:19	5	15.6	56.9	97.50	0.33	3.62
14:20	6	16.2	56.7	97.31	0.38	3.60
14:21	7	15.7	57.7	97.51	0.32	3.61
14:22	8	16.1	56.5	97.03	0.35	3.59
14:23	9	16.0	57.3	97.21	0.35	3.60
14:24	10	16.1	57.6	98.04	0.32	3.62
14:25	11	16.1	56.6	97.95	0.37	3.62
14:26	12	15.9	56.7	97.51	0.36	3.64
14:27	13	16.3	55.8	97.03	0.38	3.62
14:28	14	16.1	54.9	97.83	0.37	3.62
14:29	15	16.1	55.3	98.16	0.33	3.63
14:30	16	16.1	56.1	106.88	0.38	3.60
14:31	17	15.9	57.5	97.58	0.38	3.61
14:32	18	16.2	55.5	96.46	0.35	3.64
14:33	19	15.7	57.6	97.45	0.37	3.62
14:34	20	16.1	55.1	96.06	0.40	3.59
14:35	21	15.9	54.6	96.05	0.36	3.60
14:36	22	16.0	56.3	96.39	0.35	3.61
14:37	23	16.1	56.3	96.86	0.39	3.62
14:38	24	16.1	55.5	97.04	0.36	3.62
14:39	25	16.1	54.7	97.25	0.36	3.63
14:40	26	16.3	56.6	97.42	0.38	3.62
14:41	27	16.0	56.3	97.04	0.31	3.66
14:42	28	16.6	55.9	95.14	0.40	3.63
14:43	29	16.0	56.4	96.79	0.33	3.64
14:44	30	16.3	55.3	95.42	0.35	3.62
14:45	31	16.2	57.5	96.07	0.36	3.62
14:46	32	16.1	57.0	96.66	0.32	3.63
14:47	33	16.4	57.3	95.99	0.36	3.60
14:48	34	15.8	59.8	95.44	0.34	3.61
14:49	35	15.9	57.9	95.14	0.35	3.59
14:50	36	16.1	58.7	94.79	0.37	3.58
14:51	37	16.2	57.5	96.13	0.33	3.63
14:52	38	16.2	58.2	95.55	0.35	3.60
14:53	39	16.2	58.5	95.60	0.34	3.62
14:54	40	16.4	56.9	95.55	0.35	3.63
14:55	41	16.1	58.4	95.13	0.33	3.61
14:56	42	16.0	60.2	94.90	0.32	3.61
14:57	43	16.1	59.8	95.17	0.30	3.61
14:58	44	16.1	59.8	96.90	0.29	3.63
14:59	45	16.4	60.6	97.36	0.30	3.61
15:00	46	16.2	60.0	95.98	0.31	3.58
15:01	47	16.2	60.0	96.48	0.31	3.63
15:02	48	16.2	57.8	99.56	0.36	3.61
15:03	49	16.0	57.3	96.62	0.32	3.64
15:04	50	16.2	57.6	95.40	0.37	3.59
15:05	51	16.1	58.1	97.29	0.36	3.60
15:06	52	16.5	58.3	95.96	0.33	3.63
15:07	53	16.5	59.3	95.86	0.37	3.62
15:08	54	16.4	57.8	96.02	0.31	3.65
15:09	55	16.4	56.4	96.68	0.35	3.61
15:10	56	16.1	59.6	96.40	0.33	3.62
15:11	57	16.6	58.2	99.13	0.34	3.62
15:12	58	16.3	56.5	96.92	0.32	3.62
15:13	59	15.9	59.5	96.38	0.33	3.63
15:14	60	16.4	56.6	97.12	0.37	3.62
	AVG (C) =	**16.15**	**57.33**	**96.92**	**0.35**	**3.62**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	4
TEST DATE :	1/25/2007
STARTING HOUR :	15:39

GAS ANALYZER **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.50
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**16.76**

GAS ANALYZER **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	250.40
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**58.8**

GAS ANALYZER **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.80
AVERAGE ZERO BIAS (C_o):	-1.05
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**93.3**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**95.0**

GAS ANALYZER **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	4.99
AVERAGE ZERO BIAS (C_o):	-0.05
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.39**

GAS ANALYZER **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	7.07
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.50**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
15:39	0	-------	-------	-------	-------	-------
15:40	1	16.3	58.0	97.8	0.36	3.59
15:41	2	16.7	56.5	100.0	0.39	3.61
15:42	3	16.1	58.3	98.2	0.36	3.60
15:43	4	15.9	57.2	96.3	0.33	3.59
15:44	5	16.1	58.1	95.2	0.40	3.56
15:45	6	16.1	56.9	94.9	0.33	3.61
15:46	7	16.5	57.9	94.7	0.36	3.59
15:47	8	16.2	56.8	95.7	0.33	3.59
15:48	9	16.5	57.3	94.7	0.37	3.59
15:49	10	16.4	57.4	96.2	0.35	3.60
15:50	11	16.1	57.0	96.1	0.34	3.59
15:51	12	16.6	55.0	96.7	0.34	3.59
15:52	13	16.1	57.5	96.0	0.33	3.59
15:53	14	16.4	57.2	96.7	0.37	3.58
15:54	15	16.2	57.0	96.4	0.35	3.57
15:55	16	16.0	58.3	96.0	0.32	3.57
15:56	17	16.2	58.0	95.5	0.37	3.53
15:57	18	15.9	57.8	95.4	0.32	3.55
15:58	19	16.2	58.8	94.8	0.35	3.54
15:59	20	16.1	58.7	94.0	0.33	3.57
16:00	21	16.0	56.8	93.7	0.32	3.55
16:01	22	16.4	57.6	92.1	0.37	3.55
16:02	23	15.8	60.9	93.0	0.33	3.59
16:03	24	16.4	60.0	95.8	0.39	3.56
16:04	25	16.1	61.9	95.0	0.38	3.52
16:05	26	16.2	57.6	98.5	0.36	3.56
16:06	27	16.3	54.6	95.4	0.37	3.54
16:07	28	15.7	58.5	93.5	0.36	3.50
16:08	29	16.1	58.3	94.1	0.36	3.49
16:09	30	16.4	60.0	93.2	0.39	3.49
16:10	31	16.2	59.7	93.1	0.31	3.52
16:11	32	16.3	60.8	93.4	0.37	3.48
16:12	33	16.0	59.6	94.8	0.29	3.52
16:13	34	16.2	59.9	94.6	0.32	3.51
16:14	35	16.5	62.2	94.8	0.37	3.49
16:15	36	16.1	58.7	93.9	0.28	3.54
16:16	37	16.5	58.1	93.8	0.39	3.52
16:17	38	16.4	56.3	93.6	0.32	3.53
16:18	39	16.6	57.2	94.0	0.35	3.52
16:19	40	16.2	58.0	94.3	0.35	3.50
16:20	41	16.0	59.5	94.3	0.35	3.50
16:21	42	16.3	60.6	94.6	0.38	3.49
16:22	43	16.4	60.4	99.3	0.36	3.50
16:23	44	16.1	60.0	98.2	0.34	3.51
16:24	45	16.5	59.2	94.4	0.35	3.50
16:25	46	16.2	59.5	95.4	0.30	3.53
16:26	47	16.5	60.2	95.2	0.35	3.50
16:27	48	16.2	63.2	93.1	0.33	3.51
16:28	49	16.9	59.8	92.6	0.32	3.54
16:29	50	16.7	57.7	92.1	0.33	3.53
16:30	51	16.5	58.7	92.4	0.30	3.54
16:31	52	17.0	60.4	92.5	0.31	3.54
16:32	53	16.2	62.2	93.7	0.29	3.53
16:33	54	16.7	60.4	92.8	0.30	3.51
16:34	55	16.7	59.6	94.8	0.31	3.51
16:35	56	16.5	61.2	94.1	0.28	3.54
16:36	57	17.1	61.9	93.8	0.32	3.54
16:37	58	16.6	61.7	95.7	0.26	3.56
16:38	59	16.6	62.0	94.7	0.30	3.55
16:39	60	16.8	63.5	94.1	0.31	3.53
	AVG (C) =	**16.33**	**58.97**	**94.9**	**0.339**	**3.542**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	5
TEST DATE :	1/25/2007
STARTING HOUR :	17:03

GAS ANALYZER — **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.45
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**17.28**

GAS ANALYZER — **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	251.40
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**59.3**

GAS ANALYZER — **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.85
AVERAGE ZERO BIAS (C_o):	-1.05
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**93.4**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**95.1**

GAS ANALYZER — **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	4.99
AVERAGE ZERO BIAS (C_o):	-0.05
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.36**

GAS ANALYZER — **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	6.98
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.62**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
17:03	0	-------	-------	-------	-------	-------
17:04	1	17.3	60.3	95.16	0.34	3.59
17:05	2	16.9	60.6	95.48	0.28	3.63
17:06	3	16.8	59.8	94.87	0.36	3.58
17:07	4	16.5	58.3	94.92	0.30	3.60
17:08	5	17.0	58.6	94.34	0.32	3.58
17:09	6	17.0	58.7	94.71	0.29	3.60
17:10	7	16.8	58.9	94.24	0.29	3.62
17:11	8	17.1	61.7	96.13	0.34	3.58
17:12	9	16.7	59.4	94.80	0.29	3.61
17:13	10	16.9	60.0	94.11	0.28	3.60
17:14	11	16.6	60.0	94.03	0.31	3.59
17:15	12	17.2	60.0	95.42	0.32	3.62
17:16	13	16.9	59.8	95.37	0.30	3.62
17:17	14	16.7	58.4	95.04	0.30	3.61
17:18	15	16.6	58.6	94.29	0.31	3.57
17:19	16	16.5	58.8	94.86	0.29	3.59
17:20	17	17.0	59.8	94.59	0.33	3.59
17:21	18	16.8	58.9	94.38	0.29	3.60
17:22	19	16.7	59.9	94.41	0.34	3.60
17:23	20	16.7	60.3	94.76	0.35	3.59
17:24	21	17.0	57.7	94.36	0.33	3.60
17:25	22	16.7	61.2	94.32	0.33	3.63
17:26	23	16.9	60.5	94.44	0.33	3.62
17:27	24	16.6	58.7	94.65	0.31	3.60
17:28	25	16.4	58.8	95.06	0.29	3.61
17:29	26	16.6	59.0	94.36	0.32	3.59
17:30	27	16.6	59.3	94.72	0.31	3.61
17:31	28	17.1	60.7	95.33	0.33	3.61
17:32	29	17.3	61.0	95.04	0.28	3.63
17:33	30	16.8	60.9	95.30	0.28	3.62
17:34	31	16.9	61.1	94.79	0.28	3.61
17:35	32	16.9	63.2	95.61	0.29	3.61
17:36	33	16.9	60.8	95.82	0.24	3.66
17:37	34	16.7	60.3	96.01	0.28	3.59
17:38	35	17.0	61.9	95.51	0.30	3.61
17:39	36	16.6	60.8	95.39	0.30	3.62
17:40	37	16.8	59.8	94.57	0.31	3.61
17:41	38	16.6	61.8	95.46	0.33	3.59
17:42	39	17.1	58.8	96.48	0.30	3.63
17:43	40	17.1	60.2	95.48	0.31	3.62
17:44	41	17.0	58.3	95.34	0.31	3.62
17:45	42	16.6	60.7	94.45	0.34	3.62
17:46	43	16.7	60.1	94.67	0.33	3.60
17:47	44	16.6	59.5	94.57	0.33	3.60
17:48	45	16.6	59.9	94.63	0.31	3.62
17:49	46	16.8	57.1	94.29	0.32	3.62
17:50	47	16.7	59.0	96.52	0.32	3.61
17:51	48	17.0	60.8	96.04	0.34	3.60
17:52	49	17.1	60.3	95.88	0.31	3.62
17:53	50	17.2	60.4	97.20	0.29	3.65
17:54	51	17.0	60.6	94.77	0.32	3.62
17:55	52	17.0	59.6	95.78	0.31	3.64
17:56	53	17.0	60.4	95.67	0.32	3.62
17:57	54	16.8	59.8	95.39	0.26	3.61
17:58	55	16.6	57.5	94.70	0.31	3.61
17:59	56	16.8	59.6	95.14	0.29	3.62
18:00	57	17.1	59.6	96.07	0.30	3.63
18:01	58	16.9	58.3	95.98	0.30	3.63
18:02	59	17.0	57.7	95.48	0.33	3.60
18:03	60	16.8	57.6	95.38	0.32	3.60
	AVG (C) =	**16.84**	**59.73**	**95.110**	**0.309**	**3.609**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	6
TEST DATE :	1/25/2007
STARTING HOUR :	18:29

GAS ANALYZER **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.45
AVERAGE ZERO BIAS (C_o):	0.20
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**17.58**

GAS ANALYZER **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	251.20
AVERAGE ZERO BIAS (C_o):	0.05
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**60.1**

GAS ANALYZER **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.70
AVERAGE ZERO BIAS (C_o):	-1.10
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**95.0**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**96.6**

GAS ANALYZER **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.00
AVERAGE ZERO BIAS (C_o):	-0.05
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.34**

GAS ANALYZER **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	6.96
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.62**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
18:29	0	-------	-------	-------	-------	-------
18:30	1	17.0	59.9	92.73	0.28	3.61
18:31	2	17.1	61.3	93.87	0.30	3.61
18:32	3	17.0	60.6	94.32	0.30	3.60
18:33	4	17.1	60.3	93.97	0.27	3.61
18:34	5	17.0	59.7	94.01	0.30	3.60
18:35	6	17.2	61.1	93.95	0.30	3.61
18:36	7	17.1	60.4	95.50	0.27	3.60
18:37	8	17.2	60.4	94.51	0.28	3.61
18:38	9	17.3	61.5	94.49	0.29	3.61
18:39	10	17.1	61.8	94.75	0.28	3.61
18:40	11	17.3	60.8	95.50	0.31	3.60
18:41	12	17.5	60.9	97.08	0.30	3.61
18:42	13	17.3	60.2	96.21	0.25	3.62
18:43	14	17.2	60.5	95.03	0.31	3.59
18:44	15	17.3	62.6	101.81	0.28	3.60
18:45	16	17.2	58.5	106.81	0.28	3.59
18:46	17	16.9	59.4	96.61	0.29	3.60
18:47	18	17.2	60.7	96.33	0.30	3.58
18:48	19	17.0	61.5	97.06	0.30	3.60
18:49	20	17.3	62.3	96.51	0.31	3.61
18:50	21	17.3	61.8	96.31	0.31	3.61
18:51	22	17.2	60.3	95.22	0.28	3.60
18:52	23	17.3	61.8	95.25	0.27	3.61
18:53	24	17.2	61.4	96.24	0.32	3.61
18:54	25	17.2	60.9	96.32	0.30	3.60
18:55	26	17.1	59.5	96.46	0.31	3.60
18:56	27	17.4	60.3	97.46	0.30	3.60
18:57	28	17.0	61.0	97.06	0.30	3.61
18:58	29	17.5	60.8	95.99	0.30	3.61
18:59	30	17.4	61.3	96.00	0.30	3.62
19:00	31	17.2	59.4	96.37	0.27	3.63
19:01	32	17.4	59.0	96.79	0.29	3.60
19:02	33	17.3	61.0	97.61	0.27	3.63
19:03	34	17.0	59.9	97.28	0.31	3.60
19:04	35	17.0	59.6	97.04	0.33	3.58
19:05	36	17.3	60.4	96.09	0.35	3.59
19:06	37	17.2	58.1	96.77	0.31	3.64
19:07	38	17.3	58.6	96.72	0.32	3.61
19:08	39	16.7	60.5	96.92	0.33	3.59
19:09	40	17.1	59.6	96.94	0.29	3.61
19:10	41	16.7	60.3	97.30	0.28	3.61
19:11	42	17.0	60.3	95.94	0.32	3.59
19:12	43	17.2	60.2	96.35	0.30	3.62
19:13	44	17.2	59.9	96.32	0.30	3.62
19:14	45	17.3	59.4	96.62	0.31	3.63
19:15	46	17.2	58.9	97.97	0.30	3.62
19:16	47	17.2	59.7	95.79	0.30	3.62
19:17	48	16.9	58.7	96.13	0.30	3.60
19:18	49	17.1	59.6	97.91	0.29	3.60
19:19	50	16.8	59.8	97.00	0.30	3.60
19:20	51	17.3	62.3	99.85	0.30	3.59
19:21	52	17.0	61.5	97.87	0.28	3.61
19:22	53	17.2	62.0	97.81	0.30	3.59
19:23	54	17.3	59.7	97.47	0.26	3.61
19:24	55	17.1	60.4	97.83	0.29	3.60
19:25	56	17.4	60.4	97.36	0.31	3.60
19:26	57	17.4	60.1	97.17	0.29	3.62
19:27	58	17.2	61.1	96.53	0.31	3.60
19:28	59	17.0	60.5	97.29	0.31	3.60
19:29	60	17.1	58.5	96.89	0.33	3.57
	AVG (C) =	**17.16**	**60.38**	**96.59**	**0.30**	**3.61**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	7
TEST DATE :	1/25/2007
STARTING HOUR :	19:53

GAS ANALYZER **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.50
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**17.20**

GAS ANALYZER **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	250.70
AVERAGE ZERO BIAS (C_o):	-0.20
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**59.6**

GAS ANALYZER **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.75
AVERAGE ZERO BIAS (C_o):	-1.10
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**95.0**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**96.8**

GAS ANALYZER **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.00
AVERAGE ZERO BIAS (C_o):	-0.06
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.38**

GAS ANALYZER **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	6.96
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.61**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
19:53	0	-------	-------	-------	-------	-------
19:54	1	17.0	59.4	98.7	0.34	3.58
19:55	2	17.1	57.5	98.2	0.34	3.58
19:56	3	16.9	60.0	98.6	0.33	3.60
19:57	4	16.7	60.4	98.6	0.35	3.57
19:58	5	16.9	59.0	98.4	0.36	3.57
19:59	6	16.8	60.0	98.7	0.34	3.58
20:00	7	17.0	58.8	97.0	0.36	3.59
20:01	8	17.2	58.2	97.5	0.33	3.61
20:02	9	17.1	59.8	97.7	0.35	3.60
20:03	10	17.0	57.1	98.4	0.33	3.61
20:04	11	16.7	58.7	98.6	0.34	3.56
20:05	12	16.9	56.2	97.2	0.34	3.58
20:06	13	16.5	60.8	97.6	0.35	3.59
20:07	14	17.0	58.9	97.0	0.40	3.58
20:08	15	16.8	57.4	95.8	0.36	3.61
20:09	16	16.8	55.9	95.4	0.35	3.61
20:10	17	16.8	55.6	96.3	0.34	3.60
20:11	18	16.8	57.4	95.6	0.37	3.59
20:12	19	16.8	57.6	95.2	0.35	3.60
20:13	20	16.5	59.7	93.5	0.38	3.58
20:14	21	17.0	57.1	94.6	0.37	3.59
20:15	22	16.6	56.2	95.6	0.33	3.59
20:16	23	16.5	57.4	95.6	0.38	3.56
20:17	24	16.6	56.9	96.3	0.35	3.59
20:18	25	16.6	57.0	96.7	0.36	3.58
20:19	26	16.7	58.4	95.8	0.38	3.59
20:20	27	16.8	56.4	96.2	0.33	3.61
20:21	28	16.5	58.3	97.0	0.36	3.58
20:22	29	16.5	59.5	97.0	0.33	3.60
20:23	30	16.6	60.4	99.4	0.39	3.57
20:24	31	16.7	59.1	96.6	0.32	3.59
20:25	32	16.4	61.7	95.7	0.36	3.58
20:26	33	16.8	60.7	96.5	0.35	3.58
20:27	34	16.7	60.6	97.1	0.32	3.59
20:28	35	16.8	58.8	97.2	0.31	3.59
20:29	36	16.7	60.2	97.4	0.30	3.58
20:30	37	16.5	62.4	96.6	0.29	3.59
20:31	38	16.8	64.0	96.1	0.36	3.57
20:32	39	17.0	61.7	96.7	0.29	3.61
20:33	40	16.9	61.4	96.5	0.34	3.60
20:34	41	17.1	59.8	96.4	0.29	3.62
20:35	42	16.8	60.4	96.1	0.30	3.61
20:36	43	16.9	59.7	96.3	0.30	3.60
20:37	44	16.8	59.7	96.9	0.31	3.59
20:38	45	17.1	59.5	96.2	0.30	3.60
20:39	46	16.6	62.2	96.2	0.28	3.61
20:40	47	16.9	63.6	96.5	0.29	3.60
20:41	48	16.7	62.9	96.2	0.31	3.58
20:42	49	16.7	62.3	96.2	0.30	3.60
20:43	50	16.9	63.4	96.4	0.33	3.60
20:44	51	17.0	63.1	96.4	0.28	3.62
20:45	52	16.9	61.7	95.3	0.31	3.58
20:46	53	16.9	61.0	95.3	0.29	3.60
20:47	54	16.7	60.5	95.2	0.32	3.58
20:48	55	17.0	59.6	95.3	0.31	3.60
20:49	56	16.8	59.9	95.3	0.30	3.60
20:50	57	16.4	61.3	95.7	0.33	3.57
20:51	58	16.8	61.2	95.7	0.34	3.56
20:52	59	16.6	61.5	97.0	0.31	3.58
20:53	60	16.7	59.6	96.8	0.30	3.59
	AVG (C) =	**16.78**	**59.66**	**96.6**	**0.332**	**3.591**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	8
TEST DATE :	1/25/2007
STARTING HOUR :	21:19

GAS ANALYZER **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.35
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**17.02**

GAS ANALYZER **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	250.10
AVERAGE ZERO BIAS (C_o):	-0.65
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**61.0**

GAS ANALYZER **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.75
AVERAGE ZERO BIAS (C_o):	-1.00
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**93.8**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**95.5**

GAS ANALYZER **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	4.99
AVERAGE ZERO BIAS (C_o):	-0.06
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.36**

GAS ANALYZER **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	6.95
AVERAGE ZERO BIAS (C_o):	-0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.60**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
21:19	0	-------	-------	-------	-------	-------
21:20	1	16.3	57.1	96.24	0.34	3.56
21:21	2	16.4	56.7	95.37	0.32	3.57
21:22	3	16.5	60.0	97.46	0.36	3.55
21:23	4	16.6	57.6	97.34	0.31	3.57
21:24	5	16.6	58.8	95.59	0.31	3.58
21:25	6	16.5	57.9	95.93	0.30	3.57
21:26	7	16.5	57.4	95.71	0.30	3.56
21:27	8	16.5	58.6	96.29	0.29	3.56
21:28	9	16.6	59.2	95.74	0.30	3.56
21:29	10	16.4	59.0	95.36	0.31	3.57
21:30	11	16.6	60.9	95.66	0.34	3.57
21:31	12	16.6	60.7	95.30	0.31	3.59
21:32	13	16.5	58.8	95.05	0.31	3.56
21:33	14	16.6	58.0	95.05	0.31	3.56
21:34	15	16.5	59.0	94.77	0.29	3.57
21:35	16	16.7	58.3	94.24	0.31	3.55
21:36	17	16.6	59.9	94.15	0.31	3.57
21:37	18	16.9	59.6	93.83	0.28	3.59
21:38	19	16.8	61.7	94.19	0.30	3.57
21:39	20	16.5	57.6	93.40	0.27	3.59
21:40	21	16.4	58.3	92.80	0.33	3.54
21:41	22	16.8	57.5	93.03	0.30	3.57
21:42	23	16.7	60.0	93.87	0.32	3.58
21:43	24	16.8	59.4	95.31	0.33	3.58
21:44	25	16.7	59.5	95.18	0.33	3.59
21:45	26	16.5	59.6	95.46	0.26	3.59
21:46	27	16.2	59.5	94.82	0.31	3.55
21:47	28	16.3	61.2	92.82	0.33	3.54
21:48	29	16.2	59.9	93.54	0.29	3.55
21:49	30	16.2	61.2	93.80	0.29	3.55
21:50	31	16.4	62.4	95.26	0.32	3.54
21:51	32	16.5	67.2	95.00	0.32	3.55
21:52	33	16.8	63.7	95.07	0.33	3.59
21:53	34	16.6	62.7	94.35	0.31	3.59
21:54	35	16.6	60.0	94.35	0.30	3.59
21:55	36	16.3	62.7	95.49	0.29	3.56
21:56	37	16.4	61.7	95.53	0.29	3.55
21:57	38	16.6	63.8	95.77	0.29	3.56
21:58	39	16.6	62.5	95.17	0.30	3.58
21:59	40	16.6	62.5	95.78	0.29	3.58
22:00	41	16.6	61.0	95.97	0.30	3.57
22:01	42	16.5	61.3	96.03	0.30	3.56
22:02	43	16.4	61.7	95.90	0.31	3.55
22:03	44	16.6	60.5	96.41	0.31	3.57
22:04	45	16.5	62.0	96.32	0.32	3.57
22:05	46	16.5	60.8	96.61	0.31	3.57
22:06	47	16.6	62.0	96.03	0.32	3.57
22:07	48	16.3	60.7	96.33	0.28	3.57
22:08	49	16.3	63.6	96.65	0.34	3.55
22:09	50	16.6	62.6	96.27	0.29	3.59
22:10	51	16.7	62.0	96.58	0.28	3.58
22:11	52	16.5	61.1	98.23	0.29	3.56
22:12	53	16.4	61.6	96.36	0.30	3.56
22:13	54	16.6	61.0	96.18	0.29	3.57
22:14	55	16.4	63.0	95.76	0.31	3.57
22:15	56	16.7	61.3	96.01	0.30	3.57
22:16	57	16.4	60.8	95.73	0.28	3.57
22:17	58	16.5	62.4	95.89	0.30	3.57
22:18	59	16.5	61.5	96.06	0.30	3.58
22:19	60	16.5	61.0	95.96	0.32	3.56
	AVG (C) =	**16.53**	**60.57**	**95.405**	**0.306**	**3.568**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	9
TEST DATE :	1/25/2007
STARTING HOUR :	22:44

GAS ANALYZER — **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	47.90
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**17.09**

GAS ANALYZER — **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	249.50
AVERAGE ZERO BIAS (C_o):	-0.90
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**63.3**

GAS ANALYZER — **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	101.60
AVERAGE ZERO BIAS (C_o):	-0.90
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**95.4**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**97.1**

GAS ANALYZER — **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	4.98
AVERAGE ZERO BIAS (C_o):	-0.06
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.36**

GAS ANALYZER — **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	6.97
AVERAGE ZERO BIAS (C_o):	-0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.60**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
22:44	0	-------	-------	-------	-------	-------
22:45	1	16.6	62.6	98.66	0.33	3.58
22:46	2	16.5	59.8	97.61	0.30	3.58
22:47	3	16.4	60.7	96.73	0.28	3.59
22:48	4	16.2	61.8	97.34	0.30	3.56
22:49	5	16.6	63.4	100.72	0.31	3.57
22:50	6	16.5	63.1	101.97	0.29	3.58
22:51	7	16.6	63.7	96.93	0.31	3.59
22:52	8	16.7	62.7	96.73	0.31	3.60
22:53	9	16.8	64.8	97.11	0.32	3.59
22:54	10	16.8	61.0	98.04	0.28	3.60
22:55	11	16.5	59.8	96.82	0.29	3.59
22:56	12	16.4	62.6	96.73	0.32	3.57
22:57	13	16.5	62.0	96.84	0.32	3.58
22:58	14	16.7	60.5	96.59	0.31	3.58
22:59	15	16.6	62.7	97.11	0.30	3.58
23:00	16	16.7	61.7	96.73	0.27	3.60
23:01	17	16.4	63.7	96.65	0.29	3.61
23:02	18	16.8	64.2	97.16	0.30	3.57
23:03	19	16.5	62.9	97.24	0.27	3.59
23:04	20	16.5	64.2	96.69	0.33	3.57
23:05	21	16.5	63.3	96.80	0.32	3.58
23:06	22	16.6	62.0	96.84	0.32	3.57
23:07	23	16.6	61.3	96.49	0.30	3.58
23:08	24	16.5	61.7	96.69	0.29	3.59
23:09	25	16.4	60.8	96.86	0.30	3.57
23:10	26	16.6	62.7	96.46	0.28	3.59
23:11	27	16.4	63.5	95.97	0.31	3.58
23:12	28	16.6	61.7	96.01	0.33	3.58
23:13	29	16.5	60.2	96.49	0.29	3.59
23:14	30	16.4	64.3	96.82	0.32	3.58
23:15	31	16.7	61.9	97.08	0.32	3.59
23:16	32	16.4	60.9	96.97	0.29	3.60
23:17	33	16.1	61.0	96.19	0.28	3.58
23:18	34	16.4	60.2	96.27	0.32	3.57
23:19	35	16.6	61.0	95.75	0.30	3.59
23:20	36	16.4	62.8	95.75	0.28	3.60
23:21	37	16.4	63.1	96.21	0.31	3.59
23:22	38	16.3	63.1	96.17	0.34	3.59
23:23	39	16.7	64.1	97.21	0.34	3.59
23:24	40	16.2	61.5	99.26	0.27	3.61
23:25	41	16.1	61.7	96.61	0.32	3.55
23:26	42	16.4	62.0	96.93	0.30	3.57
23:27	43	16.1	62.8	96.62	0.29	3.57
23:28	44	16.4	62.7	97.30	0.31	3.58
23:29	45	16.2	65.2	96.50	0.32	3.58
23:30	46	16.9	64.4	95.99	0.33	3.59
23:31	47	16.2	62.8	96.77	0.26	3.61
23:32	48	16.2	62.1	97.24	0.30	3.56
23:33	49	16.2	62.0	96.76	0.31	3.57
23:34	50	16.2	64.2	97.02	0.31	3.56
23:35	51	16.3	64.4	97.09	0.29	3.58
23:36	52	16.0	65.2	96.56	0.31	3.57
23:37	53	16.7	63.8	96.56	0.34	3.58
23:38	54	16.5	60.6	96.98	0.28	3.61
23:39	55	16.2	61.2	96.93	0.30	3.59
23:40	56	16.1	63.0	96.25	0.33	3.57
23:41	57	16.3	63.8	95.99	0.33	3.56
23:42	58	16.0	62.8	95.44	0.28	3.57
23:43	59	15.9	65.2	95.69	0.32	3.55
23:44	60	16.4	63.2	96.05	0.33	3.55
	AVG (C) =	**16.44**	**62.54**	**96.90**	**0.31**	**3.58**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	10
TEST DATE :	1/26/2007
STARTING HOUR :	8:00

GAS ANALYZER — **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.90
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**16.06**

GAS ANALYZER — **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	247.05
AVERAGE ZERO BIAS (C_o):	-0.10
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**67.2**

GAS ANALYZER — **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	98.30
AVERAGE ZERO BIAS (C_o):	-0.85
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**93.1**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**94.7**

GAS ANALYZER — **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.00
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.34**

GAS ANALYZER — **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	6.99
AVERAGE ZERO BIAS (C_o):	0.02
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.62**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
8:00	0	-------	-------	-------	-------	-------
8:01	1	15.5	64.8	91.1	0.37	3.61
8:02	2	15.7	65.5	91.6	0.38	3.61
8:03	3	15.8	63.1	91.4	0.38	3.63
8:04	4	15.4	63.6	91.8	0.37	3.61
8:05	5	15.8	64.1	91.9	0.36	3.60
8:06	6	15.9	62.2	91.2	0.33	3.63
8:07	7	15.6	62.3	91.5	0.36	3.63
8:08	8	15.5	62.2	91.1	0.39	3.61
8:09	9	15.5	63.6	91.4	0.40	3.61
8:10	10	15.5	62.7	91.0	0.39	3.62
8:11	11	15.2	64.0	91.3	0.41	3.61
8:12	12	15.6	64.8	92.1	0.40	3.60
8:13	13	15.3	65.9	92.2	0.36	3.62
8:14	14	15.7	64.2	91.1	0.39	3.61
8:15	15	15.6	64.9	92.0	0.38	3.62
8:16	16	15.6	64.0	91.5	0.36	3.62
8:17	17	15.5	65.1	91.3	0.38	3.60
8:18	18	15.9	63.4	91.2	0.36	3.63
8:19	19	15.8	64.9	91.4	0.38	3.62
8:20	20	15.6	65.3	91.6	0.34	3.63
8:21	21	15.3	64.5	90.6	0.36	3.60
8:22	22	15.8	65.3	91.1	0.37	3.59
8:23	23	15.7	64.4	90.9	0.34	3.62
8:24	24	15.7	66.1	91.1	0.36	3.63
8:25	25	15.7	65.2	91.7	0.36	3.62
8:26	26	15.8	65.5	91.1	0.35	3.61
8:27	27	15.8	65.6	90.8	0.37	3.62
8:28	28	15.5	67.0	90.7	0.34	3.62
8:29	29	15.6	68.2	91.3	0.36	3.58
8:30	30	15.4	67.0	91.9	0.34	3.58
8:31	31	15.8	68.0	93.5	0.36	3.60
8:32	32	15.7	68.8	91.7	0.32	3.62
8:33	33	15.7	68.6	92.1	0.35	3.60
8:34	34	16.1	66.3	90.8	0.35	3.62
8:35	35	15.9	70.7	90.5	0.33	3.64
8:36	36	15.7	71.0	91.3	0.30	3.62
8:37	37	15.8	69.1	91.0	0.31	3.61
8:38	38	15.8	69.8	91.3	0.33	3.61
8:39	39	15.9	70.0	91.9	0.33	3.64
8:40	40	15.8	66.2	91.3	0.33	3.61
8:41	41	16.3	70.4	90.1	0.37	3.62
8:42	42	15.7	70.2	90.0	0.31	3.64
8:43	43	15.9	69.9	91.1	0.31	3.61
8:44	44	16.0	67.4	91.2	0.35	3.60
8:45	45	15.9	66.8	90.6	0.34	3.62
8:46	46	16.1	66.4	91.1	0.35	3.62
8:47	47	15.9	64.9	91.7	0.33	3.63
8:48	48	15.7	66.4	92.1	0.37	3.62
8:49	49	15.9	66.5	91.7	0.37	3.61
8:50	50	16.0	68.5	91.5	0.36	3.61
8:51	51	16.1	67.2	91.1	0.31	3.64
8:52	52	16.0	66.3	91.2	0.34	3.62
8:53	53	15.8	67.3	91.8	0.33	3.59
8:54	54	16.1	66.7	92.6	0.37	3.59
8:55	55	16.0	68.2	92.7	0.36	3.62
8:56	56	16.1	66.4	92.4	0.33	3.62
8:57	57	16.2	67.3	92.2	0.33	3.61
8:58	58	16.2	68.2	92.1	0.31	3.63
8:59	59	15.9	68.3	92.4	0.32	3.63
9:00	60	16.2	68.2	92.7	0.35	3.60
	AVG (C) =	**15.77**	**66.32**	**91.5**	**0.353**	**3.615**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	11
TEST DATE :	1/26/2007
STARTING HOUR :	9:24

GAS ANALYZER — **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.35
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**16.44**

GAS ANALYZER — **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	246.55
AVERAGE ZERO BIAS (C_o):	-0.40
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**65.4**

GAS ANALYZER — **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	98.75
AVERAGE ZERO BIAS (C_o):	-0.70
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**93.6**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**95.2**

GAS ANALYZER — **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.00
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.35**

GAS ANALYZER — **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	7.00
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.61**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
9:24	0	-------	-------	-------	-------	-------
9:25	1	16.2	64.8	95.63	0.34	3.64
9:26	2	15.9	64.3	94.13	0.39	3.61
9:27	3	16.0	63.1	92.36	0.38	3.61
9:28	4	15.9	63.8	95.13	0.39	3.60
9:29	5	16.0	64.9	93.37	0.38	3.61
9:30	6	15.8	67.1	94.76	0.37	3.60
9:31	7	16.0	65.9	93.15	0.38	3.60
9:32	8	16.1	66.8	92.14	0.39	3.62
9:33	9	16.3	64.1	92.59	0.38	3.63
9:34	10	15.9	63.8	92.73	0.37	3.63
9:35	11	16.2	62.0	92.60	0.39	3.62
9:36	12	15.9	65.2	93.14	0.37	3.62
9:37	13	16.0	64.3	92.57	0.34	3.62
9:38	14	15.7	65.0	92.92	0.37	3.60
9:39	15	15.9	63.9	92.44	0.38	3.61
9:40	16	16.1	66.9	93.95	0.36	3.61
9:41	17	16.0	65.4	92.70	0.33	3.62
9:42	18	16.1	66.4	92.31	0.38	3.61
9:43	19	16.0	63.7	92.37	0.37	3.60
9:44	20	15.9	65.2	92.48	0.36	3.61
9:45	21	16.1	65.7	92.44	0.39	3.61
9:46	22	15.8	62.7	93.05	0.36	3.60
9:47	23	16.1	65.6	93.49	0.32	3.62
9:48	24	16.1	63.9	92.48	0.38	3.60
9:49	25	15.8	65.7	92.90	0.35	3.63
9:50	26	16.3	63.0	92.07	0.38	3.62
9:51	27	15.8	64.4	92.68	0.37	3.62
9:52	28	16.0	64.0	93.00	0.34	3.62
9:53	29	16.1	63.7	92.31	0.36	3.61
9:54	30	15.8	64.6	92.26	0.35	3.62
9:55	31	15.9	64.9	92.04	0.35	3.62
9:56	32	15.6	65.0	91.61	0.40	3.59
9:57	33	16.1	62.2	90.80	0.35	3.61
9:58	34	16.0	64.5	92.14	0.38	3.61
9:59	35	15.9	62.3	92.21	0.36	3.62
10:00	36	15.9	60.7	90.69	0.38	3.60
10:01	37	15.9	61.8	90.96	0.38	3.61
10:02	38	15.9	61.3	91.38	0.36	3.62
10:03	39	15.7	60.3	91.47	0.37	3.59
10:04	40	15.7	61.9	90.99	0.34	3.59
10:05	41	15.9	64.3	90.91	0.36	3.60
10:06	42	15.5	65.3	91.47	0.34	3.60
10:07	43	16.2	65.2	92.22	0.39	3.59
10:08	44	16.1	66.6	91.97	0.38	3.62
10:09	45	16.0	64.7	91.83	0.34	3.62
10:10	46	16.0	62.7	91.93	0.32	3.60
10:11	47	15.9	65.2	91.50	0.33	3.61
10:12	48	15.9	62.9	91.95	0.35	3.60
10:13	49	15.9	62.9	91.51	0.34	3.60
10:14	50	16.0	64.0	92.06	0.34	3.61
10:15	51	15.9	63.7	92.25	0.35	3.59
10:16	52	16.0	63.4	92.08	0.36	3.59
10:17	53	16.1	65.2	92.28	0.34	3.61
10:18	54	15.9	65.0	92.57	0.32	3.60
10:19	55	15.8	64.1	92.79	0.34	3.59
10:20	56	15.9	65.5	92.30	0.37	3.59
10:21	57	15.9	64.6	91.55	0.33	3.61
10:22	58	16.1	63.3	91.66	0.33	3.62
10:23	59	16.2	65.2	91.65	0.35	3.62
10:24	60	15.9	65.5	91.67	0.31	3.61
	AVG (C) =	**15.96**	**64.24**	**92.377**	**0.359**	**3.609**

MONITOR DATA SUMMARY

COMPANY :	Valero Refining
LOCATION:	Port Arthur, Texas
SOURCE :	SRU 546 Incinerator
REPETITION :	12
TEST DATE :	1/26/2007
STARTING HOUR :	10:50

GAS ANALYZER — **NOx**

SCALE :	0 - 90 ppm
AVERAGE CAL. BIAS (C_m):	48.15
AVERAGE ZERO BIAS (C_o):	0.45
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	50.0
PPM CORRECTED (C_{gas}):	**16.16**

GAS ANALYZER — **CO**

SCALE :	0 - 450 ppm
AVERAGE CAL. BIAS (C_m):	246.65
AVERAGE ZERO BIAS (C_o):	0.35
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	250.0
PPM CORRECTED (C_{gas}):	**61.9**

GAS ANALYZER — **SO2**

SCALE :	0 - 180 ppm
AVERAGE CAL. BIAS (C_m):	97.95
AVERAGE ZERO BIAS (C_o):	-0.70
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	100.0
PPM CORRECTED (C_{gas}):	**94.8**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**96.6**

GAS ANALYZER — **O2**

SCALE :	0 - 9 %
AVERAGE CAL. BIAS (C_m):	5.01
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	5.00
% CORRECTED (C_{gas}):	**0.38**

GAS ANALYZER — **CO2**

SCALE :	0 - 14 %
AVERAGE CAL. BIAS (C_m):	7.01
AVERAGE ZERO BIAS (C_o):	0.01
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	7.00
% CORRECTED (C_{gas}):	**3.59**

$$C_{gas} = (C - C_o)\frac{C_{ma}}{(C_m - C_o)}$$

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	O2	CO2
10:50	0	-------	-------	-------	-------	-------
10:51	1	15.9	60.8	92.30	0.41	3.57
10:52	2	15.9	59.9	92.40	0.38	3.60
10:53	3	16.1	60.7	92.00	0.36	3.62
10:54	4	16.0	61.7	91.74	0.37	3.61
10:55	5	15.6	62.8	91.69	0.35	3.61
10:56	6	15.9	60.6	91.50	0.39	3.59
10:57	7	15.8	62.1	91.76	0.41	3.60
10:58	8	15.8	61.1	92.58	0.37	3.61
10:59	9	15.9	59.3	92.85	0.37	3.61
11:00	10	15.6	60.9	92.27	0.41	3.59
11:01	11	15.8	59.6	92.15	0.40	3.59
11:02	12	15.5	60.2	92.67	0.41	3.59
11:03	13	15.5	59.2	92.65	0.42	3.58
11:04	14	15.7	60.3	92.56	0.44	3.59
11:05	15	15.3	64.1	92.82	0.46	3.58
11:06	16	15.5	61.0	92.82	0.43	3.59
11:07	17	15.6	62.4	92.12	0.46	3.57
11:08	18	15.5	60.0	92.22	0.40	3.61
11:09	19	15.6	60.8	92.90	0.43	3.59
11:10	20	15.7	60.2	93.27	0.41	3.61
11:11	21	15.7	61.2	93.26	0.43	3.59
11:12	22	15.9	60.4	92.98	0.42	3.60
11:13	23	15.8	60.1	92.90	0.37	3.62
11:14	24	15.9	60.3	98.23	0.42	3.59
11:15	25	15.8	60.7	101.14	0.40	3.59
11:16	26	15.8	59.7	94.96	0.39	3.60
11:17	27	15.9	58.8	92.58	0.37	3.60
11:18	28	15.8	59.5	92.43	0.37	3.61
11:19	29	16.2	59.8	92.67	0.40	3.61
11:20	30	16.0	60.3	92.54	0.40	3.63
11:21	31	15.7	59.6	93.04	0.40	3.61
11:22	32	16.0	60.1	97.75	0.42	3.59
11:23	33	15.7	60.8	93.33	0.38	3.62
11:24	34	15.8	59.4	91.76	0.39	3.60
11:25	35	15.8	62.9	92.38	0.43	3.58
11:26	36	15.7	61.1	91.97	0.38	3.59
11:27	37	15.6	63.7	91.89	0.44	3.57
11:28	38	15.7	60.0	92.31	0.39	3.61
11:29	39	15.7	61.2	92.22	0.38	3.59
11:30	40	16.0	61.1	92.47	0.39	3.60
11:31	41	15.9	61.8	92.22	0.39	3.60
11:32	42	16.3	59.7	92.34	0.38	3.61
11:33	43	16.1	60.2	92.61	0.38	3.61
11:34	44	16.2	59.9	92.60	0.37	3.60
11:35	45	15.9	61.4	92.28	0.36	3.60
11:36	46	16.0	61.9	92.45	0.39	3.58
11:37	47	16.2	61.2	92.42	0.35	3.60
11:38	48	15.6	63.9	91.95	0.35	3.58
11:39	49	16.0	64.4	92.42	0.37	3.59
11:40	50	15.9	65.2	92.57	0.36	3.60
11:41	51	16.1	65.1	92.43	0.35	3.59
11:42	52	16.0	63.9	92.91	0.36	3.59
11:43	53	16.2	63.8	92.81	0.32	3.60
11:44	54	16.2	62.5	92.08	0.34	3.61
11:45	55	16.1	63.1	92.50	0.35	3.60
11:46	56	16.1	63.2	92.26	0.33	3.61
11:47	57	16.3	63.6	92.01	0.36	3.59
11:48	58	16.1	62.3	93.98	0.32	3.60
11:49	59	16.1	61.5	93.57	0.35	3.59
11:50	60	16.1	61.2	91.81	0.36	3.58
	AVG (C) =	**15.86**	**61.30**	**92.84**	**0.39**	**3.60**

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 1

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	44.489 **ft^3**
STATIC PRES:	-1.50 **$in.H_2O$**	**METER TEMP:**	65.5 **°F**
STACK TEMP:	516.9 **°F**	**LIQUID COLL:**	109.8 **milliliters**
SQ.RT ΔP:	0.8968 **$in.H_2O$**	**CO_2:**	3.56 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	1.17 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 45.141 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.168 \text{ scf}$$

V_{lc} = 109.8 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.103$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 542.4 °K
P = 761.5 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.103

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 2

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	44.326 **ft^3**
STATIC PRES:	-1.50 **$in.H_2O$**	**METER TEMP:**	71.6 **°F**
STACK TEMP:	512.4 **°F**	**LIQUID COLL:**	106.5 **milliliters**
SQ.RT ΔP:	0.9061 **$in.H_2O$**	**CO_2:**	3.57 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	0.48 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.460 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.013 \text{ scf}$$

V_{lc} = 106.5 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.101$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 539.9 °K
P = 761.5 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.101

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 3

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	44.164 **ft^3**
STATIC PRES:	-1.50 **in.H_2O**	**METER TEMP:**	70.5 **°F**
STACK TEMP:	514.0 **°F**	**LIQUID COLL:**	107.2 **milliliters**
SQ.RT ΔP:	0.9033 **in.H_2O**	**CO_2:**	3.54 **% by volume**
ΔH:	1.70 **in.H_2O**	**O_2:**	0.39 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.389 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.046 \text{ scf}$$

V_{lc} = 107.2 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.102$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 540.8 °K
P = 761.5 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.102

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 4

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	43.969 **ft^3**
STATIC PRES:	-1.40 **$in.H_2O$**	**METER TEMP:**	67.7 **°F**
STACK TEMP:	513.1 **°F**	**LIQUID COLL:**	107.6 **milliliters**
SQ.RT ΔP:	0.9003 **$in.H_2O$**	**CO_2:**	3.50 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	0.39 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.428 \text{ dscf}$$

$\gamma =$ 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.065 \text{ scf}$$

$V_{lc} =$ 107.6 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.102$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 540.3 °K
P = 761.7 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

$B_{ws} =$ 0.102

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 5

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	44.295 **ft^3**
STATIC PRES:	-1.40 **$in.H_2O$**	**METER TEMP:**	66.7 **°F**
STACK TEMP:	515.9 **°F**	**LIQUID COLL:**	111.5 **milliliters**
SQ.RT ΔP:	0.8871 **$in.H_2O$**	**CO_2:**	3.62 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	0.36 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.842 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.248 \text{ scf}$$

V_{lc} = 111.5 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.105$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 541.3 °K
P = 761.7 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.105

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 6

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	45.239 **ft^3**
STATIC PRES:	-1.50 **in.H_2O**	**METER TEMP:**	64.8 **°F**
STACK TEMP:	516.8 **°F**	**LIQUID COLL:**	105.2 **milliliters**
SQ.RT ΔP:	0.8867 **in.H_2O**	**CO_2:**	3.62 **% by volume**
ΔH:	1.70 **in.H_2O**	**O_2:**	0.34 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 45.964 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 4.952 \text{ scf}$$

V_{lc} = 105.2 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.097$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 542.3 °K
P = 761.5 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.097

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 7

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	44.229 **ft^3**
STATIC PRES:	-1.50 **$in.H_2O$**	**METER TEMP:**	64.8 **°F**
STACK TEMP:	511.4 **°F**	**LIQUID COLL:**	105.9 **milliliters**
SQ.RT ΔP:	0.8958 **$in.H_2O$**	**CO_2:**	3.61 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	0.38 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.937 \text{ dscf}$$

$\gamma =$ 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 4.985 \text{ scf}$$

$V_{lc} =$ 105.9 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.100$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 539.3 °K
P = 761.5 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

$B_{ws} =$ 0.100

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 8

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	43.760 **ft^3**
STATIC PRES:	-1.60 **in.H_2O**	**METER TEMP:**	62.3 **°F**
STACK TEMP:	514.1 **°F**	**LIQUID COLL:**	114.6 **milliliters**
SQ.RT ΔP:	0.8952 **in.H_2O**	**CO_2:**	3.60 **% by volume**
ΔH:	1.70 **in.H_2O**	**O_2:**	0.36 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.674 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.394 \text{ scf}$$

V_{lc} = 114.6 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.108$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 540.8 °K
P = 761.3 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.108

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/25/2007
RUN NUMBER: 9

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.09 **in. Hg**	**METER VOLUME:**	43.620 **ft^3**
STATIC PRES:	-1.50 **in.H_2O**	**METER TEMP:**	62.8 **°F**
STACK TEMP:	514.3 **°F**	**LIQUID COLL:**	104.1 **milliliters**
SQ.RT ΔP:	0.8978 **in.H_2O**	**CO_2:**	3.60 **% by volume**
ΔH:	1.70 **in.H_2O**	**O_2:**	0.36 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 44.488 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 4.900 \text{ scf}$$

V_{lc} = 104.1 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.099$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 540.9 °K
P = 761.5 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.099

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/26/2007
RUN NUMBER: 10

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.12 **in. Hg**	**METER VOLUME:**	45.216 **ft^3**
STATIC PRES:	-1.50 **in.H_2O**	**METER TEMP:**	46.3 **°F**
STACK TEMP:	512.4 **°F**	**LIQUID COLL:**	107.7 **milliliters**
SQ.RT ΔP:	0.9001 **in.H_2O**	**CO_2:**	3.62 **% by volume**
ΔH:	1.70 **in.H_2O**	**O_2:**	0.34 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 47.666 \text{ dscf}$$

γ = 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.069 \text{ scf}$$

V_{lc} = 107.7 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.096$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 539.9 °K
P = 762.2 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.096

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/26/2007
RUN NUMBER: 11

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.12 **in. Hg**	**METER VOLUME:**	44.782 **ft^3**
STATIC PRES:	-1.50 **$in.H_2O$**	**METER TEMP:**	50.3 **°F**
STACK TEMP:	516.2 **°F**	**LIQUID COLL:**	108.1 **milliliters**
SQ.RT ΔP:	0.8922 **$in.H_2O$**	**CO_2:**	3.61 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	0.35 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 46.839 \text{ dscf}$$

$\gamma =$ 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 5.088 \text{ scf}$$

$V_{lc} =$ 108.1 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.098$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 542.0 °K
P = 762.2 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

$B_{ws} =$ 0.098

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
TEST DATE: 1/26/2007
RUN NUMBER: 12

γ FACTOR:	1.000	**STACK DIAM:**	48.00 **inches**
BAROMETRIC:	30.12 **in. Hg**	**METER VOLUME:**	44.523 **ft^3**
STATIC PRES:	-1.50 **$in.H_2O$**	**METER TEMP:**	58.4 **°F**
STACK TEMP:	515.3 **°F**	**LIQUID COLL:**	104.6 **milliliters**
SQ.RT ΔP:	0.8982 **$in.H_2O$**	**CO_2:**	3.59 **% by volume**
ΔH:	1.70 **$in.H_2O$**	**O_2:**	0.38 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 45.840 \text{ dscf}$$

$\gamma =$ 1.000

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 4.924 \text{ scf}$$

$V_{lc} =$ 104.6 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.097$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.000$$

T = 541.5 °K
P = 762.2 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

$B_{ws} =$ 0.097

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	1		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.56 **% by volume**
STACK TEMP:	516.9 **°F**	**O_2:**	1.17 **% by volume**
SQ.RT ΔP:	0.8968 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.62	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.53	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8968	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 516.9 °F + 460	=	977	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.98	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.07	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,832	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,612 1,716,714	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,673 1,540,357	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	2		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.57 **% by volume**
STACK TEMP:	512.4 **°F**	**O_2:**	0.48
SQ.RT ΔP:	0.9061 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.52	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.9061	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 512.4 °F + 460	=	972	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.98	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.65	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	53,265	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,980 1,738,803	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	26,044 1,562,614	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	3		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.54 **% by volume**
STACK TEMP:	514 **°F**	**O_2:**	0.39 **% by volume**
SQ.RT ΔP:	0.9033 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.58	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.50	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.9033	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 514.0 °F + 460	=	974	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.98	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.50	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	53,158	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,874 1,732,446	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,927 1,555,613	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	4		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.4 **in.H_2O**	**CO_2:**	3.50 **% by volume**
STACK TEMP:	513.1 **°F**	**O_2:**	0.39 **% by volume**
SQ.RT ΔP:	0.9003 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.58	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.49	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.9003	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 513.1 °F + 460	=	973	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.99	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.24	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,959	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,800 1,727,970	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,852 1,551,141	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	5		
BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.4 **in.H_2O**	**CO_2:**	3.62 **% by volume**
STACK TEMP:	515.9 **°F**	**O_2:**	0.36
SQ.RT ΔP:	0.8871 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.48	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8871	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 515.9 °F + 460	=	976	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.99	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	69.32	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,267	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,342 1,700,525	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,372 1,522,350	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	6		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.62 **% by volume**
STACK TEMP:	516.8 **°F**	**O_2:**	0.34 **% by volume**
SQ.RT ΔP:	0.8867 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.56	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8867	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 516.8 °F + 460	=	977	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.98	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(avg\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	69.23	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,198	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,272 1,696,295	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,522 1,531,322	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	7		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.61 **% by volume**
STACK TEMP:	511.4 **°F**	**O_2:**	0.38 **% by volume**
SQ.RT ΔP:	0.8958 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.54	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8958	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 511.4 °F + 460	=	971	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.98	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	69.78	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,615	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,655 1,719,329	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,794 1,547,654	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	8		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.6 **in.H_2O**	**CO_2:**	3.60 **% by volume**
STACK TEMP:	514.1 **°F**	**O_2:**	0.36
SQ.RT ΔP:	0.8952 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.45	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8952	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 514.1 °F + 460	=	974	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.97	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	69.95	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,742	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,638 1,718,287	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,553 1,533,162	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/25/2007
RUN NUMBER:	9		

BAROMETRIC:	30.09 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.60 **% by volume**
STACK TEMP:	514.3 **°F**	**O_2:**	0.36 **% by volume**
SQ.RT ΔP:	0.8978 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.54	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8978	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 514.3 °F + 460	=	974	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.98	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(avg\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.04	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,806	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,674 1,720,458	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,829 1,549,765	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/26/2007
RUN NUMBER:	10		

BAROMETRIC:	30.12 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.62 **% by volume**
STACK TEMP:	512.4 **°F**	**O_2:**	0.34 **% by volume**
SQ.RT ΔP:	0.9001 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.57	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.9001	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 512.4 °F + 460	=	972	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	30.01	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.07	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,831	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,772 1,726,348	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	26,007 1,560,396	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/26/2007
RUN NUMBER:	11		

BAROMETRIC:	30.12 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.61 **% by volume**
STACK TEMP:	516.2 **°F**	**O_2:**	0.35
SQ.RT ΔP:	0.8922 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.55	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8922	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 516.2 °F + 460	=	976	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	30.01	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	69.62	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,489	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,475 1,708,501	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,685 1,541,087	**dscfm** **dscfh**

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Valero Refining	**SOURCE:**	SRU 546 Incinerator
LOCATION:	Port Arthur, Texas	**TEST DATE:**	1/26/2007
RUN NUMBER:	12		

BAROMETRIC:	30.12 **in. Hg**	**STACK DIAM:**	48.00 **inches**
STATIC PRES:	-1.5 **in.H_2O**	**CO_2:**	3.59 **% by volume**
STACK TEMP:	515.3 **°F**	**O_2:**	0.38 **% by volume**
SQ.RT ΔP:	0.8982 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	28.59	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.56	**lb/lb-mole**
PITOT TUBE COEFFICIENT			
C_p (from calibration curve or geometric specifications)	=	0.84	
AVERAGE VELOCITY HEAD OF STACK GAS, in. H_2O			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	0.8982	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 515.3 °F + 460	=	975	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	30.01	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	70.04	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	52,809	**acfm**
Stack Area = 12.566 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	28,675 1,720,489	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	25,894 1,553,620	**dscfm** **dscfh**

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 1
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	90.4	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.3	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	98.7	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,540,357	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 90.4 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $\boxed{C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}}$ = 91.6 ppmv db

SO_2 CONC.(lbs/dscf) =

$$\boxed{C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)} = 15.21 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,540,357 dscfh

STACK SO_2 EMISSION RATE =

$$\boxed{SO_{2pmr} = (C_{gas,lb/dscf})(Q_{std})} = 23.43 \text{ lbs/hr} = 102.6 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 2
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	99.0	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.8	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	100.0	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,562,614	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 99.0 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 99.1 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 16.46 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,562,614 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 25.72 lbs/hr
= 112.7 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 3
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	96.9	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.9	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.2	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,555,613	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 96.9 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 95.8 ppmv db

SO_2 CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 15.92 $\times 10^{-6}$ lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,555,613 dscfh

STACK SO_2 EMISSION RATE =

$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 24.76 lbs/hr
= 108.4 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 4
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	94.9	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-1.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.8	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,551,141	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 94.90 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = (\overline{C} - C_o)\dfrac{C_{ma}}{C_m - C_o}$ = 93.3 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 15.50 $\times 10^{-6}$ lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,551,141 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = (C_{gas,lb/dscf})(Q_{std})$$

= 24.04 lbs/hr
= 105.3 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 5
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	95.1	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-1.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.9	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,522,350	~~dscfh~~

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 95.1 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$

= 93.4 ~~ppmv~~ db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 15.52 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,522,350 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 23.63 lbs/hr
= 103.5 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 6
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	96.6	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-1.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.7	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,531,322	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 96.6 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 95.0 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 15.79 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,531,322 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = (C_{gas,lb/dscf})(Q_{std})$$

= 24.17 lbs/hr
= 105.9 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 7
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	96.6	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-1.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.8	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,547,654	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 96.60 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 95.0 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 15.78 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,547,654 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 24.42 lbs/hr
= 107.0 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 8
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	95.4	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-1.0	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.8	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,533,162	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 95.41 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $\boxed{C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}}$ = 93.8 ppmv db

SO_2 CONC.(lbs/dscf) =

$$\boxed{C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)}$$

= 15.59 $\times 10^{-6}$ lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,533,162 dscfh

STACK SO_2 EMISSION RATE =

$$\boxed{SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)}$$

= 23.90 lbs/hr
= 104.7 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 9
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	96.9	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.9	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	101.6	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,549,765	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 96.9 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $\boxed{C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}}$ = 95.4 ppmv db

SO_2 CONC.(lbs/dscf) =

$$\boxed{C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)}$$ = 15.85 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,549,765 dscfh

STACK SO_2 EMISSION RATE =

$$\boxed{SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)}$$ = 24.56 lbs/hr
= 107.6 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Fort Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 10
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	91.5	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.9	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	98.3	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,560,396	~~dscf~~h

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 91.5 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 93.1 ppmv db

SO_2 CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 15.47 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,560,396 dscfh

STACK SO_2 EMISSION RATE =

$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 24.14 lbs/hr
= 105.7 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 11
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	92.4	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.7	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	98.8	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,541,087	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 92.38 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = (\overline{C} - C_o)\dfrac{C_{ma}}{C_m - C_o}$ = 93.6 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 15.55 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,541,087 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = (C_{gas,lb/dscf})(Q_{std})$$

= 23.96 lbs/hr
= 104.9 ton/yr

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Western Research 721-ATM
RUN NO: 12
TEST DATE: 1/25/2007

INPUT

SO_2 AVERAGE CHART READING (C):	92.8	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.7	ppmv
CAL GAS CONCENTRATION (C_{ma}):	100.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	98.0	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,553,620	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 92.84 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = (\overline{C} - C_o)\dfrac{C_{ma}}{C_m - C_o}$ = 94.8 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 15.75 x 10^{-6} lbs/dscf

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,553,620 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = (C_{gas,lb/dscf})(Q_{std})$$

= 24.47 lbs/hr
= 107.2 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 1
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	14.09	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.2	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	50.1	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,540,357	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 14.09 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$

= 13.95 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 1.666 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,540,357 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 2.566 lbs/hr
= 11.24 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 2
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	15.82	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.2	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	49.6	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,562,614	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 15.82 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 15.86 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 1.894 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,562,614 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 2.959 lbs/hr
= 12.96 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 3
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	16.15	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.8	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,555,613	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 16.15 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 16.49 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 1.969 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,555,613 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.063 lbs/hr
= 13.42 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 4
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	16.33	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.5	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,551,141	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 16.33 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 16.76 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 2.002 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,551,141 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.105 lbs/hr
= 13.60 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 5
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	16.84	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.2	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.5	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,522,350	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 16.84 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 17.28 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 2.063 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,522,350 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.141 lbs/hr
= 13.76 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 6
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	17.16	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.2	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.5	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,531,322	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 17.16 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 17.58 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 2.099 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,531,322 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.214 lbs/hr
= 14.08 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 7
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	16.78	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.2	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.5	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,547,654	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 16.78 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 17.20 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 2.054 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,547,654 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.179 lbs/hr
= 13.92 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 8
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	16.53	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.4	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,533,162	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 16.53 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 17.02 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 2.033 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,533,162 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.117 lbs/hr
= 13.65 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 9
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	16.44	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	47.9	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,549,765	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 16.44 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 17.09 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 2.040 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,549,765 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = (C_{gas,lb/dscf})(Q_{std})$ = 3.162 lbs/hr
= 13.85 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 10
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	15.77	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.9	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,560,396	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 15.77 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 16.06 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 1.917 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,560,396 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 2.992 lbs/hr
= 13.10 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 11
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	15.96	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.4	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,541,087	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 15.96 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 16.44 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 1.963 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,541,087 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 3.025 lbs/hr
= 13.25 ton/yr

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 12
TEST DATE: 1/25/2007

INPUT

NO_x AVERAGE CHART READING (C):	15.86	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.5	ppmv
CAL GAS CONCENTRATION (C_{ma}):	50.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	48.2	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,553,620	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 15.86 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 16.16 ppmv db

NOx CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 1.929 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,553,620 dscfh

STACK NOx EMISSION RATE =

$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 2.997 lbs/hr
= 13.13 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 1
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	129.2	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.3	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	249.0	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,540,357	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 129.2 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 129.6 ppmv db

CO CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 9.42 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,540,357 dscfh

STACK CO EMISSION RATE =

$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std})$ = 14.51 lbs/hr
= 63.6 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 2
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	73.2	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	249.1	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,562,614	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 73.2 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $\boxed{C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}}$ = 73.4 ppmv db

CO CONC.(lbs/dscf) =

$$\boxed{C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)}$$ = 5.34 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,562,614 dscfh

STACK CO EMISSION RATE =

$$\boxed{CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)}$$ = 8.34 lbs/hr
= 36.5 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 3
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	57.3	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	249.7	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,555,613	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 57.3 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$

= 57.3 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 4.17 $\times 10^{-6}$ lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,555,613 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 6.48 lbs/hr
= 28.4 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 4
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	59.0	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	250.4	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,551,141	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 59.0 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $\boxed{C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}}$ = 58.8 ppmv db

CO CONC.(lbs/dscf) =

$\boxed{C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)}$ = 4.27 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,551,141 dscfh

STACK CO EMISSION RATE =

$\boxed{CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)}$ = 6.63 lbs/hr
= 29.0 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 5
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	59.7	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	251.4	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,522,350	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 59.7 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 59.3 ppmv db

CO CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 4.31 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,522,350 dscfh

STACK CO EMISSION RATE =

$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std})$ = 6.56 lbs/hr
= 28.7 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 6
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	60.4	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	251.2	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,531,322	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 60.4 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\bar{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 60.1 ppmv db

CO CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 4.36 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,531,322 dscfh

STACK CO EMISSION RATE =

$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std})$ = 6.68 lbs/hr
= 29.3 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 7
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	59.7	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.2	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	250.7	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,547,654	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 59.7 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 59.6 ppmv db

CO CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 4.33 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,547,654 dscfh

STACK CO EMISSION RATE =

$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std})$ = 6.71 lbs/hr
= 29.4 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 8
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	60.6	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.7	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	250.1	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,533,162	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 60.6 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$

= 61.0 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 4.44 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,533,162 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 6.80 lbs/hr
= 29.8 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 9
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	62.5	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.9	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	249.5	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,549,765	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 62.5 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$

= 63.3 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= 4.60 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,549,765 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= 7.13 lbs/hr
= 31.2 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 10
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	66.3	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.1	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	247.1	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,560,396	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 66.3 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $\boxed{C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}}$ = 67.2 ppmv db

CO CONC.(lbs/dscf) =

$$\boxed{C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)} = 4.88 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,560,396 dscfh

STACK CO EMISSION RATE =

$$\boxed{CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)} = 7.62 \text{ lbs/hr} = 33.4 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 11
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	64.2	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.4	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	246.6	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,541,087	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 64.2 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 65.4 ppmv db

CO CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 4.76 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,541,087 dscfh

STACK CO EMISSION RATE =

$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$ = 7.33 lbs/hr
= 32.1 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Valero Refining
LOCATION: Port Arthur, Texas
SOURCE: SRU 546 Incinerator
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 12
TEST DATE: 1/25/2007

INPUT

CO AVERAGE CHART READING (C):	61.3	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.4	ppmv
CAL GAS CONCENTRATION (C_{ma}):	250.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	246.7	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,553,620	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 61.3 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv (corrected) = $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 61.9 ppmv db

CO CONC.(lbs/dscf) =

$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$ = 4.50 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,553,620 dscfh

STACK CO EMISSION RATE =

$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std})$ = 6.99 lbs/hr
= 30.6 ton/yr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 1

Field Test Data:

Vm:	85.9 Liters	Start Meter Volume:	210.0 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	295.9 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,540,357 dscfh
Tm:	70.0 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.10 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	3.033 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	3.079 dscf
Vmstd (liters) = Vmstd x 28.32	=	87.203 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	1.796 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.12E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	1.270 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.173 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 2

Field Test Data:

Vm:	42.2 Liters	Start Meter Volume:	352.1 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	295.9 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,562,614 dscfh
Tm:	70.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		**Blank**	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.80 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	1.490 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	1.511 dscf
Vmstd (liters) = Vmstd x 28.32	=	42.800 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	0.813 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	5.07E-08 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	0.575 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.079 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 3

Field Test Data:

Vm:	62.8 Liters	Start Meter Volume:	352.1 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	413.1 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,555,613 dscfh
Tm:	67.0 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.30 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.218 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.264 dscf
Vmstd (liters) = Vmstd x 28.32	=	64.115 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	1.899 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.19E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	1.343 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.1844 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 4

Field Test Data:

Vm:	61.8 Liters	Start Meter Volume:	413.1 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	474.9 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,551,141 dscfh
Tm:	63.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.00 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.182 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.243 dscf
Vmstd (liters) = Vmstd x 28.32	=	63.516 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	2.739 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.71E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	1.937 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.265 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 5

Field Test Data:

Vm:	42.2 Liters	Start Meter Volume:	474.9 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	534.1 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,522,350 dscfh
Tm:	62.0 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.40 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	1.490 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	1.536 dscf
Vmstd (liters) = Vmstd x 28.32	=	43.497 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	2.400 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.50E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	1.697 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.228 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 6

Field Test Data:

Vm:	62.8 Liters	Start Meter Volume:	534.1 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	594.2 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,531,322 dscfh
Tm:	60.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.70 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.218 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.292 dscf
Vmstd (liters) = Vmstd x 28.32	=	64.916 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	0.804 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	5.02E-08 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	0.569 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.0769 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 7

Field Test Data:

Vm:	59.6 Liters	Start Meter Volume:	594.2 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	653.8 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,547,654 dscfh
Tm:	59.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.00 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.105 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.180 dscf
Vmstd (liters) = Vmstd x 28.32	=	61.727 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	2.819 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.76E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	1.994 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.272 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 8

Field Test Data:

Vm:	42.2 Liters	Start Meter Volume:	653.8 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	714.5 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,533,162 dscfh
Tm:	57.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	47.80 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	1.490 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	1.549 dscf
Vmstd (liters) = Vmstd x 28.32	=	43.875 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	4.758 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	2.97E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	3.366 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.455 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/25/2007
Run # : 9

Field Test Data:

Vm:	62.8 Liters	Start Meter Volume:	714.5 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	774.8 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,549,765 dscfh
Tm:	55.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.80 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.218 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.314 dscf
Vmstd (liters) = Vmstd x 28.32	=	65.546 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	0.531 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	3.31E-08 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	0.375 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.0514 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/26/2007
Run # : 10

Field Test Data:

Vm:	57.9 Liters	Start Meter Volume:	774.8 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	832.7 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,560,396 dscfh
Tm:	55.5 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.00 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.044 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.134 dscf
Vmstd (liters) = Vmstd x 28.32	=	60.431 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	2.879 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.80E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	2.036 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.280 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/26/2007
Run # : 11

Field Test Data:

Vm:	42.2 Liters	Start Meter Volume:	832.7 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	894.0 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,541,087 dscfh
Tm:	56.0 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.10 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	1.490 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	1.554 dscf
Vmstd (liters) = Vmstd x 28.32	=	44.002 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	3.558 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	2.22E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	2.517 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.342 lb/hr

Hydrogen Sulfide (H_2S) Calculation Summary

Company: Valero Refining
Location: Port Arthur, Texas
Source: SRU 546 Incinerator
Test Date: 1/26/2007
Run # : 12

Field Test Data:

Vm:	62.8 Liters	Start Meter Volume:	894.0 Liters
Yd:	1.012 dimensionless	Final Meter Volume:	954.5 Liters
Pbar:	30.12 inches Hg		
DH:	0.1 inches H_2O	Flow Rate (Qstd)	1,553,620 dscfh
Tm:	57.0 degrees F		

Laboratory Analysis for Hydrogen Sulfide (H_2S):

Sample		Blank	
Normality of iodine (Ni):	0.01012 N	Normality of iodine (Nib):	0.01012 N
Normality of titrant (Nt):	0.01021 N	Normality of titrant (Ntb):	0.01021 N
Volume of Iodine solution (Vit):	50.0 milliliters	Volume of Iodine solution (Vitb):	50.0 milliliters
Volume of titrant (Vtt):	48.30 milliliters	Volume of titrant (Vttb):	49.00 milliliters
Volume of sample(Vm):	2.218 Ft^3		

Calculations:

		English Units (29.92 in. Hg, 68° F)
Volume of sample at standard conditions on dry basis:		
Vmstd = (17.647)(Vm)(Yd)(Pbar+DH/13.6)/(Tm)	=	2.308 dscf
Vmstd (liters) = Vmstd x 28.32	=	65.355 liters
Hydrogen sulfide concentration:		
mg/dscm = (K((Vit*Ni-Vtt*Nt)-(Vitb*Nib-Vttb*Ntb))) / Vmstd (liters)	=	1.863 mg/dscm H_2S
lb/dscf = mg/dscm * 6.242 x 10^{-8}	=	1.16E-07 lb/dscf H_2S
ppmv = lb/dscf * 385.26 / 34 x 10^{-6}	=	1.318 ppm H_2S
lb/hr = lb/dscf*Qstd	=	0.1807 lb/hr

APPENDIX B

Field Data

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	1
Start Time	1125
Stop Time	1225

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 905 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1019		Posttest: 1230 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0	CC59953	0.0		0.5		0.1			Co=
CO Low		diluted								
CO Mid	250	CC93770	252.3		249.7		248.2			Cm=
CO High	450	1988 ppm	451.1							
CO_2 Zero	0	CC59953	-0.02		0.01		0.02			Co=
CO_2 Low		diluted								
CO_2 Mid	7.0	CC163330	6.92		6.95		7.14			Cm=
CO_2 High	14.0	25.2 %	14.09							
O_2 Zero	0	CC62305	-0.03		-0.03		-0.04			Co=
O_2 Low		diluted								
O_2 Mid	5.0	CC59953	5.03		5.03		5.01			Cm=
O_2 High	9.0	25.0 %	9.10							
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0	CC59953	0.3		0.1		0.2			Co=
NO_x Low		diluted								
NO_x Mid	50	CC9844	50.3		49.9		50.3			Cm=
NO_x High	90	1940 ppm	90.4							
SO_2 Zero	0	CC59953	0.0		0.2		-0.8			Co=
SO_2 Low		diluted								
SO_2 Mid	100	CC43398	100.0		98.2		99.2			Cm=
SO_2 High	180	2063 ppm	180.1							

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	2
Start Time	1250
Stop Time	1350

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest:		Posttest: 1354 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero		CC59953					0.1			Co=
CO Low		diluted								
CO Mid		CC93770					249.9			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.02			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					7.13			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.05			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					5.00			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.8			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-0.7			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					100.7			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	3
Start Time	1414
Stop Time	1514

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	Pretest: System Response	Pretest: Syst. Bias (% of Span)	Posttest: 1518 hrs System Response	Posttest: Syst. Bias (% of Span)	Posttest: Drift (% of Span)	
CO Zero		CC59953					0.1			Co=
CO Low		diluted								
CO Mid		CC93770					249.4			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.01			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					7.13			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.05			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					4.99			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.7			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-1.1			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					101.7			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	4
Start Time	1539
Stop Time	1639

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest:		Posttest: 1643 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero		CC59953					0.1			Co=
CO Low		diluted								
CO Mid		CC93770					251.4			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.01			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					7.00			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.05			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					4.99			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.3			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-1.0			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					101.9			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	5
Start Time	1703
Stop Time	1803

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR -			hrs	SYSTEM BIAS CHECK					Calibration Correction Factors
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	Pretest: System Response	Pretest: Syst. Bias (% of Span)	Posttest: 1808 hrs System Response	Posttest: Syst. Bias (% of Span)	Posttest: Drift (% of Span)	
CO Zero		CC59953					0.1			Co=
CO Low		diluted								
CO Mid		CC93770					251.4			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.00			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					6.96			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.05			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					4.99			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.2			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.6			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-1.1			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					101.8			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	6
Start Time	1829
Stop Time	1929

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR -			hrs	SYSTEM BIAS CHECK					Calibration Correction Factors
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	Pretest: System Response	Pretest: Syst. Bias (% of Span)	Posttest: 1933 hrs System Response	Posttest: Syst. Bias (% of Span)	Posttest: Drift (% of Span)	
CO Zero		CC59953					0.0			Co=
CO Low		diluted								
CO Mid		CC93770					251.0			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.01			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					6.96			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.05			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					5.00			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.2			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.3			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-1.1			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					101.6			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	7
Start Time	1953
Stop Time	2053

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR -			hrs	SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest:		Posttest: 2658 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero		CC59953					-0.41			Co=
CO Low		diluted								
CO Mid		CC93770					250.4			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.00			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					6.95			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.06			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					4.99			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.7			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-1.1			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					101.9			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	8
Start Time	2119
Stop Time	2219

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest:		Posttest: 2223 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero		CC59953					-0.9			Co=
CO Low		diluted								
CO Mid		CC93770					249.8			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					-0.01			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					6.95			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.06			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					4.98			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.0			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-0.9			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					101.6			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/25/2007
Run Number	9
Start Time	2244
Stop Time	2344

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR -			hrs	SYSTEM BIAS CHECK					Calibration Correction Factors
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	Pretest: System Response	Pretest: Syst. Bias (% of Span)	Posttest: 0012 hrs System Response	Posttest: Syst. Bias (% of Span)	Posttest: Drift (% of Span)	
CO Zero		CC59953					-0.9			Co=
CO Low		diluted								
CO Mid		CC93770					249.2			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.00			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					6.98			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC62305					-0.06			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					4.98			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					47.8			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-0.9			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					181.6			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/26/2007
Run Number	10
Start Time	800
Stop Time	900

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 1029 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 716		Posttest: 904 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0	CC59953	-0.4		-0.1		-0.3			Co=
CO Low		diluted								
CO Mid	250	CC93770	249.7		247.1		247.0			Cm=
CO High	450	1988 ppm	450.6							
CO_2 Zero	0	CC59953	-0.01		0.02		0.01			Co=
CO_2 Low		diluted								
CO_2 Mid	7.0	CC163330	7.03		6.98		6.99			Cm=
CO_2 High	14.0	25.2 %	13.97							
O_2 Zero	0.	CC163330	-0.05		0.01		0.01			Co=
O_2 Low		diluted								
O_2 Mid	5.0	CC59953	5.07		5.00		5.00			Cm=
O_2 High	9.0	25.0 %	9.07							
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0	CC59953	0.0		0.1		0.1			Co=
NO_x Low		diluted								
NO_x Mid	50	CC9844	49.9		48.6		49.2			Cm=
NO_x High	90	1940 ppm	90.2							
SO_2 Zero	0	CC59953	-0.3				-0.7			Co=
SO_2 Low		diluted								
SO_2 Mid	100	CC43398	99.5		99.3		99.3			Cm=
SO_2 High	180	2063 ppm	179.5							

NO_2 CC198348 50.0 ppm

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/26/2007
Run Number	11
Start Time	924
Stop Time	1024

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest:		Posttest: 1029 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero		CC59953					-0.5			Co=
CO Low		diluted								
CO Mid		CC93770					246.1			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.00			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					7.01			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC163330					0.00			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					5.00			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.1			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					47.5			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-0.7			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					482			Cm=
SO_2 High		2063 ppm								

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU No. 546 Incinerator
Date	1/26/2007
Run Number	12
Start Time	1050
Stop Time	1150

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR -			hrs	SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest:		Posttest: 1154 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero		CC59953					1.2			Co=
CO Low		diluted								
CO Mid		CC93770					247.2			Cm=
CO High		1988 ppm								
CO_2 Zero		CC59953					0.01			Co=
CO_2 Low		diluted								
CO_2 Mid		CC163330					7.00			Cm=
CO_2 High		25.2 %								
O_2 Zero		CC163330					0.01			Co=
O_2 Low		diluted								
O_2 Mid		CC59953					5.01			Cm=
O_2 High		25.0 %								
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero		CC59953					0.8			Co=
NO_x Low		diluted								
NO_x Mid		CC9844					48.8			Cm=
NO_x High		1940 ppm								
SO_2 Zero		CC59953					-0.7			Co=
SO_2 Low		diluted								
SO_2 Mid		CC43398					97.7			Cm=
SO_2 High		2063 ppm								

FIELD DATA

PLANT	Valero	AMBIENT TEMPERATURE	62	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.07	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	1	STACK DIAMETER, in.	48	pitot #	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	6041B0	NUMBER OF POINTS	12		
START TIME		NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg	
Filter No.	
Sample	
Final wt	
Tare wt	
Wt. gain	
TOTAL	mg

A= A B= B

CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET ($T_{m_{in}}$) °F	OUTLET ($T_{m_{out}}$) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
11:25	A 1	0	-1.5	499	0.60		1.7	1.74	512.433		62	—	—	—	63	2
11:30	2	5		509	0.76		1.7		516.0		62				60	2
11:35	3	10		516	0.85		1.7		519.7		63				58	2
11:40	4	15		520	0.89		1.7		523.4		64				57	2
11:45	5	20		525	0.93		1.7		527.0		64				55	2
11:50	6	25		521	0.70		1.7		530.4		65				55	2
11:55	B 1	30		506	0.63		1.7		534.3		66				56	2
12:00	2	35		511	0.84		1.7		538.0		66				56	2
12:05	3	40		520	0.90		1.7		541.7		67				56	2
12:10	4	45		527	0.95		1.7		545.3		68				58	2
12:15	5	50		530	0.89		1.7		548.9		69				57	2
12:20	6	55		519	0.76		1.7		552.5		70				58	2
12:25		60		—	—		—	—	556.922		—				—	—
AVERAGE				516.9		$\sqrt{0.8968}$			44.489		65.5					

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL CW	186	114	2		257.8
INITIAL	100	100	0		250.0
LIQUID COLLECTED	86	14	2		7.8
TOTAL COLLECTED (specify ml or g)					

(0.98)

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM ___ "Hg
PITOT PRE:	✓	@ > 3"H2O
POST:	✓	@ > 3"H2O

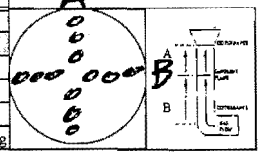
FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	V2/C10	AMBIENT TEMPERATURE	63	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	2	STACK DIAMETER, in.	48	pitot	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME	12:50	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= B=



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ), min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	VELOCITY HEAD ($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O DESIRED	GAS SAMPLE VOLUME (V_m) ft^3	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	GAS SAMPLE TEMP AT DRY GAS METER OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
12:50	A 1	0	-1.5	496	0.63		1.7	1.74	558.061		69	—	—	—	65	2
	2	5		502	0.69		1.7		561.7		70				59	2
13:00	3	10		512	0.86		1.7		565.4		70				55	2
	4	15		521	0.94		1.7		569.1		71				54	2
13:10	5	20		518	0.93		1.7		572.8		71				53	2
	6	25		513	0.81		1.7		576.5		71				54	2
13:20	B 1	30		503	0.65		1.7		580.2		72				54	2
	2	35		506	0.89		1.7		583.9		72				54	2
13:30	3	40		517	0.96		1.7		587.6		73				55	2
	4	45		525	0.93		1.7		591.3		73				56	2
13:40	5	50		524	0.86		1.7		594.8		73				58	2
	6	55		512	0.75		1.7		598.6		74				60	2
13:50		60		—	—		—	—	602.326		—				—	—
AVERAGE				512.4		$\sqrt{0.9061}$			44.326		71.6					

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	180	114	0		256.5
INITIAL	100	100	0		250.0
LIQUID COLLECTED	80	14	0		6.5
TOTAL COLLECTED (specify ml or g)					

106.5

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM ___ "Hg
PITOT PRE:	✓	@ > 3"H2O
POST:	✓	@ > 3"H2O

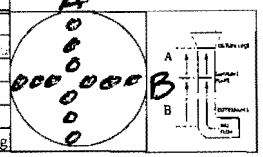
FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	Valero	AMBIENT TEMPERATURE	66	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	3	STACK DIAMETER, in.	48	pitot #	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME	14:14	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg	
Filter No.	
Sample	
Final wt	
Tare wt	
Wt. gain	
TOTAL	mg

A= B=



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	VELOCITY HEAD ($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O DESIRED	GAS SAMPLE VOLUME (V_m) ft^3	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	GAS SAMPLE TEMP AT DRY GAS METER OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
14:14	A 1	0	-1.5	505	0.65		1.7	1.74	602.816		70	—	—	—	64	2
14:19	2	5		508	0.70		1.7		606.5		70				61	2
14:24	3	10		516	0.87		1.7		610.2		70				58	2
14:29	4	15		524	0.91		1.7		613.7		71				57	2
14:34	5	20		523	0.92		1.7		617.4		71				58	2
14:39	6	25		518	0.79		1.7		621.2		71				58	2
14:44	B 1	30		496	0.62		1.7		625.0		71				57	2
14:49	2	35		505	0.88		1.7		628.8		70				58	2
14:54	3	40		514	0.94		1.7		632.5		70				60	2
14:59	4	45		523	0.96		1.7		636.1		70				60	2
15:04	5	50		522	0.87		1.7		639.7		71				61	2
15:09	6	55		514	0.73		1.7		643.3		71				62	2
15:14		60		—	—		—	—	646.980		—				—	—
AVERAGE				514.0		$\sqrt{0.9033}$			44.164		70.5					

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED (ml)	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	184	112	5		256.2
INITIAL	100	100	0		250.0
LIQUID COLLECTED	84	12	5		6.2
TOTAL COLLECTED (specify ml or g)					

107.2

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM___"Hg
PITOT PRE:	✓	@ > 3"H2O
POST:	✓	@ > 3"H2O

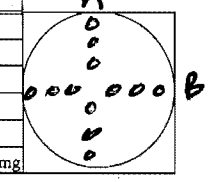
ARI ENVIRONMENTAL INC.

FIELD DATA

PLANT	Valero	AMBIENT TEMPERATURE	61	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	4	STACK DIAMETER, in.	48	PITOT/THERMOCOUPLE NO.	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME	15:39	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= B=



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	VELOCITY HEAD ($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (Vm) ft^3	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	OUTLET (Tm_{out}) °F	SAMPLE BOX TEMPERATURE °F	TEMP OF GAS LEAVING CONDENSER OR LAST IMINGER °F	Pump Vacuum in. Hg
15:39	A 1	0	-1.4	500	0.62		1.7	1.74	647.403		67	—	58	2
15:44	2	5		509	0.75		1.7		651.0		67		56	2
15:49	3	10		517	0.84		1.7		654.7		67		53	2
15:54	4	15		521	0.90		1.7		658.4		67		53	2
15:59	5	20		520	0.94		1.7		662.1		68		54	2
16:04	6	25		514	0.83		1.7		665.8		68		54	2
16:09	B 1	30		499	0.66		1.7		669.5		68		54	2
16:14	2	35		507	0.77		1.7		673.2		68		55	2
16:19	3	40		515	0.90		1.7		676.8		68		55	2
16:24	4	45		517	0.96		1.7		680.4		68		57	2
16:29	5	50		522	0.88		1.7		684.0		68		57	2
16:34	6	55		516	0.72		1.7		687.7		68		57	2
16:39		60		—	—		—	—	691.372		—		—	—
TOTAL				513.1		$\sqrt{0.9003}$			43.969		67.7			
AVERAGE														

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	180	117	4		256.6
INITIAL	100	100	0		250.0
LIQUID COLLECTED	80	17	4		6.6

107.6

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15in.Hg
POST:	0.00	CFM@15in.Hg
PITOT PRE:	✓	@ > 3 in. H_2O
POST:	✓	@ > 3 in. H_2O

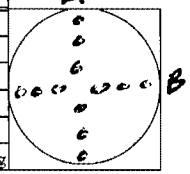
ARI ENVIRONMENTAL INC.

FIELD DATA

PLANT	Valero	AMBIENT TEMPERATURE	60°	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	5	STACK DIAMETER, in.	48	PITOT/THERMOCOUPLE NO.	P 58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME	17:03	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= ____ B= ____



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_S) °F	VELOCITY HEAD (ΔP_S)	VELOCITY HEAD ($\sqrt{\Delta P_S}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O DESIRED	GAS SAMPLE VOLUME (Vm) ft^3	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	GAS SAMPLE TEMP AT DRY GAS METER OUTLET (Tm_{out}) °F	SAMPLE BOX TEMPERATURE °F	TEMP OF GAS LEAVING CONDENSER OR LAST IMINGER °F	Pump Vacuum in. Hg
17:03	A 1	0	-1.4	492	0.61		1.7	1.74	691.709		68		57	2
17:08	2	5		510	0.74		1.7		695.4		67		55	2
17:13	3	10		519	0.80		1.7		699.1		67		54	2
17:18	4	15		522	0.87		1.7		702.8		67		54	2
17:23	5	20		526	0.90		1.7		706.5		67		54	2
17:28	6	25		517	0.77		1.7		710.2		67		55	2
17:33	B 1	30		506	0.65		1.7		714.0		67		55	2
17:38	2	35		515	0.77		1.7		717.6		66		55	2
17:43	3	40		519	0.86		1.7		721.2		66		55	2
17:48	4	45		527	0.92		1.7		724.9		66		55	2
17:53	5	50		525	0.89		1.7		728.5		66		55	2
17:58	6	55		513	0.70		1.7		732.2		66			2
18:03		60		—	—		—	—	736.004		—		—	—
TOTAL				515.9		$\sqrt{0.8871}$			44.295		66.7			
AVERAGE														

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	189	114	3		258.5
INITIAL	100	100	0		250.0
LIQUID COLLECTED	89	14	3		8.5

111.5

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15in.Hg
POST:	0.00	CFM@15in.Hg
PITOT PRE:	✓	@ > 3 in. H_2O
POST:	✓	@ > 3 in. H_2O

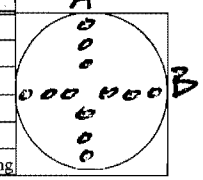
ARI ENVIRONMENTAL INC.

FIELD DATA

PLANT	Valero	AMBIENT TEMPERATURE	58°	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	6	STACK DIAMETER, in.	48	PITOT/THERMOCOUPLE NO.	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME		NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= B=



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_S) °F	VELOCITY HEAD (ΔP_S)	VELOCITY HEAD ($\sqrt{\Delta P_S}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (Vm) ft^3	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	OUTLET (Tm_{out}) °F	SAMPLE BOX TEMPERATURE °F	TEMP OF GAS LEAVING CONDENSER OR LAST IMINGER °F	Pump Vacuum in. Hg
18:29	A 1	0	-1.5	502	0.61		1.7	1.74	736.785		64		53	2
18:34	2	5		510	0.72		1.7		740.5		64		54	2
18:39	3	10		516	0.79		1.7		744.4		64		55	2
18:44	4	15		523	0.90		1.7		748.2		65		55	2
18:49	5	20		524	0.88		1.7		752.1		65		55	2
18:54	6	25		515	0.80		1.7		755.9		65		55	2
18:59	B 1	30		510	0.65		1.7		759.8		65		56	2
19:04	2	35		514	0.74		1.7		763.5		65		56	2
19:09	3	40		520	0.80		1.7		767.2		65		56	2
19:14	4	45		525	0.89		1.7		770.9		65		56	2
19:19	5	50		524	0.91		1.7		774.6		65		56	2
19:24	6	55		518	0.78		1.7		778.3		65		57	2
19:29		60		—	—	—	—	—	782.024		—		—	—
TOTAL				516.8		$\sqrt{0.8867}$			45.239		64.8			
AVERAGE														

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	185	110	3		151.2
INITIAL	100	100	0		150.0
LIQUID COLLECTED	85	10	3		1.2

105.2

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.0	CFM@15in.Hg
POST:	0.00	CFM@15in.Hg
PITOT PRE:	✓	@ > 3 in.
POST:	✓	@ > 3

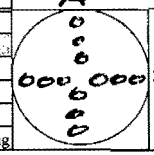
FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	Valero	AMBIENT TEMPERATURE	58°	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	7	STACK DIAMETER, in.	48	pitot	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604CBO	NUMBER OF POINTS	12		
START TIME	19:53	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= A B=



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
19:53	A 1	0	-1.5	499	0.60		1.7	1.74	782.440		65	—	—	—	56	2
19:58	2	5		505	0.75		1.7		786.2		65				56	2
20:03	3	10		514	0.82		1.7		789.8		65				56	2
20:08	4	15		519	0.91		1.7		793.5		65				55	2
20:13	5	20		520	0.94		1.7		797.2		65				55	2
20:18	6	25		512	0.81		1.7		800.9		65				55	2
20:23	B 1	30		500	0.63		1.7		804.6		65				55	2
20:28	2	35		507	0.77		1.7		808.3		65				55	2
20:33	3	40		509	0.86		1.7		811.9		65				55	2
20:38	4	45		519	0.91		1.7		815.7		64				54	2
20:43	5	50		522	0.88		1.7		819.4		64				54	2
20:48	6	55		511	0.79		1.7		823.0		64				54	2
20:53		60		—	—		—	—	826.669		—				—	—
AVERAGE				511.4		$\sqrt{0.8950}$			44.229		64.8					

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	178	116	6		255.4
INITIAL	100	100	0		250.0
LIQUID COLLECTED	78	16	6		5.4
TOTAL COLLECTED (specify ml or g)					

105.9

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM___"Hg
PITOT PRE:	✓	@ > 3"H2O
POST:	✓	@ > 3"H2O

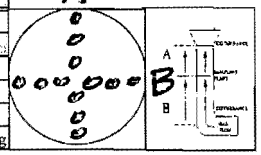
FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	V3610	AMBIENT TEMPERATURE	54	PROBE HEATER SETTING	—
DATE	1-25-07	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	# 546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	8	STACK DIAMETER, in.	48	pitot	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME	21:19	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= A B=



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET ($T_{m_{in}}$) °F	OUTLET ($T_{m_{out}}$) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
21:19	A 1	0	-1.6	496	0.60		1.7	1.74	826.849		62	—	—	—	55	2
21:24	2	5		507	0.72		1.7		830.3		62				55	2
21:29	3	10		515	0.87		1.7		834.1		61				55	2
21:34	4	15		521	0.91		1.7		837.7		62				56	2
21:39	5	20		525	0.92		1.7		841.4		62				55	2
21:44	6	25		519	0.80		1.7		845.1		62				55	2
21:49	B 1	30		500	0.61		1.7		848.6		62				55	2
21:54	2	35		509	0.70		1.7		852.3		63				54	2
21:59	3	40		516	0.89		1.7		856.0		63				54	2
22:04	4	45		519	0.92		1.7		859.7		63				54	2
22:09	5	50		524	0.94		1.7		863.3		63				54	2
22:14	6	55		518	0.79		1.7		866.9		63				54	2
22:19		60		—	—		—	—	870.609		—				—	—
AVERAGE				514.1		$\sqrt{0.8452}$			43.760		62.3					

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	190	114	4		256.6
INITIAL	100	100	0		250.0
LIQUID COLLECTED	90	14	4		6.6
TOTAL COLLECTED (specify ml or g)					114.6

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

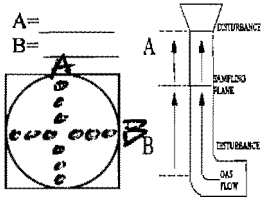
LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM___"Hg
PITOT PRE:	✓	@ > 3"H2O
POST:	✓	@ > 3"H2O

FIELD DATA

PLANT	Valero	METER BOX NO.	604180	BAROMETER NO.	EB8331
DATE	1-25-07	AMBIENT TEMPERATURE	52	PROBE HEATER SETTING	—
LOCATION	Port Arthur, TX	BAROMETRIC PRESSURE	30.09	HEATER BOX SETTING	—
OPERATOR	CW	ASSUMED MOISTURE, %	13	METER H	1.74
STACK NO.	546 SRU	PROBE LENGTH, in.	96	C_d FACTOR	0.84
METHOD	4	NOZZLE DIAMETER, in.	—	Y FACTOR	1.000
RUN NO.	9	STACK DIAMETER, in.	48		
METER NO.	—	PITOT NO.	P58		

PARTICULATE COLLECTED, mg		
FILTER NO.		
SAMPLE	FILTER	PROBE
FINAL WEIGHT		
TARE WEIGHT		
WEIGHT GAIN		
TOTAL		

A= ____
B= ____



CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLE TIME min.	STATIC PRESSURE (in., H_2O)	STACK TEMP (T_S), °F	VELOCITY HEAD (ΔP_S)	VELOCITY HEAD ($\sqrt{\Delta P_S}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE (ΔH) In., H_2O ACTUAL	PRESSURE DIFFERENTIAL ACROSS ORIFICE (ΔH) In., H_2O DESIRED	GAS SAMPLE VOLUME (Vm), ft^3	GAS TEMP AT DRY GAS METER INLET (Tm_{in}) °F	GAS TEMP AT DRY GAS METER OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP °F	TEMP OF GAS LEAVING LAST IMPINGER	PUMP VACUUM in., Hg
	A 1	0	-1.5	502	0.60		1.7	1.74	870.944		62	—	54	2
	2	5		510	0.76		1.7		874.6		63		53	2
	3	10		516	0.88		1.7		878.2		63		53	2
	4	15		521	0.95		1.7		881.9		64		53	2
	5	20		527	0.94		1.7		885.5		64		53	2
	6	25		518	0.85		1.7		889.2		64		53	2
	B 1	30		498	0.59		1.7		892.8		64		54	2
	2	35		508	0.71		1.7		896.3		63		53	2
	3	40		513	0.86		1.7		900.8		62		52	2
	4	45		522	0.90		1.7		903.7		62		52	2
	5	50		521	0.93		1.7		907.3		61		51	2
	6	55		515	0.76		1.7		911.0		61		51	2
		60		—	—	—	—	—	914.564		—		—	—
TOTAL				514.3		$\sqrt{0.8978}$			43.620		62.8			
AVERAGE														

VOLUME OR WEIGHT OF LIQUID COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) 1	2	3	4	SILICA GEL WEIGHT
CONTENTS					
FINAL	100	108	2		256.1
INITIAL	100	100	0		250.0
LIQUID COLLECTED	0	8	2		6.1
TOTAL ____ COLLECTED (specify ml or mg)					

10.1

ORSAT MEASUREMENT	TIME	CO_2	O_2	CO
1				
2				
3				
AVG				

LEAK CHECK		
SYSTEM	PRE: 0.00	CFM at 15" Hg
	POST: 0.00	CFM at ___ Hg
PITOT	PRE: ✓	3" H_2O for 15 sec
	POST: ✓	3" H_2O for 15 sec

FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	V2/e10	AMBIENT TEMPERATURE	43	PROBE HEATER SETTING	—
DATE	1-26-07	BAROMETRIC PRESSURE	30.12	HEATER BOX SETTING	—
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	13	METER $H_@$	1.74
OPERATOR	CW	PROBE LENGTH, in.	96	C_p FACTOR	0.84
STACK NO.	546 SRU	NOZZLE DIAMETER, in.	—	Y_d FACTOR	1.000
RUN NO.	10	STACK DIAMETER, in.	48	pitot	P58
SAMPLE BOX NO.	—	MINUTES PER POINT	5		
METER BOX NO.	604180	NUMBER OF POINTS	12		
START TIME	8:00	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg	
Filter No.	
Sample	
Final wt	
Tare wt	
Wt. gain	
TOTAL	mg

A= A B= B

CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (Θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET (Tm_{in}) °F	OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
8:00	A 1	0	-1.5	500	0.59		1.7	1.74	914.859		45	—	—	—	41	2
8:05	2	5		510	0.70		1.7		918.5		45				41	2
8:10	3	10		514	0.87		1.7		922.3		45				42	2
8:15	4	15		519	0.95		1.7		925.7		46				42	2
8:20	5	20		517	0.93		1.7		929.1		46				42	2
8:25	6	25		511	0.84		1.7		932.6		46				43	2
8:30	B 1	30		499	0.61		1.7		936.0		46				43	2
8:35	2	35		506	0.72		1.7		939.4		47				43	2
8:40	3	40		515	0.88		1.7		942.8		47				44	2
8:45	4	45		521	0.94		1.7		946.3		47				44	2
8:50	5	50		523	0.90		1.7		949.7		48				44	2
8:55	6	55		514	0.85		1.7		953.1		48				45	2
9:00		60		—	—		—	—	956.6		—				—	—
									960.075							
AVERAGE				512.4		$\sqrt{0.9001}$			45.216		46.3					

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	184	112	4		257.7
INITIAL	100	100	0		250.0
LIQUID COLLECTED	84	12	4		7.7
TOTAL COLLECTED (specify ml or g)					107.7

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

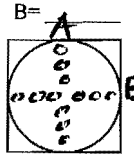
LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM ___ "Hg
PITOT PRE:	✓	@ > 3"H2O
POST:	✓	@ > 3"H2O

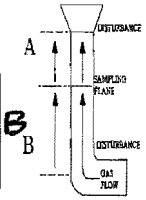
FIELD DATA

PLANT	Valero	METER BOX NO.	604180	BAROMETER NO.	EB833-1
DATE	1-26-07	AMBIENT TEMPERATURE	54	PROBE HEATER SETTING	—
LOCATION	Port Arthur, TX	BAROMETRIC PRESSURE	30.12	HEATER BOX SETTING	—
OPERATOR	CW	ASSUMED MOISTURE, %	13	METER H	1.74
STACK NO.	546 SRU	PROBE LENGTH, in.	96	C_d FACTOR	0.84
METHOD	4	NOZZLE DIAMETER, in.	—	Y FACTOR	1.000
RUN NO.	11	STACK DIAMETER, in.	48		
METER NO.	—	PITOT NO.	P58		

PARTICULATE COLLECTED, mg		
FILTER NO.		
SAMPLE	FILTER	PROBE
FINAL WEIGHT		
TARE WEIGHT		
WEIGHT GAIN		
TOTAL		

A= ____
B= ____





CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLE TIME min.	STATIC PRESSURE (in., H_2O)	STACK TEMP (T_s), °F	VELOCITY HEAD (ΔP_s)	VELOCITY HEAD ($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE (ΔH) In., H_2O) ACTUAL	PRESSURE DIFFERENTIAL ACROSS ORIFICE (ΔH) In., H_2O) DESIRED	GAS SAMPLE VOLUME (Vm), ft^3	GAS TEMP AT DRY GAS METER INLET (Tm_{in}) °F	GAS TEMP AT DRY GAS METER OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP °F	TEMP OF GAS LEAVING LAST IMPINGER	PUMP VACUUM in., Hg
9:24	A 1	0	-1.5	506	0.61		1.7	1.74	960.411		48	—	48	2
9:29	2	5		512	0.71		1.7		964.1		48		43	2
9:34	3	10		519	0.86		1.7		967.8		49		43	2
9:39	4	15		524	0.94		1.7		971.5		49		42	2
9:44	5	20		520	0.89		1.7		975.3		49		42	2
9:49	6	25		511	0.80		1.7		979.0		50		43	2
9:54	B 1	30		502	0.62		1.7		982.7		50		43	2
9:59	2	35		512	0.69		1.7		986.5		51		43	2
10:04	3	40		521	0.83		1.7		990.2		52		43	2
10:09	4	45		528	0.90		1.7		993.9		52		44	2
10:14	5	50		523	0.91		1.7		997.7		53		44	2
10:19	6	55		516	0.84		1.7		1001.4		53		44	2
10:24		60		—	—		—	—	1005.193		—		—	—
TOTAL				516.2		$\sqrt{0.8422}$			44.782		50.3			
AVERAGE														

VOLUME OR WEIGHT OF LIQUID COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) 1	2	3	4	SILICA GEL WEIGHT
CONTENTS					
FINAL	186	110	4		258.1
INITIAL	100	100	0		250.0
LIQUID COLLECTED	86	10	4		8.1
TOTAL ____ COLLECTED (specify ml or mg)					108.1

ORSAT MEASUREMENT	TIME	CO_2	O_2	CO
1				
2				
3				
AVG				

LEAK CHECK		
SYSTEM	PRE: 0.00	CFM at 15" Hg
	POST: 0.00	CFM at ___ Hg
PITOT	PRE: ✓	3" H_2O for 15 sec
	POST: ✓	3" H_2O for 15 sec

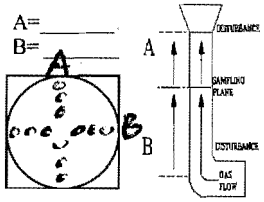
ARI ENVIRONMENTAL INC.

FIELD DATA

PLANT	Valero	METER BOX NO.	604180	BAROMETER NO.	EB833-1
DATE	1-26-07	AMBIENT TEMPERATURE	61	PROBE HEATER SETTING	—
LOCATION	Port Arthur, TX	BAROMETRIC PRESSURE	30.12	HEATER BOX SETTING	—
OPERATOR	CW	ASSUMED MOISTURE, %	13	METER H	1.74
STACK NO.	546 SRU	PROBE LENGTH, in.	96	C_d FACTOR	0.84
METHOD	4	NOZZLE DIAMETER, in.	—	Y FACTOR	1.000
RUN NO.	12	STACK DIAMETER, in.	48		
METER NO.	—	PITOT NO.	P58		

PARTICULATE COLLECTED, mg		
FILTER NO.		
SAMPLE	FILTER	PROBE
FINAL WEIGHT		
TARE WEIGHT		
WEIGHT GAIN		
TOTAL		

A=
B=



CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLE TIME min.	STATIC PRESSURE (in., H_2O)	STACK TEMP (T_s), °F	VELOCITY HEAD (ΔP_s)	VELOCITY HEAD ($\sqrt{\Delta P_s}$)	PRESSURE DIFFERENTIAL ACROSS ORIFICE (ΔH) In., H_2O ACTUAL	PRESSURE DIFFERENTIAL ACROSS ORIFICE (ΔH) In., H_2O DESIRED	GAS SAMPLE VOLUME (Vm), ft^3	GAS TEMP AT DRY GAS METER INLET (Tm_{in}) °F	GAS TEMP AT DRY GAS METER OUTLET (Tm_{out}) °F	SAMPLE BOX TEMP °F	TEMP OF GAS LEAVING LAST IMPINGER	PUMP VACUUM in., Hg
10:50	A 1	0	-1.5	501	0.62		1.7	1.74	5.584		54	—	56	2
10:55	2	5		511	0.73		1.7		9.2		55		52	2
11:00	3	10		516	0.88		1.7		12.9		56		50	2
11:05	4	15		525	0.94		1.7		16.6		57		50	2
11:10	5	20		526	0.89		1.7		20.3		57		48	2
11:15	6	25		517	0.80		1.7		24.0		58		48	2
11:20	B 1	30		497	0.60		1.7		27.7		59		48	2
11:25	2	35		509	0.74		1.7		31.4		59		48	2
11:30	3	40		515	0.86		1.7		35.1		60		47	2
11:35	4	45		522	0.95		1.7		38.8		61		49	2
11:40	5	50		525	0.90		1.7		42.6		62		50	2
11:45	6	55		519	0.82		1.7		46.3		63		50	2
11:50		60		—	—		—	—	50.107		—		—	—
TOTAL				515.3		$\sqrt{0.8482}$			44.523		58.4			

AVERAGE

VOLUME OR WEIGHT OF LIQUID COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) 1	2	3	4	SILICA GEL WEIGHT
CONTENTS					
FINAL	184	106	4		258.6
INITIAL	100	100	0		250.0
LIQUID COLLECTED	84	6	4		8.6
TOTAL COLLECTED (specify ml or mg)					104.6

ORSAT MEASUREMENT	TIME	CO_2	O_2	CO
1				
2				
3				
AVG				

LEAK CHECK		
SYSTEM	PRE: 0.00	CFM at 15" Hg
	POST: 0.00	CFM at ___ Hg
PITOT	PRE: ✓	3" H_2O for 15 sec
	POST: ✓	3" H_2O for 15 sec

ARI ENVIRONMENTAL, INC.
USEPA METHOD 11 FIELD DATA SHEET

CLIENT: Valero
LOCATION: Port Arthur
SOURCE: SRU 546 INCINERATOR
DATE: 1-25-07
ANALYST: SM, CW

GAS METER No.: 0549
GAS METER y: 1.012
BAROMETRIC PRESSURE: 30.12 in. Hg
IODINE NORMALITY: ~~24.8~~ N 0.01012
THIOSULFATE NORMALITY 0.01021 N
BLANK VOLUME THIOSULFATE: 49.0 ml
BLANK VOLUME IODINE: 50.0 ml

Run No.	Test Time		Gas Volume (Liters)		Meter Temperature (Deg F)		Thiosulfate Volume (ml)	Vm
	Start	Stop	Initial	Final	Initial	Final		
RA-1	11:25	12:25	2100	295.9	69	71	46.1	85.9
RA-2	12:50	13:50	295.9	352.1	71	70	48.8	56.2
RA-3	14:14	15:14	352.1	413.1	70	64	48.3	61.0
RA-4	15:39	16:39	413.1	474.9	64	63	48.0	61.8
RA-5	17:03	18:03	474.9	534.1	63	61	48.4	59.2
RA-6	18:29	19:29	534.1	594.2	61	60	48.7	60.1
RA-7	19:53	20:53	594.2	653.8	60	59	48.0	59.6
RA-8	21:19	22:19	653.8	714.5	59	56	47.8	60.7
RA-9	22:44	23:44	714.5	774.8	56	55	48.8	60.3
1-26-07 RA-10	8:00	9:00	774.8	832.7	55	56	48.0	57.9
RA-11	9:24	10:24	832.7	894.0	56	56	48.1	61.3
RA-12	10:50	11:50	894.0	954.5	56	58	48.3	60.5

Normality of Thiosulfate
Weight of $K_2Cr_2O_7$ = 2.012
Volume of Thiosulfate = 40.20

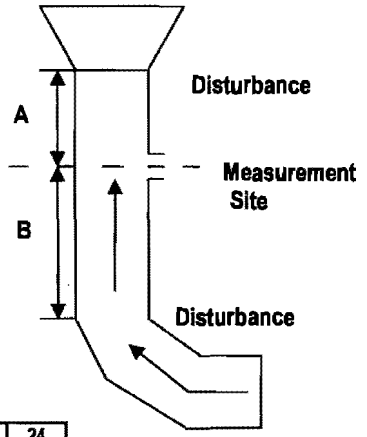
Normality of Iodine
Normality of Thiosulfate = 0.01021
Volume of Iodine = 25.0
Volume of Thiosulfate = 24.80

TRAVERSE POINT LOCATION FOR CIRCULAR AND RECTANGULAR DUCTS

PLANT Valero
DATE 1-25-07
SAMPLING LOCATION 546 SRU
INSIDE OF FAR WALL TO
OUTSIDE OF PORT (DISTANCE C) 56"
INSIDE OF NEAR WALL TO
OUTSIDE OF PORT (DISTANCE D) 8"
STACK ID 48"
NEAREST UPSTREAM DISTURBANCE (A) 246" (5.125dd)
NEAREST DOWNSTREAM DISTURBANCE (B) 419" (8.73dd)
CALCULATOR Cameron Withers

Location of Traverse Points in Rectangular Stacks

	2	3	4	5	6	7	8	9	10	11	12
1	25.0	16.7	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2
2	75.0	50.0	37.5	30.0	25.0	21.4	18.8	16.7	15.0	13.6	12.5
3		83.3	62.5	50.0	41.7	35.7	31.3	27.8	25.0	22.7	20.8
4			87.5	70.0	58.3	50.0	43.8	38.9	35.0	31.8	29.2
5				90.0	75.0	64.3	56.3	50.0	45.0	40.9	37.5
6					91.7	78.6	68.8	61.1	55.0	50.0	45.8
7						92.9	81.3	72.2	65.0	59.1	54.2
8							93.8	83.3	75.0	68.2	62.5
9								94.4	85.0	77.3	70.8
10									95.0	86.4	79.2
11										95.5	87.5
12											95.8

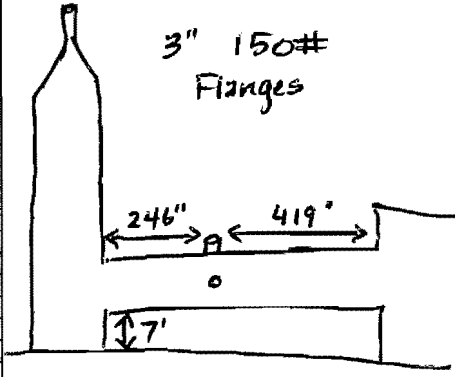


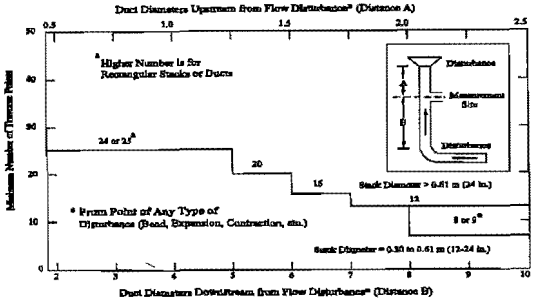
Rectangular Duct Equivalent Diameter Determination $\frac{2 \times L \times W}{L + W}$

TRAVERSE POINT NUMBER	FRACTION OF STACK I.D.	STACK I.D.	PRODUCT OF COLUMNS 1 AND 2 (TO NEAREST 1/8 INCH)	DISTANCE D (PORT DEPTH)	TRAVERSE POINT LOCATION FROM OUTSIDE OF PORT (SUM OF COLUMNS 3 AND 4)
1	4.4	48	2 1/8	8	10 1/8"
2	14.6	↓	7	↓	15"
3	29.6	↓	14 1/4	↓	22 1/4"
Velocity 4	70.4	↓	33 3/4	↓	41 3/4"
5	85.4	↓	41	↓	49"
6	95.6	↓	45 7/8	↓	53 7/8"
7					
8					
9	0.167	48	8 –	8	16 –
CEMS 10	0.500	↓	24 –		32 –
11	0.833	↓	40 –	↓	48 –
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

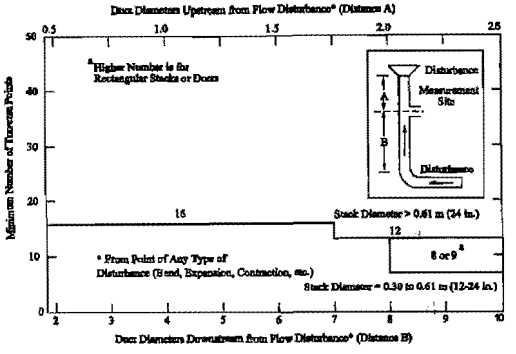
LOCATION OF TRAVERSE POINTS ON CIRCULAR STACKS

	4	6	8	10	12	14	16	18	20	22	24
1	6.7	4.4	3.2	2.6	2.1	1.8	1.6	1.4	1.3	1.1	1.1
2	25.0	14.6	10.5	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2
3	75.0	29.6	19.4	14.6	11.8	9.9	8.5	7.5	6.7	6.0	5.5
4	93.3	70.4	32.3	22.6	17.7	14.6	12.5	10.9	9.7	8.7	7.9
5		85.4	67.7	34.2	25.0	20.1	16.9	14.6	12.9	11.6	10.5
6		95.6	80.6	65.8	35.6	26.9	22.0	18.8	16.5	14.6	13.2
7			89.5	77.4	64.4	36.6	28.3	23.6	20.4	18.0	16.1
8			96.8	85.4	75.0	63.4	37.5	29.6	25.0	21.8	19.4
9				91.8	82.3	73.1	62.5	38.2	30.6	26.2	23.0
10				97.4	88.2	79.9	71.7	61.8	38.8	31.5	27.2
11					93.3	85.4	78.0	70.4	61.2	39.3	32.3
12					97.9	90.1	83.1	76.4	69.4	60.7	39.8
13						94.3	87.5	81.2	75.0	68.5	60.2
14						98.2	91.5	85.4	79.6	73.8	67.7
15							95.1	89.1	83.5	78.2	72.8
16							98.4	92.5	87.1	82.0	77.0
17								95.6	90.3	85.4	80.6
18								98.6	93.3	88.4	83.9
19									96.1	91.3	86.8
20									98.7	94.0	89.5
21										96.5	92.1
22										98.9	94.5
23											96.8
24											98.9





Minimum number of traverse points for particulate traverses.



Minimum number of traverse points for velocity (nonparticulate) traverses.

APPENDIX C

Process Data

SRU 546 Incinerator
Performance Test Results
Summary Sheet

Testing Firm: **ARI Environmental**

	Date		1/25/2007	1/25/2007	1/25/2007	1/25/2007	
	Start Time		1/25/07 11:25 AM	1/25/07 12:50 PM	1/25/07 2:14 PM	1/25/07 3:39 PM	
	End Time		1/25/07 12:25 PM	1/25/07 1:50 PM	1/25/07 3:14 PM	1/25/07 4:39 PM	
	RUN		**1**	**2**	**3**	**4**	**AVG**
Process Parameters							
Acid Gas Charge	600 Train (MSCFH)	34FC2060.PV	214.7	215.2	214.7	214.9	214.9
SWS Gas	600 Train (MSCFH)	34FC2061.PV	58.78	56.35	54.99	55.04	56.3
Acid Gas Charge	700 Train (MSCFH)	34FC2360.PV	214.4	215.5	214.6	214.8	214.8
SWS Gas	700 Train (MSCFH)	34FC2361.PV	58.8	56.3	55.0	55.0	56.3
Recycle Acid Gas	SRU-546 (MSCFH)	34FI2772.PV	13.4	12.6	11.9	11.9	12.5
Tail Gas Incinerator	Natural Gas (MSCFH)	34FI2800.PV	36.7	34.3	33.8	34.0	34.7
Tail Gas Incinerator	Firebox Temp (deg F)	34TI2801.PV	1,421.0	1,420.6	1,419.0	1,419.5	1420.0

SRU 546 Incinerator
Performance Test Results
Summary Sheet

	Date		1/25/2007	1/25/2007	1/25/2007	1/25/2007	
	Start Time		1/25/07 5:03 PM	1/25/07 6:29 PM	1/25/07 7:53 PM	1/25/07 9:19 PM	
	End Time		1/25/07 6:03 PM	1/25/07 7:29 PM	1/25/07 8:53 PM	1/25/07 10:19 PM	
	RUN		**5**	**6**	**7**	**8**	**AVG**
Process Parameters							
Acid Gas Charge	600 Train (MSCFH)	34FC2060.PV	215.1	215.1	215.0	215.2	215.1
SWS Gas	600 Train (MSCFH)	34FC2061.PV	55.0	55.0	55.0	55.0	55.0
Acid Gas Charge	700 Train (MSCFH)	34FC2360.PV	215.0	215.0	215.1	215.1	215.0
SWS Gas	700 Train (MSCFH)	34FC2361.PV	55.0	55.0	55.1	55.0	55.0
Recycle Acid Gas	SRU-546 (MSCFH)	34FI2772.PV	11.8	11.8	11.9	11.8	11.8
Tail Gas Incinerator	Natural Gas (MSCFH)	34FI2800.PV	34.3	34.7	34.3	34.3	34.4
Tail Gas Incinerator	Firebox Temp (deg F)	34TI2801.PV	1,419.8	1,419.8	1,419.4	1,419.6	1419.6

SRU 546 Incinerator
Performance Test Results
Summary Sheet

	Date		1/25/2007	1/26/2007	1/26/2007	1/26/2007	
	Start Time		1/25/07 10:44 PM	1/26/07 8:00 AM	1/26/07 9:24 AM	1/26/07 10:50 AM	
	End Time		1/25/07 11:44 PM	1/26/07 9:00 AM	1/26/07 10:24 AM	1/26/07 11:50 AM	
	RUN		**9**	**10**	**11**	**12**	**AVG**
Process Parameters							
Acid Gas Charge	600 Train (MSCFH)	34FC2060.PV	215.0	215.0	215.4	214.8	215.0
SWS Gas	600 Train (MSCFH)	34FC2061.PV	55.0	55.0	55.0	54.9	55.0
Acid Gas Charge	700 Train (MSCFH)	34FC2360.PV	214.9	215.1	215.3	214.6	215.0
SWS Gas	700 Train (MSCFH)	34FC2361.PV	55.0	55.0	55.0	55.0	55.0
Recycle Acid Gas	SRU-546 (MSCFH)	34FI2772.PV	11.9	11.9	11.8	11.6	11.8
Tail Gas Incinerator	Natural Gas (MSCFH)	34FI2800.PV	34.3	34.4	34.6	34.3	34.4
Tail Gas Incinerator	Firebox Temp (deg F)	34TI2801.PV	1,419.6	1,419.7	1,419.9	1,420.1	1419.8

APPENDIX D ARI Reference Method Monitoring Data

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 9:05:00	0.3	1.3	2.5	-0.06	-0.01		
1/25/07 9:05:15	0.3	0.3	2.6	-0.06	-0.02		
1/25/07 9:05:30	0.3	0.2	2.5	-0.06	-0.02		
1/25/07 9:05:45	0.3	0.2	0.5	-0.06	-0.02		
1/25/07 9:06:00	0.3	-0.3	0.0	-0.06	-0.02		
1/25/07 9:06:15	0.3	0.0	0.0	-0.06	-0.02		
1/25/07 9:06:30	0.3	0.1	0.0	-0.06	-0.02		
1/25/07 9:06:45	0.3	0.2	-0.1	-0.06	-0.02	Calibration Error	
1/25/07 9:07:00	0.3	0.1	-0.1	-0.06	-0.02	Zero NOx	
1/25/07 9:07:15	0.3	0.1	0.0	-0.06	-0.02		0.3
1/25/07 9:07:30	0.3	0.0	0.0	-0.06	-0.02	Zero CO	
1/25/07 9:07:45	0.3	0.0	0.1	-0.06	-0.02		0.0
1/25/07 9:08:00	0.3	0.1	0.0	-0.06	-0.02	Zero SO2	
1/25/07 9:08:15	0.3	0.2	0.5	-0.06	-0.02		0.0
1/25/07 9:08:30	0.3	0.0	0.1	-0.06	-0.02	Zero O2	
1/25/07 9:08:45	0.3	-0.1	1.1	-0.06	-0.02		-0.06
1/25/07 9:09:00	0.3	0.0	27.0	-0.06	-0.02	Zero CO2	
1/25/07 9:09:15	0.3	-0.1	105.0	-0.06	-0.02		-0.02
1/25/07 9:09:30	0.3	0.0	186.1	-0.06	-0.02		
1/25/07 9:09:45	0.3	0.0	201.6	-0.06	-0.02		
1/25/07 9:10:00	0.3	-0.2	201.6	-0.06	-0.02		
1/25/07 9:10:15	0.3	-0.2	201.6	-0.06	-0.03		
1/25/07 9:10:30	0.3	-0.2	180.2	-0.06	-0.03	Calibration Error	
1/25/07 9:10:45	0.3	0.0	180.2	-0.06	-0.03	180 ppm SO2	
1/25/07 9:11:00	0.3	0.0	180.2	-0.06	-0.03		180.1
1/25/07 9:11:15	0.3	-0.1	180.1	-0.06	-0.02		
1/25/07 9:11:30	0.3	-0.2	179.9	-0.06	-0.02		
1/25/07 9:11:45	0.3	-0.1	179.8	-0.06	-0.02		
1/25/07 9:12:00	0.3	-0.1	173.9	-0.06	-0.02		
1/25/07 9:12:15	0.3	0.0	151.9	-0.06	-0.02		
1/25/07 9:12:30	0.3	0.0	126.0	-0.06	-0.01		
1/25/07 9:12:45	0.3	0.0	110.6	-0.06	-0.01		
1/25/07 9:13:00	0.3	-0.4	104.0	-0.06	-0.02		
1/25/07 9:13:15	0.3	-0.2	101.4	-0.06	-0.03		
1/25/07 9:13:30	0.3	0.0	100.4	-0.06	-0.03	Calibration Error	
1/25/07 9:13:45	0.3	0.0	100.0	-0.06	-0.02	100 ppm SO2	
1/25/07 9:14:00	0.3	0.0	99.8	-0.06	-0.02		100.0
1/25/07 9:14:15	0.3	-0.2	99.9	-0.06	-0.02		
1/25/07 9:14:30	0.2	-0.2	100.0	-0.06	-0.02		
1/25/07 9:14:45	0.2	0.0	99.3	-0.06	-0.02		
1/25/07 9:15:00	0.2	-0.2	99.1	-0.06	-0.02		
1/25/07 9:15:15	0.3	-0.5	99.7	-0.06	-0.02		
1/25/07 9:15:30	0.0	-0.3	102.9	-0.06	-0.02		
1/25/07 9:15:45	0.0	-0.4	97.5	-0.05	-0.02		
1/25/07 9:16:00	0.0	-0.3	67.8	-0.06	-0.02		
1/25/07 9:16:15	0.0	-0.2	34.5	-0.06	-0.02		
1/25/07 9:16:30	0.0	-0.4	14.9	-0.06	-0.02		
1/25/07 9:16:45	0.0	-0.3	6.1	-0.06	-0.02		
1/25/07 9:17:00	0.0	-0.4	2.7	-0.06	-0.02		
1/25/07 9:17:15	0.0	-0.5	1.2	-0.06	-0.02		
1/25/07 9:17:30	0.0	-0.2	0.6	-0.06	-0.02		
1/25/07 9:17:45	0.0	-0.4	0.5	-0.06	-0.02		
1/25/07 9:18:00	0.0	-0.3	0.4	-0.06	-0.02		
1/25/07 9:18:15	25.0	-0.3	0.2	-0.06	-0.02		
1/25/07 9:18:30	100.1	-0.4	0.4	-0.05	-0.02		
1/25/07 9:18:45	100.1	-0.5	4.0	-0.01	-0.02		
1/25/07 9:19:00	100.1	-0.3	10.8	0.10	-0.02		
1/25/07 9:19:15	100.1	0.0	11.0	0.06	-0.02		
1/25/07 9:19:30	100.1	-0.1	6.6	-0.01	-0.02		
1/25/07 9:19:45	100.1	-0.3	3.1	-0.04	-0.02		
1/25/07 9:20:00	100.1	-0.3	1.4	-0.05	-0.02		
1/25/07 9:20:15	98.4	-0.3	0.7	-0.05	-0.02		
1/25/07 9:20:30	93.2	0.1	0.4	-0.05	-0.02		
1/25/07 9:20:45	90.2	-0.1	0.3	-0.05	-0.02		
1/25/07 9:21:00	90.8	-0.2	0.2	-0.05	-0.02	Calibration Error	
1/25/07 9:21:15	90.4	-0.1	0.2	-0.05	-0.02	90 ppm NOx	
1/25/07 9:21:30	90.4	-0.2	0.0	-0.05	-0.02		90.4
1/25/07 9:21:45	90.3	-0.3	-0.1	-0.05	-0.02		
1/25/07 9:22:00	90.4	-0.1	0.0	-0.05	-0.02		
1/25/07 9:22:15	88.4	-0.2	0.0	-0.05	-0.02		
1/25/07 9:22:30	58.0	-0.5	-0.1	-0.05	-0.02		
1/25/07 9:22:45	50.4	-0.1	-0.1	-0.05	-0.02		
1/25/07 9:23:00	50.1	0.2	-0.2	-0.05	-0.02		
1/25/07 9:23:15	50.2	-0.5	-0.1	-0.05	-0.02		
1/25/07 9:23:30	50.2	-0.3	-0.1	-0.06	-0.02	Calibration Error	
1/25/07 9:23:45	50.3	0.0	-0.1	-0.05	-0.02	50 ppm NOx	
1/25/07 9:24:00	50.3	-0.2	-0.2	-0.05	-0.02		50.3
1/25/07 9:24:15	50.3	-0.2	-0.2	-0.05	-0.02		
1/25/07 9:24:30	50.3	0.0	0.0	-0.05	-0.02		
1/25/07 9:24:45	49.9	-0.1	-0.2	-0.06	-0.03		
1/25/07 9:25:00	48.8	0.0	-0.2	-0.06	-0.02		
1/25/07 9:25:15	42.2	0.1	-0.3	-0.05	-0.02		
1/25/07 9:25:30	42.3	0.0	-0.2	-0.04	-0.02		
1/25/07 9:25:45	43.0	0.2	-0.2	0.03	-0.02		
1/25/07 9:26:00	43.9	0.4	0.2	0.03	-0.02		
1/25/07 9:26:15	44.5	0.3	0.3	-0.02	-0.02		
1/25/07 9:26:30	44.9	0.1	0.3	-0.04	-0.02		
1/25/07 9:26:45	45.4	0.2	0.4	-0.05	-0.02		
1/25/07 9:27:00	45.6	0.1	0.4	-0.05	-0.02		
1/25/07 9:27:15	45.9	0.1	0.3	-0.05	-0.02		
1/25/07 9:27:30	46.1	0.2	0.3	-0.05	-0.02		
1/25/07 9:27:45	46.3	0.4	0.3	-0.06	-0.02		
1/25/07 9:28:00	46.5	0.3	0.3	-0.05	-0.02		
1/25/07 9:28:15	46.6	0.0	0.3	-0.06	-0.02		
1/25/07 9:28:30	46.7	0.2	0.4	-0.06	-0.02	NOx converter check	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 9:28:45	46.8	0.1	0.4	-0.05	-0.03	50.0 ppm NO2 (cyl# CC198398)	
1/25/07 9:29:00	46.8	2.6	0.3	-0.05	-0.02		46.8
1/25/07 9:29:15	46.8	16.1	0.3	-0.05	-0.02	Converter efficiency	
1/25/07 9:29:30	46.9	101.5	0.4	-0.06	-0.02		93.6
1/25/07 9:29:45	8.6	206.8	0.4	-0.05	-0.02		
1/25/07 9:30:00	4.6	346.0	0.3	-0.04	-0.02		
1/25/07 9:30:15	3.3	403.8	0.2	-0.01	-0.02		
1/25/07 9:30:30	2.1	434.8	-0.1	0.02	-0.02		
1/25/07 9:30:45	1.7	447.0	-0.3	0.01	-0.02		
1/25/07 9:31:00	1.3	449.5	-0.4	-0.03	-0.02		
1/25/07 9:31:15	1.1	450.2	-0.4	-0.04	-0.02		
1/25/07 9:31:30	0.9	450.5	-0.3	-0.05	-0.01	Calibration Error	
1/25/07 9:31:45	0.8	451.0	-0.3	-0.05	-0.02	450 ppm CO	
1/25/07 9:32:00	0.7	451.0	-0.4	-0.05	-0.02		451.1
1/25/07 9:32:15	0.6	451.0	-0.5	-0.06	-0.02		
1/25/07 9:32:30	0.6	451.6	-0.5	-0.06	-0.02		
1/25/07 9:32:45	0.6	453.9	-0.4	-0.05	-0.02		
1/25/07 9:33:00	0.4	412.3	-0.5	-0.05	-0.02		
1/25/07 9:33:15	0.4	347.5	-0.4	-0.05	-0.02		
1/25/07 9:33:30	0.4	304.5	-0.4	-0.05	-0.02		
1/25/07 9:33:45	0.4	269.3	-0.3	-0.05	-0.02		
1/25/07 9:34:00	0.4	260.8	-0.4	-0.05	-0.02		
1/25/07 9:34:15	0.4	257.5	-0.5	-0.05	-0.02		
1/25/07 9:34:30	0.4	253.5	-0.4	-0.05	-0.02	Calibration Error	
1/25/07 9:34:45	0.4	252.4	-0.5	-0.05	-0.02	250 ppm CO	
1/25/07 9:35:00	0.4	252.3	-0.5	-0.05	-0.02		252.3
1/25/07 9:35:15	0.3	252.2	-0.5	-0.05	-0.02		
1/25/07 9:35:30	0.3	252.4	-0.5	-0.05	-0.02		
1/25/07 9:35:45	0.3	248.4	-0.5	-0.06	-0.02		
1/25/07 9:36:00	0.4	284.7	-0.4	-0.05	-0.02		
1/25/07 9:36:15	18.6	364.4	-0.4	-0.05	-0.02		
1/25/07 9:36:30	6.9	295.5	-0.4	-0.05	2.07		
1/25/07 9:36:45	0.5	196.2	-0.3	0.03	4.31		
1/25/07 9:37:00	0.4	99.1	-0.3	0.07	7.78		
1/25/07 9:37:15	0.3	40.1	-0.3	0.03	10.32		
1/25/07 9:37:30	0.3	4.7	-0.4	-0.03	12.27		
1/25/07 9:37:45	0.3	0.5	-0.4	-0.07	13.57		
1/25/07 9:38:00	0.2	-2.0	-0.5	-0.09	14.12		
1/25/07 9:38:15	0.2	-2.2	-0.5	-0.10	14.30		
1/25/07 9:38:30	0.2	-2.0	-0.5	-0.10	14.36		
1/25/07 9:38:45	0.2	-2.0	-0.4	-0.10	14.37		
1/25/07 9:39:00	0.2	-1.9	-0.4	-0.10	14.38		
1/25/07 9:39:15	0.2	-2.1	-0.5	-0.10	14.37		
1/25/07 9:39:30	0.2	-2.3	-0.4	-0.10	14.41		
1/25/07 9:39:45	0.2	-2.3	-0.4	-0.10	14.37		
1/25/07 9:40:00	0.2	-1.9	-0.5	-0.10	14.09	Calibration Error	
1/25/07 9:40:15	0.2	-2.0	-0.4	-0.10	14.09	14.0% CO2	
1/25/07 9:40:30	0.2	-2.1	-0.4	-0.10	14.09		14.09
1/25/07 9:40:45	0.1	-2.0	-0.4	-0.10	14.09		
1/25/07 9:41:00	0.1	-2.0	-0.5	-0.10	14.09		
1/25/07 9:41:15	0.1	-1.5	-0.3	-0.10	13.70		
1/25/07 9:41:30	0.1	-1.3	-0.4	-0.09	9.81		
1/25/07 9:41:45	0.1	-1.3	-0.4	-0.09	7.98		
1/25/07 9:42:00	0.1	-1.4	-0.4	-0.08	6.96		
1/25/07 9:42:15	0.1	-1.5	-0.5	-0.08	6.94	Calibration Error	
1/25/07 9:42:30	0.1	-1.5	-0.5	-0.08	6.92	7.0% CO2	
1/25/07 9:42:45	0.1	-1.3	-0.4	-0.08	6.92		6.92
1/25/07 9:43:00	0.1	-1.3	-0.5	-0.08	6.91		
1/25/07 9:43:15	0.1	-1.4	-0.4	-0.08	6.91		
1/25/07 9:43:30	0.1	-1.6	-0.5	-0.08	6.92		
1/25/07 9:43:45	1.3	2.2	-0.4	-0.08	6.92		
1/25/07 9:44:00	3.6	3.1	-0.3	-0.08	6.91		
1/25/07 9:44:15	0.5	3.1	-0.3	0.09	6.51		
1/25/07 9:44:30	0.3	1.9	-0.2	2.07	4.38		
1/25/07 9:44:45	0.3	0.6	-0.4	5.27	1.98		
1/25/07 9:45:00	0.2	0.0	-0.3	7.54	0.63		
1/25/07 9:45:15	0.2	-0.2	-0.4	8.57	0.21		
1/25/07 9:45:30	0.2	-0.2	-0.5	8.96	0.08		
1/25/07 9:45:45	0.2	0.0	-0.5	9.11	0.03		
1/25/07 9:46:00	0.2	-0.1	-0.5	9.11	0.02		
1/25/07 9:46:15	0.2	-0.2	-0.4	9.08	0.01		
1/25/07 9:46:30	0.2	-0.3	-0.4	9.09	0.00	Calibration Error	
1/25/07 9:46:45	0.1	-0.3	-0.5	9.10	0.00	9.0% O2	
1/25/07 9:47:00	0.1	-0.1	-0.6	9.10	0.00		9.10
1/25/07 9:47:15	0.1	-0.4	-0.6	9.10	0.00		
1/25/07 9:47:30	0.1	0.0	-0.4	9.09	-0.01		
1/25/07 9:47:45	0.1	-0.1	-0.4	8.55	-0.01		
1/25/07 9:48:00	0.1	-0.3	-0.4	6.86	-0.01		
1/25/07 9:48:15	0.1	-0.1	-0.4	5.67	-0.01		
1/25/07 9:48:30	0.1	0.0	-0.4	5.24	-0.01		
1/25/07 9:48:45	0.1	-0.3	-0.4	5.10	0.00		
1/25/07 9:49:00	0.1	0.0	-0.4	5.06	0.00	Calibration Error	
1/25/07 9:49:15	0.1	-0.1	-0.5	5.04	-0.02	5.0% O2	
1/25/07 9:49:30	0.1	-0.3	-0.5	5.04	-0.02		5.03
1/25/07 9:49:45	0.1	0.0	-0.4	5.03	-0.02		
1/25/07 9:50:00	0.1	-0.1	-0.5	5.03	-0.02		
1/25/07 9:50:15	0.1	-0.2	-0.4	5.03	-0.02		
1/25/07 9:50:30	0.1	-0.1	-0.4	5.03	-0.02		
1/25/07 9:50:45	0.2	0.2	-0.3	5.03	-0.02		
1/25/07 9:51:00	3.3	7.2	-0.3	5.04	-0.02		
1/25/07 9:51:15	15.0	19.3	-0.4	5.17	0.00		
1/25/07 9:51:30	20.6	29.2	-0.1	6.94	0.33		
1/25/07 9:51:45	19.8	34.9	5.3	7.35	1.52		
1/25/07 9:52:00	18.9	43.1	21.5	4.18	2.88		
1/25/07 9:52:15	17.3	51.3	36.4	1.90	3.51		

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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 9:52:30	16.8	55.8	45.9	1.14	3.70	
1/25/07 9:52:45	18.3	52.9	57.0	0.92	3.74	
1/25/07 9:53:00	18.9	49.3	66.9	0.90	3.73	
1/25/07 9:53:15	17.4	49.4	73.2	0.86	3.77	
1/25/07 9:53:30	17.1	52.5	77.3	0.77	3.82	
1/25/07 9:53:45	17.5	53.8	81.8	0.74	3.82	
1/25/07 9:54:00	18.0	52.6	84.1	0.82	3.79	
1/25/07 9:54:15	17.9	53.2	83.8	0.85	3.79	
1/25/07 9:54:30	16.6	58.4	84.1	0.82	3.81	
1/25/07 9:54:45	16.4	62.7	86.0	0.80	3.83	
1/25/07 9:55:00	17.4	61.2	86.2	0.83	3.80	
1/25/07 9:55:15	17.4	56.4	84.8	0.91	3.77	
1/25/07 9:55:30	18.0	53.4	83.8	0.92	3.78	
1/25/07 9:55:45	17.3	55.5	83.9	0.87	3.81	
1/25/07 9:56:00	16.4	62.0	83.9	0.82	3.83	
1/25/07 9:56:15	16.0	67.2	84.5	0.81	3.83	
1/25/07 9:56:30	17.0	67.1	84.0	0.86	3.80	
1/25/07 9:56:45	17.3	64.4	83.1	0.93	3.76	
1/25/07 9:57:00	17.4	59.0	82.1	0.95	3.77	
1/25/07 9:57:15	17.7	53.8	81.5	0.90	3.78	
1/25/07 9:57:30	18.0	50.3	81.9	0.86	3.80	
1/25/07 9:57:45	17.6	49.4	81.7	0.83	3.82	
1/25/07 9:58:00	17.7	57.2	84.9	0.82	3.80	
1/25/07 9:58:15	18.0	50.8	89.8	0.88	3.77	
1/25/07 9:58:30	16.7	78.0	86.0	0.75	3.84	
1/25/07 9:58:45	16.6	57.3	85.3	0.73	3.84	
1/25/07 9:59:00	17.0	58.0	83.7	0.77	3.81	
1/25/07 9:59:15	17.5	55.0	81.5	0.84	3.77	
1/25/07 9:59:30	17.5	53.2	79.8	0.86	3.78	
1/25/07 9:59:45	17.2	53.4	79.0	0.82	3.79	
1/25/07 10:00:00	17.6	54.6	78.8	0.78	3.82	
1/25/07 10:00:15	17.2	56.3	78.8	0.79	3.81	
1/25/07 10:00:30	17.4	58.4	80.6	0.80	3.81	
1/25/07 10:00:45	16.9	60.3	82.5	0.80	3.81	
1/25/07 10:01:00	17.5	57.0	87.3	0.82	3.79	
1/25/07 10:01:15	18.2	53.4	97.0	0.86	3.77	
1/25/07 10:01:30	17.8	50.4	98.0	0.86	3.78	
1/25/07 10:01:45	17.3	51.2	91.5	0.80	3.82	
1/25/07 10:02:00	17.0	55.3	85.1	0.74	3.84	
1/25/07 10:02:15	17.1	58.4	81.1	0.75	3.83	
1/25/07 10:02:30	16.9	59.4	79.0	0.80	3.80	
1/25/07 10:02:45	17.0	59.7	78.0	0.83	3.79	
1/25/07 10:03:00	17.2	58.0	77.4	0.84	3.78	
1/25/07 10:03:15	17.3	55.1	77.7	0.84	3.79	
1/25/07 10:03:30	17.6	52.9	78.7	0.84	3.80	
1/25/07 10:03:45	17.4	53.7	80.3	0.84	3.81	
1/25/07 10:04:00	17.0	56.7	80.3	0.82	3.79	
1/25/07 10:04:15	16.7	61.8	79.2	0.80	3.80	
1/25/07 10:04:30	16.8	62.5	78.7	0.82	3.80	
1/25/07 10:04:45	17.6	59.5	78.8	0.87	3.78	
1/25/07 10:05:00	17.5	57.7	78.1	0.89	3.78	
1/25/07 10:05:15	17.0	56.8	77.2	0.86	3.79	
1/25/07 10:05:30	16.9	60.8	76.7	0.80	3.80	
1/25/07 10:05:45	16.7	64.4	76.6	0.81	3.80	
1/25/07 10:06:00	16.6	67.5	76.8	0.84	3.79	
1/25/07 10:06:15	16.5	67.9	76.9	0.87	3.77	
1/25/07 10:06:30	17.5	64.8	77.0	0.90	3.75	
1/25/07 10:06:45	17.9	59.4	77.0	0.92	3.75	
1/25/07 10:07:00	17.7	53.2	80.9	0.91	3.76	
1/25/07 10:07:15	18.0	51.3	88.0	0.87	3.79	
1/25/07 10:07:30	17.1	53.0	88.9	0.83	3.80	
1/25/07 10:07:45	16.7	58.1	86.0	0.80	3.81	
1/25/07 10:08:00	16.5	62.6	84.8	0.81	3.80	
1/25/07 10:08:15	16.6	63.4	83.6	0.85	3.78	
1/25/07 10:08:30	17.1	60.1	81.5	0.89	3.76	
1/25/07 10:08:45	17.6	55.3	79.6	0.91	3.75	
1/25/07 10:09:00	17.7	51.1	78.4	0.89	3.78	
1/25/07 10:09:15	17.0	53.2	77.9	0.83	3.80	
1/25/07 10:09:30	16.3	57.4	77.7	0.77	3.82	
1/25/07 10:09:45	16.9	58.8	77.7	0.77	3.81	
1/25/07 10:10:00	17.1	57.1	77.6	0.83	3.77	
1/25/07 10:10:15	16.9	55.6	77.5	0.86	3.76	
1/25/07 10:10:30	16.5	58.8	77.3	0.83	3.77	
1/25/07 10:10:45	16.3	62.0	77.4	0.81	3.79	
1/25/07 10:11:00	16.6	62.0	77.6	0.83	3.78	
1/25/07 10:11:15	16.7	61.0	77.7	0.87	3.75	
1/25/07 10:11:30	16.9	59.1	77.5	0.89	3.75	
1/25/07 10:11:45	16.8	58.6	77.2	0.88	3.76	
1/25/07 10:12:00	16.7	58.4	77.6	0.85	3.77	
1/25/07 10:12:15	17.0	58.8	78.3	0.83	3.78	
1/25/07 10:12:30	17.7	58.7	79.0	0.83	3.78	
1/25/07 10:12:45	18.3	56.3	81.8	0.83	3.77	
1/25/07 10:13:00	17.7	55.8	97.0	0.81	3.77	
1/25/07 10:13:15	16.4	50.1	121.9	0.80	3.79	
1/25/07 10:13:30	1.1	35.1	127.3	0.78	3.79	
1/25/07 10:13:45	2.9	23.0	112.5	0.83	3.55	
1/25/07 10:14:00	1.1	14.0	94.1	1.05	2.29	
1/25/07 10:14:15	0.8	8.8	105.7	0.89	0.99	
1/25/07 10:14:30	0.6	6.0	153.1	0.42	0.34	
1/25/07 10:14:45	0.5	3.0	169.2	0.14	0.11	
1/25/07 10:15:00	0.5	1.4	143.4	0.04	0.05	
1/25/07 10:15:15	0.4	0.8	116.7	0.01	0.03	
1/25/07 10:15:30	0.4	0.8	102.5	0.00	0.02	
1/25/07 10:15:45	0.4	0.6	96.5	0.00	0.02	
1/25/07 10:16:00	0.4	0.3	94.1	0.00	0.01	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 10:16:15	0.4	0.7	93.1	0.00	0.01		
1/25/07 10:16:30	0.4	0.8	92.7	0.00	0.02		
1/25/07 10:16:45	0.3	0.6	92.5	0.00	0.01		
1/25/07 10:17:00	0.3	0.6	92.7	0.00	0.01		
1/25/07 10:17:15	0.3	0.4	92.8	0.00	0.01		
1/25/07 10:17:30	0.3	0.5	93.0	0.00	0.01		
1/25/07 10:17:45	0.3	0.5	93.4	0.00	0.01		
1/25/07 10:18:00	0.3	0.6	95.7	0.00	0.01		
1/25/07 10:18:15	0.3	0.4	98.0	-0.01	0.01		
1/25/07 10:18:30	0.3	0.5	98.1	-0.01	0.01		
1/25/07 10:18:45	0.3	0.5	98.1	-0.01	0.01	System Bias	
1/25/07 10:19:00	0.3	0.3	98.2	-0.01	0.01	100 ppm SO2	
1/25/07 10:19:15	0.3	0.4	98.2	-0.01	0.00		98.2
1/25/07 10:19:30	0.3	0.6	98.2	-0.01	0.00		
1/25/07 10:19:45	3.2	0.4	98.2	-0.01	0.00		
1/25/07 10:20:00	18.1	0.4	98.2	-0.01	0.01		
1/25/07 10:20:15	30.3	0.4	92.3	-0.01	0.01		
1/25/07 10:20:30	36.1	0.4	75.6	0.00	0.01		
1/25/07 10:20:45	39.7	0.6	52.8	0.00	0.00		
1/25/07 10:21:00	47.6	0.6	33.6	0.00	0.00		
1/25/07 10:21:15	52.8	0.6	21.3	0.00	0.00		
1/25/07 10:21:30	54.3	0.6	14.5	0.00	0.01		
1/25/07 10:21:45	52.2	0.3	10.7	0.00	-0.01		
1/25/07 10:22:00	49.8	0.5	8.3	0.00	0.00		
1/25/07 10:22:15	49.7	0.6	6.7	0.00	0.00		
1/25/07 10:22:30	49.6	0.6	5.4	0.00	0.00		
1/25/07 10:22:45	49.9	0.5	4.5	0.00	0.00		
1/25/07 10:23:00	50.0	0.4	3.9	0.00	0.00	System Bias	
1/25/07 10:23:15	50.0	0.5	3.3	-0.01	0.00	50 ppm NOx	
1/25/07 10:23:30	49.9	0.6	2.9	-0.01	0.00		49.9
1/25/07 10:23:45	49.9	0.5	2.5	-0.01	0.00		
1/25/07 10:24:00	49.9	1.5	2.3	0.00	0.00		
1/25/07 10:24:15	54.0	17.6	2.1	0.00	0.00		
1/25/07 10:24:30	45.1	67.9	1.9	0.00	0.00		
1/25/07 10:24:45	5.9	142.2	1.7	0.00	0.00		
1/25/07 10:25:00	4.0	206.0	1.6	0.00	-0.01		
1/25/07 10:25:15	2.8	233.1	1.6	0.00	-0.01	System Bias	
1/25/07 10:25:30	2.1	249.8	1.4	0.00	-0.01	250 ppm CO	
1/25/07 10:25:45	1.7	249.7	1.2	0.00	-0.01		249.7
1/25/07 10:26:00	1.5	249.4	1.3	0.00	-0.01		
1/25/07 10:26:15	2.3	249.8	1.3	-0.01	-0.01		
1/25/07 10:26:30	4.4	241.7	1.1	-0.01	-0.01		
1/25/07 10:26:45	3.3	182.7	1.2	-0.01	-0.01		
1/25/07 10:27:00	1.0	124.2	1.1	-0.01	-0.01		
1/25/07 10:27:15	0.3	59.3	1.0	-0.01	0.00		
1/25/07 10:27:30	0.3	19.8	1.0	0.00	-0.01		
1/25/07 10:27:45	0.3	7.3	1.0	-0.01	0.00		
1/25/07 10:28:00	0.2	2.9	0.8	-0.01	0.00		
1/25/07 10:28:15	0.2	1.0	0.9	-0.01	0.00		
1/25/07 10:28:30	0.2	1.4	0.9	-0.01	0.00		
1/25/07 10:28:45	0.6	1.9	0.8	-0.01	0.00		
1/25/07 10:29:00	1.3	1.5	0.9	-0.01	0.06		
1/25/07 10:29:15	0.5	0.9	0.8	-0.01	1.34		
1/25/07 10:29:30	0.4	0.0	0.9	-0.01	3.55		
1/25/07 10:29:45	0.7	1.9	1.0	-0.02	5.30		
1/25/07 10:30:00	1.8	7.6	1.1	-0.03	6.32		
1/25/07 10:30:15	2.3	9.1	1.3	-0.03	6.67		
1/25/07 10:30:30	0.9	6.2	2.0	0.01	6.03		
1/25/07 10:30:45	0.3	3.2	3.1	0.09	5.05		
1/25/07 10:31:00	0.2	0.4	3.6	0.10	5.60		
1/25/07 10:31:15	0.2	-0.7	3.1	0.04	6.36		
1/25/07 10:31:30	0.2	-0.6	2.6	-0.01	6.70		
1/25/07 10:31:45	0.2	-0.8	2.2	-0.02	6.80		
1/25/07 10:32:00	0.2	-1.0	1.7	-0.03	6.83		
1/25/07 10:32:15	0.2	-1.0	1.3	-0.03	6.91		
1/25/07 10:32:30	0.2	-1.0	1.1	-0.03	6.94		
1/25/07 10:32:45	0.2	-1.0	1.0	-0.03	6.94		
1/25/07 10:33:00	0.2	-1.0	0.7	-0.03	6.95		
1/25/07 10:33:15	0.1	-1.0	0.5	-0.03	6.95		
1/25/07 10:33:30	0.1	-1.0	0.6	-0.03	6.95		
1/25/07 10:33:45	0.1	-1.1	0.6	-0.03	6.94		
1/25/07 10:34:00	0.1	-1.0	0.5	-0.03	6.95		
1/25/07 10:34:15	0.1	-0.9	0.5	-0.03	6.95		
1/25/07 10:34:30	0.1	-0.8	0.5	-0.03	6.94	System Bias	
1/25/07 10:34:45	0.1	-1.1	0.4	-0.03	6.94	7.0% CO2	
1/25/07 10:35:00	0.1	-1.1	0.3	-0.03	6.94		6.95
1/25/07 10:35:15	0.1	-1.0	0.3	-0.03	6.96	Zero O2	
1/25/07 10:35:30	1.0	-0.6	0.4	-0.03	6.96		-0.03
1/25/07 10:35:45	0.5	-0.2	0.5	-0.02	6.80		
1/25/07 10:36:00	0.2	-0.2	0.4	0.57	5.18		
1/25/07 10:36:15	0.1	0.3	0.3	2.25	2.75		
1/25/07 10:36:30	0.1	0.3	0.3	3.89	0.99		
1/25/07 10:36:45	0.1	0.3	0.2	4.69	0.33		
1/25/07 10:37:00	0.1	0.4	0.2	4.91	0.14		
1/25/07 10:37:15	0.1	0.2	0.2	4.97	0.07		
1/25/07 10:37:30	0.1	0.5	0.3	5.00	0.05		
1/25/07 10:37:45	0.1	0.0	0.3	5.01	0.04		
1/25/07 10:38:00	0.1	0.4	0.3	5.02	0.03		
1/25/07 10:38:15	0.1	0.3	0.3	5.02	0.02		
1/25/07 10:38:30	0.1	0.3	0.2	5.02	0.02	System Bias	
1/25/07 10:38:45	0.1	0.5	0.2	5.02	0.02	5.0% O2	
1/25/07 10:39:00	0.1	0.5	0.2	5.03	0.01		5.03
1/25/07 10:39:15	0.1	0.6	0.1	5.03	0.01	Zero NOx	
1/25/07 10:39:30	0.1	0.4	0.2	5.03	0.01		0.1
1/25/07 10:39:45	0.1	5.5	0.2	5.03	0.01	Zero CO	

Valero - Port Arthur, TX
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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 10:40:00	3.6	35.1	0.0	5.03	0.01		0.5
1/25/07 10:40:15	14.3	70.2	0.2	5.03	0.03	Zero SO2	
1/25/07 10:40:30	14.4	118.7	3.5	4.66	0.57		0.2
1/25/07 10:40:45	14.4	139.0	18.4	3.29	1.84	Zero CO2	
1/25/07 10:41:00	14.6	152.0	42.8	2.00	2.82		0.01
1/25/07 10:41:15	14.7	160.4	64.3	1.38	3.31		
1/25/07 10:41:30	14.0	166.6	79.5	1.19	3.45		
1/25/07 10:41:45	14.3	167.2	93.0	1.14	3.48		
1/25/07 10:42:00	14.6	163.5	99.8	1.16	3.49		
1/25/07 10:42:15	14.5	159.0	99.1	1.16	3.50		
1/25/07 10:42:30	14.3	159.7	96.2	1.14	3.49		
1/25/07 10:42:45	14.2	162.3	94.7	1.11	3.50		
1/25/07 10:43:00	14.6	152.8	94.1	1.11	3.50		
1/25/07 10:43:15	16.1	146.4	93.7	1.12	3.50		
1/25/07 10:43:30	14.3	154.2	93.5	1.11	3.51		
1/25/07 10:43:45	13.7	171.8	94.5	0.92	3.55		
1/25/07 10:44:00	13.8	181.5	97.1	0.83	3.55		
1/25/07 10:44:15	15.0	171.3	97.4	0.99	3.49		
1/25/07 10:44:30	15.5	157.7	95.6	1.11	3.47		
1/25/07 10:44:45	15.4	147.0	94.0	1.12	3.49		
1/25/07 10:45:00	15.0	146.3	93.1	1.04	3.55		
1/25/07 10:45:15	14.6	152.6	92.8	1.00	3.57		
1/25/07 10:45:30	14.4	164.6	92.8	1.01	3.57		
1/25/07 10:45:45	14.2	172.5	92.8	1.04	3.56		
1/25/07 10:46:00	11.9	159.2	93.3	1.13	3.51		
1/25/07 10:46:15	2.8	83.8	93.3	1.15	3.48		
1/25/07 10:46:30	0.3	31.8	82.4	1.34	2.51		
1/25/07 10:46:45	0.2	6.6	53.5	0.90	0.90		
1/25/07 10:47:00	0.2	1.2	25.9	0.22	0.21		
1/25/07 10:47:15	0.2	0.5	12.8	0.03	0.05		
1/25/07 10:47:30	0.1	0.5	8.0	0.00	0.02		
1/25/07 10:47:45	0.1	0.4	5.6	0.00	0.01		
1/25/07 10:48:00	0.1	0.5	4.3	-0.01	0.01		
1/25/07 10:48:15	0.1	0.4	3.5	-0.01	0.00		
1/25/07 10:48:30	0.1	0.5	3.1	-0.01	0.00		
1/25/07 10:48:45	0.1	0.4	2.8	-0.01	0.00		
1/25/07 10:49:00	0.1	0.3	2.4	-0.01	0.00		
1/25/07 10:49:15	0.1	0.4	2.3	-0.01	0.00		
1/25/07 10:49:30	0.1	0.3	2.0	-0.01	0.00		
1/25/07 10:49:45	0.1	0.6	1.7	-0.01	0.00		
1/25/07 10:50:00	0.1	0.3	1.5	-0.01	0.01		
1/25/07 10:50:15	0.1	0.3	1.2	-0.01	0.00		
1/25/07 10:50:30	0.1	0.3	1.1	-0.01	-0.01		
1/25/07 10:50:45	0.1	0.4	1.1	-0.01	0.00		
1/25/07 10:51:00	0.1	0.4	1.0	-0.01	0.00		
1/25/07 10:51:15	0.1	0.4	0.8	-0.01	0.00		
1/25/07 10:51:30	0.1	0.4	-0.3	-0.01	0.00		
1/25/07 10:51:45	0.1	0.5	-0.3	-0.01	0.00		
1/25/07 10:52:00	0.1	0.5	-0.3	-0.01	0.00		
1/25/07 10:52:15	0.1	0.2	-0.3	-0.01	0.00		
1/25/07 10:52:30	0.1	0.5	-0.1	-0.01	0.00	Upscale Response Time	
1/25/07 10:52:45	1.1	0.5	-0.3	-0.01	0.00	115 seconds	
1/25/07 10:53:00	1.0	0.4	-0.4	0.00	0.00		
1/25/07 10:53:15	0.6	0.6	9.3	0.14	0.02		
1/25/07 10:53:30	0.5	0.0	31.3	0.12	0.01		
1/25/07 10:53:45	0.4	0.4	61.7	0.03	0.00		
1/25/07 10:54:00	0.4	0.6	81.9	0.00	0.00		
1/25/07 10:54:15	0.4	0.6	90.9	-0.01	0.00		
1/25/07 10:54:30	0.4	0.2	94.6	-0.01	0.00		
1/25/07 10:54:45	0.4	0.3	96.3	-0.01	0.00		
1/25/07 10:55:00	0.4	0.3	97.4	-0.01	-0.01		
1/25/07 10:55:15	0.4	0.5	98.2	-0.01	0.00		
1/25/07 10:55:30	0.3	0.5	98.7	-0.01	0.00		
1/25/07 10:55:45	0.3	0.2	98.8	-0.01	0.00		
1/25/07 10:56:00	0.3	0.5	97.6	-0.01	0.00		
1/25/07 10:56:15	0.3	0.3	97.6	-0.01	0.00		
1/25/07 10:56:30	0.3	0.4	97.9	-0.01	0.00		
1/25/07 10:56:45	0.3	0.4	98.6	-0.01	0.00		
1/25/07 10:57:00	0.3	0.2	99.1	-0.01	0.00		
1/25/07 10:57:15	0.3	0.4	99.7	-0.01	0.00		
1/25/07 10:57:30	0.3	0.5	100.3	-0.01	0.00	Downscale Response Time	
1/25/07 10:57:45	0.1	0.4	100.7	-0.01	-0.01	119 saeconds	
1/25/07 10:58:00	0.1	0.4	98.2	-0.01	-0.01		
1/25/07 10:58:15	0.1	0.3	75.9	-0.01	-0.01		
1/25/07 10:58:30	0.0	0.3	41.9	-0.02	-0.01		
1/25/07 10:58:45	0.0	0.6	21.1	-0.01	-0.01		
1/25/07 10:59:00	0.0	0.5	12.1	-0.01	-0.01		
1/25/07 10:59:15	0.0	0.3	7.9	-0.01	-0.01		
1/25/07 10:59:30	0.0	0.4	5.7	-0.02	-0.01		
1/25/07 10:59:45	0.0	0.2	4.4	-0.01	-0.01		
1/25/07 11:00:00	0.0	0.5	3.4	-0.02	-0.01		
1/25/07 11:00:15	0.0	0.4	2.8	-0.02	-0.01		
1/25/07 11:00:30	0.0	0.2	2.2	-0.02	-0.01		
1/25/07 11:02:15	15.2	154.6	96.8	1.00	3.59		
1/25/07 11:02:30	14.8	168.0	104.1	1.00	3.58		
1/25/07 11:02:45	14.8	170.3	107.5	1.05	3.55		
1/25/07 11:03:00	15.3	164.3	104.7	1.09	3.53		
1/25/07 11:03:15	15.5	155.3	100.9	1.09	3.54		
1/25/07 11:03:30	15.9	143.5	99.0	1.06	3.56	Mean Average of the NOx Sampling Points	
1/25/07 11:03:45	16.0	139.7	98.0	1.03	3.59		13.78
1/25/07 11:04:00	15.1	153.0	96.5	0.99	3.61	Mean Average of the CO Sampling Points	
1/25/07 11:04:15	14.7	168.8	96.1	0.99	3.62		127.67
1/25/07 11:04:30	19.8	186.2	98.2	1.05	3.59	Mean Average of the SO2 Sampling Points	

Valero - Port Arthur, TX
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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 11:04:45	24.0	180.2	125.4	1.15	3.57		96.02
1/25/07 11:05:00	15.3	168.3	201.5	1.10	3.61	Mean Average of the O2 Sampling Points	
1/25/07 11:05:15	14.7	163.4	201.5	1.01	3.64		1.16
1/25/07 11:05:30	14.6	159.5	201.5	1.06	3.64	Mean Average of the CO2 Sampling Points	
1/25/07 11:05:45	14.6	156.5	180.3	1.10	3.63		3.54
1/25/07 11:06:00	14.5	152.8	130.2	1.10	3.64		
1/25/07 11:06:15	14.5	149.6	112.2	1.09	3.61		
1/25/07 11:06:30	15.1	139.8	105.6	1.07	3.61		
1/25/07 11:06:45	14.9	132.6	102.1	1.07	3.61		
1/25/07 11:07:00	14.9	129.3	101.3	1.02	3.63		
1/25/07 11:07:15	14.7	130.9	101.8	0.99	3.64		
1/25/07 11:07:30	14.2	134.3	106.4	0.97	3.62		
1/25/07 11:07:45	14.1	135.4	118.2	0.99	3.60		
1/25/07 11:08:00	14.5	131.0	117.5	1.01	3.58		
1/25/07 11:08:15	14.4	127.5	114.1	1.02	3.58		
1/25/07 11:08:30	14.1	131.0	110.6	0.99	3.60	CEMS Sampling Point No. 1	
1/25/07 11:08:45	13.6	139.2	104.3	0.98	3.60	NOx sampling point average	14.6
1/25/07 11:09:00	14.3	139.3	100.3	1.02	3.59	CO sampling point average	132.2
1/25/07 11:09:15	15.0	130.2	99.0	1.08	3.57	SO2 sampling point average	100.9
1/25/07 11:09:30	15.0	124.0	99.8	1.06	3.59	O2 sampling point average	1.06
1/25/07 11:09:45	14.3	132.0	105.0	1.10	3.63	CO2 sampling point average	3.61
1/25/07 11:10:00	13.8	144.5	106.3	1.07	3.64		
1/25/07 11:10:15	14.1	143.9	102.0	1.06	3.61	NOx absolute difference from mean	-6.0
1/25/07 11:10:30	14.9	134.8	99.1	1.02	3.58	CO absolute difference from mean	-3.5
1/25/07 11:10:45	14.6	128.2	98.6	1.06	3.59	SO2 absolute difference from mean	-5.0
1/25/07 11:11:00	15.0	124.8	98.2	1.07	3.63	O2 absolute difference from mean	8.7
1/25/07 11:11:15	14.8	127.9	98.5	1.06	3.63	CO2 absolute difference from mean	-2.2
1/25/07 11:11:30	14.2	136.0	98.0	1.06	3.64		
1/25/07 11:11:45	14.2	139.4	97.7	1.07	3.63		
1/25/07 11:12:00	15.0	134.5	97.0	1.05	3.61		
1/25/07 11:12:15	15.3	123.9	97.3	1.08	3.61		
1/25/07 11:12:30	15.4	119.3	103.2	1.09	3.63		
1/25/07 11:12:45	14.7	125.4	107.7	1.05	3.65		
1/25/07 11:13:00	14.7	131.8	103.5	1.04	3.66		
1/25/07 11:13:15	14.7	132.8	99.7	1.09	3.64		
1/25/07 11:13:30	15.0	132.5	98.2	1.01	3.63		
1/25/07 11:13:45	15.0	133.7	97.2	1.02	3.65		
1/25/07 11:14:00	15.2	133.3	96.8	1.01	3.64	CEMS Sampling Point No. 2	
1/25/07 11:14:15	15.3	136.4	97.7	1.03	3.66	NOx sampling point average	13.5
1/25/07 11:14:30	14.8	139.5	98.0	1.02	3.68	CO sampling point average	141.1
1/25/07 11:14:45	14.8	138.3	97.2	1.02	3.68	SO2 sampling point average	94.9
1/25/07 11:15:00	15.2	133.0	96.2	1.04	3.67	O2 sampling point average	1.19
1/25/07 11:15:15	15.4	124.3	95.1	1.05	3.66	CO2 sampling point average	3.52
1/25/07 11:15:30	12.8	141.0	93.7	1.23	3.51		
1/25/07 11:15:45	12.9	138.4	93.9	1.22	3.50	NOx absolute difference from mean	1.7
1/25/07 11:16:00	12.7	143.5	94.1	1.24	3.49	CO absolute difference from mean	-10.5
1/25/07 11:16:15	12.6	147.8	94.2	1.25	3.47	SO2 absolute difference from mean	1.2
1/25/07 11:16:30	12.7	141.3	94.4	1.27	3.46	O2 absolute difference from mean	-2.8
1/25/07 11:16:45	12.8	148.6	94.4	1.29	3.44	CO2 absolute difference from mean	0.4
1/25/07 11:17:00	13.3	149.0	94.2	1.30	3.44		
1/25/07 11:17:15	13.2	140.9	94.0	1.28	3.44		
1/25/07 11:17:30	12.7	144.0	94.0	1.23	3.47		
1/25/07 11:17:45	12.5	153.7	94.3	1.20	3.48		
1/25/07 11:18:00	13.1	153.0	94.2	1.23	3.45		
1/25/07 11:18:15	13.4	138.2	94.3	1.27	3.44		
1/25/07 11:18:30	13.5	129.3	94.0	1.25	3.47		
1/25/07 11:18:45	12.8	143.0	93.9	1.19	3.49		
1/25/07 11:19:00	12.5	159.0	94.6	1.15	3.47		
1/25/07 11:19:15	13.0	159.8	94.7	1.21	3.44		
1/25/07 11:19:30	13.2	151.5	93.6	1.29	3.41	CEMS Sampling Point No. 3	
1/25/07 11:19:45	13.1	145.1	92.7	1.26	3.44	NOx sampling point average	13.2
1/25/07 11:20:00	13.3	143.8	92.7	1.22	3.47	CO sampling point average	141.0
1/25/07 11:20:15	13.1	149.0	92.4	1.21	3.48	SO2 sampling point average	92.3
1/25/07 11:20:30	13.0	157.5	92.4	1.20	3.48	O2 sampling point average	1.23
1/25/07 11:20:45	12.8	152.1	92.9	1.22	3.47	CO2 sampling point average	3.48
1/25/07 11:21:00	12.8	147.2	95.7	1.25	3.46		
1/25/07 11:21:15	12.9	142.6	97.0	1.30	3.44	NOx absolute difference from mean	4.2
1/25/07 11:21:30	13.8	134.5	95.8	1.31	3.45	CO absolute difference from mean	-10.5
1/25/07 11:21:45	14.3	132.4	94.9	1.29	3.46	SO2 absolute difference from mean	3.9
1/25/07 11:22:00	13.1	135.5	94.7	1.22	3.51	O2 absolute difference from mean	-6.0
1/25/07 11:22:15	12.9	134.8	94.1	1.14	3.54	CO2 absolute difference from mean	1.7
1/25/07 11:22:30	13.1	140.5	93.7	1.18	3.50		
1/25/07 11:22:45	13.4	150.8	92.9	1.26	3.47		
1/25/07 11:23:00	13.7	138.5	89.8	1.27	3.47		
1/25/07 11:23:15	13.7	130.8	87.1	1.23	3.47		
1/25/07 11:23:30	13.2	135.0	86.7	1.18	3.50		
1/25/07 11:23:45	12.9	132.9	87.7	1.15	3.51		
1/25/07 11:24:00	12.4	135.5	88.7	1.18	3.48		
1/25/07 11:24:15	12.9	136.3	88.7	1.22	3.45		
1/25/07 11:24:30	13.2	136.0	88.8	1.27	3.42		
1/25/07 11:24:45	13.7	142.3	89.0	1.25	3.43	Start Run No. 1	
1/25/07 11:25:00	**13.0**	**144.3**	**89.1**	**1.21**	**3.46**		
1/25/07 11:25:15	**12.8**	**157.9**	**89.1**	**1.18**	**3.48**		
1/25/07 11:25:30	**12.9**	**163.0**	**88.9**	**1.20**	**3.46**		
1/25/07 11:25:45	**13.1**	**157.3**	**89.2**	**1.23**	**3.44**		
1/25/07 11:26:00	**13.4**	**148.8**	**90.9**	**1.25**	**3.44**		
1/25/07 11:26:15	**13.6**	**139.4**	**91.0**	**1.22**	**3.46**		
1/25/07 11:26:30	**13.5**	**142.0**	**90.1**	**1.20**	**3.47**		
1/25/07 11:26:45	**13.3**	**153.6**	**89.5**	**1.16**	**3.49**		
1/25/07 11:27:00	**13.0**	**162.3**	**89.0**	**1.17**	**3.50**		
1/25/07 11:27:15	**13.0**	**165.4**	**89.4**	**1.20**	**3.48**		
1/25/07 11:27:30	**13.3**	**160.0**	**90.5**	**1.24**	**3.46**		
1/25/07 11:27:45	**13.8**	**145.5**	**90.5**	**1.26**	**3.47**		
1/25/07 11:28:00	**14.0**	**140.0**	**90.0**	**1.24**	**3.48**		
1/25/07 11:28:15	**13.2**	**149.1**	**89.7**	**1.19**	**3.51**		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 11:28:30	12.9	163.0	89.9	1.15	3.52	
1/25/07 11:28:45	13.0	171.9	90.1	1.18	3.49	
1/25/07 11:29:00	13.4	165.8	90.6	1.24	3.46	
1/25/07 11:29:15	13.5	147.9	92.1	1.27	3.46	
1/25/07 11:29:30	14.1	135.0	91.6	1.23	3.48	
1/25/07 11:29:45	13.7	131.0	90.6	1.17	3.49	
1/25/07 11:30:00	13.0	140.3	89.9	1.11	3.51	
1/25/07 11:30:15	13.3	142.5	89.7	1.11	3.50	
1/25/07 11:30:30	14.1	135.0	90.2	1.17	3.47	
1/25/07 11:30:45	13.5	132.8	90.7	1.17	3.48	
1/25/07 11:31:00	13.6	137.0	90.7	1.11	3.52	
1/25/07 11:31:15	13.5	144.0	90.6	1.12	3.50	
1/25/07 11:31:30	13.3	151.0	90.7	1.15	3.49	
1/25/07 11:31:45	13.1	159.5	92.2	1.16	3.48	
1/25/07 11:32:00	13.2	160.0	92.2	1.17	3.47	
1/25/07 11:32:15	13.3	153.3	91.2	1.20	3.45	
1/25/07 11:32:30	14.2	141.3	90.8	1.21	3.45	
1/25/07 11:32:45	14.1	131.0	90.9	1.19	3.47	
1/25/07 11:33:00	13.5	134.3	91.2	1.13	3.51	
1/25/07 11:33:15	12.9	150.4	91.2	1.10	3.51	
1/25/07 11:33:30	13.0	158.5	91.4	1.12	3.49	
1/25/07 11:33:45	13.2	156.1	91.6	1.19	3.48	
1/25/07 11:34:00	13.6	146.3	91.9	1.22	3.46	
1/25/07 11:34:15	13.9	137.4	91.9	1.20	3.51	
1/25/07 11:34:30	13.0	143.3	91.4	1.15	3.54	
1/25/07 11:34:45	13.0	153.5	91.2	1.12	3.55	
1/25/07 11:35:00	13.3	152.8	91.3	1.17	3.52	
1/25/07 11:35:15	13.5	144.4	92.0	1.20	3.50	
1/25/07 11:35:30	13.9	137.5	92.9	1.19	3.52	
1/25/07 11:35:45	13.8	134.8	92.2	1.16	3.54	
1/25/07 11:36:00	13.2	143.0	91.4	1.14	3.55	
1/25/07 11:36:15	13.0	157.5	90.7	1.13	3.55	
1/25/07 11:36:30	13.1	159.0	90.4	1.16	3.53	
1/25/07 11:36:45	13.4	153.4	90.3	1.19	3.51	
1/25/07 11:37:00	13.7	145.3	90.1	1.20	3.51	
1/25/07 11:37:15	14.3	135.3	90.5	1.18	3.54	
1/25/07 11:37:30	13.4	139.5	90.9	1.15	3.57	
1/25/07 11:37:45	13.2	152.9	90.6	1.10	3.56	
1/25/07 11:38:00	13.3	155.5	90.2	1.13	3.54	
1/25/07 11:38:15	14.0	142.0	90.3	1.20	3.51	
1/25/07 11:38:30	14.4	126.5	90.4	1.22	3.53	
1/25/07 11:38:45	14.5	121.2	90.5	1.15	3.57	
1/25/07 11:39:00	13.4	130.3	90.1	1.09	3.60	
1/25/07 11:39:15	13.2	145.4	89.8	1.07	3.60	
1/25/07 11:39:30	14.0	141.0	89.8	1.13	3.56	
1/25/07 11:39:45	14.4	124.0	89.2	1.20	3.54	
1/25/07 11:40:00	13.8	121.0	89.0	1.17	3.56	
1/25/07 11:40:15	13.7	130.4	89.2	1.09	3.60	
1/25/07 11:40:30	13.6	137.5	88.8	1.09	3.59	
1/25/07 11:40:45	13.5	145.3	88.4	1.14	3.56	
1/25/07 11:41:00	13.5	147.0	88.4	1.16	3.55	
1/25/07 11:41:15	13.6	145.6	88.8	1.16	3.55	
1/25/07 11:41:30	13.7	144.5	89.3	1.17	3.56	
1/25/07 11:41:45	14.1	135.6	89.8	1.17	3.56	
1/25/07 11:42:00	14.5	126.5	89.9	1.16	3.57	
1/25/07 11:42:15	14.2	126.7	89.7	1.14	3.60	
1/25/07 11:42:30	13.4	140.0	89.2	1.10	3.62	
1/25/07 11:42:45	13.4	153.6	89.2	1.11	3.60	
1/25/07 11:43:00	14.1	147.8	90.1	1.18	3.56	
1/25/07 11:43:15	14.4	129.8	90.4	1.22	3.55	
1/25/07 11:43:30	14.3	123.8	90.4	1.18	3.59	
1/25/07 11:43:45	14.0	127.7	90.3	1.12	3.61	
1/25/07 11:44:00	13.8	133.6	90.3	1.10	3.61	
1/25/07 11:44:15	13.8	136.4	90.2	1.13	3.60	
1/25/07 11:44:30	14.0	133.3	90.3	1.15	3.58	
1/25/07 11:44:45	14.4	121.9	90.2	1.17	3.58	
1/25/07 11:45:00	15.0	111.6	89.8	1.16	3.58	
1/25/07 11:45:15	14.5	110.9	89.4	1.11	3.61	
1/25/07 11:45:30	13.5	123.8	89.5	1.05	3.64	
1/25/07 11:45:45	13.7	136.6	90.1	1.05	3.61	
1/25/07 11:46:00	14.5	132.3	90.4	1.14	3.57	
1/25/07 11:46:15	14.9	117.3	90.2	1.20	3.58	
1/25/07 11:46:30	14.8	113.5	89.4	1.15	3.59	
1/25/07 11:46:45	14.1	121.3	88.7	1.08	3.62	
1/25/07 11:47:00	13.9	129.8	88.7	1.07	3.62	
1/25/07 11:47:15	13.9	135.4	88.9	1.12	3.59	
1/25/07 11:47:30	14.6	128.8	89.2	1.17	3.57	
1/25/07 11:47:45	14.9	115.4	89.9	1.18	3.57	
1/25/07 11:48:00	14.7	112.8	91.1	1.14	3.58	
1/25/07 11:48:15	14.1	122.4	91.3	1.08	3.61	
1/25/07 11:48:30	14.5	125.5	90.7	1.07	3.62	
1/25/07 11:48:45	14.8	119.6	90.1	1.12	3.60	
1/25/07 11:49:00	15.0	113.6	89.8	1.13	3.61	
1/25/07 11:49:15	14.7	114.0	89.3	1.10	3.63	
1/25/07 11:49:30	14.5	116.0	89.3	1.07	3.64	
1/25/07 11:49:45	14.5	121.9	89.5	1.08	3.66	
1/25/07 11:50:00	14.5	123.5	89.7	1.10	3.65	
1/25/07 11:50:15	14.3	126.7	90.1	1.11	3.64	
1/25/07 11:50:30	14.2	128.3	90.2	1.12	3.82	
1/25/07 11:50:45	14.2	127.9	90.0	1.14	3.59	
1/25/07 11:51:00	14.4	123.0	89.8	1.16	3.59	
1/25/07 11:51:15	14.6	117.5	89.6	1.17	3.59	
1/25/07 11:51:30	14.1	120.5	89.2	1.14	3.60	
1/25/07 11:51:45	13.9	129.8	88.6	1.11	3.61	
1/25/07 11:52:00	14.4	129.0	88.5	1.13	3.60	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 11:52:15	14.8	120.0	88.2	1.17	3.58	
1/25/07 11:52:30	14.7	114.3	88.0	1.16	3.60	
1/25/07 11:52:45	14.9	110.3	87.9	1.12	3.62	
1/25/07 11:53:00	14.8	111.3	87.5	1.10	3.63	
1/25/07 11:53:15	14.8	117.9	87.3	1.09	3.64	
1/25/07 11:53:30	14.2	126.0	87.7	1.09	3.64	
1/25/07 11:53:45	14.1	134.5	88.3	1.11	3.63	
1/25/07 11:54:00	14.1	135.8	88.6	1.15	3.61	
1/25/07 11:54:15	14.5	130.0	88.6	1.18	3.60	
1/25/07 11:54:30	14.6	126.8	88.7	1.19	3.60	
1/25/07 11:54:45	14.5	125.5	88.7	1.17	3.62	
1/25/07 11:55:00	14.1	127.8	89.3	1.15	3.63	
1/25/07 11:55:15	14.2	133.2	89.6	1.15	3.62	
1/25/07 11:55:30	14.3	134.8	89.1	1.17	3.61	
1/25/07 11:55:45	14.5	132.4	88.6	1.18	3.60	
1/25/07 11:56:00	14.5	128.3	88.5	1.17	3.61	
1/25/07 11:56:15	14.5	123.7	88.5	1.14	3.61	
1/25/07 11:56:30	14.4	124.8	88.4	1.11	3.62	
1/25/07 11:56:45	14.0	132.7	89.0	1.11	3.62	
1/25/07 11:57:00	14.1	136.5	89.7	1.13	3.62	
1/25/07 11:57:15	14.4	128.5	89.3	1.17	3.58	
1/25/07 11:57:30	14.7	119.3	89.1	1.17	3.57	
1/25/07 11:57:45	14.4	115.3	89.0	1.14	3.59	
1/25/07 11:58:00	13.9	119.8	88.6	1.10	3.61	
1/25/07 11:58:15	13.8	130.0	88.5	1.09	3.60	
1/25/07 11:58:30	14.2	129.8	88.7	1.11	3.59	
1/25/07 11:58:45	14.3	123.2	88.5	1.13	3.57	
1/25/07 11:59:00	14.3	120.0	88.1	1.13	3.58	
1/25/07 11:59:15	14.1	124.0	88.4	1.11	3.60	
1/25/07 11:59:30	14.3	124.8	88.9	1.10	3.60	
1/25/07 11:59:45	14.5	120.9	89.2	1.12	3.58	
1/25/07 12:00:00	14.6	115.8	89.1	1.12	3.60	
1/25/07 12:00:15	14.7	108.9	89.0	1.10	3.62	
1/25/07 12:00:30	14.6	108.1	89.0	1.09	3.62	
1/25/07 12:00:45	14.5	109.8	89.1	1.07	3.62	
1/25/07 12:01:00	14.3	113.1	89.1	1.05	3.62	
1/25/07 12:01:15	14.2	119.7	88.9	1.06	3.62	
1/25/07 12:01:30	14.0	125.3	88.9	1.07	3.62	
1/25/07 12:01:45	14.4	125.8	89.1	1.09	3.61	
1/25/07 12:02:00	14.6	122.8	88.6	1.12	3.60	
1/25/07 12:02:15	14.3	123.5	88.3	1.12	3.58	
1/25/07 12:02:30	14.1	126.0	88.6	1.11	3.60	
1/25/07 12:02:45	14.6	122.3	89.1	1.12	3.59	
1/25/07 12:03:00	14.7	116.6	89.2	1.15	3.58	
1/25/07 12:03:15	14.3	121.4	88.9	1.13	3.60	
1/25/07 12:03:30	13.9	130.5	88.9	1.09	3.62	
1/25/07 12:03:45	14.5	129.8	89.3	1.11	3.60	
1/25/07 12:04:00	14.7	121.8	89.5	1.15	3.58	
1/25/07 12:04:15	14.6	114.8	89.6	1.13	3.60	
1/25/07 12:04:30	14.1	122.6	89.5	1.09	3.62	
1/25/07 12:04:45	13.9	135.0	89.8	1.07	3.62	
1/25/07 12:05:00	14.6	131.1	89.9	1.12	3.58	
1/25/07 12:05:15	15.1	116.3	90.6	1.18	3.55	
1/25/07 12:05:30	14.3	120.6	91.0	1.14	3.59	
1/25/07 12:05:45	13.7	133.9	90.3	1.06	3.61	
1/25/07 12:06:00	14.4	130.8	89.3	1.09	3.59	
1/25/07 12:06:15	14.6	121.8	88.4	1.17	3.56	
1/25/07 12:06:30	14.4	122.2	88.4	1.14	3.60	
1/25/07 12:06:45	14.4	124.7	88.7	1.09	3.61	
1/25/07 12:07:00	14.6	120.7	89.1	1.12	3.60	
1/25/07 12:07:15	14.5	118.7	89.2	1.14	3.58	
1/25/07 12:07:30	14.2	120.5	89.3	1.12	3.60	
1/25/07 12:07:45	14.0	127.3	89.8	1.12	3.60	
1/25/07 12:08:00	13.9	130.7	90.2	1.15	3.60	
1/25/07 12:08:15	14.3	125.4	89.9	1.18	3.59	
1/25/07 12:08:30	14.8	112.7	89.9	1.20	3.59	
1/25/07 12:08:45	15.0	103.8	90.6	1.18	3.60	
1/25/07 12:09:00	14.5	104.2	90.6	1.13	3.62	
1/25/07 12:09:15	14.3	111.7	90.1	1.10	3.65	
1/25/07 12:09:30	14.1	118.4	89.5	1.11	3.64	
1/25/07 12:09:45	14.2	122.2	89.7	1.15	3.63	
1/25/07 12:10:00	14.4	118.0	90.7	1.18	3.63	
1/25/07 12:10:15	14.9	108.1	91.0	1.19	3.62	
1/25/07 12:10:30	14.7	100.9	90.5	1.17	3.63	
1/25/07 12:10:45	14.2	104.2	90.0	1.11	3.66	
1/25/07 12:11:00	13.8	115.1	89.9	1.09	3.68	
1/25/07 12:11:15	13.7	122.4	90.8	1.12	3.65	
1/25/07 12:11:30	14.1	119.4	90.9	1.17	3.63	
1/25/07 12:11:45	14.7	111.6	89.4	1.20	3.62	
1/25/07 12:12:00	13.9	116.1	94.4	1.18	3.62	
1/25/07 12:12:15	13.6	130.5	105.4	1.14	3.64	
1/25/07 12:12:30	13.7	141.4	103.6	1.16	3.61	
1/25/07 12:12:45	13.8	136.8	110.1	1.22	3.58	
1/25/07 12:13:00	14.1	127.8	114.9	1.23	3.58	
1/25/07 12:13:15	14.1	122.5	105.7	1.20	3.61	
1/25/07 12:13:30	14.3	119.9	100.4	1.16	3.63	
1/25/07 12:13:45	14.2	118.8	96.4	1.16	3.64	
1/25/07 12:14:00	14.1	121.0	92.9	1.14	3.65	
1/25/07 12:14:15	14.0	125.7	91.6	1.14	3.65	
1/25/07 12:14:30	13.9	127.9	91.3	1.15	3.65	
1/25/07 12:14:45	14.4	120.9	90.9	1.18	3.61	
1/25/07 12:15:00	14.9	109.7	90.7	1.20	3.61	
1/25/07 12:15:15	14.4	111.7	90.5	1.17	3.64	
1/25/07 12:15:30	13.8	125.9	90.4	1.12	3.66	
1/25/07 12:15:45	13.8	135.8	91.1	1.12	3.65	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 12:16:00	14.7	124.9	91.8	1.18	3.61		
1/25/07 12:16:15	15.1	112.2	90.8	1.22	3.61		
1/25/07 12:16:30	14.6	107.7	89.7	1.16	3.66		
1/25/07 12:16:45	14.5	112.8	89.6	1.09	3.69		
1/25/07 12:17:00	14.5	116.9	90.0	1.09	3.68		
1/25/07 12:17:15	14.3	122.4	90.3	1.12	3.66		
1/25/07 12:17:30	14.1	129.5	90.3	1.14	3.65		
1/25/07 12:17:45	14.3	132.9	90.5	1.17	3.64		
1/25/07 12:18:00	14.8	125.4	90.9	1.20	3.63		
1/25/07 12:18:15	14.8	119.7	91.2	1.21	3.64		
1/25/07 12:18:30	14.5	119.3	91.1	1.17	3.67		
1/25/07 12:18:45	14.4	123.3	91.0	1.14	3.68		
1/25/07 12:19:00	14.4	125.5	90.8	1.16	3.67		
1/25/07 12:19:15	14.6	124.5	90.6	1.18	3.66		
1/25/07 12:19:30	14.5	120.8	90.8	1.19	3.66		
1/25/07 12:19:45	14.8	116.3	90.3	1.19	3.66		
1/25/07 12:20:00	14.7	112.9	90.0	1.18	3.66		
1/25/07 12:20:15	14.6	112.3	89.9	1.16	3.68		
1/25/07 12:20:30	14.2	120.5	89.6	1.14	3.67		
1/25/07 12:20:45	13.7	129.8	89.4	1.14	3.67		
1/25/07 12:21:00	14.1	133.2	90.5	1.17	3.64		
1/25/07 12:21:15	14.1	128.0	91.1	1.21	3.62		
1/25/07 12:21:30	14.6	117.9	91.8	1.22	3.62		
1/25/07 12:21:45	14.7	112.1	91.7	1.19	3.63		
1/25/07 12:22:00	13.7	128.5	90.5	1.16	3.65		
1/25/07 12:22:15	13.2	145.5	90.2	1.13	3.66		
1/25/07 12:22:30	14.1	138.0	90.0	1.19	3.61		
1/25/07 12:22:45	14.8	116.0	89.6	1.27	3.58		
1/25/07 12:23:00	14.9	102.9	89.7	1.21	3.63		
1/25/07 12:23:15	14.0	106.8	89.6	1.11	3.68		
1/25/07 12:23:30	13.9	116.2	89.7	1.08	3.68		
1/25/07 12:23:45	13.8	123.7	90.0	1.11	3.66		
1/25/07 12:24:00	14.2	120.3	90.0	1.16	3.64		
1/25/07 12:24:15	14.4	116.3	89.9	1.18	3.63		
1/25/07 12:24:30	14.0	118.9	89.7	1.14	3.64		
1/25/07 12:24:45	13.9	124.8	89.6	1.12	3.64		
1/25/07 12:25:00	13.9	127.0	89.5	1.15	3.62	End Run No. 1	
1/25/07 12:25:15	14.0	126.4	89.3	1.18	3.60		
1/25/07 12:25:30	11.4	96.8	89.3	1.18	3.60		
1/25/07 12:25:45	5.2	53.2	88.2	1.23	3.49		
1/25/07 12:26:00	1.1	29.1	83.9	1.64	2.18		
1/25/07 12:26:15	0.3	2.7	129.4	1.10	0.74		
1/25/07 12:26:30	0.2	0.8	177.8	0.30	0.18		
1/25/07 12:26:45	0.2	0.2	143.4	0.05	0.05		
1/25/07 12:27:00	0.2	0.6	117.7	0.00	0.02		
1/25/07 12:27:15	0.2	0.3	103.5	0.00	0.01		
1/25/07 12:27:30	0.2	0.3	97.5	-0.01	0.01		
1/25/07 12:27:45	0.1	0.5	95.1	-0.01	0.01		
1/25/07 12:28:00	0.1	0.1	94.1	-0.01	0.01		
1/25/07 12:28:15	0.1	0.6	93.7	-0.01	0.01		
1/25/07 12:28:30	0.1	0.2	93.6	-0.01	-0.01		
1/25/07 12:28:45	0.1	0.5	93.7	-0.01	0.00		
1/25/07 12:29:00	0.1	0.1	93.8	-0.01	0.00		
1/25/07 12:29:15	0.1	0.2	94.0	-0.01	0.00		
1/25/07 12:29:30	0.1	0.2	94.4	-0.01	0.00		
1/25/07 12:29:45	0.1	0.2	96.7	-0.01	0.00		
1/25/07 12:30:00	0.1	0.2	99.0	-0.01	0.00		
1/25/07 12:30:15	0.1	0.2	99.1	-0.01	0.00		
1/25/07 12:30:30	0.6	1.3	99.1	-0.01	0.00	System Bias	
1/25/07 12:30:45	22.3	2.1	99.2	-0.01	0.00	100 ppm SO2	
1/25/07 12:31:00	30.8	1.7	99.2	0.00	0.00		99.2
1/25/07 12:31:15	36.3	1.0	99.3	0.04	0.00		
1/25/07 12:31:30	39.2	0.6	99.2	0.02	0.00		
1/25/07 12:31:45	42.9	0.2	99.2	0.00	0.00		
1/25/07 12:32:00	46.7	0.2	93.3	0.00	0.00		
1/25/07 12:32:15	53.1	0.3	75.6	-0.01	0.00		
1/25/07 12:32:30	54.1	0.3	52.8	-0.01	0.00		
1/25/07 12:32:45	51.8	0.1	33.6	-0.01	0.00		
1/25/07 12:33:00	51.1	0.4	21.3	-0.01	0.00		
1/25/07 12:33:15	50.6	0.4	14.5	-0.01	0.00	System Bias	
1/25/07 12:33:30	50.4	0.5	10.7	-0.01	0.00	50 ppm NOx	
1/25/07 12:33:45	50.4	0.6	8.3	-0.01	0.00		50.3
1/25/07 12:34:00	50.3	0.5	6.7	-0.01	0.01		
1/25/07 12:34:15	50.3	1.4	5.4	-0.01	0.00		
1/25/07 12:34:30	27.4	17.4	4.0	-0.01	0.00		
1/25/07 12:34:45	1.0	67.2	2.5	-0.01	0.00		
1/25/07 12:35:00	0.7	180.8	1.7	-0.01	0.00		
1/25/07 12:35:15	0.5	234.0	1.2	-0.01	0.00		
1/25/07 12:35:30	0.5	245.8	1.2	-0.01	0.00	System Bias	
1/25/07 12:35:45	0.4	248.2	1.1	-0.01	0.00	250 ppm CO	
1/25/07 12:36:00	0.4	248.2	1.0	-0.01	0.00		248.2
1/25/07 12:36:15	0.4	248.2	0.9	-0.02	0.00		
1/25/07 12:36:30	0.4	248.3	0.8	-0.02	0.00		
1/25/07 12:36:45	0.3	239.2	0.6	-0.02	0.00		
1/25/07 12:37:00	0.3	180.9	0.6	-0.02	0.00		
1/25/07 12:37:15	0.3	123.0	0.5	-0.02	0.00		
1/25/07 12:37:30	0.3	58.7	0.4	-0.02	0.00		
1/25/07 12:37:45	2.9	19.6	0.3	-0.02	-0.01		
1/25/07 12:38:00	6.3	7.3	0.3	-0.02	0.11		
1/25/07 12:38:15	1.0	2.9	0.2	-0.01	2.01		
1/25/07 12:38:30	0.7	1.0	0.2	-0.01	4.69		
1/25/07 12:38:45	0.5	1.4	0.2	-0.03	6.38		
1/25/07 12:39:00	0.5	-0.9	0.1	-0.03	6.98		
1/25/07 12:39:15	0.4	-1.3	0.0	-0.04	7.12		
1/25/07 12:39:30	0.4	-1.3	0.0	-0.04	7.16		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 12:39:45	0.3	-1.0	0.0	-0.04	7.13		
1/25/07 12:40:00	0.3	-1.0	-0.1	-0.04	7.12		
1/25/07 12:40:15	0.3	-1.3	-0.2	-0.04	7.13	System Bias	
1/25/07 12:40:30	0.3	-0.9	-0.2	-0.04	7.14	7.0% CO2	
1/25/07 12:40:45	0.2	-1.3	-0.2	-0.04	7.14		7.14
1/25/07 12:41:00	0.2	-0.9	-0.3	-0.04	7.14	Zero O2	
1/25/07 12:41:15	0.7	-0.9	-0.3	-0.04	7.15		-0.04
1/25/07 12:41:30	1.6	-0.5	-0.4	-0.03	7.11		
1/25/07 12:41:45	0.3	0.2	-0.4	0.53	5.44		
1/25/07 12:42:00	0.3	0.2	-0.5	2.60	2.37		
1/25/07 12:42:15	0.3	0.5	-0.7	4.31	0.60		
1/25/07 12:42:30	0.3	0.1	-0.8	4.83	0.17		
1/25/07 12:42:45	0.3	0.2	-0.8	4.94	0.08		
1/25/07 12:43:00	0.3	0.6	-0.8	4.98	0.05		
1/25/07 12:43:15	0.3	0.2	-0.7	5.00	0.03		
1/25/07 12:43:30	0.3	0.2	-0.6	5.01	0.03	System Bias	
1/25/07 12:43:45	0.3	0.1	-0.8	5.01	0.02	5.0% O2	
1/25/07 12:44:00	0.3	0.1	-0.8	5.01	0.02		5.01
1/25/07 12:44:15	0.2	0.2	-0.8	5.01	0.02	Zero NOx	
1/25/07 12:44:30	0.2	0.2	-0.7	5.02	0.02		0.2
1/25/07 12:44:45	4.3	22.6	-0.8	5.02	0.01	Zero CO	
1/25/07 12:45:00	14.4	56.3	-0.7	4.99	0.10		0.1
1/25/07 12:45:15	15.3	78.6	12.1	4.04	1.19	Zero SO2	
1/25/07 12:45:30	14.8	90.3	44.4	2.26	2.69		-0.8
1/25/07 12:45:45	14.7	98.0	72.8	1.32	3.41	Zero CO2	
1/25/07 12:46:00	14.3	106.3	86.5	1.11	3.57		0.02
1/25/07 12:46:15	14.4	111.1	92.3	1.09	3.59		
1/25/07 12:46:30	14.4	112.2	94.9	1.11	3.58		
1/25/07 12:46:45	14.7	108.9	95.5	1.12	3.57		
1/25/07 12:47:00	14.7	104.4	96.6	1.12	3.57		
1/25/07 12:47:15	14.5	103.3	96.5	1.10	3.59		
1/25/07 12:47:30	14.0	111.5	95.2	1.08	3.62		
1/25/07 12:47:45	14.0	117.6	94.6	1.08	3.62		
1/25/07 12:48:00	14.4	114.6	95.1	1.12	3.57		
1/25/07 12:48:15	15.1	102.1	96.6	1.15	3.57		
1/25/07 12:48:30	15.1	100.3	96.2	1.12	3.59		
1/25/07 12:48:45	13.7	113.9	94.6	1.07	3.63		
1/25/07 12:49:00	13.9	121.4	94.2	1.06	3.63		
1/25/07 12:49:15	14.7	113.4	93.7	1.15	3.58		
1/25/07 12:49:30	14.9	102.5	93.6	1.16	3.58		
1/25/07 12:49:45	15.1	94.5	93.7	1.10	3.62	Start Run No. 2	
1/25/07 12:50:00	**15.3**	**90.8**	**94.0**	**1.06**	**3.64**		
1/25/07 12:50:15	**14.7**	**95.5**	**94.2**	**1.05**	**3.65**		
1/25/07 12:50:30	**14.5**	**106.0**	**94.4**	**1.03**	**3.65**		
1/25/07 12:50:45	**14.7**	**112.1**	**97.4**	**1.06**	**3.63**		
1/25/07 12:51:00	**14.9**	**107.6**	**100.3**	**1.10**	**3.60**		
1/25/07 12:51:15	**15.3**	**98.9**	**101.6**	**1.12**	**3.59**		
1/25/07 12:51:30	**15.5**	**92.1**	**99.2**	**1.10**	**3.61**		
1/25/07 12:51:45	**15.0**	**93.5**	**96.0**	**1.07**	**3.64**		
1/25/07 12:52:00	**14.8**	**97.5**	**94.5**	**1.03**	**3.65**		
1/25/07 12:52:15	**14.6**	**102.4**	**94.3**	**1.05**	**3.64**		
1/25/07 12:52:30	**14.9**	**104.1**	**94.4**	**1.08**	**3.63**		
1/25/07 12:52:45	**15.4**	**103.4**	**94.2**	**1.11**	**3.61**		
1/25/07 12:53:00	**15.1**	**101.8**	**95.2**	**1.11**	**3.62**		
1/25/07 12:53:15	**15.1**	**101.3**	**100.3**	**1.10**	**3.63**		
1/25/07 12:53:30	**15.2**	**102.9**	**99.5**	**1.08**	**3.64**		
1/25/07 12:53:45	**14.6**	**110.8**	**95.9**	**1.08**	**3.66**		
1/25/07 12:54:00	**14.4**	**117.9**	**94.2**	**1.09**	**3.65**		
1/25/07 12:54:15	**14.6**	**119.3**	**93.7**	**1.12**	**3.60**		
1/25/07 12:54:30	**15.0**	**111.0**	**93.7**	**1.17**	**3.59**		
1/25/07 12:54:45	**15.7**	**96.5**	**93.9**	**1.17**	**3.60**		
1/25/07 12:55:00	**15.3**	**91.5**	**94.7**	**1.12**	**3.62**		
1/25/07 12:55:15	**14.8**	**98.0**	**94.1**	**1.05**	**3.66**		
1/25/07 12:55:30	**14.5**	**106.8**	**93.2**	**1.04**	**3.66**		
1/25/07 12:55:45	**14.7**	**113.0**	**92.8**	**1.07**	**3.63**		
1/25/07 12:56:00	**14.8**	**112.1**	**92.7**	**1.11**	**3.61**		
1/25/07 12:56:15	**15.3**	**104.0**	**92.8**	**1.13**	**3.61**		
1/25/07 12:56:30	**15.6**	**95.4**	**93.1**	**1.14**	**3.61**		
1/25/07 12:56:45	**15.3**	**96.5**	**93.7**	**1.10**	**3.62**		
1/25/07 12:57:00	**14.2**	**108.3**	**94.3**	**1.06**	**3.64**		
1/25/07 12:57:15	**14.6**	**120.2**	**95.6**	**1.05**	**3.63**		
1/25/07 12:57:30	**15.7**	**199.2**	**95.2**	**1.12**	**3.59**		
1/25/07 12:57:45	**18.0**	**212.2**	**94.3**	**1.13**	**3.59**		
1/25/07 12:58:00	**16.1**	**171.2**	**94.1**	**0.93**	**3.65**		
1/25/07 12:58:15	**15.2**	**102.3**	**95.3**	**0.57**	**3.72**		
1/25/07 12:58:30	**15.0**	**89.3**	**96.4**	**0.59**	**3.69**		
1/25/07 12:58:45	**15.5**	**83.0**	**97.7**	**0.75**	**3.63**		
1/25/07 12:59:00	**15.9**	**97.8**	**98.2**	**0.84**	**3.61**		
1/25/07 12:59:15	**17.9**	**134.7**	**97.4**	**0.84**	**3.63**		
1/25/07 12:59:30	**16.6**	**126.4**	**97.1**	**0.71**	**3.66**		
1/25/07 12:59:45	**16.2**	**87.5**	**98.5**	**0.37**	**3.72**		
1/25/07 13:00:00	**16.1**	**67.4**	**99.0**	**0.35**	**3.70**		
1/25/07 13:00:15	**16.7**	**58.0**	**98.4**	**0.47**	**3.67**		
1/25/07 13:00:30	**16.5**	**56.7**	**96.0**	**0.52**	**3.66**		
1/25/07 13:00:45	**16.5**	**116.7**	**98.1**	**0.51**	**3.68**		
1/25/07 13:01:00	**18.0**	**297.1**	**98.1**	**0.49**	**3.68**		
1/25/07 13:01:15	**18.4**	**393.8**	**98.3**	**0.48**	**3.69**		
1/25/07 13:01:30	**18.4**	**328.1**	**99.7**	**0.28**	**3.71**		
1/25/07 13:01:45	**17.1**	**169.2**	**101.2**	**0.10**	**3.75**		
1/25/07 13:02:00	**16.2**	**101.6**	**101.5**	**0.07**	**3.78**		
1/25/07 13:02:15	**16.2**	**66.8**	**100.9**	**0.16**	**3.74**		
1/25/07 13:02:30	**16.3**	**61.5**	**100.8**	**0.29**	**3.67**		
1/25/07 13:02:45	**16.8**	**61.0**	**102.0**	**0.34**	**3.65**		
1/25/07 13:03:00	**16.6**	**61.4**	**101.6**	**0.34**	**3.65**		
1/25/07 13:03:15	**16.2**	**59.5**	**100.0**	**0.29**	**3.68**		

Valero - Port Arthur, TX
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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 13:03:30	15.9	57.9	99.0	0.25	3.70	
1/25/07 13:03:45	15.9	57.0	99.1	0.28	3.68	
1/25/07 13:04:00	15.8	56.7	98.7	0.31	3.65	
1/25/07 13:04:15	16.1	56.0	97.8	0.34	3.65	
1/25/07 13:04:30	16.7	56.2	97.9	0.34	3.65	
1/25/07 13:04:45	16.3	56.0	98.5	0.32	3.66	
1/25/07 13:05:00	15.7	57.2	99.0	0.28	3.68	
1/25/07 13:05:15	15.8	60.0	99.3	0.29	3.68	
1/25/07 13:05:30	16.2	63.7	99.1	0.35	3.65	
1/25/07 13:05:45	16.7	70.3	99.1	0.36	3.64	
1/25/07 13:06:00	17.1	77.0	99.4	0.31	3.66	
1/25/07 13:06:15	17.1	81.0	99.8	0.25	3.68	
1/25/07 13:06:30	16.2	77.0	100.0	0.19	3.71	
1/25/07 13:06:45	15.9	68.8	100.0	0.18	3.72	
1/25/07 13:07:00	15.7	64.3	99.8	0.22	3.69	
1/25/07 13:07:15	16.0	62.5	100.1	0.28	3.65	
1/25/07 13:07:30	16.3	65.2	100.4	0.30	3.65	
1/25/07 13:07:45	16.5	70.5	100.2	0.28	3.66	
1/25/07 13:08:00	16.3	70.3	99.7	0.25	3.67	
1/25/07 13:08:15	16.0	66.5	99.4	0.22	3.68	
1/25/07 13:08:30	15.8	63.5	99.6	0.21	3.67	
1/25/07 13:08:45	15.8	65.8	99.8	0.23	3.65	
1/25/07 13:09:00	16.6	75.5	99.5	0.26	3.64	
1/25/07 13:09:15	16.8	85.3	99.6	0.26	3.64	
1/25/07 13:09:30	16.3	82.9	100.0	0.21	3.67	
1/25/07 13:09:45	16.4	73.8	102.0	0.17	3.69	
1/25/07 13:10:00	15.8	68.3	103.1	0.19	3.67	
1/25/07 13:10:15	15.6	63.5	101.6	0.21	3.67	
1/25/07 13:10:30	15.7	61.8	100.3	0.25	3.64	
1/25/07 13:10:45	16.2	62.8	100.1	0.30	3.63	
1/25/07 13:11:00	16.5	66.7	100.5	0.31	3.62	
1/25/07 13:11:15	16.6	70.8	100.8	0.29	3.65	
1/25/07 13:11:30	16.3	69.9	100.6	0.24	3.68	
1/25/07 13:11:45	15.8	66.5	100.2	0.22	3.68	
1/25/07 13:12:00	15.9	64.0	100.0	0.24	3.66	
1/25/07 13:12:15	15.8	62.8	99.8	0.29	3.64	
1/25/07 13:12:30	16.2	63.7	99.6	0.31	3.63	
1/25/07 13:12:45	16.5	65.3	99.5	0.31	3.63	
1/25/07 13:13:00	16.5	64.8	99.2	0.28	3.64	
1/25/07 13:13:15	16.3	62.0	99.1	0.25	3.86	
1/25/07 13:13:30	15.9	60.7	99.3	0.24	3.66	
1/25/07 13:13:45	15.9	59.8	99.8	0.26	3.65	
1/25/07 13:14:00	15.9	59.5	100.3	0.30	3.64	
1/25/07 13:14:15	16.2	59.3	99.9	0.34	3.63	
1/25/07 13:14:30	16.5	58.7	99.7	0.36	3.61	
1/25/07 13:14:45	16.7	59.5	99.6	0.35	3.62	
1/25/07 13:15:00	16.4	60.3	99.9	0.31	3.65	
1/25/07 13:15:15	16.2	61.5	100.1	0.28	3.66	
1/25/07 13:15:30	16.0	61.7	100.5	0.28	3.66	
1/25/07 13:15:45	16.0	60.3	100.8	0.33	3.65	
1/25/07 13:16:00	16.2	60.0	100.8	0.36	3.64	
1/25/07 13:16:15	16.5	61.5	100.8	0.37	3.64	
1/25/07 13:16:30	16.3	62.4	100.7	0.34	3.66	
1/25/07 13:16:45	16.2	60.8	100.8	0.29	3.68	
1/25/07 13:17:00	15.8	59.3	101.0	0.28	3.70	
1/25/07 13:17:15	15.6	59.8	101.3	0.31	3.67	
1/25/07 13:17:30	15.7	60.8	101.3	0.34	3.64	
1/25/07 13:17:45	15.9	60.5	100.9	0.36	3.63	
1/25/07 13:18:00	16.2	59.7	100.6	0.38	3.63	
1/25/07 13:18:15	16.2	59.0	100.5	0.36	3.65	
1/25/07 13:18:30	15.9	59.0	100.6	0.33	3.66	
1/25/07 13:18:45	15.8	58.3	100.6	0.30	3.67	
1/25/07 13:19:00	15.7	58.0	100.6	0.30	3.66	
1/25/07 13:19:15	15.9	58.3	100.5	0.33	3.65	
1/25/07 13:19:30	16.0	59.7	100.5	0.34	3.64	
1/25/07 13:19:45	16.1	61.8	100.6	0.32	3.64	
1/25/07 13:20:00	15.9	61.7	101.0	0.30	3.65	
1/25/07 13:20:15	15.5	59.5	100.7	0.27	3.66	
1/25/07 13:20:30	15.5	58.3	99.8	0.27	3.65	
1/25/07 13:20:45	15.4	60.0	99.3	0.32	3.63	
1/25/07 13:21:00	15.5	60.9	99.5	0.35	3.62	
1/25/07 13:21:15	15.8	60.3	99.4	0.37	3.61	
1/25/07 13:21:30	16.0	59.3	99.2	0.36	3.61	
1/25/07 13:21:45	15.7	59.0	99.7	0.32	3.64	
1/25/07 13:22:00	15.5	58.7	100.2	0.28	3.67	
1/25/07 13:22:15	15.5	57.5	100.0	0.28	3.66	
1/25/07 13:22:30	15.4	57.9	99.8	0.33	3.64	
1/25/07 13:22:45	15.5	57.5	99.2	0.35	3.64	
1/25/07 13:23:00	15.8	56.7	99.1	0.35	3.64	
1/25/07 13:23:15	15.9	55.8	99.2	0.35	3.64	
1/25/07 13:23:30	15.8	56.4	99.2	0.34	3.66	
1/25/07 13:23:45	15.5	58.3	99.2	0.32	3.67	
1/25/07 13:24:00	15.5	59.3	99.6	0.33	3.66	
1/25/07 13:24:15	15.6	59.3	100.2	0.35	3.64	
1/25/07 13:24:30	16.0	59.4	101.9	0.37	3.63	
1/25/07 13:24:45	16.0	59.5	103.4	0.37	3.64	
1/25/07 13:25:00	15.9	59.3	102.5	0.32	3.66	
1/25/07 13:25:15	15.3	58.0	102.5	0.28	3.68	
1/25/07 13:25:30	15.3	57.2	103.6	0.29	3.66	
1/25/07 13:25:45	15.2	58.3	103.2	0.34	3.64	
1/25/07 13:26:00	15.1	59.8	101.7	0.37	3.63	
1/25/07 13:26:15	15.5	60.5	100.8	0.39	3.61	
1/25/07 13:26:30	15.8	60.5	100.4	0.39	3.62	
1/25/07 13:26:45	15.8	58.8	100.5	0.35	3.64	
1/25/07 13:27:00	15.6	57.8	100.9	0.31	3.65	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 13:27:15	15.3	57.3	101.0	0.30	3.66	
1/25/07 13:27:30	15.3	57.4	102.2	0.32	3.65	
1/25/07 13:27:45	15.2	59.0	102.2	0.36	3.64	
1/25/07 13:28:00	15.6	58.3	100.9	0.37	3.63	
1/25/07 13:28:15	15.9	55.8	99.8	0.36	3.63	
1/25/07 13:28:30	15.8	54.7	99.2	0.35	3.63	
1/25/07 13:28:45	15.7	54.5	99.5	0.33	3.65	
1/25/07 13:29:00	15.4	55.4	100.2	0.32	3.66	
1/25/07 13:29:15	15.4	57.0	100.2	0.35	3.64	
1/25/07 13:29:30	15.2	57.9	100.3	0.37	3.63	
1/25/07 13:29:45	15.7	57.5	100.7	0.38	3.62	
1/25/07 13:30:00	16.1	56.7	100.7	0.38	3.62	
1/25/07 13:30:15	15.9	56.5	100.6	0.36	3.64	
1/25/07 13:30:30	15.4	57.8	101.4	0.33	3.66	
1/25/07 13:30:45	15.1	60.0	101.6	0.32	3.67	
1/25/07 13:31:00	15.1	60.5	101.1	0.36	3.64	
1/25/07 13:31:15	15.3	59.5	100.4	0.38	3.63	
1/25/07 13:31:30	15.7	58.3	100.5	0.39	3.60	
1/25/07 13:31:45	16.1	58.3	100.8	0.37	3.62	
1/25/07 13:32:00	16.0	58.5	100.4	0.34	3.64	
1/25/07 13:32:15	15.8	57.0	99.9	0.30	3.66	
1/25/07 13:32:30	15.4	56.5	99.8	0.29	3.66	
1/25/07 13:32:45	15.1	59.0	99.5	0.31	3.65	
1/25/07 13:33:00	15.3	60.4	99.3	0.35	3.62	
1/25/07 13:33:15	15.5	59.5	99.5	0.39	3.60	
1/25/07 13:33:30	15.6	57.5	101.3	0.40	3.61	
1/25/07 13:33:45	15.7	56.5	101.8	0.38	3.63	
1/25/07 13:34:00	15.6	56.5	100.4	0.35	3.65	
1/25/07 13:34:15	15.3	56.8	99.8	0.32	3.62	
1/25/07 13:34:30	15.2	57.4	99.8	0.32	3.62	
1/25/07 13:34:45	15.1	57.3	99.5	0.35	3.60	
1/25/07 13:35:00	15.2	57.2	99.3	0.37	3.60	
1/25/07 13:35:15	15.7	57.5	99.0	0.38	3.59	
1/25/07 13:35:30	15.7	56.8	98.9	0.38	3.60	
1/25/07 13:35:45	15.6	57.0	99.2	0.35	3.61	
1/25/07 13:36:00	15.2	59.0	99.2	0.32	3.63	
1/25/07 13:36:15	14.9	62.3	99.4	0.32	3.62	
1/25/07 13:36:30	15.0	63.0	99.4	0.36	3.60	
1/25/07 13:36:45	15.5	60.3	99.3	0.39	3.59	
1/25/07 13:37:00	16.0	58.8	99.2	0.39	3.60	
1/25/07 13:37:15	16.2	57.8	99.4	0.36	3.62	
1/25/07 13:37:30	15.9	58.4	99.3	0.31	3.66	
1/25/07 13:37:45	15.5	60.0	99.0	0.28	3.67	
1/25/07 13:38:00	15.5	60.9	98.8	0.30	3.65	
1/25/07 13:38:15	15.5	61.0	99.0	0.36	3.63	
1/25/07 13:36:30	15.9	59.8	99.1	0.40	3.62	
1/25/07 13:38:45	16.3	58.5	99.0	0.40	3.61	
1/25/07 13:39:00	16.3	57.3	98.7	0.37	3.63	
1/25/07 13:39:15	15.8	57.0	99.0	0.32	3.66	
1/25/07 13:39:30	15.4	59.9	99.0	0.31	3.65	
1/25/07 13:39:45	15.3	62.0	99.4	0.35	3.63	
1/25/07 13:40:00	15.7	61.3	99.4	0.39	3.61	
1/25/07 13:40:15	16.1	60.3	99.6	0.41	3.60	
1/25/07 13:40:30	16.4	60.6	100.0	0.38	3.62	
1/25/07 13:40:45	16.1	60.3	99.8	0.33	3.65	
1/25/07 13:41:00	16.1	58.8	99.1	0.30	3.67	
1/25/07 13:41:15	15.9	57.8	98.4	0.26	3.68	
1/25/07 13:41:30	15.7	58.5	98.1	0.30	3.64	
1/25/07 13:41:45	15.7	59.3	98.0	0.34	3.62	
1/25/07 13:42:00	15.9	59.2	98.8	0.38	3.62	
1/25/07 13:42:15	16.3	59.5	99.3	0.39	3.62	
1/25/07 13:42:30	16.7	60.5	99.0	0.36	3.64	
1/25/07 13:42:45	16.2	60.0	98.6	0.32	3.66	
1/25/07 13:43:00	15.8	59.5	98.0	0.28	3.67	
1/25/07 13:43:15	16.1	59.0	97.8	0.27	3.67	
1/25/07 13:43:30	16.4	58.7	98.0	0.31	3.65	
1/25/07 13:43:45	16.1	58.8	98.4	0.31	3.66	
1/25/07 13:44:00	16.1	59.3	98.8	0.29	3.67	
1/25/07 13:44:15	16.3	60.0	98.2	0.29	3.65	
1/25/07 13:44:30	16.1	60.2	98.0	0.29	3.66	
1/25/07 13:44:45	15.3	61.0	98.6	0.28	3.67	
1/25/07 13:45:00	15.1	61.9	98.7	0.29	3.65	
1/25/07 13:45:15	15.6	61.0	98.3	0.34	3.61	
1/25/07 13:45:30	16.1	60.3	97.9	0.37	3.60	
1/25/07 13:45:45	16.4	61.3	97.6	0.35	3.61	
1/25/07 13:46:00	16.4	61.7	97.4	0.30	3.63	
1/25/07 13:46:15	15.9	61.5	97.8	0.27	3.63	
1/25/07 13:46:30	15.7	60.0	98.0	0.25	3.64	
1/25/07 13:46:45	15.6	58.5	97.6	0.27	3.62	
1/25/07 13:47:00	16.0	57.8	97.8	0.31	3.61	
1/25/07 13:47:15	16.1	58.0	98.0	0.34	3.61	
1/25/07 13:47:30	16.5	58.3	98.1	0.34	3.62	
1/25/07 13:47:45	16.4	57.8	98.0	0.32	3.63	
1/25/07 13:48:00	15.9	57.5	98.3	0.30	3.65	
1/25/07 13:48:15	15.3	58.3	98.6	0.28	3.66	
1/25/07 13:48:30	15.1	60.0	98.5	0.32	3.63	
1/25/07 13:48:45	15.6	60.8	96.0	0.38	3.59	
1/25/07 13:49:00	15.7	58.7	97.5	0.40	3.57	
1/25/07 13:49:15	16.3	56.3	97.6	0.39	3.58	
1/25/07 13:49:30	16.5	54.8	97.8	0.37	3.60	
1/25/07 13:49:45	16.2	54.8	98.1	0.33	3.64	
1/25/07 13:50:00	16.1	56.0	98.2	0.32	3.67	End Run No. 2
1/25/07 13:50:15	16.0	56.3	98.3	0.34	3.66	
1/25/07 13:50:30	15.3	43.4	98.1	0.38	3.61	
1/25/07 13:50:45	4.1	23.1	97.1	0.44	3.52	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 13:51:00	1.5	8.4	91.6	0.98	2.29		
1/25/07 13:51:15	0.2	1.8	129.9	0.88	0.80		
1/25/07 13:51:30	0.2	0.7	181.4	0.27	0.20		
1/25/07 13:51:45	0.1	0.6	124.6	0.04	0.05		
1/25/07 13:52:00	0.1	0.3	133.6	-0.01	0.02		
1/25/07 13:52:15	0.1	0.3	110.3	-0.01	0.01		
1/25/07 13:52:30	0.1	0.2	102.8	-0.02	0.00		
1/25/07 13:52:45	0.1	0.3	101.0	-0.02	0.00		
1/25/07 13:53:00	0.1	0.3	100.5	-0.02	0.00		
1/25/07 13:53:15	0.1	0.1	100.3	-0.02	0.00		
1/25/07 13:53:30	0.1	0.2	100.2	-0.02	0.00		
1/25/07 13:53:45	0.1	0.3	100.4	-0.02	0.00		
1/25/07 13:54:00	0.1	0.3	100.6	-0.02	0.00		
1/25/07 13:54:15	0.1	0.1	100.6	-0.02	0.00		
1/25/07 13:54:30	0.1	0.1	100.7	-0.02	0.00	System Bias	
1/25/07 13:54:45	0.1	0.1	100.6	-0.02	0.00	100 ppm SO2	
1/25/07 13:55:00	0.1	0.5	100.6	-0.02	0.00		100.7
1/25/07 13:55:15	0.1	0.6	100.8	-0.02	0.00		
1/25/07 13:55:30	0.1	0.3	100.8	-0.02	-0.01		
1/25/07 13:55:45	22.8	0.3	100.3	-0.02	0.00		
1/25/07 13:56:00	33.3	0.2	97.7	0.00	0.00		
1/25/07 13:56:15	39.2	0.6	77.6	0.03	0.00		
1/25/07 13:56:30	41.8	0.3	46.7	0.01	0.00		
1/25/07 13:56:45	44.6	0.6	23.8	-0.01	0.00		
1/25/07 13:57:00	47.7	0.5	12.7	-0.01	0.00		
1/25/07 13:57:15	51.6	0.3	8.3	-0.01	0.00		
1/25/07 13:57:30	51.6	0.4	5.9	-0.02	0.00		
1/25/07 13:57:45	49.8	0.3	4.4	-0.02	0.00		
1/25/07 13:58:00	49.1	0.2	3.3	-0.02	-0.01	System Bias	
1/25/07 13:58:15	48.8	0.1	2.5	-0.02	-0.01	50 ppm NOx	
1/25/07 13:58:30	48.8	0.1	2.1	-0.02	-0.01		48.8
1/25/07 13:58:45	48.8	0.3	1.7	-0.02	-0.01		
1/25/07 13:59:00	48.7	0.2	1.4	-0.02	0.00		
1/25/07 13:59:15	40.5	5.6	1.0	-0.02	0.00		
1/25/07 13:59:30	32.1	67.3	0.9	-0.02	-0.01		
1/25/07 13:59:45	7.6	154.5	0.7	-0.02	-0.01		
1/25/07 14:00:00	3.3	216.5	0.5	0.01	0.00		
1/25/07 14:00:15	2.0	242.4	0.4	0.01	-0.01		
1/25/07 14:00:30	1.5	247.3	0.4	-0.01	-0.01		
1/25/07 14:00:45	1.2	249.2	0.3	-0.02	-0.01		
1/25/07 14:01:00	1.1	249.2	0.3	-0.02	-0.01		
1/25/07 14:01:15	0.9	249.7	0.2	-0.02	-0.01	System Bias	
1/25/07 14:01:30	0.8	249.9	0.2	-0.02	-0.01	250 ppm CO	
1/25/07 14:01:45	0.7	249.9	0.1	-0.02	0.00		249.9
1/25/07 14:02:00	0.6	250.0	0.1	-0.02	-0.02		
1/25/07 14:02:15	0.6	249.9	0.0	-0.02	-0.02		
1/25/07 14:02:30	0.5	248.5	0.0	-0.02	-0.02		
1/25/07 14:02:45	1.7	219.2	-0.1	-0.02	-0.01		
1/25/07 14:03:00	1.1	134.9	-0.1	-0.02	0.12		
1/25/07 14:03:15	0.4	58.5	-0.2	-0.02	2.13		
1/25/07 14:03:30	0.3	17.9	-0.2	-0.03	4.82		
1/25/07 14:03:45	0.3	2.1	-0.2	-0.04	6.46		
1/25/07 14:04:00	0.3	-0.7	-0.3	-0.05	6.99		
1/25/07 14:04:15	0.3	-0.9	-0.4	-0.05	7.10		
1/25/07 14:04:30	0.2	-0.9	-0.4	-0.05	7.12		
1/25/07 14:04:45	0.2	-0.9	-0.5	-0.05	7.13		
1/25/07 14:05:00	0.2	-1.3	-0.4	-0.05	7.13		
1/25/07 14:05:15	0.2	-1.2	-0.6	-0.05	7.14	System Bias	
1/25/07 14:05:30	0.2	-0.9	-0.6	-0.05	7.13	7.0% CO2	
1/25/07 14:05:45	0.2	-0.9	-0.5	-0.05	7.13		7.13
1/25/07 14:06:00	0.2	-0.9	-0.7	-0.05	7.14	Zero O2	
1/25/07 14:06:15	0.4	-1.2	-0.6	-0.05	7.14		-0.05
1/25/07 14:06:30	1.0	-0.7	-0.7	-0.05	7.12		
1/25/07 14:06:45	0.3	-0.2	-0.6	0.36	5.80		
1/25/07 14:07:00	0.2	0.1	-0.7	2.30	2.77		
1/25/07 14:07:15	0.2	0.1	-0.7	4.15	0.75		
1/25/07 14:07:30	0.2	0.1	-0.7	4.80	0.19		
1/25/07 14:07:45	0.2	0.1	-0.7	4.93	0.07		
1/25/07 14:08:00	0.2	0.1	-0.8	4.98	0.04		
1/25/07 14:08:15	0.2	0.1	-0.7	4.99	0.03	System Bias	
1/25/07 14:08:30	0.1	0.1	-0.7	5.00	0.02	5.0% O2	
1/25/07 14:08:45	0.1	0.1	-0.7	5.00	0.02		5.00
1/25/07 14:09:00	0.1	0.1	-0.6	5.00	0.01	Zero NOx	
1/25/07 14:09:15	0.1	0.1	-0.7	5.01	0.01		0.1
1/25/07 14:09:30	0.1	1.5	-0.8	5.01	0.01	Zero CO	
1/25/07 14:09:45	6.0	12.6	-0.7	5.01	0.01		0.1
1/25/07 14:10:00	14.5	33.3	-0.8	4.99	0.06	Zero SO2	
1/25/07 14:10:15	15.8	49.3	9.4	4.01	1.04		-0.7
1/25/07 14:10:30	16.2	56.7	40.6	1.88	2.57	Zero CO2	
1/25/07 14:10:45	16.0	58.5	70.7	0.70	3.33		0.02
1/25/07 14:11:00	15.6	58.9	85.0	0.36	3.55		
1/25/07 14:11:15	15.4	59.0	90.3	0.31	3.59		
1/25/07 14:11:30	15.6	58.8	92.7	0.34	3.57		
1/25/07 14:11:45	15.8	57.8	93.7	0.38	3.56		
1/25/07 14:12:00	16.1	57.8	94.7	0.39	3.57		
1/25/07 14:12:15	16.2	57.8	95.2	0.38	3.58		
1/25/07 14:12:30	16.2	57.9	96.1	0.35	3.59		
1/25/07 14:12:45	15.9	56.8	97.2	0.30	3.62		
1/25/07 14:13:00	15.8	55.7	97.3	0.28	3.62		
1/25/07 14:13:15	15.7	54.8	97.1	0.30	3.62		
1/25/07 14:13:30	15.8	56.8	96.9	0.33	3.60		
1/25/07 14:13:45	16.1	57.3	97.2	0.36	3.60	Start Run No. 3	
1/25/07 14:14:00	**16.3**	**58.0**	**100.2**	**0.37**	**3.58**		
1/25/07 14:14:15	**16.0**	**58.3**	**101.8**	**0.34**	**3.60**		
1/25/07 14:14:30	**15.9**	**57.5**	**100.1**	**0.29**	**3.63**		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 14:14:45	15.8	56.8	99.1	0.28	3.63	
1/25/07 14:15:00	15.9	56.9	98.7	0.31	3.63	
1/25/07 14:15:15	16.2	56.8	98.3	0.36	3.60	
1/25/07 14:15:30	16.6	55.9	98.1	0.39	3.60	
1/25/07 14:15:45	16.7	54.5	97.9	0.38	3.61	
1/25/07 14:16:00	16.5	55.2	98.2	0.34	3.63	
1/25/07 14:16:15	16.1	56.0	98.0	0.31	3.66	
1/25/07 14:16:30	15.9	56.3	97.8	0.30	3.66	
1/25/07 14:16:45	15.8	57.0	97.6	0.31	3.64	
1/25/07 14:17:00	15.9	57.8	97.3	0.35	3.63	
1/25/07 14:17:15	16.5	57.5	97.5	0.37	3.62	
1/25/07 14:17:30	16.5	56.9	97.8	0.37	3.61	
1/25/07 14:17:45	16.2	55.5	98.0	0.33	3.62	
1/25/07 14:18:00	15.9	54.8	97.8	0.29	3.64	
1/25/07 14:18:15	15.5	56.0	97.6	0.30	3.64	
1/25/07 14:18:30	15.5	58.2	97.3	0.34	3.62	
1/25/07 14:18:45	15.6	58.8	97.3	0.36	3.60	
1/25/07 14:19:00	16.0	58.2	97.1	0.42	3.58	
1/25/07 14:19:15	16.5	56.0	97.9	0.42	3.59	
1/25/07 14:19:30	16.3	56.0	97.5	0.38	3.60	
1/25/07 14:19:45	15.9	56.5	96.7	0.33	3.62	
1/25/07 14:20:00	15.6	57.4	96.6	0.28	3.63	
1/25/07 14:20:15	15.6	58.0	97.4	0.30	3.62	
1/25/07 14:20:30	15.8	57.8	98.1	0.34	3.60	
1/25/07 14:20:45	15.8	57.5	97.9	0.37	3.58	
1/25/07 14:21:00	16.2	56.9	97.4	0.38	3.58	
1/25/07 14:21:15	16.3	56.5	96.9	0.37	3.58	
1/25/07 14:21:30	16.1	56.3	96.9	0.33	3.60	
1/25/07 14:21:45	15.9	56.3	96.9	0.30	3.62	
1/25/07 14:22:00	15.8	57.0	97.0	0.30	3.61	
1/25/07 14:22:15	15.7	57.3	97.3	0.34	3.60	
1/25/07 14:22:30	16.1	56.7	97.3	0.36	3.60	
1/25/07 14:22:45	16.5	58.3	97.2	0.38	3.59	
1/25/07 14:23:00	16.3	59.0	97.3	0.37	3.60	
1/25/07 14:23:15	16.1	58.8	98.0	0.31	3.62	
1/25/07 14:23:30	16.0	56.9	98.7	0.29	3.63	
1/25/07 14:23:45	15.9	55.8	98.2	0.32	3.62	
1/25/07 14:24:00	15.9	56.2	97.2	0.36	3.61	
1/25/07 14:24:15	16.0	57.0	97.4	0.38	3.61	
1/25/07 14:24:30	16.3	57.0	98.6	0.38	3.62	
1/25/07 14:24:45	16.3	56.0	98.6	0.37	3.63	
1/25/07 14:25:00	16.1	55.7	98.3	0.36	3.65	
1/25/07 14:25:15	15.9	56.3	97.7	0.35	3.66	
1/25/07 14:25:30	15.8	57.2	97.2	0.36	3.64	
1/25/07 14:25:45	15.8	57.8	96.9	0.38	3.62	
1/25/07 14:26:00	16.2	55.9	96.9	0.39	3.61	
1/25/07 14:26:15	16.4	55.8	97.0	0.40	3.62	
1/25/07 14:26:30	16.3	55.5	97.0	0.38	3.63	
1/25/07 14:26:45	16.2	55.8	97.2	0.37	3.61	
1/25/07 14:27:00	16.1	54.7	97.5	0.35	3.62	
1/25/07 14:27:15	16.0	54.8	98.1	0.36	3.62	
1/25/07 14:27:30	16.1	55.4	98.1	0.38	3.63	
1/25/07 14:27:45	16.4	54.8	97.7	0.38	3.62	
1/25/07 14:28:00	16.3	54.2	97.8	0.36	3.63	
1/25/07 14:28:15	16.1	54.8	97.9	0.33	3.64	
1/25/07 14:28:30	16.3	56.0	97.6	0.31	3.64	
1/25/07 14:28:45	15.9	56.3	99.3	0.32	3.63	
1/25/07 14:29:00	15.8	57.0	109.7	0.35	3.61	
1/25/07 14:29:15	15.9	56.8	112.5	0.38	3.60	
1/25/07 14:29:30	16.2	55.4	105.1	0.40	3.59	
1/25/07 14:29:45	16.4	55.0	100.2	0.40	3.60	
1/25/07 14:30:00	16.1	56.3	98.5	0.38	3.61	
1/25/07 14:30:15	15.8	57.5	97.7	0.37	3.62	
1/25/07 14:30:30	15.8	58.5	97.0	0.38	3.61	
1/25/07 14:30:45	16.1	57.8	97.0	0.40	3.60	
1/25/07 14:31:00	16.6	55.9	96.8	0.41	3.61	
1/25/07 14:31:15	16.6	55.0	96.3	0.38	3.63	
1/25/07 14:31:30	16.1	55.2	96.2	0.33	3.65	
1/25/07 14:31:45	15.8	55.8	96.6	0.29	3.67	
1/25/07 14:32:00	15.7	57.3	97.4	0.31	3.65	
1/25/07 14:32:15	15.6	58.0	97.9	0.36	3.63	
1/25/07 14:32:30	15.7	57.5	97.5	0.39	3.60	
1/25/07 14:32:45	15.9	57.5	97.0	0.42	3.59	
1/25/07 14:33:00	16.1	56.7	96.5	0.43	3.59	
1/25/07 14:33:15	16.3	56.0	95.8	0.42	3.58	
1/25/07 14:33:30	16.1	54.0	95.8	0.39	3.59	
1/25/07 14:33:45	15.8	53.8	96.2	0.36	3.61	
1/25/07 14:34:00	15.8	54.2	96.2	0.34	3.62	
1/25/07 14:34:15	15.8	54.5	96.0	0.35	3.61	
1/25/07 14:34:30	15.9	55.0	96.0	0.38	3.58	
1/25/07 14:34:45	16.1	54.8	96.1	0.38	3.57	
1/25/07 14:35:00	16.1	54.8	96.0	0.37	3.59	
1/25/07 14:35:15	15.9	56.0	96.2	0.35	3.60	
1/25/07 14:35:30	16.0	56.8	96.4	0.34	3.62	
1/25/07 14:35:45	15.8	57.5	96.9	0.36	3.63	
1/25/07 14:36:00	16.0	57.9	97.1	0.38	3.62	
1/25/07 14:36:15	16.1	57.0	97.0	0.39	3.62	
1/25/07 14:36:30	16.3	55.4	96.8	0.40	3.61	
1/25/07 14:36:45	16.2	55.0	96.6	0.39	3.62	
1/25/07 14:37:00	16.0	55.9	96.7	0.37	3.62	
1/25/07 14:37:15	16.2	55.5	96.9	0.35	3.63	
1/25/07 14:37:30	16.0	55.4	97.2	0.35	3.62	
1/25/07 14:37:45	16.1	55.0	97.4	0.36	3.62	
1/25/07 14:38:00	16.2	54.4	97.5	0.37	3.61	
1/25/07 14:38:15	16.2	53.8	97.6	0.37	3.61	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 14:38:30	16.2	54.0	97.1	0.36	3.63	
1/25/07 14:38:45	15.7	56.5	96.8	0.34	3.65	
1/25/07 14:39:00	15.6	59.5	97.0	0.34	3.64	
1/25/07 14:39:15	16.1	58.5	97.3	0.38	3.61	
1/25/07 14:39:30	16.6	55.0	97.6	0.41	3.60	
1/25/07 14:39:45	16.8	53.3	97.7	0.38	3.62	
1/25/07 14:40:00	16.6	54.2	97.4	0.32	3.66	
1/25/07 14:40:15	16.0	55.3	97.1	0.28	3.68	
1/25/07 14:40:30	15.7	57.3	96.9	0.30	3.67	
1/25/07 14:40:45	15.7	58.3	96.6	0.35	3.65	
1/25/07 14:41:00	16.3	57.8	96.1	0.41	3.63	
1/25/07 14:41:15	16.6	56.8	95.1	0.43	3.63	
1/25/07 14:41:30	16.7	54.9	94.7	0.40	3.63	
1/25/07 14:41:45	16.7	54.0	94.7	0.36	3.64	
1/25/07 14:42:00	16.3	54.4	96.5	0.33	3.65	
1/25/07 14:42:15	15.7	56.5	97.9	0.32	3.66	
1/25/07 14:42:30	15.8	57.5	96.9	0.33	3.65	
1/25/07 14:42:45	16.2	57.0	95.8	0.37	3.62	
1/25/07 14:43:00	16.4	54.9	95.7	0.39	3.61	
1/25/07 14:43:15	16.5	54.5	95.7	0.37	3.61	
1/25/07 14:43:30	16.3	55.3	95.2	0.34	3.63	
1/25/07 14:43:45	16.1	56.5	95.0	0.32	3.65	
1/25/07 14:44:00	16.0	57.7	95.5	0.32	3.63	
1/25/07 14:44:15	16.0	58.0	96.1	0.35	3.62	
1/25/07 14:44:30	16.3	57.4	96.2	0.38	3.62	
1/25/07 14:44:45	16.6	57.0	96.4	0.39	3.62	
1/25/07 14:45:00	16.5	56.9	96.7	0.37	3.62	
1/25/07 14:45:15	16.4	56.3	96.7	0.32	3.64	
1/25/07 14:45:30	15.8	56.8	96.8	0.29	3.64	
1/25/07 14:45:45	15.7	58.0	96.5	0.29	3.63	
1/25/07 14:46:00	15.9	58.4	96.3	0.33	3.61	
1/25/07 14:46:15	16.1	57.8	96.0	0.37	3.59	
1/25/07 14:46:30	16.7	56.5	95.9	0.38	3.58	
1/25/07 14:46:45	16.7	56.5	95.7	0.36	3.61	
1/25/07 14:47:00	15.9	58.0	95.5	0.32	3.61	
1/25/07 14:47:15	15.5	60.0	95.4	0.30	3.63	
1/25/07 14:47:30	15.7	61.3	95.4	0.33	3.61	
1/25/07 14:47:45	16.0	59.8	95.4	0.39	3.59	
1/25/07 14:48:00	16.2	57.3	95.3	0.40	3.58	
1/25/07 14:48:15	16.2	56.5	95.2	0.36	3.59	
1/25/07 14:48:30	15.6	57.9	94.9	0.33	3.60	
1/25/07 14:48:45	15.5	59.8	95.2	0.31	3.61	
1/25/07 14:49:00	15.8	60.3	94.9	0.35	3.58	
1/25/07 14:49:15	16.0	59.0	94.4	0.38	3.56	
1/25/07 14:49:30	16.3	57.9	94.6	0.39	3.57	
1/25/07 14:49:45	16.3	57.5	95.2	0.36	3.59	
1/25/07 14:50:00	16.4	57.3	95.7	0.34	3.61	
1/25/07 14:50:15	16.2	58.0	96.1	0.33	3.63	
1/25/07 14:50:30	16.1	57.4	96.4	0.33	3.65	
1/25/07 14:50:45	16.0	57.3	96.3	0.32	3.61	
1/25/07 14:51:00	15.9	58.3	96.0	0.33	3.61	
1/25/07 14:51:15	16.1	59.3	95.7	0.34	3.60	
1/25/07 14:51:30	16.3	58.3	95.3	0.36	3.60	
1/25/07 14:51:45	16.7	57.0	95.2	0.37	3.60	
1/25/07 14:52:00	16.6	57.3	95.3	0.35	3.62	
1/25/07 14:52:15	15.9	58.8	95.5	0.31	3.64	
1/25/07 14:52:30	15.9	59.4	95.7	0.31	3.63	
1/25/07 14:52:45	16.4	58.5	96.0	0.37	3.60	
1/25/07 14:53:00	16.7	57.4	96.2	0.41	3.60	
1/25/07 14:53:15	16.6	57.0	95.8	0.36	3.63	
1/25/07 14:53:30	16.4	56.5	95.2	0.32	3.64	
1/25/07 14:53:45	16.1	56.8	95.0	0.30	3.64	
1/25/07 14:54:00	15.6	58.3	95.4	0.29	3.63	
1/25/07 14:54:15	15.7	58.5	95.3	0.32	3.61	
1/25/07 14:54:30	16.5	58.4	95.0	0.35	3.59	
1/25/07 14:54:45	16.6	58.3	94.8	0.36	3.59	
1/25/07 14:55:00	15.9	59.3	94.7	0.33	3.61	
1/25/07 14:55:15	15.9	60.3	94.7	0.30	3.62	
1/25/07 14:55:30	16.0	60.9	95.0	0.32	3.60	
1/25/07 14:55:45	16.3	60.3	95.3	0.35	3.59	
1/25/07 14:56:00	16.1	59.2	95.5	0.33	3.60	
1/25/07 14:56:15	16.0	59.5	95.1	0.30	3.61	
1/25/07 14:56:30	16.2	59.8	95.0	0.28	3.61	
1/25/07 14:56:45	16.2	60.8	95.1	0.30	3.61	
1/25/07 14:57:00	16.2	60.9	95.4	0.30	3.62	
1/25/07 14:57:15	16.2	60.3	95.7	0.28	3.63	
1/25/07 14:57:30	16.1	59.0	96.7	0.28	3.62	
1/25/07 14:57:45	16.0	59.0	99.7	0.30	3.63	
1/25/07 14:58:00	16.3	59.7	99.3	0.31	3.62	
1/25/07 14:58:15	16.8	60.3	97.4	0.31	3.61	
1/25/07 14:58:30	16.5	61.0	96.5	0.30	3.61	
1/25/07 14:58:45	16.0	61.3	96.2	0.26	3.61	
1/25/07 14:59:00	15.8	61.0	95.5	0.25	3.60	
1/25/07 14:59:15	16.1	60.8	95.6	0.31	3.59	
1/25/07 14:59:30	16.3	59.3	96.4	0.35	3.57	
1/25/07 14:59:45	16.6	58.8	96.4	0.34	3.58	
1/25/07 15:00:00	16.6	59.0	96.3	0.33	3.60	
1/25/07 15:00:15	16.5	59.0	96.4	0.31	3.62	
1/25/07 15:00:30	15.9	60.7	96.3	0.29	3.64	
1/25/07 15:00:45	15.7	61.3	96.9	0.30	3.64	
1/25/07 15:01:00	15.7	60.7	100.7	0.33	3.62	
1/25/07 15:01:15	16.0	58.8	101.4	0.37	3.61	
1/25/07 15:01:30	16.4	56.3	98.8	0.39	3.59	
1/25/07 15:01:45	16.6	55.3	97.3	0.37	3.61	
1/25/07 15:02:00	16.2	55.4	96.8	0.33	3.64	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 15:02:15	16.0	57.0	96.8	0.29	3.65		
1/25/07 15:02:30	15.9	58.2	96.6	0.30	3.64		
1/25/07 15:02:45	16.0	58.5	96.3	0.34	3.61		
1/25/07 15:03:00	16.1	59.0	95.8	0.37	3.59		
1/25/07 15:03:15	16.4	58.5	95.3	0.39	3.59		
1/25/07 15:03:30	16.3	56.4	95.1	0.38	3.59		
1/25/07 15:03:45	16.0	56.5	95.4	0.35	3.60		
1/25/07 15:04:00	15.8	58.0	97.9	0.33	3.61		
1/25/07 15:04:15	16.1	58.3	98.1	0.34	3.60		
1/25/07 15:04:30	16.1	57.7	96.8	0.38	3.60		
1/25/07 15:04:45	16.6	58.3	96.3	0.39	3.60		
1/25/07 15:05:00	16.9	58.5	96.2	0.37	3.60		
1/25/07 15:05:15	16.5	58.3	96.1	0.34	3.62		
1/25/07 15:05:30	16.3	58.2	95.9	0.30	3.64		
1/25/07 15:05:45	16.3	58.3	95.7	0.31	3.64		
1/25/07 15:06:00	16.3	59.0	95.8	0.34	3.63		
1/25/07 15:06:15	16.3	59.3	95.8	0.37	3.62		
1/25/07 15:06:30	16.4	59.5	95.9	0.39	3.62		
1/25/07 15:06:45	17.0	59.3	95.9	0.39	3.61		
1/25/07 15:07:00	16.9	59.3	95.8	0.36	3.61		
1/25/07 15:07:15	16.6	58.0	95.7	0.31	3.65		
1/25/07 15:07:30	16.3	56.7	96.2	0.27	3.67		
1/25/07 15:07:45	15.9	57.3	96.4	0.29	3.65		
1/25/07 15:08:00	16.2	57.5	96.5	0.33	3.62		
1/25/07 15:08:15	16.4	57.3	96.7	0.37	3.58		
1/25/07 15:08:30	16.7	55.4	96.9	0.37	3.60		
1/25/07 15:08:45	16.5	55.5	96.7	0.34	3.64		
1/25/07 15:09:00	16.1	57.4	96.7	0.31	3.63		
1/25/07 15:09:15	15.9	59.3	96.5	0.31	3.63		
1/25/07 15:09:30	15.9	61.0	96.5	0.34	3.62		
1/25/07 15:09:45	16.5	60.5	95.9	0.38	3.60		
1/25/07 15:10:00	16.7	58.8	96.3	0.39	3.60		
1/25/07 15:10:15	17.0	58.3	99.8	0.37	3.60		
1/25/07 15:10:30	16.6	58.0	101.2	0.33	3.62		
1/25/07 15:10:45	16.1	57.8	99.2	0.28	3.64		
1/25/07 15:11:00	16.0	56.9	97.8	0.28	3.64		
1/25/07 15:11:15	16.0	56.5	97.2	0.32	3.61		
1/25/07 15:11:30	16.4	56.4	96.7	0.35	3.60		
1/25/07 15:11:45	16.7	58.0	96.0	0.35	3.61		
1/25/07 15:12:00	16.4	56.8	95.8	0.33	3.62		
1/25/07 15:12:15	15.7	58.9	96.1	0.30	3.65		
1/25/07 15:12:30	15.6	61.2	96.6	0.32	3.64		
1/25/07 15:12:45	16.1	61.2	97.0	0.38	3.60		
1/25/07 15:13:00	16.3	59.5	96.9	0.41	3.59		
1/25/07 15:13:15	16.6	57.1	97.1	0.38	3.59		
1/25/07 15:13:30	16.6	55.3	97.2	0.36	3.63		
1/25/07 15:13:45	16.2	54.5	97.4	0.32	3.66		
1/25/07 15:14:00	16.0	55.3	97.5	0.31	3.67	End Run No. 3	
1/25/07 15:14:15	15.8	57.0	97.1	0.33	3.64		
1/25/07 15:14:30	14.1	49.2	97.0	0.38	3.62		
1/25/07 15:14:45	8.9	28.7	95.9	0.41	3.59		
1/25/07 15:15:00	5.2	10.6	90.1	0.80	2.75		
1/25/07 15:15:15	6.0	2.3	110.5	1.03	1.11		
1/25/07 15:15:30	1.3	0.4	181.5	0.41	0.29		
1/25/07 15:15:45	1.0	0.1	179.3	0.10	0.07		
1/25/07 15:16:00	0.9	0.1	134.9	0.01	0.02		
1/25/07 15:16:15	0.8	0.1	111.5	-0.01	0.01		
1/25/07 15:16:30	0.8	0.1	103.9	-0.02	0.00		
1/25/07 15:16:45	0.7	0.1	102.0	-0.02	0.00		
1/25/07 15:17:00	0.7	0.1	101.5	-0.02	0.00		
1/25/07 15:17:15	0.7	0.1	101.3	-0.02	0.00		
1/25/07 15:17:30	0.6	0.1	101.2	-0.02	0.00		
1/25/07 15:17:45	0.6	0.1	101.4	-0.02	-0.01		
1/25/07 15:18:00	0.6	0.1	101.6	-0.02	-0.01		
1/25/07 15:18:15	0.6	0.1	101.6	-0.02	-0.01		
1/25/07 15:18:30	0.5	-0.3	101.7	-0.02	-0.01	System Bias	
1/25/07 15:18:45	0.5	0.1	101.7	-0.02	-0.01	100 ppm SO2	
1/25/07 15:19:00	0.5	0.1	101.7	-0.02	-0.01		101.7
1/25/07 15:19:15	0.5	0.1	101.8	-0.02	-0.01		
1/25/07 15:19:30	0.4	0.1	101.8	-0.02	0.00		
1/25/07 15:19:45	5.1	0.1	102.0	-0.02	-0.01		
1/25/07 15:20:00	31.8	0.1	98.7	-0.02	0.00		
1/25/07 15:20:15	38.4	0.1	78.3	-0.02	-0.01		
1/25/07 15:20:30	42.5	0.1	47.2	-0.02	-0.01		
1/25/07 15:20:45	44.8	0.1	24.1	-0.02	-0.01		
1/25/07 15:21:00	47.2	0.0	12.9	-0.02	-0.01		
1/25/07 15:21:15	51.4	0.0	8.4	-0.02	-0.01		
1/25/07 15:21:30	51.0	0.1	5.9	-0.02	-0.01		
1/25/07 15:21:45	49.4	0.1	4.5	-0.02	-0.01		
1/25/07 15:22:00	48.6	0.1	3.3	-0.02	-0.01		
1/25/07 15:22:15	48.6	0.1	2.5	-0.02	-0.01	System Bias	
1/25/07 15:22:30	48.7	0.1	2.1	-0.02	-0.01	50 ppm NOx	
1/25/07 15:22:45	48.7	0.1	1.7	-0.02	-0.01		48.7
1/25/07 15:23:00	48.7	0.1	1.4	-0.02	-0.01		
1/25/07 15:23:15	48.7	0.1	1.0	-0.02	-0.01		
1/25/07 15:23:30	22.5	40.7	0.9	-0.02	-0.01		
1/25/07 15:23:45	14.2	129.9	0.8	-0.02	-0.01		
1/25/07 15:24:00	2.9	205.7	1.3	-0.02	-0.01		
1/25/07 15:24:15	1.8	238.3	2.1	-0.01	-0.01		
1/25/07 15:24:30	1.3	245.9	1.9	-0.02	-0.01		
1/25/07 15:24:45	1.1	247.8	1.3	-0.02	-0.01		
1/25/07 15:25:00	0.8	248.0	0.7	-0.02	0.00		
1/25/07 15:25:15	0.8	248.8	0.3	-0.03	-0.01		
1/25/07 15:25:30	0.7	249.4	0.2	-0.03	-0.02	System Bias	
1/25/07 15:25:45	0.6	249.4	0.0	-0.03	-0.02	250 ppm CO	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 15:26:00	0.5	249.4	0.0	-0.03	-0.02		249.4
1/25/07 15:26:15	0.5	249.4	-0.1	-0.03	-0.02		
1/25/07 15:26:30	0.5	249.5	-0.2	-0.03	-0.02		
1/25/07 15:26:45	0.4	237.2	-0.3	-0.03	-0.02		
1/25/07 15:27:00	2.3	161.0	-0.4	-0.03	-0.01		
1/25/07 15:27:15	0.4	77.8	-0.6	-0.02	1.24		
1/25/07 15:27:30	0.3	24.7	-0.6	-0.02	4.03		
1/25/07 15:27:45	0.3	4.1	-0.7	-0.04	6.03		
1/25/07 15:28:00	0.3	-0.5	-0.6	-0.04	6.87		
1/25/07 15:28:15	0.3	-0.9	-0.7	-0.05	7.04		
1/25/07 15:28:30	0.2	-1.0	-0.6	-0.05	7.09		
1/25/07 15:28:45	0.2	-1.4	-0.6	-0.05	7.13		
1/25/07 15:29:00	0.2	-1.3	-0.7	-0.05	7.13		
1/25/07 15:29:15	0.2	-1.3	-0.8	-0.05	7.14	System Bias	
1/25/07 15:29:30	0.2	-1.4	-0.8	-0.05	7.13	7.0% CO2	
1/25/07 15:29:45	0.2	-1.1	-0.8	-0.05	7.13		7.13
1/25/07 15:30:00	0.2	-1.4	-0.7	-0.05	7.13	Zero O2	
1/25/07 15:30:15	0.2	-1.1	-0.8	-0.05	7.14		-0.05
1/25/07 15:30:30	1.7	-0.8	-1.0	-0.05	7.14		
1/25/07 15:30:45	0.4	0.0	-1.0	0.12	6.43		
1/25/07 15:31:00	0.2	0.1	-0.9	1.70	3.53		
1/25/07 15:31:15	0.2	-0.3	-1.0	3.77	1.09		
1/25/07 15:31:30	0.2	0.1	-1.0	4.71	0.27		
1/25/07 15:31:45	0.2	0.1	-1.2	4.90	0.09		
1/25/07 15:32:00	0.2	0.1	-1.2	4.96	0.05		
1/25/07 15:32:15	0.2	0.1	-1.0	4.98	0.03		
1/25/07 15:32:30	0.1	0.1	-1.2	4.99	0.02	System Bias	
1/25/07 15:32:45	0.1	0.1	-1.2	4.99	0.02	5.0% O2	
1/25/07 15:33:00	0.1	0.1	-1.1	4.99	0.01		4.99
1/25/07 15:33:15	0.1	0.1	-1.0	5.00	0.01	Zero NOx	
1/25/07 15:33:30	0.1	0.2	-1.2	5.00	0.01		0.1
1/25/07 15:33:45	0.1	6.2	-1.2	5.00	0.01	Zero CO	
1/25/07 15:34:00	15.1	24.2	-1.0	5.00	0.01		0.1
1/25/07 15:34:15	15.7	44.0	4.0	4.50	0.61	Zero SO2	
1/25/07 15:34:30	15.7	54.8	29.6	2.45	2.18		-1.1
1/25/07 15:34:45	15.9	57.8	62.5	0.93	3.17	Zero CO2	
1/25/07 15:35:00	16.2	58.0	81.1	0.50	3.46		0.01
1/25/07 15:35:15	16.6	58.0	88.8	0.43	3.53		
1/25/07 15:35:30	16.7	58.3	92.4	0.40	3.56		
1/25/07 15:35:45	16.6	57.7	94.2	0.35	3.59		
1/25/07 15:36:00	16.2	57.8	95.0	0.31	3.61		
1/25/07 15:36:15	16.0	59.7	95.4	0.32	3.61		
1/25/07 15:36:30	16.2	61.5	95.8	0.36	3.59		
1/25/07 15:36:45	16.3	61.2	96.6	0.38	3.58		
1/25/07 15:37:00	16.8	59.4	96.5	0.39	3.57		
1/25/07 15:37:15	17.0	58.3	95.8	0.38	3.59		
1/25/07 15:37:30	16.4	58.4	95.6	0.35	3.61		
1/25/07 15:37:45	16.3	57.3	96.1	0.31	3.62		
1/25/07 15:38:00	16.5	56.2	96.3	0.33	3.61		
1/25/07 15:38:15	16.6	54.3	96.2	0.37	3.58		
1/25/07 15:38:30	16.5	53.5	96.1	0.38	3.58		
1/25/07 15:38:45	16.5	53.9	96.1	0.36	3.58	Start Run No. 4	
1/25/07 15:39:00	**16.5**	**54.5**	**96.4**	**0.35**	**3.59**		
1/25/07 15:39:15	**16.5**	**57.2**	**96.8**	**0.35**	**3.60**		
1/25/07 15:39:30	**16.2**	**59.9**	**97.3**	**0.36**	**3.60**		
1/25/07 15:39:45	**16.2**	**60.3**	**100.6**	**0.38**	**3.59**		
1/25/07 15:40:00	**16.7**	**58.4**	**101.3**	**0.41**	**3.59**		
1/25/07 15:40:15	**17.1**	**56.5**	**98.9**	**0.42**	**3.59**		
1/25/07 15:40:30	**16.8**	**55.4**	**98.3**	**0.39**	**3.62**		
1/25/07 15:40:45	**16.4**	**55.8**	**101.4**	**0.34**	**3.64**		
1/25/07 15:41:00	**15.9**	**58.0**	**100.6**	**0.32**	**3.65**		
1/25/07 15:41:15	**15.8**	**58.8**	**98.2**	**0.34**	**3.63**		
1/25/07 15:41:30	**16.1**	**59.4**	**97.3**	**0.38**	**3.58**		
1/25/07 15:41:45	**16.6**	**56.8**	**96.7**	**0.40**	**3.55**		
1/25/07 15:42:00	**16.6**	**55.3**	**96.1**	**0.38**	**3.57**		
1/25/07 15:42:15	**16.1**	**55.3**	**96.0**	**0.33**	**3.60**		
1/25/07 15:42:30	**15.5**	**58.0**	**96.5**	**0.29**	**3.61**		
1/25/07 15:42:45	**15.4**	**60.3**	**96.7**	**0.32**	**3.58**		
1/25/07 15:43:00	**15.6**	**60.7**	**96.2**	**0.38**	**3.55**		
1/25/07 15:43:15	**15.9**	**58.0**	**95.2**	**0.42**	**3.54**		
1/25/07 15:43:30	**16.4**	**57.0**	**94.8**	**0.41**	**3.55**		
1/25/07 15:43:45	**16.5**	**56.7**	**94.8**	**0.38**	**3.58**		
1/25/07 15:44:00	**16.4**	**55.7**	**94.9**	**0.34**	**3.61**		
1/25/07 15:44:15	**16.2**	**56.0**	**95.0**	**0.30**	**3.62**		
1/25/07 15:44:30	**15.9**	**57.7**	**95.0**	**0.32**	**3.62**		
1/25/07 15:44:45	**16.0**	**58.4**	**94.8**	**0.35**	**3.60**		
1/25/07 15:45:00	**16.3**	**57.9**	**94.6**	**0.38**	**3.57**		
1/25/07 15:45:15	**16.5**	**57.9**	**94.5**	**0.38**	**3.57**		
1/25/07 15:45:30	**16.9**	**58.0**	**94.3**	**0.36**	**3.59**		
1/25/07 15:45:45	**16.5**	**57.7**	**95.2**	**0.32**	**3.61**		
1/25/07 15:46:00	**16.3**	**55.9**	**95.9**	**0.29**	**3.64**		
1/25/07 15:46:15	**16.2**	**55.9**	**95.9**	**0.31**	**3.62**		
1/25/07 15:46:30	**16.1**	**57.3**	**95.8**	**0.34**	**3.56**		
1/25/07 15:46:45	**16.2**	**58.0**	**95.3**	**0.36**	**3.56**		
1/25/07 15:47:00	**16.4**	**57.9**	**94.8**	**0.38**	**3.56**		
1/25/07 15:47:15	**16.6**	**57.5**	**94.4**	**0.38**	**3.58**		
1/25/07 15:47:30	**16.6**	**57.0**	**94.6**	**0.37**	**3.59**		
1/25/07 15:47:45	**16.6**	**56.7**	**95.1**	**0.35**	**3.61**		
1/25/07 15:48:00	**16.5**	**56.0**	**95.4**	**0.34**	**3.61**		
1/25/07 15:48:15	**16.2**	**56.8**	**96.0**	**0.34**	**3.61**		
1/25/07 15:48:30	**16.5**	**57.9**	**96.9**	**0.35**	**3.60**		
1/25/07 15:48:45	**16.6**	**59.0**	**96.6**	**0.36**	**3.58**		
1/25/07 15:49:00	**16.4**	**57.8**	**96.0**	**0.36**	**3.58**		
1/25/07 15:49:15	**16.1**	**56.7**	**95.7**	**0.33**	**3.60**		
1/25/07 15:49:30	**15.8**	**56.8**	**95.6**	**0.31**	**3.61**		

Valero - Port Arthur, TX
SRU 546 Incinerator
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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 15:49:45	15.9	56.8	96.9	0.34	3.59	
1/25/07 15:50:00	16.4	55.8	98.5	0.36	3.57	
1/25/07 15:50:15	16.8	55.0	97.5	0.36	3.58	
1/25/07 15:50:30	16.6	54.4	95.8	0.33	3.59	
1/25/07 15:50:45	16.4	54.8	95.1	0.30	3.61	
1/25/07 15:51:00	16.2	56.0	95.3	0.30	3.62	
1/25/07 15:51:15	16.0	56.8	95.9	0.31	3.60	
1/25/07 15:51:30	16.0	58.4	96.2	0.34	3.59	
1/25/07 15:51:45	16.1	58.8	96.7	0.37	3.56	
1/25/07 15:52:00	16.4	57.8	96.6	0.39	3.56	
1/25/07 15:52:15	16.5	57.0	96.7	0.38	3.56	
1/25/07 15:52:30	16.4	56.9	96.8	0.36	3.59	
1/25/07 15:52:45	16.1	56.9	96.8	0.34	3.60	
1/25/07 15:53:00	16.0	56.9	96.6	0.33	3.59	
1/25/07 15:53:15	16.1	57.3	96.3	0.35	3.58	
1/25/07 15:53:30	16.4	56.7	96.3	0.36	3.56	
1/25/07 15:53:45	16.4	57.0	96.5	0.36	3.55	
1/25/07 15:54:00	16.4	57.3	96.3	0.35	3.55	
1/25/07 15:54:15	16.2	57.7	96.1	0.33	3.56	
1/25/07 15:54:30	15.8	58.7	96.0	0.31	3.58	
1/25/07 15:54:45	15.6	59.8	95.8	0.31	3.58	
1/25/07 15:55:00	15.7	60.4	95.8	0.34	3.56	
1/25/07 15:55:15	16.0	58.5	95.7	0.37	3.53	
1/25/07 15:55:30	16.5	57.2	95.3	0.39	3.53	
1/25/07 15:55:45	16.5	56.0	95.1	0.39	3.51	
1/25/07 15:56:00	16.3	55.8	95.0	0.35	3.54	
1/25/07 15:56:15	15.8	56.9	95.3	0.30	3.56	
1/25/07 15:56:30	15.7	58.8	95.7	0.30	3.56	
1/25/07 15:56:45	15.7	59.5	95.8	0.33	3.53	
1/25/07 15:57:00	16.0	59.3	95.6	0.37	3.52	
1/25/07 15:57:15	16.4	58.5	95.0	0.38	3.52	
1/25/07 15:57:30	16.5	58.5	94.4	0.36	3.54	
1/25/07 15:57:45	16.1	58.9	94.1	0.31	3.59	
1/25/07 15:58:00	15.7	60.0	94.3	0.28	3.61	
1/25/07 15:58:15	15.6	60.0	94.2	0.30	3.60	
1/25/07 15:58:30	16.3	58.2	93.7	0.35	3.54	
1/25/07 15:58:45	16.6	56.7	93.7	0.37	3.53	
1/25/07 15:59:00	16.3	55.7	94.4	0.35	3.53	
1/25/07 15:59:15	16.1	56.0	94.2	0.31	3.55	
1/25/07 15:59:30	15.9	57.2	93.6	0.31	3.56	
1/25/07 15:59:45	15.9	58.3	92.6	0.33	3.55	
1/25/07 16:00:00	16.0	58.0	92.0	0.36	3.54	
1/25/07 16:00:15	16.4	58.4	91.8	0.38	3.54	
1/25/07 16:00:30	16.6	57.5	92.1	0.39	3.54	
1/25/07 16:00:45	16.7	56.4	92.5	0.36	3.57	
1/25/07 16:01:00	16.3	56.9	92.6	0.32	3.59	
1/25/07 16:01:15	15.8	59.5	92.7	0.29	3.60	
1/25/07 16:01:30	15.6	63.5	93.1	0.32	3.60	
1/25/07 16:01:45	15.7	63.7	93.5	0.39	3.57	
1/25/07 16:02:00	16.3	61.5	93.6	0.44	3.55	
1/25/07 16:02:15	16.7	59.5	94.3	0.44	3.55	
1/25/07 16:02:30	16.6	58.3	97.4	0.38	3.56	
1/25/07 16:02:45	15.8	60.7	97.8	0.31	3.57	
1/25/07 16:03:00	15.4	64.3	96.1	0.29	3.55	
1/25/07 16:03:15	16.0	64.2	95.1	0.37	3.51	
1/25/07 16:03:30	16.3	60.8	94.5	0.45	3.48	
1/25/07 16:03:45	16.8	58.4	94.2	0.43	3.51	
1/25/07 16:04:00	16.5	56.5	94.2	0.38	3.55	
1/25/07 16:04:15	16.2	57.2	99.0	0.35	3.57	
1/25/07 16:04:30	16.0	58.8	102.2	0.34	3.57	
1/25/07 16:04:45	16.2	57.9	98.4	0.36	3.56	
1/25/07 16:05:00	16.2	55.8	96.4	0.38	3.54	
1/25/07 16:05:15	16.3	54.7	96.6	0.38	3.55	
1/25/07 16:05:30	16.6	53.3	95.1	0.36	3.53	
1/25/07 16:05:45	16.2	54.7	93.4	0.34	3.53	
1/25/07 16:06:00	15.8	56.5	93.1	0.32	3.54	
1/25/07 16:06:15	15.5	58.2	93.6	0.34	3.51	
1/25/07 16:06:30	15.6	59.8	93.6	0.37	3.49	
1/25/07 16:06:45	16.0	59.5	93.4	0.40	3.47	
1/25/07 16:07:00	16.4	58.0	93.6	0.40	3.47	
1/25/07 16:07:15	16.3	56.8	93.9	0.37	3.48	
1/25/07 16:07:30	16.1	58.0	94.4	0.33	3.51	
1/25/07 16:07:45	15.6	60.5	94.5	0.32	3.51	
1/25/07 16:08:00	15.6	62.8	93.7	0.34	3.51	
1/25/07 16:08:15	16.2	61.4	93.2	0.40	3.48	
1/25/07 16:08:30	16.6	58.0	92.9	0.42	3.47	
1/25/07 16:08:45	17.1	57.8	93.0	0.39	3.49	
1/25/07 16:09:00	16.8	59.3	93.2	0.34	3.50	
1/25/07 16:09:15	16.3	60.3	93.1	0.29	3.53	
1/25/07 16:09:30	16.0	60.0	93.2	0.27	3.54	
1/25/07 16:09:45	15.9	59.2	92.9	0.32	3.52	
1/25/07 16:10:00	15.8	60.0	92.9	0.37	3.49	
1/25/07 16:10:15	16.2	60.9	93.1	0.38	3.48	
1/25/07 16:10:30	16.6	60.8	93.5	0.39	3.47	
1/25/07 16:10:45	16.7	61.4	94.1	0.35	3.48	
1/25/07 16:11:00	16.2	61.0	94.4	0.30	3.51	
1/25/07 16:11:15	15.8	60.2	95.0	0.26	3.52	
1/25/07 16:11:30	15.7	59.0	95.0	0.27	3.52	
1/25/07 16:11:45	16.1	58.2	94.6	0.32	3.52	
1/25/07 16:12:00	16.7	57.5	94.5	0.36	3.48	
1/25/07 16:12:15	16.7	58.4	94.6	0.35	3.49	
1/25/07 16:12:30	16.0	60.0	94.7	0.31	3.52	
1/25/07 16:12:45	15.5	63.8	94.6	0.28	3.54	
1/25/07 16:13:00	15.7	64.8	94.9	0.32	3.52	
1/25/07 16:13:15	16.3	63.0	95.0	0.39	3.48	

Valero - Port Arthur, TX
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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 16:13:30	16.7	60.8	94.8	0.41	3.48	
1/25/07 16:13:45	17.2	60.2	94.4	0.37	3.50	
1/25/07 16:14:00	16.9	57.8	94.3	0.31	3.53	
1/25/07 16:14:15	16.2	57.0	94.0	0.26	3.55	
1/25/07 16:14:30	15.7	58.8	93.7	0.25	3.55	
1/25/07 16:14:45	15.7	61.2	93.5	0.30	3.52	
1/25/07 16:15:00	16.0	60.3	93.4	0.37	3.50	
1/25/07 16:15:15	16.5	58.4	93.8	0.41	3.50	
1/25/07 16:15:30	16.8	57.0	93.9	0.40	3.52	
1/25/07 16:15:45	16.7	56.7	93.8	0.36	3.55	
1/25/07 16:16:00	16.6	55.8	93.7	0.31	3.55	
1/25/07 16:16:15	16.4	55.5	93.6	0.30	3.54	
1/25/07 16:16:30	16.3	56.5	93.5	0.31	3.51	
1/25/07 16:16:45	16.4	57.4	93.5	0.33	3.51	
1/25/07 16:17:00	16.6	57.5	93.9	0.35	3.51	
1/25/07 16:17:15	16.8	57.2	93.8	0.36	3.51	
1/25/07 16:17:30	16.7	57.0	94.2	0.35	3.52	
1/25/07 16:17:45	16.3	57.0	94.2	0.33	3.52	
1/25/07 16:18:00	16.1	57.3	94.2	0.31	3.52	
1/25/07 16:18:15	16.0	57.9	94.3	0.33	3.51	
1/25/07 16:18:30	16.1	58.5	94.5	0.37	3.49	
1/25/07 16:18:45	16.4	58.2	94.3	0.39	3.49	
1/25/07 16:19:00	16.4	57.8	94.1	0.38	3.50	
1/25/07 16:19:15	16.1	57.9	94.2	0.35	3.51	
1/25/07 16:19:30	15.7	60.3	94.4	0.33	3.51	
1/25/07 16:19:45	15.8	62.2	94.4	0.35	3.49	
1/25/07 16:20:00	16.1	62.0	94.2	0.38	3.47	
1/25/07 16:20:15	16.5	60.8	94.3	0.40	3.47	
1/25/07 16:20:30	16.6	59.5	94.7	0.38	3.49	
1/25/07 16:20:45	16.1	59.9	95.0	0.35	3.52	
1/25/07 16:21:00	16.4	61.0	94.8	0.34	3.52	
1/25/07 16:21:15	16.6	60.3	94.7	0.36	3.50	
1/25/07 16:21:30	16.3	60.3	100.7	0.37	3.49	
1/25/07 16:21:45	16.3	60.0	107.0	0.36	3.50	
1/25/07 16:22:00	16.4	59.8	103.0	0.35	3.51	
1/25/07 16:22:15	16.2	59.9	98.4	0.34	3.51	
1/25/07 16:22:30	15.8	60.3	96.1	0.35	3.51	
1/25/07 16:22:45	15.9	60.2	95.3	0.34	3.51	
1/25/07 16:23:00	16.3	60.0	94.8	0.36	3.50	
1/25/07 16:23:15	16.5	59.7	94.6	0.37	3.49	
1/25/07 16:23:30	16.5	58.8	94.2	0.34	3.50	
1/25/07 16:23:45	16.6	58.2	94.1	0.32	3.52	
1/25/07 16:24:00	16.5	59.0	94.3	0.31	3.52	
1/25/07 16:24:15	16.2	59.0	94.7	0.29	3.54	
1/25/07 16:24:30	16.0	59.8	95.3	0.29	3.53	
1/25/07 16:24:45	16.0	60.0	97.2	0.32	3.51	
1/25/07 16:25:00	16.5	60.0	97.9	0.36	3.49	
1/25/07 16:25:15	16.7	59.7	95.7	0.37	3.49	
1/25/07 16:25:30	16.7	60.3	93.8	0.35	3.49	
1/25/07 16:25:45	16.2	60.9	93.4	0.30	3.52	
1/25/07 16:26:00	15.9	62.8	93.5	0.28	3.53	
1/25/07 16:26:15	15.9	64.3	93.1	0.31	3.52	
1/25/07 16:26:30	16.1	63.8	92.9	0.35	3.50	
1/25/07 16:26:45	16.7	62.0	92.9	0.38	3.50	
1/25/07 16:27:00	17.0	60.3	92.8	0.38	3.51	
1/25/07 16:27:15	17.0	60.0	92.7	0.34	3.54	
1/25/07 16:27:30	16.8	60.0	92.5	0.29	3.55	
1/25/07 16:27:45	16.6	58.8	92.5	0.28	3.56	
1/25/07 16:28:00	16.5	57.0	92.3	0.30	3.55	
1/25/07 16:28:15	16.5	57.4	92.2	0.32	3.52	
1/25/07 16:28:30	16.7	58.3	91.9	0.35	3.52	
1/25/07 16:28:45	16.9	58.2	91.8	0.35	3.53	
1/25/07 16:29:00	16.9	58.8	92.2	0.32	3.54	
1/25/07 16:29:15	16.3	59.0	92.3	0.29	3.55	
1/25/07 16:29:30	16.2	58.8	92.4	0.27	3.55	
1/25/07 16:29:45	16.5	58.2	92.6	0.30	3.53	
1/25/07 16:30:00	16.7	58.0	92.5	0.34	3.52	
1/25/07 16:30:15	17.0	59.7	92.3	0.33	3.53	
1/25/07 16:30:30	17.4	61.8	92.1	0.31	3.54	
1/25/07 16:30:45	17.0	62.2	93.2	0.27	3.56	
1/25/07 16:31:00	16.1	62.8	94.2	0.23	3.58	
1/25/07 16:31:15	15.9	63.0	94.1	0.24	3.57	
1/25/07 16:31:30	16.3	61.8	93.6	0.31	3.52	
1/25/07 16:31:45	16.7	61.2	92.8	0.36	3.46	
1/25/07 16:32:00	17.1	61.0	92.1	0.36	3.48	
1/25/07 16:32:15	17.0	61.0	91.8	0.31	3.51	
1/25/07 16:32:30	16.6	60.0	92.3	0.27	3.53	
1/25/07 16:32:45	16.2	59.5	94.8	0.26	3.54	
1/25/07 16:33:00	16.3	59.5	97.0	0.28	3.52	
1/25/07 16:33:15	16.6	59.0	95.3	0.32	3.50	
1/25/07 18:33:30	16.7	59.5	93.6	0.33	3.50	
1/25/07 16:33:45	17.1	60.4	93.3	0.32	3.51	
1/25/07 16:34:00	17.1	60.8	93.4	0.30	3.53	
1/25/07 16:34:15	16.4	60.7	93.9	0.27	3.55	
1/25/07 16:34:30	16.2	61.8	94.8	0.26	3.56	
1/25/07 16:34:45	16.4	61.7	94.4	0.31	3.54	
1/25/07 16:35:00	16.9	61.3	93.7	0.35	3.52	
1/25/07 16:35:15	17.3	62.2	93.4	0.35	3.53	
1/25/07 16:35:30	17.2	62.5	93.7	0.31	3.55	
1/25/07 16:35:45	17.2	61.7	94.4	0.26	3.56	
1/25/07 16:36:00	16.7	61.3	95.0	0.24	3.57	
1/25/07 16:36:15	16.5	61.5	95.6	0.24	3.57	
1/25/07 16:36:30	16.5	61.8	96.3	0.27	3.56	
1/25/07 16:36:45	16.6	62.3	95.9	0.30	3.54	
1/25/07 16:37:00	16.8	63.0	95.1	0.32	3.54	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 16:37:15	**16.9**	**63.0**	**94.6**	**0.31**	**3.54**		
1/25/07 16:37:30	**16.6**	**61.3**	**94.5**	**0.29**	**3.55**		
1/25/07 16:37:45	**16.2**	**60.5**	**94.4**	**0.27**	**3.55**		
1/25/07 16:38:00	**16.3**	**61.3**	**94.5**	**0.28**	**3.54**		
1/25/07 16:38:15	**16.6**	**62.3**	**94.2**	**0.32**	**3.52**		
1/25/07 16:38:30	**17.2**	**64.8**	**93.8**	**0.34**	**3.52**		
1/25/07 16:38:45	**17.0**	**65.5**	**94.1**	**0.30**	**3.54**		
1/25/07 16:39:00	16.4	63.8	94.3	0.24	3.58	End Run No. 4	
1/25/07 16:39:15	16.1	62.7	94.1	0.23	3.58		
1/25/07 16:39:30	16.3	61.5	93.5	0.28	3.53		
1/25/07 16:39:45	14.3	54.7	93.0	0.33	3.51		
1/25/07 16:40:00	7.1	30.6	92.7	0.33	3.51		
1/25/07 16:40:15	6.6	14.1	88.2	0.66	2.80		
1/25/07 16:40:30	9.9	2.8	105.3	1.00	1.20		
1/25/07 16:40:45	1.3	0.7	176.7	0.44	0.32		
1/25/07 16:41:00	0.9	0.1	182.0	0.10	0.07		
1/25/07 16:41:15	0.8	0.4	137.3	0.01	0.03		
1/25/07 16:41:30	0.7	0.1	112.4	-0.01	0.01		
1/25/07 16:41:45	0.7	0.1	104.4	-0.02	0.00		
1/25/07 16:42:00	0.6	0.3	102.3	-0.02	0.01		
1/25/07 16:42:15	0.6	0.1	101.8	-0.02	0.00		
1/25/07 16:42:30	0.6	0.1	101.6	-0.02	-0.01		
1/25/07 16:42:45	0.6	0.1	101.6	-0.02	-0.01		
1/25/07 16:43:00	0.6	0.1	101.5	-0.02	-0.01		
1/25/07 16:43:15	0.5	0.1	101.7	-0.03	-0.01	System Bias	
1/25/07 16:43:30	0.5	0.1	101.8	-0.02	-0.01	100 ppm SO2	
1/25/07 16:43:45	0.5	0.1	101.8	-0.02	-0.01		101.9
1/25/07 16:44:00	0.5	0.1	101.9	-0.03	-0.01		
1/25/07 16:44:15	0.4	0.0	101.9	-0.03	-0.01		
1/25/07 16:44:30	5.1	0.1	102.0	-0.03	-0.01		
1/25/07 16:44:45	31.9	0.4	99.1	-0.03	-0.01		
1/25/07 16:45:00	37.0	0.1	79.6	-0.02	-0.01		
1/25/07 16:45:15	41.3	0.1	48.2	-0.02	-0.01		
1/25/07 16:45:30	42.8	0.1	24.5	-0.02	-0.01		
1/25/07 16:45:45	45.9	0.1	13.0	-0.02	-0.01		
1/25/07 16:46:00	49.8	0.1	8.2	-0.02	-0.01		
1/25/07 16:46:15	50.7	0.1	5.8	-0.02	-0.01		
1/25/07 16:46:30	49.3	0.1	4.3	-0.03	-0.01		
1/25/07 16:46:45	48.6	0.1	3.2	-0.03	-0.01	System Bias	
1/25/07 16:47:00	48.4	0.1	2.4	-0.02	-0.01	50 ppm NOx	
1/25/07 16:47:15	48.3	0.1	1.9	-0.03	-0.01		48.3
1/25/07 16:47:30	48.3	0.1	1.5	-0.03	-0.02		
1/25/07 16:47:45	48.3	0.1	1.2	-0.03	-0.02		
1/25/07 16:48:00	48.3	0.1	1.0	-0.02	-0.02		
1/25/07 16:48:15	19.1	37.8	0.8	-0.03	-0.02		
1/25/07 16:48:30	19.6	125.5	0.6	-0.03	-0.02		
1/25/07 16:48:45	2.6	200.5	1.2	-0.02	-0.02		
1/25/07 16:49:00	1.8	239.2	2.3	-0.01	-0.02		
1/25/07 16:49:15	1.2	247.4	2.1	-0.02	-0.02		
1/25/07 16:49:30	1.0	249.7	1.4	-0.03	-0.02		
1/25/07 16:49:45	0.8	250.4	0.8	-0.03	-0.02		
1/25/07 16:50:00	0.7	251.2	0.3	-0.03	-0.02	System Bias	
1/25/07 16:50:15	0.6	251.4	0.2	-0.03	-0.02	250 ppm CO	
1/25/07 16:50:30	0.6	251.4	0.0	-0.03	-0.02		251.4
1/25/07 16:50:45	0.5	251.5	-0.1	-0.03	-0.02		
1/25/07 16:51:00	0.5	251.4	-0.2	-0.03	-0.02		
1/25/07 16:51:15	0.5	251.2	-0.3	-0.03	-0.02		
1/25/07 16:51:30	0.4	238.9	-0.3	-0.03	-0.02		
1/25/07 16:51:45	2.0	165.8	-0.4	-0.03	-0.01		
1/25/07 16:52:00	0.4	82.0	-0.5	-0.03	1.22		
1/25/07 16:52:15	0.3	29.3	-0.7	-0.03	3.88		
1/25/07 16:52:30	0.3	5.1	-0.6	-0.04	5.87		
1/25/07 16:52:45	0.3	0.0	-0.6	-0.05	6.73		
1/25/07 16:53:00	0.2	-0.9	-0.7	-0.05	6.91		
1/25/07 16:53:15	0.2	-0.9	-0.8	-0.05	6.96		
1/25/07 16:53:30	0.2	-0.9	-0.7	-0.05	6.98		
1/25/07 16:53:45	0.2	-1.2	-0.7	-0.05	6.98		
1/25/07 16:54:00	0.2	-0.9	-0.7	-0.05	6.99	System Bias	
1/25/07 16:54:15	0.2	-1.3	-0.8	-0.05	6.99	7.0% CO2	
1/25/07 16:54:30	0.2	-1.2	-0.7	-0.05	7.00		7.00
1/25/07 16:54:45	0.2	-0.9	-0.8	-0.05	7.00	Zero O2	
1/25/07 16:55:00	0.2	-0.9	-0.7	-0.05	7.00		-0.05
1/25/07 16:55:15	1.9	-0.8	-0.6	-0.05	7.00		
1/25/07 16:55:30	0.5	-0.4	-0.7	0.10	6.29		
1/25/07 16:55:45	0.2	0.1	-0.8	1.62	3.55		
1/25/07 16:56:00	0.2	0.1	-0.9	3.70	1.15		
1/25/07 16:56:15	0.2	0.0	-1.0	4.69	0.27		
1/25/07 16:56:30	0.2	0.1	-1.0	4.90	0.09		
1/25/07 16:56:45	0.2	0.1	-1.1	4.95	0.05		
1/25/07 16:57:00	0.2	0.1	-1.0	4.98	0.03	System Bias	
1/25/07 16:57:15	0.2	0.1	-1.0	4.99	0.02	5.0% O2	
1/25/07 16:57:30	0.2	0.1	-1.0	4.99	0.01		4.99
1/25/07 16:57:45	0.1	0.3	-1.0	4.99	0.01	Zero NOx	
1/25/07 16:58:00	0.1	0.1	-1.1	4.99	0.00		0.1
1/25/07 16:58:15	0.1	0.1	-1.0	4.99	0.00	Zero CO	
1/25/07 16:58:30	0.2	6.6	-1.0	5.00	0.00		0.1
1/25/07 16:58:45	16.2	26.9	-1.0	4.99	0.00	Zero SO2	
1/25/07 16:59:00	16.7	47.0	3.4	4.56	0.54		-1.0
1/25/07 16:59:15	16.6	57.5	27.6	2.53	2.12	Zero CO2	
1/25/07 16:59:30	16.1	60.8	60.6	0.92	3.16		0.01
1/25/07 16:59:45	16.3	60.9	80.1	0.43	3.47		
1/25/07 17:00:00	16.7	60.8	88.0	0.37	3.52		
1/25/07 17:00:15	17.3	60.8	90.6	0.37	3.53		
1/25/07 17:00:30	17.3	61.0	91.4	0.35	3.56		
1/25/07 17:00:45	17.2	60.9	92.1	0.29	3.60		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 17:01:00	16.9	60.5	93.0	0.27	3.61	
1/25/07 17:01:15	16.7	60.5	93.7	0.28	3.60	
1/25/07 17:01:30	16.8	60.3	94.2	0.32	3.59	
1/25/07 17:01:45	17.5	59.9	94.6	0.35	3.58	
1/25/07 17:02:00	17.7	60.3	95.0	0.35	3.59	
1/25/07 17:02:15	17.1	61.5	95.7	0.30	3.62	
1/25/07 17:02:30	17.0	62.3	96.1	0.27	3.63	
1/25/07 17:02:45	16.7	61.7	96.0	0.30	3.61	Start Run No. 5
1/25/07 17:03:00	16.9	59.8	96.0	0.33	3.59	
1/25/07 17:03:15	17.3	59.9	95.0	0.35	3.58	
1/25/07 17:03:30	17.4	60.5	94.6	0.35	3.60	
1/25/07 17:03:45	17.7	61.0	95.1	0.32	3.62	
1/25/07 17:04:00	17.4	60.3	95.7	0.28	3.64	
1/25/07 17:04:15	16.9	59.8	95.8	0.26	3.65	
1/25/07 17:04:30	16.7	60.8	95.2	0.27	3.64	
1/25/07 17:04:45	16.5	61.4	95.2	0.31	3.61	
1/25/07 17:05:00	16.5	61.0	95.1	0.36	3.59	
1/25/07 17:05:15	16.6	60.0	94.8	0.37	3.57	
1/25/07 17:05:30	17.0	59.5	94.8	0.37	3.57	
1/25/07 17:05:45	17.0	58.5	94.7	0.36	3.58	
1/25/07 17:06:00	16.8	57.5	94.9	0.32	3.60	
1/25/07 17:06:15	16.6	57.8	94.9	0.30	3.60	
1/25/07 17:06:30	16.1	58.8	95.0	0.29	3.60	
1/25/07 17:06:45	16.7	58.9	94.9	0.31	3.59	
1/25/07 17:07:00	17.0	58.0	94.8	0.35	3.56	
1/25/07 17:07:15	17.0	58.0	94.1	0.34	3.56	
1/25/07 17:07:30	17.0	58.8	94.1	0.30	3.59	
1/25/07 17:07:45	16.9	59.5	94.4	0.27	3.60	
1/25/07 17:08:00	16.7	60.0	94.4	0.27	3.61	
1/25/07 17:08:15	16.9	59.3	94.5	0.28	3.59	
1/25/07 17:08:30	17.0	58.3	94.9	0.30	3.59	
1/25/07 17:08:45	17.1	57.0	95.0	0.31	3.61	
1/25/07 17:09:00	17.0	57.0	94.9	0.29	3.62	
1/25/07 17:09:15	16.8	58.2	94.3	0.28	3.63	
1/25/07 17:09:30	16.7	59.5	93.8	0.28	3.62	
1/25/07 17:09:45	16.8	60.9	94.0	0.30	3.60	
1/25/07 17:10:00	16.8	61.8	95.0	0.34	3.56	
1/25/07 17:10:15	16.9	62.0	97.4	0.35	3.56	
1/25/07 17:10:30	17.3	62.0	96.9	0.34	3.59	
1/25/07 17:10:45	17.3	61.0	95.2	0.32	3.61	
1/25/07 17:11:00	16.8	60.5	94.8	0.29	3.64	
1/25/07 17:11:15	16.6	59.4	94.9	0.27	3.63	
1/25/07 17:11:30	18.6	58.5	95.0	0.29	3.59	
1/25/07 17:11:45	16.9	59.3	94.6	0.32	3.57	
1/25/07 17:12:00	16.9	60.8	94.0	0.32	3.58	
1/25/07 17:12:15	17.2	61.2	94.2	0.29	3.59	
1/25/07 17:12:30	16.9	60.0	94.1	0.26	3.61	
1/25/07 17:12:45	16.6	58.0	94.1	0.24	3.62	
1/25/07 17:13:00	16.4	58.3	94.1	0.25	3.61	
1/25/07 17:13:15	16.3	59.9	93.9	0.29	3.59	
1/25/07 17:13:30	16.6	60.8	94.0	0.33	3.58	
1/25/07 17:13:45	17.0	61.0	94.2	0.36	3.58	
1/25/07 17:14:00	17.2	60.8	95.1	0.37	3.60	
1/25/07 17:14:15	17.5	60.3	95.7	0.34	3.62	
1/25/07 17:14:30	17.3	59.5	95.4	0.29	3.63	
1/25/07 17:14:45	17.0	59.4	95.5	0.27	3.63	
1/25/07 17:15:00	16.8	59.3	95.5	0.27	3.64	
1/25/07 17:15:15	16.8	59.8	95.5	0.29	3.63	
1/25/07 17:15:30	17.0	60.3	95.5	0.31	3.62	
1/25/07 17:15:45	17.0	59.7	95.0	0.32	3.61	
1/25/07 17:16:00	16.9	58.8	94.8	0.32	3.61	
1/25/07 17:16:15	16.9	58.0	95.0	0.31	3.61	
1/25/07 17:16:30	16.6	58.3	95.2	0.30	3.62	
1/25/07 17:16:45	16.5	58.5	95.2	0.29	3.61	
1/25/07 17:17:00	16.4	58.5	94.7	0.29	3.59	
1/25/07 17:17:15	16.4	58.8	94.0	0.31	3.57	
1/25/07 17:17:30	16.7	58.5	93.9	0.32	3.55	
1/25/07 17:17:45	16.7	58.7	94.5	0.33	3.56	
1/25/07 17:18:00	16.8	59.0	94.5	0.31	3.58	
1/25/07 17:18:15	16.7	57.9	94.7	0.28	3.59	
1/25/07 17:18:30	16.4	58.0	95.2	0.27	3.59	
1/25/07 17:18:45	16.3	60.2	95.0	0.29	3.59	
1/25/07 17:19:00	16.7	61.5	94.7	0.32	3.59	
1/25/07 17:19:15	17.0	61.2	94.7	0.34	3.58	
1/25/07 17:19:30	17.2	59.0	94.5	0.34	3.59	
1/25/07 17:19:45	17.1	57.4	94.5	0.31	3.60	
1/25/07 17:20:00	17.0	57.5	94.5	0.28	3.60	
1/25/07 17:20:15	16.8	58.8	94.7	0.28	3.60	
1/25/07 17:20:30	16.7	59.3	94.2	0.29	3.60	
1/25/07 17:20:45	16.8	60.2	94.1	0.30	3.60	
1/25/07 17:21:00	16.7	60.8	94.3	0.31	3.61	
1/25/07 17:21:15	16.7	60.5	94.5	0.33	3.59	
1/25/07 17:21:30	16.8	59.3	94.5	0.34	3.59	
1/25/07 17:21:45	16.8	59.2	94.3	0.35	3.61	
1/25/07 17:22:00	16.6	59.8	94.6	0.35	3.60	
1/25/07 17:22:15	16.6	60.4	95.3	0.35	3.59	
1/25/07 17:22:30	16.8	61.0	94.9	0.35	3.58	
1/25/07 17:22:45	16.9	59.9	94.2	0.36	3.57	
1/25/07 17:23:00	17.1	58.3	93.9	0.36	3.58	
1/25/07 17:23:15	17.0	57.2	94.1	0.34	3.59	
1/25/07 17:23:30	17.1	57.3	94.8	0.32	3.61	
1/25/07 17:23:45	16.7	58.2	94.7	0.31	3.62	
1/25/07 17:24:00	16.8	59.3	94.6	0.30	3.63	
1/25/07 17:24:15	16.7	61.0	94.5	0.32	3.63	
1/25/07 17:24:30	16.7	62.5	94.2	0.34	3.64	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 17:24:45	16.9	61.9	94.1	0.35	3.64	
1/25/07 17:25:00	17.1	61.5	94.3	0.36	3.62	
1/25/07 17:25:15	17.1	61.0	94.2	0.35	3.62	
1/25/07 17:25:30	16.8	60.0	94.5	0.32	3.62	
1/25/07 17:25:45	16.6	59.3	94.9	0.30	3.62	
1/25/07 17:26:00	16.5	59.0	95.1	0.31	3.59	
1/25/07 17:26:15	16.6	58.9	94.9	0.32	3.59	
1/25/07 17:26:30	16.8	58.8	94.2	0.32	3.61	
1/25/07 17:26:45	16.7	58.3	94.4	0.30	3.62	
1/25/07 17:27:00	16.4	58.8	95.0	0.28	3.63	
1/25/07 17:27:15	16.3	58.4	95.4	0.28	3.63	
1/25/07 17:27:30	16.4	58.8	95.2	0.30	3.60	
1/25/07 17:27:45	16.5	59.4	94.7	0.32	3.58	
1/25/07 17:28:00	16.5	59.8	94.5	0.33	3.58	
1/25/07 17:28:15	16.7	59.4	94.3	0.32	3.59	
1/25/07 17:28:30	16.8	58.8	94.3	0.31	3.59	
1/25/07 17:28:45	16.6	58.2	94.3	0.30	3.60	
1/25/07 17:29:00	16.7	58.5	94.2	0.30	3.60	
1/25/07 17:29:15	16.5	59.5	94.4	0.31	3.60	
1/25/07 17:29:30	16.7	59.8	94.8	0.31	3.61	
1/25/07 17:29:45	16.7	59.3	95.4	0.32	3.62	
1/25/07 17:30:00	16.7	60.3	95.7	0.34	3.62	
1/25/07 17:30:15	16.9	60.8	95.4	0.34	3.62	
1/25/07 17:30:30	17.2	60.3	95.0	0.33	3.61	
1/25/07 17:30:45	17.4	61.4	95.2	0.33	3.60	
1/25/07 17:31:00	17.4	62.0	95.2	0.30	3.62	
1/25/07 17:31:15	17.2	61.4	95.1	0.27	3.63	
1/25/07 17:31:30	17.3	60.3	94.9	0.27	3.63	
1/25/07 17:31:45	17.3	60.2	94.9	0.28	3.62	
1/25/07 17:32:00	17.0	60.8	95.7	0.28	3.63	
1/25/07 17:32:15	16.8	60.9	95.8	0.27	3.63	
1/25/07 17:32:30	16.8	61.3	95.0	0.28	3.62	
1/25/07 17:32:45	16.7	60.8	94.7	0.29	3.62	
1/25/07 17:33:00	16.9	60.8	94.7	0.29	3.61	
1/25/07 17:33:15	17.1	60.9	94.5	0.28	3.61	
1/25/07 17:33:30	17.1	61.3	94.7	0.28	3.61	
1/25/07 17:33:45	16.6	61.4	95.2	0.27	3.63	
1/25/07 17:34:00	16.6	61.0	95.5	0.26	3.63	
1/25/07 17:34:15	16.8	62.4	95.7	0.30	3.61	
1/25/07 17:34:30	17.1	64.5	95.8	0.32	3.60	
1/25/07 17:34:45	17.2	64.9	95.5	0.30	3.61	
1/25/07 17:35:00	17.2	63.8	95.2	0.26	3.64	
1/25/07 17:35:15	17.0	60.9	95.5	0.23	3.65	
1/25/07 17:35:30	17.0	59.3	96.3	0.23	3.67	
1/25/07 17:35:45	16.7	59.2	96.3	0.25	3.66	
1/25/07 17:36:00	16.7	59.3	96.4	0.27	3.62	
1/25/07 17:36:15	16.8	59.8	96.2	0.28	3.59	
1/25/07 17:36:30	16.7	60.8	95.9	0.29	3.58	
1/25/07 17:36:45	16.6	61.4	95.6	0.31	3.58	
1/25/07 17:37:00	17.0	61.0	95.9	0.32	3.59	
1/25/07 17:37:15	17.2	61.7	96.0	0.32	3.60	
1/25/07 17:37:30	17.2	62.3	95.3	0.29	3.62	
1/25/07 17:37:45	16.6	62.5	94.9	0.25	3.64	
1/25/07 17:38:00	16.4	62.0	94.9	0.24	3.64	
1/25/07 17:38:15	16.5	60.9	95.4	0.28	3.62	
1/25/07 17:38:30	16.7	60.3	95.8	0.32	3.60	
1/25/07 17:38:45	16.9	59.8	95.5	0.34	3.60	
1/25/07 17:39:00	16.9	60.5	94.7	0.34	3.61	
1/25/07 17:39:15	16.8	60.3	94.6	0.32	3.61	
1/25/07 17:39:30	16.9	59.0	94.7	0.29	3.60	
1/25/07 17:39:45	16.7	59.4	94.3	0.29	3.60	
1/25/07 17:40:00	16.3	61.8	94.2	0.29	3.61	
1/25/07 17:40:15	16.3	63.5	94.5	0.31	3.60	
1/25/07 17:40:30	16.7	62.8	95.7	0.36	3.58	
1/25/07 17:40:45	17.1	59.3	97.5	0.38	3.57	
1/25/07 17:41:00	17.2	58.5	97.6	0.35	3.59	
1/25/07 17:41:15	17.2	58.3	96.7	0.31	3.62	
1/25/07 17:41:30	17.1	59.5	95.9	0.28	3.64	
1/25/07 17:41:45	17.1	58.9	95.8	0.28	3.65	
1/25/07 17:42:00	17.0	60.0	95.5	0.29	3.64	
1/25/07 17:42:15	17.0	61.0	95.4	0.30	3.63	
1/25/07 17:42:30	17.2	60.5	95.4	0.31	3.62	
1/25/07 17:42:45	17.1	59.3	95.5	0.32	3.60	
1/25/07 17:43:00	17.1	58.5	95.7	0.32	3.61	
1/25/07 17:43:15	17.0	58.0	95.6	0.32	3.61	
1/25/07 17:43:30	17.0	58.0	95.3	0.31	3.62	
1/25/07 17:43:45	16.8	58.7	94.8	0.30	3.63	
1/25/07 17:44:00	16.7	59.5	94.4	0.31	3.63	
1/25/07 17:44:15	16.7	60.7	94.4	0.33	3.62	
1/25/07 17:44:30	16.6	61.3	94.5	0.35	3.61	
1/25/07 17:44:45	16.6	61.2	94.5	0.35	3.61	
1/25/07 17:45:00	16.7	61.3	94.5	0.35	3.60	
1/25/07 17:45:15	16.8	60.0	94.4	0.33	3.60	
1/25/07 17:45:30	16.6	59.8	94.8	0.31	3.60	
1/25/07 17:45:45	16.6	59.4	95.0	0.31	3.59	
1/25/07 17:46:00	16.5	59.3	94.9	0.32	3.59	
1/25/07 17:46:15	16.5	59.5	94.6	0.33	3.59	
1/25/07 17:46:30	16.7	59.5	94.4	0.33	3.59	
1/25/07 17:46:45	16.7	59.5	94.3	0.33	3.61	
1/25/07 17:47:00	16.6	59.3	94.4	0.31	3.63	
1/25/07 17:47:15	16.7	59.9	94.6	0.30	3.64	
1/25/07 17:47:30	16.6	60.8	94.7	0.31	3.61	
1/25/07 17:47:45	16.6	59.7	94.8	0.33	3.59	
1/25/07 17:48:00	16.9	58.0	94.6	0.34	3.59	
1/25/07 17:48:15	16.8	57.3	94.2	0.34	3.61	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 17:48:30	16.8	56.8	94.1	0.31	3.63		
1/25/07 17:48:45	16.7	56.3	94.2	0.30	3.64		
1/25/07 17:49:00	16.6	57.0	94.4	0.30	3.62		
1/25/07 17:49:15	16.8	58.7	96.1	0.31	3.61		
1/25/07 17:49:30	16.8	59.5	97.2	0.32	3.61		
1/25/07 17:49:45	16.8	60.7	98.3	0.34	3.61		
1/25/07 17:50:00	16.8	61.3	97.6	0.35	3.60		
1/25/07 17:50:15	17.1	61.4	96.1	0.35	3.59		
1/25/07 17:50:30	17.1	60.5	95.2	0.34	3.59		
1/25/07 17:50:45	16.8	60.2	95.2	0.31	3.62		
1/25/07 17:51:00	16.9	59.0	95.3	0.30	3.63		
1/25/07 17:51:15	17.1	60.4	95.0	0.31	3.62		
1/25/07 17:51:30	17.1	60.8	95.2	0.32	3.62		
1/25/07 17:51:45	17.3	61.2	98.1	0.32	3.61		
1/25/07 17:52:00	17.3	61.5	99.3	0.31	3.62		
1/25/07 17:52:15	17.1	60.8	98.2	0.28	3.65		
1/25/07 17:52:30	17.2	59.5	96.4	0.27	3.66		
1/25/07 17:52:45	17.1	59.7	94.9	0.29	3.65		
1/25/07 17:53:00	17.0	60.3	94.0	0.30	3.63		
1/25/07 17:53:15	17.1	61.3	93.5	0.31	3.61		
1/25/07 17:53:30	17.0	60.8	94.7	0.33	3.61		
1/25/07 17:53:45	17.0	59.9	96.9	0.33	3.62		
1/25/07 17:54:00	17.1	59.3	96.9	0.33	3.63		
1/25/07 17:54:15	17.0	59.2	95.8	0.32	3.63		
1/25/07 17:54:30	16.9	59.5	95.2	0.31	3.64		
1/25/07 17:54:45	16.8	60.4	95.2	0.30	3.64		
1/25/07 17:55:00	16.7	61.5	95.5	0.31	3.63		
1/25/07 17:55:15	16.8	60.7	95.7	0.32	3.63		
1/25/07 17:55:30	17.1	59.0	95.7	0.34	3.61		
1/25/07 17:55:45	17.3	60.3	95.8	0.32	3.60		
1/25/07 17:56:00	17.3	61.5	95.8	0.29	3.61		
1/25/07 17:56:15	16.7	61.2	95.7	0.26	3.62		
1/25/07 17:56:30	16.6	59.0	95.1	0.23	3.62		
1/25/07 17:56:45	16.5	57.5	94.9	0.26	3.62		
1/25/07 17:57:00	16.6	57.3	94.7	0.29	3.60		
1/25/07 17:57:15	16.6	57.5	94.6	0.31	3.61		
1/25/07 17:57:30	16.5	57.5	94.6	0.31	3.62		
1/25/07 17:57:45	16.6	57.5	94.9	0.32	3.61		
1/25/07 17:58:00	16.9	57.8	94.8	0.32	3.60		
1/25/07 17:58:15	16.9	59.7	94.7	0.31	3.61		
1/25/07 17:58:30	16.6	60.3	95.3	0.28	3.63		
1/25/07 17:58:45	16.8	60.5	95.8	0.27	3.64		
1/25/07 17:59:00	17.1	60.3	96.2	0.30	3.62		
1/25/07 17:59:15	17.2	60.0	95.9	0.32	3.63		
1/25/07 17:59:30	17.1	59.5	96.0	0.29	3.63		
1/25/07 17:59:45	16.9	58.4	96.2	0.27	3.63		
1/25/07 18:00:00	17.0	57.8	96.3	0.28	3.63		
1/25/07 18:00:15	16.9	57.8	96.2	0.30	3.63		
1/25/07 18:00:30	16.8	58.8	95.9	0.31	3.63		
1/25/07 18:00:45	16.9	58.9	95.5	0.32	3.63		
1/25/07 18:01:00	17.0	58.3	95.3	0.33	3.61		
1/25/07 18:01:15	17.0	57.4	95.4	0.33	3.60		
1/25/07 18:01:30	16.9	56.8	95.6	0.33	3.60		
1/25/07 16:01:45	17.0	58.2	95.7	0.33	3.60		
1/25/07 18:02:00	17.0	58.5	95.6	0.33	3.60		
1/25/07 18:02:15	16.9	57.7	95.8	0.32	3.60		
1/25/07 18:02:30	16.8	56.8	95.4	0.31	3.61		
1/25/07 18:02:45	16.6	57.5	94.7	0.31	3.59		
1/25/07 18:03:00	16.7	58.0	94.9	0.33	3.58	End Run No. 5	
1/25/07 18:03:15	17.0	58.4	95.4	0.34	3.57		
1/25/07 18:03:30	17.2	59.8	95.3	0.33	3.58		
1/25/07 18:03:45	16.6	59.7	95.1	0.30	3.60		
1/25/07 18:04:00	16.4	60.0	95.2	0.28	3.61		
1/25/07 18:04:15	16.5	59.2	95.8	0.31	3.56		
1/25/07 18:04:30	16.8	57.8	95.9	0.36	3.54		
1/25/07 18:04:45	16.7	49.3	95.7	0.37	3.54		
1/25/07 18:05:00	8.9	32.3	95.6	0.34	3.56		
1/25/07 18:05:15	1.9	11.7	93.4	0.63	2.91		
1/25/07 18:05:30	7.6	3.6	108.2	1.01	1.28		
1/25/07 18:05:45	1.2	0.2	175.8	0.46	0.36		
1/25/07 18:06:00	1.0	0.6	183.7	0.11	0.09		
1/25/07 18:06:15	0.8	0.1	138.7	0.01	0.03		
1/25/07 18:06:30	0.8	0.1	112.9	-0.01	0.01		
1/25/07 18:06:45	0.7	0.2	104.7	-0.02	0.00		
1/25/07 18:07:00	0.7	0.1	102.3	-0.02	0.00		
1/25/07 18:07:15	0.6	0.1	101.6	-0.02	0.00		
1/25/07 18:07:30	0.6	0.3	101.4	-0.02	-0.01		
1/25/07 18:07:45	0.6	-0.3	101.1	-0.02	-0.01		
1/25/07 18:08:00	0.6	0.1	101.3	-0.02	-0.01		
1/25/07 18:08:15	0.5	0.0	101.4	-0.02	-0.01	System Bias	
1/25/07 18:08:30	0.5	0.1	101.6	-0.03	-0.01	100 ppm SO2	
1/25/07 18:08:45	0.5	0.1	101.8	-0.03	-0.01		101.8
1/25/07 18:09:00	0.5	0.3	101.8	-0.03	-0.01		
1/25/07 18:09:15	0.5	0.1	101.8	-0.03	-0.02		
1/25/07 18:09:30	1.1	0.1	101.5	-0.03	-0.02		
1/25/07 18:09:45	29.6	0.1	99.1	-0.03	-0.02		
1/25/07 18:10:00	35.8	0.1	81.2	-0.02	-0.02		
1/25/07 18:10:15	40.1	0.4	49.9	-0.02	-0.02		
1/25/07 18:10:30	41.6	0.1	25.5	-0.02	-0.02		
1/25/07 18:10:45	44.7	0.0	13.5	-0.02	-0.02		
1/25/07 18:11:00	48.6	-0.2	8.4	-0.02	-0.02		
1/25/07 18:11:15	50.9	0.4	6.0	-0.02	-0.02		
1/25/07 18:11:30	49.3	0.1	4.4	-0.03	-0.02		
1/25/07 18:11:45	48.6	0.1	3.3	-0.03	-0.02	System Bias	
1/25/07 18:12:00	48.6	0.1	2.5	-0.03	-0.02	50 ppm NOx	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 18:12:15	48.5	0.1	1.9	-0.03	-0.02		48.6
1/25/07 18:12:30	48.5	0.3	1.6	-0.03	-0.02		
1/25/07 18:12:45	48.5	0.3	1.2	-0.03	-0.02		
1/25/07 18:13:00	47.7	-0.2	0.9	-0.03	-0.02		
1/25/07 18:13:15	36.4	34.6	0.7	-0.03	-0.02		
1/25/07 18:13:30	13.7	108.5	0.6	-0.03	-0.02		
1/25/07 18:13:45	2.8	202.4	0.9	-0.02	-0.02		
1/25/07 18:14:00	1.9	235.1	1.9	-0.01	-0.02		
1/25/07 18:14:15	1.3	247.8	1.8	-0.02	-0.02		
1/25/07 18:14:30	1.1	249.4	1.2	-0.03	-0.01		
1/25/07 18:14:45	0.9	250.0	0.7	-0.03	-0.02		
1/25/07 18:15:00	0.8	250.7	0.5	-0.03	-0.01		
1/25/07 18:15:15	0.7	251.0	0.3	-0.03	-0.01	System Bias	
1/25/07 18:15:30	0.6	251.4	0.0	-0.03	-0.01	250 ppm CO	
1/25/07 18:15:45	0.6	251.5	-0.1	-0.03	-0.01		251.4
1/25/07 18:16:00	0.6	251.4	-0.2	-0.03	-0.01		
1/25/07 18:16:15	0.5	251.4	-0.2	-0.03	-0.01		
1/25/07 18:16:30	0.5	245.7	-0.4	-0.03	-0.02		
1/25/07 18:16:45	1.8	168.3	-0.6	-0.03	-0.01		
1/25/07 18:17:00	0.5	96.5	-0.6	-0.03	1.00		
1/25/07 18:17:15	0.4	27.7	-0.6	-0.03	3.67		
1/25/07 18:17:30	0.3	7.1	-0.5	-0.04	5.72		
1/25/07 18:17:45	0.3	-0.2	-0.6	-0.05	6.64		
1/25/07 18:18:00	0.3	-0.9	-0.6	-0.05	6.86		
1/25/07 18:18:15	0.3	-0.9	-0.6	-0.05	6.92		
1/25/07 18:18:30	0.3	-1.2	-0.6	-0.05	6.93		
1/25/07 18:18:45	0.2	-1.1	-0.7	-0.05	6.95		
1/25/07 18:19:00	0.2	-1.4	-0.7	-0.05	6.95	System Bias	
1/25/07 18:19:15	0.2	-1.1	-0.8	-0.05	6.96	7.0% CO2	
1/25/07 18:19:30	0.2	-1.2	-0.7	-0.05	6.96		6.96
1/25/07 18:19:45	0.2	-1.1	-0.8	-0.05	6.96	Zero O2	
1/25/07 18:20:00	0.4	-1.4	-0.9	-0.05	6.96		-0.05
1/25/07 18:20:15	1.3	-0.7	-0.9	-0.05	6.96		
1/25/07 18:20:30	0.6	-0.2	-0.9	0.07	6.38		
1/25/07 18:20:45	0.2	0.0	-0.9	1.53	3.66		
1/25/07 18:21:00	0.2	-0.1	-0.8	3.64	1.19		
1/25/07 18:21:15	0.2	0.1	-0.9	4.67	0.28		
1/25/07 18:21:30	0.2	-0.3	-1.0	4.89	0.09		
1/25/07 18:21:45	0.2	0.3	-0.9	4.95	0.04		
1/25/07 18:22:00	0.2	0.0	-1.0	4.97	0.02		
1/25/07 18:22:15	0.2	0.1	-1.1	4.98	0.01	System Bias	
1/25/07 18:22:30	0.2	0.1	-1.1	4.99	0.00	5.0% O2	
1/25/07 18:22:45	0.2	0.1	-1.1	4.99	0.00		4.99
1/25/07 18:23:00	0.2	0.1	-1.1	4.99	0.00	Zero NOx	
1/25/07 18:23:15	0.2	0.1	-1.1	4.99	0.00		0.2
1/25/07 18:23:30	2.6	6.1	-1.1	4.99	-0.01	Zero CO	
1/25/07 18:23:45	13.2	25.4	-1.2	4.99	0.00		0.1
1/25/07 18:24:00	16.7	45.7	2.2	4.65	0.45	Zero SO2	
1/25/07 18:24:15	17.0	56.3	24.5	2.71	2.00		-1.1
1/25/07 18:24:30	17.9	61.2	58.5	1.02	3.11	Zero CO2	
1/25/07 18:24:45	17.2	63.5	81.7	0.45	3.50		0.00
1/25/07 18:25:00	17.0	63.5	103.8	0.31	3.58		
1/25/07 18:25:15	17.0	62.9	112.3	0.31	3.58		
1/25/07 18:25:30	17.0	62.9	108.0	0.34	3.57		
1/25/07 18:25:45	17.1	63.4	100.3	0.34	3.59		
1/25/07 18:26:00	17.3	61.9	96.3	0.33	3.60		
1/25/07 18:26:15	17.4	60.4	94.8	0.32	3.59		
1/25/07 18:26:30	17.4	58.9	94.3	0.31	3.60		
1/25/07 18:26:45	17.2	59.4	94.0	0.29	3.61		
1/25/07 18:27:00	17.1	60.5	94.0	0.27	3.62		
1/25/07 18:27:15	17.0	60.9	94.2	0.28	3.61		
1/25/07 18:27:30	17.0	60.2	94.2	0.30	3.61		
1/25/07 18:27:45	16.9	59.7	94.1	0.30	3.60		
1/25/07 18:28:00	17.1	59.3	94.2	0.31	3.60		
1/25/07 18:28:15	17.2	58.9	94.2	0.31	3.59		
1/25/07 18:28:30	17.2	58.5	93.5	0.31	3.58		
1/25/07 18:28:45	17.0	58.2	92.6	0.30	3.59	Start Run No. 6	
1/25/07 18:29:00	**17.0**	**59.3**	**92.5**	**0.27**	**3.60**		
1/25/07 18:29:15	**16.9**	**59.9**	**92.7**	**0.28**	**3.61**		
1/25/07 18:29:30	**17.0**	**60.3**	**92.9**	**0.29**	**3.61**		
1/25/07 18:29:45	**17.1**	**60.2**	**92.9**	**0.29**	**3.61**		
1/25/07 18:30:00	**17.0**	**60.9**	**93.2**	**0.30**	**3.61**		
1/25/07 18:30:15	**17.1**	**60.8**	**93.8**	**0.30**	**3.62**		
1/25/07 18:30:30	**17.4**	**61.9**	**94.1**	**0.30**	**3.60**		
1/25/07 18:30:45	**17.0**	**61.5**	**94.4**	**0.29**	**3.61**		
1/25/07 18:31:00	**16.7**	**61.2**	**94.5**	**0.25**	**3.63**		
1/25/07 18:31:15	**16.7**	**61.0**	**94.3**	**0.27**	**3.61**		
1/25/07 18:31:30	**17.3**	**60.3**	**94.2**	**0.32**	**3.60**		
1/25/07 18:31:45	**17.4**	**59.8**	**94.3**	**0.34**	**3.58**		
1/25/07 18:32:00	**17.1**	**60.5**	**94.0**	**0.30**	**3.60**		
1/25/07 18:32:15	**17.0**	**60.4**	**93.9**	**0.26**	**3.62**		
1/25/07 18:32:30	**17.1**	**60.0**	**94.0**	**0.26**	**3.62**		
1/25/07 18:32:45	**17.0**	**60.0**	**93.9**	**0.28**	**3.61**		
1/25/07 18:33:00	**16.9**	**60.0**	**94.1**	**0.29**	**3.61**		
1/25/07 18:33:15	**16.9**	**59.9**	**94.4**	**0.30**	**3.60**		
1/25/07 18:33:30	**17.0**	**59.5**	**94.0**	**0.31**	**3.59**		
1/25/07 18:33:45	**17.0**	**59.2**	**93.6**	**0.31**	**3.59**		
1/25/07 18:34:00	**17.1**	**59.9**	**93.7**	**0.31**	**3.59**		
1/25/07 18:34:15	**17.2**	**60.8**	**93.8**	**0.31**	**3.60**		
1/25/07 18:34:30	**17.2**	**61.9**	**94.0**	**0.29**	**3.63**		
1/25/07 18:34:45	**17.3**	**61.8**	**94.3**	**0.27**	**3.61**		
1/25/07 18:35:00	**17.2**	**62.2**	**94.8**	**0.26**	**3.61**		
1/25/07 18:35:15	**17.0**	**60.9**	**95.1**	**0.26**	**3.61**		
1/25/07 18:35:30	**17.0**	**59.8**	**96.1**	**0.27**	**3.60**		
1/25/07 18:35:45	**17.2**	**58.8**	**96.0**	**0.28**	**3.59**		

Valero - Port Arthur, TX
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ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 18:36:00	17.1	58.8	94.5	0.28	3.59	
1/25/07 18:36:15	17.0	59.9	94.0	0.28	3.60	
1/25/07 18:36:30	17.2	61.8	94.5	0.28	3.62	
1/25/07 18:36:45	17.2	61.0	95.1	0.28	3.62	
1/25/07 18:37:00	17.2	60.7	95.2	0.29	3.61	
1/25/07 18:37:15	17.3	61.2	94.5	0.29	3.61	
1/25/07 18:37:30	17.4	62.3	94.1	0.29	3.60	
1/25/07 18:37:45	17.5	61.9	94.1	0.29	3.60	
1/25/07 18:38:00	17.2	61.2	94.4	0.28	3.61	
1/25/07 18:38:15	17.0	62.2	94.8	0.26	3.62	
1/25/07 18:38:30	17.1	62.5	94.9	0.28	3.61	
1/25/07 18:38:45	17.2	61.3	94.8	0.31	3.59	
1/25/07 18:39:00	17.4	60.2	95.0	0.32	3.58	
1/25/07 18:39:15	17.3	60.0	95.4	0.31	3.60	
1/25/07 18:39:30	17.3	61.2	95.8	0.30	3.62	
1/25/07 18:39:45	17.3	61.9	95.8	0.30	3.62	
1/25/07 18:40:00	17.3	61.2	96.3	0.30	3.62	
1/25/07 18:40:15	17.3	60.5	97.9	0.30	3.61	
1/25/07 18:40:30	17.6	60.5	97.6	0.30	3.61	
1/25/07 18:40:45	17.7	61.5	96.6	0.29	3.61	
1/25/07 18:41:00	17.7	61.2	95.9	0.27	3.62	
1/25/07 18:41:15	17.5	60.4	96.4	0.24	3.63	
1/25/07 18:41:30	17.1	59.7	96.5	0.24	3.63	
1/25/07 18:41:45	16.9	59.5	96.0	0.24	3.62	
1/25/07 18:42:00	16.9	59.9	95.5	0.29	3.60	
1/25/07 18:42:15	17.0	60.2	95.1	0.32	3.58	
1/25/07 18:42:30	17.4	60.9	94.8	0.33	3.58	
1/25/07 18:42:45	17.5	61.2	94.7	0.32	3.59	
1/25/07 18:43:00	17.1	62.3	94.8	0.27	3.62	
1/25/07 18:43:15	17.3	63.4	95.8	0.25	3.62	
1/25/07 18:43:30	17.4	63.0	101.4	0.28	3.60	
1/25/07 18:43:45	17.2	61.7	115.2	0.30	3.58	
1/25/07 18:44:00	17.2	59.4	119.2	0.29	3.59	
1/25/07 18:44:15	17.2	58.3	109.4	0.27	3.59	
1/25/07 18:44:30	17.2	57.9	101.0	0.28	3.59	
1/25/07 18:44:45	17.0	58.5	97.6	0.28	3.60	
1/25/07 18:45:00	17.0	58.9	96.7	0.28	3.60	
1/25/07 18:45:15	17.0	58.5	96.7	0.29	3.61	
1/25/07 18:45:30	16.8	60.0	96.7	0.30	3.61	
1/25/07 18:45:45	16.9	60.2	96.3	0.30	3.60	
1/25/07 18:46:00	17.3	60.2	95.8	0.31	3.58	
1/25/07 18:46:15	17.3	61.3	95.4	0.31	3.57	
1/25/07 18:46:30	17.1	60.5	96.2	0.29	3.59	
1/25/07 18:46:45	17.1	60.9	98.1	0.28	3.60	
1/25/07 18:47:00	17.1	60.5	97.9	0.29	3.60	
1/25/07 18:47:15	17.0	61.2	96.9	0.30	3.60	
1/25/07 18:47:30	16.9	61.9	96.5	0.30	3.60	
1/25/07 18:47:45	16.9	62.5	96.9	0.31	3.60	
1/25/07 18:48:00	17.3	62.5	96.9	0.33	3.60	
1/25/07 18:48:15	17.5	61.9	96.7	0.33	3.60	
1/25/07 18:48:30	17.3	61.5	96.4	0.31	3.61	
1/25/07 18:48:45	16.9	63.2	96.1	0.27	3.62	
1/25/07 18:49:00	16.9	63.5	96.0	0.27	3.62	
1/25/07 18:49:15	17.3	62.7	96.6	0.32	3.60	
1/25/07 18:49:30	17.5	61.2	96.6	0.34	3.60	
1/25/07 18:49:45	17.5	59.9	96.0	0.31	3.61	
1/25/07 18:50:00	17.3	59.2	95.5	0.27	3.63	
1/25/07 18:50:15	17.0	59.2	95.3	0.26	3.61	
1/25/07 18:50:30	17.2	60.7	95.2	0.28	3.59	
1/25/07 18:50:45	17.5	62.2	94.9	0.30	3.58	
1/25/07 18:51:00	17.7	62.2	94.9	0.30	3.58	
1/25/07 18:51:15	17.5	61.5	95.3	0.26	3.61	
1/25/07 18:51:30	17.1	61.2	95.5	0.25	3.63	
1/25/07 18:51:45	16.8	62.2	95.3	0.27	3.63	
1/25/07 18:52:00	16.9	62.2	95.2	0.30	3.61	
1/25/07 18:52:15	17.1	61.3	95.5	0.32	3.60	
1/25/07 18:52:30	17.3	60.9	96.6	0.33	3.60	
1/25/07 18:52:45	17.4	61.4	97.7	0.32	3.61	
1/25/07 18:53:00	17.3	61.4	97.4	0.31	3.62	
1/25/07 18:53:15	17.1	61.8	96.7	0.29	3.60	
1/25/07 18:53:30	17.2	60.7	95.6	0.29	3.60	
1/25/07 18:53:45	17.2	59.8	95.6	0.30	3.59	
1/25/07 18:54:00	17.2	59.0	96.3	0.30	3.60	
1/25/07 18:54:15	17.1	59.5	96.4	0.30	3.61	
1/25/07 18:54:30	17.0	59.9	96.5	0.31	3.61	
1/25/07 18:54:45	17.2	59.7	96.7	0.31	3.60	
1/25/07 18:55:00	17.4	59.3	96.7	0.32	3.59	
1/25/07 18:55:15	17.6	60.0	97.1	0.31	3.60	
1/25/07 18:55:30	17.6	60.8	97.9	0.30	3.61	
1/25/07 18:55:45	17.2	61.0	98.0	0.27	3.63	
1/25/07 18:56:00	16.8	60.7	97.6	0.25	3.63	
1/25/07 18:56:15	16.9	60.7	97.2	0.27	3.61	
1/25/07 18:56:30	17.0	61.0	96.9	0.32	3.60	
1/25/07 18:56:45	17.1	61.5	96.4	0.34	3.60	
1/25/07 18:57:00	17.6	61.2	96.2	0.35	3.60	
1/25/07 18:57:15	17.7	60.9	96.0	0.33	3.59	
1/25/07 18:57:30	17.6	60.2	95.9	0.29	3.61	
1/25/07 18:57:45	17.0	61.2	95.9	0.25	3.64	
1/25/07 18:58:00	16.9	61.9	95.7	0.26	3.64	
1/25/07 18:58:15	17.2	61.5	95.8	0.30	3.61	
1/25/07 18:58:30	17.5	61.2	96.0	0.34	3.60	
1/25/07 18:58:45	17.8	60.8	96.5	0.31	3.62	
1/25/07 18:59:00	17.4	59.3	96.7	0.27	3.64	
1/25/07 18:59:15	17.0	59.2	96.3	0.25	3.64	
1/25/07 18:59:30	17.0	59.9	96.2	0.26	3.62	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 18:59:45	17.2	59.3	96.3	0.31	3.61	
1/25/07 19:00:00	17.4	58.5	96.9	0.32	3.58	
1/25/07 19:00:15	17.4	58.5	97.0	0.30	3.59	
1/25/07 19:00:30	17.4	58.9	96.8	0.28	3.61	
1/25/07 19:00:45	17.3	59.9	96.5	0.28	3.62	
1/25/07 19:01:00	17.4	61.4	96.4	0.27	3.62	
1/25/07 19:01:15	17.3	61.9	96.9	0.27	3.63	
1/25/07 19:01:30	17.3	60.8	98.5	0.26	3.63	
1/25/07 19:01:45	17.1	59.9	98.6	0.26	3.63	
1/25/07 19:02:00	16.9	60.3	97.8	0.27	3.62	
1/25/07 19:02:15	16.9	60.8	97.5	0.31	3.60	
1/25/07 19:02:30	17.1	59.7	97.0	0.33	3.59	
1/25/07 19:02:45	17.0	59.0	96.8	0.33	3.59	
1/25/07 19:03:00	17.1	59.4	96.9	0.32	3.59	
1/25/07 19:03:15	17.1	58.7	97.2	0.32	3.59	
1/25/07 19:03:30	17.0	59.4	97.1	0.33	3.58	
1/25/07 19:03:45	16.9	61.0	97.0	0.34	3.58	
1/25/07 19:04:00	17.1	62.5	97.0	0.35	3.58	
1/25/07 19:04:15	17.1	61.8	96.3	0.36	3.58	
1/25/07 19:04:30	17.3	59.5	95.6	0.35	3.59	
1/25/07 19:04:45	17.5	57.9	95.5	0.33	3.63	
1/25/07 19:05:00	17.4	57.2	95.9	0.31	3.65	
1/25/07 19:05:15	17.3	57.3	96.4	0.29	3.66	
1/25/07 19:05:30	17.1	58.8	97.1	0.31	3.65	
1/25/07 19:05:45	17.1	59.2	97.8	0.32	3.61	
1/25/07 19:06:00	17.2	59.9	97.5	0.33	3.61	
1/25/07 19:06:15	17.2	58.9	96.5	0.33	3.60	
1/25/07 19:06:30	17.4	57.8	96.3	0.32	3.60	
1/25/07 19:06:45	17.2	57.7	96.6	0.32	3.61	
1/25/07 19:07:00	16.4	59.5	97.1	0.30	3.62	
1/25/07 19:07:15	16.4	61.3	97.1	0.30	3.61	
1/25/07 19:07:30	16.7	61.7	96.9	0.36	3.57	
1/25/07 19:07:45	17.3	59.6	96.6	0.37	3.56	
1/25/07 19:08:00	17.4	58.5	96.7	0.34	3.58	
1/25/07 19:08:15	17.2	58.9	96.7	0.29	3.61	
1/25/07 19:08:30	17.0	60.7	97.1	0.26	3.63	
1/25/07 19:08:45	16.9	60.3	97.2	0.26	3.62	
1/25/07 19:09:00	17.0	60.0	97.4	0.27	3.62	
1/25/07 19:09:15	16.8	59.9	97.6	0.27	3.61	
1/25/07 19:09:30	18.6	60.2	97.5	0.28	3.61	
1/25/07 19:09:45	16.5	61.2	96.7	0.30	3.60	
1/25/07 19:10:00	16.8	61.2	96.3	0.33	3.57	
1/25/07 19:10:15	17.1	59.3	98.1	0.34	3.57	
1/25/07 19:10:30	17.1	59.8	95.6	0.33	3.59	
1/25/07 19:10:45	16.8	60.8	95.7	0.30	3.62	
1/25/07 19:11:00	16.9	61.4	96.0	0.28	3.63	
1/25/07 19:11:15	17.2	60.3	96.3	0.30	3.62	
1/25/07 19:11:30	17.4	59.7	96.5	0.32	3.62	
1/25/07 19:11:45	17.3	59.5	96.6	0.30	3.62	
1/25/07 19:12:00	17.3	59.5	96.3	0.29	3.62	
1/25/07 19:12:15	17.2	60.0	96.1	0.29	3.62	
1/25/07 19:12:30	17.2	59.7	96.3	0.30	3.63	
1/25/07 19:12:45	17.2	60.3	96.5	0.31	3.63	
1/25/07 19:13:00	17.1	60.2	96.4	0.31	3.63	
1/25/07 19:13:15	17.2	59.8	96.4	0.31	3.63	
1/25/07 19:13:30	17.3	59.2	96.8	0.32	3.63	
1/25/07 19:13:45	17.4	58.5	96.8	0.32	3.63	
1/25/07 19:14:00	17.3	58.5	97.1	0.31	3.62	
1/25/07 19:14:15	17.2	58.5	98.7	0.30	3.63	
1/25/07 19:14:30	17.2	58.9	98.8	0.30	3.62	
1/25/07 19:14:45	17.3	59.5	97.3	0.29	3.62	
1/25/07 19:15:00	17.2	59.7	96.3	0.29	3.62	
1/25/07 19:15:15	17.2	59.3	95.8	0.30	3.62	
1/25/07 19:15:30	17.3	59.4	95.5	0.30	3.62	
1/25/07 19:15:45	17.1	60.3	95.5	0.29	3.61	
1/25/07 19:16:00	16.8	59.8	95.6	0.29	3.62	
1/25/07 19:16:15	16.8	58.3	95.9	0.29	3.60	
1/25/07 19:16:30	17.0	58.0	96.3	0.31	3.60	
1/25/07 19:16:45	17.0	58.5	96.6	0.33	3.59	
1/25/07 19:17:00	17.3	59.8	97.6	0.33	3.58	
1/25/07 19:17:15	17.3	59.8	98.7	0.31	3.59	
1/25/07 19:17:30	16.9	59.2	98.1	0.27	3.61	
1/25/07 19:17:45	16.8	59.5	97.2	0.25	3.61	
1/25/07 19:18:00	16.7	59.9	96.7	0.27	3.61	
1/25/07 19:18:15	16.8	59.8	97.0	0.29	3.60	
1/25/07 19:18:30	17.0	59.2	97.2	0.30	3.60	
1/25/07 19:18:45	16.9	60.5	97.1	0.31	3.59	
1/25/07 19:19:00	17.1	61.4	98.5	0.32	3.59	
1/25/07 19:19:15	17.3	62.8	101.4	0.32	3.58	
1/25/07 19:19:30	17.5	63.0	100.6	0.30	3.59	
1/25/07 19:19:45	17.2	62.0	98.9	0.27	3.61	
1/25/07 19:20:00	17.0	61.9	98.3	0.25	3.62	
1/25/07 19:20:15	17.0	61.8	97.9	0.27	3.62	
1/25/07 19:20:30	17.0	61.2	97.7	0.30	3.61	
1/25/07 19:20:45	17.1	61.0	97.6	0.31	3.60	
1/25/07 19:21:00	17.1	61.9	97.6	0.31	3.59	
1/25/07 19:21:15	17.1	62.0	97.5	0.31	3.59	
1/25/07 19:21:30	17.2	62.4	98.1	0.30	3.59	
1/25/07 19:21:45	17.4	61.8	98.1	0.30	3.60	
1/25/07 19:22:00	17.4	60.3	97.4	0.28	3.59	
1/25/07 19:22:15	17.4	59.0	97.1	0.26	3.61	
1/25/07 19:22:30	17.4	59.4	97.1	0.25	3.61	
1/25/07 19:22:45	17.1	60.0	98.2	0.27	3.61	
1/25/07 19:23:00	17.2	60.4	98.0	0.28	3.61	
1/25/07 19:23:15	17.1	60.3	97.6	0.29	3.60	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 19:23:30	17.1	60.5	97.9	0.29	3.60		
1/25/07 19:23:45	17.1	60.5	97.9	0.30	3.60		
1/25/07 19:24:00	17.1	60.5	97.6	0.31	3.60		
1/25/07 19:24:15	17.3	60.3	97.3	0.32	3.59		
1/25/07 19:24:30	17.6	60.2	97.2	0.32	3.59		
1/25/07 19:24:45	17.7	60.5	97.2	0.30	3.61		
1/25/07 19:25:00	17.4	60.5	97.2	0.28	3.63		
1/25/07 19:25:15	17.2	60.3	97.5	0.27	3.63		
1/25/07 19:25:30	17.4	59.8	97.3	0.29	3.62		
1/25/07 19:25:45	17.6	59.8	96.7	0.31	3.60		
1/25/07 19:26:00	17.5	60.3	96.2	0.32	3.59		
1/25/07 19:26:15	17.1	62.3	96.3	0.30	3.62		
1/25/07 19:26:30	17.0	62.5	96.6	0.29	3.61		
1/25/07 19:26:45	17.1	59.3	97.0	0.31	3.59		
1/25/07 19:27:00	17.2	58.5	97.1	0.33	3.58		
1/25/07 19:27:15	17.1	60.8	97.1	0.32	3.60		
1/25/07 19:27:30	16.8	61.9	97.4	0.30	3.62		
1/25/07 19:27:45	17.0	60.8	97.6	0.31	3.61		
1/25/07 19:28:00	17.4	58.9	97.1	0.34	3.56		
1/25/07 19:28:15	17.3	57.5	96.6	0.34	3.56		
1/25/07 19:28:30	17.0	57.9	96.6	0.32	3.57		
1/25/07 19:28:45	16.9	59.5	97.2	0.30	3.58		
1/25/07 19:29:00	17.0	60.4	97.6	0.31	3.57	End Run No. 6	
1/25/07 19:29:15	17.0	60.0	97.7	0.33	3.56		
1/25/07 19:29:30	17.0	60.4	97.3	0.33	3.56		
1/25/07 19:29:45	17.7	52.3	96.9	0.33	3.57		
1/25/07 19:30:00	2.9	35.2	96.9	0.32	3.58		
1/25/07 19:30:15	2.0	12.6	92.6	0.61	2.99		
1/25/07 19:30:30	16.8	3.8	102.7	1.03	1.35		
1/25/07 19:30:45	1.2	0.3	171.9	0.50	0.38		
1/25/07 19:31:00	0.9	0.1	185.5	0.12	0.08		
1/25/07 19:31:15	0.8	0.1	141.3	0.02	0.02		
1/25/07 19:31:30	0.7	0.1	114.0	-0.01	0.01		
1/25/07 19:31:45	0.7	0.1	104.7	-0.02	0.00		
1/25/07 19:32:00	0.6	0.1	102.2	-0.02	0.00		
1/25/07 19:32:15	0.6	0.1	101.4	-0.02	-0.01		
1/25/07 19:32:30	0.6	0.1	101.0	-0.02	-0.01		
1/25/07 19:32:45	0.5	0.1	101.2	-0.02	-0.01		
1/25/07 19:33:00	0.5	0.1	101.2	-0.02	-0.01		
1/25/07 19:33:15	0.5	0.1	101.4	-0.02	-0.01		
1/25/07 19:33:30	0.5	0.1	101.6	-0.02	-0.01	System Bias	
1/25/07 19:33:45	0.5	0.1	101.6	-0.02	-0.01	100 ppm SO2	
1/25/07 19:34:00	0.5	0.1	101.6	-0.02	-0.01		101.6
1/25/07 19:34:15	0.5	0.1	101.5	-0.02	-0.01		
1/25/07 19:34:30	4.3	0.1	101.6	-0.02	-0.01		
1/25/07 19:34:45	27.5	0.1	99.6	-0.02	-0.01		
1/25/07 19:35:00	36.3	0.1	82.7	-0.02	-0.01		
1/25/07 19:35:15	40.0	0.1	52.0	-0.02	-0.01		
1/25/07 19:35:30	41.9	0.1	26.8	-0.02	-0.01		
1/25/07 19:35:45	44.4	0.1	13.9	-0.02	-0.01		
1/25/07 19:36:00	49.0	0.1	8.5	-0.02	-0.01		
1/25/07 19:36:15	51.0	0.1	6.0	-0.02	-0.01		
1/25/07 19:36:30	49.4	0.1	4.5	-0.02	-0.01		
1/25/07 19:36:45	48.6	0.1	3.4	-0.02	-0.01		
1/25/07 19:37:00	48.4	0.1	2.6	-0.02	-0.01	System Bias	
1/25/07 19:37:15	48.3	0.1	2.2	-0.02	-0.01	50 ppm NOx	
1/25/07 19:37:30	48.3	0.1	1.7	-0.02	-0.01		48.3
1/25/07 19:37:45	48.4	0.1	1.3	-0.02	-0.02		
1/25/07 19:38:00	48.2	0.1	1.0	-0.02	-0.01		
1/25/07 19:38:15	17.8	35.1	0.8	-0.02	-0.01		
1/25/07 19:38:30	12.2	106.9	0.8	-0.02	-0.01		
1/25/07 19:38:45	2.9	200.2	1.0	-0.02	-0.01		
1/25/07 19:39:00	1.8	234.3	2.0	-0.01	-0.01		
1/25/07 19:39:15	1.3	247.2	1.9	-0.02	-0.01		
1/25/07 19:39:30	1.0	249.2	1.3	-0.02	-0.01		
1/25/07 19:39:45	0.9	250.2	0.7	-0.02	-0.01		
1/25/07 19:40:00	0.8	250.4	0.4	-0.02	-0.01		
1/25/07 19:40:15	0.7	250.9	0.1	-0.02	-0.01	System Bias	
1/25/07 19:40:30	0.6	250.9	-0.1	-0.02	-0.02	250 ppm CO	
1/25/07 19:40:45	0.6	250.9	-0.2	-0.02	-0.02		251.0
1/25/07 19:41:00	0.5	251.0	-0.1	-0.02	-0.02		
1/25/07 19:41:15	0.5	251.0	-0.2	-0.02	-0.01		
1/25/07 19:41:30	0.5	249.2	-0.4	-0.03	-0.01		
1/25/07 19:41:45	1.1	171.9	-0.5	-0.03	-0.01		
1/25/07 19:42:00	0.4	99.3	-0.5	-0.02	0.84		
1/25/07 19:42:15	0.4	29.8	-0.7	-0.02	3.51		
1/25/07 19:42:30	0.3	7.7	-0.7	-0.03	5.64		
1/25/07 19:42:45	0.3	-0.2	-0.6	-0.04	6.63		
1/25/07 19:43:00	0.3	-0.9	-0.7	-0.05	6.87		
1/25/07 19:43:15	0.3	-0.9	-0.6	-0.05	6.93		
1/25/07 19:43:30	0.2	-1.3	-0.7	-0.05	6.95		
1/25/07 19:43:45	0.2	-1.4	-0.7	-0.05	6.95		
1/25/07 19:44:00	0.2	-1.4	-0.8	-0.05	6.96		
1/25/07 19:44:15	0.2	-1.4	-0.8	-0.05	6.97	System Bias	
1/25/07 19:44:30	0.2	-1.4	-0.7	-0.05	6.97	7.0% CO2	
1/25/07 19:44:45	0.2	-1.2	-0.7	-0.05	6.96		6.96
1/25/07 19:45:00	0.2	-1.4	-0.8	-0.05	6.96	Zero O2	
1/25/07 19:45:15	2.0	-0.9	-0.9	-0.05	6.97		-0.05
1/25/07 19:45:30	0.4	-0.5	-0.9	0.05	6.46		
1/25/07 19:45:45	0.2	-0.2	-0.8	1.42	3.83		
1/25/07 19:46:00	0.2	0.1	-0.9	3.54	1.30		
1/25/07 19:46:15	0.2	0.1	-1.1	4.65	0.31		
1/25/07 19:46:30	0.2	0.1	-1.2	4.89	0.10		
1/25/07 19:46:45	0.2	-0.2	-1.1	4.95	0.04		
1/25/07 19:47:00	0.2	0.0	-1.1	4.98	0.03		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 19:47:15	0.2	0.1	-1.1	4.99	0.01	System Bias	
1/25/07 19:47:30	0.2	0.1	-1.1	4.99	0.01	5.0% O2	
1/25/07 19:47:45	0.2	0.1	-1.1	4.99	0.01		5.00
1/25/07 19:48:00	0.2	-0.3	-1.1	5.00	0.01	Zero NOx	
1/25/07 19:48:15	0.2	0.1	-1.1	5.00	0.00		0.2
1/25/07 19:48:30	0.6	2.7	-1.2	5.00	0.00	Zero CO	
1/25/07 19:48:45	12.7	24.3	-1.2	5.00	0.00		0.0
1/25/07 19:49:00	17.0	40.8	1.8	4.71	0.41	Zero SO2	
1/25/07 19:49:15	16.9	54.8	26.4	2.84	1.94		-1.1
1/25/07 19:49:30	16.7	58.2	63.6	1.10	3.07	Zero CO2	
1/25/07 19:49:45	16.8	59.0	84.2	0.49	3.44		0.01
1/25/07 19:50:00	16.7	58.7	91.4	0.38	3.51		
1/25/07 19:50:15	16.8	58.5	94.6	0.36	3.53		
1/25/07 19:50:30	16.9	58.9	96.7	0.35	3.54		
1/25/07 19:50:45	16.8	58.8	97.8	0.35	3.56		
1/25/07 19:51:00	16.9	58.7	98.5	0.35	3.56		
1/25/07 19:51:15	17.1	58.5	98.5	0.34	3.56		
1/25/07 19:51:30	17.3	58.5	98.4	0.33	3.57		
1/25/07 19:51:45	17.3	57.8	98.4	0.32	3.58		
1/25/07 19:52:00	17.4	57.5	98.2	0.30	3.59		
1/25/07 19:52:15	17.4	57.8	98.4	0.30	3.59		
1/25/07 19:52:30	17.0	59.3	98.6	0.31	3.59		
1/25/07 19:52:45	17.0	61.5	98.6	0.32	3.60	Start Run No. 7	
1/25/07 19:53:00	16.9	62.0	98.9	0.34	3.60		
1/25/07 19:53:15	17.0	59.5	99.0	0.34	3.58		
1/25/07 19:53:30	17.1	58.2	98.7	0.35	3.58		
1/25/07 19:53:45	17.1	57.8	98.3	0.35	3.58		
1/25/07 19:54:00	17.3	58.0	98.0	0.35	3.57		
1/25/07 19:54:15	17.0	57.3	98.0	0.34	3.57		
1/25/07 19:54:30	17.1	57.0	98.2	0.34	3.59		
1/25/07 19:54:45	17.1	57.5	98.6	0.33	3.59		
1/25/07 19:55:00	17.2	58.4	98.8	0.32	3.60		
1/25/07 19:55:15	16.9	59.3	98.8	0.31	3.60		
1/25/07 19:55:30	16.8	60.8	98.6	0.32	3.60		
1/25/07 19:55:45	16.7	61.5	98.3	0.35	3.59		
1/25/07 19:56:00	16.9	61.1	98.4	0.36	3.56		
1/25/07 19:56:15	18.8	60.5	98.6	0.34	3.56		
1/25/07 19:56:30	16.7	60.2	98.7	0.34	3.57		
1/25/07 19:56:45	16.7	59.8	98.5	0.35	3.57		
1/25/07 19:57:00	16.8	59.4	98.4	0.36	3.57		
1/25/07 19:57:15	16.9	59.0	98.5	0.37	3.57		
1/25/07 19:57:30	17.0	58.9	98.2	0.37	3.58		
1/25/07 19:57:45	17.1	58.5	98.6	0.35	3.58		
1/25/07 19:58:00	16.9	58.9	98.9	0.33	3.58		
1/25/07 19:58:15	16.9	59.3	99.1	0.32	3.58		
1/25/07 19:58:30	16.8	60.3	98.8	0.34	3.58		
1/25/07 19:58:45	16.8	61.5	98.0	0.35	3.57		
1/25/07 19:59:00	17.0	60.5	97.4	0.37	3.58		
1/25/07 19:59:15	16.8	58.8	97.1	0.36	3.58		
1/25/07 19:59:30	17.1	57.8	96.9	0.36	3.59		
1/25/07 19:59:45	17.3	58.0	96.6	0.35	3.59		
1/25/07 20:00:00	17.3	57.8	96.8	0.33	3.60		
1/25/07 20:00:15	17.2	57.8	97.4	0.32	3.61		
1/25/07 20:00:30	17.1	58.3	97.7	0.32	3.61		
1/25/07 20:00:45	17.1	58.8	98.0	0.35	3.61		
1/25/07 20:01:00	17.0	60.2	97.9	0.36	3.61		
1/25/07 20:01:15	17.2	60.5	97.8	0.35	3.60		
1/25/07 20:01:30	17.2	59.9	97.7	0.34	3.59		
1/25/07 20:01:45	17.1	58.5	97.6	0.34	3.60		
1/25/07 20:02:00	17.0	57.2	97.9	0.33	3.60		
1/25/07 20:02:15	17.0	56.5	98.4	0.32	3.60		
1/25/07 20:02:30	16.9	57.0	98.7	0.32	3.61		
1/25/07 20:02:45	16.9	57.8	98.7	0.33	3.61		
1/25/07 20:03:00	16.7	58.5	98.6	0.34	3.57		
1/25/07 20:03:15	16.6	59.3	98.9	0.34	3.56		
1/25/07 20:03:30	16.7	59.0	98.7	0.34	3.56		
1/25/07 20:03:45	16.8	58.0	98.0	0.35	3.56		
1/25/07 20:04:00	16.9	56.3	97.8	0.35	3.57		
1/25/07 20:04:15	17.0	55.5	97.4	0.34	3.58		
1/25/07 20:04:30	16.9	56.0	96.8	0.34	3.59		
1/25/07 20:04:45	16.9	57.0	96.8	0.34	3.59		
1/25/07 20:05:00	16.5	58.9	97.7	0.34	3.59		
1/25/07 20:05:15	16.5	60.3	97.4	0.34	3.59		
1/25/07 20:05:30	16.6	61.5	97.4	0.36	3.59		
1/25/07 20:05:45	16.5	62.5	97.7	0.38	3.58		
1/25/07 20:06:00	16.7	61.4	97.6	0.40	3.57		
1/25/07 20:06:15	17.0	59.5	97.2	0.41	3.57		
1/25/07 20:06:30	17.2	57.8	96.7	0.41	3.58		
1/25/07 20:06:45	17.0	57.0	96.5	0.38	3.61		
1/25/07 20:07:00	16.7	57.3	96.1	0.35	3.62		
1/25/07 20:07:15	16.8	57.8	95.8	0.35	3.62		
1/25/07 20:07:30	16.8	57.8	95.7	0.37	3.61		
1/25/07 20:07:45	17.0	56.8	95.6	0.37	3.60		
1/25/07 20:08:00	16.9	55.7	95.3	0.37	3.60		
1/25/07 20:08:15	16.7	55.5	95.2	0.35	3.61		
1/25/07 20:08:30	16.8	56.3	95.4	0.33	3.62		
1/25/07 20:08:45	16.9	56.3	95.7	0.34	3.61		
1/25/07 20:09:00	16.8	55.7	96.2	0.34	3.60		
1/25/07 20:09:15	16.7	55.5	96.5	0.34	3.61		
1/25/07 20:09:30	16.7	55.3	96.4	0.33	3.60		
1/25/07 20:09:45	16.8	55.8	95.9	0.36	3.59		
1/25/07 20:10:00	16.8	56.3	95.8	0.36	3.59		
1/25/07 20:10:15	16.7	57.5	95.6	0.37	3.59		
1/25/07 20:10:30	16.9	58.0	95.5	0.36	3.60		
1/25/07 20:10:45	16.8	57.8	95.4	0.35	3.60		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 20:11:00	16.8	57.2	95.6	0.35	3.60	
1/25/07 20:11:15	16.8	57.3	95.5	0.34	3.60	
1/25/07 20:11:30	16.9	57.7	95.0	0.35	3.60	
1/25/07 20:11:45	16.7	58.3	94.6	0.36	3.60	
1/25/07 20:12:00	16.5	59.5	93.6	0.36	3.60	
1/25/07 20:12:15	16.4	60.3	92.9	0.37	3.58	
1/25/07 20:12:30	16.6	59.9	93.4	0.39	3.57	
1/25/07 20:12:45	16.6	59.0	94.0	0.40	3.57	
1/25/07 20:13:00	17.0	58.3	94.1	0.41	3.58	
1/25/07 20:13:15	17.3	57.5	94.4	0.40	3.59	
1/25/07 20:13:30	16.9	56.7	94.8	0.37	3.60	
1/25/07 20:13:45	16.7	56.0	95.2	0.32	3.61	
1/25/07 20:14:00	16.7	56.0	95.5	0.32	3.62	
1/25/07 20:14:15	16.7	55.8	95.6	0.34	3.60	
1/25/07 20:14:30	16.5	56.0	95.5	0.34	3.59	
1/25/07 20:14:45	16.4	56.8	95.7	0.34	3.58	
1/25/07 20:15:00	16.3	57.4	95.5	0.35	3.57	
1/25/07 20:15:15	16.4	57.8	95.4	0.38	3.55	
1/25/07 20:15:30	16.5	57.5	95.6	0.39	3.55	
1/25/07 20:15:45	16.7	56.8	95.8	0.39	3.56	
1/25/07 20:16:00	16.6	56.7	95.8	0.37	3.59	
1/25/07 20:16:15	16.6	57.0	96.0	0.35	3.59	
1/25/07 20:16:30	16.5	57.0	96.4	0.33	3.58	
1/25/07 20:16:45	16.6	57.0	96.8	0.34	3.59	
1/25/07 20:17:00	16.6	56.9	97.0	0.36	3.59	
1/25/07 20:17:15	16.5	56.5	96.9	0.36	3.58	
1/25/07 20:17:30	16.6	56.9	96.5	0.37	3.57	
1/25/07 20:17:45	16.6	57.8	96.5	0.37	3.58	
1/25/07 20:18:00	16.6	59.3	96.3	0.37	3.58	
1/25/07 20:18:15	16.7	59.3	95.9	0.38	3.59	
1/25/07 20:18:30	16.7	58.3	95.6	0.39	3.59	
1/25/07 20:18:45	17.0	56.8	95.5	0.38	3.59	
1/25/07 20:19:00	16.9	56.3	95.9	0.36	3.60	
1/25/07 20:19:15	17.1	56.5	95.8	0.33	3.61	
1/25/07 20:19:30	16.6	56.4	96.2	0.31	3.61	
1/25/07 20:19:45	16.5	56.3	96.9	0.30	3.62	
1/25/07 20:20:00	16.2	57.5	97.2	0.32	3.61	
1/25/07 20:20:15	16.3	58.8	97.1	0.36	3.59	
1/25/07 20:20:30	16.6	58.5	96.8	0.38	3.57	
1/25/07 20:20:45	16.8	58.3	97.0	0.38	3.56	
1/25/07 20:21:00	17.0	58.0	96.9	0.37	3.58	
1/25/07 20:21:15	16.5	58.3	96.4	0.33	3.60	
1/25/07 20:21:30	16.3	59.9	96.7	0.30	3.61	
1/25/07 20:21:45	16.2	61.8	98.0	0.33	3.61	
1/25/07 20:22:00	16.3	61.7	100.9	0.38	3.60	
1/25/07 20:22:15	16.5	61.0	100.5	0.40	3.58	
1/25/07 20:22:30	16.7	59.8	98.4	0.40	3.55	
1/25/07 20:22:45	16.8	59.3	97.8	0.38	3.55	
1/25/07 20:23:00	17.1	57.9	97.2	0.35	3.56	
1/25/07 20:23:15	16.9	58.0	96.6	0.32	3.58	
1/25/07 20:23:30	16.5	59.3	96.6	0.30	3.60	
1/25/07 20:23:45	16.2	61.0	96.2	0.30	3.61	
1/25/07 20:24:00	16.1	62.4	95.6	0.33	3.60	
1/25/07 20:24:15	16.2	62.5	95.3	0.36	3.58	
1/25/07 20:24:30	16.4	61.2	95.8	0.39	3.57	
1/25/07 20:24:45	16.6	60.5	96.2	0.39	3.55	
1/25/07 20:25:00	16.8	60.4	96.3	0.37	3.56	
1/25/07 20:25:15	16.8	61.0	96.5	0.36	3.57	
1/25/07 20:25:30	16.8	60.9	96.7	0.34	3.59	
1/25/07 20:25:45	17.0	60.3	96.7	0.32	3.59	
1/25/07 20:26:00	16.6	59.5	96.7	0.30	3.60	
1/25/07 20:26:15	16.7	60.5	96.8	0.31	3.59	
1/25/07 20:26:30	16.7	61.3	97.3	0.33	3.59	
1/25/07 20:26:45	16.7	61.0	97.4	0.33	3.59	
1/25/07 20:27:00	16.8	59.5	97.0	0.32	3.59	
1/25/07 20:27:15	16.9	58.0	97.0	0.31	3.59	
1/25/07 20:27:30	16.6	58.3	97.2	0.30	3.58	
1/25/07 20:27:45	16.7	59.5	97.6	0.30	3.58	
1/25/07 20:28:00	16.6	60.4	97.7	0.31	3.58	
1/25/07 20:28:15	16.7	60.5	97.4	0.31	3.58	
1/25/07 20:28:30	16.7	60.0	97.3	0.30	3.59	
1/25/07 20:28:45	16.7	59.8	97.1	0.30	3.59	
1/25/07 20:29:00	16.7	60.4	96.8	0.29	3.59	
1/25/07 20:29:15	16.6	61.3	96.7	0.29	3.59	
1/25/07 20:29:30	16.3	63.5	96.5	0.29	3.59	
1/25/07 20:29:45	16.2	64.5	96.3	0.30	3.59	
1/25/07 20:30:00	16.4	65.0	96.3	0.34	3.58	
1/25/07 20:30:15	16.7	64.8	96.0	0.37	3.56	
1/25/07 20:30:30	16.9	63.7	95.9	0.37	3.58	
1/25/07 20:30:45	17.2	62.5	96.2	0.34	3.57	
1/25/07 20:31:00	17.3	61.8	96.7	0.31	3.58	
1/25/07 20:31:15	16.9	62.0	96.8	0.28	3.61	
1/25/07 20:31:30	16.8	61.5	96.7	0.27	3.62	
1/25/07 20:31:45	16.8	61.3	96.5	0.28	3.61	
1/25/07 20:32:00	16.7	61.9	96.5	0.32	3.61	
1/25/07 20:32:15	16.8	61.8	96.7	0.34	3.61	
1/25/07 20:32:30	16.8	61.4	98.8	0.34	3.60	
1/25/07 20:32:45	17.1	60.5	96.3	0.34	3.59	
1/25/07 20:33:00	17.2	59.7	95.9	0.32	3.59	
1/25/07 20:33:15	17.2	59.5	96.4	0.29	3.62	
1/25/07 20:33:30	17.1	59.9	96.6	0.27	3.62	
1/25/07 20:33:45	16.9	60.0	96.8	0.27	3.63	
1/25/07 20:34:00	16.6	59.8	96.9	0.28	3.62	
1/25/07 20:34:15	16.7	60.0	96.2	0.30	3.61	
1/25/07 20:34:30	16.9	60.5	95.5	0.30	3.60	

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SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 20:34:45	16.9	61.3	95.6	0.31	3.61	
1/25/07 20:35:00	17.0	60.4	96.1	0.32	3.60	
1/25/07 20:35:15	17.0	59.8	96.5	0.31	3.60	
1/25/07 20:35:30	16.8	59.3	96.5	0.29	3.60	
1/25/07 20:35:45	16.8	59.5	96.3	0.28	3.61	
1/25/07 20:36:00	16.7	60.0	96.3	0.29	3.60	
1/25/07 20:36:15	16.7	60.5	96.9	0.31	3.59	
1/25/07 20:36:30	16.7	59.7	97.3	0.32	3.59	
1/25/07 20:36:45	16.9	58.8	97.2	0.32	3.60	
1/25/07 20:37:00	17.0	58.0	96.8	0.32	3.59	
1/25/07 20:37:15	17.0	58.5	96.4	0.31	3.60	
1/25/07 20:37:30	17.2	60.4	95.9	0.30	3.60	
1/25/07 20:37:45	17.2	61.0	95.7	0.28	3.61	
1/25/07 20:38:00	16.9	60.7	95.8	0.27	3.61	
1/25/07 20:38:15	16.6	61.0	96.0	0.26	3.62	
1/25/07 20:38:30	16.4	62.7	96.5	0.27	3.61	
1/25/07 20:38:45	16.7	64.3	96.6	0.31	3.60	
1/25/07 20:39:00	17.3	64.8	96.3	0.34	3.57	
1/25/07 20:39:15	17.3	64.0	96.2	0.33	3.59	
1/25/07 20:39:30	16.8	62.8	96.5	0.26	3.62	
1/25/07 20:39:45	16.4	62.8	97.0	0.23	3.64	
1/25/07 20:40:00	16.4	63.7	97.3	0.27	3.61	
1/25/07 20:40:15	16.6	63.5	96.6	0.33	3.57	
1/25/07 20:40:30	16.9	62.5	95.6	0.34	3.57	
1/25/07 20:40:45	16.9	61.8	95.4	0.32	3.59	
1/25/07 20:41:00	16.7	62.8	95.7	0.30	3.59	
1/25/07 20:41:15	16.7	62.8	96.3	0.29	3.61	
1/25/07 20:41:30	16.8	62.3	96.3	0.30	3.60	
1/25/07 20:41:45	16.7	61.5	96.4	0.31	3.60	
1/25/07 20:42:00	16.7	61.9	96.3	0.31	3.60	
1/25/07 20:42:15	16.8	63.0	96.4	0.32	3.60	
1/25/07 20:42:30	17.0	64.0	96.3	0.33	3.60	
1/25/07 20:42:45	17.3	64.5	96.4	0.34	3.61	
1/25/07 20:43:00	17.4	64.4	96.2	0.31	3.62	
1/25/07 20:43:15	17.1	63.5	96.4	0.28	3.64	
1/25/07 20:43:30	16.8	62.5	96.6	0.25	3.63	
1/25/07 20:43:45	16.6	62.0	96.4	0.26	3.61	
1/25/07 20:44:00	16.6	62.5	95.9	0.29	3.59	
1/25/07 20:44:15	16.8	62.0	95.2	0.31	3.57	
1/25/07 20:44:30	16.9	61.4	95.0	0.32	3.57	
1/25/07 20:44:45	17.1	61.0	95.2	0.32	3.58	
1/25/07 20:45:00	17.0	60.7	95.1	0.30	3.59	
1/25/07 20:45:15	16.8	61.3	95.2	0.28	3.61	
1/25/07 20:45:30	16.8	61.4	95.4	0.27	3.61	
1/25/07 20:45:45	16.8	60.8	95.6	0.29	3.60	
1/25/07 20:46:00	16.6	60.3	95.8	0.31	3.58	
1/25/07 20:46:15	16.6	61.0	95.6	0.32	3.58	
1/25/07 20:46:30	16.8	60.8	94.9	0.33	3.58	
1/25/07 20:46:45	16.9	59.8	94.5	0.33	3.58	
1/25/07 20:47:00	17.0	59.2	94.7	0.33	3.59	
1/25/07 20:47:15	17.0	59.5	95.0	0.32	3.60	
1/25/07 20:47:30	17.0	59.5	95.5	0.30	3.61	
1/25/07 20:47:45	17.0	60.0	95.8	0.30	3.60	
1/25/07 20:48:00	16.9	60.5	95.3	0.30	3.60	
1/25/07 20:48:15	16.8	60.0	95.3	0.29	3.60	
1/25/07 20:48:30	16.7	59.4	95.4	0.30	3.60	
1/25/07 20:48:45	16.7	59.5	95.4	0.32	3.59	
1/25/07 20:49:00	16.4	60.7	95.8	0.32	3.58	
1/25/07 20:49:15	16.3	61.0	96.0	0.32	3.58	
1/25/07 20:49:30	16.3	61.7	95.6	0.33	3.56	
1/25/07 20:49:45	16.4	62.0	95.3	0.34	3.55	
1/25/07 20:50:00	16.4	61.9	95.4	0.35	3.56	
1/25/07 20:50:15	16.7	61.3	95.5	0.35	3.56	
1/25/07 20:50:30	17.1	60.9	95.8	0.34	3.56	
1/25/07 20:50:45	16.8	60.8	96.3	0.32	3.58	
1/25/07 20:51:00	16.4	61.7	97.1	0.29	3.60	
1/25/07 20:51:15	16.4	62.3	97.4	0.28	3.60	
1/25/07 20:51:30	16.7	61.8	96.9	0.31	3.57	
1/25/07 20:51:45	16.9	60.3	96.6	0.34	3.55	
1/25/07 20:52:00	16.9	57.9	97.0	0.32	3.57	
1/25/07 20:52:15	16.7	58.0	97.2	0.28	3.59	
1/25/07 20:52:30	16.7	60.5	96.9	0.28	3.60	
1/25/07 20:52:45	16.5	62.0	96.3	0.30	3.60	
1/25/07 20:53:00	16.7	62.5	96.6	0.32	3.59	End Run No. 7
1/25/07 20:53:15	16.9	61.8	96.8	0.33	3.59	
1/25/07 20:53:30	17.1	61.2	96.7	0.33	3.59	
1/25/07 20:53:45	17.3	61.3	97.0	0.32	3.60	
1/25/07 20:54:00	17.2	59.9	97.2	0.30	3.62	
1/25/07 20:54:15	17.0	59.3	97.2	0.28	3.63	
1/25/07 20:54:30	16.7	59.0	96.8	0.28	3.62	
1/25/07 20:54:45	15.2	54.0	96.6	0.28	3.60	
1/25/07 20:55:00	9.4	31.0	96.2	0.29	3.58	
1/25/07 20:55:15	5.7	15.1	91.4	0.58	3.02	
1/25/07 20:55:30	7.6	2.4	99.5	1.03	1.40	
1/25/07 20:55:45	1.7	0.3	167.5	0.53	0.39	
1/25/07 20:56:00	0.9	-0.4	186.9	0.13	0.08	
1/25/07 20:56:15	0.7	-0.4	144.0	0.02	0.02	
1/25/07 20:56:30	0.7	-0.4	115.9	-0.01	0.00	
1/25/07 20:56:45	0.6	-0.4	106.4	-0.02	-0.01	
1/25/07 20:57:00	0.6	-0.4	103.3	-0.02	-0.01	
1/25/07 20:57:15	0.5	-0.4	102.3	-0.03	-0.01	
1/25/07 20:57:30	0.5	-0.4	102.1	-0.03	-0.01	
1/25/07 20:57:45	0.5	-0.4	102.0	-0.03	-0.01	
1/25/07 20:58:00	0.5	-0.4	101.9	-0.03	-0.01	
1/25/07 20:58:15	0.5	-0.4	101.8	-0.03	-0.01	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 20:58:30	0.5	-0.4	101.7	-0.03	-0.01	System Bias	
1/25/07 20:58:45	0.5	-0.4	101.8	-0.03	-0.02	100 ppm SO2	
1/25/07 20:59:00	0.4	-0.4	101.8	-0.03	-0.02		101.9
1/25/07 20:59:15	0.4	-0.4	102.0	-0.03	-0.02		
1/25/07 20:59:30	2.8	-0.4	102.0	-0.03	-0.01		
1/25/07 20:59:45	25.0	-0.4	100.2	-0.03	-0.02		
1/25/07 21:00:00	36.7	-0.4	84.0	-0.03	-0.02		
1/25/07 21:00:15	40.3	-0.4	53.8	-0.03	-0.01		
1/25/07 21:00:30	42.3	-0.4	28.0	-0.03	-0.01		
1/25/07 21:00:45	45.0	-0.4	14.5	-0.03	-0.02		
1/25/07 21:01:00	49.1	-0.4	8.8	-0.03	-0.02		
1/25/07 21:01:15	49.5	-0.4	6.1	-0.03	-0.02		
1/25/07 21:01:30	49.1	-0.4	4.4	-0.03	-0.02		
1/25/07 21:01:45	48.8	-0.4	3.2	-0.03	-0.02		
1/25/07 21:02:00	48.7	-0.4	2.4	-0.03	-0.02	System Bias	
1/25/07 21:02:15	48.7	-0.4	1.8	-0.03	-0.02	50 ppm NOx	
1/25/07 21:02:30	48.7	-0.4	1.3	-0.03	-0.02		48.7
1/25/07 21:02:45	48.6	-0.4	1.1	-0.03	-0.02		
1/25/07 21:03:00	48.6	-0.2	0.8	-0.03	-0.02		
1/25/07 21:03:15	33.8	21.1	0.6	-0.03	-0.03		
1/25/07 21:03:30	21.6	116.5	0.4	-0.03	-0.03		
1/25/07 21:03:45	3.3	185.4	0.6	-0.03	-0.03		
1/25/07 21:04:00	1.8	236.8	1.5	-0.02	-0.03		
1/25/07 21:04:15	1.3	245.4	1.7	-0.02	-0.03		
1/25/07 21:04:30	1.0	248.5	1.2	-0.03	-0.03		
1/25/07 21:04:45	0.9	249.2	0.8	-0.03	-0.03		
1/25/07 21:05:00	0.7	249.4	0.5	-0.03	-0.03		
1/25/07 21:05:15	0.6	249.7	0.2	-0.03	-0.03	System Bias	
1/25/07 21:05:30	0.6	250.4	-0.2	-0.03	-0.03	250 ppm CO	
1/25/07 21:05:45	0.5	250.4	-0.2	-0.03	-0.03		250.4
1/25/07 21:06:00	0.5	250.4	-0.4	-0.03	-0.03		
1/25/07 21:06:15	0.4	250.5	-0.4	-0.03	-0.03		
1/25/07 21:06:30	0.4	243.4	-0.5	-0.03	-0.03		
1/25/07 21:06:45	2.6	190.2	-0.5	-0.03	-0.03		
1/25/07 21:07:00	0.4	69.6	-0.6	-0.03	0.69		
1/25/07 21:07:15	0.3	38.5	-0.7	-0.03	3.34		
1/25/07 21:07:30	0.3	5.4	-0.7	-0.04	5.54		
1/25/07 21:07:45	0.2	-0.2	-0.7	-0.05	6.59		
1/25/07 21:08:00	0.2	-1.6	-0.6	-0.05	6.85		
1/25/07 21:08:15	0.2	-1.7	-0.6	-0.06	6.91		
1/25/07 21:08:30	0.2	-1.4	-0.6	-0.06	6.93		
1/25/07 21:08:45	0.2	-1.7	-0.7	-0.06	6.94		
1/25/07 21:09:00	0.2	-1.9	-0.7	-0.06	6.93		
1/25/07 21:09:15	0.1	-1.9	-0.8	-0.06	6.94	System Bias	
1/25/07 21:09:30	0.1	-1.9	-0.8	-0.06	6.95	7.0% CO2	
1/25/07 21:09:45	0.1	-1.9	-0.8	-0.06	6.95		6.95
1/25/07 21:10:00	0.1	-1.8	-0.9	-0.06	6.95	Zero O2	
1/25/07 21:10:15	1.6	-1.4	-0.9	-0.06	6.95		-0.06
1/25/07 21:10:30	0.7	-0.9	-0.9	0.02	6.54		
1/25/07 21:10:45	0.2	-0.7	-1.0	1.27	4.00		
1/25/07 21:11:00	0.2	-0.4	-0.9	3.41	1.42		
1/25/07 21:11:15	0.1	-0.4	-0.9	4.60	0.34		
1/25/07 21:11:30	0.1	-0.4	-1.0	4.88	0.10		
1/25/07 21:11:45	0.1	-0.4	-1.0	4.94	0.04		
1/25/07 21:12:00	0.1	-0.4	-1.1	4.97	0.02		
1/25/07 21:12:15	0.1	-0.4	-0.9	4.98	0.01	System Bias	
1/25/07 21:12:30	0.1	-0.4	-1.0	4.99	0.00	5.0% O2	
1/25/07 21:12:45	0.1	-0.4	-1.1	4.99	0.00		4.99
1/25/07 21:13:00	0.1	-0.4	-1.1	4.99	0.00	Zero NOx	
1/25/07 21:13:15	0.1	-0.4	-1.1	4.99	0.00		0.1
1/25/07 21:13:30	0.1	4.2	-1.2	4.99	-0.01	Zero CO	
1/25/07 21:13:45	14.0	20.3	-1.2	4.99	-0.01		-0.4
1/25/07 21:14:00	16.1	43.3	1.3	4.75	0.35	Zero SO2	
1/25/07 21:14:15	16.6	52.3	21.0	2.94	1.84		-1.1
1/25/07 21:14:30	16.7	56.3	55.1	1.15	3.02	Zero CO2	
1/25/07 21:14:45	16.1	57.5	78.5	0.49	3.46		0.00
1/25/07 21:15:00	15.9	59.4	88.4	0.33	3.55		
1/25/07 21:15:15	16.2	60.3	92.0	0.34	3.55		
1/25/07 21:15:30	16.3	58.3	93.5	0.39	3.53		
1/25/07 21:15:45	16.6	56.8	94.4	0.39	3.54		
1/25/07 21:16:00	16.9	55.9	95.2	0.36	3.56		
1/25/07 21:16:15	16.6	55.5	95.6	0.33	3.57		
1/25/07 21:16:30	16.4	55.0	95.7	0.31	3.58		
1/25/07 21:16:45	16.4	55.8	95.8	0.30	3.57		
1/25/07 21:17:00	16.4	56.8	95.9	0.33	3.57		
1/25/07 21:17:15	16.3	57.5	96.0	0.34	3.57		
1/25/07 21:17:30	16.4	57.0	96.2	0.34	3.57		
1/25/07 21:17:45	16.5	56.5	96.2	0.35	3.57		
1/25/07 21:18:00	16.6	56.0	96.0	0.34	3.56		
1/25/07 21:18:15	16.5	56.3	96.0	0.32	3.57		
1/25/07 21:18:30	16.4	57.7	96.3	0.31	3.58		
1/25/07 21:18:45	16.4	58.5	96.8	0.32	3.58	Start Run No. 8	
1/25/07 21:19:00	**16.3**	**58.5**	**96.6**	**0.33**	**3.57**		
1/25/07 21:19:15	**16.2**	**57.8**	**96.4**	**0.34**	**3.56**		
1/25/07 21:19:30	**16.4**	**56.0**	**96.3**	**0.34**	**3.56**		
1/25/07 21:19:45	**16.5**	**56.0**	**95.7**	**0.34**	**3.55**		
1/25/07 21:20:00	**16.7**	**55.5**	**95.1**	**0.34**	**3.55**		
1/25/07 21:20:15	**16.5**	**55.8**	**95.2**	**0.33**	**3.56**		
1/25/07 21:20:30	**16.2**	**57.3**	**95.3**	**0.31**	**3.58**		
1/25/07 21:20:45	**16.1**	**58.3**	**95.7**	**0.31**	**3.58**		
1/25/07 21:21:00	**16.2**	**59.8**	**97.4**	**0.34**	**3.56**		
1/25/07 21:21:15	**16.4**	**60.5**	**97.3**	**0.37**	**3.55**		
1/25/07 21:21:30	**16.8**	**60.3**	**96.6**	**0.37**	**3.54**		
1/25/07 21:21:45	**16.8**	**59.3**	**98.4**	**0.35**	**3.55**		
1/25/07 21:22:00	**16.6**	**57.4**	**99.8**	**0.32**	**3.56**		

Valero - Port Arthur, TX
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ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 21:22:15	16.6	57.0	96.1	0.30	3.58	
1/25/07 21:22:30	16.6	58.0	96.1	0.31	3.57	
1/25/07 21:22:45	16.5	58.0	95.3	0.31	3.57	
1/25/07 21:23:00	16.5	58.7	95.4	0.32	3.56	
1/25/07 21:23:15	16.5	58.8	95.5	0.32	3.58	
1/25/07 21:23:30	16.7	58.7	95.6	0.31	3.57	
1/25/07 21:23:45	16.6	59.0	95.9	0.31	3.58	
1/25/07 21:24:00	16.6	59.0	96.3	0.30	3.56	
1/25/07 21:24:15	16.5	59.0	96.0	0.29	3.57	
1/25/07 21:24:30	16.6	57.3	95.8	0.30	3.57	
1/25/07 21:24:45	16.5	56.3	95.6	0.30	3.57	
1/25/07 21:25:00	16.4	56.8	95.3	0.30	3.56	
1/25/07 21:25:15	16.6	57.5	95.4	0.30	3.57	
1/25/07 21:25:30	16.6	57.5	95.9	0.30	3.55	
1/25/07 21:25:45	16.6	57.8	96.3	0.30	3.55	
1/25/07 21:26:00	16.5	59.0	96.3	0.29	3.57	
1/25/07 21:26:15	16.4	59.0	96.4	0.29	3.57	
1/25/07 21:26:30	16.4	58.4	96.3	0.29	3.57	
1/25/07 21:26:45	16.6	58.0	96.1	0.29	3.56	
1/25/07 21:27:00	16.7	59.5	95.9	0.30	3.55	
1/25/07 21:27:15	16.5	59.5	95.9	0.30	3.56	
1/25/07 21:27:30	16.6	59.0	95.7	0.31	3.57	
1/25/07 21:27:45	16.5	58.8	95.4	0.31	3.58	
1/25/07 21:28:00	16.5	58.5	95.2	0.30	3.58	
1/25/07 21:28:15	16.4	58.5	95.3	0.30	3.56	
1/25/07 21:28:30	16.3	58.8	95.4	0.31	3.57	
1/25/07 21:28:45	16.5	60.0	95.5	0.32	3.56	
1/25/07 21:29:00	16.4	60.9	95.5	0.34	3.56	
1/25/07 21:29:15	16.7	60.5	95.5	0.35	3.57	
1/25/07 21:29:30	16.8	60.7	95.6	0.35	3.57	
1/25/07 21:29:45	16.6	61.3	96.0	0.33	3.58	
1/25/07 21:30:00	16.7	62.0	95.8	0.30	3.60	
1/25/07 21:30:15	16.7	61.4	95.5	0.29	3.60	
1/25/07 21:30:30	16.5	60.0	95.1	0.31	3.60	
1/25/07 21:30:45	16.5	59.4	94.8	0.33	3.57	
1/25/07 21:31:00	16.6	58.7	94.7	0.33	3.55	
1/25/07 21:31:15	16.5	59.0	94.8	0.31	3.55	
1/25/07 21:31:30	16.5	58.9	95.2	0.30	3.57	
1/25/07 21:31:45	16.6	58.5	95.4	0.30	3.57	
1/25/07 21:32:00	16.5	57.9	95.2	0.30	3.57	
1/25/07 21:32:15	16.5	57.5	94.9	0.31	3.57	
1/25/07 21:32:30	16.5	58.0	94.9	0.31	3.56	
1/25/07 21:32:45	16.7	58.4	95.1	0.30	3.55	
1/25/07 21:33:00	16.7	58.9	95.2	0.30	3.56	
1/25/07 21:33:15	16.5	58.9	94.9	0.29	3.57	
1/25/07 21:33:30	16.4	59.0	94.7	0.28	3.58	
1/25/07 21:33:45	16.3	59.0	94.3	0.30	3.57	
1/25/07 21:34:00	16.6	58.5	94.0	0.32	3.55	
1/25/07 21:34:15	16.9	58.5	93.8	0.32	3.54	
1/25/07 21:34:30	16.7	58.0	94.3	0.30	3.55	
1/25/07 21:34:45	16.6	58.0	94.8	0.28	3.56	
1/25/07 21:35:00	16.5	58.8	94.7	0.28	3.57	
1/25/07 21:35:15	16.5	60.3	94.2	0.31	3.57	
1/25/07 21:35:30	16.6	60.9	93.9	0.33	3.56	
1/25/07 21:35:45	16.9	59.8	93.8	0.33	3.57	
1/25/07 21:36:00	17.1	59.5	94.0	0.31	3.58	
1/25/07 21:36:15	17.2	59.2	94.0	0.29	3.59	
1/25/07 21:36:30	16.9	58.9	93.8	0.27	3.61	
1/25/07 21:36:45	16.5	60.8	93.5	0.26	3.60	
1/25/07 21:37:00	16.5	61.3	93.8	0.28	3.58	
1/25/07 21:37:15	16.6	62.4	94.3	0.30	3.57	
1/25/07 21:37:30	16.8	61.9	94.5	0.32	3.57	
1/25/07 21:37:45	17.1	61.2	94.1	0.31	3.57	
1/25/07 21:38:00	17.1	59.2	93.8	0.29	3.57	
1/25/07 21:38:15	16.6	57.3	93.4	0.27	3.59	
1/25/07 21:38:30	16.3	57.0	93.3	0.25	3.60	
1/25/07 21:38:45	16.2	57.0	93.1	0.27	3.59	
1/25/07 21:39:00	16.2	57.7	93.2	0.31	3.57	
1/25/07 21:39:15	16.2	58.4	93.1	0.33	3.55	
1/25/07 21:39:30	16.5	58.7	92.6	0.33	3.52	
1/25/07 21:39:45	16.6	58.7	92.3	0.34	3.52	
1/25/07 21:40:00	16.9	57.4	92.5	0.33	3.54	
1/25/07 21:40:15	16.8	57.0	92.9	0.30	3.57	
1/25/07 21:40:30	16.7	57.7	93.2	0.28	3.59	
1/25/07 21:40:45	16.6	58.0	93.5	0.28	3.59	
1/25/07 21:41:00	16.5	59.3	93.9	0.30	3.58	
1/25/07 21:41:15	16.7	60.0	93.9	0.31	3.58	
1/25/07 21:41:30	16.8	60.5	93.8	0.33	3.58	
1/25/07 21:41:45	16.7	60.2	93.8	0.33	3.58	
1/25/07 21:42:00	16.8	60.0	94.4	0.34	3.58	
1/25/07 21:42:15	16.7	58.7	96.0	0.34	3.57	
1/25/07 21:42:30	16.9	59.0	95.9	0.33	3.58	
1/25/07 21:42:45	16.8	59.0	94.9	0.33	3.58	
1/25/07 21:43:00	16.8	58.7	94.8	0.33	3.59	
1/25/07 21:43:15	16.5	59.4	95.1	0.33	3.59	
1/25/07 21:43:30	16.8	60.0	95.3	0.33	3.59	
1/25/07 21:43:45	16.9	60.0	95.5	0.32	3.59	
1/25/07 21:44:00	16.7	59.0	95.7	0.28	3.60	
1/25/07 21:44:15	16.5	59.4	95.5	0.25	3.60	
1/25/07 21:44:30	16.3	60.0	95.2	0.25	3.59	
1/25/07 21:44:45	16.3	60.0	95.5	0.26	3.58	
1/25/07 21:45:00	16.2	59.5	96.0	0.29	3.56	
1/25/07 21:45:15	16.2	59.5	95.5	0.31	3.55	
1/25/07 21:45:30	16.2	59.5	94.4	0.32	3.54	
1/25/07 21:45:45	16.4	59.5	93.4	0.32	3.54	

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ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 21:46:00	16.4	60.4	92.9	0.33	3.55	
1/25/07 21:46:15	16.1	61.5	92.6	0.33	3.55	
1/25/07 21:46:30	16.3	61.5	92.9	0.33	3.54	
1/25/07 21:46:45	16.4	61.2	92.9	0.32	3.53	
1/25/07 21:47:00	16.3	59.8	93.3	0.31	3.54	
1/25/07 21:47:15	16.1	59.0	93.6	0.29	3.55	
1/25/07 21:47:30	16.2	60.2	93.6	0.27	3.55	
1/25/07 21:47:45	16.3	60.5	93.6	0.29	3.55	
1/25/07 21:48:00	16.3	61.0	93.9	0.30	3.55	
1/25/07 21:48:15	16.2	60.7	94.1	0.30	3.54	
1/25/07 21:48:30	16.0	61.2	93.7	0.28	3.54	
1/25/07 21:48:45	16.2	61.9	93.5	0.28	3.55	
1/25/07 21:49:00	16.2	62.9	93.9	0.30	3.54	
1/25/07 21:49:15	16.4	62.2	94.9	0.32	3.55	
1/25/07 21:49:30	16.4	61.7	95.9	0.32	3.54	
1/25/07 21:49:45	16.5	62.8	96.3	0.32	3.55	
1/25/07 21:50:00	16.4	64.9	95.7	0.31	3.55	
1/25/07 21:50:15	16.5	67.5	95.1	0.31	3.55	
1/25/07 21:50:30	16.5	68.9	94.6	0.32	3.56	
1/25/07 21:50:45	16.7	67.4	94.5	0.33	3.56	
1/25/07 21:51:00	16.9	65.0	95.0	0.35	3.56	
1/25/07 21:51:15	17.1	63.2	95.2	0.35	3.59	
1/25/07 21:51:30	16.8	63.4	95.2	0.32	3.59	
1/25/07 21:51:45	16.6	63.4	94.9	0.30	3.59	
1/25/07 21:52:00	16.6	63.7	94.4	0.29	3.60	
1/25/07 21:52:15	16.6	64.0	94.4	0.31	3.59	
1/25/07 21:52:30	16.6	62.3	94.4	0.33	3.58	
1/25/07 21:52:45	16.5	60.8	94.2	0.33	3.58	
1/25/07 21:53:00	16.6	59.9	93.6	0.32	3.59	
1/25/07 21:53:15	16.6	59.5	93.9	0.30	3.58	
1/25/07 21:53:30	16.8	60.2	94.6	0.29	3.59	
1/25/07 21:53:45	16.4	60.5	95.2	0.26	3.59	
1/25/07 21:54:00	16.2	61.2	95.5	0.27	3.58	
1/25/07 21:54:15	16.3	62.3	95.5	0.29	3.57	
1/25/07 21:54:30	16.3	63.3	95.5	0.30	3.55	
1/25/07 21:54:45	16.2	64.0	95.5	0.30	3.54	
1/25/07 21:55:00	16.3	62.8	95.3	0.30	3.54	
1/25/07 21:55:15	16.4	61.3	95.2	0.29	3.55	
1/25/07 21:55:30	16.3	60.8	95.6	0.28	3.56	
1/25/07 21:55:45	16.4	61.9	96.1	0.29	3.56	
1/25/07 21:56:00	16.7	62.7	96.0	0.30	3.56	
1/25/07 21:56:15	16.7	63.4	95.8	0.31	3.55	
1/25/07 21:56:30	16.5	64.6	95.8	0.29	3.56	
1/25/07 21:56:45	16.5	64.6	95.4	0.27	3.57	
1/25/07 21:57:00	16.5	63.3	95.0	0.28	3.57	
1/25/07 21:57:15	16.6	62.5	95.1	0.29	3.57	
1/25/07 21:57:30	16.6	62.0	95.3	0.30	3.56	
1/25/07 21:57:45	16.8	62.0	95.3	0.31	3.56	
1/25/07 21:58:00	16.8	62.7	95.3	0.31	3.58	
1/25/07 21:58:15	16.5	63.0	95.8	0.29	3.58	
1/25/07 21:58:30	16.5	62.8	96.0	0.27	3.57	
1/25/07 21:58:45	16.7	61.7	96.0	0.28	3.57	
1/25/07 21:59:00	16.7	60.9	96.0	0.29	3.57	
1/25/07 21:59:15	16.6	60.5	96.0	0.30	3.57	
1/25/07 21:59:30	16.6	61.2	96.0	0.31	3.57	
1/25/07 21:59:45	16.6	61.5	95.9	0.31	3.56	
1/25/07 22:00:00	16.5	61.5	95.9	0.31	3.56	
1/25/07 22:00:15	16.6	61.5	96.1	0.31	3.56	
1/25/07 22:00:30	16.7	61.0	96.1	0.30	3.57	
1/25/07 22:00:45	16.4	61.0	96.1	0.29	3.56	
1/25/07 22:01:00	16.3	61.7	95.9	0.28	3.56	
1/25/07 22:01:15	16.3	62.8	95.6	0.30	3.55	
1/25/07 22:01:30	16.4	62.3	95.9	0.33	3.54	
1/25/07 22:01:45	16.6	60.0	96.2	0.34	3.54	
1/25/07 22:02:00	16.9	59.0	96.2	0.34	3.55	
1/25/07 22:02:15	16.8	59.4	96.3	0.32	3.57	
1/25/07 22:02:30	16.5	61.3	96.5	0.29	3.58	
1/25/07 22:02:45	16.5	62.4	96.6	0.29	3.58	
1/25/07 22:03:00	16.5	61.9	96.7	0.31	3.58	
1/25/07 22:03:15	16.5	61.5	96.4	0.32	3.58	
1/25/07 22:03:30	16.6	62.0	96.1	0.32	3.57	
1/25/07 22:03:45	16.6	62.4	96.1	0.32	3.56	
1/25/07 22:04:00	16.5	61.8	96.1	0.32	3.56	
1/25/07 22:04:15	16.5	60.7	96.8	0.31	3.57	
1/25/07 22:04:30	16.6	60.2	97.0	0.31	3.58	
1/25/07 22:04:45	16.5	60.5	96.4	0.31	3.58	
1/25/07 22:05:00	16.5	61.5	96.1	0.32	3.58	
1/25/07 22:05:15	16.6	61.9	96.3	0.32	3.57	
1/25/07 22:05:30	16.6	62.5	96.1	0.32	3.57	
1/25/07 22:05:45	16.7	62.2	95.6	0.31	3.57	
1/25/07 22:06:00	16.5	60.9	95.6	0.28	3.58	
1/25/07 22:06:15	16.5	60.2	95.9	0.28	3.58	
1/25/07 22:06:30	16.3	60.2	96.6	0.27	3.58	
1/25/07 22:06:45	15.9	61.7	97.1	0.27	3.57	
1/25/07 22:07:00	15.8	63.2	96.6	0.29	3.57	
1/25/07 22:07:15	16.2	63.5	96.5	0.34	3.55	
1/25/07 22:07:30	16.6	63.9	96.7	0.37	3.54	
1/25/07 22:07:45	16.8	63.9	96.6	0.37	3.55	
1/25/07 22:08:00	17.0	63.4	96.7	0.33	3.57	
1/25/07 22:08:15	16.8	62.7	96.9	0.30	3.59	
1/25/07 22:08:30	16.4	62.0	96.0	0.27	3.60	
1/25/07 22:08:45	16.4	62.4	95.4	0.26	3.59	
1/25/07 22:09:00	16.7	62.0	95.6	0.28	3.57	
1/25/07 22:09:15	16.8	62.0	96.0	0.30	3.57	
1/25/07 22:09:30	16.7	62.0	96.5	0.28	3.57	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 22:09:45	16.6	62.0	98.3	0.27	3.60		
1/25/07 22:10:00	16.5	61.3	98.8	0.27	3.58		
1/25/07 22:10:15	16.5	60.5	98.2	0.28	3.55		
1/25/07 22:10:30	16.5	60.7	97.9	0.30	3.55		
1/25/07 22:10:45	16.4	61.8	98.0	0.31	3.55		
1/25/07 22:11:00	16.5	61.9	97.2	0.31	3.55		
1/25/07 22:11:15	16.5	61.5	96.2	0.30	3.55		
1/25/07 22:11:30	16.4	61.0	95.9	0.29	3.56		
1/25/07 22:11:45	16.4	61.8	96.1	0.29	3.57		
1/25/07 22:12:00	16.4	61.9	96.3	0.28	3.58		
1/25/07 22:12:15	16.7	61.2	96.2	0.29	3.57		
1/25/07 22:12:30	16.8	60.2	96.1	0.30	3.56		
1/25/07 22:12:45	16.5	60.9	96.0	0.29	3.56		
1/25/07 22:13:00	16.4	61.8	95.9	0.28	3.57		
1/25/07 22:13:15	16.4	63.7	95.6	0.31	3.58		
1/25/07 22:13:30	16.3	63.9	95.6	0.33	3.57		
1/25/07 22:13:45	16.4	62.8	95.8	0.33	3.56		
1/25/07 22:14:00	16.7	62.0	95.7	0.33	3.56		
1/25/07 22:14:15	16.8	62.0	95.6	0.32	3.57		
1/25/07 22:14:30	16.9	61.3	96.2	0.29	3.58		
1/25/07 22:14:45	16.5	59.8	96.5	0.26	3.59		
1/25/07 22:15:00	16.3	60.0	96.4	0.24	3.59		
1/25/07 22:15:15	16.2	60.4	95.8	0.26	3.58		
1/25/07 22:15:30	16.3	61.2	95.5	0.30	3.56		
1/25/07 22:15:45	16.7	61.5	95.2	0.32	3.55		
1/25/07 22:16:00	16.9	61.5	95.8	0.33	3.55		
1/25/07 22:16:15	16.4	61.9	96.3	0.31	3.57		
1/25/07 22:16:30	16.2	63.2	96.0	0.28	3.58		
1/25/07 22:16:45	16.4	63.2	95.5	0.29	3.58		
1/25/07 22:17:00	16.6	62.7	95.6	0.31	3.57		
1/25/07 22:17:15	16.6	62.0	96.2	0.31	3.59		
1/25/07 22:17:30	16.5	60.8	96.3	0.29	3.58		
1/25/07 22:17:45	16.4	60.5	96.0	0.29	3.58		
1/25/07 22:18:00	16.5	61.0	95.6	0.30	3.57		
1/25/07 22:18:15	16.5	61.2	95.8	0.32	3.56		
1/25/07 22:18:30	16.4	61.0	96.2	0.33	3.56		
1/25/07 22:18:45	16.7	61.0	96.3	0.33	3.57		
1/25/07 22:19:00	16.5	61.8	96.3	0.32	3.59	End Run No. 8	
1/25/07 22:19:15	16.4	62.0	96.4	0.33	3.59		
1/25/07 22:19:30	16.4	62.0	96.1	0.33	3.57		
1/25/07 22:19:45	17.1	55.5	96.0	0.33	3.56		
1/25/07 22:20:00	7.7	31.5	96.0	0.33	3.56		
1/25/07 22:20:15	1.6	14.7	92.4	0.57	3.06		
1/25/07 22:20:30	13.0	2.3	99.1	1.04	1.48		
1/25/07 22:20:45	1.2	-0.2	164.5	0.56	0.43		
1/25/07 22:21:00	0.9	-0.7	188.2	0.13	0.09		
1/25/07 22:21:15	0.7	-0.9	146.0	0.02	0.02		
1/25/07 22:21:30	0.7	-0.9	116.1	-0.02	0.00		
1/25/07 22:21:45	0.6	-0.9	105.9	-0.03	0.00		
1/25/07 22:22:00	0.6	-0.9	102.6	-0.03	-0.01		
1/25/07 22:22:15	0.5	-0.9	101.6	-0.03	-0.01		
1/25/07 22:22:30	0.5	-0.9	101.5	-0.03	-0.01		
1/25/07 22:22:45	0.5	-0.9	101.4	-0.03	-0.01		
1/25/07 22:23:00	0.5	-0.9	101.3	-0.03	-0.01		
1/25/07 22:23:15	0.5	-0.9	101.3	-0.03	-0.02		
1/25/07 22:23:30	0.5	-0.9	101.4	-0.03	-0.02	System Bias	
1/25/07 22:23:45	0.4	-0.9	101.5	-0.03	-0.02	100 ppm SO2	
1/25/07 22:24:00	0.4	-0.9	101.6	-0.03	-0.02		101.6
1/25/07 22:24:15	0.4	-0.6	101.8	-0.03	-0.02		
1/25/07 22:24:30	0.4	-0.9	101.7	-0.03	-0.02		
1/25/07 22:24:45	29.0	-0.9	100.2	-0.03	-0.02		
1/25/07 22:25:00	37.0	-0.9	84.8	-0.03	-0.02		
1/25/07 22:25:15	41.2	-0.9	54.3	-0.03	-0.02		
1/25/07 22:25:30	43.1	-0.9	28.5	-0.03	-0.03		
1/25/07 22:25:45	45.8	-0.9	14.8	-0.03	-0.02		
1/25/07 22:26:00	49.8	-0.9	8.8	-0.03	-0.02		
1/25/07 22:26:15	50.0	-0.9	5.9	-0.03	-0.02		
1/25/07 22:26:30	48.8	-0.9	4.1	-0.03	-0.02		
1/25/07 22:26:45	48.1	-0.6	3.0	-0.03	-0.03		
1/25/07 22:27:00	48.0	-0.9	2.3	-0.03	-0.03	System Bias	
1/25/07 22:27:15	48.0	-0.9	1.8	-0.03	-0.03	50 ppm NOx	
1/25/07 22:27:30	48.0	-0.9	1.2	-0.04	-0.03		48.0
1/25/07 22:27:45	47.9	-0.9	1.0	-0.03	-0.03		
1/25/07 22:28:00	47.9	-0.9	0.9	-0.03	-0.03		
1/25/07 22:28:15	35.1	19.3	0.7	-0.04	-0.03		
1/25/07 22:28:30	12.2	115.5	0.5	-0.04	-0.03		
1/25/07 22:28:45	2.9	185.3	0.8	-0.03	-0.03		
1/25/07 22:29:00	1.8	235.4	1.7	-0.02	-0.03		
1/25/07 22:29:15	1.3	244.4	1.8	-0.03	-0.03		
1/25/07 22:29:30	1.1	247.7	1.2	-0.03	-0.03		
1/25/07 22:29:45	0.8	248.3	0.7	-0.03	-0.03		
1/25/07 22:30:00	0.8	249.2	0.3	-0.04	-0.03		
1/25/07 22:30:15	0.6	249.4	0.2	-0.04	-0.03	System Bias	
1/25/07 22:30:30	0.6	249.7	0.0	-0.04	-0.03	250 ppm CO	
1/25/07 22:30:45	0.5	249.9	-0.1	-0.04	-0.03		249.8
1/25/07 22:31:00	0.5	249.7	-0.2	-0.04	-0.03		
1/25/07 22:31:15	0.4	249.8	-0.3	-0.04	-0.02		
1/25/07 22:31:30	0.4	241.7	-0.3	-0.04	-0.02		
1/25/07 22:31:45	1.6	189.8	-0.3	-0.04	-0.02		
1/25/07 22:32:00	0.5	89.8	-0.4	-0.04	0.66		
1/25/07 22:32:15	0.3	37.4	-0.4	-0.04	3.29		
1/25/07 22:32:30	0.3	5.6	-0.5	-0.05	5.50		
1/25/07 22:32:45	0.2	-0.7	-0.5	-0.06	6.57		
1/25/07 22:33:00	0.2	-1.9	-0.5	-0.06	6.85		
1/25/07 22:33:15	0.2	-1.9	-0.6	-0.06	6.91		

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/25/07 22:33:30	0.2	-1.9	-0.5	-0.06	6.93		
1/25/07 22:33:45	0.2	-1.9	-0.7	-0.06	6.94		
1/25/07 22:34:00	0.2	-1.9	-0.8	-0.06	6.94		
1/25/07 22:34:15	0.1	-1.9	-0.8	-0.06	6.95	System Bias	
1/25/07 22:34:30	0.1	-2.2	-0.8	-0.06	6.95	7.0% CO2	
1/25/07 22:34:45	0.1	-2.4	-0.8	-0.06	6.95		6.95
1/25/07 22:35:00	0.1	-2.2	-0.8	-0.06	6.95	Zero O2	
1/25/07 22:35:15	1.2	-1.9	-0.7	-0.06	6.95		-0.06
1/25/07 22:35:30	0.8	-1.4	-0.8	0.01	6.59		
1/25/07 22:35:45	0.2	-1.1	-0.8	1.22	4.11		
1/25/07 22:36:00	0.2	-0.9	-0.9	3.36	1.49		
1/25/07 22:36:15	0.1	-0.9	-0.9	4.58	0.34		
1/25/07 22:36:30	0.1	-0.9	-0.9	4.87	0.09		
1/25/07 22:36:45	0.1	-0.9	-1.0	4.94	0.03		
1/25/07 22:37:00	0.1	-0.9	-0.9	4.96	0.01		
1/25/07 22:37:15	0.1	-0.9	-0.8	4.98	0.00	System Bias	
1/25/07 22:37:30	0.1	-0.9	-0.9	4.98	-0.01	5.0% O2	
1/25/07 22:37:45	0.1	-0.9	-0.9	4.98	-0.01		4.98
1/25/07 22:38:00	0.1	-0.9	-0.9	4.99	-0.01	Zero NOx	
1/25/07 22:38:15	0.1	-0.9	-0.9	4.99	-0.02		0.1
1/25/07 22:38:30	0.1	3.8	-1.0	4.99	-0.02	Zero CO	
1/25/07 22:38:45	11.3	18.9	-1.1	4.99	-0.02		-0.9
1/25/07 22:39:00	16.1	43.8	1.1	4.78	0.30	Zero SO2	
1/25/07 22:39:15	16.1	56.0	20.3	3.03	1.76		-0.9
1/25/07 22:39:30	16.2	60.5	55.0	1.17	2.98	Zero CO2	
1/25/07 22:39:45	16.0	60.5	79.1	0.50	3.43		-0.01
1/25/07 22:40:00	16.0	60.3	89.2	0.36	3.53		
1/25/07 22:40:15	16.1	60.0	93.2	0.34	3.54		
1/25/07 22:40:30	16.2	60.3	94.7	0.34	3.55		
1/25/07 22:40:45	16.2	60.9	95.4	0.35	3.54		
1/25/07 22:41:00	16.3	61.5	95.8	0.35	3.54		
1/25/07 22:41:15	16.4	62.4	96.4	0.35	3.55		
1/25/07 22:41:30	16.4	63.3	97.0	0.36	3.56		
1/25/07 22:41:45	16.5	62.6	97.6	0.35	3.57		
1/25/07 22:42:00	16.8	61.5	97.9	0.34	3.58		
1/25/07 22:42:15	16.7	61.5	98.1	0.31	3.59		
1/25/07 22:42:30	16.6	62.0	98.8	0.29	3.60		
1/25/07 22:42:45	16.6	62.9	99.4	0.28	3.60		
1/25/07 22:43:00	16.3	64.3	101.6	0.30	3.59		
1/25/07 22:43:15	16.5	65.8	105.3	0.34	3.57		
1/25/07 22:43:30	16.4	65.5	103.6	0.36	3.56		
1/25/07 22:43:45	16.6	63.9	102.4	0.37	3.55	Start Run No. 9	
1/25/07 22:44:00	**16.8**	**62.8**	**100.6**	**0.37**	**3.56**		
1/25/07 22:44:15	**16.6**	**62.6**	**98.4**	**0.35**	**3.58**		
1/25/07 22:44:30	**16.5**	**63.0**	**97.6**	**0.32**	**3.59**		
1/25/07 22:44:45	**16.6**	**61.8**	**97.9**	**0.30**	**3.60**		
1/25/07 22:45:00	**16.5**	**61.3**	**98.0**	**0.30**	**3.60**		
1/25/07 22:45:15	**16.4**	**60.7**	**97.8**	**0.30**	**3.59**		
1/25/07 22:45:30	**16.5**	**58.8**	**97.6**	**0.30**	**3.58**		
1/25/07 22:45:45	**16.5**	**58.4**	**97.1**	**0.30**	**3.57**		
1/25/07 22:46:00	**16.6**	**60.9**	**96.8**	**0.31**	**3.57**		
1/25/07 22:46:15	**16.5**	**60.5**	**96.5**	**0.28**	**3.58**		
1/25/07 22:46:30	**16.2**	**60.5**	**96.8**	**0.26**	**3.59**		
1/25/07 22:46:45	**16.2**	**60.9**	**96.9**	**0.27**	**3.59**		
1/25/07 22:47:00	**16.2**	**61.0**	**96.8**	**0.29**	**3.57**		
1/25/07 22:47:15	**16.1**	**62.2**	**97.1**	**0.30**	**3.56**		
1/25/07 22:47:30	**16.2**	**62.0**	**97.9**	**0.31**	**3.56**		
1/25/07 22:47:45	**16.2**	**62.0**	**97.6**	**0.31**	**3.56**		
1/25/07 22:48:00	**16.6**	**62.9**	**96.7**	**0.31**	**3.56**		
1/25/07 22:48:15	**16.6**	**63.0**	**96.6**	**0.31**	**3.57**		
1/25/07 22:48:30	**16.6**	**64.0**	**101.4**	**0.31**	**3.57**		
1/25/07 22:48:45	**16.7**	**63.8**	**108.2**	**0.30**	**3.56**		
1/25/07 22:49:00	**16.6**	**63.3**	**107.3**	**0.29**	**3.57**		
1/25/07 22:49:15	**16.5**	**63.0**	**102.9**	**0.29**	**3.58**		
1/25/07 22:49:30	**16.4**	**63.0**	**99.6**	**0.28**	**3.59**		
1/25/07 22:49:45	**16.5**	**63.2**	**98.1**	**0.29**	**3.60**		
1/25/07 22:50:00	**16.6**	**63.8**	**97.5**	**0.31**	**3.59**		
1/25/07 22:50:15	**16.5**	**64.0**	**97.0**	**0.31**	**3.59**		
1/25/07 22:50:30	**16.7**	**64.0**	**96.7**	**0.32**	**3.59**		
1/25/07 22:50:45	**16.8**	**63.0**	**96.6**	**0.31**	**3.59**		
1/25/07 22:51:00	**16.8**	**62.2**	**96.6**	**0.31**	**3.60**		
1/25/07 22:51:15	**16.8**	**62.5**	**96.5**	**0.30**	**3.60**		
1/25/07 22:51:30	**16.7**	**62.8**	**96.8**	**0.30**	**3.61**		
1/25/07 22:51:45	**16.6**	**63.4**	**97.1**	**0.31**	**3.60**		
1/25/07 22:52:00	**16.6**	**64.5**	**97.2**	**0.31**	**3.59**		
1/25/07 22:52:15	**16.7**	**64.7**	**97.3**	**0.32**	**3.58**		
1/25/07 22:52:30	**16.9**	**65.3**	**97.0**	**0.32**	**3.58**		
1/25/07 22:52:45	**16.9**	**64.9**	**97.0**	**0.31**	**3.59**		
1/25/07 22:53:00	**17.0**	**63.4**	**97.9**	**0.30**	**3.59**		
1/25/07 22:53:15	**16.9**	**61.4**	**98.7**	**0.29**	**3.60**		
1/25/07 22:53:30	**16.8**	**60.3**	**98.2**	**0.27**	**3.61**		
1/25/07 22:53:45	**16.7**	**59.0**	**97.4**	**0.26**	**3.61**		
1/25/07 22:54:00	**16.7**	**58.2**	**97.0**	**0.28**	**3.60**		
1/25/07 22:54:15	**16.6**	**58.8**	**96.8**	**0.29**	**3.60**		
1/25/07 22:54:30	**16.6**	**60.3**	**96.6**	**0.29**	**3.59**		
1/25/07 22:54:45	**16.4**	**61.8**	**96.8**	**0.30**	**3.59**		
1/25/07 22:55:00	**16.4**	**62.8**	**97.0**	**0.30**	**3.58**		
1/25/07 22:55:15	**16.3**	**63.0**	**96.6**	**0.32**	**3.57**		
1/25/07 22:55:30	**16.4**	**62.7**	**96.6**	**0.33**	**3.56**		
1/25/07 22:55:45	**16.4**	**62.0**	**96.7**	**0.32**	**3.57**		
1/25/07 22:56:00	**16.5**	**62.0**	**97.1**	**0.32**	**3.58**		
1/25/07 22:56:15	**16.4**	**62.3**	**97.1**	**0.32**	**3.58**		
1/25/07 22:56:30	**16.5**	**62.2**	**96.7**	**0.32**	**3.58**		
1/25/07 22:56:45	**16.6**	**61.7**	**96.4**	**0.32**	**3.57**		
1/25/07 22:57:00	**16.8**	**60.4**	**96.4**	**0.32**	**3.57**		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 22:57:15	17.0	60.0	96.4	0.32	3.57	
1/25/07 22:57:30	16.8	60.3	96.7	0.31	3.58	
1/25/07 22:57:45	16.4	61.3	96.8	0.29	3.59	
1/25/07 22:58:00	16.3	61.9	97.0	0.28	3.59	
1/25/07 22:58:15	16.5	63.4	97.2	0.29	3.57	
1/25/07 22:58:30	16.7	63.0	97.2	0.31	3.56	
1/25/07 22:58:45	16.8	62.5	97.1	0.31	3.58	
1/25/07 22:59:00	16.7	61.7	97.1	0.29	3.59	
1/25/07 22:59:15	16.7	60.8	96.9	0.27	3.60	
1/25/07 22:59:30	16.6	61.8	96.7	0.26	3.61	
1/25/07 22:59:45	16.7	62.7	96.3	0.27	3.60	
1/25/07 23:00:00	16.5	63.3	96.3	0.28	3.62	
1/25/07 23:00:15	16.3	63.5	96.7	0.28	3.63	
1/25/07 23:00:30	16.3	63.5	96.9	0.29	3.62	
1/25/07 23:00:45	16.4	64.5	96.7	0.30	3.57	
1/25/07 23:01:00	16.6	64.5	96.8	0.31	3.56	
1/25/07 23:01:15	16.9	64.3	97.3	0.31	3.56	
1/25/07 23:01:30	16.8	64.0	97.4	0.30	3.57	
1/25/07 23:01:45	16.8	64.0	97.1	0.28	3.58	
1/25/07 23:02:00	16.5	63.4	96.8	0.26	3.59	
1/25/07 23:02:15	16.5	63.0	97.2	0.25	3.60	
1/25/07 23:02:30	16.6	62.8	97.5	0.27	3.59	
1/25/07 23:02:45	16.5	62.5	97.5	0.29	3.58	
1/25/07 23:03:00	16.3	63.3	97.1	0.31	3.58	
1/25/07 23:03:15	16.4	64.5	96.8	0.33	3.57	
1/25/07 23:03:30	16.6	64.5	96.5	0.34	3.57	
1/25/07 23:03:45	16.6	64.5	96.3	0.35	3.57	
1/25/07 23:04:00	16.8	63.8	96.4	0.35	3.57	
1/25/07 23:04:15	16.5	63.5	96.6	0.32	3.58	
1/25/07 23:04:30	16.4	63.0	97.0	0.30	3.58	
1/25/07 23:04:45	16.2	63.0	97.2	0.29	3.58	
1/25/07 23:05:00	16.4	62.5	97.1	0.31	3.58	
1/25/07 23:05:15	16.7	62.4	96.8	0.32	3.57	
1/25/07 23:05:30	16.6	61.8	96.8	0.32	3.57	
1/25/07 23:05:45	16.5	61.4	96.6	0.32	3.58	
1/25/07 23:06:00	16.6	60.9	96.5	0.31	3.58	
1/25/07 23:06:15	16.7	60.8	96.1	0.30	3.58	
1/25/07 23:06:30	16.6	61.4	96.6	0.30	3.58	
1/25/07 23:06:45	16.6	61.9	96.8	0.30	3.59	
1/25/07 23:07:00	16.6	62.5	96.8	0.30	3.60	
1/25/07 23:07:15	16.6	62.3	96.7	0.29	3.59	
1/25/07 23:07:30	16.3	61.3	96.5	0.29	3.59	
1/25/07 23:07:45	16.3	60.7	96.7	0.28	3.58	
1/25/07 23:08:00	16.2	60.2	97.0	0.29	3.57	
1/25/07 23:08:15	16.4	60.2	96.8	0.31	3.57	
1/25/07 23:08:30	16.5	60.8	96.8	0.31	3.56	
1/25/07 23:08:45	16.7	62.0	96.9	0.31	3.56	
1/25/07 23:09:00	16.8	62.5	96.8	0.30	3.58	
1/25/07 23:09:15	16.7	62.5	96.7	0.28	3.59	
1/25/07 23:09:30	16.5	62.7	96.3	0.26	3.60	
1/25/07 23:09:45	16.4	63.0	96.1	0.26	3.60	
1/25/07 23:10:00	16.4	63.3	96.2	0.28	3.59	
1/25/07 23:10:15	16.4	63.5	96.1	0.30	3.59	
1/25/07 23:10:30	16.4	63.5	95.8	0.32	3.58	
1/25/07 23:10:45	16.3	63.7	95.8	0.33	3.57	
1/25/07 23:11:00	16.5	63.9	95.9	0.34	3.57	
1/25/07 23:11:15	16.5	62.8	95.9	0.33	3.57	
1/25/07 23:11:30	16.7	60.9	96.0	0.32	3.58	
1/25/07 23:11:45	16.7	59.4	96.2	0.32	3.58	
1/25/07 23:12:00	16.7	58.7	96.6	0.30	3.59	
1/25/07 23:12:15	16.7	59.3	96.5	0.29	3.59	
1/25/07 23:12:30	16.3	60.8	96.4	0.28	3.60	
1/25/07 23:12:45	16.2	62.3	96.4	0.28	3.60	
1/25/07 23:13:00	16.4	63.3	96.9	0.30	3.59	
1/25/07 23:13:15	16.3	64.7	97.1	0.32	3.58	
1/25/07 23:13:30	16.3	64.9	96.8	0.34	3.58	
1/25/07 23:13:45	16.6	64.3	96.6	0.34	3.57	
1/25/07 23:14:00	16.6	63.3	96.7	0.34	3.58	
1/25/07 23:14:15	16.8	62.3	96.8	0.33	3.59	
1/25/07 23:14:30	16.8	61.0	97.2	0.31	3.59	
1/25/07 23:14:45	16.6	61.0	97.7	0.30	3.61	
1/25/07 23:15:00	16.4	61.0	97.6	0.28	3.61	
1/25/07 23:15:15	16.4	61.0	97.2	0.29	3.61	
1/25/07 23:15:30	16.5	61.0	96.7	0.29	3.59	
1/25/07 23:15:45	16.5	60.7	96.4	0.29	3.58	
1/25/07 23:16:00	16.3	61.0	96.0	0.28	3.57	
1/25/07 23:16:15	16.1	61.0	96.2	0.28	3.58	
1/25/07 23:16:30	16.1	61.0	96.3	0.27	3.58	
1/25/07 23:16:45	16.0	61.0	96.1	0.29	3.57	
1/25/07 23:17:00	16.1	60.4	96.5	0.31	3.57	
1/25/07 23:17:15	16.3	60.0	96.4	0.32	3.57	
1/25/07 23:17:30	16.6	60.0	96.3	0.33	3.56	
1/25/07 23:17:45	16.6	60.4	96.0	0.32	3.57	
1/25/07 23:18:00	16.5	60.5	95.8	0.31	3.58	
1/25/07 23:18:15	16.5	60.7	95.7	0.30	3.59	
1/25/07 23:18:30	16.6	61.2	95.8	0.29	3.59	
1/25/07 23:18:45	16.6	61.8	95.7	0.28	3.60	
1/25/07 23:19:00	16.5	62.4	95.8	0.28	3.60	
1/25/07 23:19:15	16.5	62.5	95.8	0.28	3.60	
1/25/07 23:19:30	16.4	62.8	95.7	0.29	3.60	
1/25/07 23:19:45	16.4	63.4	95.7	0.29	3.60	
1/25/07 23:20:00	16.4	62.8	95.8	0.30	3.59	
1/25/07 23:20:15	16.4	62.9	96.3	0.31	3.59	
1/25/07 23:20:30	16.4	63.0	96.4	0.32	3.60	
1/25/07 23:20:45	16.5	63.5	96.3	0.33	3.60	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 23:21:00	16.6	63.3	96.3	0.33	3.59	
1/25/07 23:21:15	16.3	62.8	96.0	0.34	3.59	
1/25/07 23:21:30	16.3	62.7	96.2	0.34	3.59	
1/25/07 23:21:45	16.3	63.7	96.2	0.35	3.59	
1/25/07 23:22:00	16.5	64.7	96.6	0.35	3.59	
1/25/07 23:22:15	16.7	64.8	96.8	0.35	3.58	
1/25/07 23:22:30	16.9	63.8	97.1	0.34	3.59	
1/25/07 23:22:45	16.7	63.2	98.3	0.32	3.60	
1/25/07 23:23:00	16.5	62.3	99.8	0.29	3.62	
1/25/07 23:23:15	16.3	61.0	100.0	0.26	3.62	
1/25/07 23:23:30	16.1	61.2	99.0	0.26	3.61	
1/25/07 23:23:45	16.0	61.5	98.2	0.27	3.59	
1/25/07 23:24:00	16.0	61.2	97.2	0.29	3.57	
1/25/07 23:24:15	16.0	61.4	96.7	0.32	3.55	
1/25/07 23:24:30	16.3	62.0	96.3	0.34	3.54	
1/25/07 23:24:45	16.3	62.0	96.2	0.34	3.55	
1/25/07 23:25:00	16.6	62.3	96.5	0.33	3.55	
1/25/07 23:25:15	16.6	61.8	97.1	0.32	3.56	
1/25/07 23:25:30	16.1	61.9	97.3	0.29	3.58	
1/25/07 23:25:45	16.2	61.9	96.9	0.27	3.59	
1/25/07 23:26:00	16.1	61.9	96.6	0.27	3.58	
1/25/07 23:26:15	16.1	63.0	96.1	0.29	3.57	
1/25/07 23:26:30	16.2	63.0	96.7	0.30	3.55	
1/25/07 23:26:45	16.2	63.4	97.1	0.31	3.56	
1/25/07 23:27:00	16.4	63.0	97.0	0.32	3.56	
1/25/07 23:27:15	16.6	62.9	97.2	0.32	3.57	
1/25/07 23:27:30	16.4	62.3	97.5	0.31	3.58	
1/25/07 23:27:45	16.1	62.4	97.6	0.30	3.60	
1/25/07 23:28:00	16.1	63.7	97.4	0.29	3.60	
1/25/07 23:28:15	16.1	65.3	96.8	0.31	3.59	
1/25/07 23:28:30	16.2	65.9	96.1	0.34	3.57	
1/25/07 23:28:45	16.5	65.8	95.8	0.35	3.56	
1/25/07 23:29:00	16.8	65.7	95.6	0.36	3.57	
1/25/07 23:29:15	17.0	65.2	95.9	0.35	3.58	
1/25/07 23:29:30	16.9	63.8	96.1	0.32	3.60	
1/25/07 23:29:45	16.7	62.9	96.3	0.27	3.62	
1/25/07 23:30:00	16.3	62.3	96.1	0.24	3.63	
1/25/07 23:30:15	16.1	62.8	96.4	0.24	3.61	
1/25/07 23:30:30	16.1	63.4	97.0	0.27	3.59	
1/25/07 23:30:45	16.2	62.9	97.6	0.29	3.59	
1/25/07 23:31:00	16.3	62.4	97.4	0.30	3.56	
1/25/07 23:31:15	16.2	62.0	97.2	0.30	3.56	
1/25/07 23:31:30	16.1	62.0	97.1	0.30	3.56	
1/25/07 23:31:45	16.3	62.0	97.3	0.30	3.57	
1/25/07 23:32:00	16.2	61.9	97.0	0.30	3.57	
1/25/07 23:32:15	16.3	61.5	96.9	0.31	3.57	
1/25/07 23:32:30	16.2	61.8	96.7	0.31	3.57	
1/25/07 23:32:45	16.2	62.8	96.5	0.31	3.56	
1/25/07 23:33:00	16.1	63.4	96.9	0.31	3.56	
1/25/07 23:33:15	16.1	64.2	97.0	0.31	3.56	
1/25/07 23:33:30	16.2	64.5	97.0	0.31	3.56	
1/25/07 23:33:45	16.3	64.8	97.2	0.31	3.56	
1/25/07 23:34:00	16.5	65.0	97.5	0.31	3.56	
1/25/07 23:34:15	16.6	64.3	97.6	0.31	3.57	
1/25/07 23:34:30	16.2	64.0	96.9	0.29	3.58	
1/25/07 23:34:45	15.9	64.3	96.4	0.26	3.60	
1/25/07 23:35:00	15.9	65.5	96.4	0.26	3.59	
1/25/07 23:35:15	15.9	65.7	96.5	0.29	3.57	
1/25/07 23:35:30	16.0	65.2	96.6	0.33	3.56	
1/25/07 23:35:45	16.3	64.3	96.7	0.35	3.56	
1/25/07 23:36:00	16.6	63.8	96.7	0.37	3.56	
1/25/07 23:36:15	16.7	64.5	96.5	0.37	3.57	
1/25/07 23:36:30	16.8	63.8	96.5	0.34	3.59	
1/25/07 23:36:45	16.6	63.2	96.6	0.31	3.61	
1/25/07 23:37:00	16.6	61.3	96.4	0.28	3.62	
1/25/07 23:37:15	16.6	60.4	97.0	0.28	3.61	
1/25/07 23:37:30	16.5	60.3	97.1	0.28	3.60	
1/25/07 23:37:45	16.5	60.5	97.4	0.29	3.59	
1/25/07 23:38:00	16.4	60.9	97.4	0.29	3.59	
1/25/07 23:38:15	16.2	61.0	96.9	0.29	3.59	
1/25/07 23:38:30	16.1	61.2	96.8	0.30	3.59	
1/25/07 23:38:45	16.2	61.5	96.6	0.31	3.58	
1/25/07 23:39:00	16.2	62.3	96.5	0.33	3.58	
1/25/07 23:39:15	16.2	62.9	96.2	0.33	3.58	
1/25/07 23:39:30	16.1	63.2	96.3	0.33	3.57	
1/25/07 23:39:45	16.1	63.5	96.0	0.33	3.57	
1/25/07 23:40:00	16.2	63.5	96.0	0.33	3.57	
1/25/07 23:40:15	16.3	63.9	96.1	0.34	3.56	
1/25/07 23:40:30	16.4	64.5	96.1	0.34	3.56	
1/25/07 23:40:45	16.5	63.4	95.8	0.33	3.56	
1/25/07 23:41:00	16.3	62.8	95.5	0.31	3.56	
1/25/07 23:41:15	15.9	62.5	95.5	0.28	3.58	
1/25/07 23:41:30	15.9	62.9	95.4	0.27	3.58	
1/25/07 23:41:45	15.8	63.0	95.4	0.28	3.57	
1/25/07 23:42:00	15.7	63.8	95.6	0.30	3.56	
1/25/07 23:42:15	15.9	65.0	95.8	0.32	3.55	
1/25/07 23:42:30	15.8	65.8	95.7	0.33	3.55	
1/25/07 23:42:45	16.1	66.0	95.7	0.34	3.55	
1/25/07 23:43:00	16.2	65.0	96.0	0.34	3.54	
1/25/07 23:43:15	16.4	63.3	96.3	0.34	3.55	
1/25/07 23:43:30	16.7	62.3	96.1	0.32	3.56	
1/25/07 23:43:45	16.4	62.0	95.9	0.30	3.57	
1/25/07 23:44:00	15.9	63.2	95.6	0.28	3.58	End Run No. 9
1/25/07 23:44:15	15.9	64.5	95.5	0.27	3.59	
1/25/07 23:44:30	16.3	64.4	95.3	0.29	3.58	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/25/07 23:44:45	16.4	64.0	95.6	0.31	3.57	
1/25/07 23:45:00	16.4	63.8	96.1	0.32	3.57	
1/25/07 23:45:15	16.6	63.2	96.6	0.31	3.58	
1/25/07 23:45:30	16.8	64.5	96.6	0.30	3.58	
1/25/07 23:45:45	16.8	65.8	96.4	0.29	3.59	
1/25/07 23:46:00	16.8	66.0	96.2	0.27	3.60	
1/25/07 23:46:15	16.7	65.0	96.1	0.26	3.61	
1/25/07 23:46:30	16.6	63.8	96.0	0.25	3.62	
1/25/07 23:46:45	16.5	63.5	95.7	0.26	3.62	
1/25/07 23:47:00	16.5	65.4	95.4	0.27	3.62	
1/25/07 23:47:15	16.5	66.8	95.4	0.29	3.62	
1/25/07 23:47:30	16.5	66.8	95.7	0.31	3.61	
1/25/07 23:47:45	16.4	66.2	96.3	0.32	3.60	
1/25/07 23:48:00	16.4	65.0	96.8	0.32	3.60	
1/25/07 23:48:15	16.3	63.8	96.8	0.32	3.59	
1/25/07 23:48:30	16.6	62.8	96.7	0.30	3.59	
1/25/07 23:48:45	16.5	62.3	96.5	0.29	3.60	
1/25/07 23:49:00	16.4	61.3	96.2	0.28	3.59	
1/25/07 23:49:15	16.5	60.5	96.1	0.28	3.60	
1/25/07 23:49:30	16.6	59.7	96.2	0.28	3.59	
1/25/07 23:49:45	16.5	60.3	96.1	0.28	3.59	
1/25/07 23:50:00	16.4	61.0	96.2	0.28	3.59	
1/25/07 23:50:15	16.5	61.5	96.5	0.28	3.59	
1/25/07 23:50:30	16.4	62.0	96.0	0.28	3.60	
1/25/07 23:50:45	16.1	62.5	95.4	0.28	3.60	
1/25/07 23:51:00	16.2	63.0	95.5	0.29	3.60	
1/25/07 23:51:15	16.0	63.8	95.7	0.30	3.58	
1/25/07 23:51:30	16.0	64.8	95.9	0.33	3.58	
1/25/07 23:51:45	16.0	64.5	95.9	0.34	3.57	
1/25/07 23:52:00	16.1	62.7	95.7	0.34	3.56	
1/25/07 23:52:15	16.2	62.0	95.7	0.35	3.56	
1/25/07 23:52:30	16.3	62.8	95.8	0.34	3.58	
1/25/07 23:52:45	16.5	64.5	95.6	0.33	3.57	
1/25/07 23:53:00	16.6	65.0	95.6	0.31	3.57	
1/25/07 23:53:15	16.4	64.4	95.8	0.28	3.59	
1/25/07 23:53:30	16.3	63.5	96.0	0.26	3.60	
1/25/07 23:53:45	16.3	62.5	96.3	0.25	3.60	
1/25/07 23:54:00	16.3	61.3	96.5	0.26	3.59	
1/25/07 23:54:15	16.5	61.0	96.2	0.27	3.58	
1/25/07 23:54:30	16.5	61.0	95.9	0.29	3.58	
1/25/07 23:54:45	16.3	61.0	99.7	0.30	3.57	
1/25/07 23:55:00	16.2	60.8	106.2	0.29	3.58	
1/25/07 23:55:15	16.2	60.5	106.1	0.29	3.58	
1/25/07 23:55:30	16.1	61.0	102.4	0.28	3.58	
1/25/07 23:55:45	15.8	63.3	99.3	0.28	3.59	
1/25/07 23:56:00	15.7	66.3	97.6	0.28	3.60	
1/25/07 23:56:15	15.7	67.3	96.6	0.30	3.58	
1/25/07 23:56:30	16.0	66.8	95.9	0.33	3.56	
1/25/07 23:56:45	16.4	65.0	95.7	0.36	3.54	
1/25/07 23:57:00	16.7	64.7	95.9	0.37	3.54	
1/25/07 23:57:15	16.9	65.3	95.8	0.34	3.56	
1/25/07 23:57:30	16.5	65.3	96.0	0.30	3.60	
1/25/07 23:57:45	16.4	65.0	96.8	0.27	3.61	
1/25/07 23:58:00	16.4	65.5	96.9	0.28	3.62	
1/25/07 23:58:15	16.3	65.7	96.8	0.30	3.61	
1/25/07 23:58:30	16.3	66.3	96.3	0.31	3.61	
1/25/07 23:58:45	16.2	66.3	96.1	0.32	3.60	
1/25/07 23:59:00	16.3	64.5	96.0	0.32	3.59	
1/25/07 23:59:15	16.3	63.0	96.3	0.32	3.59	
1/25/07 23:59:30	16.2	62.3	96.3	0.32	3.57	
1/25/07 23:59:45	16.6	63.0	96.1	0.32	3.57	
1/26/07 0:00:00	16.6	63.0	95.8	0.31	3.58	
1/26/07 0:00:15	16.5	63.0	95.8	0.29	3.60	
1/26/07 0:00:30	16.4	62.5	95.8	0.27	3.62	
1/26/07 0:00:45	16.4	61.5	95.8	0.26	3.62	
1/26/07 0:01:00	16.2	62.3	95.6	0.28	3.62	
1/26/07 0:01:15	16.2	63.3	95.2	0.30	3.60	
1/26/07 0:01:30	16.4	64.3	95.2	0.31	3.58	
1/26/07 0:01:45	16.6	64.5	95.2	0.31	3.58	
1/26/07 0:02:00	16.7	63.0	95.0	0.31	3.59	
1/26/07 0:02:15	16.5	62.5	94.8	0.29	3.60	
1/26/07 0:02:30	16.3	61.5	94.8	0.27	3.63	
1/26/07 0:02:45	16.2	61.0	94.8	0.26	3.63	
1/26/07 0:03:00	16.2	60.5	94.8	0.28	3.62	
1/26/07 0:03:15	16.1	61.9	95.5	0.29	3.61	
1/26/07 0:03:30	16.3	62.8	95.9	0.31	3.60	
1/26/07 0:03:45	16.5	63.3	96.2	0.32	3.58	
1/26/07 0:04:00	16.6	64.4	96.1	0.32	3.59	
1/26/07 0:04:15	16.5	65.0	96.0	0.31	3.60	
1/26/07 0:04:30	16.3	64.5	95.7	0.29	3.63	
1/26/07 0:04:45	16.4	64.5	95.6	0.28	3.62	
1/26/07 0:05:00	16.4	63.8	95.2	0.30	3.61	
1/26/07 0:05:15	16.4	63.0	94.8	0.31	3.60	
1/26/07 0:05:30	16.6	64.0	94.8	0.31	3.60	
1/26/07 0:05:45	16.5	64.8	95.1	0.30	3.61	
1/26/07 0:06:00	16.2	65.3	95.4	0.28	3.61	
1/26/07 0:06:15	16.2	64.3	96.5	0.27	3.62	
1/26/07 0:06:30	16.2	62.4	97.1	0.28	3.62	
1/26/07 0:06:45	16.2	61.0	96.7	0.30	3.60	
1/26/07 0:07:00	16.2	62.2	96.4	0.31	3.59	
1/26/07 0:07:15	16.3	59.3	96.1	0.31	3.59	
1/26/07 0:07:30	14.0	48.8	95.8	0.31	3.58	
1/26/07 0:07:45	2.7	29.9	95.5	0.32	3.57	
1/26/07 0:08:00	1.7	12.6	91.5	0.64	2.93	
1/26/07 0:08:15	15.8	3.6	95.3	1.08	1.59	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 0:08:30	1.3	0.1	142.6	0.74	0.62		
1/26/07 0:08:45	1.0	-0.7	191.1	0.27	0.19		
1/26/07 0:09:00	0.8	-0.9	177.8	0.08	0.06		
1/26/07 0:09:15	0.7	-0.9	141.1	0.01	0.02		
1/26/07 0:09:30	0.7	-0.9	117.3	-0.02	0.01		
1/26/07 0:09:45	0.6	-0.9	107.0	-0.03	0.00		
1/26/07 0:10:00	0.6	-0.9	103.0	-0.03	0.00		
1/26/07 0:10:15	0.6	-0.9	101.5	-0.03	0.00		
1/26/07 0:10:30	0.5	-0.9	101.0	-0.03	-0.01		
1/26/07 0:10:45	0.5	-0.9	100.9	-0.03	-0.01		
1/26/07 0:11:00	0.5	-0.9	100.9	-0.03	-0.01		
1/26/07 0:11:15	0.5	-0.9	100.9	-0.03	-0.01		
1/26/07 0:11:30	0.5	-0.9	101.0	-0.03	-0.01		
1/26/07 0:11:45	0.5	-0.9	101.1	-0.03	-0.01		
1/26/07 0:12:00	0.5	-0.9	101.2	-0.03	-0.01		
1/26/07 0:12:15	0.4	-0.9	101.3	-0.03	-0.01		
1/26/07 0:12:30	0.4	-0.9	101.4	-0.03	-0.01	System Bias	
1/26/07 0:12:45	0.4	-0.9	101.5	-0.03	-0.01	100 ppm SO2	
1/26/07 0:13:00	0.4	-0.9	101.6	-0.03	-0.01		101.6
1/26/07 0:13:15	0.2	-0.9	101.6	-0.03	-0.01		
1/26/07 0:13:30	23.0	-0.9	101.6	-0.03	-0.01		
1/26/07 0:13:45	32.8	-0.9	95.2	-0.03	-0.01		
1/26/07 0:14:00	37.4	-0.9	76.5	-0.03	-0.02		
1/26/07 0:14:15	39.9	-0.9	51.4	-0.03	-0.02		
1/26/07 0:14:30	41.4	-0.9	30.1	-0.03	-0.02		
1/26/07 0:14:45	43.5	-0.9	17.4	-0.03	-0.02		
1/26/07 0:15:00	46.0	-0.9	10.8	-0.03	-0.02		
1/26/07 0:15:15	50.1	-0.9	7.6	-0.03	-0.02		
1/26/07 0:15:30	50.1	-0.9	5.7	-0.03	-0.02		
1/26/07 0:15:45	49.1	-0.9	4.5	-0.03	-0.02		
1/26/07 0:16:00	48.4	-0.9	3.3	-0.03	-0.02		
1/26/07 0:16:15	48.2	-0.9	2.7	-0.03	-0.02		
1/26/07 0:16:30	48.0	-0.9	2.2	-0.03	-0.02	System Bias	
1/26/07 0:16:45	47.9	-0.4	2.0	-0.03	-0.03	50 ppm NOx	
1/26/07 0:17:00	47.8	-1.4	1.5	-0.03	-0.02		47.8
1/26/07 0:17:15	47.8	-0.9	1.2	-0.03	-0.02		
1/26/07 0:17:30	47.8	-0.4	0.9	-0.03	-0.02		
1/26/07 0:17:45	47.9	-1.2	0.9	-0.03	-0.02		
1/26/07 0:18:00	22.2	23.6	0.8	-0.03	-0.02		
1/26/07 0:18:15	12.0	97.8	0.6	-0.03	-0.02		
1/26/07 0:18:30	3.5	169.7	0.6	-0.03	-0.02		
1/26/07 0:18:45	2.2	212.7	1.2	-0.02	-0.02		
1/26/07 0:19:00	1.6	238.0	1.8	-0.02	-0.02		
1/26/07 0:19:15	1.3	245.4	1.8	-0.03	-0.02		
1/26/07 0:19:30	1.1	247.2	1.4	-0.03	-0.02		
1/26/07 0:19:45	0.9	248.4	1.0	-0.03	-0.02		
1/26/07 0:20:00	0.8	249.2	0.5	-0.03	-0.02		
1/26/07 0:20:15	0.7	249.0	0.3	-0.04	-0.02		
1/26/07 0:20:30	0.6	249.9	0.2	-0.04	-0.02		
1/26/07 0:20:45	0.6	248.9	0.1	-0.04	-0.02	System Bias	
1/26/07 0:21:00	0.6	249.2	0.1	-0.04	-0.02	250 ppm CO	
1/26/07 0:21:15	0.5	249.3	0.0	-0.04	-0.02		249.2
1/26/07 0:21:30	0.5	249.2	-0.2	-0.04	-0.02		
1/26/07 0:21:45	0.4	249.2	-0.2	-0.04	-0.02		
1/26/07 0:22:00	0.4	245.7	-0.3	-0.03	-0.02		
1/26/07 0:22:15	1.5	204.2	-0.2	-0.04	-0.02		
1/26/07 0:22:30	0.8	145.2	-0.3	-0.04	0.06		
1/26/07 0:22:45	0.4	76.8	-0.4	-0.03	1.39		
1/26/07 0:23:00	0.3	28.6	-0.5	-0.03	3.62		
1/26/07 0:23:15	0.3	7.4	-0.5	-0.04	5.38		
1/26/07 0:23:30	0.3	-0.2	-0.5	-0.05	6.41		
1/26/07 0:23:45	0.2	-1.7	-0.5	-0.06	6.79		
1/26/07 0:24:00	0.2	-1.9	-0.6	-0.06	6.90		
1/26/07 0:24:15	0.2	-1.9	-0.6	-0.06	6.92		
1/26/07 0:24:30	0.2	-2.4	-0.5	-0.06	6.94		
1/26/07 0:24:45	0.2	-2.2	-0.6	-0.06	6.95		
1/26/07 0:25:00	0.2	-1.9	-0.6	-0.06	6.96		
1/26/07 0:25:15	0.2	-2.3	-0.6	-0.06	6.95	System Bias	
1/26/07 0:25:30	0.1	-1.5	-0.7	-0.06	6.96	7.0% CO2	
1/26/07 0:25:45	0.1	-2.8	-0.7	-0.06	6.99		6.98
1/26/07 0:26:00	0.1	-2.4	-0.7	-0.06	6.98	Zero O2	
1/26/07 0:26:15	0.1	-2.4	-0.7	-0.06	6.98		-0.06
1/26/07 0:26:30	0.1	-2.4	-0.7	-0.06	6.99		
1/26/07 0:26:45	2.0	-1.8	-0.7	-0.06	6.99		
1/26/07 0:27:00	1.0	-1.4	-0.7	-0.03	6.76		
1/26/07 0:27:15	0.2	-1.4	-0.8	0.63	5.03		
1/26/07 0:27:30	0.2	-0.7	-0.8	2.32	2.64		
1/26/07 0:27:45	0.2	-1.2	-0.8	3.88	0.94		
1/26/07 0:28:00	0.1	-0.9	-0.8	4.64	0.29		
1/26/07 0:28:15	0.1	-0.9	-0.9	4.85	0.11		
1/26/07 0:28:30	0.1	-0.9	-0.9	4.92	0.05		
1/26/07 0:28:45	0.1	-0.9	-0.9	4.95	0.03		
1/26/07 0:29:00	0.1	-0.9	-0.9	4.97	0.02		
1/26/07 0:29:15	0.1	-0.9	-0.9	4.97	0.01	System Bias	
1/26/07 0:29:30	0.1	-0.9	-0.9	4.98	0.00	5.0% O2	
1/26/07 0:29:45	0.1	-1.2	-0.9	4.98	0.00		4.98
1/26/07 0:30:00	0.1	-0.7	-0.9	4.98	0.00	Zero NOx	
1/26/07 0:30:15	0.1	-0.8	-0.9	4.98	0.00		0.1
1/26/07 0:30:30	0.1	-1.2	-0.9	4.98	-0.01	Zero CO	
1/26/07 0:30:45	0.1	1.7	-0.9	4.98	-0.01		-0.9
1/26/07 0:31:00	6.6	15.8	-0.9	4.99	-0.01	Zero SO2	
1/26/07 0:31:15	15.1	34.4	-0.8	4.98	0.02		-0.9
1/26/07 0:31:30	15.6	46.7	3.9	4.45	0.65	Zero CO2	
1/26/07 0:31:45	15.9	57.0	23.2	2.76	1.98		0.00
1/26/07 0:32:00	16.0	58.5	51.5	1.29	2.94		

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1/26/07 0:32:15	15.9	58.8	73.7	0.62	3.38		
1/26/07 0:32:30	15.6	59.4	85.3	0.40	3.51		
1/26/07 0:32:45	15.7	59.9	90.9	0.34	3.55		
1/26/07 6:29:00	0.1	-0.4	-0.3	-0.05	0.00	Calibration Error	
1/26/07 6:29:15	0.1	-0.4	-0.3	-0.05	-0.01	Zero NOx	
1/26/07 6:29:30	0.0	-0.4	-0.3	-0.05	-0.01		0.0
1/26/07 6:29:45	0.0	-0.4	-0.3	-0.05	-0.01	Zero CO	
1/26/07 6:30:00	0.0	-0.4	-0.3	-0.05	-0.01		-0.4
1/26/07 6:30:15	6.0	0.0	-0.2	-0.05	-0.01	Zero SO2	
1/26/07 6:30:30	2.7	0.1	-0.2	-0.05	-0.01		-0.3
1/26/07 6:30:45	1.1	0.0	11.9	0.01	-0.01	Zero O2	
1/26/07 6:31:00	0.9	-0.4	60.4	0.12	0.00		-0.05
1/26/07 6:31:15	0.8	-0.4	119.7	0.07	-0.01	Zero CO2	
1/26/07 6:31:30	0.7	-0.4	182.7	-0.04	-0.02		-0.01
1/26/07 6:31:45	0.7	-0.4	188.1	-0.05	-0.01		
1/26/07 6:32:00	0.6	-0.4	190.1	-0.05	-0.01		
1/26/07 6:32:15	0.6	-0.5	191.1	-0.05	-0.02		
1/26/07 6:32:30	0.6	-0.8	191.6	-0.06	-0.03		
1/26/07 6:32:45	0.6	-0.4	192.1	-0.06	-0.03		
1/26/07 6:33:00	0.6	-0.4	179.1	-0.06	-0.03	Calibration Error	
1/26/07 6:33:15	0.5	-0.4	179.2	-0.06	-0.03	180 ppm SO2	
1/26/07 6:33:30	0.5	-0.4	179.2	-0.06	-0.02		179.3
1/26/07 6:33:45	0.4	-0.4	179.3	-0.06	-0.02		
1/26/07 6:34:00	0.4	-0.4	179.3	-0.06	-0.03		
1/26/07 6:34:15	0.4	-0.4	173.4	-0.06	-0.03		
1/26/07 6:34:30	0.4	-0.4	151.0	-0.06	-0.03		
1/26/07 6:34:45	0.4	-0.4	125.6	-0.06	-0.02		
1/26/07 6:35:00	0.4	-0.4	110.5	-0.06	-0.02		
1/26/07 6:35:15	0.4	-0.4	103.7	-0.06	-0.03		
1/26/07 6:35:30	0.4	-0.4	101.1	-0.06	-0.02		
1/26/07 6:35:45	0.4	-0.8	100.3	-0.06	-0.02		
1/26/07 6:36:00	0.4	-0.4	99.9	-0.06	-0.03		
1/26/07 6:36:15	0.4	-0.4	99.7	-0.06	-0.02		
1/26/07 6:36:30	0.4	-0.4	99.7	-0.06	-0.03	Calibration Error	
1/26/07 6:36:45	0.4	-0.8	99.7	-0.06	-0.02	100 ppm SO2	
1/26/07 6:37:00	0.4	-0.5	98.7	-0.06	-0.02		99.5
1/26/07 6:37:15	16.3	-0.4	99.7	-0.06	-0.02		
1/26/07 6:37:30	69.7	-0.4	99.7	-0.06	-0.02		
1/26/07 6:37:45	79.4	-0.4	91.8	-0.05	-0.02		
1/26/07 6:38:00	84.8	-0.4	65.0	-0.04	-0.02		
1/26/07 6:38:15	94.7	-0.4	34.5	-0.04	-0.02		
1/26/07 6:38:30	95.5	-0.4	15.3	-0.05	-0.02		
1/26/07 6:38:45	93.6	-0.4	7.6	-0.06	-0.02		
1/26/07 6:39:00	90.2	-0.7	3.7	-0.06	-0.02	Calibration Error	
1/26/07 6:39:15	90.3	-0.5	2.1	-0.06	-0.02	90 ppm NOx	
1/26/07 6:39:30	90.1	-0.4	1.4	-0.06	-0.02		90.2
1/26/07 6:39:45	90.2	-0.5	1.0	-0.06	-0.02		
1/26/07 6:40:00	90.2	-0.8	0.8	-0.06	-0.02		
1/26/07 6:40:15	67.0	-0.4	0.6	-0.06	-0.02		
1/26/07 6:40:30	48.2	-0.4	0.5	-0.06	-0.02		
1/26/07 6:40:45	49.6	-0.8	0.5	-0.06	-0.02	Calibration Error	
1/26/07 6:41:00	49.8	-0.4	0.3	-0.06	-0.02	50 ppm NOx	
1/26/07 6:41:15	49.9	-0.4	0.2	-0.06	-0.02		49.9
1/26/07 6:41:30	49.9	-0.4	0.2	-0.06	-0.02		
1/26/07 6:41:45	49.9	-0.4	0.1	-0.06	-0.02		
1/26/07 6:42:00	49.9	-0.4	0.1	-0.06	-0.02		
1/26/07 6:42:15	47.7	-0.8	0.0	-0.06	-0.02		
1/26/07 6:42:30	50.1	-0.4	0.1	-0.06	-0.02		
1/26/07 6:42:45	47.4	-0.4	0.1	-0.05	-0.02		
1/26/07 6:43:00	43.2	-0.4	0.2	0.22	-0.02		
1/26/07 6:43:15	44.0	-0.4	0.5	0.44	-0.02		
1/26/07 6:43:30	44.5	0.0	0.4	0.23	-0.02		
1/26/07 6:43:45	45.2	-0.3	0.4	0.04	-0.02		
1/26/07 6:44:00	45.6	-0.2	0.5	-0.03	-0.02		
1/26/07 6:44:15	45.9	-0.4	0.4	-0.05	-0.02		
1/26/07 6:44:30	46.1	-0.4	0.5	-0.06	-0.02		
1/26/07 6:44:45	46.2	0.1	0.6	-0.06	-0.02	NOx converter check	
1/26/07 6:45:00	46.2	0.1	0.5	-0.06	-0.02	50.0 ppm NO2 (cyl# CC198398)	
1/26/07 6:45:15	46.3	-0.2	0.4	-0.06	-0.03		46.3
1/26/07 6:45:30	46.3	0.0	0.5	-0.06	-0.02	Converter efficiency	
1/26/07 6:45:45	46.4	-0.3	0.4	-0.06	-0.02		92.6
1/26/07 6:46:00	55.8	26.9	0.6	-0.06	-0.03		
1/26/07 6:46:15	41.7	112.2	0.6	-0.06	-0.03		
1/26/07 6:46:30	5.5	248.9	0.5	-0.06	-0.03		
1/26/07 6:46:45	2.1	365.7	0.8	0.03	-0.03		
1/26/07 6:47:00	1.3	418.5	0.6	0.04	-0.03		
1/26/07 6:47:15	1.1	448.6	0.1	-0.01	-0.03		
1/26/07 6:47:30	0.9	453.2	-0.2	-0.05	-0.03		
1/26/07 6:47:45	0.8	455.2	-0.2	-0.06	-0.03	Calibration Error	
1/26/07 6:48:00	0.7	450.5	-0.3	-0.06	-0.03	450 ppm CO	
1/26/07 6:48:15	0.7	450.6	-0.4	-0.07	-0.03		450.6
1/26/07 6:48:30	0.6	450.6	-0.4	-0.07	-0.03		
1/26/07 6:48:45	0.5	450.5	-0.3	-0.07	-0.03		
1/26/07 6:49:00	0.5	449.0	-0.2	-0.07	-0.03		
1/26/07 6:49:15	0.5	417.4	-0.2	-0.07	-0.03		
1/26/07 6:49:30	0.4	368.3	-0.2	-0.07	-0.03		
1/26/07 6:49:45	0.4	298.6	-0.3	-0.07	-0.03		
1/26/07 6:50:00	0.4	269.9	-0.2	-0.07	-0.02		
1/26/07 6:50:15	0.4	255.2	-0.3	-0.07	-0.02		
1/26/07 6:50:30	0.3	250.9	-0.3	-0.07	-0.02	Calibration Error	
1/26/07 6:50:45	0.3	249.7	-0.3	-0.07	-0.02	250 ppm CO	
1/26/07 6:51:00	0.3	249.7	-0.3	-0.07	-0.02		249.7
1/26/07 6:51:15	0.3	249.8	-0.3	-0.07	-0.03		

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1/26/07 6:51:30	0.3	249.7	-0.4	-0.07	-0.04		
1/26/07 6:51:45	0.3	263.2	-0.3	-0.07	-0.03		
1/26/07 6:52:00	5.7	244.5	-0.2	-0.07	-0.03		
1/26/07 6:52:15	0.9	161.2	-0.1	-0.07	0.33		
1/26/07 6:52:30	0.3	103.4	0.2	-0.06	3.66		
1/26/07 6:52:45	0.2	50.5	0.2	-0.07	7.19		
1/26/07 6:53:00	0.2	18.7	0.2	-0.08	9.81		
1/26/07 6:53:15	0.2	5.7	0.0	-0.10	11.74		
1/26/07 6:53:30	0.2	-1.3	-0.2	-0.10	12.93		
1/26/07 6:53:45	0.2	-2.4	-0.2	-0.11	13.40		
1/26/07 6:54:00	0.1	-2.4	-0.3	-0.11	13.52		
1/26/07 6:54:15	0.1	-2.4	-0.3	-0.11	13.55		
1/26/07 6:54:30	0.1	-2.4	-0.3	-0.11	13.57		
1/26/07 6:54:45	0.1	-2.8	-0.4	-0.11	13.76	Calibration Error	
1/26/07 6:55:00	0.1	-2.5	-0.3	-0.08	13.96	14.0% CO2	
1/26/07 6:55:15	0.1	-2.7	-0.3	0.00	13.97		13.97
1/26/07 6:55:30	0.1	-2.4	-0.4	-0.01	13.97		
1/26/07 6:55:45	0.1	-2.8	-0.5	-0.01	13.97		
1/26/07 6:56:00	0.1	-2.4	-0.4	0.00	13.97		
1/26/07 6:56:15	0.1	-2.3	-0.2	0.00	13.82		
1/26/07 6:56:30	0.1	-1.9	-0.2	0.00	12.13		
1/26/07 6:56:45	0.1	-2.3	-0.2	0.01	9.90		
1/26/07 6:57:00	0.1	-2.0	-0.3	0.01	8.24		
1/26/07 6:57:15	0.1	-1.9	-0.4	0.02	7.53		
1/26/07 6:57:30	0.1	-1.9	-0.4	0.02	7.13		
1/26/07 6:57:45	0.1	-1.9	-0.5	0.02	7.06		
1/26/07 6:58:00	0.1	-1.9	-0.4	0.02	7.03		
1/26/07 6:58:15	0.1	-1.9	-0.4	0.02	7.03	Calibration Error	
1/26/07 6:58:30	0.1	-1.9	-0.3	0.02	7.03	7.0% CO2	
1/26/07 6:58:45	0.1	-2.0	-0.3	0.02	7.03		7.03
1/26/07 6:59:00	0.1	-2.4	-0.4	0.01	7.03		
1/26/07 6:59:15	0.1	-1.3	-0.4	0.02	7.03		
1/26/07 6:59:30	10.8	-0.5	-0.4	0.02	7.02		
1/26/07 6:59:45	0.7	-0.4	-0.3	0.03	6.96		
1/26/07 7:00:00	0.2	-0.4	-0.2	0.94	5.69		
1/26/07 7:00:15	0.2	-0.7	-0.1	4.07	3.12		
1/26/07 7:00:30	0.2	-0.9	-0.1	7.02	1.16		
1/26/07 7:00:45	0.1	-0.9	-0.1	8.49	0.36		
1/26/07 7:01:00	0.1	-0.8	-0.3	8.94	0.13		
1/26/07 7:01:15	0.1	-0.5	-0.4	9.07	0.05		
1/26/07 7:01:30	0.1	-0.9	-0.4	9.12	0.01		
1/26/07 7:01:45	0.1	-0.9	-0.4	9.11	0.00	Calibration Error	
1/26/07 7:02:00	0.1	-0.5	-0.5	9.07	0.00	9.0% O2	
1/26/07 7:02:15	0.1	-0.9	-0.5	9.07	-0.01		9.07
1/26/07 7:02:30	0.1	-0.8	-0.4	9.07	-0.01		
1/26/07 7:02:45	0.1	-0.7	-0.4	9.07	-0.01		
1/26/07 7:03:00	0.1	-0.5	-0.5	8.76	-0.02		
1/26/07 7:03:15	0.1	-0.9	-0.4	7.25	-0.02		
1/26/07 7:03:30	0.1	-0.4	-0.4	5.85	-0.02		
1/26/07 7:03:45	0.1	-0.4	-0.4	5.31	-0.02		
1/26/07 7:04:00	0.1	-0.7	-0.4	5.14	-0.02		
1/26/07 7:04:15	0.1	-0.9	-0.5	5.09	-0.02		
1/26/07 7:04:30	0.1	-0.4	-0.5	5.08	-0.02		
1/26/07 7:04:45	0.1	-0.8	-0.4	5.07	-0.02	Calibration Error	
1/26/07 7:05:00	0.1	-0.4	-0.4	5.07	-0.03	5.0% O2	
1/26/07 7:05:15	0.1	-0.4	-0.4	5.07	-0.02		5.07
1/26/07 7:05:30	0.1	-0.8	-0.5	5.07	-0.02		
1/26/07 7:05:45	0.1	-0.9	-0.5	5.07	-0.03		
1/26/07 7:06:00	0.1	-0.9	-0.4	5.07	-0.03		
1/26/07 7:06:15	0.1	-0.9	-0.4	5.07	-0.03		
1/26/07 7:06:30	0.1	1.3	-0.4	5.07	-0.02		
1/26/07 7:06:45	4.2	15.2	-0.4	5.07	-0.02		
1/26/07 7:07:00	15.8	35.5	0.4	5.07	0.00		
1/26/07 7:07:15	15.5	50.5	11.3	4.63	0.56		
1/26/07 7:07:30	11.2	46.3	37.4	2.97	1.90		
1/26/07 7:07:45	2.1	33.3	63.1	1.40	2.92		
1/26/07 7:08:00	0.3	16.3	74.4	0.70	2.93		
1/26/07 7:08:15	0.3	5.1	65.2	0.46	1.80		
1/26/07 7:08:30	0.2	0.8	42.7	0.27	0.72		
1/26/07 7:08:45	0.2	0.1	23.0	0.14	0.22		
1/26/07 7:09:00	0.2	-0.2	12.2	0.10	0.05		
1/26/07 7:09:15	0.1	0.1	4.2	0.05	-0.01		
1/26/07 7:09:30	0.1	-0.3	3.0	0.04	-0.01		
1/26/07 7:09:45	0.1	0.1	2.3	0.03	-0.01		
1/26/07 7:10:00	0.1	-0.2	1.9	0.03	-0.01		
1/26/07 7:10:15	0.1	0.0	1.4	0.03	-0.01		
1/26/07 7:10:30	0.1	0.1	1.1	0.03	-0.01		
1/26/07 7:10:45	0.1	0.1	0.8	0.03	-0.01		
1/26/07 7:11:00	0.1	0.1	0.5	0.03	-0.01		
1/26/07 7:11:15	0.1	-0.2	0.3	0.03	-0.01		
1/26/07 7:11:30	0.1	-0.3	0.2	0.04	-0.01		
1/26/07 7:11:45	0.1	0.1	0.1	0.04	-0.01		
1/26/07 7:12:00	0.1	-0.3	0.0	0.03	-0.01		
1/26/07 7:12:15	0.1	0.1	0.0	0.03	-0.01		
1/26/07 7:12:30	0.1	0.1	-0.2	0.03	-0.01		
1/26/07 7:12:45	0.1	-0.3	-0.2	0.03	-0.01	Upscale Response Time	
1/26/07 7:13:00	0.1	-0.2	-0.3	0.03	-0.01		120 seconds
1/26/07 7:13:15	3.8	0.1	-0.2	0.03	-0.01		
1/26/07 7:13:30	1.1	0.1	6.2	0.07	-0.01		
1/26/07 7:13:45	0.6	0.1	18.5	0.21	0.00		
1/26/07 7:14:00	0.6	-0.2	51.4	0.13	0.00		
1/26/07 7:14:15	0.5	0.1	78.1	0.06	-0.01		
1/26/07 7:14:30	0.5	-0.3	89.9	0.04	-0.01		
1/26/07 7:14:45	0.5	-0.3	94.3	0.04	-0.01		
1/26/07 7:15:00	0.4	0.1	96.3	0.04	-0.01		

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 7:15:15	0.4	0.0	96.4	0.03	-0.01		
1/26/07 7:15:30	0.4	-0.2	97.1	0.03	-0.01		
1/26/07 7:15:45	0.4	0.1	97.2	0.03	-0.01		
1/26/07 7:16:00	0.4	-0.3	97.2	0.03	-0.01	System Bias	
1/26/07 7:16:15	0.4	0.1	97.2	0.03	-0.01	100 ppm SO2	
1/26/07 7:16:30	0.4	-0.3	97.3	0.03	-0.01		97.3
1/26/07 7:16:45	0.4	-0.4	97.3	0.03	-0.01		
1/26/07 7:17:00	0.3	0.0	97.3	0.03	-0.01		
1/26/07 7:17:15	0.3	0.0	97.3	0.03	-0.01	Downscale Response Time	
1/26/07 7:17:30	0.3	-0.4	97.4	0.03	-0.01		119 seconds
1/26/07 7:17:45	0.2	-0.4	97.4	0.03	-0.01		
1/26/07 7:18:00	0.0	-0.2	96.7	0.03	-0.01		
1/26/07 7:18:15	0.0	0.1	75.8	0.03	-0.01		
1/26/07 7:18:30	0.0	0.1	39.0	0.03	0.00		
1/26/07 7:18:45	0.0	-0.2	16.7	0.03	-0.01		
1/26/07 7:19:00	0.0	-0.2	8.4	0.03	-0.01		
1/26/07 7:19:15	0.0	-0.2	5.3	0.03	-0.01		
1/26/07 7:19:30	0.0	-0.3	3.8	0.03	-0.01		
1/26/07 7:19:45	0.0	-0.3	2.9	0.03	-0.01		
1/26/07 7:20:00	0.0	0.1	2.4	0.03	-0.01		
1/26/07 7:20:15	0.0	-0.3	1.9	0.03	-0.01		
1/26/07 7:20:30	0.0	-0.4	1.5	0.03	0.00		
1/26/07 7:20:45	0.0	0.6	1.1	0.03	0.00		
1/26/07 7:21:00	5.2	12.2	0.9	0.03	0.00		
1/26/07 7:21:15	7.1	16.8	1.9	0.04	0.17		
1/26/07 7:21:30	23.6	10.8	13.4	0.12	1.09		
1/26/07 7:21:45	34.9	3.3	27.3	0.14	0.91		
1/26/07 7:22:00	40.0	0.1	24.4	0.07	0.26		
1/26/07 7:22:15	41.9	0.1	12.9	0.04	0.05		
1/26/07 7:22:30	45.6	-0.2	5.6	0.04	0.01		
1/26/07 7:22:45	48.9	0.0	2.7	0.03	0.00		
1/26/07 7:23:00	48.7	-0.2	1.4	0.03	0.00		
1/26/07 7:23:15	48.7	-0.3	0.7	0.03	0.00	System Bias	
1/26/07 7:23:30	48.6	-0.3	0.3	0.03	0.00	50 ppm NOx	
1/26/07 7:23:45	48.6	-0.2	0.1	0.03	0.01		48.6
1/26/07 7:24:00	48.6	-0.3	-0.2	0.03	0.00		
1/26/07 7:24:15	48.5	-0.4	-0.4	0.03	0.00		
1/26/07 7:24:30	48.1	0.0	-0.4	0.03	-0.01		
1/26/07 7:24:45	38.3	0.3	-0.4	0.03	-0.01		
1/26/07 7:25:00	17.3	68.8	-0.4	0.03	-0.01		
1/26/07 7:25:15	3.4	154.8	-0.5	0.04	-0.01		
1/26/07 7:25:30	2.0	218.1	-0.1	0.08	-0.01		
1/26/07 7:25:45	1.4	241.3	0.2	0.06	-0.01		
1/26/07 7:26:00	1.1	244.6	0.0	0.04	-0.01		
1/26/07 7:26:15	0.9	245.7	-0.2	0.03	-0.01		
1/26/07 7:26:30	0.8	246.2	-0.3	0.03	-0.01		
1/26/07 7:26:45	0.7	246.8	-0.4	0.03	-0.01	System Bias	
1/26/07 7:27:00	0.6	247.0	-0.4	0.03	-0.01	250 ppm CO	
1/26/07 7:27:15	0.6	247.0	-0.6	0.03	-0.01		247.1
1/26/07 7:27:30	0.5	247.1	-0.5	0.03	-0.01		
1/26/07 7:27:45	0.5	247.1	-0.7	0.03	-0.01		
1/26/07 7:28:00	0.5	224.2	-0.6	0.03	-0.01		
1/26/07 7:28:15	0.9	128.3	-0.6	0.03	0.10		
1/26/07 7:28:30	0.4	56.0	-0.6	0.03	2.14		
1/26/07 7:28:45	0.3	14.6	-0.7	0.02	4.90		
1/26/07 7:29:00	0.3	0.6	-0.7	0.01	6.44		
1/26/07 7:29:15	0.2	-1.3	-0.7	0.01	6.87		
1/26/07 7:29:30	0.2	-1.2	-0.8	0.01	6.94		
1/26/07 7:29:45	0.2	-1.3	-0.7	0.01	6.96		
1/26/07 7:30:00	0.2	-1.4	-0.8	0.01	6.97		
1/26/07 7:30:15	0.2	-1.4	-0.7	0.01	6.97		
1/26/07 7:30:30	0.2	-1.4	-0.8	0.01	6.98	System Bias	
1/26/07 7:30:45	0.2	-1.7	-1.0	0.01	6.98	7.0% CO2	
1/26/07 7:31:00	0.1	-1.7	-1.0	0.01	6.98		6.98
1/26/07 7:31:15	0.1	-1.4	-1.0	0.01	6.98	Zero O2	
1/26/07 7:31:30	1.4	-0.9	-1.0	0.01	6.98		0.01
1/26/07 7:31:45	0.2	-0.5	-0.9	0.35	5.82		
1/26/07 7:32:00	0.2	-0.4	-0.8	2.33	2.74		
1/26/07 7:32:15	0.1	-0.4	-0.9	4.23	0.69		
1/26/07 7:32:30	0.1	-0.2	-0.9	4.86	0.17		
1/26/07 7:32:45	0.1	0.1	-0.9	4.96	0.07		
1/26/07 7:33:00	0.1	-0.3	-0.9	4.99	0.04		
1/26/07 7:33:15	0.1	-0.4	-1.0	5.00	0.03	System Bias	
1/26/07 7:33:30	0.1	-0.3	-1.1	5.00	0.03	5.0% O2	
1/26/07 7:33:45	0.1	-0.2	-1.1	5.00	0.02		5.00
1/26/07 7:34:00	0.1	0.1	-1.0	5.00	0.01	Zero NOx	
1/26/07 7:34:15	0.1	0.1	-1.0	5.00	0.01		0.1
1/26/07 7:34:30	0.3	7.6	-1.0	5.01	0.01	Zero CO	
1/26/07 7:34:45	14.9	29.9	-0.9	5.01	0.02		-0.1
1/26/07 7:35:00	15.5	51.3	4.8	4.47	0.65	Zero SO2	
1/26/07 7:35:15	15.5	64.0	32.6	2.30	2.33		-1.0
1/26/07 7:35:30	15.7	65.9	65.4	0.85	3.28	Zero CO2	
1/26/07 7:35:45	15.0	33.8	-1.1	4.98	0.02		0.02
1/26/07 7:36:00	15.4	46.2	2.4	4.57	0.55		
1/26/07 7:36:15	15.8	56.5	18.8	2.94	1.84		
1/26/07 7:36:30	15.7	60.5	45.3	1.37	2.86		
1/26/07 7:36:45	15.6	62.5	67.6	0.61	3.36		
1/26/07 7:37:00	15.7	64.2	79.9	0.38	3.50		
1/26/07 7:37:15	15.6	64.7	85.6	0.34	3.54		
1/26/07 7:37:30	15.5	64.5	88.2	0.33	3.55		
1/26/07 7:37:45	15.5	64.4	89.3	0.32	3.55		
1/26/07 7:38:00	15.5	65.3	90.4	0.31	3.55	Mean Average of the NOx Sampling Points	
1/26/07 7:38:15	15.5	65.7	91.6	0.31	3.55		15.68
1/26/07 7:38:30	15.8	66.2	92.4	0.31	3.55	Mean Average of the CO Sampling Points	
1/26/07 7:38:45	15.9	66.0	92.6	0.32	3.55		65.30

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 7:39:00	16.0	66.3	92.9	0.31	3.55	Mean Average of the SO2 Sampling Points	
1/26/07 7:39:15	15.8	66.5	93.0	0.29	3.56	92.12	
1/26/07 7:39:30	15.6	64.9	92.7	0.27	3.57	Mean Average of the O2 Sampling Points	
1/26/07 7:39:45	15.8	64.5	92.3	0.27	3.57	0.31	
1/26/07 7:40:00	15.7	64.8	92.4	0.28	3.57	Mean Average of the CO2 Sampling Points	
1/26/07 7:40:15	15.7	64.7	93.1	0.30	3.56	3.57	
1/26/07 7:40:30	15.7	64.5	93.1	0.30	3.56		
1/26/07 7:40:45	15.7	62.9	92.5	0.31	3.55		
1/26/07 7:41:00	15.6	62.4	92.5	0.31	3.55		
1/26/07 7:41:15	15.6	62.0	92.4	0.31	3.55		
1/26/07 7:41:30	15.6	62.0	92.3	0.30	3.55		
1/26/07 7:41:45	15.7	63.2	92.3	0.30	3.54		
1/26/07 7:42:00	15.8	64.2	92.1	0.29	3.55		
1/26/07 7:42:15	16.0	64.5	92.3	0.28	3.55		
1/26/07 7:42:30	15.7	64.5	92.5	0.27	3.58		
1/26/07 7:42:45	15.6	64.5	92.6	0.26	3.59		
1/26/07 7:43:00	15.6	64.5	92.5	0.26	3.59	CEMS Sampling Point No. 1	
1/26/07 7:43:15	15.8	65.2	92.3	0.28	3.56	NOx sampling point average	15.7
1/26/07 7:43:30	15.7	65.7	92.3	0.30	3.55	CO sampling point average	64.7
1/26/07 7:43:45	15.7	65.8	93.1	0.31	3.55	SO2 sampling point average	92.7
1/26/07 7:44:00	15.6	66.3	94.1	0.31	3.55	O2 sampling point average	0.30
1/26/07 7:44:15	15.7	66.5	94.3	0.32	3.55	CO2 sampling point average	3.56
1/26/07 7:44:30	15.8	66.2	93.8	0.32	3.56		
1/26/07 7:44:45	15.7	66.2	93.4	0.32	3.56	NOx absolute difference from mean	-0.2
1/26/07 7:45:00	15.8	64.8	92.6	0.33	3.56	CO absolute difference from mean	0.9
1/26/07 7:45:15	15.9	63.4	92.1	0.33	3.56	SO2 absolute difference from mean	-0.6
1/26/07 7:45:30	16.0	63.0	91.9	0.32	3.57	O2 absolute difference from mean	2.5
1/26/07 7:45:45	16.0	63.2	92.0	0.31	3.58	CO2 absolute difference from mean	0.1
1/26/07 7:46:00	15.6	63.7	91.9	0.28	3.58		
1/26/07 7:46:15	15.5	64.3	91.8	0.27	3.58		
1/26/07 7:46:30	15.5	64.5	92.1	0.28	3.57		
1/26/07 7:46:45	15.7	64.5	92.6	0.29	3.56		
1/26/07 7:47:00	15.6	63.7	92.6	0.31	3.56		
1/26/07 7:47:15	15.7	63.9	92.8	0.31	3.57		
1/26/07 7:47:30	15.6	64.0	93.1	0.30	3.57		
1/26/07 7:47:45	15.6	64.5	93.1	0.29	3.57		
1/26/07 7:48:00	15.7	63.8	92.8	0.29	3.57		
1/26/07 7:48:15	15.7	63.7	92.8	0.29	3.56		
1/26/07 7:48:30	15.7	64.0	92.8	0.29	3.56	CEMS Sampling Point No. 2	
1/26/07 7:48:45	15.6	64.3	92.3	0.29	3.56	NOx sampling point average	15.6
1/26/07 7:49:00	15.6	65.7	92.0	0.29	3.56	CO sampling point average	65.9
1/26/07 7:49:15	15.5	66.4	92.0	0.29	3.56	SO2 sampling point average	92.5
1/26/07 7:49:30	15.5	65.9	92.2	0.30	3.56	O2 sampling point average	0.29
1/26/07 7:49:45	15.4	65.4	92.4	0.30	3.55	CO2 sampling point average	3.55
1/26/07 7:50:00	15.6	64.8	92.1	0.31	3.54		
1/26/07 7:50:15	15.6	64.5	92.0	0.31	3.53	NOx absolute difference from mean	0.6
1/26/07 7:50:30	15.8	64.9	92.3	0.30	3.53	CO absolute difference from mean	-0.9
1/26/07 7:50:45	15.9	65.2	92.4	0.29	3.54	SO2 absolute difference from mean	-0.4
1/26/07 7:51:00	15.7	65.4	92.4	0.27	3.55	O2 absolute difference from mean	6.6
1/26/07 7:51:15	15.5	65.0	92.5	0.25	3.57	CO2 absolute difference from mean	0.3
1/26/07 7:51:30	15.5	64.3	92.5	0.25	3.56		
1/26/07 7:51:45	15.5	65.3	92.8	0.27	3.56		
1/26/07 7:52:00	15.4	66.9	93.7	0.29	3.56		
1/26/07 7:52:15	15.5	68.4	94.0	0.30	3.55		
1/26/07 7:52:30	15.6	68.8	93.3	0.31	3.55		
1/26/07 7:52:45	15.6	67.8	92.4	0.31	3.55		
1/26/07 7:53:00	15.5	67.5	91.8	0.32	3.55		
1/26/07 7:53:15	15.6	67.0	91.5	0.32	3.55		
1/26/07 7:53:30	15.7	65.3	91.5	0.32	3.55		
1/26/07 7:53:45	15.7	65.0	91.8	0.32	3.56		
1/26/07 7:54:00	15.7	65.0	92.0	0.31	3.56	CEMS Sampling Point No. 3	
1/26/07 7:54:15	15.7	64.5	92.1	0.29	3.57	NOx sampling point average	15.7
1/26/07 7:54:30	15.9	64.4	92.4	0.28	3.57	CO sampling point average	65.3
1/26/07 7:54:45	15.9	63.8	92.5	0.28	3.57	SO2 sampling point average	91.2
1/26/07 7:55:00	16.0	64.0	92.4	0.29	3.57	O2 sampling point average	0.34
1/26/07 7:55:15	15.9	65.3	92.2	0.29	3.57	CO2 sampling point average	3.58
1/26/07 7:55:30	16.0	65.5	92.3	0.29	3.57		
1/26/07 7:55:45	15.9	67.0	81.7	0.48	3.52	NOx absolute difference from mean	-0.4
1/26/07 7:56:00	15.7	66.4	87.1	0.40	3.58	CO absolute difference from mean	0.0
1/26/07 7:56:15	15.5	64.8	88.9	0.35	3.60	SO2 absolute difference from mean	1.1
1/26/07 7:56:30	15.5	63.4	90.1	0.35	3.59	O2 absolute difference from mean	-9.1
1/26/07 7:56:45	15.5	63.4	90.8	0.35	3.59	CO2 absolute difference from mean	-0.4
1/26/07 7:57:00	15.5	64.5	91.0	0.36	3.59		
1/26/07 7:57:15	15.6	64.9	91.4	0.36	3.59		
1/26/07 7:57:30	15.5	64.8	91.5	0.37	3.59		
1/26/07 7:57:45	15.9	65.4	91.8	0.37	3.59		
1/26/07 7:58:00	16.1	67.7	92.4	0.36	3.59		
1/26/07 7:58:15	15.8	67.8	94.3	0.36	3.61		
1/26/07 7:58:30	15.5	67.8	95.8	0.34	3.62		
1/26/07 7:58:45	15.5	67.5	94.3	0.35	3.62		
1/26/07 7:59:00	15.8	67.3	92.4	0.39	3.60		
1/26/07 7:59:15	15.9	66.5	91.6	0.40	3.60		
1/26/07 7:59:30	15.7	65.5	91.2	0.36	3.62		
1/26/07 7:59:45	15.5	64.9	91.3	0.33	3.63	Start Run No. 10	
1/26/07 8:00:00	**15.5**	**64.5**	**91.5**	**0.34**	**3.62**		
1/26/07 8:00:15	**15.3**	**65.0**	**91.1**	**0.36**	**3.61**		
1/26/07 8:00:30	**15.4**	**65.0**	**90.9**	**0.38**	**3.60**		
1/26/07 8:00:45	**15.7**	**64.5**	**91.0**	**0.39**	**3.60**		
1/26/07 8:01:00	**15.9**	**64.8**	**91.1**	**0.39**	**3.60**		
1/26/07 8:01:15	**15.8**	**65.5**	**91.5**	**0.38**	**3.61**		
1/26/07 8:01:30	**15.6**	**66.0**	**91.9**	**0.37**	**3.62**		
1/26/07 8:01:45	**15.7**	**65.7**	**91.8**	**0.37**	**3.62**		
1/26/07 8:02:00	**16.0**	**64.0**	**91.8**	**0.39**	**3.61**		
1/26/07 8:02:15	**15.8**	**63.4**	**91.5**	**0.40**	**3.62**		
1/26/07 8:02:30	**15.7**	**62.8**	**91.3**	**0.36**	**3.64**		

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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/26/07 8:02:45	15.7	62.0	91.2	0.35	3.63	
1/26/07 8:03:00	15.5	61.7	91.6	0.36	3.62	
1/26/07 8:03:15	15.4	63.0	91.9	0.37	3.62	
1/26/07 8:03:30	15.4	64.5	91.9	0.37	3.61	
1/26/07 8:03:45	15.4	65.0	92.0	0.37	3.60	
1/26/07 8:04:00	15.5	63.9	92.0	0.37	3.59	
1/26/07 8:04:15	15.7	63.5	91.9	0.37	3.59	
1/26/07 8:04:30	15.9	63.8	92.0	0.37	3.59	
1/26/07 8:04:45	15.9	65.2	91.6	0.35	3.61	
1/26/07 8:05:00	15.9	64.5	91.2	0.32	3.63	
1/26/07 8:05:15	15.9	61.9	91.2	0.32	3.64	
1/26/07 8:05:30	15.9	61.2	91.3	0.33	3.64	
1/26/07 8:05:45	15.8	61.3	90.9	0.35	3.64	
1/26/07 8:06:00	15.7	62.3	91.2	0.36	3.63	
1/26/07 8:06:15	15.7	62.3	91.4	0.36	3.63	
1/26/07 8:06:30	15.5	62.0	91.5	0.36	3.63	
1/26/07 8:06:45	15.4	62.4	91.7	0.36	3.62	
1/26/07 8:07:00	15.5	61.5	91.5	0.37	3.62	
1/26/07 8:07:15	15.2	62.3	91.3	0.39	3.60	
1/26/07 8:07:30	15.6	62.3	90.9	0.40	3.60	
1/26/07 8:07:45	15.8	62.7	90.7	0.40	3.60	
1/26/07 8:08:00	15.7	62.7	90.9	0.37	3.63	
1/26/07 8:08:15	15.2	64.3	91.7	0.38	3.61	
1/26/07 8:08:30	15.3	63.8	91.5	0.41	3.60	
1/26/07 8:08:45	15.6	63.5	91.5	0.42	3.59	
1/26/07 8:09:00	15.8	63.2	91.3	0.43	3.60	
1/26/07 8:09:15	15.8	62.5	91.0	0.41	3.61	
1/26/07 8:09:30	15.3	62.5	90.8	0.37	3.63	
1/26/07 8:09:45	15.1	62.5	90.9	0.35	3.64	
1/26/07 8:10:00	15.2	63.2	91.2	0.38	3.62	
1/26/07 8:10:15	15.1	63.9	91.1	0.41	3.61	
1/26/07 8:10:30	15.1	64.8	91.3	0.43	3.60	
1/26/07 8:10:45	15.4	64.0	91.5	0.43	3.60	
1/26/07 8:11:00	15.5	64.0	91.7	0.43	3.59	
1/26/07 8:11:15	15.7	64.7	91.8	0.42	3.59	
1/26/07 8:11:30	15.8	65.0	92.0	0.39	3.60	
1/26/07 8:11:45	15.5	65.7	93.0	0.36	3.62	
1/26/07 8:12:00	15.2	66.3	93.3	0.33	3.64	
1/26/07 8:12:15	15.1	66.9	92.5	0.34	3.63	
1/26/07 8:12:30	15.4	65.7	91.6	0.37	3.61	
1/26/07 8:12:45	15.7	64.7	91.2	0.42	3.59	
1/26/07 8:13:00	15.7	64.6	91.0	0.41	3.60	
1/26/07 8:13:15	15.6	64.8	90.9	0.39	3.63	
1/26/07 8:13:30	15.7	63.8	91.1	0.37	3.62	
1/26/07 8:13:45	15.6	63.7	91.5	0.38	3.61	
1/26/07 8:14:00	15.6	64.4	92.0	0.38	3.62	
1/26/07 8:14:15	15.6	65.2	92.2	0.38	3.62	
1/26/07 8:14:30	15.6	65.5	92.0	0.38	3.62	
1/26/07 8:14:45	15.6	64.4	91.8	0.37	3.62	
1/26/07 8:15:00	15.6	63.3	91.6	0.37	3.62	
1/26/07 8:15:15	15.7	63.4	91.6	0.36	3.62	
1/26/07 8:15:30	15.5	64.2	91.4	0.36	3.62	
1/26/07 8:15:45	15.5	65.0	91.4	0.36	3.62	
1/26/07 8:16:00	15.3	65.9	91.4	0.36	3.62	
1/26/07 8:16:15	15.3	65.8	91.3	0.37	3.61	
1/26/07 8:16:30	15.5	64.8	91.2	0.39	3.60	
1/26/07 8:16:45	16.1	63.8	91.1	0.42	3.59	
1/26/07 8:17:00	16.3	63.0	90.8	0.41	3.60	
1/26/07 8:17:15	15.9	63.0	90.9	0.37	3.63	
1/26/07 8:17:30	15.6	63.5	91.4	0.33	3.64	
1/26/07 8:17:45	15.7	64.0	91.8	0.33	3.65	
1/26/07 8:18:00	15.5	64.2	91.7	0.36	3.63	
1/26/07 8:18:15	15.7	64.5	91.4	0.39	3.62	
1/26/07 8:18:30	15.8	64.5	91.3	0.39	3.61	
1/26/07 8:18:45	15.9	66.5	91.2	0.38	3.62	
1/26/07 8:19:00	15.9	67.0	91.1	0.36	3.62	
1/26/07 8:19:15	15.7	66.3	91.4	0.34	3.64	
1/26/07 8:19:30	15.6	64.8	92.0	0.33	3.63	
1/26/07 8:19:45	15.3	63.3	92.0	0.32	3.63	
1/26/07 8:20:00	15.2	64.3	91.3	0.32	3.62	
1/26/07 8:20:15	15.2	64.9	90.6	0.35	3.60	
1/26/07 8:20:30	15.3	64.4	90.1	0.38	3.60	
1/26/07 8:20:45	15.5	64.3	90.3	0.40	3.58	
1/26/07 8:21:00	15.7	64.9	90.7	0.40	3.57	
1/26/07 8:21:15	16.0	65.8	91.1	0.38	3.59	
1/26/07 8:21:30	15.8	65.7	91.4	0.36	3.60	
1/26/07 8:21:45	15.8	64.8	91.2	0.34	3.61	
1/26/07 8:22:00	15.9	63.8	90.8	0.32	3.62	
1/26/07 8:22:15	15.7	63.5	90.8	0.33	3.62	
1/26/07 8:22:30	15.7	64.5	90.9	0.34	3.62	
1/26/07 8:22:45	15.6	65.8	91.0	0.36	3.63	
1/26/07 8:23:00	15.8	66.4	91.0	0.36	3.63	
1/26/07 8:23:15	15.8	66.0	91.1	0.36	3.63	
1/26/07 8:23:30	15.7	65.7	91.1	0.36	3.64	
1/26/07 8:23:45	15.7	66.3	91.3	0.35	3.63	
1/26/07 8:24:00	15.7	66.4	91.8	0.36	3.62	
1/26/07 8:24:15	15.7	64.9	92.1	0.36	3.62	
1/26/07 8:24:30	15.8	64.5	91.7	0.36	3.62	
1/26/07 8:24:45	15.7	64.9	91.3	0.36	3.61	
1/26/07 8:25:00	15.8	65.8	91.0	0.36	3.61	
1/26/07 8:25:15	16.0	66.0	91.0	0.36	3.61	
1/26/07 8:25:30	15.8	65.0	91.3	0.35	3.61	
1/26/07 8:25:45	15.7	65.0	91.3	0.34	3.63	
1/26/07 8:26:00	15.6	65.4	91.0	0.34	3.63	
1/26/07 8:26:15	15.6	65.5	90.9	0.36	3.62	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/26/07 8:26:30	15.8	65.5	90.7	0.38	3.61	
1/26/07 8:26:45	16.0	65.9	90.8	0.38	3.63	
1/26/07 8:27:00	16.2	66.3	90.7	0.36	3.62	
1/26/07 8:27:15	15.3	67.8	90.7	0.34	3.62	
1/26/07 8:27:30	15.2	67.3	90.8	0.32	3.62	
1/26/07 8:27:45	15.3	66.6	90.8	0.34	3.60	
1/26/07 8:28:00	15.5	67.9	91.1	0.38	3.58	
1/26/07 8:28:15	15.8	69.0	91.3	0.38	3.57	
1/26/07 8:28:30	15.7	68.7	91.3	0.36	3.58	
1/26/07 8:28:45	15.3	67.0	91.4	0.31	3.60	
1/26/07 8:29:00	15.3	66.9	92.1	0.30	3.60	
1/26/07 8:29:15	15.3	67.0	92.3	0.33	3.58	
1/26/07 8:29:30	15.3	67.0	91.7	0.36	3.57	
1/26/07 8:29:45	15.8	67.0	91.4	0.37	3.57	
1/26/07 8:30:00	15.7	67.5	92.3	0.38	3.58	
1/26/07 8:30:15	15.8	68.0	94.1	0.37	3.59	
1/26/07 8:30:30	15.9	68.0	94.4	0.35	3.60	
1/26/07 8:30:45	16.0	68.5	93.2	0.33	3.61	
1/26/07 8:31:00	15.7	69.0	92.0	0.32	3.62	
1/26/07 8:31:15	15.7	68.5	91.4	0.31	3.63	
1/26/07 8:31:30	15.7	68.5	91.4	0.31	3.62	
1/26/07 8:31:45	15.6	69.2	91.9	0.33	3.61	
1/26/07 8:32:00	15.7	69.0	92.5	0.34	3.61	
1/26/07 8:32:15	15.6	68.9	92.5	0.35	3.60	
1/26/07 8:32:30	15.8	68.8	91.8	0.35	3.60	
1/26/07 8:32:45	15.9	67.8	91.4	0.36	3.60	
1/26/07 8:33:00	16.0	66.8	91.1	0.36	3.60	
1/26/07 8:33:15	16.1	65.8	90.8	0.35	3.61	
1/26/07 8:33:30	16.3	65.7	90.6	0.35	3.63	
1/26/07 8:33:45	16.1	67.0	90.6	0.35	3.64	
1/26/07 8:34:00	16.0	89.0	90.7	0.34	3.64	
1/26/07 8:34:15	15.9	70.3	90.7	0.34	3.64	
1/26/07 8:34:30	16.0	71.3	90.5	0.33	3.64	
1/26/07 8:34:45	16.0	72.3	90.4	0.33	3.63	
1/26/07 8:35:00	15.8	72.8	90.8	0.32	3.63	
1/26/07 8:35:15	15.6	72.6	91.4	0.30	3.62	
1/26/07 8:35:30	15.7	70.2	91.7	0.29	3.62	
1/26/07 8:35:45	15.7	68.5	91.6	0.29	3.61	
1/26/07 8:36:00	15.8	68.3	91.2	0.30	3.61	
1/26/07 8:36:15	15.7	69.3	90.9	0.31	3.61	
1/26/07 8:36:30	15.8	69.5	90.9	0.31	3.60	
1/26/07 8:36:45	15.8	69.4	91.2	0.31	3.61	
1/26/07 8:37:00	15.8	66.8	91.2	0.32	3.61	
1/26/07 8:37:15	15.8	69.2	91.2	0.33	3.62	
1/26/07 8:37:30	15.7	70.3	91.2	0.34	3.61	
1/26/07 8:37:45	15.9	70.9	91.5	0.35	3.61	
1/26/07 8:38:00	16.1	71.7	91.8	0.35	3.63	
1/26/07 8:38:15	16.0	71.3	91.7	0.34	3.63	
1/26/07 8:38:30	15.8	69.4	91.9	0.32	3.65	
1/26/07 8:38:45	15.8	67.5	92.0	0.30	3.65	
1/26/07 8:39:00	15.8	65.9	91.8	0.31	3.61	
1/26/07 8:39:15	15.7	66.0	91.5	0.33	3.61	
1/26/07 8:39:30	15.7	66.3	91.1	0.34	3.61	
1/26/07 8:39:45	15.8	66.6	90.6	0.36	3.60	
1/26/07 8:40:00	15.9	67.0	90.5	0.37	3.61	
1/26/07 8:40:15	16.4	69.3	90.5	0.38	3.61	
1/26/07 8:40:30	16.6	72.4	90.0	0.38	3.62	
1/26/07 8:40:45	16.3	73.0	89.6	0.35	3.64	
1/26/07 8:41:00	15.5	71.2	89.5	0.29	3.67	
1/26/07 8:41:15	15.4	69.3	89.9	0.28	3.66	
1/26/07 8:41:30	15.8	69.3	90.2	0.32	3.62	
1/26/07 8:41:45	16.1	71.0	90.6	0.36	3.60	
1/26/07 8:42:00	16.1	70.8	90.8	0.35	3.60	
1/26/07 8:42:15	15.9	70.4	90.9	0.31	3.61	
1/26/07 8:42:30	15.7	69.8	91.3	0.28	3.62	
1/26/07 8:42:45	15.7	68.8	91.3	0.29	3.62	
1/26/07 8:43:00	15.7	67.4	91.5	0.31	3.61	
1/26/07 8:43:15	16.1	67.3	91.4	0.35	3.60	
1/26/07 8:43:30	16.1	67.3	91.0	0.37	3.60	
1/26/07 8:43:45	16.1	67.8	90.8	0.36	3.61	
1/26/07 8:44:00	15.9	67.3	90.5	0.34	3.62	
1/26/07 8:44:15	15.9	66.5	90.4	0.34	3.62	
1/26/07 8:44:30	15.9	66.5	90.6	0.35	3.62	
1/26/07 8:44:45	15.9	67.0	90.7	0.35	3.62	
1/26/07 8:45:00	15.9	67.3	90.9	0.34	3.62	
1/26/07 8:45:15	16.1	67.0	90.9	0.34	3.62	
1/26/07 8:45:30	16.1	66.0	91.2	0.35	3.62	
1/26/07 8:45:45	16.2	65.3	91.6	0.35	3.62	
1/26/07 8:46:00	16.0	64.9	92.0	0.33	3.62	
1/26/07 8:46:15	15.9	64.8	91.7	0.32	3.63	
1/26/07 8:46:30	16.1	64.9	91.6	0.33	3.63	
1/26/07 8:46:45	15.8	65.1	91.5	0.35	3.63	
1/26/07 8:47:00	15.8	66.0	91.4	0.35	3.62	
1/26/07 8:47:15	15.6	66.6	91.8	0.36	3.63	
1/26/07 8:47:30	15.6	66.3	92.8	0.38	3.61	
1/26/07 8:47:45	15.6	66.5	92.5	0.40	3.60	
1/26/07 8:48:00	15.9	66.2	91.7	0.40	3.60	
1/26/07 8:48:15	16.0	66.0	91.5	0.38	3.60	
1/26/07 8:48:30	16.0	66.1	91.8	0.36	3.61	
1/26/07 8:48:45	15.7	67.5	91.8	0.33	3.62	
1/26/07 8:49:00	15.4	68.4	91.8	0.33	3.62	
1/26/07 8:49:15	15.8	68.4	91.6	0.35	3.61	
1/26/07 8:49:30	16.4	68.8	91.5	0.39	3.59	
1/26/07 8:49:45	16.2	68.5	91.1	0.38	3.60	
1/26/07 8:50:00	16.2	67.3	90.9	0.33	3.63	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 8:50:15	16.0	67.0	91.0	0.29	3.64		
1/26/07 8:50:30	16.0	67.1	91.1	0.31	3.64		
1/26/07 8:50:45	16.0	67.5	91.4	0.33	3.63		
1/26/07 8:51:00	15.9	67.5	91.2	0.34	3.62		
1/26/07 8:51:15	15.9	67.0	91.1	0.35	3.62		
1/26/07 8:51:30	16.1	65.8	91.3	0.34	3.62		
1/26/07 8:51:45	16.0	65.0	91.3	0.33	3.61		
1/26/07 8:52:00	15.8	67.0	91.4	0.32	3.60		
1/26/07 8:52:15	15.8	67.0	91.7	0.33	3.58		
1/26/07 8:52:30	15.8	67.5	91.9	0.33	3.59		
1/26/07 8:52:45	15.8	67.5	92.0	0.34	3.59		
1/26/07 8:53:00	15.8	68.0	92.0	0.34	3.59		
1/26/07 8:53:15	16.2	66.0	92.5	0.38	3.60		
1/26/07 8:53:30	16.2	66.0	93.1	0.38	3.59		
1/26/07 8:53:45	16.3	66.5	92.8	0.38	3.60		
1/26/07 8:54:00	16.2	68.0	92.5	0.37	3.61		
1/26/07 8:54:15	16.0	68.3	92.3	0.37	3.62		
1/26/07 8:54:30	16.0	68.5	93.1	0.35	3.63		
1/26/07 8:54:45	16.0	68.0	92.8	0.34	3.63		
1/26/07 8:55:00	16.0	67.0	92.6	0.33	3.63		
1/26/07 8:55:15	16.1	66.5	92.4	0.33	3.63		
1/26/07 8:55:30	16.1	66.0	92.4	0.33	3.61		
1/26/07 8:55:45	16.2	66.0	92.3	0.34	3.62		
1/26/07 8:56:00	16.3	67.0	92.3	0.34	3.62		
1/26/07 8:56:15	16.3	67.3	92.3	0.34	3.60		
1/26/07 8:56:30	16.2	67.5	92.2	0.33	3.61		
1/26/07 8:56:45	16.2	67.5	92.1	0.32	3.62		
1/26/07 8:57:00	16.1	68.0	92.0	0.31	3.62		
1/26/07 8:57:15	16.2	68.0	92.0	0.31	3.63		
1/26/07 8:57:30	16.2	68.0	92.1	0.30	3.63		
1/26/07 8:57:45	16.2	68.5	92.1	0.31	3.63		
1/26/07 8:58:00	16.2	69.0	92.0	0.31	3.63		
1/26/07 8:58:15	15.8	68.8	92.4	0.32	3.63		
1/26/07 8:58:30	15.8	68.5	92.5	0.32	3.63		
1/26/07 8:58:45	15.8	67.0	92.4	0.32	3.62		
1/26/07 8:59:00	16.0	68.2	93.1	0.36	3.60		
1/26/07 8:59:15	16.5	68.8	92.9	0.37	3.60		
1/26/07 8:59:30	16.4	68.3	92.5	0.36	3.60		
1/26/07 8:59:45	16.0	67.5	92.6	0.31	3.63		
1/26/07 9:00:00	15.8	68.2	92.8	0.28	3.64	End Run No. 10	
1/26/07 9:00:15	15.9	68.0	93.1	0.31	3.62		
1/26/07 9:00:30	16.1	66.5	93.2	0.33	3.61		
1/26/07 9:00:45	14.0	54.3	93.0	0.34	3.60		
1/26/07 9:01:00	3.6	30.4	93.3	0.34	3.57		
1/26/07 9:01:15	0.9	10.6	97.6	0.30	2.59		
1/26/07 9:01:30	6.9	2.7	135.9	0.19	1.02		
1/26/07 9:01:45	0.6	0.3	196.9	0.09	0.26		
1/26/07 9:02:00	0.5	0.1	184.1	0.06	0.07		
1/26/07 9:02:15	0.5	0.1	135.3	0.04	0.03		
1/26/07 9:02:30	0.4	0.0	111.1	0.03	0.02		
1/26/07 9:02:45	0.4	-0.2	103.1	0.03	0.01		
1/26/07 9:03:00	0.4	0.1	100.5	0.03	0.01		
1/26/07 9:03:15	0.4	0.1	99.7	0.03	0.01		
1/26/07 9:03:30	0.3	0.1	99.5	0.03	0.01		
1/26/07 9:03:45	0.3	0.1	99.5	0.03	0.01		
1/26/07 9:04:00	0.3	-0.3	99.4	0.03	0.00		
1/26/07 9:04:15	0.3	-0.4	99.4	0.03	0.00	System Bias	
1/26/07 9:04:30	0.3	0.0	99.3	0.03	0.00	100 ppm SO2	
1/26/07 9:04:45	0.3	0.1	99.4	0.03	0.00		99.3
1/26/07 9:05:00	0.3	0.1	99.3	0.03	0.00		
1/26/07 9:05:15	0.3	-0.2	99.3	0.03	0.00		
1/26/07 9:05:30	11.4	-0.4	99.3	0.03	0.00		
1/26/07 9:05:45	26.7	-0.2	94.9	0.03	-0.01		
1/26/07 9:06:00	34.2	0.1	73.7	0.03	0.00		
1/26/07 9:06:15	36.7	-0.2	43.2	0.03	0.00		
1/26/07 9:06:30	39.3	0.0	22.0	0.03	0.00		
1/26/07 9:06:45	42.6	-0.2	12.0	0.03	-0.01		
1/26/07 9:07:00	50.1	-0.3	7.9	0.03	-0.01		
1/26/07 9:07:15	51.4	0.1	5.7	0.03	-0.01		
1/26/07 9:07:30	49.8	0.0	4.3	0.03	-0.01		
1/26/07 9:07:45	49.3	-0.2	3.3	0.03	-0.01	System Bias	
1/26/07 9:08:00	49.0	0.0	2.7	0.03	-0.01	50 ppm NOx	
1/26/07 9:08:15	49.3	-0.4	2.2	0.03	-0.01		49.2
1/26/07 9:08:30	49.3	-0.4	1.8	0.03	-0.01		
1/26/07 9:08:45	49.2	-0.2	1.6	0.03	-0.01		
1/26/07 9:09:00	46.8	3.3	1.4	0.03	-0.01		
1/26/07 9:09:15	29.5	40.8	1.2	0.03	-0.01		
1/26/07 9:09:30	5.3	127.1	1.0	0.03	-0.01		
1/26/07 9:09:45	2.2	202.2	1.7	0.03	-0.01		
1/26/07 9:10:00	1.4	234.8	2.7	0.04	-0.01		
1/26/07 9:10:15	1.1	243.4	2.3	0.03	-0.01		
1/26/07 9:10:30	0.8	245.4	1.6	0.03	-0.01		
1/26/07 9:10:45	0.8	246.2	1.1	0.03	-0.01		
1/26/07 9:11:00	0.6	246.4	0.6	0.03	-0.01		
1/26/07 9:11:15	0.6	246.7	0.5	0.03	-0.01	System Bias	
1/26/07 9:11:30	0.5	246.9	0.3	0.03	-0.01	250 ppm CO	
1/26/07 9:11:45	0.5	246.9	0.2	0.03	-0.01		247.0
1/26/07 9:12:00	0.4	247.0	0.0	0.03	-0.01		
1/26/07 9:12:15	0.4	247.0	0.0	0.03	0.00		
1/26/07 9:12:30	1.6	227.3	-0.1	0.03	-0.01		
1/26/07 9:12:45	1.2	159.5	-0.1	0.03	0.01		
1/26/07 9:13:00	0.4	65.8	-0.3	0.03	1.38		
1/26/07 9:13:15	0.3	25.3	-0.3	0.03	4.10		
1/26/07 9:13:30	0.3	2.7	-0.2	0.02	5.99		
1/26/07 9:13:45	0.3	-0.7	-0.1	0.01	6.76		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 9:14:00	0.2	-1.4	-0.2	0.01	6.92		
1/26/07 9:14:15	0.2	-1.2	-0.3	0.01	6.96		
1/26/07 9:14:30	0.2	-1.8	-0.4	0.01	6.98		
1/26/07 9:14:45	0.2	-1.4	-0.4	0.01	6.98		
1/26/07 9:15:00	0.2	-1.4	-0.5	0.01	6.99	System Bias	
1/26/07 9:15:15	0.2	-1.4	-0.5	0.01	6.99	7.0% CO2	
1/26/07 9:15:30	0.2	-1.4	-0.5	0.01	7.00		6.99
1/26/07 9:15:45	0.1	-1.4	-0.6	0.01	6.99	Zero O2	
1/26/07 9:16:00	0.2	-1.4	-0.6	0.01	7.00		0.01
1/26/07 9:16:15	2.0	-1.2	-0.6	0.01	6.99		
1/26/07 9:16:30	0.3	-0.4	-0.5	0.23	6.11		
1/26/07 9:16:45	0.2	-0.7	-0.5	1.90	3.24		
1/26/07 9:17:00	0.2	-0.3	-0.7	3.88	0.99		
1/26/07 9:17:15	0.2	-0.2	-0.6	4.74	0.24		
1/26/07 9:17:30	0.1	0.0	-0.7	4.92	0.09		
1/26/07 9:17:45	0.1	-0.4	-0.7	4.97	0.05		
1/26/07 9:18:00	0.1	-0.4	-0.8	4.99	0.03		
1/26/07 9:18:15	0.1	-0.4	-0.8	4.99	0.02	System Bias	
1/26/07 9:18:30	0.1	-0.4	-0.7	5.00	0.02	5.0% O2	
1/26/07 9:18:45	0.1	-0.2	-0.7	5.00	0.01		5.00
1/26/07 9:19:00	0.1	0.0	-0.8	5.00	0.01	Zero NOx	
1/26/07 9:19:15	0.1	-0.4	-0.7	5.00	0.01		0.1
1/26/07 9:19:30	3.6	9.3	-0.9	5.01	0.00	Zero CO	
1/26/07 9:19:45	13.5	28.3	-0.9	5.01	0.01		-0.3
1/26/07 9:20:00	15.9	51.2	5.0	4.42	0.71	Zero SO2	
1/26/07 9:20:15	15.8	59.5	30.5	2.35	2.29		-0.7
1/26/07 9:20:30	16.0	64.0	61.8	0.91	3.24	Zero CO2	
1/26/07 9:20:45	15.9	64.0	79.3	0.50	3.51		0.01
1/26/07 9:21:00	16.0	63.5	88.4	0.42	3.57		
1/26/07 9:21:15	16.1	63.3	92.5	0.41	3.58		
1/26/07 9:21:30	16.3	63.5	92.4	0.40	3.60		
1/26/07 9:21:45	16.4	64.0	92.1	0.38	3.62		
1/26/07 9:22:00	16.2	63.9	92.4	0.35	3.63		
1/26/07 9:22:15	16.0	63.0	92.9	0.34	3.64		
1/26/07 9:22:30	16.0	63.3	93.4	0.33	3.64		
1/26/07 9:22:45	15.8	64.5	93.4	0.35	3.62		
1/26/07 9:23:00	15.8	66.5	93.1	0.38	3.62		
1/26/07 9:23:15	16.0	66.3	93.1	0.40	3.61		
1/26/07 9:23:30	16.2	65.2	94.0	0.41	3.60		
1/26/07 9:23:45	16.3	64.3	95.1	0.40	3.61	Start Run No. 11	
1/26/07 9:24:00	**16.7**	**64.8**	**96.7**	**0.38**	**3.62**		
1/26/07 9:24:15	**16.2**	**65.0**	**96.5**	**0.35**	**3.64**		
1/26/07 9:24:30	**16.0**	**64.7**	**95.0**	**0.32**	**3.66**		
1/26/07 9:24:45	**15.8**	**64.8**	**94.3**	**0.33**	**3.65**		
1/26/07 9:25:00	**16.0**	**63.9**	**94.5**	**0.37**	**3.63**		
1/26/07 9:25:15	**16.0**	**64.0**	**94.6**	**0.39**	**3.61**		
1/26/07 9:25:30	**15.9**	**65.0**	**94.1**	**0.39**	**3.61**		
1/26/07 9:25:45	**15.9**	**64.3**	**93.3**	**0.39**	**3.61**		
1/26/07 9:26:00	**16.0**	**63.4**	**92.5**	**0.38**	**3.61**		
1/26/07 9:26:15	**15.9**	**63.0**	**92.1**	**0.38**	**3.61**		
1/26/07 9:26:30	**16.0**	**63.0**	**92.0**	**0.38**	**3.61**		
1/26/07 9:26:45	**16.0**	**63.0**	**92.9**	**0.39**	**3.60**		
1/26/07 9:27:00	**15.9**	**63.4**	**96.1**	**0.39**	**3.60**		
1/26/07 9:27:15	**15.9**	**63.3**	**96.3**	**0.39**	**3.60**		
1/26/07 9:27:30	**15.9**	**64.2**	**94.5**	**0.39**	**3.60**		
1/26/07 9:27:45	**16.1**	**64.5**	**93.6**	**0.38**	**3.60**		
1/26/07 9:28:00	**16.0**	**64.2**	**93.4**	**0.39**	**3.60**		
1/26/07 9:28:15	**16.0**	**65.0**	**93.5**	**0.38**	**3.61**		
1/26/07 9:28:30	**15.9**	**65.0**	**93.3**	**0.37**	**3.61**		
1/26/07 9:28:45	**16.0**	**65.3**	**93.3**	**0.38**	**3.61**		
1/26/07 9:29:00	**16.0**	**65.9**	**93.5**	**0.37**	**3.60**		
1/26/07 9:29:15	**15.8**	**67.3**	**95.0**	**0.37**	**3.60**		
1/26/07 9:29:30	**15.8**	**67.9**	**95.6**	**0.36**	**3.61**		
1/26/07 9:29:45	**15.7**	**67.3**	**94.9**	**0.37**	**3.60**		
1/26/07 9:30:00	**15.9**	**66.5**	**94.1**	**0.38**	**3.60**		
1/26/07 9:30:15	**16.1**	**66.3**	**93.4**	**0.39**	**3.59**		
1/26/07 9:30:30	**16.0**	**65.5**	**92.7**	**0.38**	**3.59**		
1/26/07 9:30:45	**16.2**	**65.3**	**92.4**	**0.38**	**3.60**		
1/26/07 9:31:00	**16.3**	**65.2**	**92.3**	**0.39**	**3.61**		
1/26/07 9:31:15	**16.0**	**66.3**	**92.0**	**0.38**	**3.62**		
1/26/07 9:31:30	**15.8**	**68.4**	**92.0**	**0.38**	**3.64**		
1/26/07 9:31:45	**16.1**	**67.5**	**92.2**	**0.40**	**3.62**		
1/26/07 9:32:00	**16.5**	**66.3**	**92.2**	**0.42**	**3.61**		
1/26/07 9:32:15	**16.3**	**64.8**	**92.5**	**0.40**	**3.63**		
1/26/07 9:32:30	**16.3**	**62.9**	**92.7**	**0.36**	**3.65**		
1/26/07 9:32:45	**16.2**	**62.3**	**93.0**	**0.34**	**3.65**		
1/26/07 9:33:00	**16.1**	**62.8**	**92.8**	**0.35**	**3.64**		
1/26/07 9:33:15	**15.9**	**63.8**	**92.9**	**0.35**	**3.64**		
1/26/07 9:33:30	**15.7**	**64.3**	**92.7**	**0.37**	**3.62**		
1/26/07 9:33:45	**15.8**	**64.5**	**92.6**	**0.40**	**3.61**		
1/26/07 9:34:00	**16.2**	**62.9**	**92.4**	**0.41**	**3.60**		
1/26/07 9:34:15	**16.3**	**62.0**	**92.4**	**0.41**	**3.61**		
1/26/07 9:34:30	**16.2**	**61.2**	**92.6**	**0.39**	**3.62**		
1/26/07 9:34:45	**16.0**	**62.0**	**93.0**	**0.35**	**3.64**		
1/26/07 9:35:00	**15.9**	**64.2**	**93.3**	**0.35**	**3.64**		
1/26/07 9:35:15	**15.9**	**65.3**	**93.4**	**0.36**	**3.63**		
1/26/07 9:35:30	**15.8**	**65.5**	**93.1**	**0.38**	**3.61**		
1/26/07 9:35:45	**16.1**	**65.8**	**92.7**	**0.39**	**3.60**		
1/26/07 9:36:00	**16.2**	**66.3**	**92.5**	**0.38**	**3.60**		
1/26/07 9:36:15	**16.2**	**65.0**	**92.4**	**0.36**	**3.61**		
1/26/07 9:36:30	**15.9**	**63.0**	**92.7**	**0.32**	**3.63**		
1/26/07 9:36:45	**15.8**	**62.8**	**92.7**	**0.30**	**3.63**		
1/26/07 9:37:00	**15.5**	**64.4**	**92.8**	**0.32**	**3.62**		
1/26/07 9:37:15	**15.6**	**65.8**	**93.0**	**0.35**	**3.60**		
1/26/07 9:37:30	**15.7**	**65.7**	**93.1**	**0.39**	**3.59**		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/26/07 9:37:45	16.0	64.0	92.7	0.41	3.58	
1/26/07 9:38:00	16.0	62.0	92.4	0.40	3.60	
1/26/07 9:38:15	15.9	62.5	92.2	0.38	3.62	
1/26/07 9:38:30	15.9	64.9	92.6	0.36	3.62	
1/26/07 9:38:45	15.9	66.3	92.6	0.38	3.62	
1/26/07 9:39:00	16.1	67.5	93.7	0.38	3.61	
1/26/07 9:39:15	16.3	67.3	94.9	0.37	3.60	
1/26/07 9:39:30	16.1	67.2	94.1	0.35	3.61	
1/26/07 9:39:45	16.1	65.8	93.1	0.32	3.62	
1/26/07 9:40:00	16.1	65.4	92.8	0.31	3.62	
1/26/07 9:40:15	16.0	65.0	92.7	0.32	3.62	
1/26/07 9:40:30	16.0	65.3	92.6	0.34	3.62	
1/26/07 9:40:45	16.1	66.0	92.6	0.36	3.61	
1/26/07 9:41:00	16.1	66.8	92.6	0.38	3.61	
1/26/07 9:41:15	16.1	67.3	92.7	0.38	3.63	
1/26/07 9:41:30	16.1	66.4	92.2	0.38	3.62	
1/26/07 9:41:45	16.1	65.3	91.8	0.38	3.60	
1/26/07 9:42:00	16.0	64.3	91.9	0.37	3.60	
1/26/07 9:42:15	16.1	63.0	92.2	0.37	3.61	
1/26/07 9:42:30	16.0	63.7	92.6	0.37	3.60	
1/26/07 9:42:45	16.1	63.8	92.7	0.37	3.60	
1/26/07 9:43:00	16.1	64.5	92.6	0.36	3.61	
1/26/07 9:43:15	15.9	64.3	92.3	0.34	3.62	
1/26/07 9:43:30	15.9	65.4	92.6	0.34	3.62	
1/26/07 9:43:45	15.8	66.5	92.4	0.37	3.61	
1/26/07 9:44:00	16.0	67.2	92.5	0.40	3.60	
1/26/07 9:44:15	16.3	67.0	92.4	0.41	3.60	
1/26/07 9:44:30	16.3	65.2	92.3	0.39	3.61	
1/26/07 9:44:45	15.9	63.5	92.6	0.35	3.62	
1/26/07 9:45:00	15.5	61.5	92.8	0.32	3.63	
1/26/07 9:45:15	15.6	62.3	92.9	0.35	3.60	
1/26/07 9:45:30	15.8	63.2	92.8	0.39	3.58	
1/26/07 9:45:45	16.2	63.8	93.7	0.40	3.57	
1/26/07 9:46:00	16.5	65.4	94.6	0.38	3.59	
1/26/07 9:46:15	16.4	66.0	94.0	0.33	3.62	
1/26/07 9:46:30	15.9	65.5	92.9	0.29	3.64	
1/26/07 9:46:45	15.5	65.5	92.5	0.28	3.64	
1/26/07 9:47:00	15.6	64.7	92.5	0.34	3.61	
1/26/07 9:47:15	16.1	64.5	92.5	0.41	3.59	
1/26/07 9:47:30	16.4	62.8	92.4	0.42	3.59	
1/26/07 9:47:45	16.4	63.8	92.4	0.38	3.61	
1/26/07 9:48:00	16.0	64.3	92.7	0.34	3.64	
1/26/07 9:48:15	15.6	65.5	93.1	0.32	3.64	
1/26/07 9:48:30	15.7	66.9	93.1	0.35	3.62	
1/26/07 9:48:45	15.9	66.0	92.7	0.40	3.60	
1/26/07 9:49:00	16.3	63.8	92.3	0.42	3.59	
1/26/07 9:49:15	16.6	63.0	91.9	0.41	3.61	
1/26/07 9:49:30	16.3	62.4	91.9	0.37	3.63	
1/26/07 9:49:45	16.0	62.8	92.2	0.33	3.65	
1/26/07 9:50:00	15.8	63.8	92.7	0.32	3.64	
1/26/07 9:50:15	15.7	64.8	92.7	0.36	3.62	
1/26/07 9:50:30	15.8	64.9	92.6	0.40	3.61	
1/26/07 9:50:45	16.1	64.3	92.7	0.41	3.60	
1/26/07 9:51:00	16.3	64.0	92.9	0.40	3.60	
1/26/07 9:51:15	16.4	64.0	93.4	0.36	3.61	
1/26/07 9:51:30	15.7	64.0	93.2	0.32	3.63	
1/26/07 9:51:45	15.6	63.8	92.6	0.30	3.64	
1/26/07 9:52:00	15.8	63.0	92.2	0.34	3.61	
1/26/07 9:52:15	16.2	63.3	92.2	0.39	3.59	
1/26/07 9:52:30	16.3	64.5	92.4	0.37	3.61	
1/26/07 9:52:45	16.2	64.0	92.5	0.33	3.63	
1/26/07 9:53:00	15.8	64.3	92.6	0.31	3.64	
1/26/07 9:53:15	15.5	65.3	92.4	0.32	3.63	
1/26/07 9:53:30	15.6	65.2	92.0	0.36	3.61	
1/26/07 9:53:45	16.1	63.8	92.0	0.40	3.59	
1/26/07 9:54:00	16.4	64.2	92.2	0.41	3.60	
1/26/07 9:54:15	16.2	64.5	91.9	0.37	3.61	
1/26/07 9:54:30	15.5	65.0	92.0	0.32	3.63	
1/26/07 9:54:45	15.3	65.8	92.1	0.31	3.63	
1/26/07 9:55:00	15.2	66.4	91.9	0.36	3.60	
1/26/07 9:55:15	15.5	66.0	91.7	0.41	3.59	
1/26/07 9:55:30	15.8	63.7	91.5	0.43	3.59	
1/26/07 9:55:45	16.1	64.0	91.2	0.42	3.56	
1/26/07 9:56:00	16.2	63.4	90.8	0.40	3.58	
1/26/07 9:56:15	16.1	62.0	90.5	0.36	3.60	
1/26/07 9:56:30	16.0	61.2	90.8	0.32	3.62	
1/26/07 9:56:45	16.0	62.1	91.1	0.33	3.62	
1/26/07 9:57:00	16.0	63.8	91.4	0.36	3.61	
1/26/07 9:57:15	16.0	64.5	91.7	0.38	3.61	
1/26/07 9:57:30	16.0	64.7	91.8	0.38	3.61	
1/26/07 9:57:45	16.1	65.0	93.6	0.39	3.61	
1/26/07 9:58:00	16.1	64.3	94.0	0.37	3.62	
1/26/07 9:58:15	15.8	62.6	92.6	0.35	3.62	
1/26/07 9:58:30	15.8	61.2	91.5	0.36	3.62	
1/26/07 9:58:45	15.9	61.2	90.8	0.37	3.61	
1/26/07 9:59:00	15.8	61.0	90.6	0.38	3.60	
1/26/07 9:59:15	16.0	60.3	90.5	0.38	3.60	
1/26/07 9:59:30	16.0	60.2	90.7	0.38	3.60	
1/26/07 9:59:45	15.9	61.3	91.0	0.37	3.61	
1/26/07 10:00:00	15.7	61.5	91.1	0.37	3.61	
1/26/07 10:00:15	15.8	61.5	91.0	0.38	3.61	
1/26/07 10:00:30	16.0	61.7	90.9	0.39	3.61	
1/26/07 10:00:45	16.1	62.4	90.9	0.40	3.60	
1/26/07 10:01:00	16.3	62.0	90.9	0.39	3.61	
1/26/07 10:01:15	16.1	61.3	91.2	0.37	3.62	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/26/07 10:01:30	15.7	60.7	91.6	0.34	3.63	
1/26/07 10:01:45	15.6	61.0	91.8	0.34	3.63	
1/26/07 10:02:00	15.6	60.5	91.6	0.35	3.61	
1/26/07 10:02:15	15.6	60.5	91.5	0.37	3.59	
1/26/07 10:02:30	15.7	59.9	91.4	0.38	3.59	
1/26/07 10:02:45	15.9	60.3	91.4	0.37	3.59	
1/26/07 10:03:00	15.9	61.3	91.4	0.36	3.59	
1/26/07 10:03:15	15.8	61.3	91.1	0.34	3.60	
1/26/07 10:03:30	15.6	61.9	90.8	0.32	3.60	
1/26/07 10:03:45	15.6	63.0	90.7	0.34	3.59	
1/26/07 10:04:00	15.8	62.5	90.5	0.36	3.59	
1/26/07 10:04:15	16.1	63.3	90.5	0.37	3.58	
1/26/07 10:04:30	16.1	65.3	91.1	0.36	3.59	
1/26/07 10:04:45	15.8	66.0	91.5	0.33	3.61	
1/26/07 10:05:00	15.6	65.3	91.6	0.31	3.61	
1/26/07 10:05:15	15.4	64.9	91.7	0.32	3.61	
1/26/07 10:05:30	15.4	65.7	91.4	0.35	3.59	
1/26/07 10:05:45	15.8	65.3	91.2	0.39	3.57	
1/26/07 10:06:00	16.0	64.5	91.2	0.42	3.57	
1/26/07 10:06:15	16.3	64.2	92.0	0.40	3.58	
1/26/07 10:06:30	16.2	65.7	92.9	0.38	3.60	
1/26/07 10:06:45	16.1	66.4	92.7	0.36	3.62	
1/26/07 10:07:00	16.0	67.1	92.3	0.36	3.63	
1/26/07 10:07:15	16.1	67.1	92.1	0.37	3.63	
1/26/07 10:07:30	16.1	66.4	91.8	0.39	3.62	
1/26/07 10:07:45	16.2	65.7	91.7	0.39	3.62	
1/26/07 10:08:00	16.1	65.2	91.4	0.37	3.62	
1/26/07 10:08:15	16.1	64.8	91.5	0.34	3.62	
1/26/07 10:08:30	16.1	64.5	92.0	0.32	3.62	
1/26/07 10:08:45	15.8	64.5	92.4	0.31	3.62	
1/26/07 10:09:00	15.9	63.3	92.5	0.31	3.61	
1/26/07 10:09:15	16.1	62.2	92.2	0.32	3.60	
1/26/07 10:09:30	16.0	62.2	91.7	0.32	3.60	
1/26/07 10:09:45	16.0	63.3	91.3	0.31	3.60	
1/26/07 10:10:00	15.9	63.8	91.4	0.31	3.60	
1/26/07 10:10:15	15.9	65.3	91.2	0.32	3.61	
1/26/07 10:10:30	15.8	66.2	91.4	0.33	3.61	
1/26/07 10:10:45	15.9	65.8	92.1	0.35	3.62	
1/26/07 10:11:00	16.0	63.8	92.2	0.36	3.61	
1/26/07 10:11:15	15.8	62.7	92.0	0.36	3.59	
1/26/07 10:11:30	15.9	62.7	91.9	0.35	3.59	
1/26/07 10:11:45	15.8	62.7	91.7	0.34	3.60	
1/26/07 10:12:00	15.8	62.7	91.6	0.34	3.60	
1/26/07 10:12:15	15.9	63.0	91.6	0.34	3.60	
1/26/07 10:12:30	15.9	63.0	91.4	0.34	3.59	
1/26/07 10:12:45	16.1	63.0	91.4	0.34	3.59	
1/26/07 10:13:00	16.2	63.2	91.7	0.35	3.60	
1/26/07 10:13:15	16.2	64.3	92.0	0.35	3.61	
1/26/07 10:13:30	15.9	64.5	92.4	0.33	3.61	
1/26/07 10:13:45	15.8	64.2	92.2	0.33	3.61	
1/26/07 10:14:00	15.7	63.7	92.1	0.34	3.60	
1/26/07 10:14:15	16.0	63.3	92.0	0.36	3.59	
1/26/07 10:14:30	16.0	64.0	92.2	0.36	3.59	
1/26/07 10:14:45	16.0	63.7	92.6	0.35	3.59	
1/26/07 10:15:00	15.8	63.0	92.8	0.35	3.59	
1/26/07 10:15:15	16.0	63.4	92.4	0.36	3.60	
1/26/07 10:15:30	16.0	63.8	91.8	0.36	3.60	
1/26/07 10:15:45	16.1	63.4	91.3	0.36	3.59	
1/26/07 10:16:00	16.3	64.7	91.1	0.36	3.61	
1/26/07 10:16:15	16.1	65.4	91.3	0.35	3.62	
1/26/07 10:16:30	15.9	65.5	93.0	0.33	3.62	
1/26/07 10:16:45	16.0	65.2	93.8	0.33	3.61	
1/26/07 10:17:00	15.9	64.8	93.1	0.33	3.60	
1/26/07 10:17:15	15.9	64.4	92.4	0.31	3.61	
1/26/07 10:17:30	15.8	65.2	92.4	0.31	3.60	
1/26/07 10:17:45	15.9	65.5	92.4	0.32	3.59	
1/26/07 10:18:00	15.8	64.9	92.4	0.33	3.58	
1/26/07 10:18:15	15.8	63.8	92.4	0.34	3.58	
1/26/07 10:18:30	15.8	63.8	93.1	0.34	3.59	
1/26/07 10:18:45	15.7	63.8	93.3	0.35	3.59	
1/26/07 10:19:00	15.6	65.2	92.8	0.36	3.59	
1/26/07 10:19:15	16.0	65.2	92.4	0.37	3.58	
1/26/07 10:19:30	16.0	65.5	92.2	0.37	3.58	
1/26/07 10:19:45	15.9	66.3	91.8	0.36	3.59	
1/26/07 10:20:00	15.9	66.5	91.5	0.33	3.60	
1/26/07 10:20:15	15.9	65.4	91.3	0.32	3.61	
1/26/07 10:20:30	16.0	63.4	91.5	0.32	3.60	
1/26/07 10:20:45	15.9	63.0	91.8	0.33	3.61	
1/26/07 10:21:00	16.1	63.3	92.0	0.33	3.60	
1/26/07 10:21:15	16.2	62.9	91.8	0.33	3.61	
1/26/07 10:21:30	16.2	63.2	91.4	0.32	3.62	
1/26/07 10:21:45	15.9	63.9	91.4	0.32	3.64	
1/26/07 10:22:00	15.9	64.4	91.7	0.33	3.64	
1/26/07 10:22:15	15.9	63.7	91.8	0.35	3.63	
1/26/07 10:22:30	16.3	64.4	91.5	0.37	3.61	
1/26/07 10:22:45	16.5	68.2	91.6	0.37	3.59	
1/26/07 10:23:00	16.2	68.7	91.9	0.33	3.61	
1/26/07 10:23:15	15.7	66.8	91.6	0.28	3.62	
1/26/07 10:23:30	15.7	64.2	91.4	0.28	3.62	
1/26/07 10:23:45	16.0	62.3	91.8	0.33	3.60	
1/26/07 10:24:00	16.0	62.0	91.9	0.35	3.59	End Run No. 11
1/26/07 10:24:15	16.5	62.8	91.2	0.34	3.59	
1/26/07 10:24:30	16.4	63.0	90.9	0.33	3.60	
1/26/07 10:24:45	16.3	62.7	90.9	0.31	3.62	
1/26/07 10:25:00	16.1	61.9	90.6	0.30	3.63	

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 10:25:15	16.0	61.9	90.1	0.32	3.62		
1/26/07 10:25:30	16.0	60.8	90.3	0.33	3.62		
1/26/07 10:25:45	13.4	51.8	90.8	0.35	3.61		
1/26/07 10:26:00	5.6	30.4	90.9	0.37	3.59		
1/26/07 10:26:15	5.7	11.3	86.4	0.76	2.73		
1/26/07 10:26:30	10.4	2.1	108.3	0.98	1.12		
1/26/07 10:26:45	0.9	-0.2	175.3	0.43	0.30		
1/26/07 10:27:00	0.7	-0.4	173.6	0.14	0.07		
1/26/07 10:27:15	0.7	-0.4	130.7	0.06	0.02		
1/26/07 10:27:30	0.6	-0.4	107.8	0.04	0.01		
1/26/07 10:27:45	0.5	-0.8	100.4	0.03	0.00		
1/26/07 10:28:00	0.5	-0.8	98.3	0.03	0.00		
1/26/07 10:28:15	0.5	-0.8	97.9	0.03	0.00		
1/26/07 10:28:30	0.4	-0.4	97.8	0.03	0.00		
1/26/07 10:28:45	0.4	-0.4	98.0	0.03	-0.01		
1/26/07 10:29:00	0.4	-0.4	97.8	0.03	-0.01		
1/26/07 10:29:15	0.4	-0.4	97.9	0.02	-0.01		
1/26/07 10:29:30	0.4	-0.9	98.1	0.02	-0.01	System Bias	
1/26/07 10:29:45	0.4	-0.5	98.1	0.02	-0.01	100 ppm SO2	
1/26/07 10:30:00	0.4	-0.8	98.2	0.02	-0.01		98.2
1/26/07 10:30:15	0.3	-0.4	98.2	0.02	-0.01		
1/26/07 10:30:30	5.6	-0.8	98.2	0.02	-0.02		
1/26/07 10:30:45	30.6	0.0	94.6	0.02	-0.02		
1/26/07 10:31:00	35.3	-0.8	74.9	0.03	-0.02		
1/26/07 10:31:15	39.2	-0.4	45.0	0.03	-0.02		
1/26/07 10:31:30	40.4	-0.7	22.9	0.03	-0.02		
1/26/07 10:31:45	43.4	-0.3	12.3	0.03	-0.02		
1/26/07 10:32:00	48.4	-0.8	8.0	0.03	-0.02		
1/26/07 10:32:15	49.5	-0.8	5.8	0.03	-0.02		
1/26/07 10:32:30	48.4	-0.4	4.4	0.02	-0.02		
1/26/07 10:32:45	47.8	-0.4	3.3	0.02	-0.02		
1/26/07 10:33:00	47.6	-0.4	2.6	0.02	-0.02	System Bias	
1/26/07 10:33:15	47.5	-0.8	2.1	0.02	-0.02	50 ppm NOx	
1/26/07 10:33:30	47.5	-0.4	1.8	0.02	-0.02		47.5
1/26/07 10:33:45	47.5	-0.8	1.6	0.02	-0.01		
1/26/07 10:34:00	47.5	0.7	1.4	0.03	-0.02		
1/26/07 10:34:15	12.9	40.4	1.1	0.02	-0.01		
1/26/07 10:34:30	14.5	125.9	0.9	0.02	-0.01		
1/26/07 10:34:45	2.2	201.5	1.3	0.03	-0.01		
1/26/07 10:35:00	1.6	235.4	2.3	0.04	-0.01		
1/26/07 10:35:15	1.1	242.9	2.2	0.03	-0.01		
1/26/07 10:35:30	0.9	244.9	1.5	0.03	-0.01		
1/26/07 10:35:45	0.8	246.0	0.9	0.02	-0.01		
1/26/07 10:36:00	0.7	246.0	0.7	0.02	-0.01		
1/26/07 10:36:15	0.6	246.0	0.5	0.02	-0.01	System Bias	
1/26/07 10:36:30	0.5	246.1	0.3	0.02	-0.01	250 ppm CO	
1/26/07 10:36:45	0.5	246.1	0.2	0.02	-0.01		246.1
1/26/07 10:37:00	0.5	246.1	0.1	0.02	-0.01		
1/26/07 10:37:15	0.4	246.2	0.0	0.02	-0.01		
1/26/07 10:37:30	0.4	235.5	0.1	0.02	-0.01		
1/26/07 10:37:45	1.8	160.2	-0.1	0.02	0.01		
1/26/07 10:38:00	0.4	78.0	-0.2	0.02	1.30		
1/26/07 10:38:15	0.4	25.2	-0.2	0.02	4.02		
1/26/07 10:38:30	0.3	3.8	-0.4	0.01	5.95		
1/26/07 10:38:45	0.3	-1.0	-0.3	0.00	6.75		
1/26/07 10:39:00	0.2	-1.5	-0.3	0.00	6.94		
1/26/07 10:39:15	0.2	-1.9	-0.2	0.00	6.97		
1/26/07 10:39:30	0.2	-1.8	-0.4	0.00	6.98		
1/26/07 10:39:45	0.2	-1.8	-0.4	0.00	6.99		
1/26/07 10:40:00	0.2	-1.9	-0.3	0.00	6.99		
1/26/07 10:40:15	0.2	-1.9	-0.4	0.00	7.00	System Bias	
1/26/07 10:40:30	0.2	-1.9	-0.4	0.00	7.00	7.0% CO2	
1/26/07 10:40:45	0.2	-1.9	-0.3	0.00	7.00		7.01
1/26/07 10:41:00	0.1	-1.8	-0.4	0.00	7.01	Zero O2	
1/26/07 10:41:15	2.2	-1.8	-0.4	0.00	7.00		0.00
1/26/07 10:41:30	0.4	-0.9	-0.4	0.19	6.25		
1/26/07 10:41:45	0.2	-0.5	-0.3	1.78	3.41		
1/26/07 10:42:00	0.2	-0.8	-0.4	3.80	1.07		
1/26/07 10:42:15	0.2	-0.4	-0.5	4.72	0.25		
1/26/07 10:42:30	0.2	-0.4	-0.5	4.91	0.08		
1/26/07 10:42:45	0.2	-0.4	-0.6	4.97	0.04		
1/26/07 10:43:00	0.2	-0.8	-0.6	4.99	0.02		
1/26/07 10:43:15	0.1	-0.4	-0.6	4.99	0.01	System Bias	
1/26/07 10:43:30	0.1	-0.6	-0.7	5.00	0.01	5.0% O2	
1/26/07 10:43:45	0.1	-0.5	-0.6	5.00	0.00		5.00
1/26/07 10:44:00	0.1	-0.4	-0.7	5.00	0.00	Zero NOx	
1/26/07 10:44:15	0.1	-0.4	-0.7	5.00	0.00		0.1
1/26/07 10:44:30	0.5	8.2	-0.7	5.01	0.00	Zero CO	
1/26/07 10:44:45	15.0	25.4	-0.6	5.00	0.00		-0.5
1/26/07 10:45:00	15.6	47.5	4.2	4.51	0.60	Zero SO2	
1/26/07 10:45:15	15.8	56.7	28.2	2.48	2.20		-0.7
1/26/07 10:45:30	15.9	59.5	59.5	0.97	3.19	Zero CO2	
1/26/07 10:45:45	15.8	60.3	77.7	0.52	3.50		0.00
1/26/07 10:46:00	15.4	63.0	85.0	0.42	3.56		
1/26/07 10:46:15	15.4	64.7	88.1	0.41	3.58		
1/26/07 10:46:30	15.4	65.3	89.6	0.43	3.56		
1/26/07 10:46:45	15.7	64.7	90.7	0.45	3.55		
1/26/07 10:47:00	16.1	63.0	91.0	0.44	3.55		
1/26/07 10:47:15	16.2	61.4	91.3	0.41	3.57		
1/26/07 10:47:30	15.6	60.5	91.9	0.37	3.58		
1/26/07 10:47:45	15.4	60.9	92.4	0.34	3.60		
1/26/07 10:48:00	15.6	60.5	92.7	0.35	3.58		
1/26/07 10:48:15	15.6	59.8	93.1	0.38	3.56		
1/26/07 10:48:30	16.0	59.3	93.6	0.40	3.55		
1/26/07 10:48:45	16.0	59.4	93.7	0.40	3.56		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/26/07 10:49:00	15.8	60.0	93.0	0.39	3.58	
1/26/07 10:49:15	15.6	60.8	92.8	0.36	3.59	
1/26/07 10:49:30	15.4	61.3	93.2	0.36	3.59	
1/26/07 10:49:45	15.5	62.3	93.1	0.38	3.58	Start Run No. 12
1/26/07 10:50:00	15.8	62.3	92.6	0.40	3.57	
1/26/07 10:50:15	16.0	61.7	92.3	0.42	3.57	
1/26/07 10:50:30	16.1	59.8	92.3	0.43	3.57	
1/26/07 10:50:45	15.9	59.4	92.0	0.40	3.59	
1/26/07 10:51:00	15.9	59.0	92.0	0.37	3.60	
1/26/07 10:51:15	15.7	59.8	92.3	0.37	3.60	
1/26/07 10:51:30	15.8	60.3	92.8	0.38	3.59	
1/26/07 10:51:45	16.4	60.5	92.6	0.39	3.60	
1/26/07 10:52:00	16.4	61.0	92.2	0.39	3.60	
1/26/07 10:52:15	16.1	61.4	92.0	0.37	3.62	
1/26/07 10:52:30	15.9	60.3	91.9	0.34	3.63	
1/26/07 10:52:45	15.8	60.0	91.9	0.34	3.63	
1/26/07 10:53:00	15.8	61.0	91.7	0.36	3.62	
1/26/07 10:53:15	15.9	61.2	91.5	0.37	3.61	
1/26/07 10:53:30	16.1	62.0	91.8	0.37	3.60	
1/26/07 10:53:45	16.2	62.4	91.9	0.37	3.60	
1/26/07 10:54:00	15.9	62.0	91.8	0.34	3.61	
1/26/07 10:54:15	15.5	62.4	91.6	0.32	3.62	
1/26/07 10:54:30	15.4	63.5	91.7	0.34	3.60	
1/26/07 10:54:45	15.6	63.2	91.6	0.39	3.58	
1/26/07 10:55:00	16.0	61.3	91.4	0.41	3.57	
1/26/07 10:55:15	16.2	59.9	91.3	0.42	3.58	
1/26/07 10:55:30	15.8	60.0	91.6	0.38	3.61	
1/26/07 10:55:45	15.6	61.2	91.7	0.35	3.62	
1/26/07 10:56:00	15.6	62.0	91.6	0.37	3.62	
1/26/07 10:56:15	15.6	62.0	91.6	0.41	3.58	
1/26/07 10:56:30	15.9	61.8	91.8	0.43	3.59	
1/26/07 10:56:45	16.0	62.4	92.0	0.41	3.59	
1/26/07 10:57:00	16.0	61.5	92.3	0.39	3.60	
1/26/07 10:57:15	15.8	60.7	92.5	0.36	3.61	
1/26/07 10:57:30	15.4	61.3	92.7	0.35	3.62	
1/26/07 10:57:45	15.9	61.0	92.9	0.37	3.60	
1/26/07 10:58:00	16.1	60.0	93.0	0.40	3.59	
1/26/07 10:58:15	15.9	59.5	93.0	0.38	3.61	
1/26/07 10:58:30	15.9	58.5	92.8	0.35	3.62	
1/26/07 10:58:45	15.7	58.9	92.7	0.37	3.61	
1/26/07 10:59:00	15.5	59.3	92.4	0.39	3.60	
1/26/07 10:59:15	15.4	60.8	92.2	0.40	3.59	
1/26/07 10:59:30	15.6	62.0	92.2	0.42	3.58	
1/26/07 10:59:45	15.8	61.7	92.3	0.44	3.57	
1/26/07 11:00:00	15.9	60.0	92.2	0.44	3.57	
1/26/07 11:00:15	15.9	60.0	92.2	0.41	3.59	
1/26/07 11:00:30	15.7	59.3	92.0	0.39	3.60	
1/26/07 11:00:45	15.6	59.0	92.2	0.38	3.60	
1/26/07 11:01:00	15.4	60.8	92.3	0.39	3.60	
1/26/07 11:01:15	15.5	61.8	92.4	0.41	3.59	
1/26/07 11:01:30	15.6	59.8	92.8	0.42	3.58	
1/26/07 11:01:45	15.7	58.3	93.1	0.43	3.58	
1/26/07 11:02:00	15.7	57.8	93.2	0.43	3.57	
1/26/07 11:02:15	15.5	59.2	93.0	0.42	3.58	
1/26/07 11:02:30	15.4	59.5	92.2	0.41	3.58	
1/26/07 11:02:45	15.4	60.3	92.2	0.42	3.58	
1/26/07 11:03:00	15.6	60.3	92.4	0.43	3.58	
1/26/07 11:03:15	15.8	60.4	92.5	0.45	3.58	
1/26/07 11:03:30	15.9	59.8	92.6	0.44	3.59	
1/26/07 11:03:45	15.5	60.8	92.7	0.43	3.60	
1/26/07 11:04:00	15.2	63.8	92.9	0.43	3.60	
1/26/07 11:04:15	15.0	65.4	92.9	0.45	3.59	
1/26/07 11:04:30	15.2	64.5	92.7	0.48	3.58	
1/26/07 11:04:45	15.7	62.8	92.8	0.49	3.57	
1/26/07 11:05:00	15.8	60.3	92.8	0.48	3.57	
1/26/07 11:05:15	15.8	59.9	92.8	0.44	3.59	
1/26/07 11:05:30	15.3	60.8	92.9	0.40	3.60	
1/26/07 11:05:45	15.2	63.0	92.9	0.40	3.60	
1/26/07 11:06:00	15.1	65.0	92.6	0.44	3.57	
1/26/07 11:06:15	15.6	64.3	92.1	0.47	3.56	
1/26/07 11:06:30	15.8	61.3	92.0	0.48	3.56	
1/26/07 11:06:45	16.1	59.0	91.8	0.45	3.58	
1/26/07 11:07:00	15.6	58.8	91.8	0.41	3.60	
1/26/07 11:07:15	15.5	59.8	92.1	0.38	3.62	
1/26/07 11:07:30	15.6	60.3	92.4	0.39	3.61	
1/26/07 11:07:45	15.5	61.3	92.7	0.42	3.60	
1/26/07 11:08:00	15.5	61.3	92.7	0.43	3.59	
1/26/07 11:08:15	15.7	61.5	92.9	0.44	3.60	
1/26/07 11:08:30	15.7	60.3	92.9	0.44	3.58	
1/26/07 11:08:45	15.7	60.0	93.1	0.43	3.59	
1/26/07 11:09:00	15.8	59.8	93.2	0.42	3.60	
1/26/07 11:09:15	16.0	59.5	93.1	0.42	3.60	
1/26/07 11:09:30	15.5	60.3	93.4	0.41	3.61	
1/26/07 11:09:45	15.5	61.3	93.4	0.40	3.61	
1/26/07 11:10:00	15.7	61.8	93.3	0.41	3.60	
1/26/07 11:10:15	15.8	61.7	93.2	0.44	3.58	
1/26/07 11:10:30	15.7	61.3	93.3	0.44	3.59	
1/26/07 11:10:45	15.7	60.0	93.3	0.42	3.60	
1/26/07 11:11:00	15.7	60.5	93.2	0.42	3.61	
1/26/07 11:11:15	15.6	61.4	93.1	0.41	3.60	
1/26/07 11:11:30	16.0	60.5	93.0	0.43	3.59	
1/26/07 11:11:45	16.2	59.2	92.6	0.42	3.60	
1/26/07 11:12:00	16.1	59.0	92.3	0.39	3.61	
1/26/07 11:12:15	15.8	59.0	92.7	0.36	3.63	
1/26/07 11:12:30	15.6	60.8	93.1	0.35	3.63	

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SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments
1/26/07 11:12:45	15.6	61.4	93.5	0.39	3.62	
1/26/07 11:13:00	16.0	61.3	93.8	0.42	3.59	
1/26/07 11:13:15	15.9	60.2	94.9	0.43	3.59	
1/26/07 11:13:30	15.7	59.5	101.7	0.42	3.59	
1/26/07 11:13:45	15.8	60.3	102.4	0.41	3.59	
1/26/07 11:14:00	15.9	61.5	97.8	0.40	3.59	
1/26/07 11:14:15	15.8	61.7	98.9	0.40	3.60	
1/26/07 11:14:30	15.7	60.3	105.2	0.40	3.59	
1/26/07 11:14:45	15.9	59.2	102.6	0.41	3.59	
1/26/07 11:15:00	15.8	59.0	97.3	0.41	3.60	
1/26/07 11:15:15	15.8	59.4	94.9	0.40	3.60	
1/26/07 11:15:30	15.7	60.3	94.1	0.38	3.61	
1/26/07 11:15:45	15.8	60.0	93.5	0.38	3.61	
1/26/07 11:16:00	15.8	59.5	93.1	0.37	3.59	
1/26/07 11:16:15	15.8	59.2	92.6	0.37	3.60	
1/26/07 11:16:30	15.9	58.3	92.4	0.38	3.60	
1/26/07 11:16:45	16.1	58.4	92.2	0.37	3.60	
1/26/07 11:17:00	15.8	58.5	92.5	0.35	3.61	
1/26/07 11:17:15	15.7	59.3	92.6	0.36	3.61	
1/26/07 11:17:30	15.8	60.3	92.4	0.37	3.61	
1/26/07 11:17:45	15.9	60.0	92.2	0.39	3.60	
1/26/07 11:18:00	16.0	60.0	92.6	0.40	3.60	
1/26/07 11:18:15	16.3	60.0	92.9	0.41	3.60	
1/26/07 11:18:30	16.3	59.8	92.8	0.42	3.61	
1/26/07 11:18:45	16.0	59.5	92.3	0.39	3.63	
1/26/07 11:19:00	16.0	60.5	92.4	0.38	3.64	
1/26/07 11:19:15	15.9	60.5	92.3	0.40	3.63	
1/26/07 11:19:30	16.0	60.3	92.6	0.41	3.62	
1/26/07 11:19:45	15.9	60.0	92.8	0.41	3.62	
1/26/07 11:20:00	16.0	59.8	92.8	0.41	3.62	
1/26/07 11:20:15	15.7	59.2	92.7	0.41	3.62	
1/26/07 11:20:30	15.7	59.3	93.1	0.40	3.60	
1/26/07 11:20:45	15.6	60.3	93.6	0.40	3.59	
1/26/07 11:21:00	15.7	60.0	94.0	0.42	3.59	
1/26/07 11:21:15	16.0	60.0	97.0	0.43	3.59	
1/26/07 11:21:30	16.2	60.3	100.4	0.42	3.59	
1/26/07 11:21:45	16.0	60.0	99.5	0.39	3.61	
1/26/07 11:22:00	15.8	60.0	95.8	0.36	3.63	
1/26/07 11:22:15	15.6	60.4	93.2	0.36	3.63	
1/26/07 11:22:30	15.5	61.0	92.3	0.38	3.62	
1/26/07 11:22:45	15.8	61.5	92.0	0.40	3.60	
1/26/07 11:23:00	16.0	61.0	91.7	0.41	3.59	
1/26/07 11:23:15	16.0	59.4	91.8	0.41	3.59	
1/26/07 11:23:30	15.8	57.8	91.7	0.37	3.60	
1/26/07 11:23:45	15.3	59.5	91.9	0.35	3.61	
1/26/07 11:24:00	15.3	62.8	92.5	0.36	3.62	
1/26/07 11:24:15	15.5	64.3	92.7	0.42	3.59	
1/26/07 11:24:30	16.0	63.0	92.4	0.46	3.56	
1/26/07 11:24:45	16.3	61.7	91.9	0.47	3.55	
1/26/07 11:25:00	16.1	61.5	91.8	0.42	3.58	
1/26/07 11:25:15	15.8	61.4	92.0	0.36	3.60	
1/26/07 11:25:30	15.5	60.8	92.1	0.36	3.60	
1/26/07 11:25:45	15.5	60.7	91.9	0.39	3.58	
1/26/07 11:26:00	15.5	63.3	91.7	0.42	3.57	
1/26/07 11:26:15	15.6	64.4	91.8	0.44	3.57	
1/26/07 11:26:30	15.7	63.8	91.9	0.45	3.57	
1/26/07 11:26:45	15.8	63.2	92.1	0.43	3.58	
1/26/07 11:27:00	15.9	61.0	92.2	0.42	3.60	
1/26/07 11:27:15	15.7	59.5	92.3	0.40	3.61	
1/26/07 11:27:30	15.8	59.0	92.3	0.38	3.61	
1/26/07 11:27:45	15.5	60.3	92.4	0.36	3.61	
1/26/07 11:28:00	15.7	61.8	92.3	0.37	3.60	
1/26/07 11:28:15	15.8	61.3	92.2	0.38	3.59	
1/26/07 11:28:30	15.7	60.8	92.2	0.38	3.59	
1/26/07 11:28:45	15.7	60.9	92.1	0.38	3.59	
1/26/07 11:29:00	15.7	61.0	92.2	0.38	3.59	
1/26/07 11:29:15	16.1	61.4	92.5	0.39	3.59	
1/26/07 11:29:30	16.2	61.0	92.7	0.41	3.59	
1/26/07 11:29:45	15.9	61.0	92.6	0.40	3.61	
1/26/07 11:30:00	16.0	61.3	92.6	0.39	3.61	
1/26/07 11:30:15	15.7	61.5	92.3	0.39	3.61	
1/26/07 11:30:30	15.8	62.3	92.0	0.39	3.60	
1/26/07 11:30:45	16.1	62.0	92.0	0.40	3.59	
1/26/07 11:31:00	16.3	60.8	91.8	0.40	3.60	
1/26/07 11:31:15	16.3	60.1	92.2	0.37	3.61	
1/26/07 11:31:30	16.3	59.0	92.6	0.36	3.62	
1/26/07 11:31:45	16.2	59.0	92.8	0.37	3.62	
1/26/07 11:32:00	16.1	59.5	92.7	0.36	3.62	
1/26/07 11:32:15	16.0	60.2	92.6	0.37	3.62	
1/26/07 11:32:30	16.1	60.3	92.4	0.38	3.60	
1/26/07 11:32:45	16.1	60.9	92.8	0.39	3.59	
1/26/07 11:33:00	16.1	60.8	92.7	0.39	3.59	
1/26/07 11:33:15	16.4	60.3	92.7	0.39	3.59	
1/26/07 11:33:30	16.4	59.3	92.6	0.37	3.59	
1/26/07 11:33:45	16.0	59.4	92.5	0.34	3.61	
1/26/07 11:34:00	15.9	60.3	92.4	0.33	3.62	
1/26/07 11:34:15	15.8	61.9	92.2	0.34	3.60	
1/26/07 11:34:30	15.8	62.0	92.2	0.36	3.59	
1/26/07 11:34:45	15.9	61.3	92.3	0.38	3.58	
1/26/07 11:35:00	15.9	61.0	92.6	0.39	3.58	
1/26/07 11:35:15	15.7	62.4	92.5	0.39	3.58	
1/26/07 11:35:30	16.0	62.8	92.4	0.39	3.58	
1/26/07 11:35:45	16.2	61.3	92.2	0.39	3.58	
1/26/07 11:36:00	16.3	59.8	92.3	0.38	3.59	
1/26/07 11:36:15	16.4	60.4	92.5	0.36	3.60	

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Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 11:36:30	16.5	62.0	92.6	0.34	3.60		
1/26/07 11:36:45	15.8	62.4	92.3	0.33	3.61		
1/26/07 11:37:00	15.5	63.0	92.0	0.31	3.60		
1/26/07 11:37:15	15.4	63.7	91.9	0.32	3.59		
1/26/07 11:37:30	15.5	64.5	92.0	0.37	3.58		
1/26/07 11:37:45	15.8	64.4	91.9	0.40	3.57		
1/26/07 11:38:00	16.1	64.0	92.0	0.41	3.58		
1/26/07 11:38:15	16.2	64.4	92.5	0.39	3.58		
1/26/07 11:38:30	16.0	64.8	92.6	0.36	3.59		
1/26/07 11:38:45	15.8	64.5	92.6	0.33	3.60		
1/26/07 11:39:00	15.9	64.3	92.9	0.33	3.59		
1/26/07 11:39:15	15.8	65.0	92.7	0.35	3.59		
1/26/07 11:39:30	15.8	65.5	92.4	0.37	3.61		
1/26/07 11:39:45	16.1	65.8	92.3	0.38	3.61		
1/26/07 11:40:00	16.2	65.8	92.4	0.38	3.58		
1/26/07 11:40:15	16.3	65.7	92.3	0.36	3.58		
1/26/07 11:40:30	16.3	64.5	92.3	0.34	3.59		
1/26/07 11:40:45	15.8	64.3	92.7	0.32	3.61		
1/26/07 11:41:00	15.8	63.8	93.1	0.32	3.60		
1/26/07 11:41:15	15.8	64.0	93.1	0.36	3.58		
1/26/07 11:41:30	16.1	63.8	92.8	0.38	3.57		
1/26/07 11:41:45	16.2	64.2	92.6	0.37	3.58		
1/26/07 11:42:00	16.2	64.5	92.9	0.34	3.59		
1/26/07 11:42:15	16.1	64.8	92.9	0.32	3.60		
1/26/07 11:42:30	16.2	63.8	92.9	0.30	3.61		
1/26/07 11:42:45	16.2	62.3	92.5	0.31	3.61		
1/26/07 11:43:00	16.3	61.5	92.1	0.34	3.61		
1/26/07 11:43:15	16.4	61.8	92.1	0.35	3.61		
1/26/07 11:43:30	16.1	63.0	92.0	0.34	3.61		
1/26/07 11:43:45	15.9	63.5	92.1	0.33	3.62		
1/26/07 11:44:00	15.9	63.3	92.1	0.34	3.61		
1/26/07 11:44:15	16.1	62.9	92.6	0.35	3.60		
1/26/07 11:44:30	16.2	62.8	92.8	0.35	3.60		
1/26/07 11:44:45	16.4	63.3	92.4	0.35	3.59		
1/26/07 11:45:00	16.3	64.3	92.3	0.34	3.60		
1/26/07 11:45:15	16.1	63.8	92.3	0.32	3.61		
1/26/07 11:45:30	16.1	62.5	92.3	0.31	3.61		
1/26/07 11:45:45	15.9	62.3	92.2	0.34	3.60		
1/26/07 11:46:00	16.1	62.5	92.1	0.36	3.59		
1/26/07 11:46:15	16.3	63.5	92.0	0.37	3.58		
1/26/07 11:46:30	16.3	64.3	91.9	0.36	3.59		
1/26/07 11:46:45	16.3	64.0	92.0	0.33	3.60		
1/26/07 11:47:00	16.1	64.0	92.1	0.31	3.61		
1/26/07 11:47:15	16.1	63.0	92.9	0.32	3.60		
1/26/07 11:47:30	16.1	61.5	94.2	0.33	3.60		
1/26/07 11:47:45	16.0	60.5	96.7	0.34	3.59		
1/26/07 11:48:00	16.2	60.5	95.7	0.36	3.59		
1/26/07 11:48:15	16.1	61.9	93.8	0.37	3.59		
1/26/07 11:48:30	16.1	62.0	92.6	0.35	3.60		
1/26/07 11:48:45	16.0	61.4	92.1	0.34	3.59		
1/26/07 11:49:00	16.0	61.0	91.9	0.35	3.59		
1/26/07 11:49:15	16.1	61.0	91.7	0.36	3.58		
1/26/07 11:49:30	16.2	61.0	91.7	0.36	3.57		
1/26/07 11:49:45	16.2	61.7	91.9	0.36	3.56		
1/26/07 11:50:00	16.2	61.3	91.8	0.35	3.57	End Run No. 12	
1/26/07 11:50:15	15.7	62.0	91.5	0.32	3.58		
1/26/07 11:50:30	15.8	63.5	91.6	0.31	3.59		
1/26/07 11:50:45	15.5	53.4	91.8	0.36	3.57		
1/26/07 11:51:00	8.0	31.6	91.4	0.41	3.55		
1/26/07 11:51:15	1.8	12.3	86.3	0.77	2.78		
1/26/07 11:51:30	5.2	2.1	104.3	1.02	1.18		
1/26/07 11:51:45	1.0	-0.2	172.0	0.47	0.32		
1/26/07 11:52:00	0.8	-0.7	175.6	0.15	0.07		
1/26/07 11:52:15	0.7	-0.5	132.9	0.06	0.02		
1/26/07 11:52:30	0.6	-0.9	108.5	0.04	0.01		
1/26/07 11:52:45	0.6	-0.9	100.6	0.03	0.00		
1/26/07 11:53:00	0.5	-0.7	98.1	0.03	0.00		
1/26/07 11:53:15	0.5	-0.8	97.3	0.03	0.00		
1/26/07 11:53:30	0.5	-0.4	97.1	0.03	0.00		
1/26/07 11:53:45	0.4	-0.5	97.3	0.03	-0.01		
1/26/07 11:54:00	0.4	-0.7	97.3	0.03	-0.01		
1/26/07 11:54:15	0.4	-0.7	97.5	0.03	-0.01		
1/26/07 11:54:30	0.4	-0.4	97.6	0.03	-0.01	System Bias	
1/26/07 11:54:45	0.4	-0.4	97.7	0.03	-0.01	100 ppm SO2	
1/26/07 11:55:00	0.4	-0.7	97.8	0.03	-0.01		97.7
1/26/07 11:55:15	0.4	-0.9	97.7	0.03	-0.01		
1/26/07 11:55:30	7.9	-0.7	97.7	0.03	-0.01		
1/26/07 11:55:45	29.4	-0.5	94.9	0.03	-0.01		
1/26/07 11:56:00	35.9	-0.7	76.6	0.03	-0.01		
1/26/07 11:56:15	39.6	-0.5	47.0	0.03	-0.01		
1/26/07 11:56:30	40.6	-0.7	24.5	0.03	-0.01		
1/26/07 11:56:45	43.2	-0.5	13.1	0.03	-0.01		
1/26/07 11:57:00	48.6	-0.7	8.1	0.03	-0.01		
1/26/07 11:57:15	50.0	-0.7	5.6	0.03	-0.01		
1/26/07 11:57:30	49.0	-0.7	4.2	0.03	-0.01		
1/26/07 11:57:45	48.9	-0.7	3.1	0.03	-0.01	System Bias	
1/26/07 11:58:00	48.8	-0.7	2.3	0.03	0.00	50 ppm NOx	
1/26/07 11:58:15	48.8	-0.4	1.8	0.03	-0.01		48.8
1/26/07 11:58:30	48.8	-0.7	1.5	0.03	-0.01		
1/26/07 11:58:45	48.8	-0.9	1.2	0.03	-0.01		
1/26/07 11:59:00	44.8	-0.7	1.0	0.03	-0.01		
1/26/07 11:59:15	34.8	41.2	1.0	0.03	0.00		
1/26/07 11:59:30	12.3	123.2	0.8	0.03	0.00		
1/26/07 11:59:45	2.4	196.9	1.2	0.03	0.00		
1/26/07 12:00:00	1.6	235.4	2.0	0.04	-0.01		

Valero - Port Arthur, TX
SRU 546 Incinerator
ARI Reference Method Monitoring Data

Date/Time	NOx	CO	SO2	O2	CO2	Comments	
1/26/07 12:00:15	1.2	243.8	1.8	0.03	0.00		
1/26/07 12:00:30	1.0	246.7	1.3	0.03	0.00		
1/26/07 12:00:45	0.8	246.8	0.9	0.03	-0.01		
1/26/07 12:01:00	0.7	247.0	0.6	0.03	-0.01		
1/26/07 12:01:15	0.6	247.1	0.4	0.02	-0.01	System Bias	
1/26/07 12:01:30	0.6	247.2	0.2	0.02	-0.01	250 ppm CO	
1/26/07 12:01:45	0.5	247.2	0.2	0.03	-0.01		247.2
1/26/07 12:02:00	0.5	247.2	0.1	0.02	-0.01		
1/26/07 12:02:15	0.4	247.3	0.0	0.03	-0.01		
1/26/07 12:02:30	1.1	234.7	-0.1	0.03	-0.01		
1/26/07 12:02:45	1.9	163.7	-0.2	0.03	0.00		
1/26/07 12:03:00	0.4	81.3	-0.3	0.03	1.16		
1/26/07 12:03:15	0.3	28.7	-0.4	0.03	3.87		
1/26/07 12:03:30	0.3	4.3	-0.4	0.02	5.86		
1/26/07 12:03:45	0.2	-0.5	-0.3	0.01	6.71		
1/26/07 12:04:00	0.2	-1.4	-0.3	0.01	6.92		
1/26/07 12:04:15	0.2	-1.7	-0.5	0.01	6.97		
1/26/07 12:04:30	0.2	-1.7	-0.4	0.01	6.97		
1/26/07 12:04:45	0.2	-1.9	-0.5	0.01	6.98		
1/26/07 12:05:00	0.2	-1.7	-0.6	0.01	6.99		
1/26/07 12:05:15	0.2	-1.8	-0.5	0.01	7.00	System Bias	
1/26/07 12:05:30	0.2	-1.9	-0.6	0.01	7.00	7.0% CO2	
1/26/07 12:05:45	0.1	-1.9	-0.5	0.01	6.99		7.00
1/26/07 12:06:00	0.4	-1.9	-0.5	0.01	6.99	Zero O2	
1/26/07 12:06:15	1.5	-1.4	-0.6	0.01	6.99		0.01
1/26/07 12:06:30	0.7	-0.9	-0.6	0.18	6.28		
1/26/07 12:06:45	0.2	-0.5	-0.6	1.73	3.49		
1/26/07 12:07:00	0.2	-0.4	-0.7	3.76	1.11		
1/26/07 12:07:15	0.2	-0.7	-0.7	4.71	0.27		
1/26/07 12:07:30	0.2	-0.4	-0.6	4.91	0.09		
1/26/07 12:07:45	0.2	-0.4	-0.6	4.96	0.05		
1/26/07 12:08:00	0.1	-0.4	-0.7	4.99	0.03		
1/26/07 12:08:15	0.1	-0.4	-0.7	5.00	0.02		
1/26/07 12:08:30	0.1	-0.4	-0.8	5.00	0.02	System Bias	
1/26/07 12:08:45	0.1	-0.3	-0.7	5.00	0.01	5.0% O2	
1/26/07 12:09:00	0.1	-0.4	-0.7	5.00	0.01		5.01
1/26/07 12:09:15	0.1	-0.3	-0.8	5.01	0.01	Zero NOx	
1/26/07 12:09:30	2.9	5.8	-0.8	5.01	0.00		0.8
1/26/07 12:09:45	13.7	25.4	-0.7	5.01	0.01	Zero CO	
1/26/07 12:10:00							1.2
1/26/07 12:10:15						Zero SO2	
1/26/07 12:10:30							-0.7
1/26/07 12:10:45						Zero CO2	
1/26/07 12:11:00							0.01
1/26/07 12:11:15							
1/26/07 12:11:30							
1/26/07 12:11:45							
1/26/07 12:12:00							

APPENDIX E

Calibration Data

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	1
Start Time	11:25
Stop Time	12:25

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 10:19		Posttest: 12:30 hrs			Correction
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	Factors
CO Zero	0.0	CC59953	0.0	0.0	0.5	0.1	0.1	0.0	-0.1	Co=
CO Low		diluted								**0.30**
CO Mid	250.0	CC93770	252.3	0.5	249.7	-0.6	248.2	-0.9	-0.3	Cm=
CO High	450.0	1988 ppm	451.1	0.2						**248.95**
CO_2 Zero	0.00	CC59953	-0.02	-0.1	0.01	0.2	0.02	0.3	0.1	Co=
CO_2 Low		diluted								**0.02**
CO_2 Mid	7.00	CC163330	6.92	-0.6	6.95	0.2	7.14	1.6	1.4	Cm=
CO_2 High	14.00	25.2 %	14.09	0.6						**7.05**
O_2 Zero	0.00	CC163330	-0.06	-0.7	-0.03	0.3	-0.04	0.2	-0.1	Co=
O_2 Low		diluted								**-0.04**
O_2 Mid	5.00	CC59953	5.03	0.3	5.03	0.0	5.01	-0.2	-0.2	Cm=
O_2 High	9.00	25.0 %	9.10	1.1						**5.02**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.3	0.3	0.1	-0.2	0.2	-0.1	0.1	Co=
NO_x Low		diluted								**0.15**
NO_x Mid	50.0	CC9844	50.3	0.3	49.9	-0.4	50.3	0.0	0.4	Cm=
NO_x High	90.0	1940 ppm	90.4	0.4						**50.10**
SO_2 Zero	0.0	CC59953	0.0	0.0	0.2	0.1	-0.8	-0.4	-0.6	Co=
SO_2 Low		diluted								**-0.30**
SO_2 Mid	100.0	CC43398	100.0	0.0	98.2	-1.0	99.2	-0.4	0.6	Cm=
SO_2 High	180.0	2063 ppm	180.1	0.1						**98.70**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	2
Start Time	12:50
Stop Time	13:50

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 12:30		Posttest: 13:54 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0.0	CC59953	0.0	0.0	0.1	0.0	0.1	0.0	0.0	Co=
CO Low		diluted								**0.10**
CO Mid	250.0	CC93770	252.3	0.5	248.2	-0.9	249.9	-0.5	0.4	Cm=
CO High	450.0	1988 ppm	451.1	0.2						**249.05**
CO_2 Zero	0.00	CC59953	-0.02	-0.1	0.02	0.3	0.02	0.3	0.0	Co=
CO_2 Low		diluted								**0.02**
CO_2 Mid	7.00	CC163330	6.92	-0.6	7.14	1.6	7.13	1.5	-0.1	Cm=
CO_2 High	14.00	25.2 %	14.09	0.6						**7.14**
O_2 Zero	0.00	CC163330	-0.06	-0.7	-0.04	0.2	-0.05	0.1	-0.1	Co=
O_2 Low		diluted								**-0.05**
O_2 Mid	5.00	CC59953	5.03	0.3	5.01	-0.2	5.00	-0.3	-0.1	Cm=
O_2 High	9.00	25.0 %	9.10	1.1						**5.01**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.30	0.3	0.2	-0.1	0.1	-0.2	-0.1	Co=
NO_x Low		diluted								**0.15**
NO_x Mid	50.0	SA21800	50.3	0.3	50.3	0.0	48.8	-1.7	-1.7	Cm=
NO_x High	90.0	1940 ppm	90.4	0.4						**49.55**
SO_2 Zero	0.0	CC59953	0.0	0.0	-0.8	-0.4	-0.7	-0.4	0.1	Co=
SO_2 Low		diluted								**-0.75**
SO_2 Mid	100.0	CC43398	100.0	0.0	99.2	-0.4	100.7	0.4	0.8	Cm=
SO_2 High	180.0	2063 ppm	180.1	0.1						**99.95**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	3
Start Time	14:14
Stop Time	15:14

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 13:54		Posttest: 15:18 hrs			Correction
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	Factors
CO Zero	0.0	CC59953	0.0	0.0	0.1	0.0	0.1	0.0	0.0	Co=
CO Low		diluted								**0.10**
CO Mid	250.0	CC93770	252.3	0.5	249.9	-0.5	249.4	-0.6	-0.1	Cm=
CO High	450.0	1988 ppm	451.1	0.2						**249.65**
CO_2 Zero	0.00	CC59953	-0.02	-0.1	0.02	0.3	0.01	0.2	-0.1	Co=
CO_2 Low		diluted								**0.02**
CO_2 Mid	7.00	CC163330	6.92	-0.6	7.13	1.5	7.13	1.5	0.0	Cm=
CO_2 High	14.00	25.2 %	14.09	0.6						**7.13**
O_2 Zero	0.00	CC163330	-0.06	-0.7	-0.05	0.1	-0.05	0.1	0.0	Co=
O_2 Low		diluted								**-0.05**
O_2 Mid	5.00	CC59953	5.03	0.3	5.00	-0.3	4.99	-0.4	-0.1	Cm=
O_2 High	9.00	25.0 %	9.10	1.1						**5.00**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.30	0.3	0.1	-0.2	0.1	-0.2	0.0	Co=
NO_x Low		diluted								**0.10**
NO_x Mid	50.0	SA21800	50.3	0.3	48.8	-1.7	48.7	-1.8	-0.1	Cm=
NO_x High	90.0	1940 ppm	90.4	0.4						**48.75**
SO_2 Zero	0.0	CC59953	0.0	0.0	-0.7	-0.4	-1.1	-0.6	-0.2	Co=
SO_2 Low		diluted								**-0.90**
SO_2 Mid	100.0	CC43398	100.0	0.0	100.7	0.4	101.7	0.9	0.6	Cm=
SO_2 High	180.0	2063 ppm	180.1	0.1						**101.20**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	4
Start Time	15:39
Stop Time	16:39

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 15:18		Posttest: 16:43 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0.0	CC59953	0.0	0.0	0.1	0.0	0.1	0.0	0.0	Co=
CO Low		diluted								**0.10**
CO Mid	250.0	CC93770	252.3	0.5	249.4	-0.6	251.4	-0.2	0.4	Cm=
CO High	450.0	1988 ppm	451.1	0.2						**250.40**
CO_2 Zero	0.00	CC59953	-0.02	-0.1	0.01	0.2	0.01	0.2	0.0	Co=
CO_2 Low		diluted								**0.01**
CO_2 Mid	7.00	CC163330	6.92	-0.6	7.13	1.5	7.00	0.6	-0.9	Cm=
CO_2 High	14.00	25.2 %	14.09	0.6						**7.07**
O_2 Zero	0.00	CC163330	-0.06	-0.7	-0.05	0.1	-0.05	0.1	0.0	Co=
O_2 Low		diluted								**-0.05**
O_2 Mid	5.00	CC59953	5.03	0.3	4.99	-0.4	4.99	-0.4	0.0	Cm=
O_2 High	9.00	25.0 %	9.10	1.1						**4.99**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.30	0.3	0.1	-0.2	0.1	-0.2	0.0	Co=
NO_x Low		diluted								**0.10**
NO_x Mid	50.0	SA21800	50.3	0.3	48.7	-1.8	48.3	-2.2	-0.4	Cm=
NO_x High	90.0	1940 ppm	90.4	0.4						**48.50**
SO_2 Zero	0.0	CC59953	0.0	0.0	-1.1	-12.2	-1.0	-0.6	0.1	Co=
SO_2 Low		diluted								**-1.05**
SO_2 Mid	100.0	CC43398	100.0	0.0	101.7	0.9	101.9	1.1	0.1	Cm=
SO_2 High	180.0	2063 ppm	180.1	0.1						**101.80**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	5
Start Time	17:03
Stop Time	18:03

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 16:43		Posttest: 18:08 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0.0	CC59953	0.0	0.0	0.1	0.0	0.1	0.0	0.0	Co=
CO Low		diluted								**0.10**
CO Mid	250.0	CC93770	252.3	0.5	251.4	-0.2	251.4	-0.2	0.0	Cm=
CO High	450.0	1988 ppm	451.1	0.2						**251.40**
CO_2 Zero	0.00	CC59953	-0.02	-0.1	0.01	0.2	0.00	0.1	-0.1	Co=
CO_2 Low		diluted								**0.01**
CO_2 Mid	7.00	CC163330	6.92	-0.6	7.00	0.6	6.96	0.3	-0.3	Cm=
CO_2 High	14.00	25.2 %	14.09	0.6						**6.98**
O_2 Zero	0.00	CC163330	-0.06	-0.7	-0.05	0.1	-0.05	0.1	0.0	Co=
O_2 Low		diluted								**-0.05**
O_2 Mid	5.00	CC59953	5.03	0.3	4.99	-0.4	4.99	-0.4	0.0	Cm=
O_2 High	9.00	25.0 %	9.10	1.1						**4.99**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.3	0.3	0.1	-0.2	0.2	-0.1	0.1	Co=
NO_x Low		diluted								**0.15**
NO_x Mid	50.0	SA21800	50.3	0.3	48.3	-2.2	48.6	-1.9	0.3	Cm=
NO_x High	90.0	1940 ppm	90.4	0.4						**48.45**
SO_2 Zero	0.0	CC59953	0.0	0.0	-1.0	-0.6	-1.1	-0.6	-0.1	Co=
SO_2 Low		diluted								**-1.05**
SO_2 Mid	100.0	CC43398	100.0	0.0	101.9	1.1	101.8	1.0	-0.1	Cm=
SO_2 High	180.0	2063 ppm	180.1	0.1						**101.85**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	6
Start Time	18:29
Stop Time	19:29

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 18:08		Posttest: 19:33 hrs			Correction
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	Factors
CO Zero	0.0	CC59953	0.0	0.0	0.1	0.0	0.0	0.0	0.0	Co=
CO Low		diluted								**0.05**
CO Mid	250.0	CC93770	252.3	0.5	251.4	-0.2	251.0	-0.3	-0.1	Cm=
CO High	450.0	1988 ppm	451.1	0.2						**251.20**
CO_2 Zero	0.00	CC59953	-0.02	-0.1	0.00	0.1	0.01	0.2	0.1	Co=
CO_2 Low		diluted								**0.01**
CO_2 Mid	7.00	CC163330	6.92	-0.6	6.96	0.3	6.96	0.3	0.0	Cm=
CO_2 High	14.00	25.2 %	14.09	0.6						**6.96**
O_2 Zero	0.00	CC163330	-0.06	-0.7	-0.05	0.1	-0.05	0.1	0.0	Co=
O_2 Low		diluted								**-0.05**
O_2 Mid	6.98	CC59953	5.03	0.3	4.99	-0.4	5.00	-0.3	0.1	Cm=
O_2 High	13.98	25.0 %	9.10	1.1						**5.00**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.3	0.3	0.2	-0.1	0.2	-0.1	0.0	Co=
NO_x Low		diluted								**0.20**
NO_x Mid	50.0	SA21800	50.3	0.3	48.6	-1.9	48.3	-2.2	-0.3	Cm=
NO_x High	90.0	1940 ppm	90.4	0.4						**48.45**
SO_2 Zero	0.0	CC59953	0.0	0.0	-1.1	-0.6	-1.1	-0.6	0.0	Co=
SO_2 Low		diluted								**-1.10**
SO_2 Mid	100.0	CC43398	100.0	0.0	101.8	1.0	101.6	0.9	-0.1	Cm=
SO_2 High	180.0	2063 ppm	180.1	0.1						**101.70**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	7
Start Time	19:53
Stop Time	20:53

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 19:33		Posttest: 20:58 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0.0	CC3266	0.0	0.0	0.0	0.0	-0.4	-0.1	-0.1	Co=
CO Low	60.0	Diluted								**-0.20**
CO Mid	120.0	CC106510	252.3	0.5	251.0	-0.3	250.4	-0.4	-0.1	Cm=
CO High	180.0	2047 ppm	451.1	0.2						**250.70**
CO_2 Zero	0.00	CC3266	0.0	-0.1	0.01	0.2	0.00	0.1	-0.1	Co=
CO_2 Low		Diluted								**0.01**
CO_2 Mid	7.00	CC133854	6.92	-0.6	6.96	0.3	6.95	0.2	-0.1	Cm=
CO_2 High	14.00	25.56 %	14.09	0.6						**6.96**
O_2 Zero	0.00	CC133854	-0.06	-0.7	-0.05	0.1	-0.06	0.0	-0.1	Co=
O_2 Low		Diluted								**-0.06**
O_2 Mid	5.00	CC3266	5.03	0.3	5.00	-0.3	4.99	-0.4	-0.1	Cm=
O_2 High	9.00	24.8 %	9.10	1.1						**5.00**
THC Zero										Co=
THC Low										
THC Mid										Cm=
THC High										
NO_x Zero	0.0	CC3266	0.3	0.3	0.2	-0.1	0.1	-0.2	-0.1	Co=
NO_x Low		Diluted								**0.15**
NO_x Mid	50.0	SA21800	50.3	0.3	48.3	-2.2	48.7	-1.8	0.4	Cm=
NO_x High	90.0	2019 ppm	90.4	0.4						**48.50**
SO_2 Zero	0.0	CC3266	0.0	0.0	-1.1	-12.2	-1.1	-0.6	0.0	Co=
SO_2 Low		Diluted								**-1.10**
SO_2 Mid	50.0	CC159633	100.0	0.0	101.6	0.9	101.9	1.1	0.2	Cm=
SO_2 High	90.0	2039 ppm	180.1	0.1						**101.75**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	8
Start Time	21:19
Stop Time	22:19

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 20:58		Posttest: 22:23 hrs			Correction
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	Factors
CO Zero	0.0	CC3266	0.0	0.0	-0.4	-0.1	-0.9	-0.2	-0.1	Co=
CO Low	60.0	Diluted								**-0.65**
CO Mid	120.0	CC106510	252.3	0.5	250.4	-0.4	249.8	-0.6	-0.1	Cm=
CO High	180.0	2047 ppm	451.1	0.2						**250.10**
CO_2 Zero	0.00	CC3266	0.0	-0.1	0.00	0.1	-0.01	0.1	-0.1	Co=
CO_2 Low		Diluted								**-0.01**
CO_2 Mid	7.00	CC133854	6.92	-0.6	6.95	0.2	6.95	0.2	0.0	Cm=
CO_2 High	14.00	25.56 %	14.09	0.6						**6.95**
O_2 Zero	0.00	CC133854	-0.06	-0.7	-0.06	0.0	-0.06	0.0	0.0	Co=
O_2 Low		Diluted								**-0.06**
O_2 Mid	5.00	CC3266	5.03	0.3	4.99	-0.4	4.98	-0.6	-0.1	Cm=
O_2 High	9.00	24.8 %	9.10	1.1						**4.99**
THC Zero										Co=
THC Low										
THC Mid										Cm=
THC High										
NO_x Zero	0.0	CC3266	0.3	0.3	0.1	-0.2	0.1	-0.2	0.0	Co=
NO_x Low		Diluted								**0.10**
NO_x Mid	50.0	SA21800	50.3	0.3	48.7	-1.8	48.0	-2.6	-0.8	Cm=
NO_x High	90.0	2019 ppm	90.4	0.4						**48.35**
SO_2 Zero	0.0	CC3266	0.0	0.0	-1.1	-0.6	-0.9	-0.5	0.1	Co=
SO_2 Low		Diluted								**-1.00**
SO_2 Mid	50.0	CC159633	100.0	0.0	101.9	1.1	101.6	0.9	-0.2	Cm=
SO_2 High	90.0	2039 ppm	180.1	0.1						**101.75**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/25/2007
Run Number	9
Start Time	22:44
Stop Time	23:44

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)		
CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 9:07 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 22:23		Posttest: 0:12 hrs			Correction
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	Factors
CO Zero	0.0	CC3266	0.0	0.0	-0.9	-0.2	-0.9	-0.2	0.0	Co=
CO Low	60.0	Diluted								**-0.90**
CO Mid	120.0	CC106510	252.3	29.4	249.8	-0.6	249.2	-0.7	-0.1	Cm=
CO High	180.0	2047 ppm	451.1	60.2						**249.50**
CO_2 Zero	0.00	CC3266	0.0	-0.1	-0.01	0.1	0.00	0.1	0.1	Co=
CO_2 Low		Diluted								**-0.01**
CO_2 Mid	7.00	CC133854	6.92	-0.6	6.95	0.2	6.98	0.4	0.2	Cm=
CO_2 High	14.00	25.56 %	14.09	0.6						**6.97**
O_2 Zero	0.00	CC133854	-0.06	-0.7	-0.06	0.0	-0.06	0.0	0.0	Co=
O_2 Low		Diluted								**-0.06**
O_2 Mid	5.00	CC3266	5.03	0.3	4.98	-0.6	4.98	-0.6	0.0	Cm=
O_2 High	9.00	24.8 %	9.10	1.1						**4.98**
THC Zero										Co=
THC Low										
THC Mid										Cm=
THC High										
NO_x Zero	0.0	CC3266	0.3	0.3	0.1	-0.2	0.1	-0.2	0.0	Co=
NO_x Low		Diluted								**0.10**
NO_x Mid	50.0	SA21800	50.3	0.3	48.0	-2.6	47.8	-2.8	-0.2	Cm=
NO_x High	90.0	2019 ppm	90.4	0.4						**47.90**
SO_2 Zero	0.0	CC3266	0.0	0.0	-0.9	-0.5	-0.9	-0.5	0.0	Co=
SO_2 Low		Diluted								**-0.90**
SO_2 Mid	50.0	CC159633	100.0	27.8	101.6	0.9	101.6	0.9	0.0	Cm=
SO_2 High	90.0	2039 ppm	180.1	50.1						**101.60**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/26/2007
Run Number	10
Start Time	8:00
Stop Time	9:00

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 6:29 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 7:16		Posttest: 9:04 hrs			Correction
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	Factors
CO Zero	0.0	CC59953	-0.4	-0.1	0.1	0.1	-0.3	0.0	-0.1	Co=
CO Low		diluted								**-0.10**
CO Mid	250.0	CC93770	249.7	-0.1	247.1	-0.6	247.0	-0.6	0.0	Cm=
CO High	450.0	1988 ppm	450.6	0.1						**247.05**
CO_2 Zero	0.00	CC59953	-0.01	-0.1	0.02	0.2	0.01	0.1	-0.1	Co=
CO_2 Low		diluted								**0.02**
CO_2 Mid	7.00	CC163330	7.03	0.2	6.98	-0.4	6.99	-0.3	0.1	Cm=
CO_2 High	14.00	25.2 %	13.97	-0.2						**6.99**
O_2 Zero	0.00	CC163330	-0.05	-0.6	0.01	0.7	0.01	0.7	0.0	Co=
O_2 Low		diluted								**0.01**
O_2 Mid	5.00	CC59953	5.07	0.8	5.00	-0.8	5.00	-0.8	0.0	Cm=
O_2 High	9.00	25.0 %	9.07	0.8						**5.00**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.0	0.0	0.1	0.1	0.1	0.1	0.0	Co=
NO_x Low		diluted								**0.10**
NO_x Mid	50.0	CC9844	49.9	-0.1	48.6	-1.4	49.2	-0.8	0.7	Cm=
NO_x High	90.0	1940 ppm	90.2	0.2						**48.90**
SO_2 Zero	0.0	CC59953	-0.3	-0.2	-1.0	-7.8	-0.7	-0.2	0.2	Co=
SO_2 Low		diluted								**-0.85**
SO_2 Mid	100.0	CC43398	99.5	-0.3	97.3	-1.2	99.3	-0.1	1.1	Cm=
SO_2 High	180.0	2063 ppm	179.3	-0.4						**98.30**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/26/2007
Run Number	11
Start Time	9:24
Stop Time	10:24

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 6:29 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 9:04		Posttest: 10:29 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0.0	CC59953	-0.4	-0.1	-0.3	0.0	-0.5	0.0	0.0	Co=
CO Low		diluted								**-0.40**
CO Mid	250.0	CC93770	249.7	-0.1	247.0	-0.6	246.1	-0.8	-0.2	Cm=
CO High	450.0	1988 ppm	450.6	0.1						**246.55**
CO_2 Zero	0.00	CC59953	-0.01	-0.1	0.01	0.1	0.00	0.1	-0.1	Co=
CO_2 Low		diluted								**0.01**
CO_2 Mid	7.00	CC163330	7.03	0.2	6.99	-0.3	7.01	-0.1	0.1	Cm=
CO_2 High	14.00	25.2 %	13.97	-0.2						**7.00**
O_2 Zero	0.00	CC163330	-0.05	-0.6	0.01	0.7	0.00	0.6	-0.1	Co=
O_2 Low		diluted								**0.01**
O_2 Mid	5.00	CC59953	5.07	0.8	5.00	-0.8	5.00	-0.8	0.0	Cm=
O_2 High	9.00	25.0 %	9.07	0.8						**5.00**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.0	0.0	0.1	0.1	0.1	0.1	0.0	Co=
NO_x Low		diluted								**0.10**
NO_x Mid	50.0	SA21800	49.9	-0.1	49.2	-0.8	47.5	-2.7	-1.9	Cm=
NO_x High	90.0	1940 ppm	90.2	0.2						**48.35**
SO_2 Zero	0.0	CC59953	-0.3	-0.2	-0.7	-0.2	-0.7	-0.2	0.0	Co=
SO_2 Low		diluted								**-0.70**
SO_2 Mid	100.0	CC43398	99.5	-0.3	99.3	-0.1	98.2	-0.7	-0.6	Cm=
SO_2 High	180.0	2063 ppm	179.3	-0.4						**98.75**

CEMS CALIBRATION DATA

Plant	Valero Refining
Location	Port Arthur, Texas
Source	SRU 546 Incinerator
Date	1/26/2007
Run Number	12
Start Time	10:50
Stop Time	11:50

Plant Rep.	Robin Hill
Team Leader	Dan Loubiere
CEM Operator	Dan Loubiere

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2	14	%
O2	9	%
THC	-	ppm
NOx	90	ppm
SO2	180	ppm

	CALIBRATION ERROR - 6:29 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 10:29		Posttest: 11:54 hrs			
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	System Response	Syst. Bias (% of Span)	System Response	Syst. Bias (% of Span)	Drift (% of Span)	
CO Zero	0.0	CC59953	-0.4	-0.1	-0.5	0.0	1.2	0.4	0.4	Co=
CO Low		diluted								**0.35**
CO Mid	250.0	CC93770	249.7	-0.1	246.1	-0.8	247.2	-0.6	0.2	Cm=
CO High	450.0	1988 ppm	450.6	0.1						**246.65**
CO_2 Zero	0.00	CC59953	-0.01	-0.1	0.00	0.1	0.01	0.1	0.1	Co=
CO_2 Low		diluted								**0.01**
CO_2 Mid	7.00	CC163330	7.03	0.2	7.01	-0.1	7.00	-0.2	-0.1	Cm=
CO_2 High	14.00	25.2 %	13.97	-0.2						**7.01**
O_2 Zero	0.00	CC163330	-0.05	-0.6	0.00	0.6	0.01	0.7	0.1	Co=
O_2 Low		diluted								**0.01**
O_2 Mid	5.00	CC59953	5.07	0.8	5.00	-0.8	5.01	-0.7	0.1	Cm=
O_2 High	9.00	25.0 %	9.07	0.8						**5.01**
THC Zero		CC59953								Co=
THC Low		diluted								
THC Mid		CC107341								Cm=
THC High		2095 ppm								
NO_x Zero	0.0	CC59953	0.0	0.0	0.1	0.1	0.8	0.9	0.8	Co=
NO_x Low		diluted								**0.45**
NO_x Mid	50.0	SA21800	49.9	-0.1	47.5	-2.7	48.8	-1.2	1.4	Cm=
NO_x High	90.0	1940 ppm	90.2	0.2						**48.15**
SO_2 Zero	0.0	CC59953	-0.3	-0.2	-0.7	-0.2	-0.7	-0.2	0.0	Co=
SO_2 Low		diluted								**-0.70**
SO_2 Mid	100.0	CC43398	99.5	-0.3	98.2	-0.7	97.7	-1.0	-0.3	Cm=
SO_2 High	180.0	2063 ppm	179.3	-0.4						**97.95**

ARI REFERENCE METHOD CEMS DATA
USEPA METHOD 205
DILUTION SYSTEM VERIFICATION

Company: Valero Refining
Location: Port Arthur, Texas
Dilution System ID: 3/24/1909
Dilution Flow Rate: 5.0 Lpm
Verification date: 6/12/2006

Analyzer Info

Monitor type: CO_2
Monitor range: 15 %
Monitor Serial No.: N3L60381

Initial Calibration Data

Calibration Concentration		Calibration results		% Difference	
Zero:	0.00	Zero:	0.03	Zero:	0.20
Low:		Low:		Low:	
Mid:	7.00	Mid:	7.11	Mid:	0.73
High:	14.00	High:	14.23	High:	1.53

Dilution System Verification

Mid level gas type: USEPA Protocol 1
Mid level concentration: 7.49
Mid level tank serial #: CC178400

High level dilution gas type: USEPA Protocol 1
High level concentration: 25.2
High level tank serial #: CC163330
Target concentration No. 1: 12.00
Target concentration No. 2: 7.50

Dilution System Results

Target Concentration No. 1	Instrument Response	% difference from average*	Target Concentration No. 2	Instrument Response	% difference from average*
Trial No. 1:	12.16	0.19	Trial No. 1:	7.52	0.36
Trial No. 2:	12.13	0.05	Trial No. 2:	7.48	0.18
Trial No. 3:	12.12	0.14	Trial No. 3:	7.48	0.18
Average:	12.137		Average:	7.493	

% Difference from target concentration: 1.14%

% Difference from target concentration: 0.09%

Mid Level Calibration Gas Results

	Instrument Response
Trial No. 1:	7.46
Trial No. 2:	7.43
Trial No. 3:	7.43

Mid Level calibration gas concentration: 7.49%
Average analyzer response: 7.44
Percent difference: 0.67 *

* Must be less than 2 %

USEPA Method 205
Dilution System Verification Check

Date/Time	CO2	Comments	
1/23/07 16:35:00	11.09		
1/23/07 16:35:15	11.34		
1/23/07 16:35:30	11.21		
1/23/07 16:35:45	9.86		
1/23/07 16:36:00	6.07		
1/23/07 16:36:15	2.74		
1/23/07 16:36:30	0.73		
1/23/07 16:36:45	0.18		
1/23/07 16:37:00	0.08		
1/23/07 16:37:15	0.05		
1/23/07 16:37:30	0.04	Calibration Error	
1/23/07 16:37:45	0.03	Zero CO2	
1/23/07 16:38:00	0.03		0.03
1/23/07 16:38:15	0.03		
1/23/07 16:38:30	0.03		
1/23/07 16:38:45	0.09		
1/23/07 16:39:00	2.95		
1/23/07 16:39:15	6.84		
1/23/07 16:39:30	9.47		
1/23/07 16:39:45	11.08		
1/23/07 16:40:00	11.66		
1/23/07 16:40:15	11.81		
1/23/07 16:40:30	11.91		
1/23/07 16:40:45	12.10		
1/23/07 16:41:00	12.19		
1/23/07 16:41:15	12.77		
1/23/07 16:41:30	14.06		
1/23/07 16:41:45	14.16		
1/23/07 16:42:00	14.21		
1/23/07 16:42:15	14.25		
1/23/07 16:42:30	14.17		
1/23/07 16:42:45	14.24		
1/23/07 16:43:00	14.14		
1/23/07 16:43:15	14.24		
1/23/07 16:43:30	14.32		
1/23/07 16:43:45	14.23		
1/23/07 16:44:00	14.20		
1/23/07 16:44:15	14.23		
1/23/07 16:44:30	14.26		
1/23/07 16:44:45	14.26		
1/23/07 16:45:00	14.15		
1/23/07 16:45:15	14.17		
1/23/07 16:45:30	14.19		
1/23/07 16:45:45	14.19		
1/23/07 16:46:00	14.23		
1/23/07 16:46:15	14.24	Calibration Error	
1/23/07 16:46:30	14.22	14.00% CO2	
1/23/07 16:46:45	14.22		14.23
1/23/07 16:47:00	14.23		
1/23/07 16:47:15	14.23		
1/23/07 16:47:30	13.50		
1/23/07 16:47:45	10.51		
1/23/07 16:48:00	8.20		
1/23/07 16:48:15	7.26		
1/23/07 16:48:30	7.13		
1/23/07 16:48:45	7.11	Calibration Error	
1/23/07 16:49:00	7.11	7.00% CO2	
1/23/07 16:49:15	7.11		7.11
1/23/07 16:49:30	7.11		
1/23/07 16:49:45	7.11		
1/23/07 16:50:00	7.15		
1/23/07 16:50:15	8.49		
1/23/07 16:50:30	10.59		
1/23/07 16:50:45	11.80		
1/23/07 16:51:00	12.15		
1/23/07 16:51:15	12.15	Target Concentration #1 Trial #1	
1/23/07 16:51:30	12.15	12.00% CO2	
1/23/07 16:51:45	12.16		12.16
1/23/07 16:52:00	12.15		
1/23/07 16:52:15	12.16		
1/23/07 16:52:30	11.96		
1/23/07 16:52:45	10.06		
1/23/07 16:53:00	8.28		
1/23/07 16:53:15	7.68		
1/23/07 16:53:30	7.57		
1/23/07 16:53:45	7.54	Target Concentration #2 Trial #1	
1/23/07 16:54:00	7.53	7.49% CO2	
1/23/07 16:54:15	7.53		7.52
1/23/07 16:54:30	7.52		
1/23/07 16:54:45	7.51		
1/23/07 16:55:00	7.48		
1/23/07 16:55:15	7.43		
1/23/07 16:55:30	7.34		
1/23/07 16:55:45	7.39		
1/23/07 16:56:00	7.43		
1/23/07 16:56:15	7.44		
1/23/07 16:56:30	7.45		
1/23/07 16:56:45	7.44	Mid Level Concentration #1	
1/23/07 16:57:00	7.46	7.49% CO2	
1/23/07 16:57:15	7.46		7.46
1/23/07 16:57:30	7.45		
1/23/07 16:57:45	7.46		
1/23/07 16:58:00	9.20		
1/23/07 16:58:15	11.03		
1/23/07 16:58:30	11.90		

USEPA Method 205
Dilution System Verification Check

Date/Time	CO2	Comments	
1/23/07 16:35:00	11.09		
1/23/07 16:58:45	12.09		
1/23/07 16:59:00	12.11	Target Concentration #1 Trial #2	
1/23/07 16:59:15	12.13	12.00% CO2	
1/23/07 16:59:30	12.13		12.13
1/23/07 16:59:45	12.14		
1/23/07 17:00:00	12.13		
1/23/07 17:00:15	12.11		
1/23/07 17:00:30	12.07		
1/23/07 17:00:45	10.75		
1/23/07 17:01:00	8.63		
1/23/07 17:01:15	7.68		
1/23/07 17:01:30	7.50		
1/23/07 17:01:45	7.49	Target Concentration #2 Trial #2	
1/23/07 17:02:00	7.47	7.49% CO2	
1/23/07 17:02:15	7.48		7.48
1/23/07 17:02:30	7.48		
1/23/07 17:02:45	7.48		
1/23/07 17:03:00	7.44		
1/23/07 17:03:15	7.42		
1/23/07 17:03:30	7.41		
1/23/07 17:03:45	7.44		
1/23/07 17:04:00	7.44	Mid Level Concentration #2	
1/23/07 17:04:15	7.43	7.49% CO2	
1/23/07 17:04:30	7.43		7.43
1/23/07 17:04:45	7.44		
1/23/07 17:05:00	7.44		
1/23/07 17:05:15	7.39		
1/23/07 17:05:30	8.78		
1/23/07 17:05:45	10.70		
1/23/07 17:06:00	11.75		
1/23/07 17:06:15	12.03		
1/23/07 17:06:30	12.09		
1/23/07 17:06:45	12.10		
1/23/07 17:07:00	12.11	Target Concentration #1 Trial #3	
1/23/07 17:07:15	12.12	12.00% CO2	
1/23/07 17:07:30	12.11		12.12
1/23/07 17:07:45	12.12		
1/23/07 17:08:00	12.13		
1/23/07 17:08:15	11.11		
1/23/07 17:08:30	8.95		
1/23/07 17:08:45	7.79		
1/23/07 17:09:00	7.53		
1/23/07 17:09:15	7.48	Target Concentration #2 Trial #3	
1/23/07 17:09:30	7.48	7.49% CO2	
1/23/07 17:09:45	7.48		7.48
1/23/07 17:10:00	7.47		
1/23/07 17:10:15	7.47		
1/23/07 17:10:30	7.43		
1/23/07 17:10:45	7.42		
1/23/07 17:11:00	7.39		
1/23/07 17:11:15	7.41	Mid Level Concentration #3	
1/23/07 17:11:30	7.42	7.49% CO2	
1/23/07 17:11:45	7.43		7.43
1/23/07 17:12:00	7.43		
1/23/07 17:12:15	7.42		

ARI Environmental, Inc.
EPA METHOD 5
Initial Meter Box Calibration

Model No: Apex 522
Serial No. 604180

Operator: Zach Lillie
Date: 1/19/2007

Pre-Test, Orifice Method
English Units

Barometric Pressure: 30.40 in.Hg

ΔH	Time		DRY GAS METER VOLUME			METER TEMPERATURE		ORIFICE		VAC.	AMBIENT TEMPERATURE		
						INLET	OUTLET						
						Initial	Initial						
in. H2O	Minutes	Seconds	Initial	Final	Total[1]	Final	Final	Number	K factor	in. Hg[2]	Inital	Final	Avg.
0.54	26	3	442.400	453.200	10.800	53 56	50 51	AJ47	0.3234	23.5	48	48	48.0
1.05	17	44	453.700	463.800	10.100	56 61	51 53	AJ55	0.4400	23.5	48	48	48.0
1.75	14	0	464.600	475.100	10.500	61 68	53 54	AJ63	0.5720	20.5	48	47	47.5
3.30	23	58	475.800	500.300	24.500	68 78	54 57	AJ73	0.7781	17.5	48	47	47.5
4.90	7	12	501.100	510.100	9.000	78 84	57 59	AJ81	0.9528	15.5	47	48	47.5

METER FLOW (cubic feet)	ORIFICE FLOW (cubic feet)	METER CALIBRATION FACTOR, Yc[3]	DH @[4]
11.320	11.363	1.0038	1.677
10.543	10.524	0.9982	1.756
10.899	10.806	0.9915	1.724
25.271	25.165	0.9958	1.752
9.227	9.257	1.0033	1.731

AVG. PRETEST METER CALIBRATION FACTOR: Y[5] = 0.999 ΔH@[6] = 1.73

ARI ENVIRONMENTAL, INC.
EPA METHOD 5

THERMOCOUPLE DIGITIAL INDICATOR CALIBRATION DATA SHEET

Operator: Zach Lillie
Date: 1/19/2007

Meterbox No.: 604180
Calibrator No.: CL-300-21001

Calibrato	Digital Temperature Readout									
Setting	PROBE		STACK		FILTER		EXIT		AUX	
° F	Acutal	Diff.	Acutal	Diff.	Acutal	Diff.	Acutal	Diff.	Acutal	Diff.
0	2	0.43	2	0.43	2	0.43	2	0.43	2	0.43
200	198	0.30	198	0.30	199	0.15	199	0.15	199	0.15
400	394	0.70	395	0.58	395	0.58	395	0.58	395	0.58
600	598	0.19	598	0.19	598	0.19	598	0.19	598	0.19
800	800	0.00	800	0.00	800	0.00	800	0.00	801	0.08
1000	1000	0.00	1000	0.00	1000	0.00	1000	0.00	1000	0.00
1200	1197	0.18	1198	0.12	1198	0.12	1198	0.12	1397	11.87
1400	1396	0.22	1396	0.22	1396	0.22	1397	0.16	1599	10.70
1600	1598	0.10	1598	0.10	1598	0.10	1599	0.05	1599	0.05
1800	1796	0.18	1796	0.18	1796	0.18	1796	0.18	1797	0.13

Actual Maximum Difference = 0.70 %
Allowable Maximum Difference = 1.50 %

ARI Environmental, Inc.
EPA METHOD 5
Post-test Meter Box Calibration

Model #: Apex 522
Serial #: 604180
Pretest Y: 0.999
Pretest ΔH@: 1.73

Operator: Zach Lillie
Date: 2/2/2007

Post-Test, Orifice Method
English Units

Barometric Pressure: 29.88 in.Hg

ΔH	Time		DRY GAS METER VOLUME			METER TEMPERATURE		ORIFICE		VAC.	AMBIENT TEMPERATURE		
						INLET	OUTLET						
						Initial	Initial						
	Minutes	Seconds	Initial	Final	Total[1]	Final	Final	Number	K factor	in. Hg[2]	Inital	Final	Avg.
1.70	13	52	582.300	592.500	10.200	58 65	49 51	AJ63	0.5720	21.0	47	46	46.5
1.70	10	10	593.100	600.600	7.500	65 68	51 52	AJ63	0.5720	21.0	46	47	46.5
1.70	12	25	601.100	610.300	9.200	68 71	52 54	AJ63	0.5720	21.0	47	48	47.5

438.900	450.200
15	6

METER FLOW (cubic feet)	ORIFICE FLOW (cubic feet)	METER CALIBRATION FACTOR, Yc[3]	DH @[4]
10.472	10.531	1.0056	1.711
7.652	7.721	1.0090	1.700
9.346	9.420	1.0080	1.696

AVG. POST-TEST METER CALIBRATION FACTOR = 1.008 1.70

ABSOLUTE DIFFERENCE FROM PRETEST Y= 0.86
MAXIMUM ALLOWABLE DIFFERENCE= 5.00

ARI ENVIRONMENTAL, INC.
EPA METHOD 5
THERMOCOUPLE DIGITIAL INDICATOR CALIBRATION DATA SHEET

Operator: Zach Lillie
Date: 2/2/2007

Meterbox No.: 604180
Calibrator No.: CL-300-21001

Calibrator	Digital Temperature Readout									
Setting	PROBE		STACK		FILTER		EXIT		AUX	
° F	Acutal	Diff.	Acutal	Diff.	Acutal	Diff.	Acutal	Diff.	Acutal	Diff.
0	2	0.43	2	0.00	2	0.43	2	0.43	2	0.43
200	198	0.30	198	0.30	198	0.30	198	0.30	198	0.30
400	395	0.58	394	0.70	395	0.58	394	0.70	394	0.70
600	598	0.19	598	0.19	598	0.19	598	0.19	598	0.19
800	800	0.00	800	0.00	800	0.00	800	0.00	800	0.00
1000	999	0.07	1000	0.00	1000	0.00	1000	0.00	1000	0.00
1200	1198	0.12	1198	0.12	1198	0.12	1198	0.12	1198	0.12
1400	1396	0.22	1396	0.22	1396	0.22	1396	0.22	1396	0.22
1600	1598	0.10	1598	0.10	1599	0.05	1599	0.05	1599	0.05
1800	1796	0.18	1797	0.13	1796	0.18	1796	0.18	1796	0.18

Actual Maximum Difference = 0.70 %
Allowable Maximum Difference = 1.50 %

BAROMETER CALIBRATION LOG

BAROMETER NO.	EB833-2	EB833-2	EB833-2	EB833-2	EB833-2	EB833-2	EB833-2

PRE-TEST

BAROMETER READING	30.06	30.06	29.91	29.95	30.1		
REFERENCE BAROMETER READING	30.1	30.12	29.97	29.97	30.05		
DIFFERENCE	0.04	-0.06	0.06	0.02	-0.05	0	0
DATE	1/23/2006	6/23/2006	8/4/2006	9/11/2006	10/1/2006		
CALIBRATOR	CW	CW	CW	CW	RR		

POST-TEST

BAROMETER READING	30.07	29.83	30.03	30.00	29.97		
REFERENCE BAROMETER READING	30.05	29.99	29.85	29.9	29.94		
DIFFERENCE	-0.02	-0.16	-0.18	-0.10	-0.03	0	0
DATE	5/15/2006	10/20/2006	11/27/2006	1/4/2006	2/5/2007		
CALIBRATOR	CW	CW	CW	CW	DL		

*** Allowable difference in post barometer calibration is 0.2 in.**

Pitot Tube Calibration Data

Pitot Tube No.: HP 58
Date: 3/9/2006
Calibrator: Reggie Russell

Average Stack Temperature		Check-out Performed at approx. °F	Reference Temperature, °F/°R		Thermometer Temperature, °F/°R		Error, %
is more than °F	but less than °F						
100	212	Ambient	84	544	84	544	0.00
212	390	(water) 212					
390	760	(oil) 400	386	846	388	848	0.24

Percent difference must not exceed 1.5% at any point.

α_1	α_2	β_1	β_2
6	*6*	*3*	*1*
< 10°	**< 10°**	**< 5°**	**< 5°**
D_t Inches	**P Inches**	**1.05 D_t Inches**	**1.50 D_t Inches**
0.205	***0.64***	***0.215***	***0.308***
$0.185 \leq Dt < 0.380$			
γ Degrees	**ϕ Degrees**	**$P_{sin}(\gamma)$ Inches**	**$P_{sin}(\phi)$ Inches**
2	***0***	***0.02234***	***0.00000***
		< 0.125	< 0.03125
P_1 Inches	P_2 Inches	(P_1-P_2) Inches	Meets Specifications
0.31	***0.33***	***-0.02***	
$1.05\ D_t < P_1 < 1.50\ D_t$	$1.05\ D_t < P_1 < 1.50\ D_t$		yes

Pitot Tube Calibration Data

Pitot Tube No.: HP 58
Date: 2/2/2007
Calibrator: Zack Lillie

Average Stack Temperature		Check-out Performed at approx. °F	Reference Temperature, °F/°R		Thermometer Temperature, °F/°R		Error, %
is more than °F	but less than °F						
100	212	Ambient					
212	390	(water) 212					
390	760	(oil) 400	386	846	388	848	0.24

Percent difference must not exceed 1.5% at any point.

α_1	α_2	β_1	β_2
3	*3*	*1*	*1*
< 10°	**< 10°**	**< 5°**	**< 5°**
D_t Inches	**P Inches**	**1.05 D_t Inches**	**1.50 D_t Inches**
0.376	***0.65***	***0.395***	***0.564***
$0.185 \leq Dt < 0.380$			
γ Degrees	**ϕ Degrees**	**$P_{sin}(\gamma)$ Inches**	**$P_{sin}(\phi)$ Inches**
2	***1***	***0.02268***	***0.01134***
		< 0.125	< 0.03125
P_1 Inches	P_2 Inches	(P_1-P_2) Inches	Meets Specifications
0.32	***0.33***	***-0.01***	
$1.05\ D_t < P_1 < 1.50\ D_t$	$1.05\ D_t < P_1 < 1.50\ D_t$		yes

AIR LIQUIDE™

CERTIFICATE OF ANALYSIS

Interference-Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section No. 2.2, Procedure . G-1

Cylinder Number: CC59953

Customer: ARI ENVIRONMENTAL
LA PORTE, TX
P.O. Number: 03-097-05
Item Number: ARI021

Shipping Order #: 17654579
Transfer #: 17654676
Lot Number: SFS89064
Valve: CGA 590
Cyl. Pressure:* 2000PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 29-Aug-05

Expiration Date: 29-Aug-08

Component	Requested Concentration	ASSAY Concentration
Oxygen	**23.75-26.25 %**	**25.0 ± 0.3 %**
Nitrogen	**Balance**	**Balance**

Reference Standard Employed For Analysis:

Concentration				Component	Balance	Cyl. No.	SRM or GMIS NTRM No.	Exp. Date	Sample No.	Type
22.41	±	0.16	%	Oxygen	Nitrogen	CC62835	82659x	09/01/06	98080603	NTRM

Analysis Information:

Component	Oxygen		First Triad Analysis: 08/29/05			
Analyzer Information			Triad 1	Triad 2	Triad 3	Units
Manufacturer:	Hewlett Packard	Zero	0	0	0	%
Model Number:	5890A	Reference	22.40	22.41	22.22	%
Serial Number:	3336A54620	Candidate	25.03	25.03	24.84	%
MPR Last Calibrated:	08/12/05	Result	25.04	25.03	25.05	%
Analytical Principle:	FID & TCD	Evaluation	VALID	VALID	VALID	
			MEAN ANALYTICAL RESULT:			25.04 %

Analyst Signature: Eric Barron

Approved by: Thuan Tran

AIR LIQUIDE AMERICA, L.P. Region Office • 8832 Dice Road, Santa Fe Springs, CA 90670-2516
Phone: (562) 945-1383 • Fax: (562) 693-1156

AIR LIQUIDE

CERTIFICATE of ANALYSIS

Interference-Free Multi-Component EPA Protocol Gases

NOTE: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121

Section 2.2 Procedure: G-1

Cyl. Number: CC9844

Customer:	ARI ENVIRONMENTAL	**Shipping Order #:**	18754799
P.O. Number:	03-128-05	**Transfer #:**	18754799
Item Number:		**LOT #:**	LPX130059
Notes:		**Valve**	CGA660
		Cyl. Pressure:*	1900psig
Assay Date:	9-Dec-05	**Expiration Date: 9-Dec-07**	

*Cylinder should not be used when gas pressure is below 150 psig

Component	Requested Concentration	Assay Concentration
Nitric Oxide	**2000 ppm**	**1940 ±10 ppm**
Total NOX		**1940 ppm**
Nitrogen	**Balance**	**Balance**

Reference Standard(s) Employed For Analysis:

Std name	Std #	Conc.	Units	Std. Error	Comp.	Balance	Cyl. No.	Exp. Date	Sample No.
GMIS188	GMIS188	987.0	ppm	7.0	NO	N2	CC38393	1/14/2006	N.A.

Analysis Information:

Component 1:	Nitric Oxide										
Analyzer Information			First Triad Analysis On:		12/2/2005			Second Triad Analysis On:		12/9/2005	
Manufacturer:	KVB/Analect		Trial 1	Trial 2	Trial 3	Units		Trial 1	Trial 2	Trial 3	Units
Model Number:	EN3024	Zero	0.11	0.26	0.30		Zero	0.12	0.65	-0.18	
Serial Number:	3024	Reference	960.70	962.51	960.55		Reference	941.08	940.53	943.23	
Analytical Principle:	FTIR	Candidate	1892.91	1892.44	1893.56		Candidate	1841.80	1847.02	1851.99	
MPC Calibrated:	11/17/05	Result	1943.82	1943.35	1944.50	ppm	Result	1930.78	1936.25	1941.46	ppm
				Mean Result:	1943.89	ppm			Mean Result:	1936.16	ppm

Analyst Signature: Bryan Leger Bryan Leger Calculated by: Mohammed Adnane M. Adnane

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Interference-Free Multi-Component EPA Protocol Gases

NOTE: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121

Section 2.2 Procedure: G-1

Cyl. Number: CC43398

Customer:	A R I ENVIRONMENTAL INC.	**Shipping Order #:**	16133007
P.O. Number:	03-043-05	**Transfer #:**	16133007
Item Number:		**LOT #:**	LPX118570
Notes:		**Valve**	CGA660
		Cyl. Pressure:*	1900psig
Assay Date:	9-May-05	**Expiration Date:** 8-May-08	*Cylinder should not be used when gas pressure is below 150 psig

Component	Requested Concentration	Assay Concentration
Sulfur Dioxide	2000 ppm	2063 ±10 ppm
Nitrogen	Balance	Balance

Reference Standard(s) Employed For Analysis:

Std name	Std #	Conc.	Units	Std. Error	Comp.	Balance	Cyl. No.	Exp. Date	Sample No.
GMIS265	GMIS265	1010.0	ppm	4.0	SO2	N2	CC36966	8/6/2006	N.A.

Analysis Information:

Component 1:	Sulfur Dioxide
Analyzer Information	
Manufacturer:	KVB/Analect
Model Number:	EN3024
Serial Number:	3024
Analytical Principle:	FTIR
MPC Calibrated:	04/21/05

	First Triad Analysis On: 5/2/2005			
	Trial 1	Trial 2	Trial 3	Units
Zero	0.14	0.33	0.60	
Reference	989.12	993.79	991.26	
Candidate	2020.62	2020.86	2028.49	
Result	2058.92	2059.17	2066.95	ppm
		Mean Result:	2061.68	ppm

	Second Triad Analysis On: 5/9/2005			
	Trial 1	Trial 2	Trial 3	Units
Zero	0.07	0.54	0.64	
Reference	987.21	993.75	991.31	
Candidate	2029.59	2018.72	2027.93	
Result	2069.46	2058.37	2067.76	ppm
		Mean Result:	2065.20	ppm

Analyst Signature: M.Adnane

Calculated by: M. Adnane

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Section No. 2.2, Procedure . G-1

Cylinder Number: CC163330

Customer: ARI ENVIRONMENTAL
LA PORTE, TX
P.O. Number: 34-043-05
Item Number: ARI022

Shipping Order #: 17698720
Transfer #: 17698758
Lot Number: SFS89296
Valve: CGA 580
Cyl. Pressure:* 2000PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 7-Sep-05

Expiration Date: 7-Sep-08

Component	Requested Concentration	ASSAY Concentration
Carbon Dioxide	**23.75-26.25 %**	**25.2 ± 0.3 %**
Nitrogen	**Balance**	**Balance**

Reference Standard Employed For Analysis:

Concentration				Component	Balance	Cyl. No.	SRM or GMIS NTRM No.	Exp. Date	Sample No.	Type
22.06	±	0.21	%	Carbon Dioxide	Nitrogen	CC55370	950801	04/08/06	PC	GMIS

Analysis Information:

Component	Carbon Dioxide		First Triad Analysis: 09/07/05			
Analyzer Information			Triad 1	Triad 2	Triad 3	Units
Manufacturer:	Varian(B)	Zero	0	0	0	%
Model Number:	3400	Reference	21.99	22.06	22.10	%
Serial Number:	2806	Candidate	25.18	25.20	25.26	%
MPR Last Calibrated:	08/09/05	Result	25.26	25.20	25.21	%
Analytical Principle:	FID & TCD	Evaluation	VALID	VALID	VALID	
			MEAN ANALYTICAL RESULT:			25.22 %

Analyst Signature: Eric Barron

Approved by: Thuan Tran

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NOTE: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121

Section 2.2 Procedure: G-1

Cyl. Number: CC93770

Customer:	ARI ENVIRONMENTAL	**Shipping Order #:**	20274426
P.O. Number:	03-061-06	**Transfer #:**	20274426
Item Number:		**LOT #:**	LPX139383
Notes:		**Valve**	CGA350
		Cyl. Pressure:*	1900psig
Assay Date:	19-Apr-06	**Expiration Date: 18-Apr-09**	*Cylinder should not be used when gas pressure is below 150 psig

Component	Requested Concentration	Assay Concentration
Carbon Monoxide	**2000 ppm**	**1988 ±20 ppm**
Nitrogen	**Balance**	**Balance**

Reference Standard(s) Employed For Analysis:

Std name	Std #	Conc.	Units	Std. Error	Comp.	Balance	Cyl. No.	Exp. Date	Sample No.
NTRM14	81681	997.0	ppm	9.0	CO	N2	CC66072	8/1/2007	970808

Analysis Information:

Component 1:	Carbon Monoxide										
Analyzer Information			First Triad Analysis On:		4/12/2006			Second Triad Analysis On:		4/19/2006	
Manufacturer:	KVB/Analect		Trial 1	Trial 2	Trial 3	Units		Trial 1	Trial 2	Trial 3	Units
Model Number:	EN3024	Zero	-0.10	0.08	0.00		Zero	-0.29	0.05	-0.09	
Serial Number:	3024	Reference	928.97	927.50	927.22		Reference	925.91	924.37	922.03	
Analytical Principle:	FTIR	Candidate	1851.58	1845.17	1847.54		Candidate	1841.44	1847.74	1843.42	
MPC Calibrated:	03/16/06 & 04/13/06	Result	1989.47	1982.58	1985.13	ppm	Result	1986.58	1993.38	1988.72	ppm
				Mean Result:	1985.73	ppm			Mean Result:	1989.56	ppm

Analyst Signature: Mohamed Adnane M. Adnane **Calculated by:** Mohamed Adnane M. Adnane

Mix Assayed At: Air Liquide America 11426 Fairmont Pkwy, La Porte, TX, 77571 Phone:(281)474-8400 Fax:(281)474-8419

APPENDIX F

ARI Project Participants

Daniel Loubiere

Mr. Loubiere is ARI's Source Testing Division South Central Regional Manager. He has accumulated in-depth experience in conducting compliance emission tests and CEMS certification for a wide variety of industries including petrochemical and petroleum refineries. Mr. Loubiere has over 11 years experience in conducting on-site emissions testing with a strong background in all aspects of source testing evaluations.

Cameron Withers

Mr. Withers is a Source Sampling Field Technician. Mr. Withers is well versed in the operation and maintenance of manual source sampling equipment and has performed these functions on numerous tests for various clients throughout the Gulf Coast Region.

Mr. Withers' responsibilities include field sampling, sample analysis, data reduction and interpretation, and maintenance and calibration of continuous and manual source sampling equipment.

Zack Lillie

Mr. Lillie is a Source Sampling Field Technician. Mr. Lillie is well versed in the operation and maintenance of manual source sampling equipment and has performed these functions on numerous tests for various clients throughout the Gulf Coast Region.

Mr. Lillie's responsibilities include field sampling, sample analysis, data reduction and interpretation, and maintenance and calibration of continuous and manual source sampling equipment.

Shawn Moody

Mr. Moody is a Source Sampling Field Technician. Mr. Moody is well versed in the operation and maintenance of manual source sampling equipment and has performed these functions on numerous tests for various clients throughout the Gulf Coast Region.

Mr. Moody's responsibilities include field sampling, sample analysis, data reduction and interpretation, and maintenance and calibration of continuous and manual source sampling equipment.