TEST REPORT

COMPLIANCE EMISSION TEST PROGRAM

SULFUR RECOVERY TAIL GAS THERMAL OXIDIZER
TCEQ AIR PERMIT NOS. 9195A AND PSD-TX-453M6
TCEQ REGULATED ENTITY NO. RN10247520

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PORT ARTHUR, TEXAS

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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 TOTAL Petrochemicals USA, Inc. (TOTAL) Refinery located in Port Arthur, Texas. The test program was conducted at the Sulfur Recovery Tail Gas Thermal Oxidizer (TGTO) Exhaust that is used to abate emissions from Sulfur Recovery Unit (SRU) Nos. 1 and 3. The emission testing was conducted pursuant to the Texas Commission on Environmental Quality (TCEQ) Air Permit Nos. 9195A and PSD-TX-453M6. This source is listed as Emission Point Number (EPN) 15SRUINCIN in the TCEQ permit.

Compliance testing at the exhaust was conducted to determine the concentrations and mass emission rates of total particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), hydrogen sulfide (H_2S), carbonyl sulfide (COS) and total volatile organic compounds (VOC). 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 1-5, 6C, 7E, 10, 15 and 25A.
- 40 CFR, Part 60, 2006, Subpart J – Standards of Performance for Petroleum Refineries
- 40 CFR, Part 63, 2006, Appendix UUU – National Emission Standards for Hazardous Air Pollutants for Petrochemical Refineries: Catalytic Cracking Units, Catalytic Reforming Units and Sulfur Recovery Units
- 40 CFR, Part 51, 2006, Appendix M, USEPA Method 205
- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III - Stationary Source Specific Methods
- TCEQ Sampling Procedures Manual
- TCEQ Air Permit Nos. 9195A and PSD-TX-453M6

Under the direction of Mr. Dan Loubiere, the ARI field test team consisted of Mr. Cameron Withers, Mr. James Wedemeier and Dr. Steve Yuchs. Mr. Casey Stark of TOTAL coordinated the test activities with plant operations and provided process data to ARI for inclusion in this report. Testing activities were conducted on December 19 and 20, 2006.

The results of the compliance test program are summarized in Table 1-1. A detailed presentation of collected data is presented in Section 3.

TABLE 1-1. SUMMARY OF SRU TGTO COMPLIANCE TEST RESULTS

RUN NO. :	1	2	3		
TEST DATE :	12/19/06	12/20/06	12/20/06		
TEST TIME :	12:13-18:26	10:05-16:03	16:38-22:24	Average	Allowable
TOTAL PARTICULATE					
lb/hr	0.972	0.674	0.919	0.855	1.08
SULFUR DIOXIDE					
ppmv db @ 0% O_2	78.2	70.6	78.2	75.7	250
lb/hr	12.658	11.678	12.860	12.399	37.80
NITROGEN OXIDES					
lb/hr	1.912	1.929	1.836	1.892	4.50
CARBON MONOXIDE					
lb/hr	16.109	18.720	18.643	17.824	40.37
HYDROGEN SULFIDE					
lb/hr	<0.061	<0.062	<0.062	<0.062	1.06
CARBONYL SULFIDE					
lb/hr	<0.054	<0.055	<0.055	<0.055	
VOLATILE ORGANIC COMPOUNDS					
lb/hr	0.546	0.598	0.576	0.618	2.00

Values represented as less than are calculated by using the analytical detection limit. If these constituents were present in the exhaust gas stream, they existed at concentrations and mass emission rates below the reported values.

SECTIONTWO Compliance Test Procedures

2.1 OVERVIEW

ARI conducted a compliance emission test on the SRU TGTO exhaust at TOTAL's Refinery located in Port Arthur, Texas. The purpose of the test program was to determine various pollutant concentrations and mass emission rates to atmosphere pursuant to TOTAL's TCEQ Air Permit Nos. 9195A and PSD-TX-453M6.

Test methods followed those as detailed in 40CFR, Part 60, 2006, Appendix A, USEPA Methods 1-5, 6C, 7E, 10, 15 and 25A; 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 TCEQ 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)
5	Determination of Particulate Matter Emissions from Stationary Sources
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
15	Determination of Hydrogen Sulfide, Carbonyl Sulfide and Carbon Disulfide Emissions from Stationary Sources
25A	Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer
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 SO_2 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. It should be noted that the sample times for H_2S and COS were conducted such that the start time corresponded with the start time of the first SO_2 sample and were conducted for twenty-four (24) consecutive injections at 12 to 13 minutes per injection. Each pollutant test run was conducted as follows:

TABLE 2-1. SRU TGTO TEST RUNS

Test Run No.	Date	Time	Parameters
1	12/19/06	12:13-18:26	1 240-min for moisture, volumetric flow and PM 1 277-min for H_2S and COS 4 60-min for O_2, CO_2, SO_2, NO_x, CO and VOC
2	12/20/06	10:05-16:03	1 240-min for moisture, volumetric flow and PM 1 300-min for H_2S and COS 4 60-min for O_2, CO_2, SO_2, NO_x, CO and VOC
3	12/20/06	16:38-22:24	1 240-min for moisture, volumetric flow and PM 1 300-min for H_2S and COS 4 60-min for O_2, CO_2, SO_2, NO_x, CO and VOC

2.2 SAMPLE AND VELOCITY TRAVERSE LOCATIONS (USEPA METHOD 1)

Sampling at the SRU TGTO exhaust was conducted using the two (2) 3-inch diameter sampling ports provided on the horizontal exhaust duct. The sampling port locations on the 32-inch diameter duct are located approximately 54 inches (1.8 duct diameters) upstream and approximately 310 inches (9.7 duct diameters) 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.

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

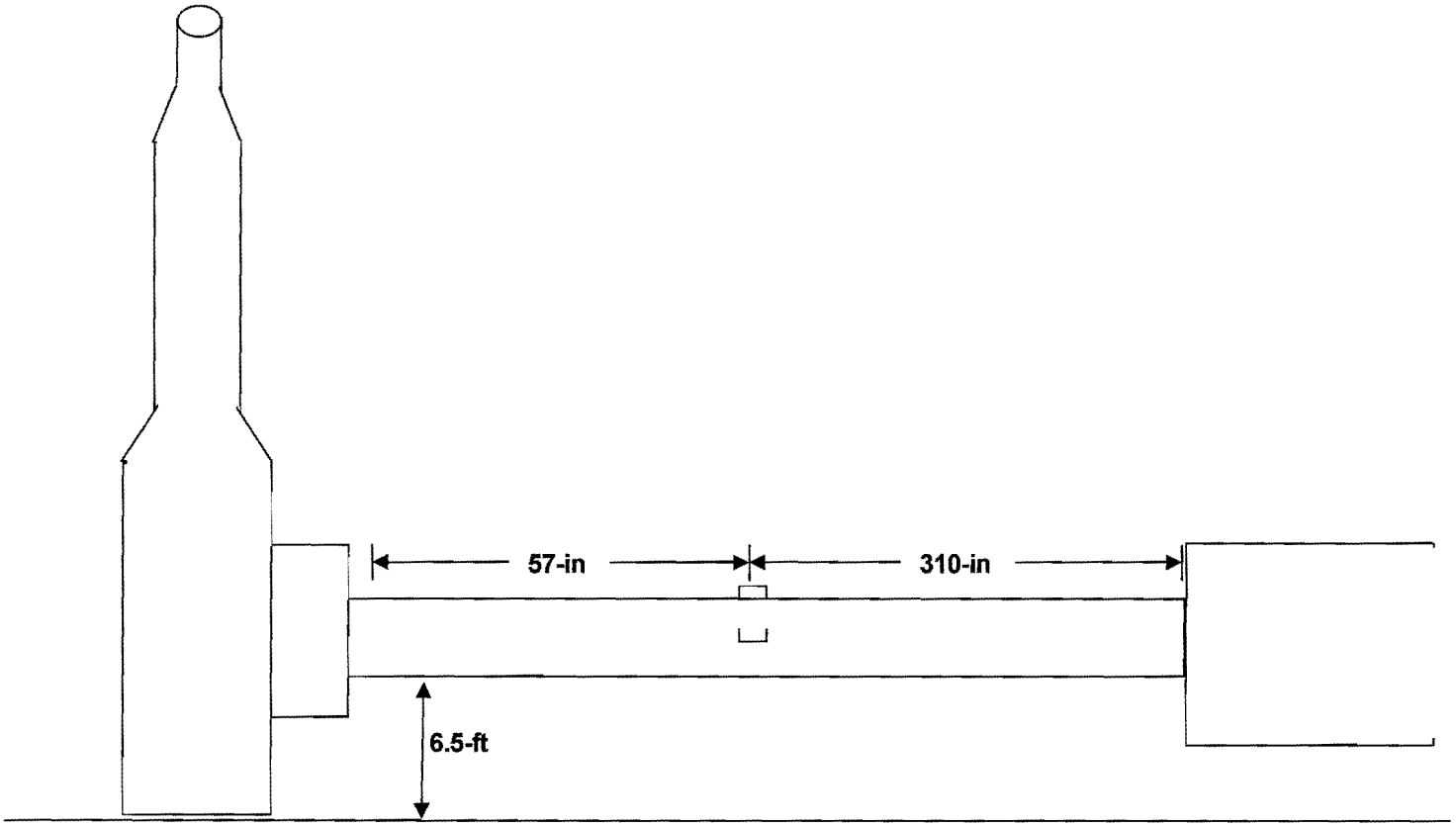
Velocity traverses were performed using a Type "S" pitot tube with the velocity head pressure measured on a Dwyer oil gauge inclined manometer to the nearest 0.01 in. H_2O. Temperature measurements in the ducts were performed with a Chromel-Alumel thermocouple connected to a digital direct read-out potentiometer. These measurements were conducted concurrently with the PM procedures described in Subsection 2.6.

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 2.7.

2.5 STACK GAS MOISTURE CONTENT (USEPA METHOD 4)

The moisture content was determined using the back half of the USEPA Method 5 sampling train described in Subsection 2.6.



TRAVERSE POINTS: 12
NUMBER OF PORTS: 2
POINTS/PORT: 6
STACK ID: 32 in.
PORT LENGTH: 8 in.

Traverse Point No.	Distance From Inside Wall, in.
1	1-3/8
2	4-5/8
3	9-1/2
4	22-1/2
5	27-3/8
6	30-5/8

CROSS SECTION

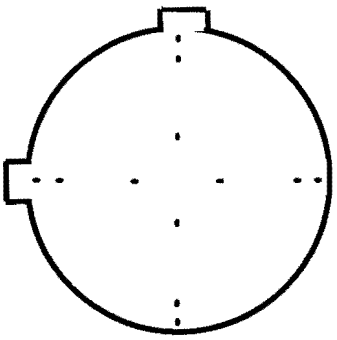


FIGURE 2-1. TOTAL PETROCHEMICAL USA, INC.
SRU TGTO EXHAUST STACK SAMPLING LOCATION

2.6 PARTICULATE MATTER

The sampling procedures for this test program were those described in USEPA Method 5 - Determination of Particulate Matter from Stationary Sources. Analysis of the collected samples was performed by ARI's laboratory located in Pasadena, Texas.

2.6.1 Sampling Apparatus

The particulate sampling train (Figure 2-2) used at the exit stack during the test program met the design specifications established by the USEPA. The sample train consisted of the following:

Nozzle – Stainless steel (316 grade) with sharp, tapered, leading edge and accurately measured round opening.

Probe - Stainless steel (316 grade) outer sheath with a heating system capable of maintaining a gas temperature of 248°F ± 25°F, with a borosilicate glass inner liner for sample transport.

Pitot Tube - A Type-S pitot tube that meets all geometric standards; attached to the probe to monitor stack gas velocity.

Filter Holder - Borosilicate glass with a heating system capable of maintaining a filter temperature of 248°F ± 25°F.

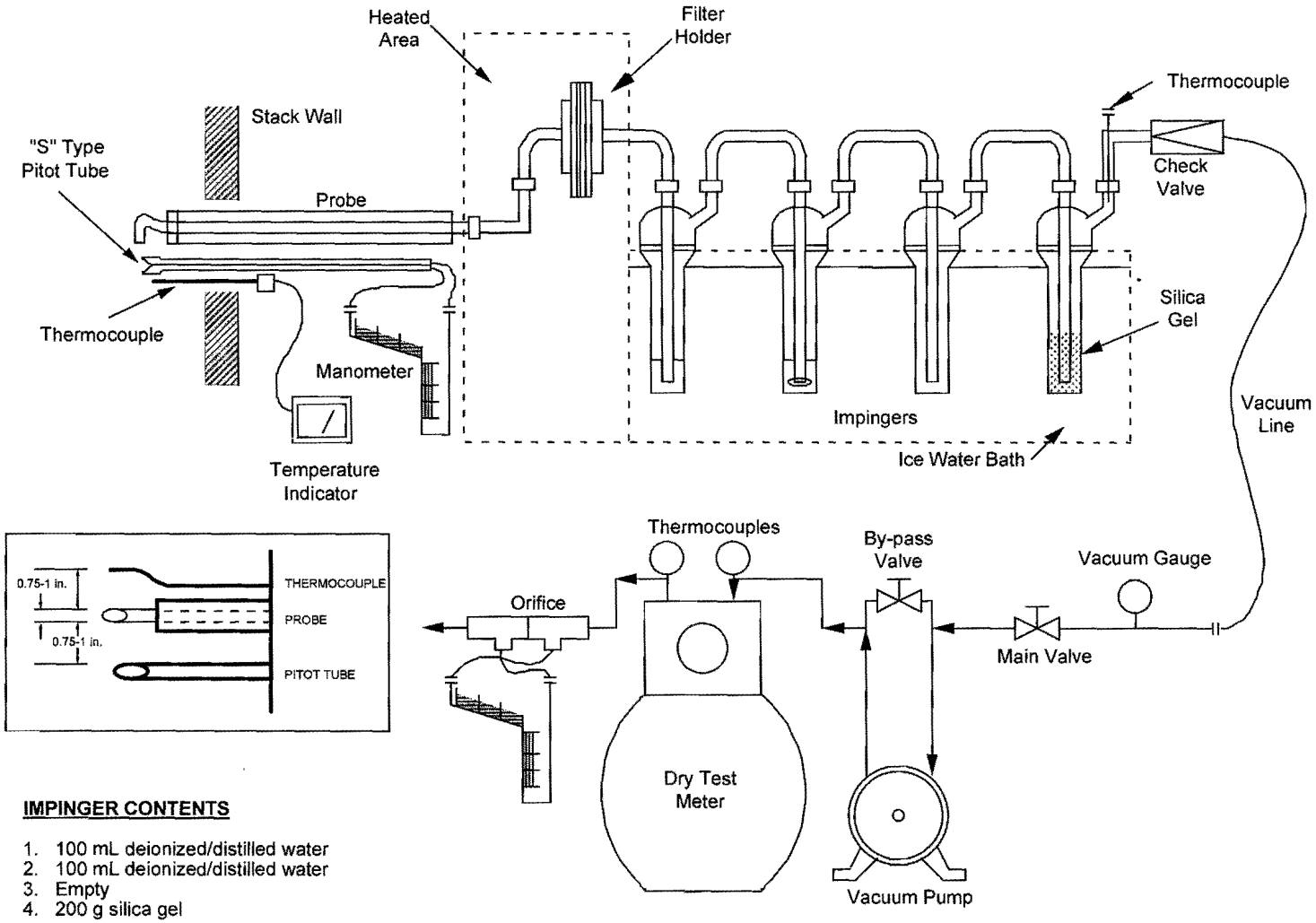
Filter - Whatman Reeve Angel 934 AH glass-fiber, 4-in. diameter.

Draft Gauge - A dual-inclined manometer made by Dwyer with a readability of 0.01 in. H_2O in the 0 to 1-in. range and 0.1 in. H_2O in the 1 to 10-in. range.

Impingers - Four impingers connected in series with glass ball joints. The first, third, and fourth impingers were of the Greenburg-Smith design. The second impinger was of the Greenburg-Smith design but modified by replacing the tip with a 1/2-in. i.d. glass tube extending to 1/2-in. from the bottom of the flask.

Metering System - Vacuum gauge, leak-free pump, thermometers capable of measuring temperature to within 5°F, dry gas meter with 2 percent accuracy, and related equipment to maintain an isokinetic sampling rate and to determine sample volume.

Barometer - Digital type to measure atmospheric pressure to ±0.1 in. Hg.



IMPINGER CONTENTS

1. 100 mL deionized/distilled water
2. 100 mL deionized/distilled water
3. Empty
4. 200 g silica gel

FIGURE 2-2. USEPA METHOD 5 - PARTICULATE MATTER SAMPLING TRAIN

2.6.2 Sampling Procedure

The sample train was assembled as shown in Figure 2-2. Glass-fiber filters were initially desiccated for at least 24 hours and weighed to the nearest 0.1 mg on an analytical balance. One hundred milliliters (mL) of deionized/distilled water were placed in each of the first two impingers; the third impinger was initially empty; and the fourth impinger contained approximately 200 grams of silica gel. The sampling train was leak-checked at the sampling site prior to each test run by plugging the inlet to the nozzle and pulling a 15-in. Hg vacuum; and at the conclusion of the test, by plugging the inlet to the nozzle and pulling a vacuum equal to at least the highest vacuum reached during the test run.

The pitot tube and lines were leak-checked at the test site prior to and at the conclusion of each test run. The check was made by blowing into the impact opening of the pitot tube until 3 or more inches of water was recorded on the manometer and then capping the impact opening and holding it for 15 seconds to assure it was leak-free. The negative pressure side of the pitot tube was leak-checked by the same procedure, except suction was used to obtain the 3-in. H_2O manometer reading. Crushed ice was placed around the impingers to keep the temperature of the gases leaving the last impinger at 68°F or less.

During sampling, stack gas and sampling train data were recorded and isokinetic sampling rates were set at each sampling point. All sampling data was recorded on the Field Data sheets provided in Appendix B.

2.6.3 Sample Recovery Procedure

The sampling train was moved carefully from the test site to the cleanup area. The volume of water from the first three impingers was measured, and sample fractions were recovered as follows:

Container No. 1 - The filter was removed from its holder and placed in a petri dish and sealed.

Container No. 2 - Loose particulate and acetone washings from all sample-exposed surfaces prior to the filter were placed in an amber glass container, sealed, and labeled. Particulate was removed from the probe with the aid of a nylon brush. The liquid level was marked after the container was sealed.

Container No. 3 - The contents of the first three impingers were measured volumetrically and recorded on the field data sheet. The contents and subsequent H_2O rinse of the impingers and connecting glassware were placed in a polyethylene jar.

The silica gel from the fourth impinger was weighed, and this value was recorded on the Field Data sheet. An unused filter, acetone and distilled water were taken as blanks.

2.6.4 Analytical Procedures

The analytical procedures followed during this program were those described in USEPA Method 5.

Container No. 1 - The filter and any loose particulate matter from this sample container were placed in a tared glass weighing dish, placed in a desiccator for 24 hours and measured to a constant weight to the nearest 0.1 mg.

Container No. 2 - The acetone washings were transferred to a tared beaker and evaporated to dryness on a hot plate by heating at 45°C. The beaker and the contents were placed in a desiccator for 24 hours and measured to a constant weight to the nearest 0.1 mg.

Container No. 3 - The impinger contents and associated rinse were transferred to a tared beaker and evaporated to dryness on a hot plate by heating to 105°C. The beaker and the contents were placed in a desiccator for 24 hours and measured to a constant weight to the nearest 0.1 mg.

The filter, acetone and water blanks were analyzed in the same way as their respective sample fractions.

The term "constant weight" means a difference of no more than 0.5 mg or 1 percent of total weight less tare weight, whichever is greater between two consecutive readings, with no less than 6 hours of desiccation between weighings. All analytical data are presented in Appendix C.

2.7 O_2, CO_2, SO_2, NO_x AND CO

Continuous O_2 sampling was conducted following USEPA Method 3A. The O_2 monitor used was a Servomex, Inc. Model 1440C paramagnetic analyzer. A pre-test and post-test system bias along with the initial calibration were performed using diluted O_2 balance nitrogen standards of zero, 4.50% and 9.00% at a monitor span of 9.00%.

Continuous CO_2 sampling was conducted following USEPA Method 3A. The CO_2 monitor used was a Servomex, Inc Model 1440C non-dispersive infrared (NDIR) CO_2 analyzer. A pre-test and post-test system bias along with the initial calibration were performed using diluted CO_2 balance nitrogen standards of zero, 4.50% and 9.00% at a monitor span of 9.00%.

Continuous SO_2 sampling was conducted following USEPA Method 6C. The SO_2 monitor used was a Bovar Western Research Model 721-ATM non-dispersive ultraviolet analyzer. A pre-test and post-test system bias along with the initial calibration were performed using diluted SO_2 balance nitrogen standards of zero, 135.0 ppm and 270.0 ppm at a monitor span of 270 ppm.

Continuous NO_x sampling was conducted following USEPA Method 7E. The NO_x monitor used was a Thermo Environmental Instruments, Inc. Model 42C chemiluminescent analyzer. Pre-test and post-test system biases along with an initial calibration error were performed using diluted NO_x balance nitrogen standards of zero, 50.0 ppm and 90.0 ppm at a monitor span of 900 ppm. A NO_x converter check was conducted by introducing a known concentration of NO_2 gas to provide direct measurement of the converter efficiency. The converter is acceptable if the NO_2 to NO conversion rate is greater than 90%. The NO_x converter check was found to have a conversion rate of 99.1% and 96.4% NO_2 to NO on December 19 and 20, 2006, respectively. The calibration gas used was 85.3 ppm NO_2 in N_2.

Continuous CO sampling was conducted following USEPA Method 10. The CO monitor used was a Thermo Environmental Instruments, Inc. Model 48 gas filter correlation NDIR analyzer. A pre-test and post-test system bias along with the initial calibration were performed using diluted CO balance nitrogen standards of zero, 225.0 ppm and 450.0 ppm at a monitor span of 450 ppm.

As shown in Figure 2-3, exhaust gas extraction to the O_2, CO_2, SO_2, NO_x and CO analyzers was withdrawn through a stainless steel probe with a 3-way valve connected to a heated Teflon sample line. The Teflon sample line was connected to ARI's Universal Analyzer Model No. 3082 electronic sample conditioner to remove moisture followed by a Teflon-lined sample transport pump. A sample manifold was connected to the exhaust side of the pump with the intake for ARI's O_2, CO_2, SO_2, NO_x and CO analyzers. Calibration gases were injected directly into the 3-way valve to determine the measurement system bias relative to direct monitor injection or calibration error. The system bias determination was conducted before and after each test run.

Prior to commencing compliance test runs, each instrument had procedures conducted to determine the analytical response time. This determination was conducted on December 18, 2006 and data is presented in Appendix D. After the response time was determined, twice the value obtained was the time used as the period to condition the sampling system to the source gases. After this period was completed, the test run times could begin.

Before Run No. 1 on December 19, 2006, a pre-test stratification check was conducted at three (3) points located at 16.7%, 50.0% and 83.3% of the stack diameter. Data obtained from the stratification check indicated that concentration levels of all pollutants and diluents did not deviate by more than 5% from the average 3-point concentration.

Calibration gases were diluted from USEPA Protocol high concentration standards as described in Subsection 2.10.

The data was collected at 15-second intervals and one-minute averages were calculated by ARI's data acquisition system. The data acquisition system consisted of an Omega OMB-DAQ-XW-XLPLUS datalogger connected to a computer for digital data archiving and data reduction.

2.8 CARBONYL SULFIDE AND HYDROGEN SULFIDE

Determination of COS and H_2S was conducted in accordance with USEPA Method 15 using a gas chromatograph for separation of sulfur compounds and measurement by a flame photometric detector.

Modifications and improvements to USEPA Method 15 during the testing included the following:

1. No sample dilution was required (GC range ~50 ppm RSC)
2. USEPA Protocol I calibration gases were used to calibrate the GC (no permeation tubes used)

The gas samples were taken in the center of the SRU TGTO exhaust duct using one of the two (2) 4-inch diameter sampling ports.

The gas sampling system consisted of a stainless steel probe connected to a heated Teflon sampling line. The exhaust gas was then conveyed through a series of Teflon impingers located on the sampling platform containing a citrate buffer solution to remove SO_2 from the sample stream.

A Teflon lined sample pump transported the sample through 0.375-inch OD Teflon tubing to the ARI mobile laboratory located at grade approximately 130 feet from the sampling location. The sample was run to a manifold system at a flow rate of approximately 3 liters per minute from which a sample was introduced to the GC-FPD.

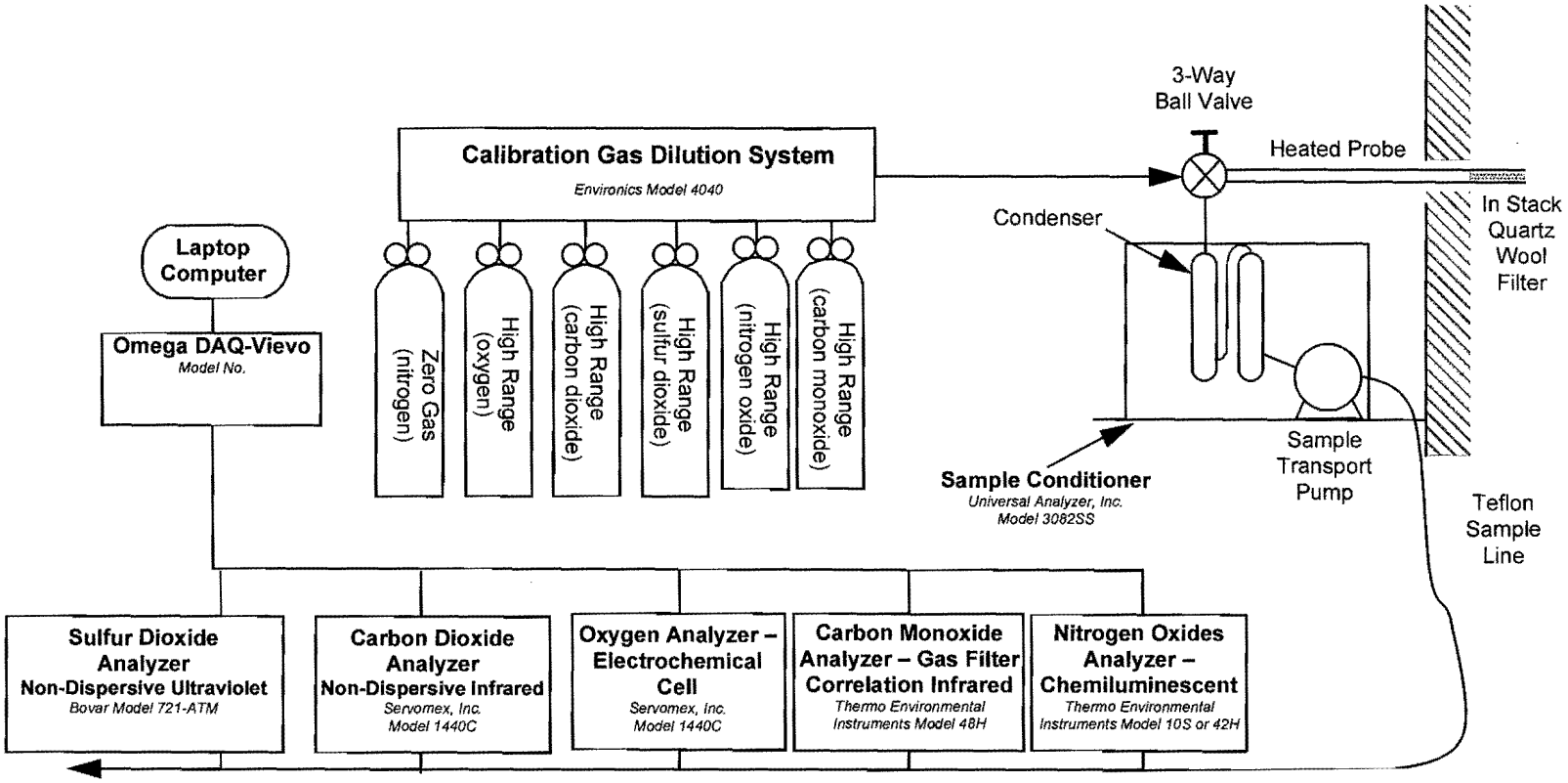


FIGURE 2-3. ARI REFERENCE METHOD O_2, CO_2, SO_2, NO_X AND CO SAMPLING SYSTEM

The GC-FPD system consisted of an SRI Model 9300B field gas chromatograph containing a heated gas sampling valve, column oven and detector. A computer based integrator utilizing Peak Simple W95 software was used for data acquisition and integration.

The GC-FPD was calibrated with a USEPA Protocol 1 H_2S/COS gas standard obtained from Specialty Gas Products. The gas standard was generated using an Environics Model 4040 mass flow controller gas dilution system. The dilution system was verified onsite in accordance with USEPA Method 205 (see Subsection 2.10).

During each compliance test run, there were nominally 24 injections to the GC-FPD.

2.9 TOTAL VOLATILE ORGANIC COMPOUNDS

Total VOC sampling was conducted in accordance with USEPA Method 25A using a VIG Industries Model 200 total hydrocarbon (THC) analyzer equipped with a heated flame ionization detector (FID).

The sampling delivery system consisted of a heated stainless steel probe and three-way calibration tee connected to a heated 250° F Teflon sampling line. The sampling lines connected directly into the analyzers located in ARI's mobile lab. The THC analyzer was internally heated to keep the sample gas stream above its dew point. See Figure 2-4.

The THC analyzer was calibrated on a 100 ppm scale with applicable zero, low-range (25 ppm), mid-range (50 ppm), and high-range (85 ppm) propane in air gases as specified in USEPA Method 25A.

The calibration gases were generated from Protocol 1 calibration standards using an Environics Model 4040 mass flow gas dilution system. The dilution system was verified on-site in strict accordance with USEPA Method 205.

The gases met the calibration gas verification protocols of Alternate Number 1 or Alternate Number 2 as specified in USEPA Method 6C, Section 6.

An initial 3-point calibration test was performed prior to testing, and a post calibration drift test was done after each test repetition on the monitor. The average zero and calibration drift values obtained during each test run on the monitor were used to correct the raw monitor data for each respective test run.

The monitor's data was collected at 15-second intervals, and one-minute averages were calculated by ARI's datalogger system connected to a computer for digital data archiving and data reduction. Excel spreadsheet computer software was used for calculation of emission rates.

2.10 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).

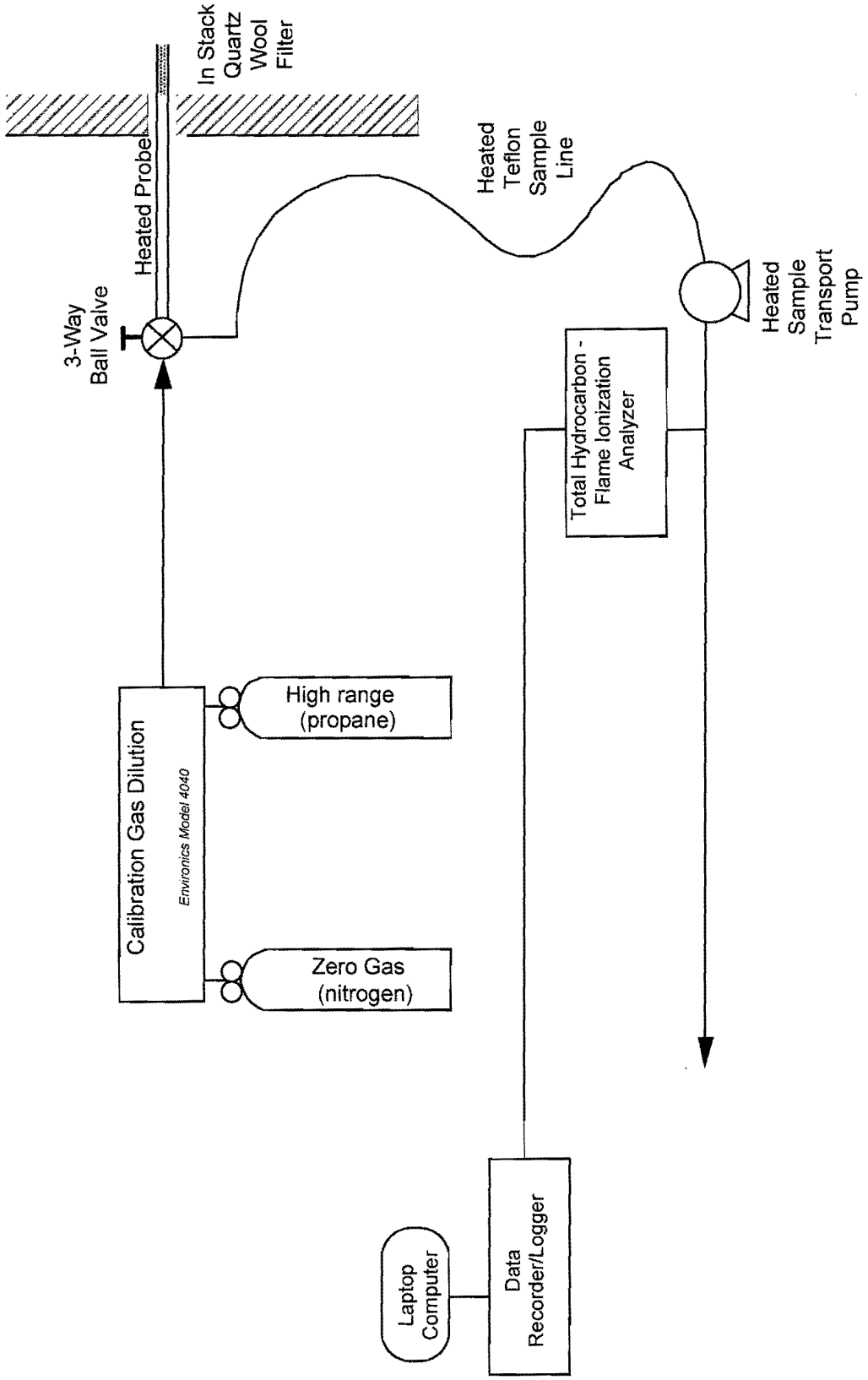


FIGURE 2-4. USEPA METHOD 25A TOTAL VOC MONITOR

ARI's Servomex, Inc. Model 1440C 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 5.00% and 13.00% and a mid-range EPA Protocol 1 standard of 7.49% 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 is presented in Table 3-1. The test runs represent data collected on the exhaust of the SRU TGTO.

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 analytical data is 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. The data supplied by TOTAL plant personnel for the process operating levels are presented in Appendix F. Appendix G presents a brief description of personnel qualifications for ARI's test crew.

TABLE 3-1. SRU TAIL GAS INCINERATOR TEST RESULTS

Company	:	TOTAL Petrochemicals USA, Inc.			
Location	:	Port Arthur, Texas			
Source	:	SRU Incinerator Stack			
Operators	:	D. Loubiere, J. Wedemeier, C. Withers, S. Yuchs			
Test Run	:	1	2	3	
Test Date	:	12/19/2006	12/20/2006	12/20/2006	
Test Time	:	12:13 - 18:26	10:05 - 16:03	16:38 - 22:24	Average
STACK GAS					
Temperature, av. °F		559.6	563.2	561.4	561.4
Velocity, av. ft/sec		128.988	133.081	132.974	131.681
Volume flow, acfm		43,224	44,596	44,560	44,127
Volume flow, scfm		22,378	22,836	22,789	22,668
Volume flow, dscfm		19,239	19,566	19,563	19,456
Volume flow, dscfh		1,154,321	1,173,953	1,173,781	1,167,352
Moisture, av. % vol		14.03	14.32	14.15	14.17
CO_2, av. % vol, db		6.72	6.94	7.24	6.97
O_2, av. % vol, db		3.27	3.18	3.28	3.24
PROCESS DATA					
SRU-1 Production, stpd		75.5	75.5	75.5	75.5
SRU-2 Production, stpd		138.8	138.8	138.8	138.8
Combined Production, stpd		214.3	214.3	214.3	214.3
PARTICULATE MATTER (PM)					
Sample volume, dscf		219.199	222.574	222.532	
% Isokinetic		99.5	99.4	99.4	
Total PM collected, mg		83.7	58.0	79.0	
Total Concentration					
gr/dscf		0.00589	0.00402	0.00548	0.00513
lb/dscf x 10^{-6}		0.842	0.575	0.783	0.733
Total Emission Rate					
lb/hr		0.972	0.674	0.919	0.855
ton/yr		4.256	2.954	4.023	3.744
SULFUR DIOXIDE (SO_2)					
Concentration					
ppm db @ 0% O_2		78.2	70.6	78.2	75.7
ppmv db		66.0	59.9	66.0	63.9
lb/dscf x 10^{-6}		10.97	9.95	10.96	10.62
Total Emission Rate					
lb/hr		12.658	11.678	12.860	12.399
ton/yr		55.442	51.151	56.328	54.307

TABLE 3-1 (CONTINUED). SRU TAILGAS INCINERATOR TEST RESULTS

Company	:	TOTAL Petrochemicals USA, Inc.			
Location	:	Port Arthur, Texas			
Source	:	SRU Incinerator Stack			
Operators	:	D. Loubiere, J. Wedemeier, C. Withers, S. Yuchs			
Test Run	:	1	2	3	
Test Date	:	12/19/2006	12/20/2006	12/20/2006	
Test Time	:	12:13 - 18:26	10:05 - 16:03	16:38 - 22:24	Average
NITROGEN OXIDES as NO_2 (NO_x)					
Concentration					
ppmv db		13.8	13.8	13.1	13.5
lb/dscf x 10^{-6}		1.646	1.643	1.564	1.618
Total Emission Rate					
lb/hr		1.900	1.929	1.836	1.888
ton/yr		8.321	8.450	8.041	8.271
CARBON MONOXIDE (CO)					
Concentration					
ppmv db		207.0	219.4	218.5	215.0
lb/dscf x 10^{-6}		15.045	15.946	15.883	15.625
Total Emission Rate					
lb/hr		17.367	18.720	18.643	18.243
ton/yr		76.068	81.995	81.655	79.906
VOC as C_1					
Concentration					
ppmv db		16.2	15.9	17.4	16.5
lb/dscf x 10^{-6}		0.506	0.495	0.543	0.515
Total Emission Rate					
lb/hr		0.584	0.581	0.638	0.601
ton/yr		2.559	2.545	2.793	2.633
HYDROGEN SULFIDE (H_2S)					
Concentration					
ppmv db		< 0.6	< 0.6	< 0.6	< 0.6
lb/dscf x 10^{-6}		< 0.0531	< 0.0531	< 0.0531	< 0.0531
Total Emission Rate					
lb/hr		< 0.0613	< 0.0623	< 0.0623	< 0.0620
ton/yr		< 0.268	< 0.273	< 0.273	< 0.271
CARBONYL SULFIDE (COS)					
Concentration					
ppmv db		< 0.3	< 0.3	< 0.3	< 0.3
lb/dscf x 10^{-6}		< 0.0468	< 0.0468	< 0.0468	< 0.0468
Total Emission Rate					
lb/hr		< 0.0540	< 0.0549	< 0.0549	< 0.0546
ton/yr		< 0.236	< 0.241	< 0.240	< 0.239

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.

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

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

$\Delta\mathbf{P}$ = 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

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
TEST DATE: 12/19/2006
RUN NUMBER: 1-1, 1-2, 1-3 & 1-4

γ FACTOR:	0.981	**STACK DIAM:**	32.00 **inches**
BAROMETRIC:	30.06 **in. Hg**	**METER VOLUME:**	228.655 **ft^3**
STATIC PRES:	-2.00 **in.H_2O**	**METER TEMP:**	86.2 **°F**
STACK TEMP:	559.6 **°F**	**LIQUID COLL:**	760.0 **milliliters**
SQ.RT ΔP:	1.6173 **in.H_2O**	**CO_2:**	6.72 **% by volume**
ΔH:	2.53 **in.H_2O**	**O_2:**	3.27 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 219.199 \text{ dscf}$$

γ = 0.981

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 35.773 \text{ scf}$$

V_{lc} = 760.0 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.1403$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.0000$$

T = 566.1 °K
P = 759.8 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.1403

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Total Petrochemicals	**SOURCE:**	SRU Incinerator Stack
LOCATION:	Port Arthur, Texas	**TEST DATE:**	12/19/2006
RUN NUMBER:	1-1, 1-2, 1-3 & 1-4		

BAROMETRIC:	30.06 **in. Hg**	**STACK DIAM:**	32.00 **inches**
STATIC PRES:	-2 **in.H_2O**	**CO_2:**	6.72 **% by volume**
STACK TEMP:	559.6 **°F**	**O_2:**	3.27 **% by volume**
SQ.RT ΔP:	1.6173 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	29.21	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.63	**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			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	1.6173	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 559.6 °F + 460	=	1,020	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.91	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	128.99	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	43,224	**acfm**
Stack Area = 5.585 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	22,378 1,342,706	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	19,239 1,154,321	**dscfm** **dscfh**

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	1-1
TEST DATE :	12/19/2006
START TIME :	12:13
END TIME:	13:13

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	42.75
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.87**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	219.35
AVERAGE ZERO BIAS (C_o):	0.85
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**192.0**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	133.40
AVERAGE ZERO BIAS (C_o):	0.80
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**64.6**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**76.3**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.56
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.21**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.57
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.60**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	51.40
AVERAGE ZERO BIAS (C_o):	0.25
CALIBRATION GAS:	Diluted Propane/N_2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.34**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
12:13	0	—	—	—	—	—	—
12:14	1	12.5	185.0	60.8	4.6	3.23	6.76
12:15	2	12.4	188.5	60.9	4.5	3.24	6.76
12:16	3	12.5	189.0	61.9	4.6	3.24	6.76
12:17	4	12.5	192.5	61.9	4.5	3.21	6.79
12:18	5	12.5	193.9	62.3	4.6	3.22	6.73
12:19	6	12.5	191.3	63.1	4.5	3.24	6.80
12:20	7	12.6	193.7	62.9	4.5	3.22	6.75
12:21	8	12.6	192.7	64.3	4.6	3.23	6.78
12:22	9	13.4	192.1	66.5	4.5	3.23	6.80
12:23	10	12.9	186.5	69.9	4.4	3.24	6.74
12:24	11	12.9	184.7	70.6	4.5	3.23	6.78
12:25	12	12.9	183.9	72.6	4.5	3.25	6.79
12:26	13	12.9	183.0	74.5	4.4	3.24	6.74
12:27	14	13.0	182.8	77.6	4.5	3.24	6.76
12:28	15	12.9	181.3	80.1	4.5	3.26	6.78
12:29	16	12.8	183.7	81.4	4.4	3.24	6.74
12:30	17	12.8	180.3	83.2	4.4	3.23	6.78
12:31	18	12.8	181.4	85.1	4.6	3.27	6.75
12:32	19	12.8	181.9	87.8	4.5	3.30	6.70
12:33	20	12.8	182.4	90.0	4.6	3.28	6.74
12:34	21	12.7	176.9	91.7	4.6	3.31	6.72
12:35	22	12.9	179.0	90.8	4.9	3.30	6.71
12:36	23	13.0	181.4	76.0	4.7	3.26	6.72
12:37	24	12.9	180.0	68.4	4.8	3.26	6.72
12:38	25	13.0	178.9	66.3	4.8	3.28	6.73
12:39	26	13.2	178.6	62.7	4.7	3.27	6.72
12:40	27	13.4	178.7	60.6	4.6	3.26	6.71
12:41	28	13.4	181.7	59.9	4.7	3.26	6.69
12:42	29	13.4	181.9	58.7	4.5	3.26	6.68
12:43	30	13.5	178.7	57.2	4.4	3.25	6.68
12:44	31	13.5	176.3	56.0	4.6	3.28	6.67
12:45	32	13.5	176.7	55.6	4.6	3.31	6.67
12:46	33	13.6	177.0	55.5	4.7	3.30	6.66
12:47	34	13.5	173.8	55.3	4.7	3.35	6.63
12:48	35	13.5	174.8	55.6	4.7	3.37	6.61
12:49	36	13.6	177.0	55.9	4.7	3.37	6.61
12:50	37	13.5	177.9	56.5	4.9	3.37	6.62
12:51	38	13.6	177.8	56.5	4.8	3.36	6.64
12:52	39	13.5	177.5	56.9	4.8	3.34	6.61
12:53	40	13.6	179.9	57.2	4.9	3.35	6.59
12:54	41	13.5	180.8	57.9	4.9	3.36	6.60
12:55	42	13.6	182.3	57.3	5.0	3.36	6.62
12:56	43	13.5	184.5	57.5	5.0	3.36	6.59
12:57	44	13.6	185.9	56.9	4.9	3.35	6.60
12:58	45	13.6	186.9	56.4	4.9	3.33	6.61
12:59	46	13.6	187.1	56.8	5.0	3.34	6.61
13:00	47	13.6	190.9	56.5	4.9	3.33	6.63
13:01	48	13.7	192.3	56.3	5.0	3.32	6.63
13:02	49	13.6	195.8	56.8	5.0	3.31	6.61
13:03	50	13.6	197.0	57.1	4.7	3.32	6.65
13:04	51	13.7	198.0	56.9	4.9	3.27	6.68
13:05	52	13.6	198.9	57.1	4.9	3.28	6.63
13:06	53	13.7	201.0	57.5	4.8	3.28	6.66
13:07	54	13.7	199.5	57.6	4.9	3.28	6.67
13:08	55	13.6	202.3	58.6	4.9	3.28	6.68
13:09	56	13.6	202.8	59.4	4.5	3.29	6.67
13:10	57	13.7	206.1	59.8	4.7	3.24	6.68
13:11	58	13.7	212.3	60.7	4.7	3.23	6.66
13:12	59	13.7	216.2	62.9	4.7	3.23	6.69
13:13	60	13.7	223.8	63.2	4.8	3.20	6.71
	AVG (C) =	**13.25**	**187.32**	**64.23**	**4.69**	**3.282**	**6.691**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	1-2
TEST DATE :	12/19/2006
START TIME :	13:59
END TIME:	14:59

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	43.35
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.41**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	218.95
AVERAGE ZERO BIAS (C_o):	0.35
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**216.5**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	133.45
AVERAGE ZERO BIAS (C_o):	1.60
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**66.4**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**78.5**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.54
AVERAGE ZERO BIAS (C_o):	0.09
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.20**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.57
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.71**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	51.45
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted Propane/N_2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.76**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
13:59	0	----	----	----	----	----	----
14:00	1	13.9	197.2	69.0	5.1	3.24	6.78
14:01	2	13.5	199.2	61.1	5.0	3.24	6.77
14:02	3	13.2	197.3	60.5	5.0	3.28	6.72
14:03	4	13.2	199.5	64.0	4.9	3.25	6.74
14:04	5	13.0	199.6	65.9	4.8	3.26	6.75
14:05	6	12.9	199.4	67.9	4.8	3.27	6.78
14:06	7	12.9	202.2	70.0	5.0	3.25	6.77
14:07	8	12.8	205.3	71.6	5.3	3.31	6.71
14:08	9	12.7	210.2	72.6	5.2	3.35	6.74
14:09	10	12.7	213.0	73.6	5.1	3.31	6.76
14:10	11	12.7	214.5	74.4	5.2	3.31	6.74
14:11	12	12.5	220.4	75.9	5.2	3.30	6.75
14:12	13	12.6	221.3	76.8	5.2	3.29	6.78
14:13	14	12.6	221.6	76.7	5.3	3.30	6.76
14:14	15	12.6	223.5	77.6	5.3	3.30	6.74
14:15	16	12.6	222.4	78.4	5.2	3.28	6.77
14:16	17	12.6	225.3	79.3	5.3	3.30	6.77
14:17	18	12.8	226.4	79.6	5.3	3.29	6.78
14:18	19	12.8	223.3	76.6	5.2	3.29	6.77
14:19	20	12.8	226.7	72.1	5.1	3.29	6.75
14:20	21	12.8	227.3	70.1	4.8	3.24	6.78
14:21	22	12.9	227.3	69.3	4.8	3.20	6.82
14:22	23	12.9	225.8	68.7	4.9	3.22	6.83
14:23	24	13.0	223.8	67.5	4.8	3.22	6.83
14:24	25	12.9	220.0	67.8	4.9	3.21	6.81
14:25	26	12.9	222.5	67.0	5.1	3.23	6.82
14:26	27	12.9	223.7	65.8	5.0	3.19	6.86
14:27	28	13.0	220.9	65.9	5.1	3.18	6.85
14:28	29	12.9	218.6	64.3	5.0	3.19	6.82
14:29	30	13.0	219.7	63.9	4.8	3.18	6.85
14:30	31	13.1	219.2	64.4	4.9	3.17	6.87
14:31	32	13.1	217.9	65.0	4.8	3.18	6.83
14:32	33	13.1	216.5	64.4	4.8	3.18	6.82
14:33	34	13.3	214.5	64.1	4.9	3.18	6.86
14:34	35	13.2	212.7	63.9	4.8	3.19	6.84
14:35	36	13.1	208.6	63.6	4.8	3.20	6.82
14:36	37	13.1	212.2	64.2	5.0	3.20	6.89
14:37	38	13.0	212.0	64.3	4.8	3.20	6.85
14:38	39	13.0	210.6	64.0	4.8	3.18	6.81
14:39	40	13.0	211.1	63.9	4.8	3.20	6.86
14:40	41	13.0	210.3	64.6	4.7	3.20	6.82
14:41	42	13.1	209.6	63.8	4.7	3.21	6.80
14:42	43	13.0	208.4	63.1	4.8	3.21	6.85
14:43	44	13.0	206.0	63.0	4.8	3.23	6.81
14:44	45	13.0	203.8	62.3	4.9	3.21	6.82
14:45	46	13.0	201.7	62.1	4.8	3.23	6.83
14:46	47	13.1	200.5	62.5	4.2	3.24	6.82
14:47	48	13.2	204.4	61.9	5.3	3.22	6.85
14:48	49	13.1	203.0	62.1	5.3	3.30	6.80
14:49	50	13.1	199.5	61.3	5.4	3.31	6.78
14:50	51	13.1	199.8	60.5	5.4	3.33	6.74
14:51	52	13.0	197.8	60.2	5.4	3.34	6.74
14:52	53	13.1	196.9	59.9	5.0	3.32	6.77
14:53	54	13.1	197.1	60.4	5.3	3.32	6.76
14:54	55	13.2	195.7	60.3	5.2	3.34	6.75
14:55	56	13.1	199.3	60.8	5.3	3.31	6.76
14:56	57	13.1	199.4	61.4	5.3	3.31	6.75
14:57	58	13.1	199.3	61.2	5.2	3.34	6.75
14:58	59	13.1	199.2	61.3	5.3	3.32	6.76
14:59	60	13.2	197.0	61.3	5.4	3.38	6.75
	AVG (C) =	**12.98**	**210.69**	**66.50**	**5.04**	**3.255**	**6.793**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	1-3
TEST DATE :	12/19/2006
START TIME :	15:43
END TIME:	16:43

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	42.30
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.48**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	219.15
AVERAGE ZERO BIAS (C_o):	0.60
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**206.1**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	133.65
AVERAGE ZERO BIAS (C_o):	1.50
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**71.0**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**84.3**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.54
AVERAGE ZERO BIAS (C_o):	0.08
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.30**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.57
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.76**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	51.05
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted Propane/N_2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.58**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
15:43	0	----	----	----	----	----	----
15:44	1	13.1	202.7	70.4	5.0	3.37	6.77
15:45	2	12.9	200.7	71.6	5.0	3.39	6.79
15:46	3	12.9	200.8	72.7	4.9	3.41	6.80
15:47	4	13.0	193.0	69.5	4.8	3.40	6.79
15:48	5	12.8	191.7	67.6	4.9	3.42	6.76
15:49	6	12.8	190.5	65.7	4.8	3.45	6.78
15:50	7	12.8	189.5	65.5	4.8	3.43	6.81
15:51	8	13.0	191.6	65.5	4.9	3.44	6.80
15:52	9	13.0	192.5	66.5	4.8	3.44	6.78
15:53	10	13.0	195.9	68.9	4.7	3.40	6.78
15:54	11	12.9	202.0	72.5	4.6	3.37	6.82
15:55	12	12.8	207.2	75.7	4.6	3.36	6.84
15:56	13	12.7	210.7	78.2	4.6	3.33	6.81
15:57	14	12.5	213.6	80.8	4.7	3.33	6.82
15:58	15	12.6	211.8	82.4	4.6	3.37	6.85
15:59	16	13.0	209.0	84.3	4.6	3.35	6.83
16:00	17	12.5	203.2	86.4	4.7	3.38	6.82
16:01	18	12.3	197.7	85.5	4.7	3.40	6.85
16:02	19	12.3	199.2	88.1	4.8	3.37	6.87
16:03	20	12.4	195.9	89.8	4.7	3.36	6.84
16:04	21	12.3	196.6	90.7	4.5	3.38	6.84
16:05	22	12.4	199.0	90.8	4.7	3.31	6.89
16:06	23	12.5	201.3	89.3	4.8	3.26	6.87
16:07	24	12.4	205.2	88.3	4.7	3.28	6.85
16:08	25	12.4	210.0	87.4	4.6	3.26	6.88
16:09	26	12.5	207.1	87.6	4.7	3.26	6.88
16:10	27	12.7	206.3	84.1	4.8	3.28	6.87
16:11	28	13.0	206.5	75.7	4.9	3.26	6.88
16:12	29	12.8	204.1	70.3	4.9	3.30	6.90
16:13	30	13.0	201.0	69.3	4.9	3.33	6.91
16:14	31	13.1	197.9	65.9	4.9	3.30	6.90
16:15	32	13.0	199.3	78.6	4.8	3.32	6.87
16:16	33	12.9	199.5	69.4	4.9	3.34	6.88
16:17	34	13.0	200.2	65.4	5.0	3.35	6.89
16:18	35	12.9	202.8	65.1	5.0	3.34	6.87
16:19	36	12.9	203.6	65.1	4.9	3.35	6.85
16:20	37	13.0	202.5	64.9	5.0	3.36	6.88
16:21	38	12.8	201.3	64.3	5.1	3.38	6.83
16:22	39	12.7	202.4	64.1	5.1	3.38	6.79
16:23	40	12.6	200.3	63.8	5.0	3.39	6.80
16:24	41	12.7	197.9	62.9	5.2	3.41	6.81
16:25	42	12.6	194.7	62.6	5.1	3.42	6.79
16:26	43	12.6	192.6	63.0	5.1	3.41	6.77
16:27	44	12.5	190.2	63.7	5.0	3.42	6.76
16:28	45	12.4	191.0	62.5	5.2	3.40	6.79
16:29	46	12.5	189.7	62.1	5.1	3.40	6.80
16:30	47	12.4	191.6	62.2	4.6	3.38	6.80
16:31	48	12.4	197.7	61.7	4.9	3.37	6.79
16:32	49	12.5	202.1	62.5	5.1	3.34	6.80
16:33	50	12.6	204.4	62.2	4.8	3.32	6.82
16:34	51	12.7	204.7	62.2	4.8	3.27	6.87
16:35	52	12.8	205.9	62.3	4.7	3.27	6.85
16:36	53	12.8	205.0	62.4	4.3	3.28	6.83
16:37	54	13.0	201.7	62.1	4.7	3.30	6.85
16:38	55	13.0	200.6	62.4	4.7	3.31	6.84
16:39	56	13.0	200.3	62.2	4.7	3.30	6.85
16:40	57	13.0	202.9	62.4	4.7	3.27	6.85
16:41	58	13.0	204.9	63.3	4.6	3.26	6.86
16:42	59	12.9	208.7	64.2	4.7	3.25	6.88
16:43	60	12.7	214.7	64.4	4.7	3.25	6.88
	AVG (C) =	**12.74**	**200.79**	**71.02**	**4.82**	**3.35**	**6.83**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	1-4
TEST DATE :	12/19/2006
START TIME :	17:26
END TIME:	18:26

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	41.35
AVERAGE ZERO BIAS (C_o):	0.10
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**14.39**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	219.40
AVERAGE ZERO BIAS (C_o):	0.60
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**213.4**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	134.10
AVERAGE ZERO BIAS (C_o):	1.20
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**62.0**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**73.8**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.53
AVERAGE ZERO BIAS (C_o):	0.08
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.35**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.57
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.81**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	50.95
AVERAGE ZERO BIAS (C_o):	0.25
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.92**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
17:26	0	—	—	—	—	—	—
17:27	1	13.9	206.0	63.3	4.9	3.21	6.98
17:28	2	13.7	205.9	62.9	4.8	3.25	6.97
17:29	3	13.5	202.3	64.1	4.7	3.25	6.96
17:30	4	13.4	204.2	65.0	4.8	3.25	6.95
17:31	5	13.2	203.0	64.0	4.7	3.25	6.94
17:32	6	13.1	200.8	64.1	4.9	3.29	6.93
17:33	7	13.0	202.5	65.3	5.0	3.34	6.92
17:34	8	13.0	205.3	64.5	5.0	3.36	6.91
17:35	9	12.9	205.9	64.1	5.0	3.35	6.92
17:36	10	13.2	207.8	64.8	4.9	3.36	6.92
17:37	11	13.0	208.5	65.0	5.0	3.34	6.91
17:38	12	12.8	209.5	63.7	5.0	3.34	6.92
17:39	13	12.9	214.1	63.4	4.9	3.33	6.93
17:40	14	13.1	214.1	64.1	4.9	3.33	6.94
17:41	15	13.1	212.8	63.3	5.0	3.33	6.94
17:42	16	13.1	213.9	63.1	4.8	3.33	6.91
17:43	17	13.3	212.6	63.0	4.8	3.32	6.92
17:44	18	13.3	211.3	63.1	4.8	3.34	6.93
17:45	19	13.3	212.3	63.2	4.9	3.35	6.93
17:46	20	13.4	213.0	62.7	4.8	3.35	6.91
17:47	21	13.4	211.6	63.0	4.8	3.35	6.90
17:48	22	13.5	213.0	61.9	4.9	3.33	6.91
17:49	23	13.5	213.7	62.1	5.0	3.32	6.95
17:50	24	13.3	213.0	61.4	5.0	3.31	6.93
17:51	25	13.2	214.0	61.1	4.9	3.31	6.91
17:52	26	13.3	212.0	61.2	5.1	3.33	6.91
17:53	27	13.3	211.4	61.5	5.4	3.36	6.90
17:54	28	13.1	210.4	60.9	5.6	3.42	6.86
17:55	29	13.2	208.2	61.0	5.7	3.46	6.81
17:56	30	13.2	208.7	61.4	5.7	3.46	6.81
17:57	31	13.1	207.6	60.6	5.6	3.47	6.83
17:58	32	13.2	208.1	61.0	5.6	3.46	6.85
17:59	33	13.1	210.6	60.9	5.7	3.44	6.87
18:00	34	13.1	212.2	61.3	5.6	3.44	6.89
18:01	35	13.2	207.6	61.3	5.5	3.45	6.85
18:02	36	13.3	206.2	61.2	5.4	3.44	6.87
18:03	37	13.3	206.0	61.5	5.4	3.44	6.87
18:04	38	13.4	206.9	61.2	5.5	3.44	6.86
18:05	39	13.3	208.0	61.1	5.6	3.45	6.85
18:06	40	13.3	207.6	61.3	5.5	3.45	6.87
18:07	41	13.5	206.8	61.0	5.4	3.45	6.86
18:08	42	13.6	208.5	61.3	5.0	3.44	6.86
18:09	43	13.7	209.3	61.8	5.4	3.41	6.87
18:10	44	13.6	212.8	62.3	5.5	3.41	6.86
18:11	45	13.6	213.7	61.1	5.5	3.41	6.87
18:12	46	13.6	210.9	60.8	5.4	3.42	6.86
18:13	47	13.6	209.2	60.8	5.4	3.44	6.86
18:14	48	13.5	206.7	60.5	5.4	3.45	6.86
18:15	49	13.4	206.0	61.1	5.5	3.45	6.86
18:16	50	13.4	204.6	61.0	5.4	3.46	6.87
18:17	51	13.4	206.5	61.1	5.4	3.44	6.87
18:18	52	13.2	204.8	62.3	5.5	3.45	6.86
18:19	53	13.2	205.0	61.8	5.6	3.46	6.88
18:20	54	13.2	205.4	61.9	5.4	3.45	6.88
18:21	55	13.2	204.3	62.5	5.7	3.47	6.87
18:22	56	13.1	203.8	61.7	5.6	3.47	6.86
18:23	57	13.2	203.6	62.0	5.7	3.47	6.86
18:24	58	13.1	203.9	62.2	5.7	3.47	6.86
18:25	59	13.3	201.6	61.8	5.5	3.48	6.86
18:26	60	13.4	198.9	61.7	5.6	3.49	6.87
	AVG (C) =	**13.29**	**208.15**	**62.23**	**5.24**	**3.390**	**6.891**

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

ARI ENVIRONMENTAL, INC.
TOTAL PARTICULATE CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
TEST DATE: 12/19/2006
RUN NUMBER: 1

INPUT

V_m:	228.655	ft^3	Q_s:	19,239	dscfm
γ FACTOR:	0.981		T_s:	559.6	°F
P_{bar}:	30.06	in.Hg	Runtime:	240	minutes
ΔH:	2.53	in.H_2O	V_s:	128.988	ft/sec
T_m:	86.2	°F	P_s:	29.91	in.Hg
V_{lc}:	760	mL	Noz. diam:	0.221	inches
M_n front:	29.0	mg			
M_n back:	54.7	mg			

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE @ STANDARD CONDITIONS, DRY BASIS

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

= 219.199 dscf

γ = 0.981

VOLUME OF WATER IN SAMPLE @ STANDARD CONDITIONS

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

= 35.773 scf

FRACTIONAL MOISTURE CONTENT OF STACK GAS

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} \times 100$$

= 14.03 %

PARTICULATE CONCENTRATION IN STACK GAS ON A DRY BASIS

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

Total	=	0.00589	gr/dscf
Front	=	0.00204	gr/dscf
Back	=	0.00385	gr/dscf

$$C'_s = \left(2.205 \times 10^{-6}\right)\left(\frac{M_n}{V_{mstd}}\right)$$

C'_s Total	=	0.842	x 10^{-6} lbs/dscf
C's Front	=	0.292	x 10^{-6} lbs/dscf
C's Back	=	0.550	x 10^{-6} lbs/dscf

EMISSION RATE

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

Total	=	0.972	lbs/hr
Front	=	0.337	lbs/hr
Back	=	0.635	lbs/hr

ISOKINETIC SAMPLING RATE

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

= 99.54 % I

A_n = 0.00026639 ft^2 Runtime = 240 minutes

SRU Tail Gas Thermal Oxidizer
Summary Sheet

Run No. 1 Summary

SAMPLE	1-1	1-2	1-3	1-4	AVERAGE
Sulfur Dioxide					
Concentration					
ppm db @ 0% O_2	76.3	78.5	84.3	73.8	78.2
ppmv db	64.6	66.4	71.0	62.0	66.0
lb/dscf x 10^{-6}	10.73	11.04	11.80	10.30	10.97
Total Emission Rate					
lb/hr	12.383	12.742	13.618	11.888	12.658
ton/yr	54.24	55.81	59.65	52.07	55.44
Nitrogen Oxide					
Concentration					
ppmv db	13.87	13.41	13.48	14.39	13.78
lb/dscf x 10^{-6}	1.656	1.601	1.609	1.718	1.646
Total Emission Rate					
lb/hr	1.912	1.848	1.857	1.983	1.900
ton/yr	8.37	8.09	8.14	8.68	8.32
Carbon Monoxide					
Concentration					
ppmv db	192.0	216.5	206.1	213.4	207.0
lb/dscf x 10^{-6}	13.96	15.73	14.98	15.51	15.05
Total Emission Rate					
lb/hr	16.109	18.163	17.291	17.905	17.367
ton/yr	70.56	79.55	75.73	78.43	76.07
VOC as C_1					
Concentration					
ppmv wb	13.0	14.3	13.8	14.8	14.0
ppmv db	15.2	16.6	16.0	17.2	16.2
lb/dscf x 10^{-6}	0.4726	0.5180	0.4987	0.5355	0.5062
Total Emission Rate					
lb/hr	0.5455	0.5979	0.5756	0.6181	0.5843
ton/yr	2.389	2.619	2.521	2.707	2.559

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 1-1
TEST DATE: 12/19/2006

INPUT

SO_2 AVERAGE CHART READING (C):	64.23	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.80	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	133.40	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 64.23 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\dfrac{C_{ma}}{C_m - C_o}$ = 64.6 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 10.728 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 12.383 \text{ lbs/hr} = 54.240 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 1-2
TEST DATE: 12/19/2006

INPUT

SO_2 AVERAGE CHART READING (C):	66.50	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.60	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	133.45	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 66.50 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\bar{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 66.4 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 11.038 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 12.742 \text{ lbs/hr} = 55.810 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 1-3
TEST DATE: 12/19/2006

INPUT

SO_2 AVERAGE CHART READING (C):	71.02	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.50	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	133.65	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 71.02 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\dfrac{C_{ma}}{C_m - C_o}$ = 71.0 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 11.797 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 13.618 \text{ lbs/hr} = 59.646 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 1-4
TEST DATE: 12/19/2006

INPUT

SO_2 AVERAGE CHART READING (C):	62.23	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.20	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	134.10	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 62.23 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 62.0 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 10.299 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 11.888 \text{ lbs/hr} = 52.071 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 1-1
TEST DATE: 12/19/2006

INPUT

NO_x AVERAGE CHART READING (C):	13.25	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.10	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	42.75	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 13.25 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\dfrac{C_{ma}}{C_m - C_o}$ = 13.9 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.656 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK NOx EMISSION RATE =

$$NO_{x_{pmr}} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.912 \text{ lbs/hr} = 8.373 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 1-2
TEST DATE: 12/19/2006

INPUT

NO_x AVERAGE CHART READING (C):	12.98	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.10	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	43.35	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 12.98 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 13.4 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.601 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = (C_{gas,lb/dscf})(Q_{std}) = 1.848 \text{ lbs/hr} = 8.093 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 1-3
TEST DATE: 12/19/2006

INPUT

NO_x AVERAGE CHART READING (C):	12.74	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.10	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	42.30	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 12.74 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = 13.5 \text{ ppmv db}$$

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.609 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.857 \text{ lbs/hr} = 8.135 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 1-4
TEST DATE: 12/19/2006

INPUT

NO_x AVERAGE CHART READING (C):	13.29	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.10	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	41.35	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 13.29 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 14.4 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.718 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK NOx EMISSION RATE =

$$NO_{x_{pmr}} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.983 \text{ lbs/hr} = 8.685 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 1-1
TEST DATE: 12/19/2006

INPUT

CO AVERAGE CHART READING (C):	187.32	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.85	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	219.35	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 187.32 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = 192.0 \text{ ppmv db}$$

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 13.956 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 16.109 \text{ lbs/hr} = 70.558 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 1-2
TEST DATE: 12/19/2006

INPUT

CO AVERAGE CHART READING (C):	210.69	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	218.95	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 210.69 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 216.5 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 15.735 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std}) = 18.163 \text{ lbs/hr} = 79.554 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 1-3
TEST DATE: 12/19/2006

INPUT

CO AVERAGE CHART READING (C):	200.79	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.60	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	219.15	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 200.79 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = 206.1 \text{ ppmv db}$$

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 14.979 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 17.291 \text{ lbs/hr} = 75.733 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 1-4
TEST DATE: 12/19/2006

INPUT

CO AVERAGE CHART READING (C):	208.15	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.60	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	219.40	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 208.15 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 213.4 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 15.512 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std}) = 17.905 \text{ lbs/hr} = 78.426 \text{ ton/yr}$$

H2S DATA SHEET
USEPA METHOD 15

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: GC-FPD
RUN NO: 1
TEST DATE: 12/19/2006

INPUT

H2S AVERAGE READING (C):	<0.6	ppmv
H2S PPMV @ 3% O2:	<0.6	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

H2S CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{34.08 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= <0.0531 x 10^{-6} lbs/dscf

H2S EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK H2S EMISSION RATE =

$$H_2S_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= <0.0613 lbs/hr
= <0.268 ton/yr

COS DATA SHEET
USEPA METHOD 15

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: GC-FPD
RUN NO: 1
TEST DATE: 12/19/2006

INPUT

COS AVERAGE CHART READING (C):	<0.3	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,154,321	dscfh

CALCULATIONS

COS CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{60.07 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= <0.047 x 10^{-6} lbs/dscf

COS EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,154,321 dscfh

STACK COS EMISSION RATE =

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

= <0.054 lbs/hr
= <0.236 ton/yr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 1-1
TEST DATE: 12/19/2006

INPUT DATA

THC (as propane) average concentration:	4.69 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.2 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.3 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	51.3 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	51.5 ppmv wb
Average THC (as propane) value (C) =	4.3 ppmv wb 5.1 ppmv db
THC as carbon, C_1 =	13.0 ppmv wb 15.2 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,154,321 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.5778 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.4726 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.6670 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.5455 lb/hr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 1-2
TEST DATE: 12/19/2006

INPUT DATA

THC (as propane) average concentration:	5.04 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.3 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.0 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	51.5 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	51.4 ppmv wb
Average THC (as propane) value (C) =	4.8 ppmv wb 5.5 ppmv db
THC as carbon, C_1 =	14.3 ppmv wb 16.6 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,154,321 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.6333 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.5180 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.7310 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.5979 lb/hr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 1-3
TEST DATE: 12/19/2006

INPUT DATA

THC (as propane) average concentration:	4.82 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.0 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.3 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	51.4 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	50.7 ppmv wb
Average THC (as propane) value (C) =	4.6 ppmv wb 5.3 ppmv db
THC as carbon, C_1 =	13.8 ppmv wb 16.0 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,154,321 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.6097 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.4987 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.7037 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.5756 lb/hr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 1-4
TEST DATE: 12/19/2006

INPUT DATA

THC (as propane) average concentration:	5.24 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.3 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.2 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	50.7 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	51.2 ppmv wb
Average THC (as propane) value (C) =	4.9 ppmv wb 5.7 ppmv db
THC as carbon, C_1 =	14.8 ppmv wb 17.2 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,154,321 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.6546 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.5355 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.7557 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.6181 lb/hr

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
TEST DATE: 12/20/2006
RUN NUMBER: 2-1, 2-2, 2-3 & 2-4

γ FACTOR:	0.981	**STACK DIAM:**	32.00 **inches**
BAROMETRIC:	29.83 **in. Hg**	**METER VOLUME:**	233.249 **ft^3**
STATIC PRES:	-1.90 **$in.H_2O$**	**METER TEMP:**	84.7 **°F**
STACK TEMP:	563.2 **°F**	**LIQUID COLL:**	790.3 **milliliters**
SQ.RT ΔP:	1.6593 **$in.H_2O$**	**CO_2:**	6.94 **% by volume**
ΔH:	2.64 **$in.H_2O$**	**O_2:**	3.18 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 222.574 \text{ dscf}$$

$\gamma =$ 0.981

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 37.199 \text{ scf}$$

$V_{lc} =$ 790.3 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.1432$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.0000$$

T = 568.1 °K
P = 754.1 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

$B_{ws} =$ 0.1432

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Total Petrochemicals	**SOURCE:**	SRU Incinerator Stack
LOCATION:	Port Arthur, Texas	**TEST DATE:**	12/20/2006
RUN NUMBER:	2-1, 2-2, 2-3 & 2-4		

BAROMETRIC:	29.83 **in. Hg**	**STACK DIAM:**	32.00 **inches**
STATIC PRES:	-1.9 **in.H_2O**	**CO_2:**	6.94 **% by volume**
STACK TEMP:	563.2 **°F**	**O_2:**	3.18 **% by volume**
SQ.RT ΔP:	1.6593 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	29.24	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.63	**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			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	1.6593	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 563.2 °F + 460	=	1,023	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.69	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	133.08	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	44,596	**acfm**
Stack Area = 5.585 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	22,836 1,370,159	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	19,566 1,173,953	**dscfm** **dscfh**

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	2-1
TEST DATE :	12/20/2006
START TIME :	10:05
END TIME:	11:05

GAS ANALYZER **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	43.25
AVERAGE ZERO BIAS (C_o):	0.20
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.99**

GAS ANALYZER **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	219.50
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**216.2**

GAS ANALYZER **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	130.85
AVERAGE ZERO BIAS (C_o):	-0.35
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**57.4**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**67.4**

GAS ANALYZER **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.61
AVERAGE ZERO BIAS (C_o):	0.08
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.11**

GAS ANALYZER **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.59
AVERAGE ZERO BIAS (C_o):	0.03
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.86**

GAS ANALYZER **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	50.45
AVERAGE ZERO BIAS (C_o):	0.20
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.22**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
10:05	0	—	—	—	—	—	—
10:06	1	14.0	178.5	57.0	4.7	3.25	6.94
10:07	2	14.0	179.0	56.2	4.6	3.22	6.93
10:08	3	13.9	181.3	55.9	4.7	3.21	6.92
10:09	4	14.3	182.3	55.3	4.5	3.21	6.96
10:10	5	13.9	179.4	51.7	4.4	3.22	6.88
10:11	6	13.9	176.9	51.6	4.2	3.23	6.97
10:12	7	13.9	174.1	52.2	4.1	3.24	6.92
10:13	8	14.0	175.5	53.4	4.0	3.21	6.97
10:14	9	14.0	185.3	54.3	4.0	3.18	6.95
10:15	10	14.0	191.3	55.5	4.1	3.16	6.97
10:16	11	13.8	198.4	56.0	4.4	3.13	7.01
10:17	12	13.6	206.9	56.8	4.5	3.22	6.89
10:18	13	13.5	210.3	55.5	4.5	3.26	6.94
10:19	14	13.4	212.0	56.1	4.5	3.26	6.89
10:20	15	13.4	206.4	56.0	4.6	3.28	6.90
10:21	16	13.4	206.6	56.6	4.5	3.28	6.95
10:22	17	13.3	204.9	54.7	4.6	3.28	6.87
10:23	18	13.5	203.6	55.1	4.6	3.30	6.93
10:24	19	13.5	206.9	55.0	4.5	3.27	6.93
10:25	20	13.7	209.1	56.0	4.6	3.26	6.93
10:26	21	13.7	217.2	56.6	4.5	3.26	6.96
10:27	22	13.7	220.8	57.3	4.4	3.24	6.92
10:28	23	13.9	218.3	56.6	4.3	3.24	7.00
10:29	24	14.0	215.8	56.1	4.3	3.23	6.94
10:30	25	13.9	214.3	55.7	4.2	3.24	6.91
10:31	26	13.9	213.1	56.4	4.4	3.25	6.97
10:32	27	13.8	211.5	56.4	4.2	3.27	6.95
10:33	28	13.8	208.7	56.7	4.2	3.27	6.93
10:34	29	13.6	211.1	56.4	4.3	3.26	6.98
10:35	30	13.5	214.7	56.5	4.3	3.25	6.94
10:36	31	13.4	212.2	56.9	4.4	3.25	6.95
10:37	32	13.3	213.8	56.8	4.4	3.25	6.99
10:38	33	13.2	215.0	56.9	4.5	3.25	6.92
10:39	34	13.2	214.5	56.5	4.4	3.27	6.99
10:40	35	13.1	206.1	55.9	4.4	3.28	6.91
10:41	36	13.1	204.9	56.6	4.5	3.28	6.98
10:42	37	13.1	206.8	57.5	4.4	3.26	6.94
10:43	38	13.1	204.5	56.4	4.4	3.26	6.98
10:44	39	13.2	203.8	56.0	4.4	3.25	7.01
10:45	40	13.2	204.8	55.6	4.3	3.23	6.96
10:46	41	13.2	208.4	55.6	4.6	3.24	6.99
10:47	42	13.5	216.9	55.1	4.7	3.18	7.04
10:48	43	13.6	221.3	53.8	4.7	3.14	6.98
10:49	44	13.7	222.2	52.3	4.8	3.14	7.05
10:50	45	13.9	224.7	50.9	4.7	3.13	7.04
10:51	46	13.9	223.2	50.8	4.6	3.12	7.01
10:52	47	13.9	223.8	51.4	4.5	3.14	7.04
10:53	48	14.0	224.5	52.7	4.6	3.13	7.06
10:54	49	14.0	224.4	53.4	4.4	3.14	7.02
10:55	50	13.8	221.2	53.5	4.3	3.14	7.02
10:56	51	13.7	218.8	54.2	4.4	3.14	7.02
10:57	52	13.6	222.2	54.5	4.3	3.14	7.04
10:58	53	13.6	223.8	54.7	4.3	3.13	7.02
10:59	54	13.3	231.3	55.4	4.3	3.12	7.08
11:00	55	13.3	235.5	56.4	4.3	3.09	7.10
11:01	56	13.1	243.4	57.7	4.5	3.07	7.05
11:02	57	13.1	243.0	58.2	4.6	3.08	7.11
11:03	58	13.0	244.7	57.8	4.6	3.08	7.08
11:04	59	13.1	240.4	58.3	4.7	3.09	7.07
11:05	60	13.0	240.4	58.1	4.7	3.09	7.11
	AVG (C) =	**13.58**	**210.91**	**55.43**	**4.44**	**3.205**	**6.978**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	2-2
TEST DATE :	12/20/2006
START TIME :	11:47
END TIME:	12:47

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	44.85
AVERAGE ZERO BIAS (C_o):	0.50
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.92**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	219.75
AVERAGE ZERO BIAS (C_o):	0.40
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**218.6**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	128.50
AVERAGE ZERO BIAS (C_o):	-0.85
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**60.5**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**71.0**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.63
AVERAGE ZERO BIAS (C_o):	0.07
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.09**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.59
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.98**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	51.10
AVERAGE ZERO BIAS (C_o):	0.05
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.70**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
11:47	0	—	—	—	—	—	—
11:48	1	14.6	225.0	60.9	4.7	3.13	7.01
11:49	2	14.6	222.0	59.1	5.0	3.16	7.04
11:50	3	14.4	227.2	58.3	4.9	3.19	7.04
11:51	4	14.5	222.7	57.8	4.9	3.19	7.01
11:52	5	14.3	223.5	57.6	4.8	3.21	7.04
11:53	6	14.2	226.3	58.1	4.7	3.20	7.05
11:54	7	14.2	221.5	58.6	4.8	3.20	7.07
11:55	8	14.2	223.2	60.3	4.8	3.21	7.06
11:56	9	14.1	222.6	58.9	4.9	3.21	7.04
11:57	10	14.1	220.8	58.1	4.8	3.21	7.07
11:58	11	14.1	217.3	57.2	4.8	3.23	7.07
11:59	12	14.2	217.1	64.0	4.8	3.24	7.02
12:00	13	14.1	211.0	58.0	4.8	3.25	7.04
12:01	14	14.1	213.6	56.3	4.8	3.26	7.02
12:02	15	13.9	214.0	60.4	4.9	3.25	7.00
12:03	16	14.0	216.7	60.6	4.9	3.25	7.07
12:04	17	14.2	216.0	59.0	4.8	3.25	7.03
12:05	18	14.3	218.5	58.9	4.9	3.25	7.05
12:06	19	14.4	216.1	58.2	4.9	3.24	7.09
12:07	20	14.2	216.9	57.3	5.0	3.24	7.03
12:08	21	14.1	213.2	57.1	5.0	3.25	7.07
12:09	22	14.1	210.3	57.2	5.0	3.26	7.07
12:10	23	14.1	209.2	56.9	5.1	3.27	7.03
12:11	24	14.1	208.7	56.9	5.1	3.27	7.09
12:12	25	14.1	210.7	56.9	5.0	3.25	7.09
12:13	26	14.1	211.4	57.1	4.8	3.21	7.08
12:14	27	14.1	210.8	57.7	4.7	3.17	7.13
12:15	28	14.2	211.7	57.8	4.8	3.14	7.13
12:16	29	14.2	215.4	58.4	4.9	3.15	7.09
12:17	30	14.3	218.5	58.5	4.9	3.15	7.14
12:18	31	14.4	217.1	58.4	4.8	3.14	7.13
12:19	32	14.3	214.4	58.0	4.8	3.16	7.09
12:20	33	14.5	215.0	57.5	4.7	3.16	7.15
12:21	34	14.5	213.0	57.3	4.8	3.15	7.13
12:22	35	14.3	213.4	57.2	4.9	3.16	7.11
12:23	36	14.4	212.8	57.0	4.8	3.16	7.18
12:24	37	14.3	210.0	56.9	4.8	3.15	7.11
12:25	38	14.3	212.9	57.2	4.9	3.16	7.14
12:26	39	14.2	214.1	56.9	4.6	3.13	7.18
12:27	40	14.2	214.5	57.0	4.7	3.13	7.13
12:28	41	14.2	214.9	56.9	4.7	3.15	7.16
12:29	42	14.2	214.9	56.5	4.8	3.14	7.16
12:30	43	14.0	215.3	55.9	4.7	3.16	7.10
12:31	44	14.1	214.2	55.3	4.8	3.16	7.18
12:32	45	14.0	212.4	55.0	4.7	3.15	7.14
12:33	46	14.0	209.4	55.0	4.8	3.18	7.16
12:34	47	14.0	207.8	55.8	4.7	3.18	7.16
12:35	48	14.0	206.8	55.2	4.3	3.19	7.11
12:36	49	14.1	205.6	54.4	4.9	3.19	7.17
12:37	50	14.2	204.3	55.3	4.8	3.20	7.12
12:38	51	14.2	199.5	55.3	4.8	3.20	7.12
12:39	52	14.2	200.6	55.0	4.8	3.21	7.15
12:40	53	14.2	202.7	54.6	5.0	3.24	7.07
12:41	54	14.3	204.7	54.4	5.1	3.25	7.12
12:42	55	14.4	202.9	54.2	5.0	3.28	7.08
12:43	56	14.4	205.7	54.5	5.1	3.27	7.07
12:44	57	14.3	210.1	54.6	5.0	3.24	7.15
12:45	58	14.3	210.1	53.7	4.9	3.24	7.09
12:46	59	14.3	208.2	53.5	4.9	3.24	7.08
12:47	60	14.3	213.0	54.1	5.1	3.22	7.13
	AVG (C) =	**14.22**	**213.54**	**57.08**	**4.85**	**3.20**	**7.09**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	2-3
TEST DATE :	12/20/2006
START TIME :	13:25
END TIME:	14:25

GAS ANALYZER **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	45.15
AVERAGE ZERO BIAS (C_o):	1.00
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.39**

GAS ANALYZER **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	220.50
AVERAGE ZERO BIAS (C_o):	1.05
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**227.2**

GAS ANALYZER **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	128.95
AVERAGE ZERO BIAS (C_o):	-0.50
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**61.8**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**72.7**

GAS ANALYZER **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.63
AVERAGE ZERO BIAS (C_o):	0.07
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.14**

GAS ANALYZER **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.60
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.98**

GAS ANALYZER **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	50.25
AVERAGE ZERO BIAS (C_o):	0.15
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.59**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
13:25	0	——	——	——	——	——	——
13:26	1	14.5	225.0	61.1	5.0	3.18	7.14
13:27	2	14.4	223.9	61.1	4.9	3.18	7.11
13:28	3	14.2	225.1	61.0	4.9	3.17	7.12
13:29	4	14.1	226.4	60.3	4.8	3.18	7.16
13:30	5	14.1	227.5	60.3	4.7	3.16	7.13
13:31	6	14.2	226.1	60.5	4.7	3.17	7.11
13:32	7	14.3	227.8	60.5	4.7	3.19	7.14
13:33	8	14.2	229.4	60.4	4.8	3.16	7.12
13:34	9	14.3	226.6	60.5	4.7	3.20	7.08
13:35	10	14.4	225.6	59.5	4.7	3.19	7.13
13:36	11	14.4	226.8	59.3	4.8	3.18	7.13
13:37	12	14.4	227.3	58.8	4.7	3.20	7.09
13:38	13	14.3	227.2	58.7	4.7	3.23	7.13
13:39	14	14.2	227.2	60.4	4.7	3.24	7.13
13:40	15	14.1	228.0	59.3	4.9	3.25	7.08
13:41	16	14.2	230.3	59.5	4.8	3.24	7.15
13:42	17	14.0	227.9	58.7	4.9	3.24	7.08
13:43	18	14.0	228.3	58.2	4.9	3.27	7.13
13:44	19	13.9	227.6	57.7	4.9	3.27	7.09
13:45	20	14.0	223.0	57.7	4.9	3.29	7.09
13:46	21	13.9	224.3	57.0	4.7	3.27	7.13
13:47	22	13.9	224.2	56.9	4.7	3.27	7.06
13:48	23	13.9	224.5	57.5	4.7	3.26	7.12
13:49	24	13.9	227.4	57.3	4.8	3.26	7.10
13:50	25	13.9	226.9	57.1	4.8	3.25	7.09
13:51	26	13.9	228.5	57.7	4.8	3.25	7.15
13:52	27	13.8	229.5	57.8	4.7	3.25	7.08
13:53	28	13.9	227.5	57.7	4.7	3.26	7.11
13:54	29	13.9	226.3	57.5	4.7	3.25	7.13
13:55	30	13.9	223.1	56.6	4.6	3.25	7.11
13:56	31	13.9	222.6	56.4	4.4	3.26	7.08
13:57	32	13.7	217.7	57.1	4.7	3.26	7.10
13:58	33	13.6	219.2	57.9	4.6	3.25	7.12
13:59	34	13.5	217.3	56.4	4.6	3.25	7.11
14:00	35	13.4	216.5	55.7	4.3	3.23	7.10
14:01	36	13.4	217.0	55.8	4.3	3.24	7.12
14:02	37	13.3	219.4	56.0	4.5	3.24	7.13
14:03	38	13.2	218.1	55.7	4.5	3.24	7.11
14:04	39	13.2	219.4	55.7	4.5	3.24	7.10
14:05	40	13.1	220.8	56.1	4.4	3.22	7.13
14:06	41	13.1	223.2	55.5	4.5	3.21	7.15
14:07	42	13.4	221.5	55.2	4.6	3.23	7.10
14:08	43	13.5	222.4	55.1	4.7	3.25	7.08
14:09	44	14.0	222.5	55.6	4.7	3.26	7.11
14:10	45	14.3	220.0	56.9	4.7	3.26	7.12
14:11	46	14.5	220.3	56.5	4.7	3.24	7.09
14:12	47	14.8	219.7	57.5	4.8	3.26	7.09
14:13	48	15.0	215.7	58.5	4.8	3.28	7.10
14:14	49	15.0	216.9	59.0	4.7	3.26	7.10
14:15	50	15.1	218.2	58.9	4.4	3.26	7.06
14:16	51	15.0	219.1	58.9	4.1	3.32	7.07
14:17	52	14.9	220.3	60.3	5.0	3.33	7.09
14:18	53	15.0	222.5	62.1	5.1	3.32	7.10
14:19	54	15.0	220.4	62.1	5.1	3.33	7.06
14:20	55	14.8	220.3	62.1	5.1	3.33	7.07
14:21	56	14.7	220.3	62.7	5.1	3.34	7.12
14:22	57	14.7	216.5	63.5	5.2	3.35	7.08
14:23	58	14.7	211.7	64.3	5.1	3.39	7.05
14:24	59	14.7	211.8	65.0	5.1	3.38	7.07
14:25	60	14.7	211.0	64.4	5.0	3.38	7.08
	AVG (C) =	**14.14**	**222.69**	**58.72**	**4.75**	**3.253**	**7.105**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	2-4
TEST DATE :	12/20/2006
START TIME :	15:03
END TIME:	16:03

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	44.70
AVERAGE ZERO BIAS (C_o):	1.40
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.75**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	221.05
AVERAGE ZERO BIAS (C_o):	1.35
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**215.6**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	131.50
AVERAGE ZERO BIAS (C_o):	-0.35
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**59.9**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**71.4**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.61
AVERAGE ZERO BIAS (C_o):	0.06
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.36**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.60
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.94**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	48.30
AVERAGE ZERO BIAS (C_o):	0.55
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.63**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
15:03	0	------	------	------	------	------	------
15:04	1	15.0	219.2	61.9	5.3	3.40	7.09
15:05	2	14.8	217.0	61.3	5.3	3.42	7.08
15:06	3	14.8	215.1	60.4	5.2	3.42	7.05
15:07	4	14.7	213.1	59.9	5.2	3.43	7.03
15:08	5	14.8	215.6	59.9	5.2	3.43	7.07
15:09	6	14.9	215.6	60.1	5.1	3.43	7.08
15:10	7	15.0	215.1	59.5	5.1	3.43	7.05
15:11	8	14.8	218.6	58.7	5.2	3.43	7.05
15:12	9	14.9	218.8	58.9	5.1	3.42	7.11
15:13	10	14.8	219.0	59.9	5.1	3.42	7.06
15:14	11	14.8	218.3	59.8	5.0	3.44	7.07
15:15	12	14.8	216.8	61.4	4.9	3.44	7.11
15:16	13	14.8	217.5	59.9	5.0	3.44	7.07
15:17	14	14.7	214.0	59.1	5.0	3.43	7.07
15:18	15	14.8	210.5	58.4	4.9	3.45	7.08
15:19	16	14.7	210.7	58.1	4.9	3.45	7.09
15:20	17	14.7	211.1	58.4	4.8	3.43	7.09
15:21	18	14.7	213.9	58.2	4.9	3.43	7.08
15:22	19	14.7	216.6	59.0	5.1	3.45	7.08
15:23	20	14.7	217.9	58.9	5.2	3.48	7.08
15:24	21	14.7	215.4	58.7	5.2	3.50	7.07
15:25	22	14.5	215.5	58.5	5.1	3.48	7.06
15:26	23	14.6	216.8	58.4	5.3	3.50	7.05
15:27	24	14.4	217.4	58.3	5.1	3.49	7.08
15:28	25	14.5	214.2	58.2	5.3	3.50	7.08
15:29	26	14.4	210.9	57.9	5.2	3.50	7.07
15:30	27	14.3	210.5	57.5	5.2	3.50	7.05
15:31	28	14.3	211.0	57.9	5.2	3.50	7.06
15:32	29	14.2	211.9	58.0	5.2	3.51	7.07
15:33	30	14.1	211.6	58.0	5.3	3.50	7.08
15:34	31	14.1	211.6	57.8	5.2	3.50	7.06
15:35	32	14.1	211.3	57.8	5.2	3.50	7.06
15:36	33	14.2	212.1	57.6	4.9	3.50	7.09
15:37	34	14.3	211.2	60.5	5.2	3.50	7.08
15:38	35	14.2	212.3	63.8	5.1	3.49	7.06
15:39	36	14.3	211.3	61.8	5.0	3.49	7.09
15:40	37	14.4	212.7	60.2	4.8	3.48	7.11
15:41	38	14.4	214.5	59.1	4.9	3.48	7.04
15:42	39	14.6	208.0	59.2	4.9	3.49	7.09
15:43	40	14.7	210.1	58.0	4.8	3.50	7.04
15:44	41	14.6	207.5	57.6	5.0	3.51	7.05
15:45	42	14.7	207.1	56.8	5.0	3.51	7.06
15:46	43	14.8	209.1	56.6	5.1	3.49	7.03
15:47	44	14.7	210.7	56.5	5.0	3.50	7.06
15:48	45	14.8	210.2	56.2	5.2	3.51	7.09
15:49	46	14.8	210.2	56.8	4.9	3.49	7.06
15:50	47	14.9	206.1	56.3	4.8	3.49	7.07
15:51	48	15.0	204.8	55.5	4.7	3.45	7.10
15:52	49	15.0	202.3	55.9	4.8	3.47	7.04
15:53	50	15.0	202.6	55.5	4.6	3.45	7.12
15:54	51	14.9	201.3	55.7	4.5	3.44	7.05
15:55	52	14.7	204.0	55.5	4.7	3.44	7.08
15:56	53	14.5	211.0	55.0	4.7	3.41	7.12
15:57	54	14.6	210.4	55.8	4.7	3.39	7.12
15:58	55	14.6	210.4	55.8	4.5	3.39	7.10
15:59	56	14.5	210.1	55.8	4.5	3.41	7.10
16:00	57	14.5	211.4	56.4	4.6	3.41	7.11
16:01	58	14.6	207.9	57.7	4.6	3.42	7.09
16:02	59	14.6	204.4	55.4	4.6	3.42	7.07
16:03	60	14.6	205.3	54.8	4.6	3.42	7.04
	AVG (C) =	**14.63**	**211.86**	**58.18**	**4.98**	**3.460**	**7.074**

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

ARI ENVIRONMENTAL, INC.
TOTAL PARTICULATE CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
TEST DATE: 12/20/2006
RUN NUMBER: 2

INPUT

V_m:	233.249	**ft^3**	**Q_s:**	19,566	**dscfm**
γ FACTOR:	0.981		**T_s:**	563.2	**°F**
P_{bar}:	29.83	**in.Hg**	**Runtime:**	240	**minutes**
ΔH:	2.64	**in.H_2O**	**V_s:**	133.081	**ft/sec**
T_m:	84.7	**°F**	**P_s:**	29.69	**in.Hg**
V_{lc}:	790.3	**mL**	**Noz. diam:**	0.221	**inches**
M_n front:	14.4	**mg**			
M_n back:	43.6	**mg**			

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE @ STANDARD CONDITIONS, DRY BASIS

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

= 222.574 **dscf**

γ = 0.981

VOLUME OF WATER IN SAMPLE @ STANDARD CONDITIONS

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

= 37.199 **scf**

FRACTIONAL MOISTURE CONTENT OF STACK GAS

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} \times 100$$

= 14.32 **%**

PARTICULATE CONCENTRATION IN STACK GAS ON A DRY BASIS

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

Total	=	0.00402	**gr/dscf**
Front	=	0.00100	**gr/dscf**
Back	=	0.00302	**gr/dscf**

$$C'_s = \left(2.205 \times 10^{-6}\right)\left(\frac{M_n}{V_{mstd}}\right)$$

C'_s Total	=	0.575	**x 10^{-6} lbs/dscf**
C's Front	=	0.143	**x 10^{-6} lbs/dscf**
C's Back	=	0.432	**x 10^{-6} lbs/dscf**

EMISSION RATE

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

Total	=	0.674	**lbs/hr**
Front	=	0.167	**lbs/hr**
Back	=	0.507	**lbs/hr**

ISOKINETIC SAMPLING RATE

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

= 99.38 **% I**

A_n = 0.00026639 ft^2 Runtime = 240 minutes

SRU Tail Gas Thermal Oxidizer
Summary Sheet

Run No. 2 Summary

SAMPLE	2-1	2-2	2-3	2-4	AVERAGE
Sulfur Dioxide					
Concentration					
ppm db @ 0% O_2	67.4	71.0	72.7	71.4	70.6
ppmv db	57.4	60.5	61.8	59.9	59.9
lb/dscf x 10^{-6}	9.53	10.04	10.26	9.95	9.95
Total Emission Rate					
lb/hr	11.192	11.790	12.044	11.687	11.678
ton/yr	49.02	51.64	52.75	51.19	51.15
Nitrogen Oxide					
Concentration					
ppmv db	13.99	13.92	13.39	13.75	13.76
lb/dscf x 10^{-6}	1.670	1.662	1.599	1.642	1.643
Total Emission Rate					
lb/hr	1.961	1.952	1.877	1.928	1.929
ton/yr	8.59	8.55	8.22	8.44	8.45
Carbon Monoxide					
Concentration					
ppmv db	216.2	218.6	227.2	215.6	219.4
lb/dscf x 10^{-6}	15.71	15.89	16.52	15.67	15.95
Total Emission Rate					
lb/hr	18.445	18.653	19.389	18.394	18.720
ton/yr	80.79	81.70	84.92	80.56	82.00
VOC as C_1					
Concentration					
ppmv wb	12.7	14.1	13.8	13.9	13.6
ppmv db	14.8	16.4	16.1	16.2	15.9
lb/dscf x 10^{-6}	0.4609	0.5126	0.5006	0.5059	0.4950
Total Emission Rate					
lb/hr	0.5410	0.6018	0.5877	0.5939	0.5811
ton/yr	2.370	2.636	2.574	2.601	2.545

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 2-1
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	55.43	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	130.85	ppmv
STACK GAS VOLUMETPIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 55.4 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 57.4 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 9.534 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 11.192 \text{ lbs/hr} = 49.023 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 2-2
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	57.08	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.85	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	128.50	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 57.08 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\dfrac{C_{ma}}{C_m - C_o}$ = 60.5 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 10.043 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 11.790 \text{ lbs/hr} = 51.640 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 2-3
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	58.72	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.50	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	128.95	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 58.72 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 61.8 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 10.259 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 12.044 \text{ lbs/hr} = 52.753 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 2-4
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	58.18	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	131.50	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 58.18 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 59.9 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 9.955 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 11.687 \text{ lbs/hr} = 51.187 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 2-1
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	13.581	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.200	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	43.25	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 13.58 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = 14.0 \text{ ppmv db}$$

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.670 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.9606 \text{ lbs/hr} = 8.5873 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Fort Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 2-2
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	14.22	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.50	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	44.85	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 14.22 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 13.9 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.662 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.9515 \text{ lbs/hr} = 8.5476 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 2-3
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	14.14	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.00	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	45.15	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 14.14 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 13.4 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.599 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK NOx EMISSION RATE =

$$NO_{x_{pmr}} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.8769 \text{ lbs/hr} = 8.2207 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 2-4
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	14.63	ppmv
AVG PRE/POST ZERC DRIFT READING (C_o):	1.40	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	44.70	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 14.63 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 13.8 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.642 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.9279 \text{ lbs/hr} = 8.4443 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 2-1
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	210.91	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.15	ppmv
CAL GAS CCNCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	219.50	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 210.91 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 216.2 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$ = 15.712 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$ = 18.445 lbs/hr
= 80.791 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 2-2
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	213.54	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.40	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	219.75	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 213.54 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = (\overline{C} - C_o)\frac{C_{ma}}{C_m - C_o}$ = 218.6 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = (C_{gas,ppm})\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 15.889 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = (C_{gas,lb/dscf})(Q_{std}) = 18.653 \text{ lbs/hr} = 81.702 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 2-3
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	222.69	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.05	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	220.50	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 222.69 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = 227.2 \text{ ppmv db}$$

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 16.516 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 19.389 \text{ lbs/hr} = 84.924 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 2-4
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	211.86	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	221.05	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 211.86 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 215.6 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$ = 15.668 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$ = 18.394 lbs/hr
= 80.565 ton/yr

H2S DATA SHEET
USEPA METHOD 15

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: GC-FPD
RUN NO: 2
TEST DATE: 12/20/2006

INPUT

H2S AVERAGE READING (C):	<0.6	ppmv
H2S PPMV @ 3% O2:	<0.6	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

H2S CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{34.08 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= <0.0531 x 10^{-6} lbs/dscf

H2S EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK H2S EMISSION RATE =

$$H_2S_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= <0.0623 lbs/hr
= <0.273 ton/yr

COS DATA SHEET
USEPA METHOD 15

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: GC-FPD
RUN NO: 2
TEST DATE: 12/20/2006

INPUT

COS AVERAGE CHART READING (C):	<0.3	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,953	dscfh

CALCULATIONS

COS CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{60.07 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= <0.047 x 10^{-6} lbs/dscf

COS EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,953 dscfh

STACK COS EMISSION RATE =

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

= <0.055 lbs/hr
= <0.241 ton/yr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 2-1
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	4.44 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.4 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.0 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	50.3 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	50.6 ppmv wb
Average THC (as propane) value (C) =	4.2 ppmv wb 4.9 ppmv db
THC as carbon, C_1 =	12.7 ppmv wb 14.8 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,953 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.5634 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.4609 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.6615 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.5410 lb/hr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 2-2
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	4.85 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.0 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.1 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	50.6 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	51.6 ppmv wb
Average THC (as propane) value (C) =	4.7 ppmv wb 5.5 ppmv db
THC as carbon, C_1 =	14.1 ppmv wb 16.4 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,953 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} = 0.6267 \times 10^{-6} \text{ lb/dscf as propane}$$

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} = 0.5126 \times 10^{-6} \text{ lb/dscf as carbon}$$

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} = 0.7358 \text{ lb/hr}$$

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} = 0.6018 \text{ lb/hr}$$

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 2-3
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	4.75 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.1 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.2 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	51.6 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	48.9 ppmv wb
Average THC (as propane) value (C) =	4.6 ppmv wb 5.4 ppmv db
THC as carbon, C_1 =	13.8 ppmv wb 16.1 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,953 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} = \quad 0.6120 \times 10^{-6} \text{ lb/dscf as propane}$$

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} = \quad 0.5006 \times 10^{-6} \text{ lb/dscf as carbon}$$

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} = \quad 0.7185 \text{ lb/hr}$$

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} = \quad 0.5877 \text{ lb/hr}$$

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 2-4
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	4.98 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.2 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.9 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	48.9 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	47.7 ppmv wb
Average THC (as propane) value (C) =	4.6 ppmv wb 5.4 ppmv db
THC as carbon, C_1 =	13.9 ppmv wb 16.2 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,953 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} = \quad 0.6185 \times 10^{-6} \text{ lb/dscf as propane}$$

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} = \quad 0.5059 \times 10^{-6} \text{ lb/dscf as carbon}$$

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} = \quad 0.7261 \text{ lb/hr}$$

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} = \quad 0.5939 \text{ lb/hr}$$

ARI ENVIRONMENTAL, INC.
MOISTURE CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
TEST DATE: 12/20/2006
RUN NUMBER: 3-1, 3-2, 3-3 & 3-4

γ FACTOR:	0.981	**STACK DIAM:**	32.00 **inches**
BAROMETRIC:	29.74 **in. Hg**	**METER VOLUME:**	232.924 **ft^3**
STATIC PRES:	-1.90 **$in.H_2O$**	**METER TEMP:**	82.4 **°F**
STACK TEMP:	561.4 **°F**	**LIQUID COLL:**	779.5 **milliliters**
SQ.RT ΔP:	1.6588 **$in.H_2O$**	**CO_2:**	7.24 **% by volume**
ΔH:	2.63 **$in.H_2O$**	**O_2:**	3.28 **% by volume**

ENGLISH UNITS
(29.92 in.Hg & °F)

VOLUME OF SAMPLE
@ STANDARD CONDITIONS, DRY BASIS

$$V_{mstd} = \left(\frac{528}{29.92}\right) \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right] = 222.532 \text{ dscf}$$

γ = 0.981

VOLUME OF WATER IN SAMPLE
@ STANDARD CONDITIONS

$$V_{wstd} = 0.04707 \times V_{lc} = 36.691 \text{ scf}$$

V_{lc} = 779.5 mL

FRACTIONAL MOISTURE CONTENT OF STACK GAS AS MEASURED

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} = 0.1415$$

FRACTIONAL MOISTURE CONTENT OF STACK GAS @ SATURATION

$$MF = \frac{\left(10^{\left[8.361 - \left(\frac{1893.5}{T - 27.65}\right)\right]}\right) - 0.5}{P} = 1.0000$$

T = 567.1 °K
P = 751.8 mmHg

FRACTIONAL MOISTURE CONTENT USED IN CALCULATIONS

B_{ws} = 0.1415

ARI ENVIRONMENTAL, INC.
FLOW RATE CALCULATION SUMMARY

COMPANY:	Total Petrochemicals	**SOURCE:**	SRU Incinerator Stack
LOCATION:	Port Arthur, Texas	**TEST DATE:**	12/20/2006
RUN NUMBER:	3-1, 3-2, 3-3 & 3-4		

BAROMETRIC:	29.74 **in. Hg**	**STACK DIAM:**	32.00 **inches**
STATIC PRES:	-1.9 **in.H_2O**	**CO_2:**	7.24 **% by volume**
STACK TEMP:	561.4 **°F**	**O_2:**	3.28 **% by volume**
SQ.RT ΔP:	1.6588 **in.H_2O**		

DRY MOLECULAR WEIGHT OF STACK GAS			
$M_d = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$	=	29.29	**lb/lb-mole**
MOLECULAR WEIGHT OF STACK GAS, wet basis			
$M_s = M_d(1 - B_{ws}) + 18B_{ws}$	=	27.69	**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			
$\overline{\sqrt{\Delta P}} = \frac{1}{n}\sum_{i=1}^{n}\sqrt{\Delta p}$	=	1.6588	**in. H_2O**
AVERAGE ABSOLUTE STACK GAS TEMPERATURE			
$T_s =$ 561.4 °F + 460	=	1,021	**°R**
ABSOLUTE STACK GAS PRESSURE			
$P_s = P_{bar} + \frac{P_{static}}{13.6}$	=	29.60	**in.Hg**
STACK GAS VELOCITY			
$V_s = (85.49)(C_p)(\text{avg}\sqrt{\Delta P})\sqrt{\frac{T_s}{(P_s)(M_s)}}$	=	132.97	**ft/sec**
STACK GAS VOLUMETRIC FLOW RATE, actual			
$Q_s = 60 \times V_s \times A_s$	=	44,560	**acfm**
Stack Area = 5.585 ft^2			
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, wet basis			
$Q_{stdw} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)$	=	22,789 1,367,314	**scfm, wb** **scfh, wb**
STACK GAS VOLUMETRIC FLOW RATE, standard conditions, dry basis			
$Q_{std} = \left(\frac{528}{29.92}\right)(Q_s)\left(\frac{P_s}{T_s}\right)(1 - B_{ws})$	=	19,563 1,173,781	**dscfm** **dscfh**

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	3-1
TEST DATE :	12/20/2006
START TIME :	16:38
END TIME:	17:38

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	43.75
AVERAGE ZERO BIAS (C_o):	1.40
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.56**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	221.30
AVERAGE ZERO BIAS (C_o):	1.30
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**206.3**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	132.00
AVERAGE ZERO BIAS (C_o):	-0.35
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**58.3**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**69.5**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.60
AVERAGE ZERO BIAS (C_o):	0.06
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.37**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.60
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**6.84**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	48.35
AVERAGE ZERO BIAS (C_o):	0.60
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**4.35**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
16:38	0	------	------	------	------	------	------
16:39	1	14.6	202.0	59.6	4.6	3.53	6.96
16:40	2	14.4	202.4	59.0	4.6	3.53	6.96
16:41	3	14.3	202.5	58.4	4.5	3.54	6.97
16:42	4	14.3	201.3	57.7	4.5	3.54	6.98
16:43	5	14.1	200.3	57.6	4.4	3.53	6.96
16:44	6	13.9	196.3	56.7	4.2	3.53	6.94
16:45	7	14.0	195.1	57.0	4.3	3.55	6.92
16:46	8	14.1	196.5	57.4	4.3	3.55	6.94
16:47	9	13.9	197.9	57.8	4.3	3.54	6.92
16:48	10	13.8	197.6	56.8	4.4	3.54	6.90
16:49	11	13.8	197.4	57.4	4.5	3.54	6.92
16:50	12	13.8	197.2	58.3	4.5	3.55	6.94
16:51	13	13.7	195.5	57.3	4.7	3.54	6.95
16:52	14	13.8	191.5	55.9	4.5	3.52	6.93
16:53	15	13.7	190.8	55.4	4.5	3.54	6.91
16:54	16	13.8	190.0	55.2	4.6	3.54	6.94
16:55	17	13.8	189.4	55.0	4.6	3.53	6.94
16:56	18	13.9	190.7	55.2	4.6	3.51	6.88
16:57	19	13.9	195.4	56.1	4.3	3.49	6.91
16:58	20	14.1	197.6	56.7	4.6	3.49	6.94
16:59	21	14.2	197.9	56.4	4.5	3.49	6.93
17:00	22	14.2	198.0	56.2	4.4	3.49	6.90
17:01	23	14.4	195.2	56.3	4.5	3.51	6.90
17:02	24	14.4	197.7	56.2	4.6	3.51	6.90
17:03	25	14.4	199.4	56.0	4.5	3.51	6.92
17:04	26	14.5	198.6	56.1	4.9	3.51	6.92
17:05	27	14.5	196.8	55.3	4.6	3.52	6.90
17:06	28	14.6	195.1	55.2	4.6	3.51	6.92
17:07	29	14.5	195.7	56.0	4.8	3.52	6.93
17:08	30	14.6	196.5	56.1	4.7	3.51	6.93
17:09	31	14.6	195.5	55.8	4.8	3.52	6.91
17:10	32	14.6	192.6	55.5	4.3	3.53	6.89
17:11	33	14.7	192.4	55.6	4.6	3.52	6.91
17:12	34	14.7	192.3	56.0	4.6	3.52	6.92
17:13	35	14.7	197.0	55.7	4.8	3.50	6.94
17:14	36	14.7	201.1	56.8	4.8	3.44	6.95
17:15	37	14.6	199.1	59.2	4.8	3.41	6.95
17:16	38	14.6	198.0	58.6	4.8	3.42	6.96
17:17	39	14.7	197.2	59.9	4.8	3.44	6.97
17:18	40	14.6	199.7	58.8	4.8	3.42	6.98
17:19	41	14.4	203.6	57.5	5.1	3.41	6.97
17:20	42	14.2	202.5	56.9	4.7	3.38	6.99
17:21	43	14.2	201.9	57.3	5.2	3.40	6.98
17:22	44	14.0	205.4	57.5	5.1	3.38	7.01
17:23	45	13.9	207.3	56.8	5.1	3.39	7.04
17:24	46	13.9	210.4	56.9	5.0	3.37	7.05
17:25	47	13.9	214.8	56.6	4.9	3.35	7.06
17:26	48	13.6	218.8	56.3	5.1	3.35	7.06
17:27	49	13.6	220.2	56.0	5.4	3.37	7.05
17:28	50	13.6	223.5	56.1	4.9	3.35	7.08
17:29	51	13.7	221.8	55.6	5.4	3.37	7.10
17:30	52	13.7	221.7	56.8	5.3	3.36	7.10
17:31	53	13.8	220.9	56.2	5.1	3.36	7.09
17:32	54	13.8	220.9	56.3	5.2	3.36	7.07
17:33	55	14.0	221.5	56.4	5.2	3.36	7.11
17:34	56	14.0	219.9	56.6	5.1	3.35	7.08
17:35	57	14.1	219.2	57.3	5.2	3.37	7.05
17:36	58	14.1	222.2	57.3	5.2	3.35	7.09
17:37	59	14.2	220.7	57.0	5.2	3.35	7.09
17:38	60	14.1	220.0	56.4	5.0	3.36	7.04
	AVG (C) =	**14.16**	**203.01**	**56.76**	**4.75**	**3.46**	**6.97**

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

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	3-2
TEST DATE :	12/20/2006
START TIME :	18:11
END TIME:	19:11

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	43.40
AVERAGE ZERO BIAS (C_o):	1.50
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**13.43**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	221.35
AVERAGE ZERO BIAS (C_o):	1.35
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**223.1**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	131.85
AVERAGE ZERO BIAS (C_o):	-0.35
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**73.1**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**86.3**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.62
AVERAGE ZERO BIAS (C_o):	0.05
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.20**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.49
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**7.20**

GAS ANALYZER — **VOC**

SCALE : 0 - 100 ppm

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
18:11	0	------	------	------	------	------	------
18:12	1	14.3	226.9	91.7	4.7	3.27	7.10
18:13	2	14.2	228.5	91.8	4.7	3.24	7.12
18:14	3	14.2	228.1	92.9	4.6	3.23	7.09
18:15	4	14.2	227.2	93.6	4.5	3.24	7.09
18:16	5	14.3	229.7	94.4	4.4	3.24	7.12
18:17	6	14.2	231.3	94.2	4.4	3.25	7.13
18:18	7	13.9	232.7	91.6	4.4	3.25	7.12
18:19	8	13.9	230.3	89.5	4.5	3.26	7.12
18:20	9	13.8	225.9	84.9	4.6	3.29	7.10
18:21	10	13.8	223.0	77.5	4.7	3.31	7.12
18:22	11	13.6	221.3	73.8	4.7	3.31	7.14
18:23	12	13.6	215.8	69.7	4.7	3.31	7.12
18:24	13	13.6	214.9	66.4	4.9	3.32	7.10
18:25	14	13.5	218.3	72.0	4.9	3.31	7.11
18:26	15	13.6	219.3	71.7	4.9	3.30	7.12
18:27	16	13.4	217.1	69.2	4.9	3.30	7.13
18:28	17	13.4	219.6	69.0	4.9	3.29	7.13
18:29	18	13.4	219.1	69.6	5.0	3.30	7.11
18:30	19	13.5	215.6	70.8	4.8	3.29	7.12
18:31	20	13.6	214.7	71.7	5.1	3.30	7.15
18:32	21	13.7	213.4	72.2	5.0	3.31	7.14
18:33	22	13.8	211.5	72.6	5.0	3.31	7.14
18:34	23	13.8	210.3	72.2	5.1	3.32	7.12
18:35	24	13.9	214.9	73.5	5.0	3.29	7.13
18:36	25	14.1	218.8	74.6	4.5	3.28	7.14
18:37	26	14.2	220.3	74.8	5.0	3.27	7.16
18:38	27	14.2	227.0	76.9	5.1	3.27	7.15
18:39	28	14.3	226.3	77.2	4.9	3.22	7.14
18:40	29	14.3	228.8	77.4	4.9	3.21	7.17
18:41	30	14.4	227.6	76.9	4.8	3.21	7.21
18:42	31	14.4	227.3	79.5	4.9	3.21	7.17
18:43	32	14.5	224.3	79.5	4.9	3.23	7.15
18:44	33	14.5	221.9	74.2	4.6	3.24	7.17
18:45	34	14.5	218.6	70.4	4.9	3.24	7.19
18:46	35	14.6	217.0	69.7	4.9	3.24	7.16
18:47	36	14.6	214.2	68.0	4.9	3.24	7.14
18:48	37	14.7	217.7	64.8	4.8	3.26	7.18
18:49	38	14.7	214.2	63.4	4.8	3.25	7.18
18:50	39	14.7	216.5	62.9	4.8	3.24	7.17
18:51	40	14.6	216.8	62.7	4.4	3.24	7.17
18:52	41	14.5	217.8	62.1	4.8	3.25	7.17
18:53	42	14.4	216.9	62.3	4.9	3.25	7.17
18:54	43	14.4	214.3	61.5	4.9	3.26	7.14
18:55	44	14.2	217.0	61.6	5.2	3.29	7.14
18:56	45	14.0	216.4	60.5	5.2	3.37	7.15
18:57	46	14.0	214.8	59.5	5.2	3.36	7.13
18:58	47	13.9	213.6	59.3	5.3	3.37	7.13
18:59	48	13.8	215.1	59.5	5.3	3.35	7.14
19:00	49	13.7	217.2	59.6	5.4	3.36	7.18
19:01	50	13.7	215.8	59.6	5.3	3.37	7.18
19:02	51	13.6	221.8	63.1	5.3	3.35	7.18
19:03	52	13.7	219.6	67.1	5.5	3.35	7.18
19:04	53	13.6	220.8	62.4	5.2	3.36	7.17
19:05	54	13.7	217.4	63.8	5.3	3.36	7.18
19:06	55	13.7	217.3	62.1	5.3	3.37	7.20
19:07	56	13.8	214.8	60.7	5.2	3.37	7.23
19:08	57	13.7	214.8	60.5	5.4	3.36	7.24
19:09	58	13.7	215.2	60.0	5.4	3.35	7.24
19:10	59	13.8	210.3	60.1	5.3	3.35	7.29
19:11	60	13.8	210.6	60.5	5.3	3.35	7.31
	AVG (C) =	**14.00**	**219.47**	**71.2**	**4.9**	**3.292**	**7.154**

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	3-3
TEST DATE :	12/20/2006
START TIME :	19:48
END TIME:	20:48

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	42.65
AVERAGE ZERO BIAS (C_o):	1.60
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**12.92**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	220.80
AVERAGE ZERO BIAS (C_o):	0.90
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**202.5**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	131.00
AVERAGE ZERO BIAS (C_o):	-0.60
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**64.4**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**76.7**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.62
AVERAGE ZERO BIAS (C_o):	0.18
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.33**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.36
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**7.51**

GAS ANALYZER — **VOC**

SCALE : 0 - 100 ppm

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
19:48	0	----	----	----	----	----	----
19:49	1	13.6	206.4	83.7	5.0	3.43	7.30
19:50	2	13.5	203.5	75.4	5.0	3.42	7.26
19:51	3	13.6	199.0	71.8	5.0	3.43	7.23
19:52	4	13.6	199.1	70.5	4.8	3.44	7.22
19:53	5	13.7	196.2	69.6	4.8	3.46	7.22
19:54	6	13.7	197.7	69.9	4.8	3.46	7.22
19:55	7	13.6	199.1	67.8	4.9	3.45	7.23
19:56	8	13.6	200.8	66.9	4.9	3.45	7.24
19:57	9	13.6	200.9	68.2	4.9	3.43	7.25
19:58	10	13.5	200.7	65.5	5.0	3.43	7.25
19:59	11	13.6	198.5	63.4	5.2	3.45	7.24
20:00	12	13.5	198.5	63.1	5.2	3.44	7.23
20:01	13	13.5	192.7	62.1	5.0	3.46	7.24
20:02	14	13.5	192.7	62.0	5.0	3.45	7.25
20:03	15	13.5	189.8	61.9	5.2	3.45	7.22
20:04	16	13.6	190.1	61.5	5.2	3.47	7.20
20:05	17	13.8	191.8	61.8	5.1	3.48	7.20
20:06	18	13.7	198.1	64.2	5.0	3.44	7.20
20:07	19	13.6	199.3	62.3	5.2	3.44	7.21
20:08	20	13.7	197.3	61.7	5.2	3.45	7.22
20:09	21	13.6	197.3	62.9	5.1	3.45	7.22
20:10	22	13.6	194.8	62.2	5.0	3.46	7.23
20:11	23	13.6	197.6	61.6	5.2	3.44	7.22
20:12	24	13.6	194.8	61.4	5.1	3.46	7.23
20:13	25	13.7	195.0	61.5	5.3	3.46	7.26
20:14	26	13.6	195.4	60.8	5.2	3.47	7.26
20:15	27	13.7	193.6	61.3	5.3	3.46	7.27
20:16	28	13.6	194.4	61.0	5.3	3.47	7.27
20:17	29	13.6	191.6	60.6	5.5	3.45	7.29
20:18	30	13.6	194.6	60.6	5.2	3.46	7.31
20:19	31	13.5	194.3	61.1	4.9	3.46	7.32
20:20	32	13.5	193.9	60.9	5.2	3.47	7.28
20:21	33	13.5	195.5	61.2	5.2	3.45	7.28
20:22	34	13.5	194.6	61.2	5.4	3.46	7.27
20:23	35	13.4	195.7	60.7	5.2	3.45	7.29
20:24	36	13.4	190.8	59.8	5.3	3.47	7.28
20:25	37	13.3	194.3	59.9	5.4	3.47	7.29
20:26	38	13.4	190.6	60.0	5.2	3.48	7.28
20:27	39	13.2	192.3	59.4	5.2	3.49	7.28
20:28	40	13.3	193.0	59.0	5.4	3.47	7.28
20:29	41	13.2	193.7	59.0	5.3	3.48	7.26
20:30	42	13.2	192.7	58.7	5.1	3.48	7.25
20:31	43	13.2	192.1	58.4	5.4	3.48	7.27
20:32	44	13.1	194.1	58.5	5.2	3.47	7.27
20:33	45	13.2	197.2	58.9	5.2	3.45	7.28
20:34	46	13.2	200.4	60.1	5.2	3.43	7.29
20:35	47	13.1	201.7	60.2	5.3	3.41	7.28
20:36	48	13.1	201.6	59.5	5.2	3.42	7.28
20:37	49	13.2	200.1	59.1	5.2	3.44	7.26
20:38	50	13.2	200.8	59.3	5.4	3.46	7.24
20:39	51	13.1	203.3	61.8	5.4	3.48	7.24
20:40	52	13.2	200.2	60.2	5.7	3.54	7.22
20:41	53	13.0	205.9	59.0	5.8	3.54	7.22
20:42	54	13.0	208.3	58.4	5.7	3.53	7.20
20:43	55	13.0	206.7	57.8	5.7	3.53	7.20
20:44	56	12.9	214.9	58.8	5.5	3.50	7.21
20:45	57	12.9	216.1	59.1	5.7	3.50	7.20
20:46	58	12.8	219.1	58.8	5.7	3.50	7.18
20:47	59	12.8	220.8	58.5	5.7	3.49	7.19
20:48	60	12.7	222.7	58.5	5.6	3.49	7.19
	AVG (C) =	**13.39**	**198.81**	**62.21**	**5.24**	**3.463**	**7.246**

MONITOR DATA SUMMARY

COMPANY :	Total Petrochemicals
LOCATION:	Port Arthur, Texas
SOURCE :	SRU Incinerator Stack
REPETITION :	3-4
TEST DATE :	12/20/2006
START TIME :	21:24
END TIME:	22:24

GAS ANALYZER — **NOx**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	42.40
AVERAGE ZERO BIAS (C_o):	1.55
CALIBRATION GAS:	Diluted EPA Protocol NOx
CALIBRATION PPM (C_{ma}):	45.0
PPM CORRECTED (C_{gas}):	**12.49**

GAS ANALYZER — **CO**

SCALE :	0 - 500 ppm
AVERAGE CAL. BIAS (C_m):	219.55
AVERAGE ZERO BIAS (C_o):	0.45
CALIBRATION GAS:	Diluted EPA Protocol CO
CALIBRATION PPM (C_{ma}):	225.0
PPM CORRECTED (C_{gas}):	**242.3**

GAS ANALYZER — **SO2**

SCALE :	0 - 300 ppm
AVERAGE CAL. BIAS (C_m):	130.10
AVERAGE ZERO BIAS (C_o):	-0.85
CALIBRATION GAS:	Diluted EPA Protocol SO2
CALIBRATION PPM (C_{ma}):	135.0
PPM CORRECTED (C_{gas}):	**68.0**
SO_2 @ 0% O_2 ($C_{gas@0\%O2}$):	**80.4**

GAS ANALYZER — **O2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.59
AVERAGE ZERO BIAS (C_o):	0.18
CALIBRATION GAS:	Diluted EPA Protocol O2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**3.22**

GAS ANALYZER — **CO2**

SCALE :	0 - 10 %
AVERAGE CAL. BIAS (C_m):	4.35
AVERAGE ZERO BIAS (C_o):	0.04
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	4.50
% CORRECTED (C_{gas}):	**7.40**

GAS ANALYZER — **VOC**

SCALE :	0 - 100 ppm
AVERAGE CAL. BIAS (C_m):	48.15
AVERAGE ZERO BIAS (C_o):	0.30
CALIBRATION GAS:	Diluted EPA Protocol CO2
CALIBRATION % (C_{ma}):	50.0
% CORRECTED (C_{gas}):	**5.64**

CLOCK TIME	ELAPSED TIME	NOx	CO	SO2	VOC	O2	CO2
21:24	0	—	—	—	—	—	—
21:25	1	13.5	225.9	64.6	5.4	3.35	7.15
21:26	2	12.9	230.2	65.1	5.6	3.36	7.13
21:27	3	12.9	228.6	63.7	5.7	3.40	7.10
21:28	4	12.9	227.1	63.4	5.9	3.45	7.07
21:29	5	12.9	229.0	62.1	5.8	3.48	7.06
21:30	6	12.7	231.9	61.7	5.8	3.48	7.05
21:31	7	12.7	230.8	61.2	5.8	3.48	7.05
21:32	8	12.7	236.2	60.9	5.8	3.47	7.07
21:33	9	12.6	236.6	61.3	5.7	3.45	7.10
21:34	10	12.7	239.3	61.7	5.9	3.43	7.12
21:35	11	12.7	240.9	63.2	5.8	3.43	7.09
21:36	12	12.6	244.0	62.8	5.7	3.41	7.07
21:37	13	12.6	244.4	63.5	5.8	3.41	7.11
21:38	14	12.5	246.8	64.6	5.8	3.40	7.12
21:39	15	12.8	249.9	64.9	5.4	3.37	7.14
21:40	16	12.8	243.2	65.4	5.4	3.28	7.18
21:41	17	12.7	241.2	65.4	5.3	3.25	7.19
21:42	18	12.7	242.8	66.5	5.2	3.23	7.21
21:43	19	12.6	244.1	67.1	5.3	3.22	7.23
21:44	20	12.6	245.1	68.1	5.2	3.23	7.24
21:45	21	12.6	246.8	69.3	5.3	3.22	7.21
21:46	22	12.5	250.3	70.1	5.4	3.21	7.19
21:47	23	12.5	249.7	71.5	5.4	3.21	7.21
21:48	24	12.6	249.8	72.8	5.3	3.21	7.23
21:49	25	12.5	250.0	73.4	5.3	3.20	7.21
21:50	26	12.5	248.2	73.8	5.6	3.22	7.18
21:51	27	12.6	238.8	73.9	5.4	3.25	7.14
21:52	28	12.6	238.3	74.3	5.3	3.28	7.12
21:53	29	12.7	231.6	74.4	5.5	3.28	7.14
21:54	30	12.9	228.3	74.1	5.6	3.31	7.10
21:55	31	12.9	231.4	73.3	5.8	3.32	7.07
21:56	32	12.8	234.6	70.6	6.0	3.36	7.03
21:57	33	13.0	236.9	68.4	6.0	3.35	7.05
21:58	34	13.1	235.8	67.0	6.1	3.38	7.05
21:59	35	13.1	236.3	66.2	6.2	3.39	7.04
22:00	36	13.1	240.2	65.8	6.2	3.37	7.03
22:01	37	13.1	238.4	64.7	6.1	3.37	7.02
22:02	38	13.1	235.3	64.0	5.9	3.38	7.01
22:03	39	13.2	234.1	63.3	5.9	3.37	7.02
22:04	40	13.1	236.0	62.9	5.9	3.34	7.04
22:05	41	13.1	234.2	62.5	5.9	3.38	7.03
22:06	42	13.1	231.1	61.9	5.8	3.41	7.04
22:07	43	13.1	232.5	61.6	5.9	3.40	7.02
22:08	44	12.9	236.8	61.8	5.6	3.40	7.02
22:09	45	12.8	238.6	61.8	5.9	3.35	7.05
22:10	46	12.8	239.6	61.5	6.1	3.33	7.07
22:11	47	12.8	237.6	61.1	5.9	3.36	7.09
22:12	48	12.9	235.4	60.7	6.1	3.36	7.09
22:13	49	12.8	233.3	61.3	6.1	3.37	7.11
22:14	50	12.9	234.7	61.2	6.2	3.39	7.11
22:15	51	13.0	235.0	61.9	6.3	3.39	7.12
22:16	52	13.1	238.5	61.4	5.6	3.34	7.14
22:17	53	13.2	232.5	61.6	5.6	3.23	7.21
22:18	54	13.2	233.2	62.1	5.4	3.22	7.22
22:19	55	13.2	229.9	62.5	5.0	3.24	7.21
22:20	56	13.2	228.9	61.8	5.6	3.24	7.22
22:21	57	13.2	224.9	62.9	5.6	3.25	7.20
22:22	58	13.3	220.0	62.8	5.6	3.28	7.18
22:23	59	13.4	219.1	62.7	5.5	3.30	7.18
22:24	60	13.3	217.1	61.2	5.4	3.31	7.17
	AVG (C) =	**12.89**	**236.36**	**65.12**	**5.69**	**3.34**	**7.12**

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

ARI ENVIRONMENTAL, INC.
TOTAL PARTICULATE CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
TEST DATE: 12/20/2006
RUN NUMBER: 3

INPUT

V_m:	232.924	ft^3	Q_s:	19,563	dscfm
γ FACTOR:	0.981		T_s:	561.4	°F
P_{bar}:	29.74	in.Hg	Runtime:	240	minutes
ΔH:	2.63	in.H_2O	V_s:	132.974	ft/sec
T_m:	82.4	°F	P_s:	29.60	in.Hg
V_{lc}:	779.5	mL	Noz. diam:	0.221	inches
M_n front:	10.0	mg			
M_n back:	69.0	mg			

ENGLISH UNITS
(29.92 in.Hg & 68 °F)

VOLUME OF SAMPLE @ STANDARD CONDITIONS, DRY BASIS

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

= 222.532 dscf

γ = 0.981

VOLUME OF WATER IN SAMPLE @ STANDARD CONDITIONS

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

= 36.691 scf

FRACTIONAL MOISTURE CONTENT OF STACK GAS

$$B_{ws} = \frac{V_{wstd}}{V_{wstd} + V_{mstd}} \times 100$$

= 14.15 %

PARTICULATE CONCENTRATION IN STACK GAS ON A DRY BASIS

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

Total	=	0.00548	gr/dscf
Front	=	0.00069	gr/dscf
Back	=	0.00478	gr/dscf

$$C'_s = (2.205 \times 10^{-6})\left(\frac{M_n}{V_{mstd}}\right)$$

C'_s Total	=	0.783	x 10^{-6} lbs/dscf
C's Front	=	0.099	x 10^{-6} lbs/dscf
C's Back	=	0.684	x 10^{-6} lbs/dscf

EMISSION RATE

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

Total	=	0.919	lbs/hr
Front	=	0.116	lbs/hr
Back	=	0.802	lbs/hr

ISOKINETIC SAMPLING RATE

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

= 99.38 % I

A_n = 0.00026639 ft^2 Runtime = 240 minutes

SRU Tail Gas Thermal Oxidizer
Summary Sheet

Run No. 3 Summary

SAMPLE	3-1	3-2	3-3	3-4	AVERAGE
Sulfur Dioxide					
Concentration					
ppm db @ 0% O_2	69.5	86.3	76.7	80.4	78.2
ppmv db	58.3	73.1	64.4	68.0	66.0
lb/dscf x 10^{-6}	9.68	12.15	10.70	11.30	10.96
Total Emission Rate					
lb/hr	11.359	14.256	12.564	13.262	12.860
ton/yr	49.75	62.44	55.03	58.09	56.33
Nitrogen Oxide					
Concentration					
ppmv db	13.56	13.43	12.92	12.49	13.10
lb/dscf x 10^{-6}	1.619	1.604	1.543	1.491	1.564
Total Emission Rate					
lb/hr	1.900	1.882	1.811	1.750	1.836
ton/yr	8.32	8.24	7.93	7.67	8.04
Carbon Monoxide					
Concentration					
ppmv db	206.3	223.1	202.5	242.3	218.5
lb/dscf x 10^{-6}	14.99	16.21	14.72	17.61	15.88
Total Emission Rate					
lb/hr	17.598	19.030	17.275	20.667	18.643
ton/yr	77.08	83.35	75.66	90.52	81.65
VOC as C_1					
Concentration					
ppmv wb	13.1	14.6	15.3	16.9	15.0
ppmv db	15.2	17.0	17.9	19.7	17.4
lb/dscf x 10^{-6}	0.4739	0.5285	0.5568	0.6140	0.5433
Total Emission Rate					
lb/hr	0.5563	0.6203	0.6536	0.7208	0.6377
ton/yr	2.436	2.717	2.863	3.157	2.793

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 3-1
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	56.76	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	132.00	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 56.76 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 58.3 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 9.677 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 11.36 \text{ lbs/hr} = 49.8 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 3-2
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	71.25	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	131.85	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 71.25 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\dfrac{C_{ma}}{C_m - C_o}$ = 73.1 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 12.15 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 14.26 \text{ lbs/hr} = 62.4 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 3-3
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	62.21	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.60	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	131.00	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 62.21 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 64.4 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 10.70 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 12.56 \text{ lbs/hr} = 55.0 \text{ ton/yr}$$

SO_2 CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 6C

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Western Research 721-ATM
RUN NO: 3-4
TEST DATE: 12/20/2006

INPUT

SO_2 AVERAGE CHART READING (C):	65.12	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	-0.85	ppmv
CAL GAS CONCENTRATION (C_{ma}):	135.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	130.10	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK SO_2 AVERAGE CHART READING = 65.12 ppmv

STACK SO_2 CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

SO_2 CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\dfrac{C_{ma}}{C_m - C_o}$ = 68.0 ppmv db

SO_2 CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{64 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 11.30 \times 10^{-6} \text{ lbs/dscf}$$

SO_2 EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK SO_2 EMISSION RATE =

$$SO_{2pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 13.26 \text{ lbs/hr} = 58.1 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 3-1
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	14.16	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.40	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	43.75	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 14.16 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 13.6 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.619 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK NOx EMISSION RATE =

$$NO_{x_{pmr}} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.900 \text{ lbs/hr} = 8.32 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 3-2
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	14.00	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.50	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	43.40	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 14.00 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv (corrected) = $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 13.4 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.604 \times 10^{-5} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.882 \text{ lbs/hr} = 8.24 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 3-3
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	13.39	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.60	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	42.65	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 13.39 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 12.9 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 1.543 \times 10^{-6} \text{ lbs/dscf}$$

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 1.811 \text{ lbs/hr} = 7.93 \text{ ton/yr}$$

NO_x CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 7E

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42H
RUN NO: 3-4
TEST DATE: 12/20/2006

INPUT

NO_x AVERAGE CHART READING (C):	12.89	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.55	ppmv
CAL GAS CONCENTRATION (C_{ma}):	45.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	42.40	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK NO_x AVERAGE CHART READING = 12.89 ppmv

STACK NO_x CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

NO_x CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 12.5 ppmv db

NOx CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{46 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$ = 1.491 x 10^{-6} lbs/dscf

NO_x EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK NOx EMISSION RATE =

$$NO_{xpmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$ = 1.750 lbs/hr
= 7.67 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 3-1
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	203.01	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.30	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	221.30	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 203.01 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 206.3 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$ = 14.993 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$ = 17.60 lbs/hr
= 77.1 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 3-2
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	219.47	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	1.35	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	221.35	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 219.47 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 223.078 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$ = 16.21 x 10^{-6} lbs/dscf

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$ = 19.03 lbs/hr
= 83.4 ton/yr

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 3-3
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	198.81	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.90	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	220.80	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 198.81 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected) $C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$ = 202.5 ppmv db

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 14.717 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 17.27 \text{ lbs/hr} = 75.7 \text{ ton/yr}$$

CO CALIBRATION CORRECTION DATA SHEET
USEPA METHOD 10

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: Thermo Environmental Model 42C
RUN NO: 3-4
TEST DATE: 12/20/2006

INPUT

CO AVERAGE CHART READING (C):	236.36	ppmv
AVG PRE/POST ZERO DRIFT READING (C_o):	0.45	ppmv
CAL GAS CONCENTRATION (C_{ma}):	225.0	ppmv
AVG CAL PRE/POST TEST READING (C_m):	219.55	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

STACK CO AVERAGE CHART READING = 236.36 ppmv

STACK CO CONC. CORRECTED FOR ZERO AND CALIBRATION DRIFT:

CO CONC, ppmv = (corrected)

$$C_{gas,ppm} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = 242.3 \text{ ppmv db}$$

CO CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{28 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right) = 17.607 \times 10^{-6} \text{ lbs/dscf}$$

CO EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK CO EMISSION RATE =

$$CO_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right) = 20.67 \text{ lbs/hr} = 90.5 \text{ ton/yr}$$

H2S DATA SHEET
USEPA METHOD 15

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: GC-FPD
RUN NO: 3
TEST DATE: 12/20/2006

INPUT

H2S AVERAGE READING (C):	<0.6	ppmv
H2S PPMV @ 3% O2:	<0.6	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

H2S CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{34.08 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= <0.0531 x 10^{-6} lbs/dscf

H2S EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK H2S EMISSION RATE =

$$H_2S_{pmr} = \left(C_{gas,lb/dscf}\right)\left(Q_{std}\right)$$

= <0.0623 lbs/hr
= <0.273 ton/yr

COS DATA SHEET
USEPA METHOD 15

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
MONITOR ID: GC-FPD
RUN NO: 3
TEST DATE: 12/20/2006

INPUT

COS AVERAGE CHART READING (C):	<0.3	ppmv
STACK GAS VOLUMETRIC FLOW RATE (Q_{std}):	1,173,781	dscfh

CALCULATIONS

COS CONC.(lbs/dscf) =

$$C_{gas,lb/dscf} = \left(C_{gas,ppm}\right)\left(\frac{60.07 lb/lb-mole}{385.26 \times 10^6 ft^3/lb-mole}\right)$$

= <0.047 x 10^{-6} lbs/dscf

COS EMISSION RATE:

STACK GAS VOLUMETRIC FLOW RATE = 1,173,781 dscfh

STACK COS EMISSION RATE =

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

= <0.055 lbs/hr
= <0.240 ton/yr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 3-1
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	4.75 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.9 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.3 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	47.7 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	49.0 ppmv wb
Average THC (as propane) value (C) =	4.4 ppmv wb 5.1 ppmv db
THC as carbon, C_1 =	13.1 ppmv wb 15.2 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,781 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.5794 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.4739 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.6801 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.5563 lb/hr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 3-3
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	5.24 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.2 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.5 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	48.2 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	48.1 ppmv wb
Average THC (as propane) value (C) =	5.1 ppmv wb 6.0 ppmv db
THC as carbon, C_1 =	15.3 ppmv wb 17.9 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,781 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.6808 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.5568 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.7991 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.6536 lb/hr

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 3-2
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	4.94 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.3 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.2 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	49.0 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	48.2 ppmv wb
Average THC (as propane) value (C) =	4.9 ppmv wb 5.7 ppmv db
THC as carbon, C_1 =	14.6 ppmv wb 17.0 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,781 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} = 0.6461 \times 10^{-6} \text{ lb/dscf as propane}$$

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} = 0.5285 \times 10^{-6} \text{ lb/dscf as carbon}$$

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} = 0.7584 \text{ lb/hr}$$

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} = 0.6203 \text{ lb/hr}$$

METHOD 25A TOTAL HYDROCARBON (THC) CALCULATION SUMMARY

COMPANY: Total Petrochemicals
LOCATION: Port Arthur, Texas
SOURCE: SRU Incinerator Stack
RUN NUMBER: 3-4
TEST DATE: 12/20/2006

INPUT DATA

THC (as propane) average concentration:	5.69 ppmv wb
Propane/N_2 avg. Zero pre-test System Bias:	0.5 ppmv wb
Propane/N_2 avg. Zero post-test System Bias:	0.1 ppmv wb
Propane/N_2 Cal. Gas Conc.:	50.0 ppmv wb
Propane/N_2 avg. Cal. pre-test System Bias:	48.1 ppmv wb
Propane/N_2 avg. Cal. post-test System Bias:	48.2 ppmv wb
Average THC (as propane) value (C) =	5.6 ppmv wb 6.6 ppmv db
THC as carbon, C_1 =	16.9 ppmv wb 19.7 ppmv db
Stack gas volumetric flow rate (Q_s) =	1,173,781 dscfh

CALCULATIONS

THC concentration in stack gas (lb/dscf)

$$C'_{gas(propane)} = \frac{(C_{gas(propane)})(44.05)}{(385.26 \times 10^6)} =$$ 0.7507 x 10^{-6} lb/dscf as propane

$$C'_{gas(carbon)} = \frac{(C_{gas(carbon)})(12.01)}{(385.26 \times 10^6)} =$$ 0.6140 x 10^{-6} lb/dscf as carbon

THC emission rate

$$E_{THC(propane)} = C'_{gas(propane)} \times Q_{std} =$$ 0.8812 lb/hr

$$E_{THC(carbon)} = C'_{gas(carbon)} \times Q_{std} =$$ 0.7208 lb/hr

APPENDIX B

Field Data

ARI REFERENCE METHOD CEMS DATA
USEPA METHOD 205
DILUTION SYSTEM VERIFICATION

Company: TOTAL PETROCHEMICALS, USA
Location: PORT ARTHUR, TX
Dilution System ID: Z635
Dilution Flow Rate: 5.0 LPM
Verification date: 12-18-06

Analyzer Info
Monitor type: SERVOMEX MODEL 1440 C
Monitor range: 18.00%
Monitor Serial No.: X1440D1/46

Initial Calibration Data

Calibration Concentration		Calibration results		Time	
Zero:	0.00	Zero:	0.01	Zero:	1457
Low:		Low:		Low:	
Mid:	9.00	Mid:	8.92	Mid:	1504
High:	18.00	High:	18.30	High:	1501

Dilution System Verification

Mid level gas type: USEPA Protocol 1
Mid level concentration: ~~7.49%~~ 7.49%
Mid level tank serial #: CC198400

High level dilution gas type: USEPA Protocol 1
High level concentration: 25.2%
High level tank serial #: CC163330
Target concentration No. 1: 5.00%
Target concentration No. 2: 13.00%

Dilution System Results

Target Concentration No. 1	Instrument Response	Time	Target Concentration No. 2	Instrument Response	Time
Trial No. 1:	5.05	1507	Trial No. 1:	13.01	1509
Trial No. 2:	5.04	1514	Trial No. 2:	13.02	1518
Trial No. 3:	5.04	1524	Trial No. 3:	13.02	1527
Average:			Average:		

% Difference from target concentration: _____

% Difference from target concentration: _____

Mid Level Calibration Gas Results

	Instrument Response	Time
Trial No. 1:	7.41	1512
Trial No. 2:	7.42	1520
Trial No. 3:	7.40	1531

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-18-06
Run Number	PRELIMINARY
Start Time	
Stop Time	

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM ROTOMETER EXCESS = 1.8 LPM

Analyzer Span Values (% or ppm)

CO	450	ppm
CO2		%
O2		%
THC	100	ppm
NOx	90	ppm
SO2	~~300~~ 270	ppm

	CALIBRATION ERROR - 1543 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1724		Posttest: 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		-0.9	1543	-0.5	1724				Co=
CO Low		CO/N2								
CO Mid	225.0	CC93770	219.4	1606	216.9	1736				Cm=
CO High	450.0	1988ppm	449.8	1604						
CO_2 Zero	0.00		0.00	1543	0.01	1724				Co=
CO_2 Low		CO2/N2								
CO_2 Mid	5.00	CC163330	5.05	1550	5.01	1734				Cm=
CO_2 High	9.00	25.2%	8.92	1547						
O_2 Zero	0.00		-0.01	1543	0.05	1724				Co=
O_2 Low		O2/N2								
O_2 Mid	4.50	CC59953	4.49	1559	4.54	1729				Cm=
O_2 High	9.00	25.0%	9.00	1554						
THC Zero	0.0				0.0	1842				Co=
THC Low	25.0	C3H8/N2			24.0	1851				
THC Mid	50.0	CC107341			49.5	1849				Cm=
THC High	85.0	2,045ppm			85.0	1847				
NO_x Zero	0.0		0.0	1543	0.2	1724				Co=
NO_x Low		NO/N2								
NO_x Mid	~~45.0~~ 50.0	CC9844	49.7	1644	48.1	1751				Cm=
NO_x High	90.0	1940ppm	90.2	1639						
SO_2 Zero	0.0		-0.2	1543	0.1	1724				Co=
SO_2 Low		SO2/N2								
SO_2 Mid	135.0	CC43398	137.9	1616	131.2	1745				Cm=
SO_2 High	270.0	2063ppm	270.6	1613						

NO_x CONVERTER CHECK: CYL # CC198389 50.0ppm NO_2/N_2

NO_x RESPONSE TIME DOWN = 71 SEC.
UP = 70 SEC.

THC RESPONSE #1 = 26 SEC.
#2 = 26 SEC.
#3 = 26 SEC.

O_2 RESPONSE TIME UP = 96 SEC
DOWN = 93 SEC

CO_2 RESPONSE TIME DOWN = 94 SEC
UP = 97 SEC

CO RESPONSE TIME DOWN = 79 SEC
UP = 77 SEC

SO_2 RESPONSE TIME DOWN = 131 SEC
UP = 132 SEC.

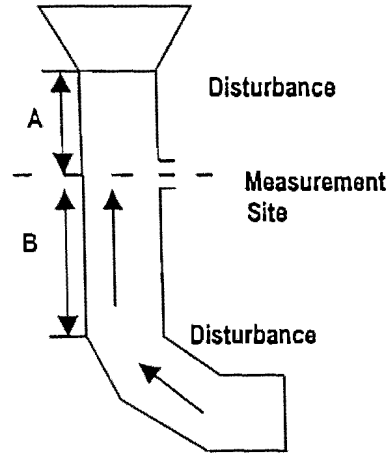
TRAVERSE POINT LOCATION FOR CIRCULAR AND RECTANGULAR DUCTS

PLANT Total - Port Arthur, TX
DATE 12-18-06
SAMPLING LOCATION SRU Incin.
INSIDE OF FAR WALL TO
OUTSIDE OF PORT (DISTANCE C) 40"
INSIDE OF NEAR WALL TO
OUTSIDE OF PORT (DISTANCE D) 8"
STACK ID 32"
NEAREST DOWNSTREAM DISTURBANCE (A) 57 (1.78dd)
NEAREST UPSTREAM DISTURBANCE (B) 310 (9.68dd)
CALCULATOR Cameron W.

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 $\frac{2 \times L \times W}{L + W}$

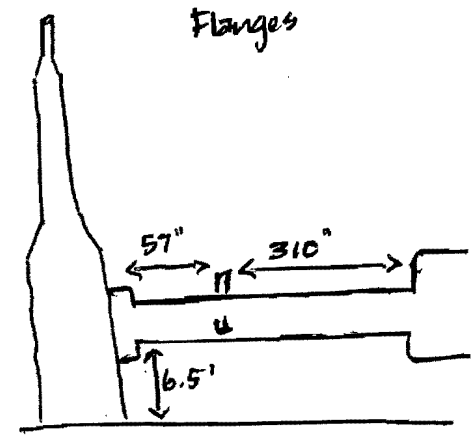


TRAVERSE POINT NUMBER	FRACTION OF STACK I.D.	STACK I.D.	PRODUCT OF COLUMNS 1 AND 2 (TO NEAREST 1/8 INCH)	DISTANCE D (PORT DEPTH)	TRAVERSE POINT LOCATION FROM OUTSIDE OF PORT (SUM OF COLUMNS 3 AND 4)
1	4.4	32	1 3/8	8	9 3/8"
2	14.6	↓	4 5/8	↓	12 5/8"
3	29.6	↓	9 1/2	↓	17 1/2"
4	70.4	↓	22 1/2	↓	30 1/2"
5	85.4	↓	27 3/8	↓	35 3/8"
6	95.6	↓	30 5/8	↓	38 5/8"
7					
8					
9					
10	16.7	32	5 3/8	16 7/8	22 1/4"
11	50.0	↓	16	↓	32 7/8"
12	83.3	↓	26 5/8	↓	43 1/2"
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

3" 150# Flanges



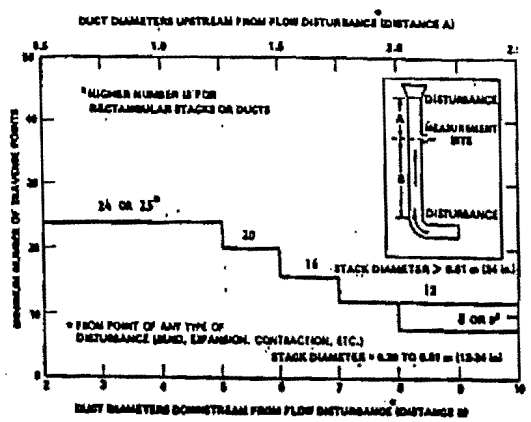


Figure 1-1. Minimum number of traverse points for particulate traverse.

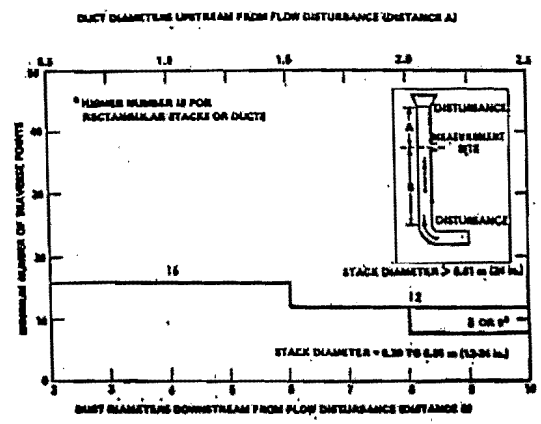


Figure 1-2. Minimum number of traverse points for velocity (nonparticulate) traverse.

ARI ENVIRONMENTAL INC.

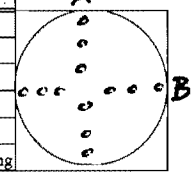
74° FIELD DATA

Nozzle
1) 0.219
2) 0.221 avg. = 0.221
3) 0.222

PLANT	Total	AMBIENT TEMPERATURE	[redacted]	PROBE HEATER SETTING	250
DATE	12-19-06	BAROMETRIC PRESSURE	30.06	HEATER BOX SETTING	250
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	14.5	METER $H_@$	1.64
OPERATOR	CW/JW	PROBE LENGTH, in.	39	C_p FACTOR	0.84
STACK NO.	SRU Incin.	NOZZLE DIAMETER, in.	0.221	Y_d FACTOR	0.981
RUN NO.	1	STACK DIAMETER, in.	32	PITOT/THERMOCOUPLE NO.	P43
SAMPLE BOX NO.	—	MINUTES PER POINT	20		
METER BOX NO.	50280	NUMBER OF POINTS	12		
START TIME	12:22	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
12:22	A 1	0	-2.0	564	2.9		2.7	2.73	613.815	75	75	263	57	4
12:42	2	20		561	3.0		2.8	2.87	632.9	89	77	265	60	5
13:02	3	40		560	3.1		3.0	2.99	654.8	95	81	267	61	6
13:22	4	60		[redacted]542	[redacted]1.6		1.6	1.58	675.2	98	84	265	60	4
13:42	5	80		554	2.0		2.0	1.96	690.8	98	84	268	48	4
14:02 15:48	6	100		556	2.1		2.0	2.05	706.0	99	85	264	48	4
4:22/[redacted]	B 1	120		554	3.4		3.2	3.24	723.7	[redacted]76	[redacted]76	266	53	[redacted]7
16:08	2	140		560	2.9		2.8	2.79	745.8	91	77	259	52	[redacted]6
16:28	3	160		562	3.0		2.9	2.89	764.9	95	79	263	53	6
16:48	4	180		559	2.7		2.6	2.62	786.3	96	80	259	54	6
17:08	5	200		573	2.[redacted]6		2.5	2.49	805.7	97	81	259	55	6
17:28	6	220		570	2.4		2.3	2.31	824.4	97	84	265	57	5
17:48		240		—	—		—	—	842.490	—	—	—	—	—
TOTAL				559.6 ✓		$\sqrt{1.6173}$ ✓	2.5 ✓		228.655 ✓	86.2 ✓				
AVERAGE														

OK 12/19/06

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	310	300	276		324.0
INITIAL	100	100	0		250.0
LIQUID COLLECTED	210	200	276		74.0

760.0

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:	[redacted] ✓	@ > 3 in. H_2O
POST:	✓	@ > 3 in. H_2O

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-19-06
Run Number	1-1
Start Time	1213
Stop Time	1313

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 0616 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1110		Posttest: 1316 hrs			
	Cylinder Value (% or ppm)	Cylinder Number 3568	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	EB0003568	0.1	0616	1.6	1110	0.1	1320		Co=
CO Low		CO/N2								
CO Mid	225.0	CC93770	221.7	0637	219.9	1130	218.8	1335		Cm=
CO High	450.0	1988ppm	455.7	0634						
CO_2 Zero	0.00	EB0003568	0.02	0616	0.04	1110	0.03	1320		Co=
CO_2 Low		CO2/N2								
CO_2 Mid	4.50	CC163330	4.59	0632	4.58	1118	4.56	1332		Cm=
CO_2 High	9.00	25.2%	8.97	0629						
O_2 Zero	0.00	EB0003568	0.00	0616	0.10	1110	0.09	1320		Co=
O_2 Low		O2/N2								
O_2 Mid	4.50	CC59953	4.51	0626	4.57	1128	4.55	1327		Cm=
O_2 High	9.00	25.0%	9.03	0622						
THC Zero	0.0	EB0003568	0.0	0713	0.2	1110	0.3	1320		Co=
THC Low	25.0	C3H8/N2	25.3	0747						
THC Mid	50.0	CC107341	50.6	0745	51.3	1155	51.5	1316		Cm=
THC High	85.0	2095ppm	86.0	0743						
NO_x Zero	0.0	EB0003568	0.1	0616	0.1	1110	0.1	1320		Co=
NO_x Low		NO/N2								
NO_x Mid	45.0	CC9844	44.5	0702	42.3	1152	43.2	1346		Cm=
NO_x High	90.0	1940ppm	90.1	0700						
SO_2 Zero	0.0	EB0003568	-0.4	0616	0.1	1110	1.5	1320		Co=
SO_2 Low		SO2/N2								
SO_2 Mid	135.0	CC43398	137.2	0646	133.7	1138	133.1	1353		Cm=
SO_2 High	270.0	2063ppm	270.2	0643						

NOx CONVERTER CHECK @ 07:07
CYL# CC198389 50.0ppm NO_2/N_2
99.1% CONVERSION

START METHOD 5 @ 1222

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-19-06
Run Number	1-2
Start Time	1359
Stop Time	1459

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1316		Posttest: 1503 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				0.1		0.6	1503		Co=
CO Low										
CO Mid	225.0				218.8		219.1	1516		Cm=
CO High										
CO_2 Zero	0.00				0.03		0.04	1503		Co=
CO_2 Low										
CO_2 Mid	4.50				4.56		4.57	1513		Cm=
CO_2 High										
O_2 Zero	0.00				0.09		0.09	1503		Co=
O_2 Low										
O_2 Mid	4.50				4.55		4.53	1507		Cm=
O_2 High										
THC Zero	0.0				0.3		0.0	1503		Co=
THC Low										
THC Mid	50.0				51.5		51.4	1538		Cm=
THC High										
NO_x Zero	0.0				0.1		0.1	1503		Co=
NO_x Low										
NO_x Mid	45.0				43.2		43.5	1524		Cm=
NO_x High										
SO_2 Zero	0.0				1.5		1.7	1503		Co=
SO_2 Low										
SO_2 Mid	135.0				133.1		133.8	1532		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-19-06
Run Number	1-3
Start Time	1543
Stop Time	1643

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP. = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1503		Posttest: 1648 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				0.6		0.6	1648		Co=
CO Low										
CO Mid	225.0				219.1		219.2	1700		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.04	1648		Co=
CO_2 Low										
CO_2 Mid	4.50				4.57		4.56	1657		Cm=
CO_2 High										
O_2 Zero	0.00				0.09		0.07	1648		Co=
O_2 Low										
O_2 Mid	4.50				4.53		4.54	1653		Cm=
O_2 High										
THC Zero	0.0				0.0		0.3	1648		Co=
THC Low										
THC Mid	50.0				51.4		50.7	1720		Cm=
THC High										
NO_x Zero	0.0				0.1		0.1	1648		Co=
NO_x Low										
NO_x Mid	45.0				43.5		41.1	1708		Cm=
NO_x High										
SO_2 Zero	0.0				1.7		1.3	1648		Co=
SO_2 Low										
SO_2 Mid	135.0				133.8		133.5	1717		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-19-06
Run Number	1-4
Start Time	1726
Stop Time	1826

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 18 LPM
LINE TEMP. = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	900	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1648		Posttest: 1832 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				0.6		0.6	1832		Co=
CO Low										
CO Mid	225.0				219.2		219.6	1845		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.04	1832		Co=
CO_2 Low										
CO_2 Mid	4.50				4.56		4.57	1842		Cm=
CO_2 High										
O_2 Zero	0.00				0.07		0.08	1832		Co=
O_2 Low										
O_2 Mid	4.50				4.54		4.51	1837		Cm=
O_2 High										
THC Zero	0.0				0.3		0.2	1832		Co=
THC Low										
THC Mid	50.0				50.7		51.2	1906		Cm=
THC High										
NO_x Zero	0.0				0.1		0.1	1832		Co=
NO_x Low										
NO_x Mid	45.0				41.1		41.6	1852		Cm=
NO_x High										
SO_2 Zero	0.0				1.3		1.1	1832		Co=
SO_2 Low										
SO_2 Mid	135.0				133.5		134.7	1903		Cm=
SO_2 High										

ARI ENVIRONMENTAL INC.

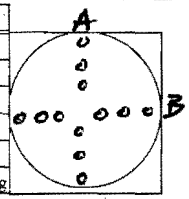
Nozzle
1) 0.219
2) 0.221
3) 0.222
avg. = 0.221

FIELD DATA

PLANT	Total	AMBIENT TEMPERATURE	69°	PROBE HEATER SETTING	250
DATE	12-20-06	BAROMETRIC PRESSURE	29.83	HEATER BOX SETTING	250
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	14.5	METER $H_@$	1.64
OPERATOR	CW/JW	PROBE LENGTH, in.	39	C_p FACTOR	0.84
STACK NO.	SRU Incin.	NOZZLE DIAMETER, in.	0.221	Y_d FACTOR	0.981
RUN NO.	2	STACK DIAMETER, in.	32	PITOT/THERMOCOUPLE NO.	P43
SAMPLE BOX NO.	—	MINUTES PER POINT	20		
METER BOX NO.	50280	NUMBER OF POINTS	12		
START TIME	10:35	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
10:35	A 1	0	-1.9	564	2.7		2.5	2.52	852.297	70	70	266	57	6
10:55	2	20		565	3.0		2.8	2.84	872.0	84	73	269	62	6
11:15	3	40		566	3.0		2.9	2.87	892.3	92	77	268	61	6
11:35	4	60		567	2.9		2.8	2.79	912.4	95	80	270	60	6
11:55	5	80		561	2.0		1.9	1.94	932.1	98	82	270	59	5
12:15	6	100		545	2.0		2.0	1.98	948.8	99	83	259	60	5
13:35/13:25	B 1	120		562	3.4		3.2	3.22	965.2	78	78	259	51	7
13:45	2	140		562	3.3		3.1	3.16	987.0	89	78	258	55	7
14:05	3	160		567	3.3		3.1	3.16	1008.2	93	79	256	53	7
14:25	4	180		570	3.0		2.9	2.88	1029.2	95	81	257	56	7
14:45	5	200		568	2.5		2.4	2.41	1049.6	96	83	255	62	6
15:05	6	220		561	2.2		2.1	2.14	1068.5	97	83	256	63	6
15:25		240		—	—		—	—	1085.546	—	—	—	—	—
TOTAL														
AVERAGE				563.2 ✓		√1.6593 ✓	2.14 ✓		233.249 ✓	84.7 ✓				

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	300	308	282	46	304.3
INITIAL	0	100	100	0	250.0g
LIQUID COLLECTED	300	208	182	46	54.3

790.3

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

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	2-1
Start Time	1005
Stop Time	1105

Plant Rep.	CASEY STARRK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM

LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 0642 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 0926		Posttest: 1107 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	EB0003568	-0.6	0642	0.2	0926	0.1	1133		Co=
CO Low		CO/N2								
CO Mid	225.0	CC93790	220.9	0703	219.6	0937	219.4	1120		Cm=
CO High	450.0	1988ppm	454.6	0701						
CO_2 Zero	0.00	EB0003568	0.02	0642	0.02	0926	0.03	1133		Co=
CO_2 Low		CO2/N2								
CO_2 Mid	4.50	CC163330	4.59	0658	4.58	0934	4.59	1116		Cm=
CO_2 High	9.00	25.2%	8.99	0655						
O_2 Zero	0.00	EB0003568	0.04	0642	0.09	0926	0.06	1133		Co=
O_2 Low		O2/N2								
O_2 Mid	4.50	CC59953	4.55	0650	4.60	0929	4.62	1112		Cm=
O_2 High	9.00	25.0%	9.02	0648						
THC Zero	0.0	EB0003568	0.4	0926	0.4	0926	0.0	1133		Co=
THC Low	25.0	C3H8/N2	25.2	0959						
THC Mid	50.0	CC107341	50.3	0958	50.3	0958	50.6	1107		Cm=
THC High	85.0	2095ppm	85.3	0856						
NO_x Zero	0.0	EB0003568	0.1	0642	0.0	0926	0.4	1133		Co=
NO_x Low		NO/N2	~~25.2~~							
NO_x Mid	45.0	CC9844	43.9	0716	42.2	0944	44.3	1129		Cm=
NO_x High	90.0	1940ppm	89.8	0714						
SO_2 Zero	0.0	EB0003568	~~0.0~~	~~0642~~	0.4	0926	-1.1	1133		Co=
SO_2 Low		SO2/N2	-0.3	0910						
SO_2 Mid	135.0	CC43398	138.2	0921	131.7	0952	130.0	1143		Cm=
SO_2 High	270.0	2063ppm	273.1	0916						

NOx CONVERTER CHECK CYL# CC198389 50.0ppm NO_2/N_2
@ 0725 96.4% CONVERSION

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	2-2
Start Time	1147
Stop Time	1247

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.82 PM
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 0642 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 1107		Posttest: 1254 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				0.1		0.7	1254		Co=
CO Low										
CO Mid	225.0				219.4		220.1	1307		Cm=
CO High										
CO_2 Zero	0.00				0.03		0.04	1254		Co=
CO_2 Low										
CO_2 Mid	4.50				4.59		~~4.63~~	~~1305~~		Cm=
CO_2 High							4.58			
O_2 Zero	0.00				0.06		0.07	1254		Co=
O_2 Low										
O_2 Mid	4.50				4.62		4.63	1259		Cm=
O_2 High										
THC Zero	0.0				0.0		0.1	1254		Co=
THC Low										
THC Mid	50.0				50.6		51.6	1320		Cm=
THC High										
NO_x Zero	0.0				0.4		0.6	1254		Co=
NO_x Low										
NO_x Mid	45.0				44.3		45.4	1316		Cm=
NO_x High										
SO_2 Zero	0.0				-1.1		-0.6	1316		Co=
SO_2 Low										
SO_2 Mid	135.0				130.0		127.0	1254		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	2-3
Start Time	1325
Stop Time	1425

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.82 cfm
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 0642 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 1254		Posttest: 1427 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				0.7		1.4	1457		Co=
CO Low										
CO Mid	225.0				220.1		220.9	1441		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.04	1457		Co=
CO_2 Low										
CO_2 Mid	4.50				4.58		4.61	1438		Cm=
CO_2 High										
O_2 Zero	0.00				0.07		0.06	1457		Co=
O_2 Low										
O_2 Mid	4.50				4.63		4.63	1434		Cm=
O_2 High										
THC Zero	0.0				0.1		0.2	1457		Co=
THC Low										
THC Mid	50.0				51.6		48.9	1427		Cm=
THC High										
NO_x Zero	0.0				0.6		1.4	1457		Co=
NO_x Low										
NO_x Mid	45.0				45.4		44.9	1449		Cm=
NO_x High										
SO_2 Zero	0.0				-0.6		-0.4	1449		Co=
SO_2 Low										
SO_2 Mid	135.0				127.0		130.9	1457		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	2-4
Start Time	1503
Stop Time	1603

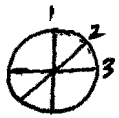
Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 0642 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 1427		Posttest: 1607 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				1.4		1.3	1630		Co=
CO Low										
CO Mid	225.0				220.9		221.2	1614		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.04	1630		Co=
CO_2 Low										
CO_2 Mid	4.50				4.61		4.59	1611		Cm=
CO_2 High										
O_2 Zero	0.00				0.06		0.06	1630		Co=
O_2 Low										
O_2 Mid	4.50				4.63		4.59	1607		Cm=
O_2 High										
THC Zero	0.0				0.2		0.9	1630		Co=
THC Low										
THC Mid	50.0				48.9		47.7	1633		Cm=
THC High										
NO_x Zero	0.0				1.4		1.4	1630		Co=
NO_x Low										
NO_x Mid	45.0				44.9		44.5	1622		Cm=
NO_x High										
SO_2 Zero	0.0				-0.4		-0.3	1622		Co=
SO_2 Low										
SO_2 Mid	135.0				130.9		132.1	1630		Cm=
SO_2 High										

ARI ENVIRONMENTAL INC.



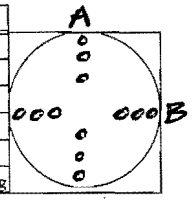
NOZZLE
1) 0.219
2) 0.221
3) 0.222

FIELD DATA

PLANT	TOTAL	AMBIENT TEMPERATURE	67°	PROBE HEATER SETTING	250°
DATE	12-20-06	BAROMETRIC PRESSURE	29.74	HEATER BOX SETTING	250°
LOCATION	Port Arthur, TX	ASSUMED MOISTURE, %	14.5	METER $H_{@}$	1.64
OPERATOR	CW, JW	PROBE LENGTH, in.	39	C_p FACTOR	0.84
STACK NO.	SRU Incin.	NOZZLE DIAMETER, in.	0.221	Y_d FACTOR	0.981
RUN NO.	3	STACK DIAMETER, in.	32	PITOT/THERMOCOUPLE NO.	P43
SAMPLE BOX NO.	—	MINUTES PER POINT	20		
METER BOX NO.	50280	NUMBER OF POINTS	12		
START TIME	17:08	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
17:08	A 1	0	-1.9	561	2.9		2.7	2.72	88.616	72	72	254	63	7
17:28	2	20		562	3.1		3.0	2.96	108.3	89	73	258	56	7
17:48	3	40		564	3.2		3.0	3.07	128.9	94	76	259	57	7
18:08	4	60		573	3.0		2.9	2.87	150.4	96	79	260	54	7
18:28	5	80		564	2.4		2.3	2.31	170.5	97	80	261	57	6
18:48	6	100		558	2.0		1.9	1.95	188.8	98	81	261	57	5
19:08/19:55	B 1	120		562	2.9		2.7	2.72	205.1	73	73	259	55	7
20:15	2	140		561	3.0		2.8	2.85	223.9	84	73	260	60	7
20:35	3	160		562	3.1		3.0	2.96	244.2	89	74	260	62	7
20:55	4	180		563	3.0		2.9	2.88	266.0	93	76	259	58	7
21:15	5	200		557	2.5		2.4	2.41	286.5	93	75	269	53	6
21:35	6	220		550	2.1		2.0	2.04	304.3	93	74	261	55	5
21:55		240		—	—		—	—	321.540	—	—	—	—	—
TOTAL				561.4 ✓		1.6588 ✓	2.63 ✓		232.924 ✓	82.4 ✓				
AVERAGE														

VOLUME OR WEIGHT OF LIQUID WATER COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	312	324	310	22	261.5
INITIAL	0	100	100	0	250.0
LIQUID COLLECTED	312	224	210	22	11.5

7795

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
POST:	✓	@ > '

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	3-1
Start Time	1638
Stop Time	1738

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 0642 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 1607		Posttest: 1741 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				1.3		1.3	1804		Co=
CO Low										
CO Mid	225.0				221.2		221.4	1749		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.04	1834		Co=
CO_2 Low										
CO_2 Mid	4.50				4.59		4.61	1745		Cm=
CO_2 High										
O_2 Zero	0.00				0.06		0.05	1834		Co=
O_2 Low										
O_2 Mid	4.50				4.59		4.61	1741		Cm=
O_2 High										
THC Zero	0.0				0.9		0.3	1834		Co=
THC Low										
THC Mid	50.0				47.7		49.0	1806		Cm=
THC High										
NO_x Zero	0.0				1.4		1.4	1804		Co=
NO_x Low										
NO_x Mid	45.0				44.5		43.0	1757		Cm=
NO_x High										
SO_2 Zero	0.0				-0.3		-0.4	1757		Co=
SO_2 Low										
SO_2 Mid	135.0				132.1		131.9	1804		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	3-2
Start Time	1811
Stop Time	1911

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 1642 hrs				SYSTEM BIAS CHECK					Calibration
	Cylinder Value (% or ppm)	Cylinder Number	Analyzer Calibration Response	Difference (% of Span)	Pretest: 1741 System Response	Syst. Bias (% of Span)	Posttest: 1915 hrs System Response	Syst. Bias (% of Span)	Drift (% of Span)	Correction Factors
CO Zero	0.0				1.3		1.4	1939		Co=
CO Low										
CO Mid	225.0				221.4		221.3	1923		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.04	1939		Co=
CO_2 Low										
CO_2 Mid	4.50				4.61		4.36	1920		Cm=
CO_2 High										
O_2 Zero	0.00				0.05		0.05	1939		Co=
O_2 Low										
O_2 Mid	4.50				4.61		4.62	1915		Cm=
O_2 High										
THC Zero	0.0				0.3		0.2	1939		Co=
THC Low										
THC Mid	50.0				49.0		48.2	1942		Cm=
THC High										
NO_x Zero	0.0				1.4		1.6	1939		Co=
NO_x Low										
NO_x Mid	45.0				43.0		43.8	1930		Cm=
NO_x High										
SO_2 Zero	0.0				-0.4		-0.3	1930		Co=
SO_2 Low										
SO_2 Mid	135.0				131.9		131.8	1939		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	3-3
Start Time	1948
Stop Time	2048

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP = 250°F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 1642 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 1915		Posttest: 2052 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				1.4		0.4	2114		Co=
CO Low										
CO Mid	225.0				221.3		220.3	2100		Cm=
CO High										
CO_2 Zero	0.00				0.04		0.03	2114		Co=
CO_2 Low										
CO_2 Mid	4.50				4.36		4.35	2056		Cm=
CO_2 High										
O_2 Zero	0.00				0.05		0.03	2114		Co=
O_2 Low										
O_2 Mid	4.50				4.62		4.61	2052		Cm=
O_2 High										
THC Zero	0.0				0.2		0.5	2114		Co=
THC Low										
THC Mid	50.0				48.2		48.1	2118		Cm=
THC High										
NO_x Zero	0.0				1.6		1.6	2114		Co=
NO_x Low										
NO_x Mid	45.0				43.8		41.5	2108		Cm=
NO_x High										
SO_2 Zero	0.0				-0.3		-0.9	2108		Co=
SO_2 Low										
SO_2 Mid	135.0				131.8		130.2	2114		Cm=
SO_2 High										

CEMS CALIBRATION DATA

Plant	TOTAL
Location	PORT ARTHUR, TX
Source	SRU INCIN.
Date	12-20-06
Run Number	3-4
Start Time	2124
Stop Time	2224

Plant Rep.	CASEY STARK
Team Leader	DAN FITZGERALD
CEM Operator	DAN FITZGERALD

SYSTEM EXCESS FLOW = 1.8 LPM
LINE TEMP = 250 °F

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 1642 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 2052		Posttest: 2227 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				0.4		0.5	2250		Co=
CO Low										
CO Mid	225.0				220.3		218.8	2234		Cm=
CO High										
CO_2 Zero	0.0				0.03		0.05	2250		Co=
CO_2 Low										
CO_2 Mid	4.50				4.35		4.34	2231		Cm=
CO_2 High										
O_2 Zero	0.00				0.03		0.05	2250		Co=
O_2 Low										
O_2 Mid	4.50				4.61		4.57	2227		Cm=
O_2 High										
THC Zero	0.0				0.5		0.1	2250		Co=
THC Low										
THC Mid	50.0				48.1		48.2	2254		Cm=
THC High										
NO_x Zero	0.0				1.6		1.5	2250		Co=
NO_x Low										
NO_x Mid	45.0				41.5		43.3	2243		Cm=
NO_x High										
SO_2 Zero	0.0				-0.9		-0.80	2243		Co=
SO_2 Low										
SO_2 Mid	135.0				130.2		130.0	2250		Cm=
SO_2 High										

APPENDIX C

Analytical Data

Method 5 ANALYTICAL SUMMARY

CLIENT: Total Petrochemicals
LOCATION: Port Arthur, TX
SOURCE: SRU INC.
SAMPLE DATE: 12/19-20/2006
ANALYSIS: PM

SRU INC.

DESCRIPTION	Tare (mg)	WT 1 (mg)	WT 2 (mg)	Particulate (mg)
Blank Filter	565.9	569.3	569.1	3.3
Run 1 Filter	563.2	588.9	588.6	25.6
Run 2 Filter	568.7	582.8	582.9	14.1
Run 3 Filter	568.5	578.2	578.5	9.9

	Volume (mls)	Tare (mg)	WT 1 (mg)	WT 2 (mg)	found Particulate (mg)
Blank Probe Wash	180	106,959.0	106,959.7	106,959.4	0.5
Run 1 Probe Wash	250	104,094.4	104,098.0	104,097.6	3.4
Run 2 Probe Wash	246	105,855.8	105,855.9	105,856.2	0.2
Run 3 Probe Wash	122	106,994.0	106,994.4	106,994.0	0.2
Blank Impinger	155	102,935.0	102,934.5	102,934.0	-0.8
Run 1 Impinger 1	260	100,823.4	100,878.3	100,877.9	54.7
Run 2 Impinger 1	250	101,663.5	101,707.3	101,706.9	43.6
Run 3 Impinger 1	240	99,545.5	99,613.2	99,613.5	67.9

Client: Total Petrochemicals
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: M15-1

File Name	Time	COS Area	COS ppm	COS ppm Corrected	H_2S Area	H_2S ppm	H_2S ppm Corrected	CS_2 Area	CS_2 ppm	CS_2 ppm Corrected
1218sample03.CHR	12:13:00	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample04.CHR	12:26:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample05.CHR	12:38:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample06.CHR	12:50:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample07.CHR	13:02:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample08.CHR	13:14:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample09.CHR	13:26:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample10.CHR	13:38:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample11.CHR	13:50:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample12.CHR	14:02:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample13.CHR	14:14:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample14.CHR	14:26:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample15.CHR	14:38:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample16.CHR	14:50:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample17.CHR	15:02:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample18.CHR	15:14:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample19.CHR	15:26:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample20.CHR	15:38:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample21.CHR	15:50:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample22.CHR	16:02:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample23.CHR	16:14:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample24.CHR	16:26:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample25.CHR	16:38:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1218sample26.CHR	16:50:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
Average				**<0.31**			**<0.63**			**<0.14**

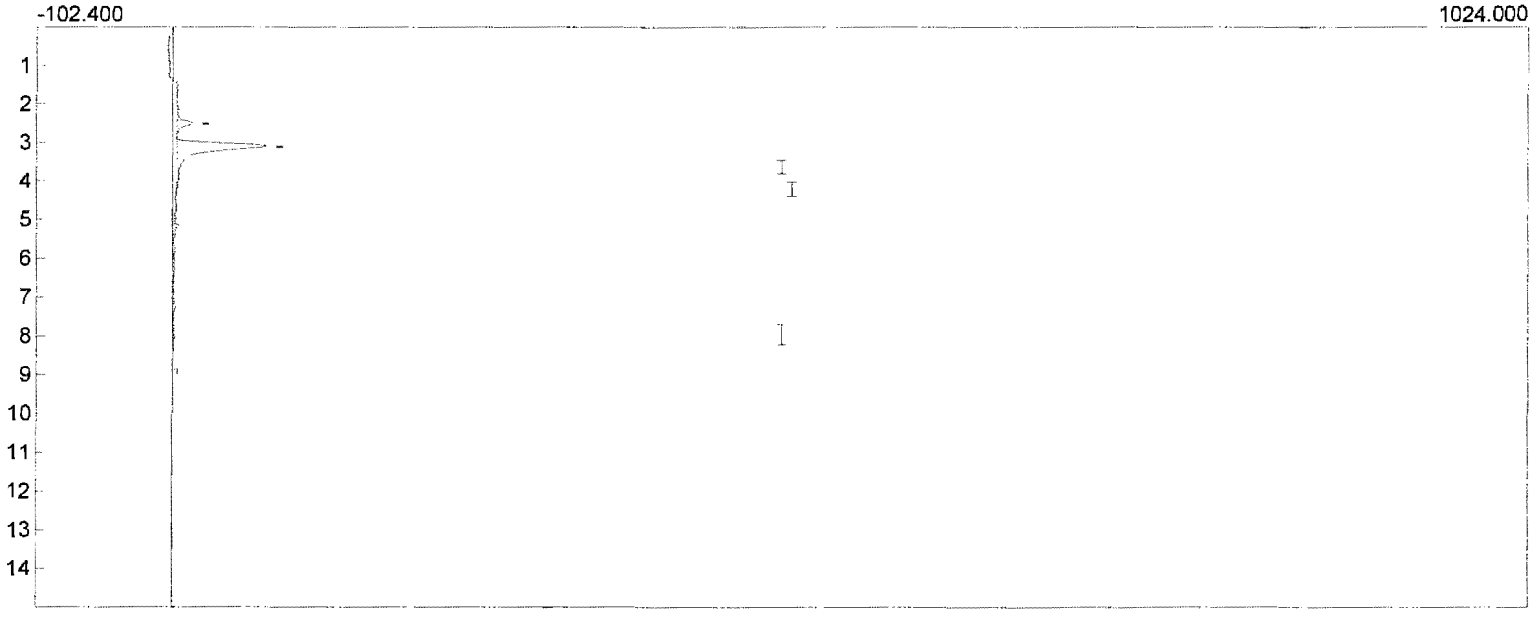
Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-2

File Name	Time	COS Area	COS ppm	COS ppm Corrected	H_2S Area	H_2S ppm	H_2S ppm Corrected	CS_2 Area	CS_2 ppm	CS_2 ppm Corrected
1220sample02.CHR	10:10:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample03.CHR	10:23:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample04.CHR	10:36:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample05.CHR	10:49:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample06.CHR	11:02:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample07.CHR	11:15:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample08.CHR	11:28:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample09.CHR	11:41:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample10.CHR	11:54:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample11.CHR	12:07:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample12.CHR	12:20:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample13.CHR	12:33:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample14.CHR	12:46:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample15.CHR	12:59:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample16.CHR	13:12:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample17.CHR	13:25:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample18.CHR	13:38:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample19.CHR	13:51:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample20.CHR	14:04:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample21.CHR	14:17:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample22.CHR	14:30:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample23.CHR	14:43:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample24.CHR	14:56:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample25.CHR	15:09:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
Average				**<0.31**			**<0.63**			**<0.14**

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-3

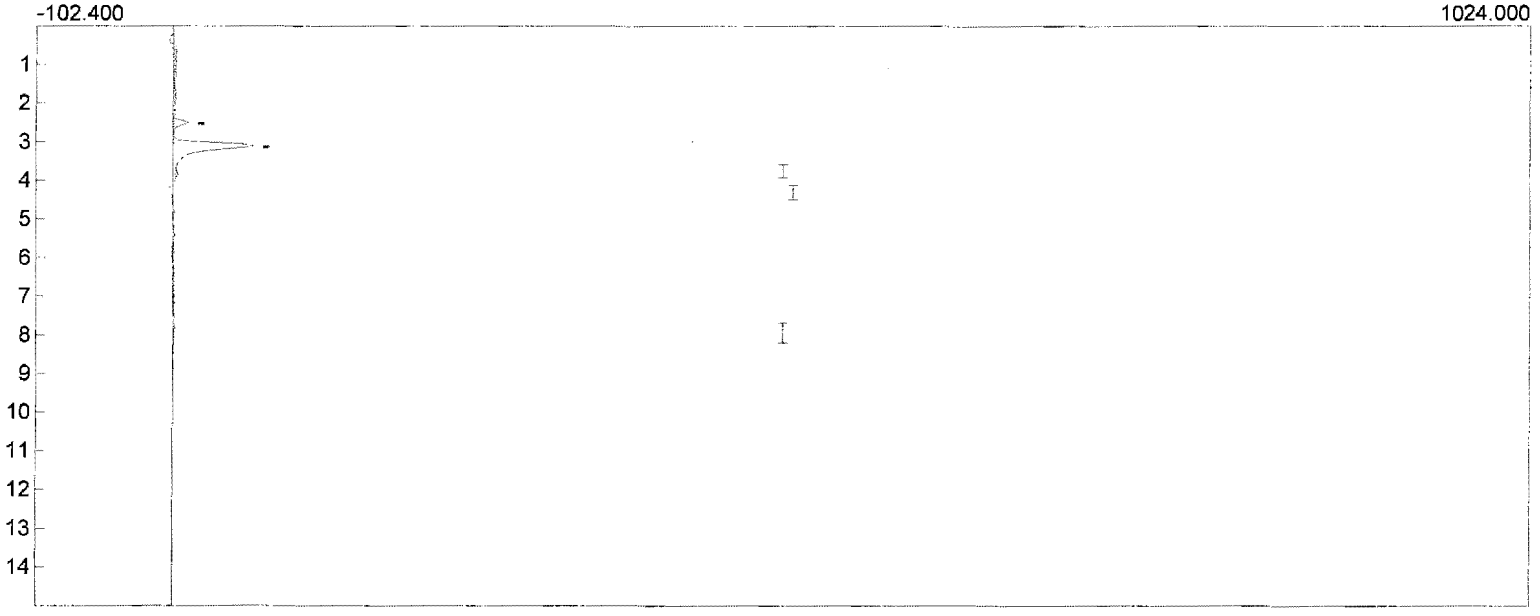
File Name	Time	COS Area	COS ppm	COS ppm Corrected	H_2S Area	H_2S ppm	H_2S ppm Corrected	CS_2 Area	CS_2 ppm	CS_2 ppm Corrected
1220sample26.CHR	15:22:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample27.CHR	15:35:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample28.CHR	15:48:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample29.CHR	16:01:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample30.CHR	16:14:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample31.CHR	16:27:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample32.CHR	16:40:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample33.CHR	16:53:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample34.CHR	17:06:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample35.CHR	17:19:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample36.CHR	17:32:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample37.CHR	17:45:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample38.CHR	17:58:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample39.CHR	18:11:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample40.CHR	18:24:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample41.CHR	18:37:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample42.CHR	18:50:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample43.CHR	19:03:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample44.CHR	19:16:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample45.CHR	19:29:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample46.CHR	19:42:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample47.CHR	19:55:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample48.CHR	20:08:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample49.CHR	20:21:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
Average				**<0.31**			**<0.63**			**<0.14**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 12:13:00
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample03.CHR ()
Sample: SRU Run #1
Operator: SEY



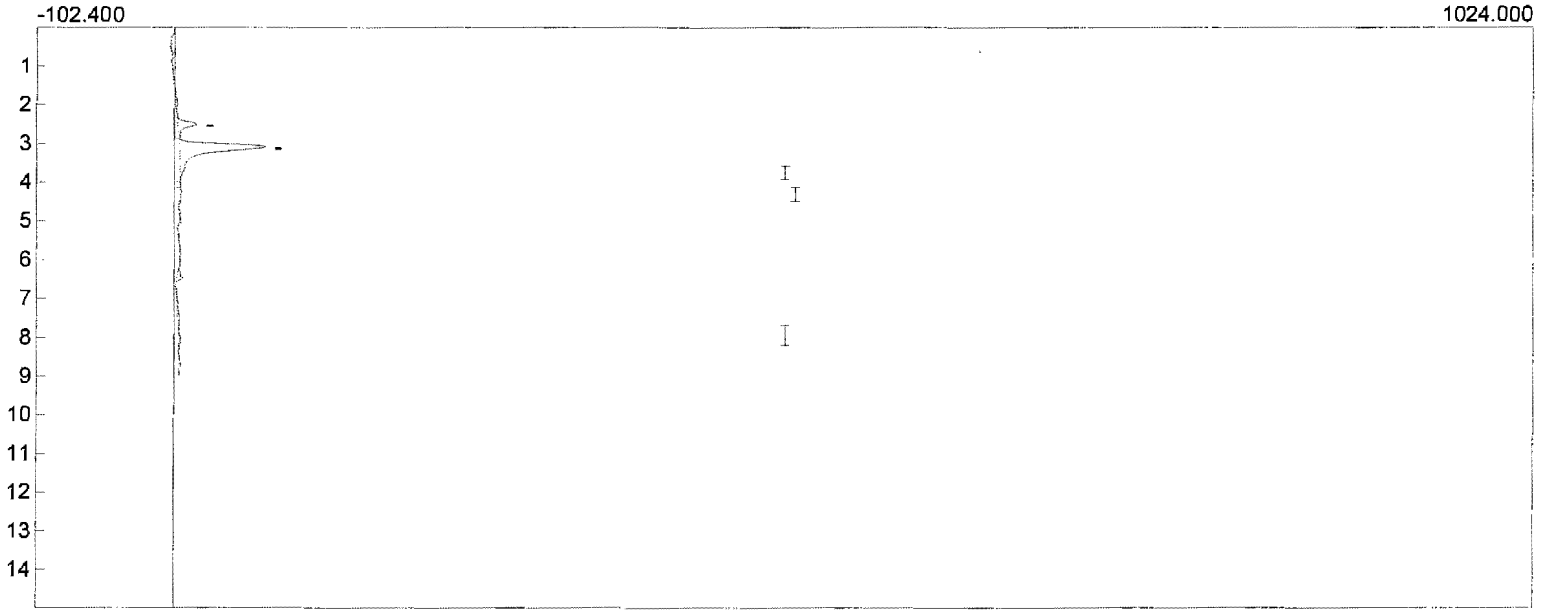
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 12:26:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample04.CHR ()
Sample: SRU Run #1
Operator: SEY



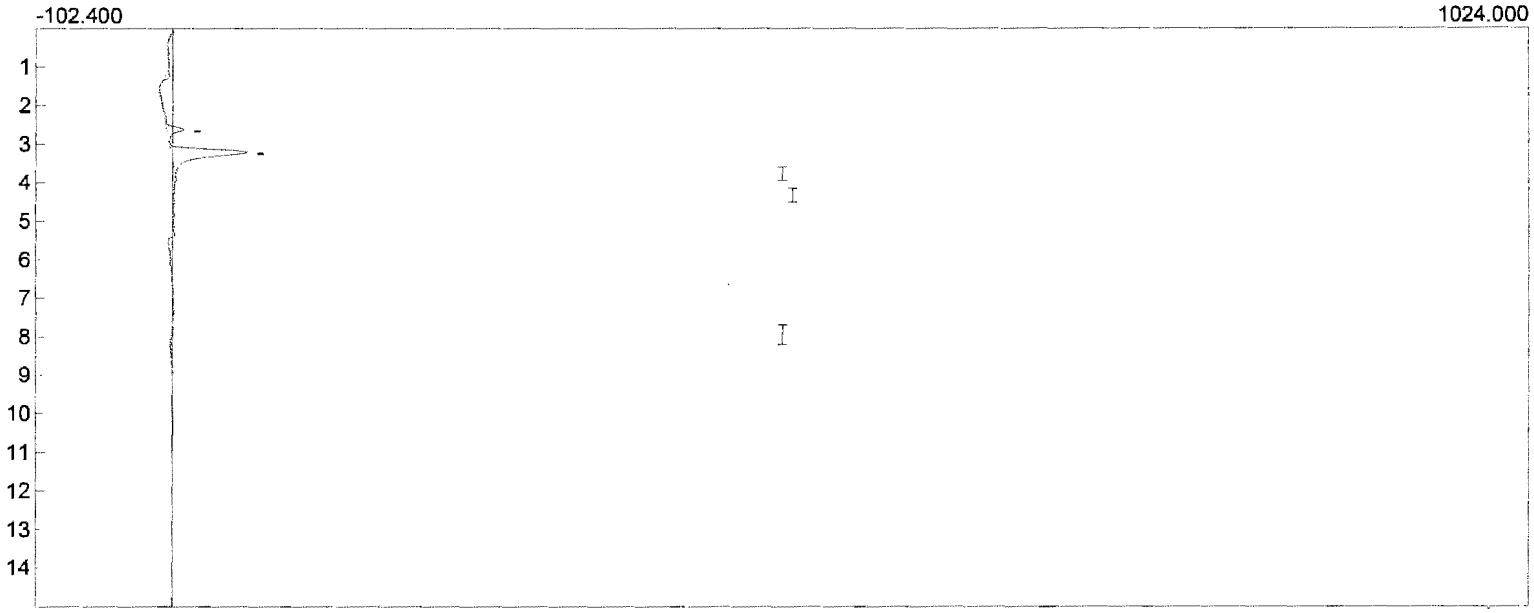
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 12:38:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample05.CHR ()
Sample: SRU Run #1
Operator: SEY



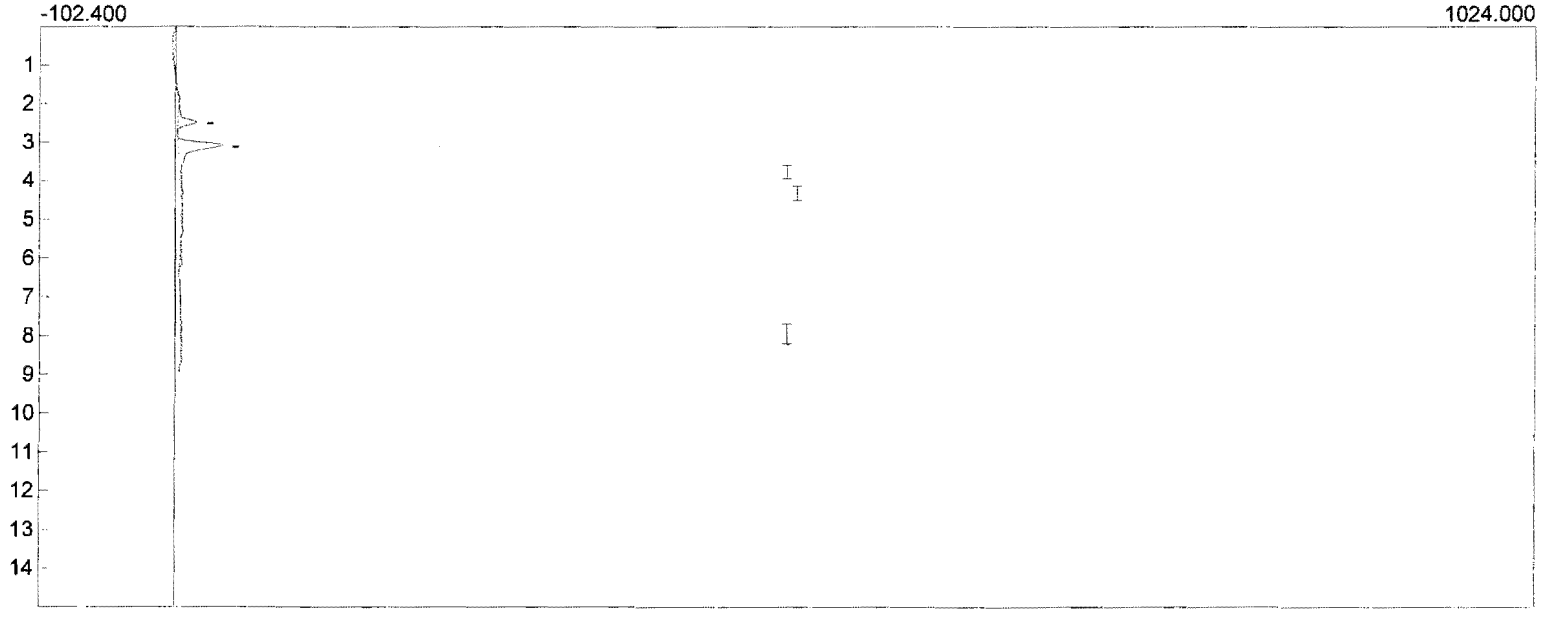
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 12:50:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample06.CHR ()
Sample: SRU Run #1
Operator: SEY



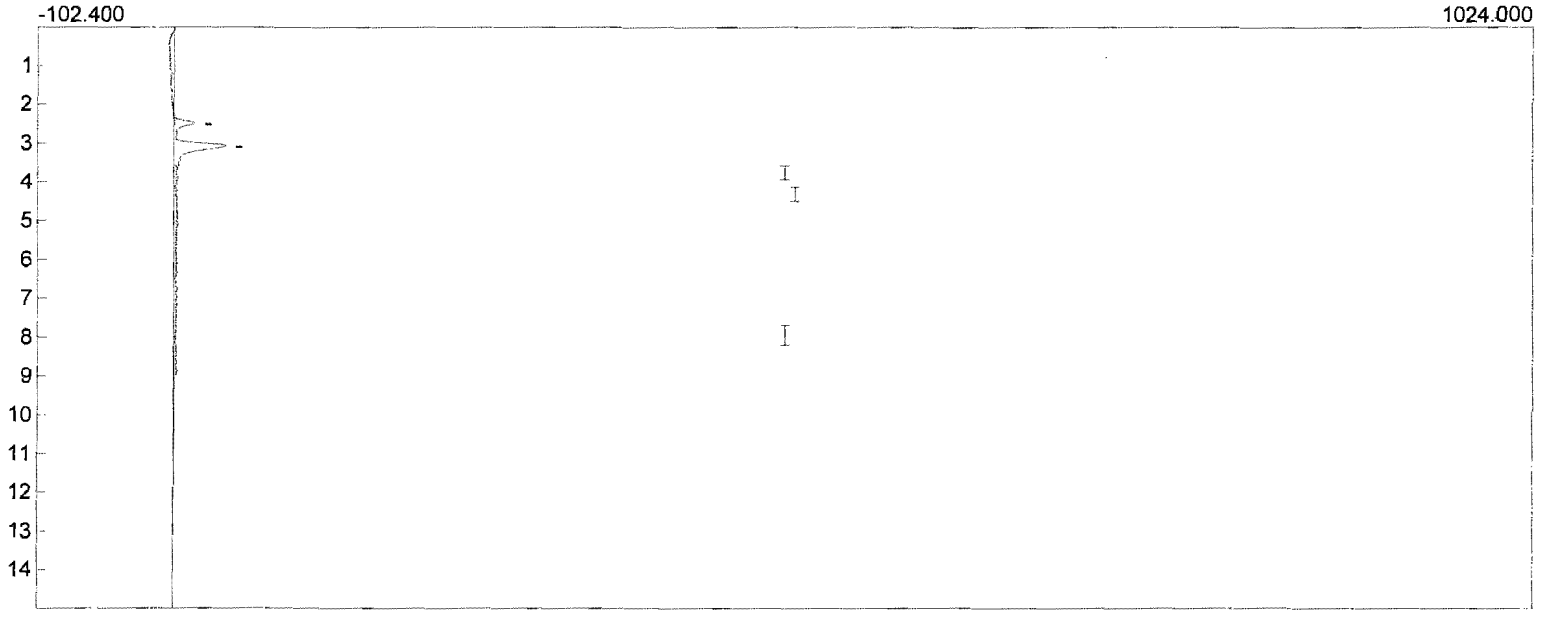
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 13:02:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample07.CHR ()
Sample: SRU Run #1
Operator: SEY



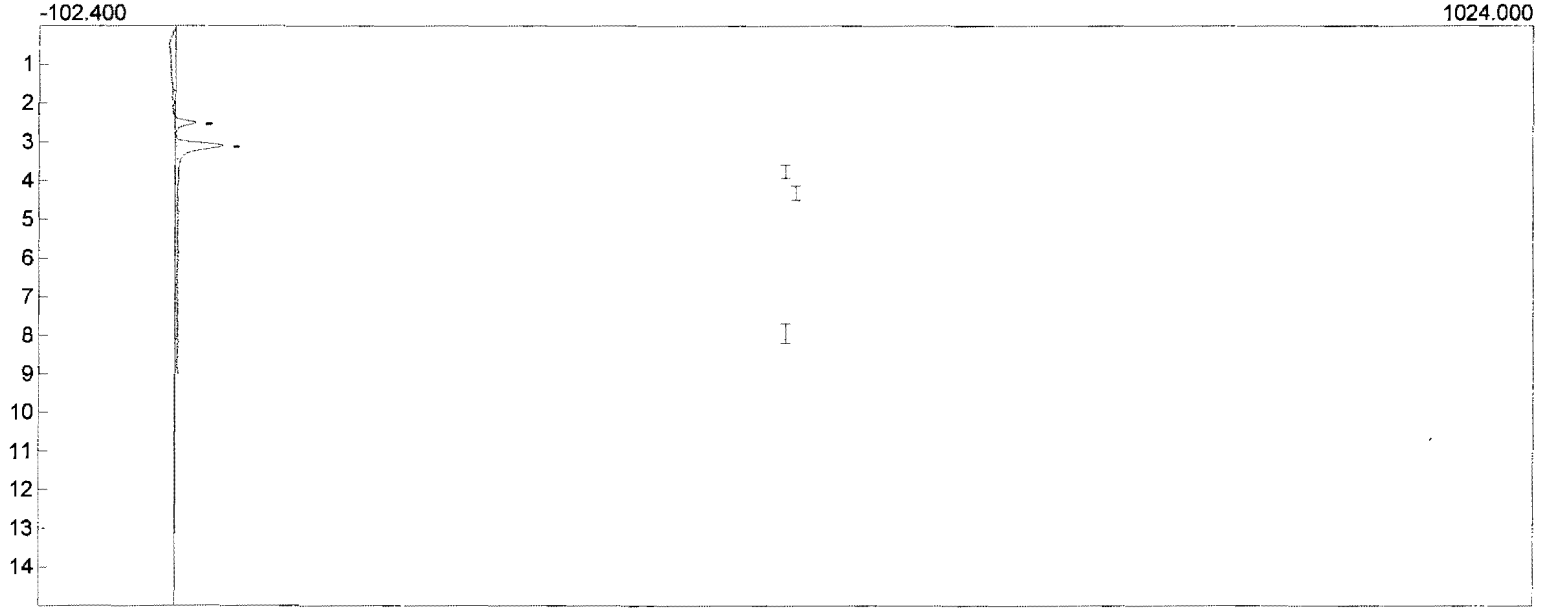
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 13:14:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample08.CHR ()
Sample: SRU Run #1
Operator: SEY



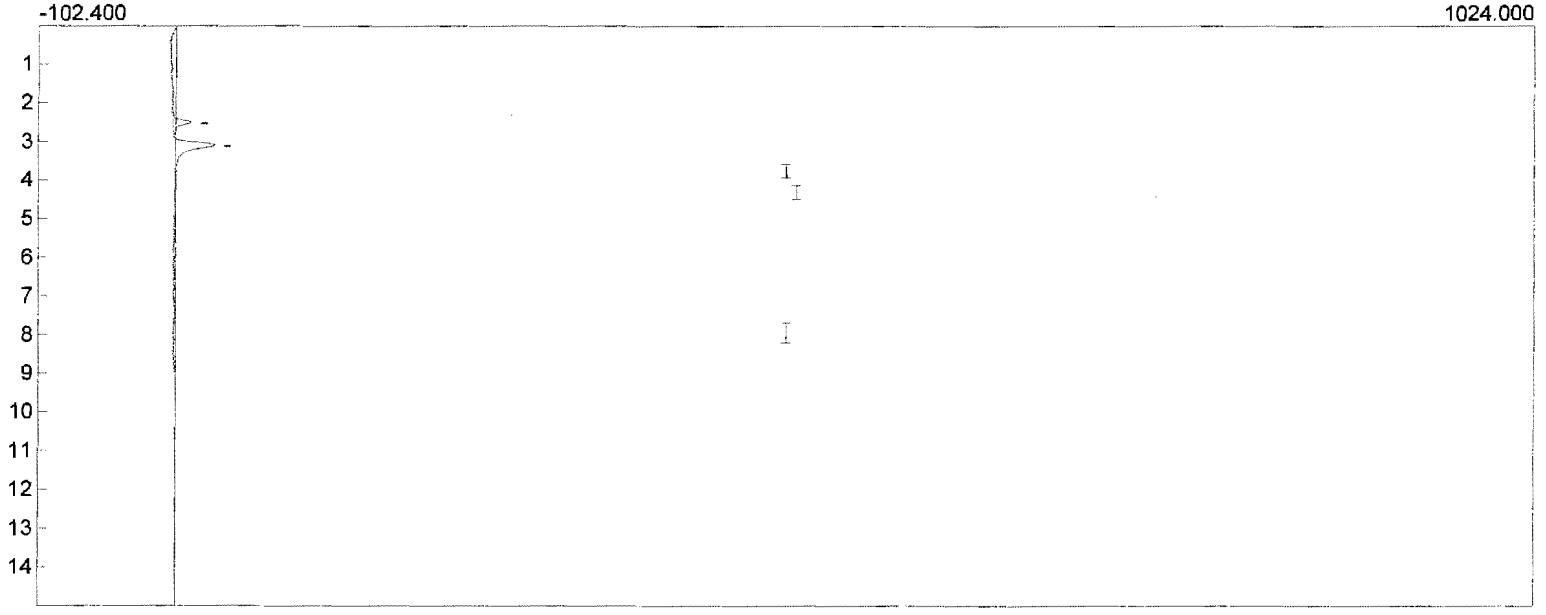
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 13:26:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample09.CHR ()
Sample: SRU Run #1
Operator: SEY



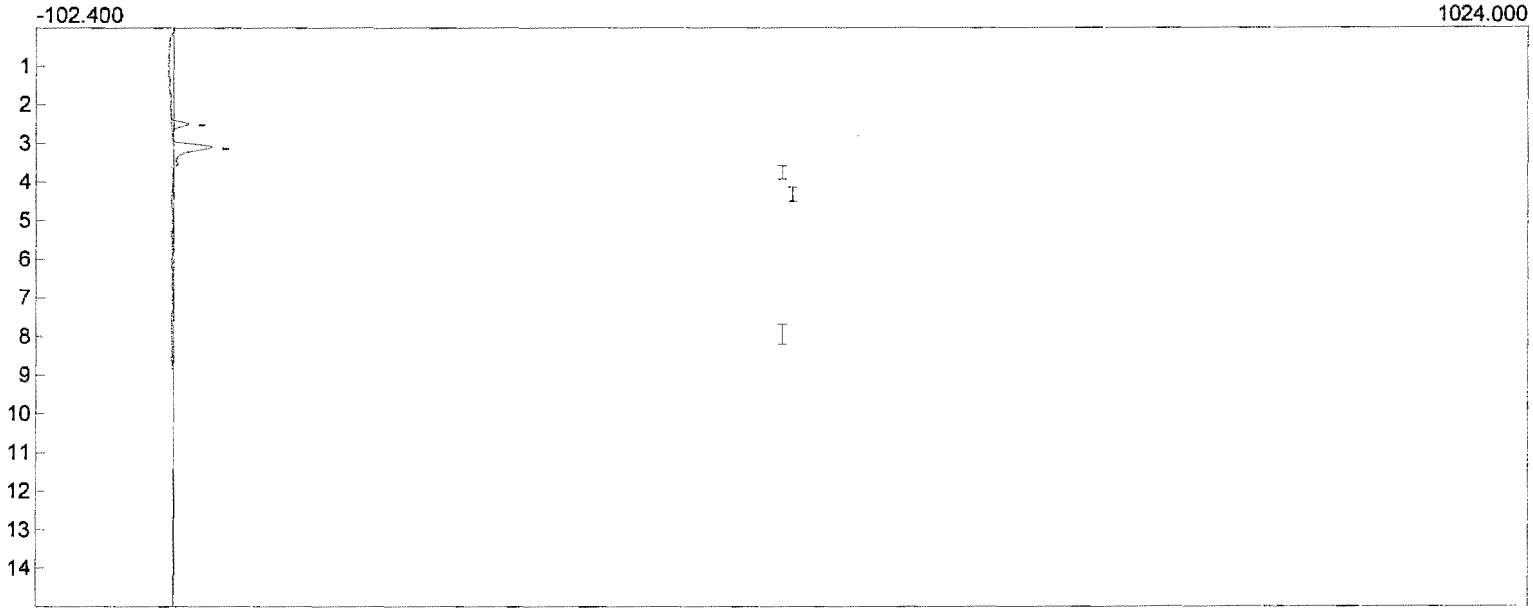
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 13:38:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample10.CHR ()
Sample: SRU Run #1
Operator: SEY



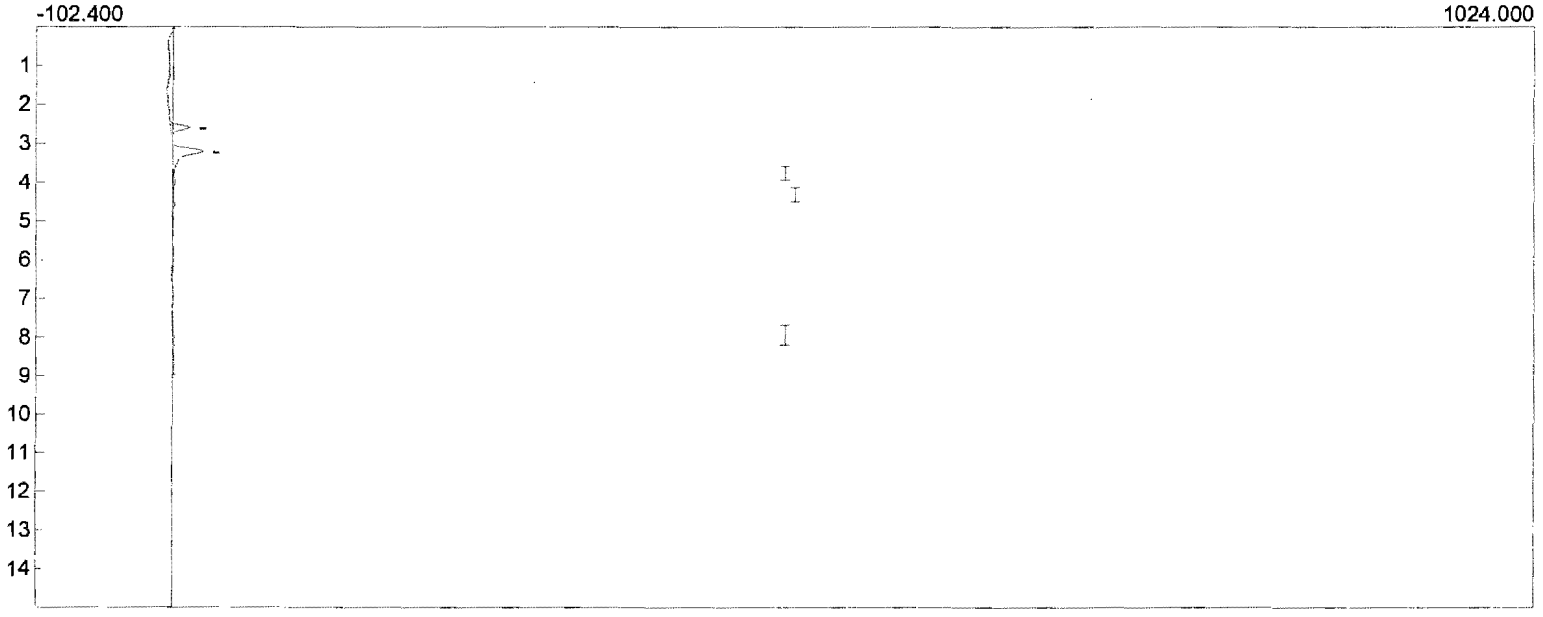
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 13:50:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample11.CHR ()
Sample: SRU Run #1
Operator: SEY



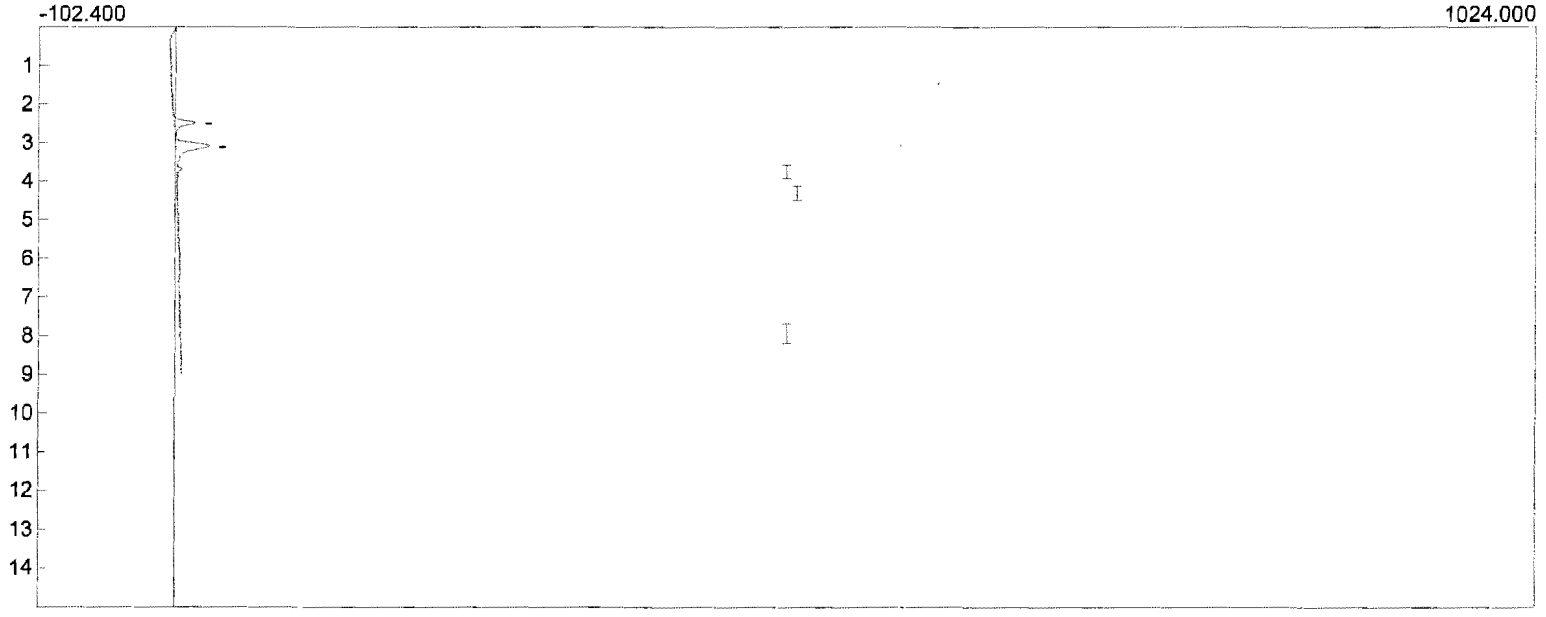
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 14:02:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample12.CHR ()
Sample: SRU Run #1
Operator: SEY



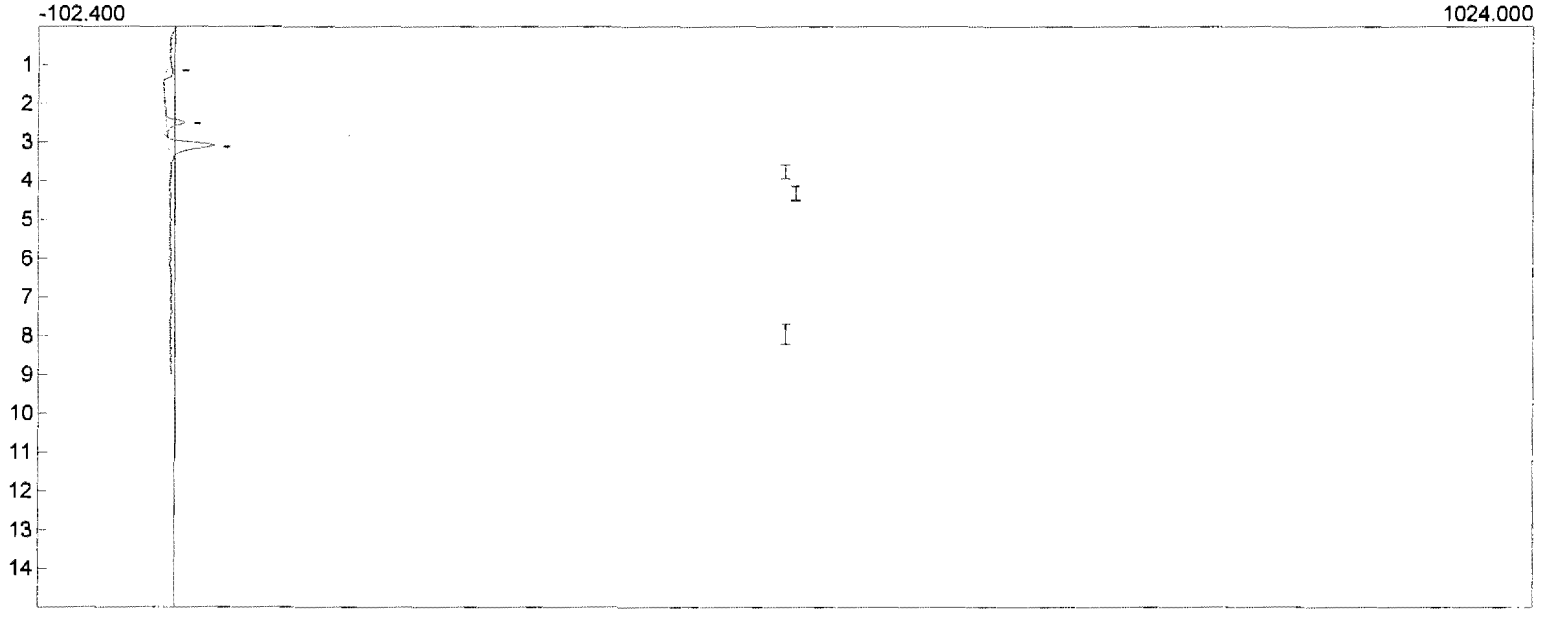
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 14:14:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample13.CHR ()
Sample: SRU Run #1
Operator: SEY



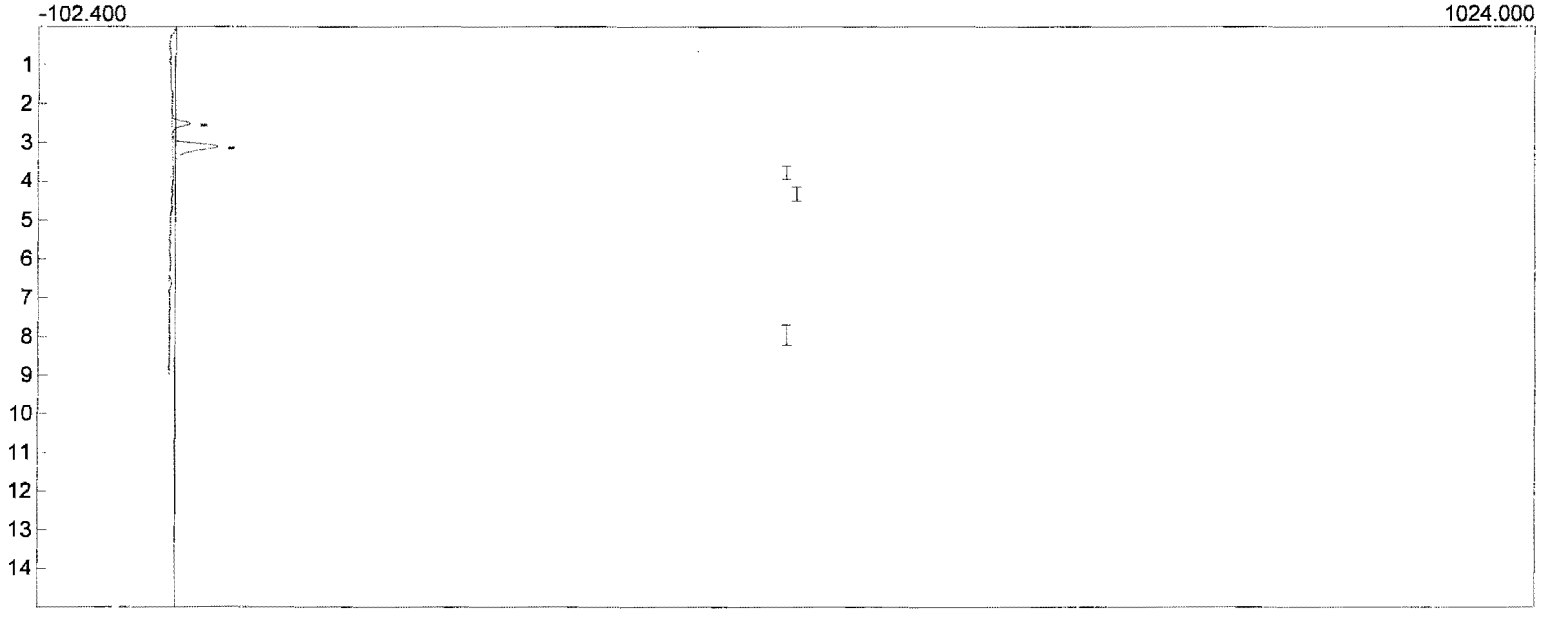
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 14:26:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample14.CHR ()
Sample: SRU Run #1
Operator: SEY



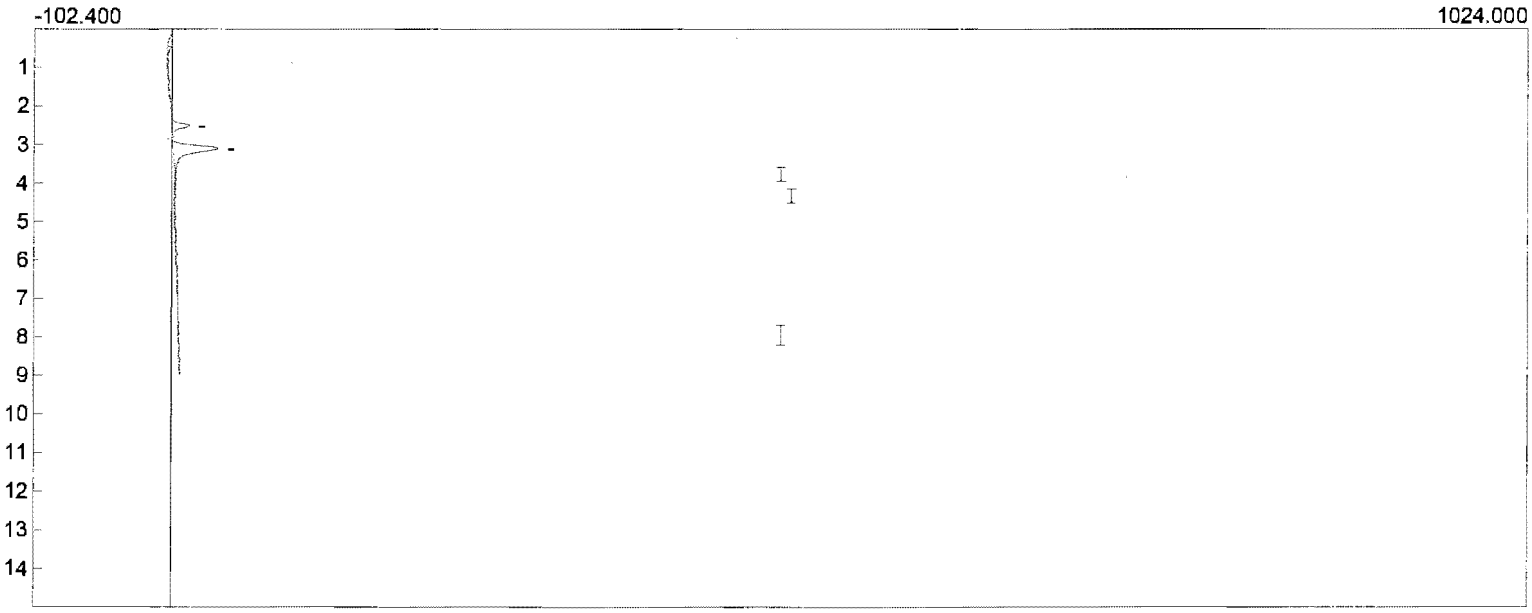
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 14:38:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample15.CHR ()
Sample: SRU Run #1
Operator: SEY



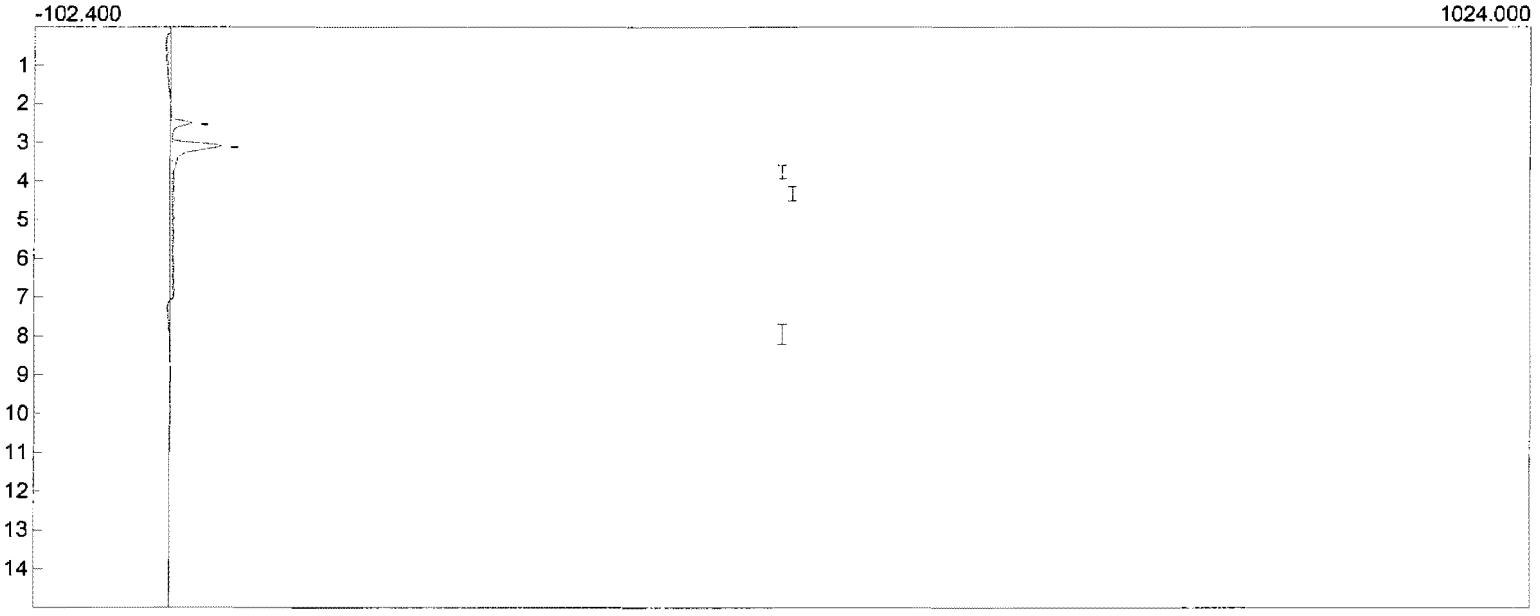
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 14:50:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample16.CHR ()
Sample: SRU Run #1
Operator: SEY



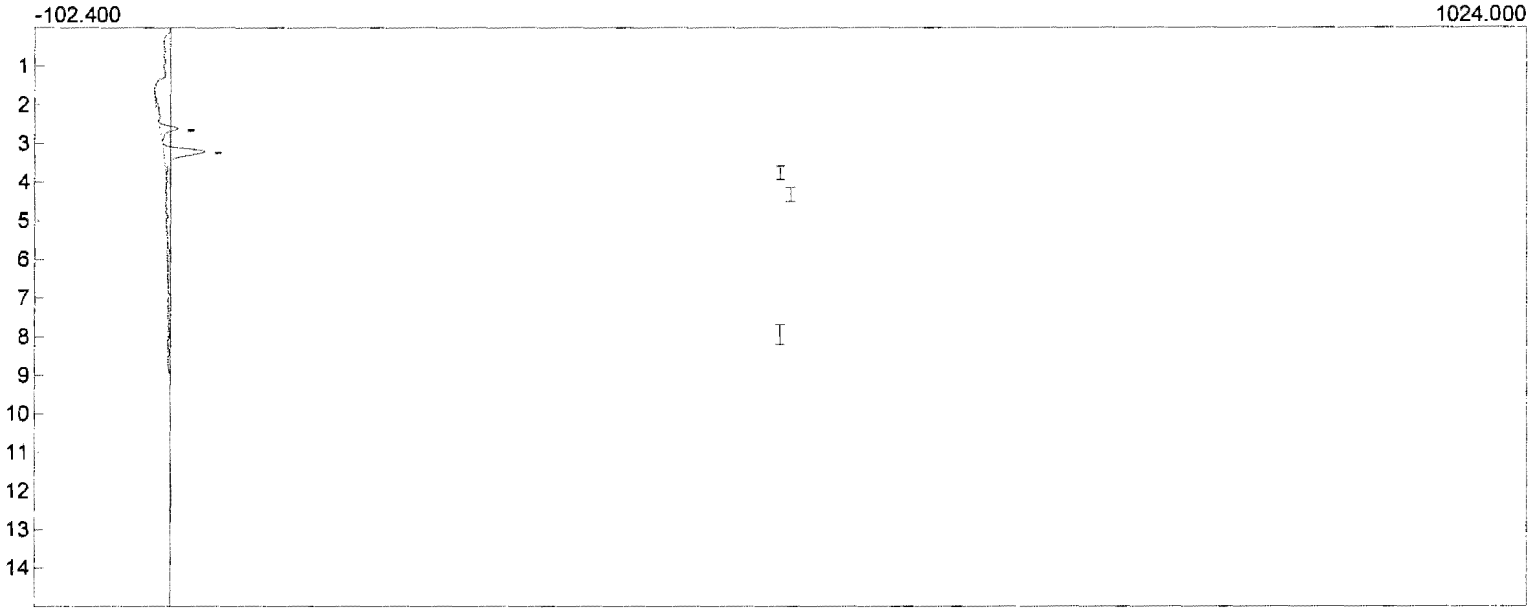
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 15:02:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample17.CHR ()
Sample: SRU Run #1
Operator: SEY



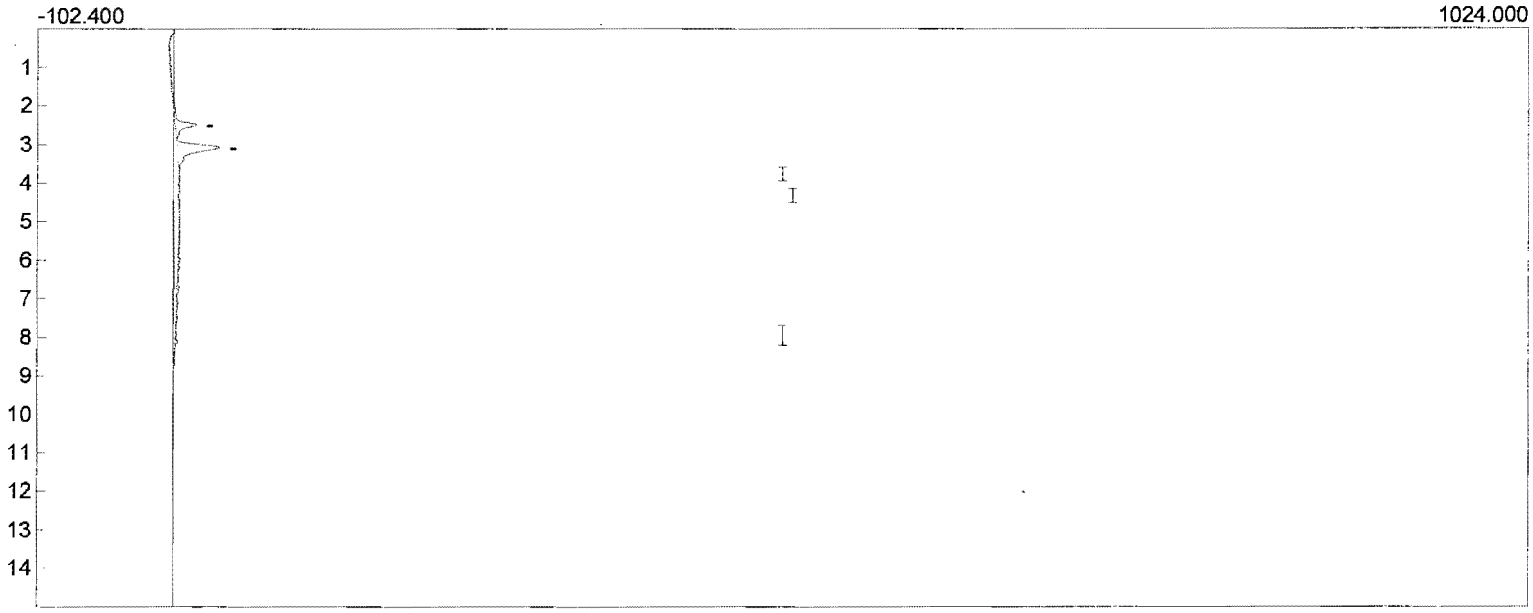
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 15:14:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample18.CHR ()
Sample: SRU Run #1
Operator: SEY



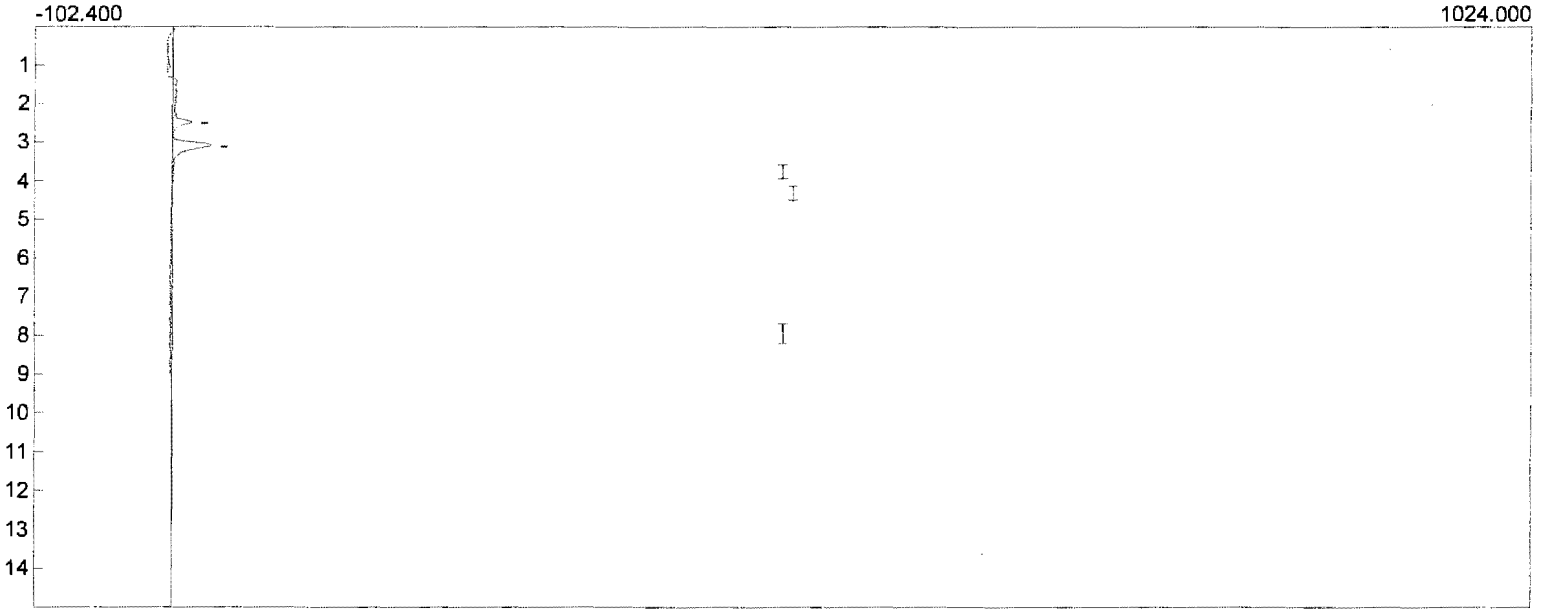
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 15:26:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample19.CHR ()
Sample: SRU Run #1
Operator: SEY



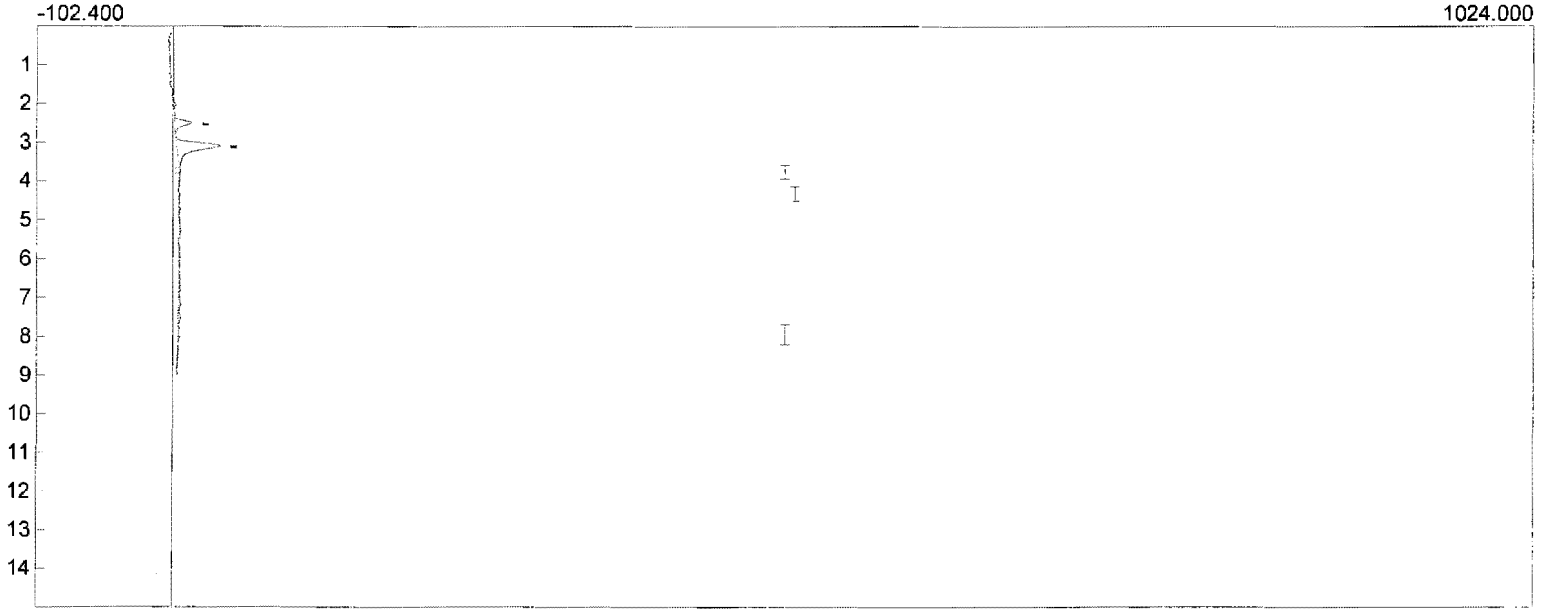
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 15:38:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample20.CHR ()
Sample: SRU Run #1
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 15:50:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample21.CHR ()
Sample: SRU Run #1
Operator: SEY

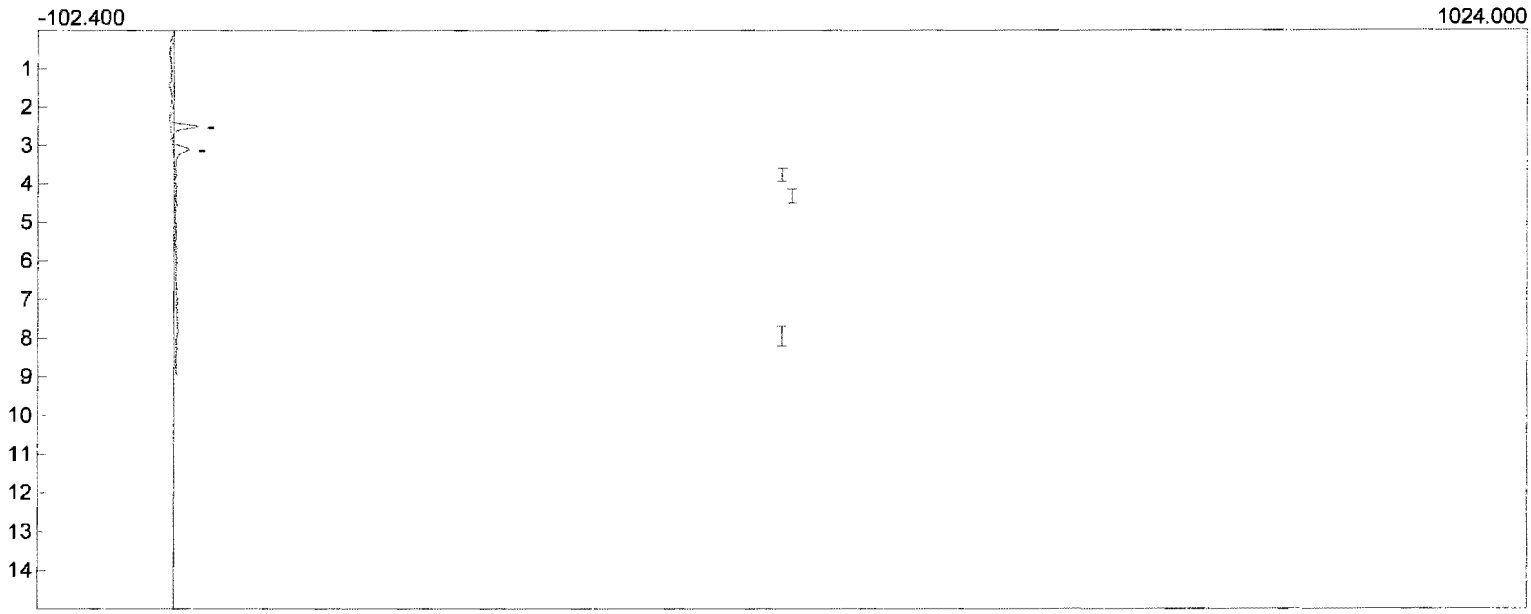


Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 16:02:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample22.CHR ()
Sample: SRU Run #1
Operator: SEY

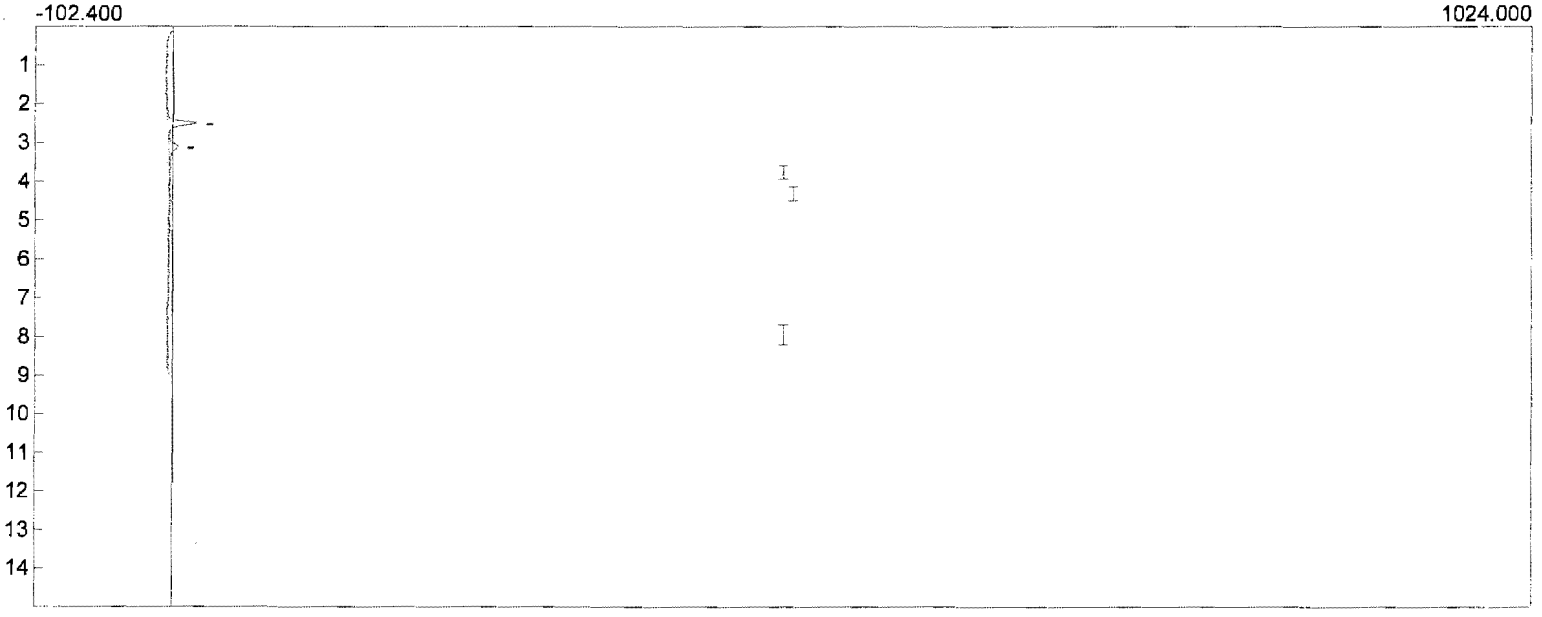
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 16:14:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample23.CHR ()
Sample: SRU Run #1
Operator: SEY



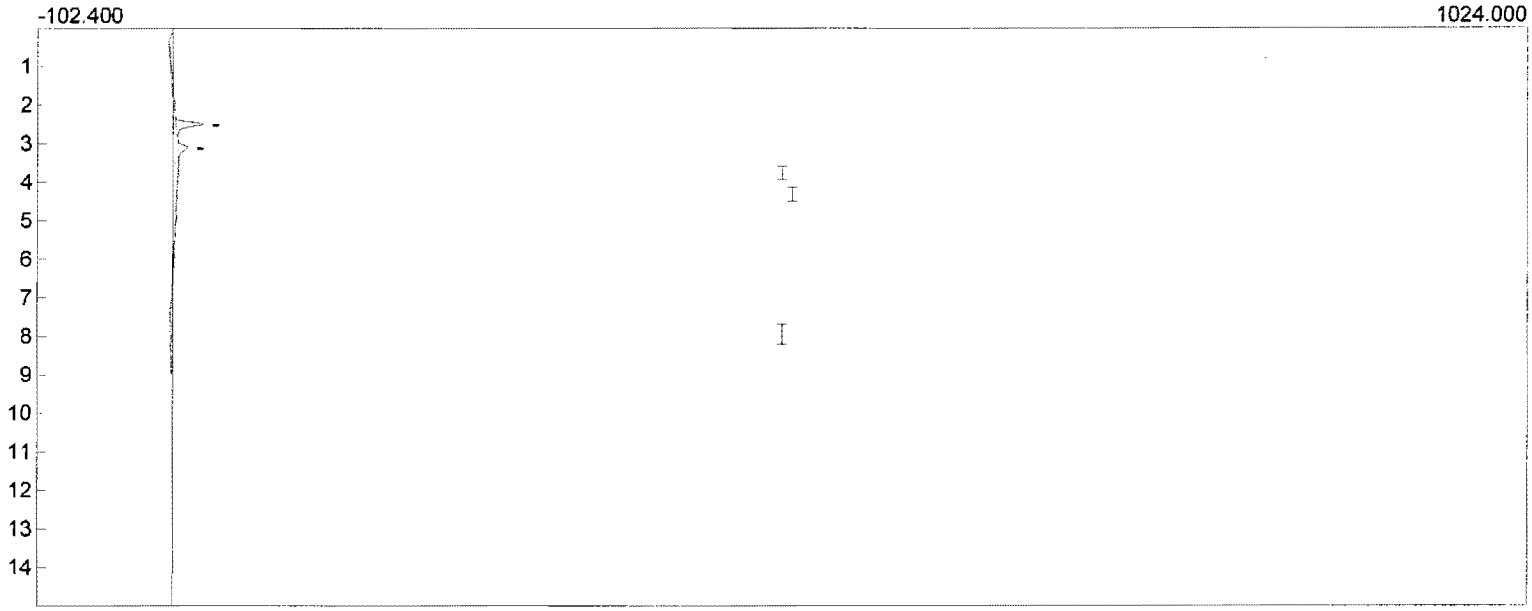
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 16:26:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample24.CHR ()
Sample: SRU Run #1
Operator: SEY



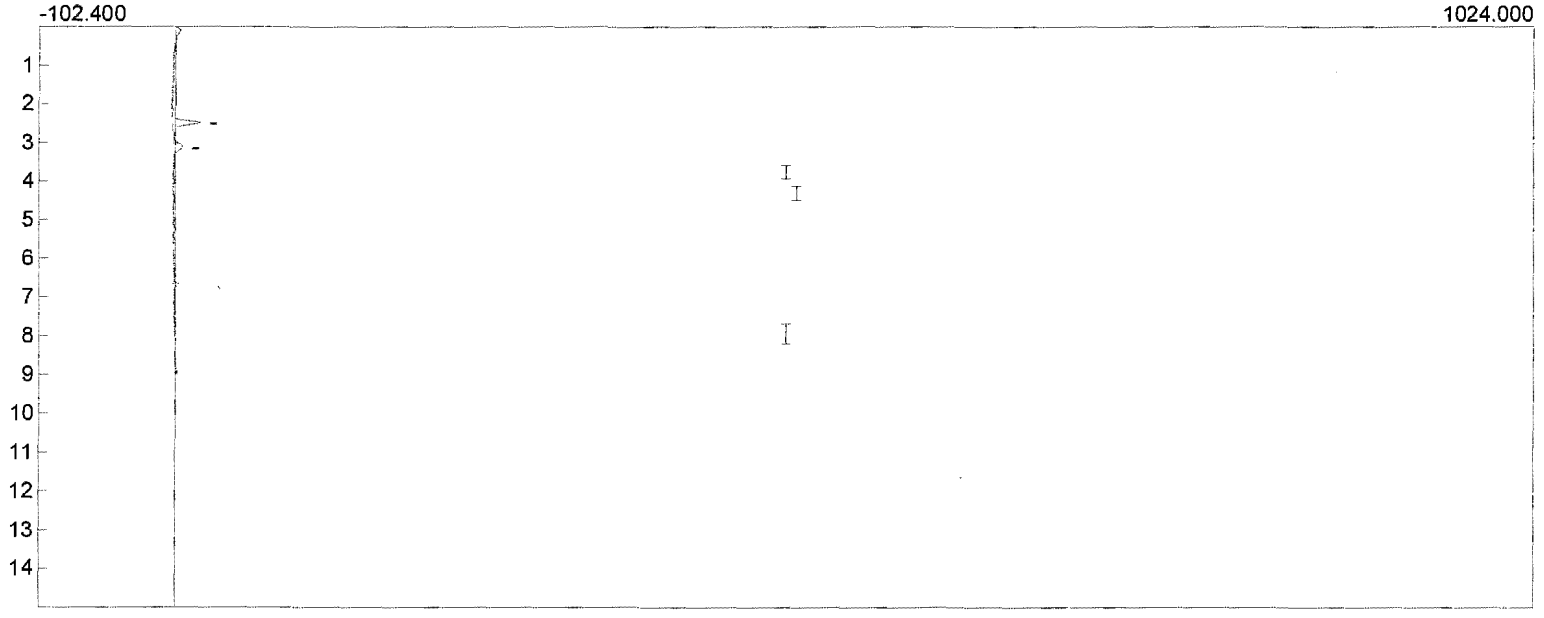
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 16:38:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample25.CHR ()
Sample: SRU Run #1
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/19/2006 16:50:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218sample26.CHR ()
Sample: SRU Run #1
Operator: SEY



Component	Area
	0.0000

TRS STANDARDS PRETEST DATA

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: 38720
Compound Analyzed: TRS
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Carbonyl Sulfide Standards			
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**
1	0.0	0.0	0.0
2	5.2	126.0	11.2
3	10.4	405.6	20.1
4	26.0	2,548.5	50.5

Hydrogen Sulfide Standards			
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**
1	0.0	0.0	0.0
2	5.0	120.6	11.0
3	10.0	462.9	21.5
4	25.0	3,139.4	56.0

Carbon Disulfide Standards			
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**
1	0.0	0.0	0.0
2	5.2	176.0	13.3
3	10.3	623.6	25.0
4	25.9	3,262.9	57.1

TRS STANDARDS POSTTEST DATA

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: 38720
Compound Analyzed: TRS
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Hydrogen Sulfide Standards				Drift
Standard No	Concentration	Area	Sq Rt Area Counts	%
1	0.0	0.0	0.0	0.0
2	5.0	129.2	11.4	-3.5
3	10.0	466.9	21.6	-0.4
4	25.0	3,074.3	55.4	1.0

Carbonyl Sulfide Standards				Drift
Standard No	Concentration	Area	Sq Rt Area Counts	%
1	0.0	0.0	0.0	0.0
2	5.2	115.6	10.7	4.2
3	10.4	390.2	19.8	1.9
4	26.0	2,513.3	50.1	0.7

Carbon Disulfide Standards				Drift
Standard No	Concentration	Area	Sq Rt Area Counts	%
1	0.0	0.0	0.0	0.0
2	5.2		0.0	100.0
3	10.3		0.0	100.0
4	25.9		0.0	100.0

Analytical Calculation Summary

Calibration Standards Area Linear Regression Fit

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: 38720
Compound Analyzed: Carbonyl Sulfide
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Calibration Standards

Standard #	Standard Peak Area (mv)	Square Root Peak Area (mv)	Standard Concentration (ppm)
1	0.0	0.0	0.0
2	126.0	11.2	5.2
3	405.6	20.1	10.4
4	2,548.5	50.5	26.0

Statistical Analysis Summary

Σxy:	1580.364
Σx:	81.8
Σy:	41.6
Σx^2:	3080
$\Sigma(x)^2$:	6699
N:	4
m:	0.518845
b:	-0.2165

Analytical Calculation Summary

Calibration Standards Area Linear Regression Fit

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: 38720
Compound Analyzed: Carbon Disulfide
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Calibration Standards

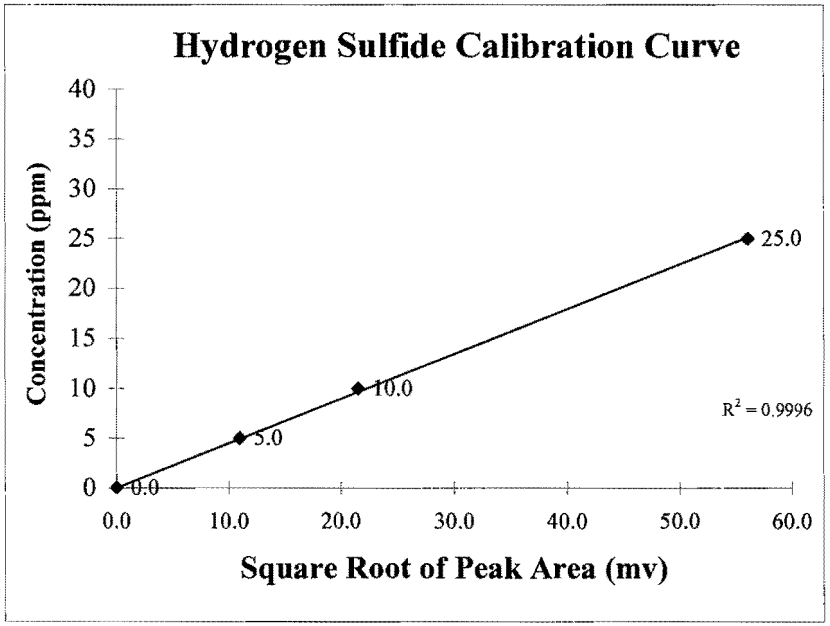
Standard #	Standard Peak Area (mv)	Square Root Peak Area (mv)	Standard Concentration (ppm)
1	0.0	0.0	0.0
2	176.0	13.3	5.2
3	623.6	25.0	10.3
4	3,262.9	57.1	25.9

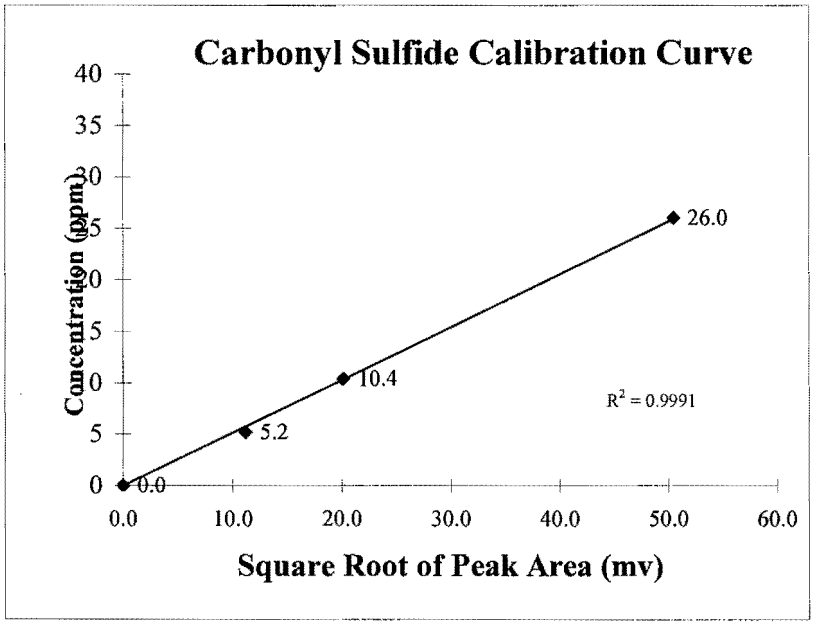
Statistical Analysis Summary

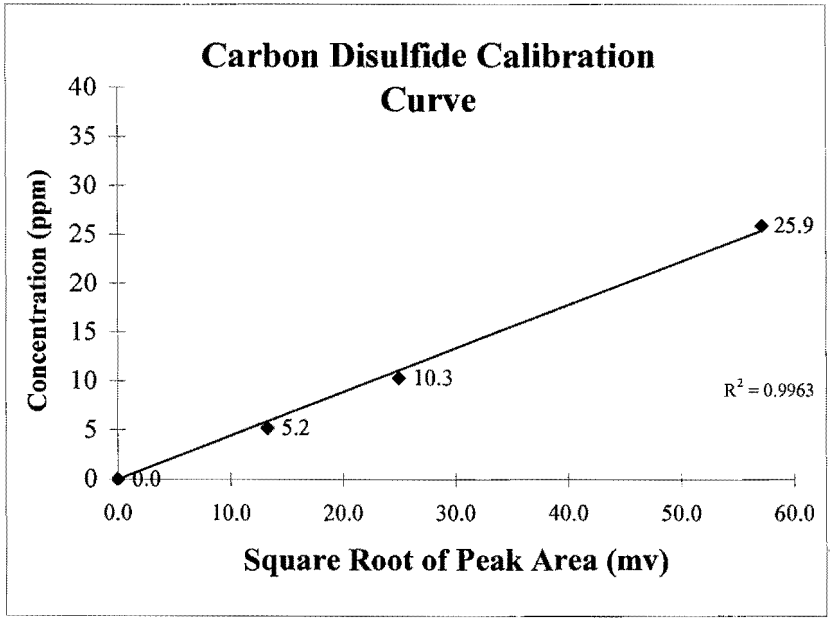
Σxy:	1805.648
Σx:	95.4
Σy:	41.4
Σx^2:	4062
$\Sigma(x)^2$:	9093
N:	4
m:	0.457584
b:	-0.55867

Calibration Curves

December 19, 2006





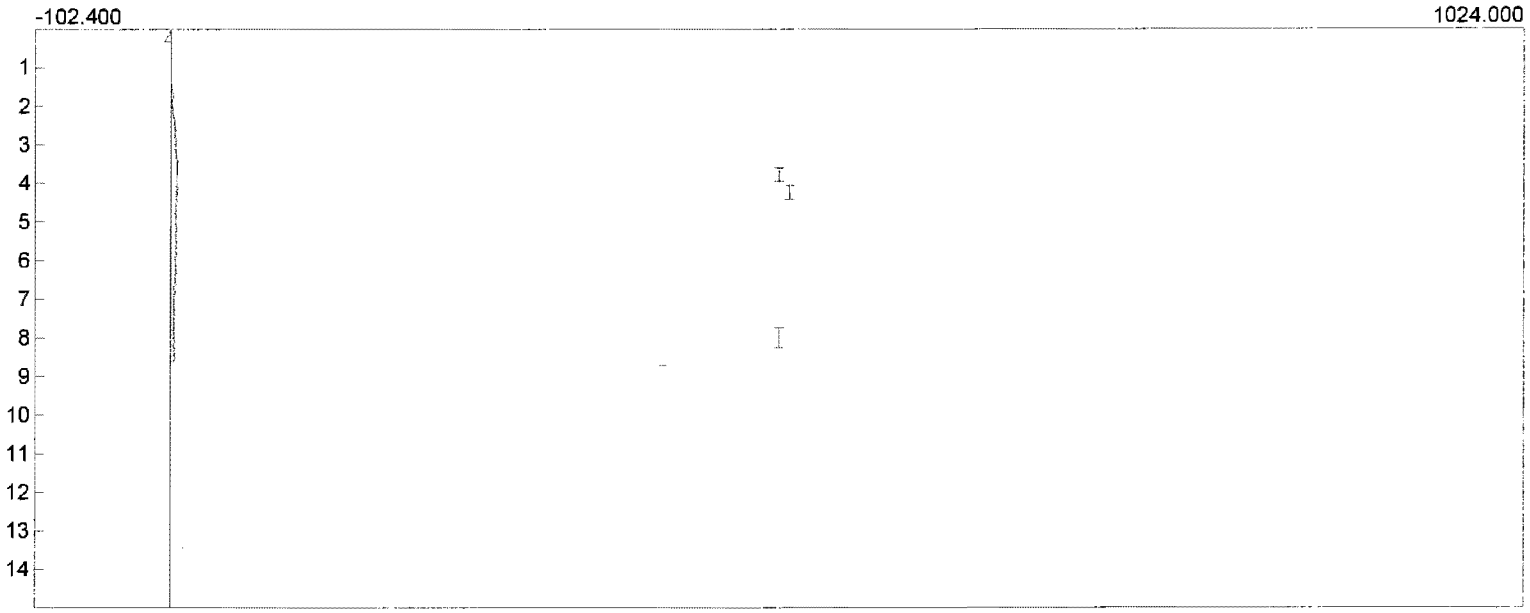


Client: Total
Location: Port Arthur, Tx
Source: SRU
Date: 12/19/2006
1218preXX PRE CAL

ARI ENVIRONMENTAL INC.

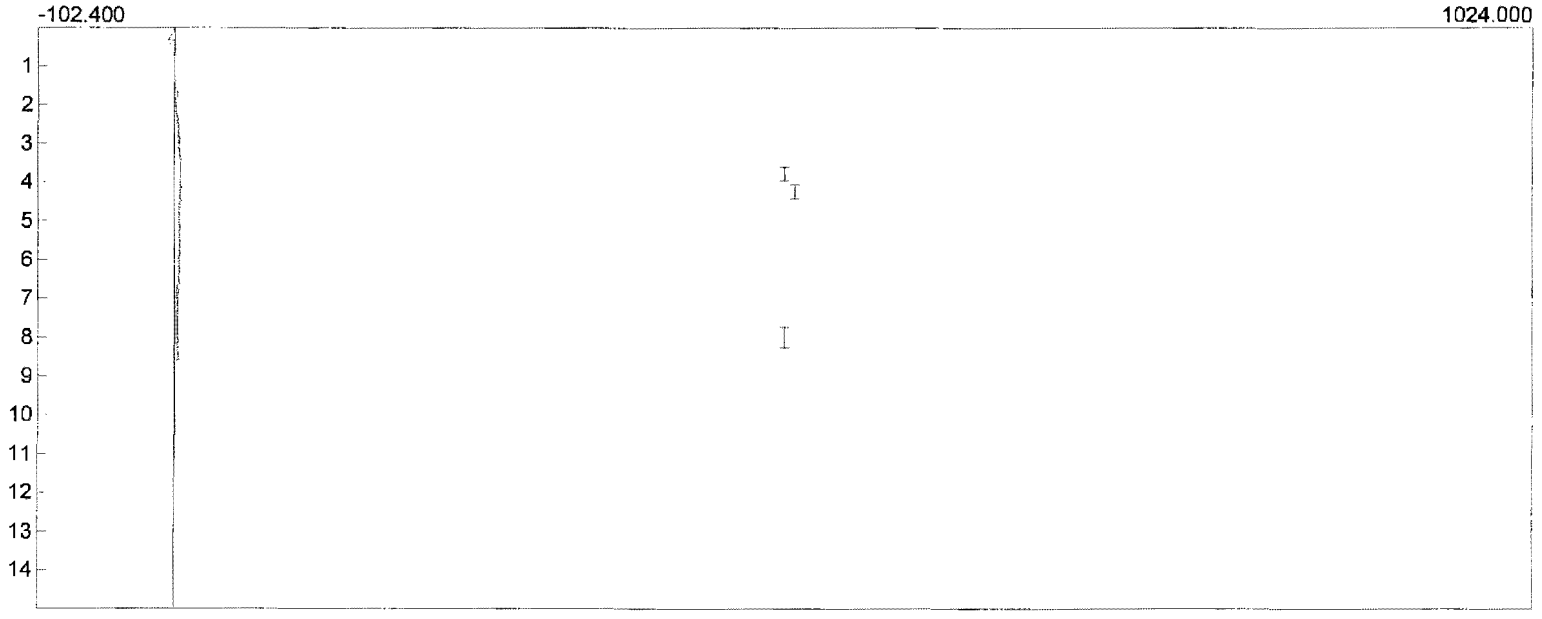
Description	File Name	COS Area (mv)	Square Root COS Area	H2S Area (mv)	Square Root H2S Area	CS2 Area (mv)	Square Root CS2 Area
5 ppm	8	118.84	10.90	122.89	11.09	173.39	13.17
	9	132.98	11.53	121.36	11.02	190.01	13.78
	10	126.18	11.23	117.56	10.84	164.49	12.83
Average		**126.00**	**11.22**	**120.60**	**10.98**	**175.96**	**13.26**
10 ppm	5	394.86	19.87	456.02	21.35	597.71	24.45
	6	405.98	20.15	459.97	21.45	624.85	25.00
	7	415.99	20.40	472.71	21.74	648.23	25.46
Average		**405.61**	**20.14**	**462.90**	**21.51**	**623.60**	**24.97**
25 ppm	2	2538.03	50.38	3121.67	55.87	3179.43	56.39
	3	2541.32	50.41	3138.80	56.02	3273.38	57.21
	4	2566.05	50.66	3157.59	56.19	3335.94	57.76
Average		**2548.47**	**50.48**	**3139.35**	**56.03**	**3262.92**	**57.12**
0 ppm							
	11	0.00	0.00	0.00	0.00	0.00	0.00
	12	0.00	0.00	0.00	0.00	0.00	0.00
	13	0.00	0.00	0.00	0.00	0.00	0.00
Average		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal11.CHR ()
Sample: 0 ppm pre
Operator: SEY



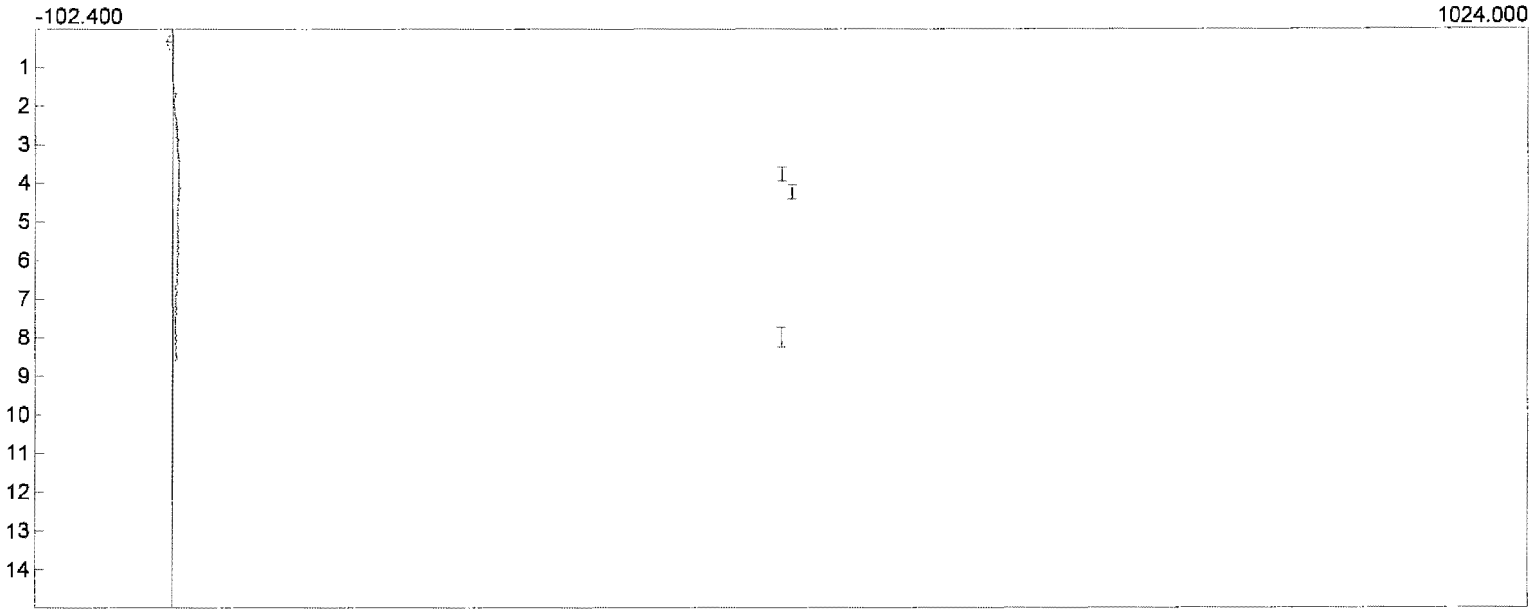
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal12.CHR ()
Sample: 0 ppm pre
Operator: SEY



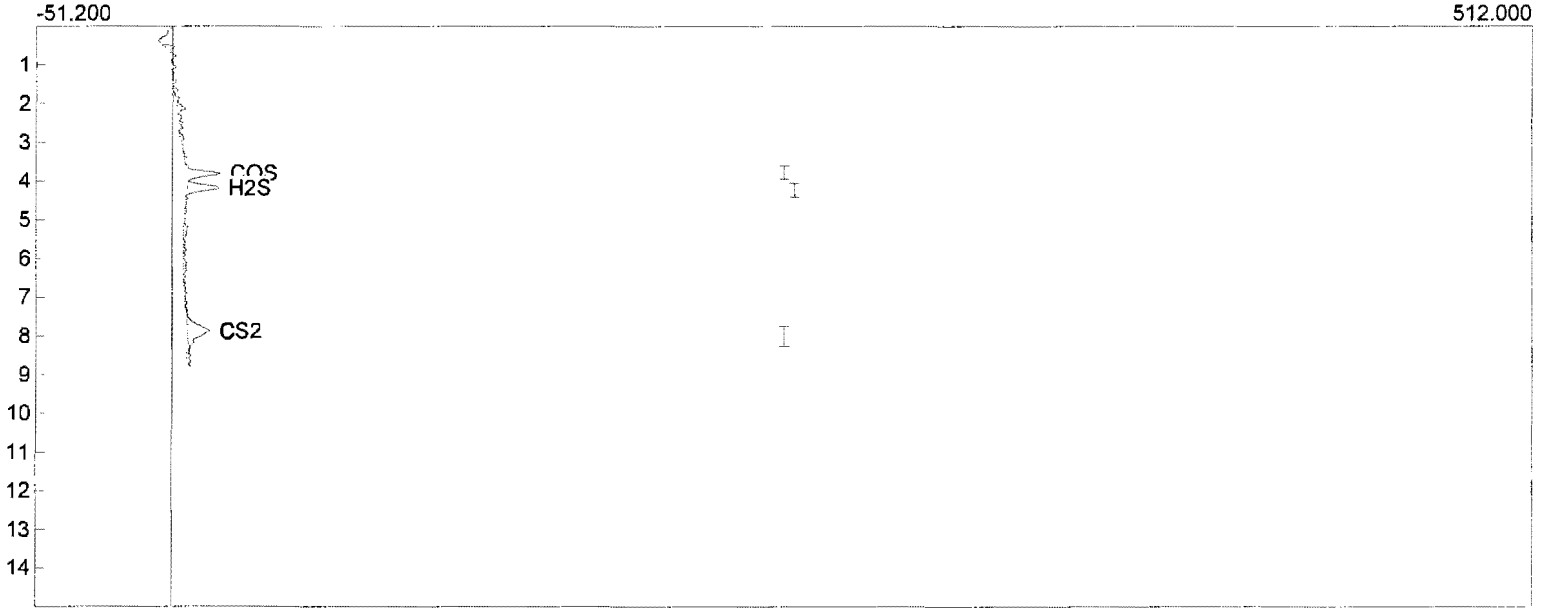
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal13.CHR ()
Sample: 0 ppm pre
Operator: SEY



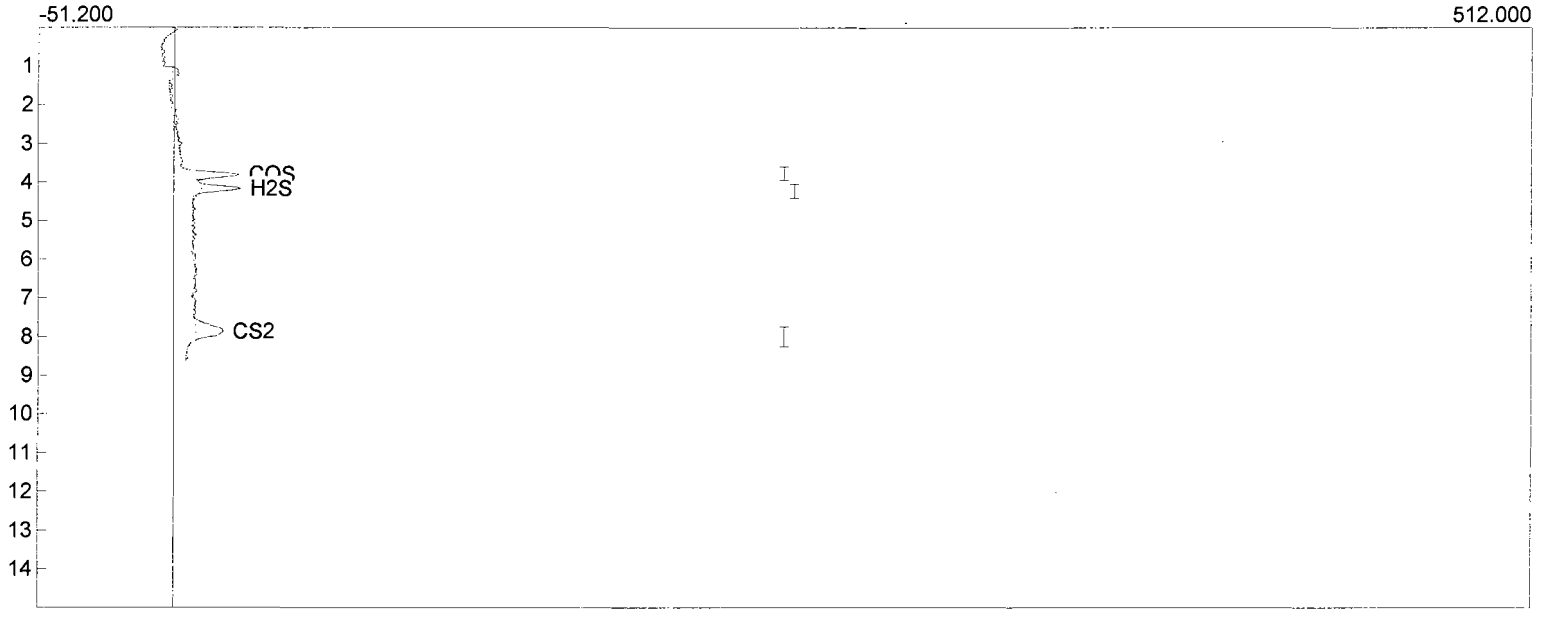
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal08.CHR ()
Sample: 5 ppm pre
Operator: SEY



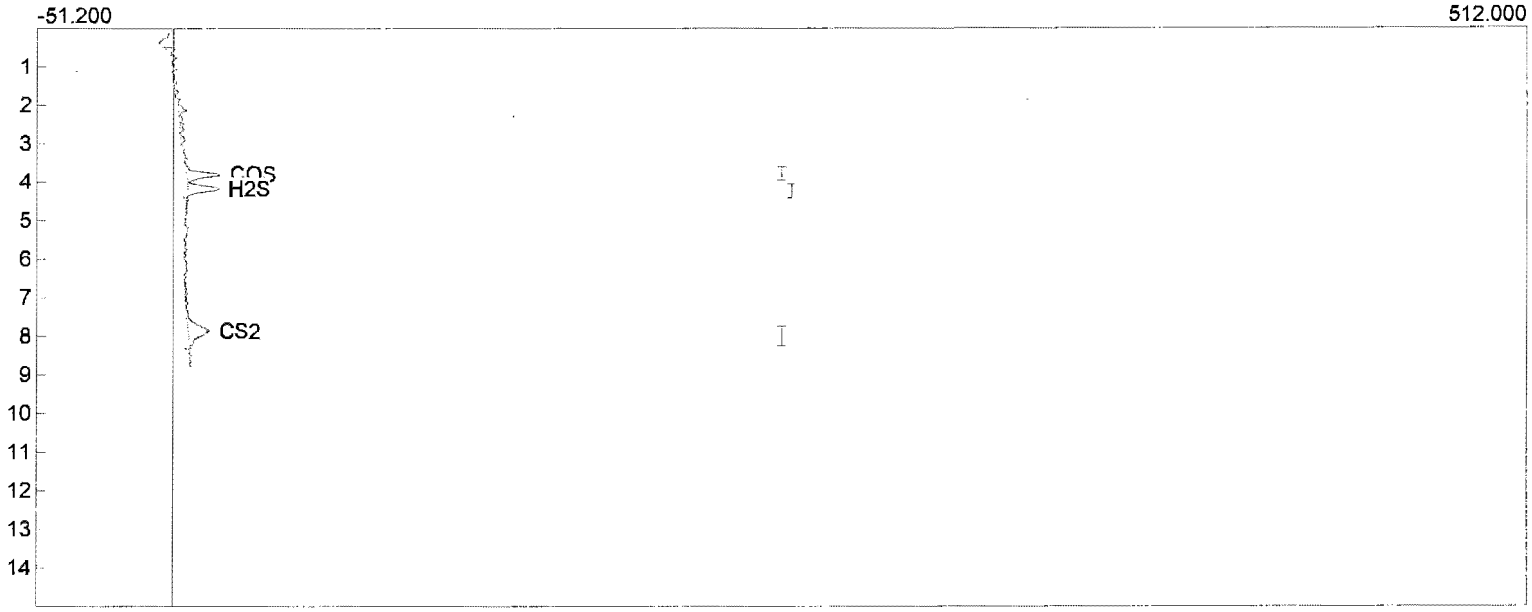
Component	Area
COS	118.8380
H2S	122.8910
CS2	173.3860
	415.1150

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal09.CHR ()
Sample: 5 ppm pre
Operator: SEY



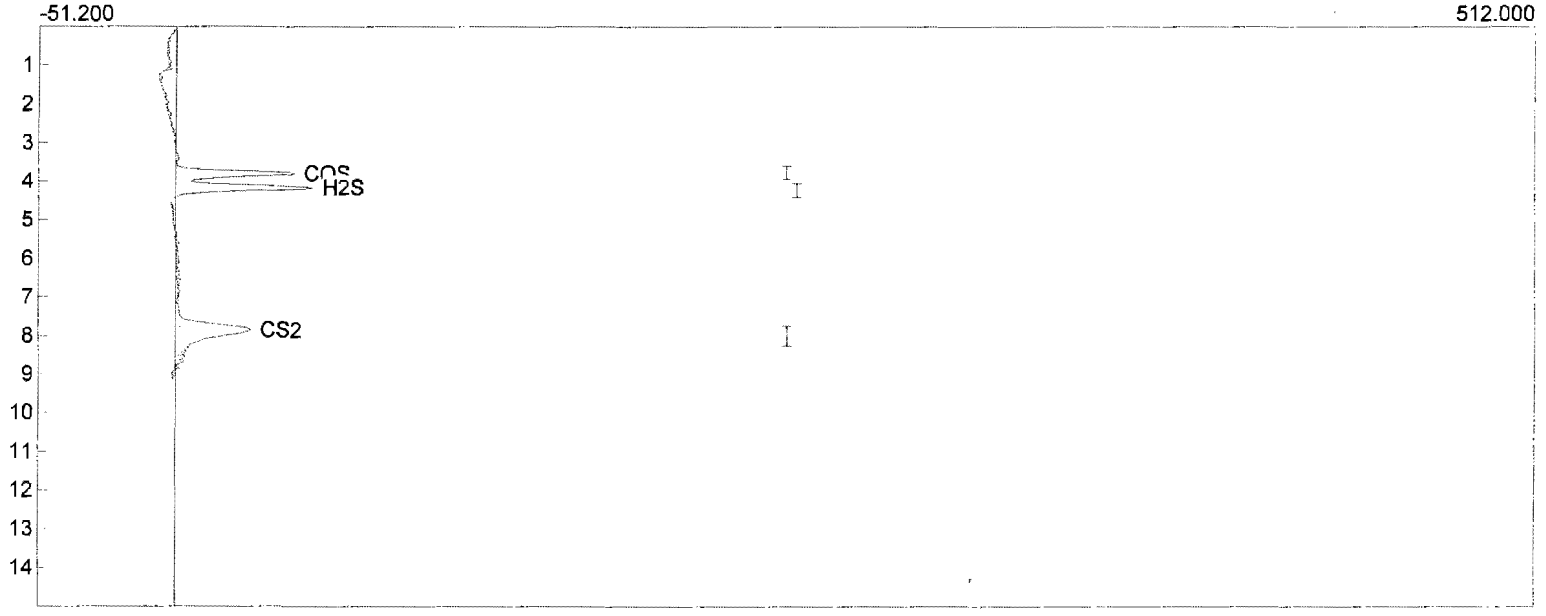
Component	Area
COS	132.9800
H2S	121.3570
CS2	190.0135
	444.3505

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal10.CHR ()
Sample: 5 ppm pre
Operator: SEY



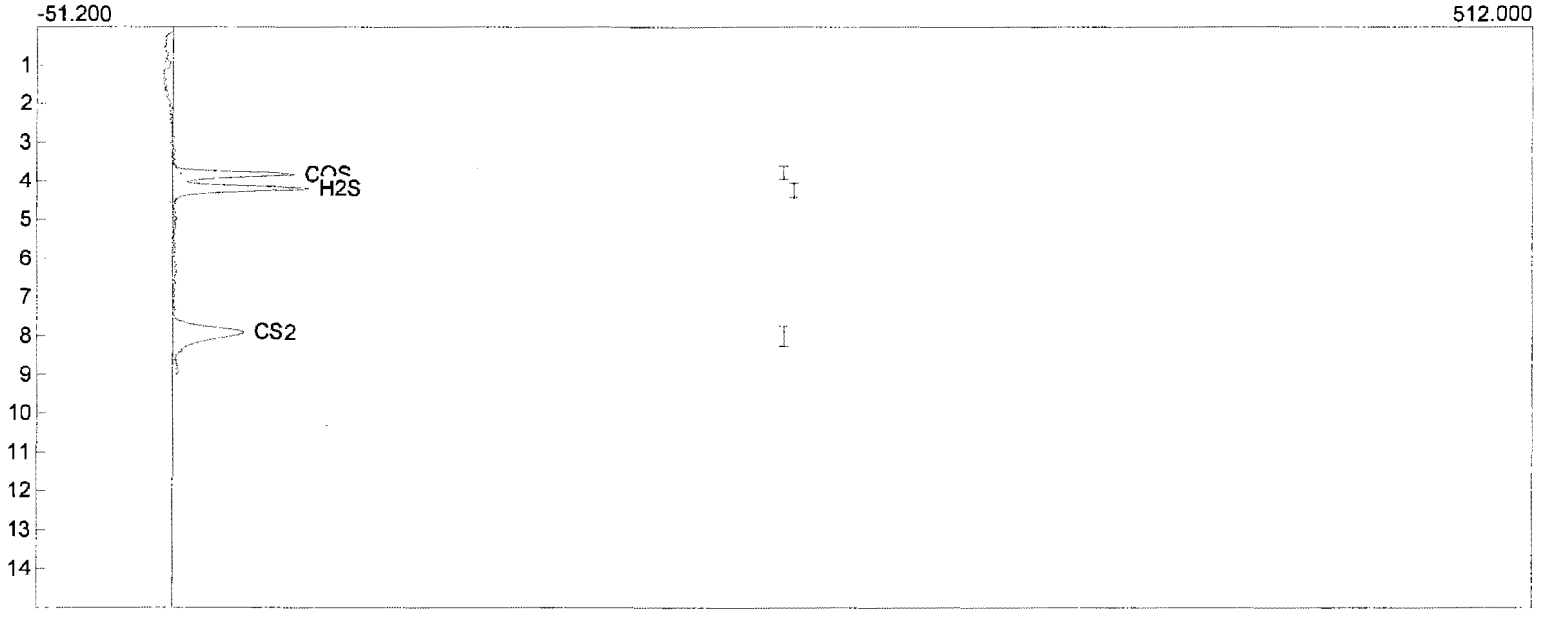
Component	Area
COS	126.1820
H2S	117.5620
CS2	164.4930
	408.2370

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal05.CHR ()
Sample: 10 ppm pre
Operator: SEY



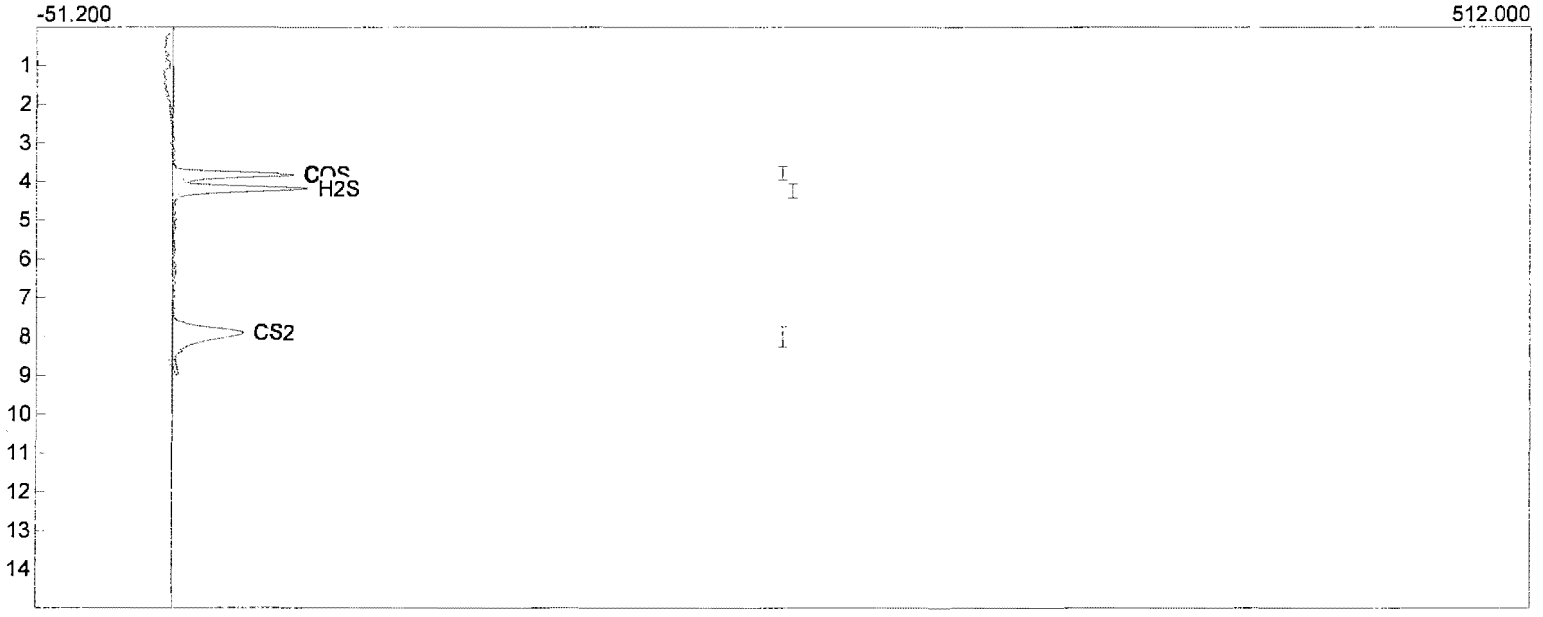
Component	Area
COS	394.8560
H2S	456.0160
CS2	597.7120
	1448.5840

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal06.CHR ()
Sample: 10 ppm pre
Operator: SEY



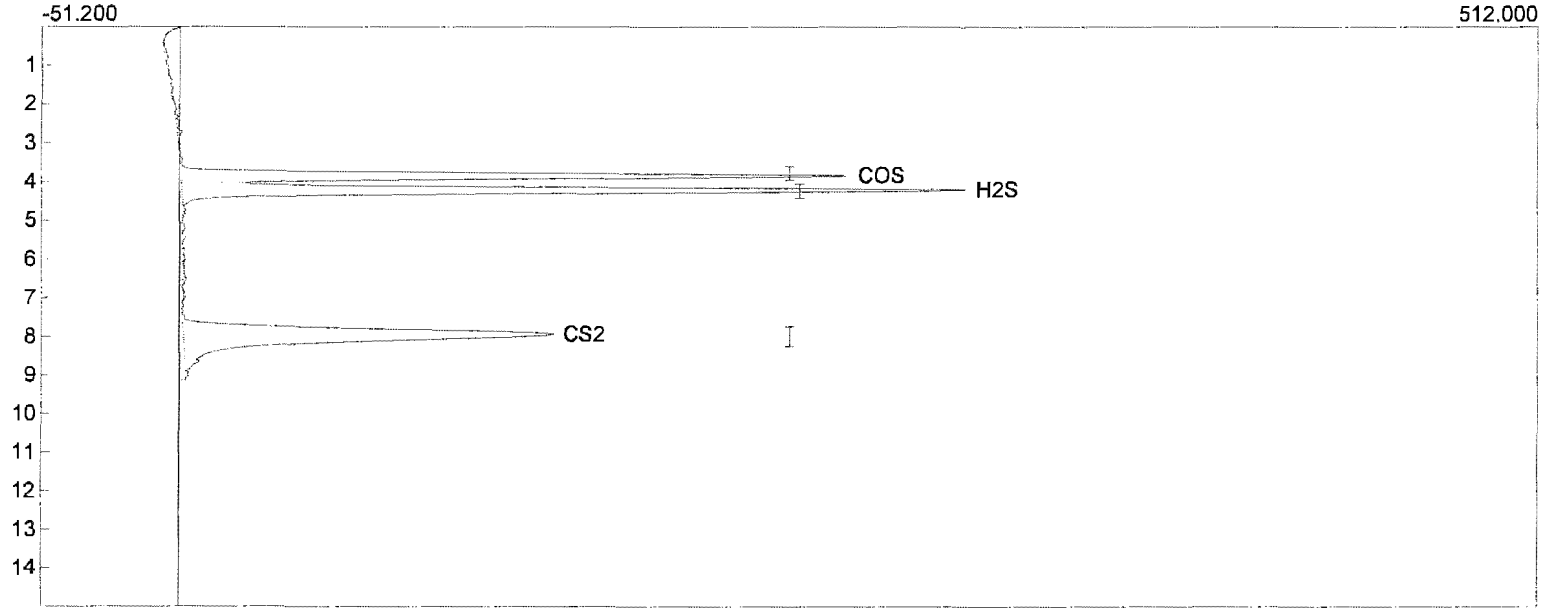
Component	Area
COS	405.9780
H2S	459.9720
CS2	624.8460
	1490.7960

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal07.CHR ()
Sample: 10 ppm pre
Operator: SEY



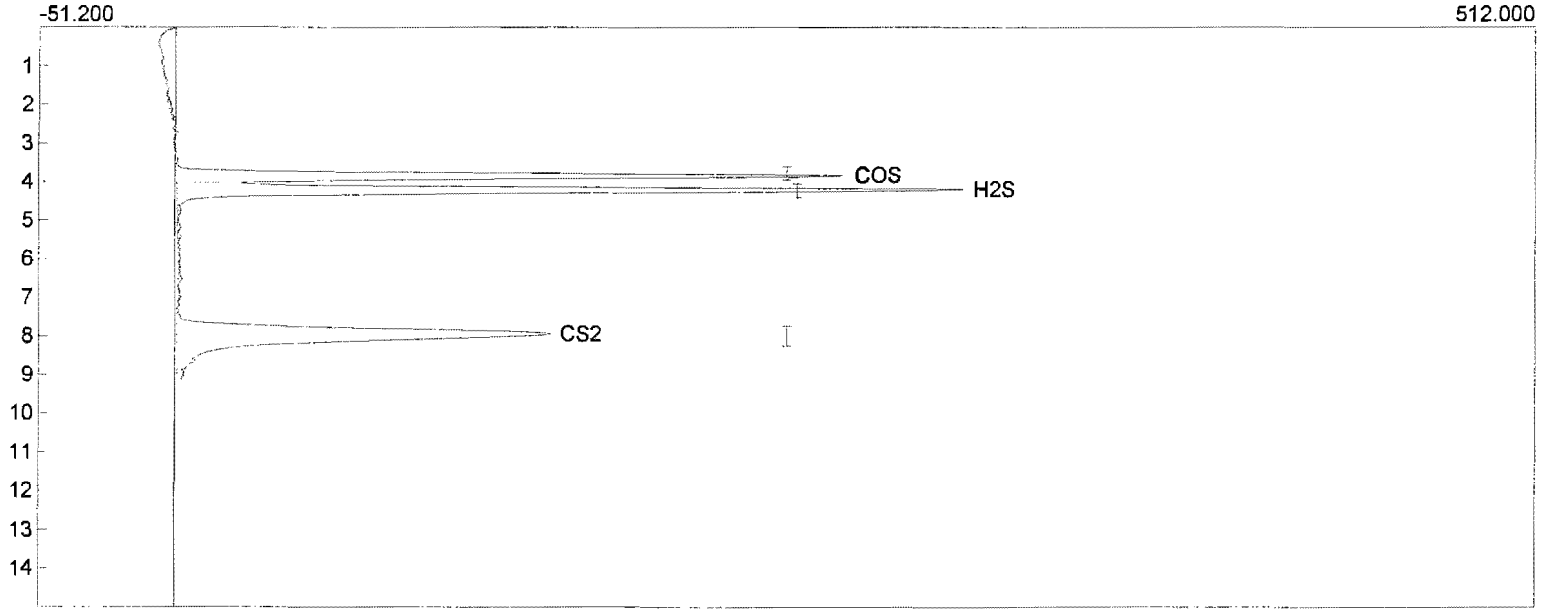
Component	Area
COS	415.9880
H2S	472.7120
CS2	648.2260
	1536.9260

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal02.CHR ()
Sample: 25 ppm pre
Operator: SEY



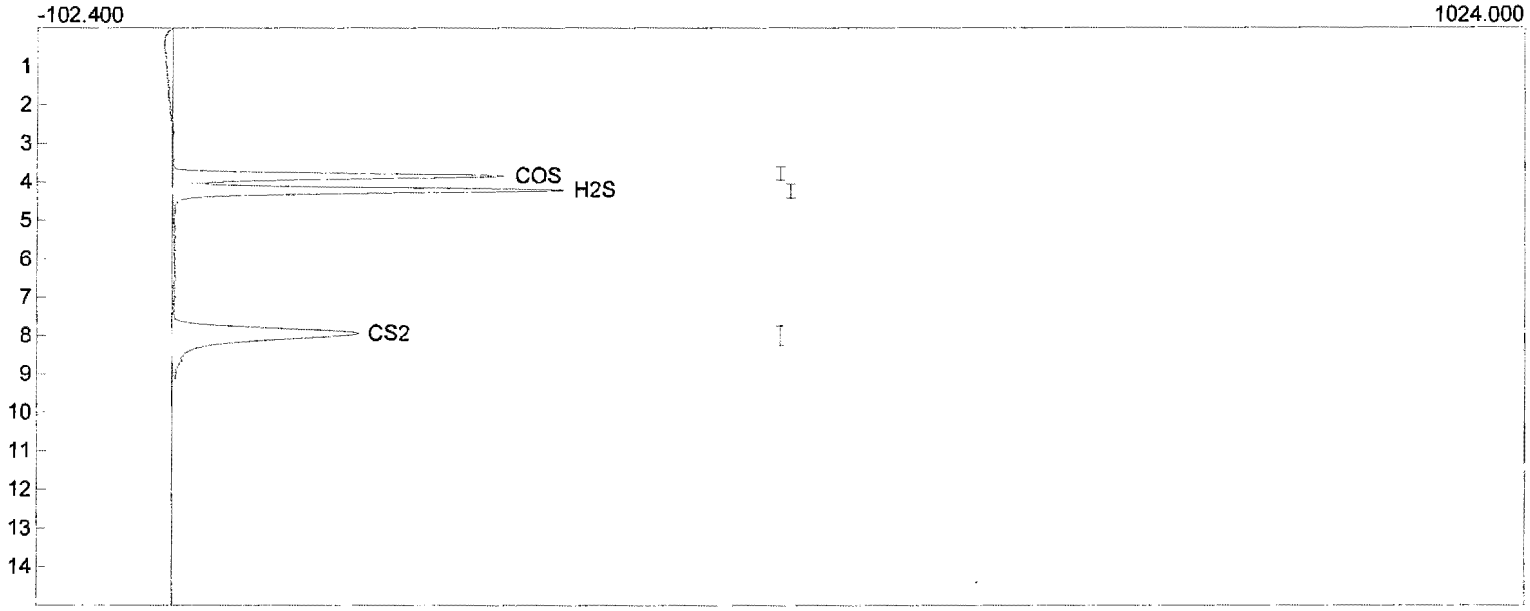
Component	Area
COS	2538.0300
H2S	3121.6670
CS2	3179.4300
	8839.1270

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal03.CHR ()
Sample: 25 ppm pre
Operator: SEY



Component	Area
COS	2541.3160
H2S	3138.7995
CS2	3273.3765
	8953.4920

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218cal04.CHR ()
Sample: 25 ppm pre
Operator: SEY

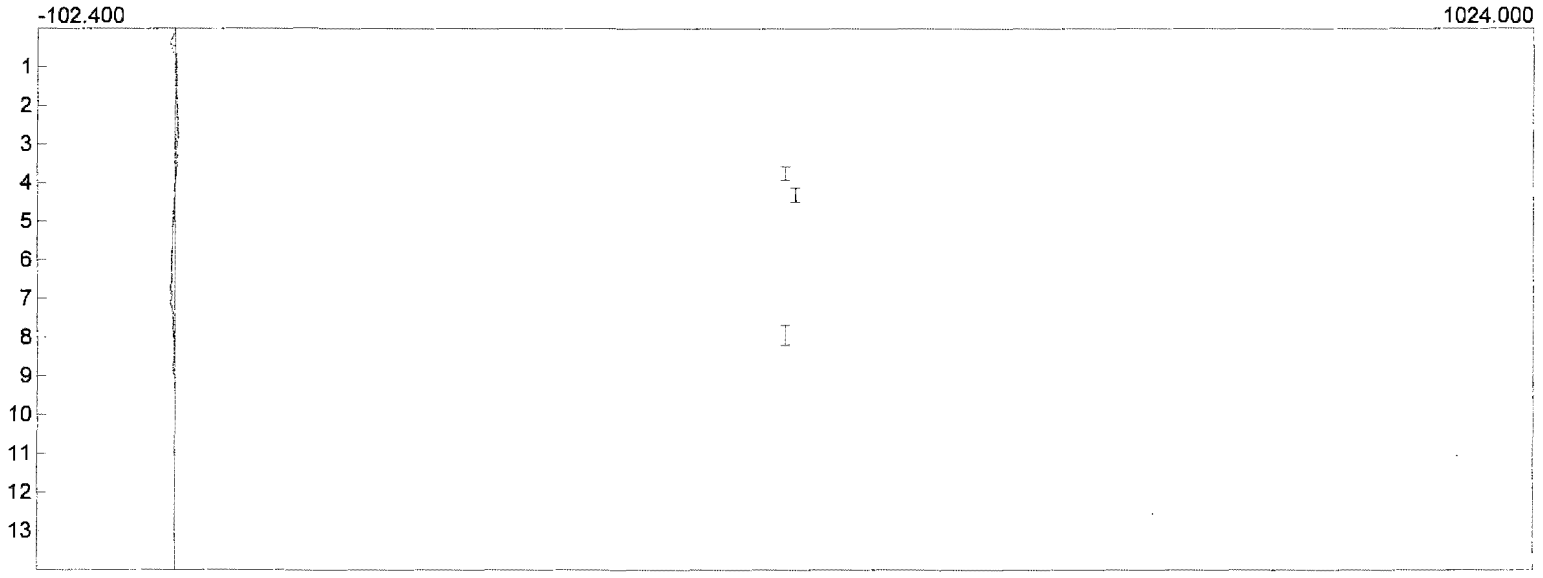


Component	Area
COS	2566.0540
H2S	3157.5945
CS2	3335.9380
	9059.5865

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date: 12/19/2006
1218postXX Post

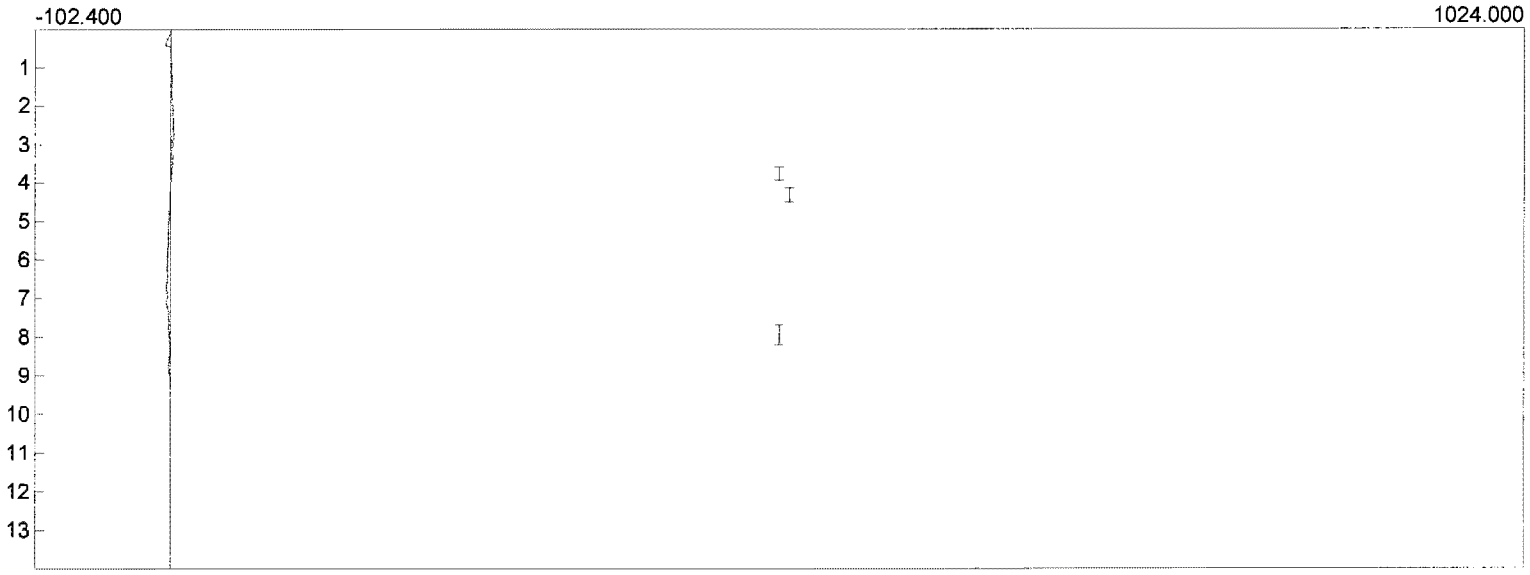
Description	File Name	COS Area (mv)	Square Root COS Area	H2S Area (mv)	Square Root H2S Area	CS2 Area (mv)	Square Root CS2 Area
5 ppm	12	122.28	11.06	139.76	11.82	172.65	13.14
	13	119.47	10.93	126.28	11.24	185.23	13.61
	14	104.90	10.24	121.43	11.02	150.87	12.28
Average		**115.55**	**10.74**	**129.16**	**11.36**	**169.58**	**13.01**
10 ppm	9	400.12	20.00	517.99	22.76	565.99	23.79
	10	372.03	19.29	436.34	20.89	587.44	24.24
	11	398.40	19.96	446.25	21.12	571.43	23.90
Average		**390.18**	**19.75**	**466.86**	**21.59**	**574.95**	**23.98**
25 ppm	5	2505.91	50.06	3061.64	55.33	3014.40	54.90
	6	2483.36	49.83	3026.34	55.01	2958.05	54.39
	7	2550.66	50.50	3134.89	55.99	3120.45	55.86
Average		**2513.31**	**50.13**	**3074.29**	**55.44**	**3030.97**	**55.05**
0 ppm							
	1	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00
Average		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218post01.CHR ()
Sample: 0 ppm post
Operator: SEY



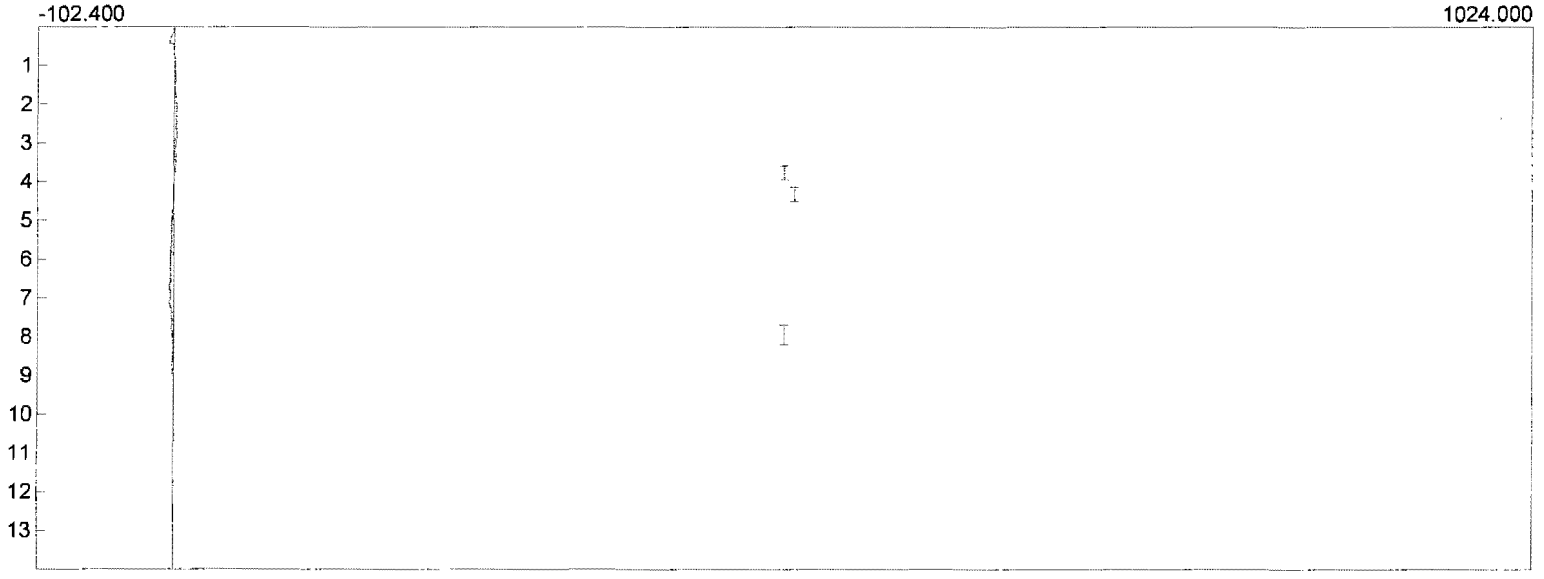
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218post02.CHR ()
Sample: 0 ppm post
Operator: SEY



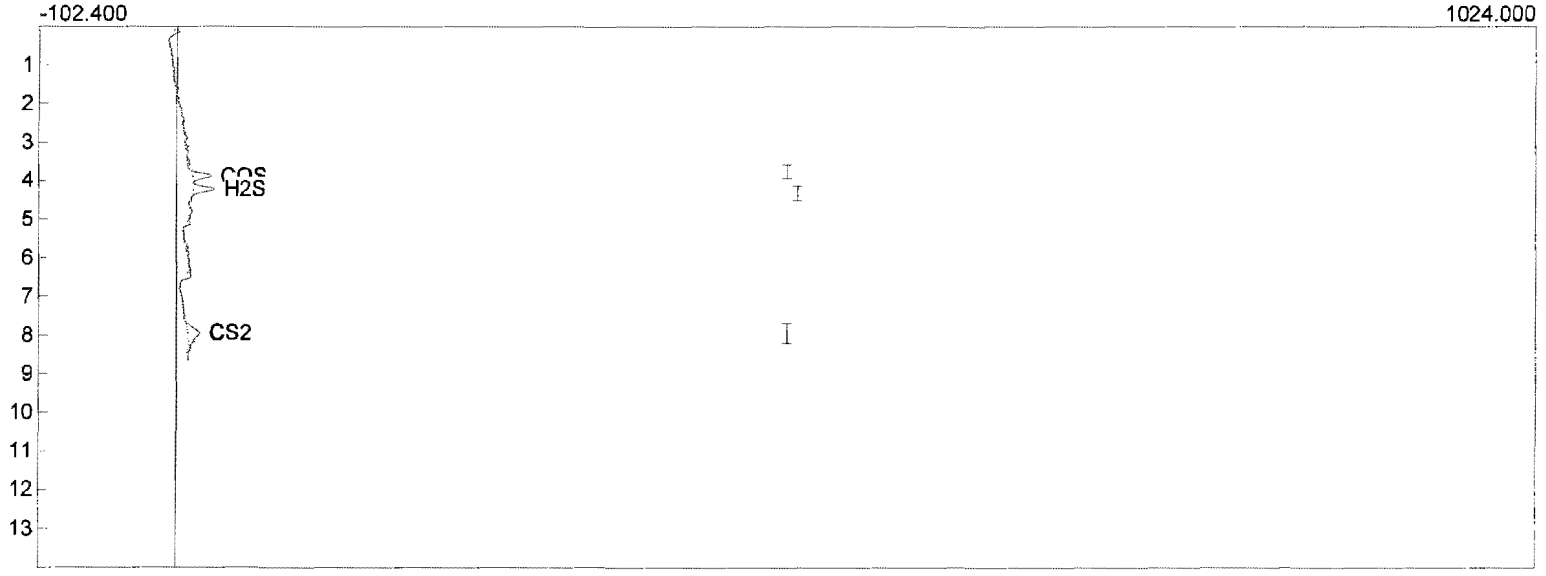
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 450 rot
Temp. prog: exxon2.tem
Data file: 1218post03.CHR ()
Sample: 0 ppm post
Operator: SEY



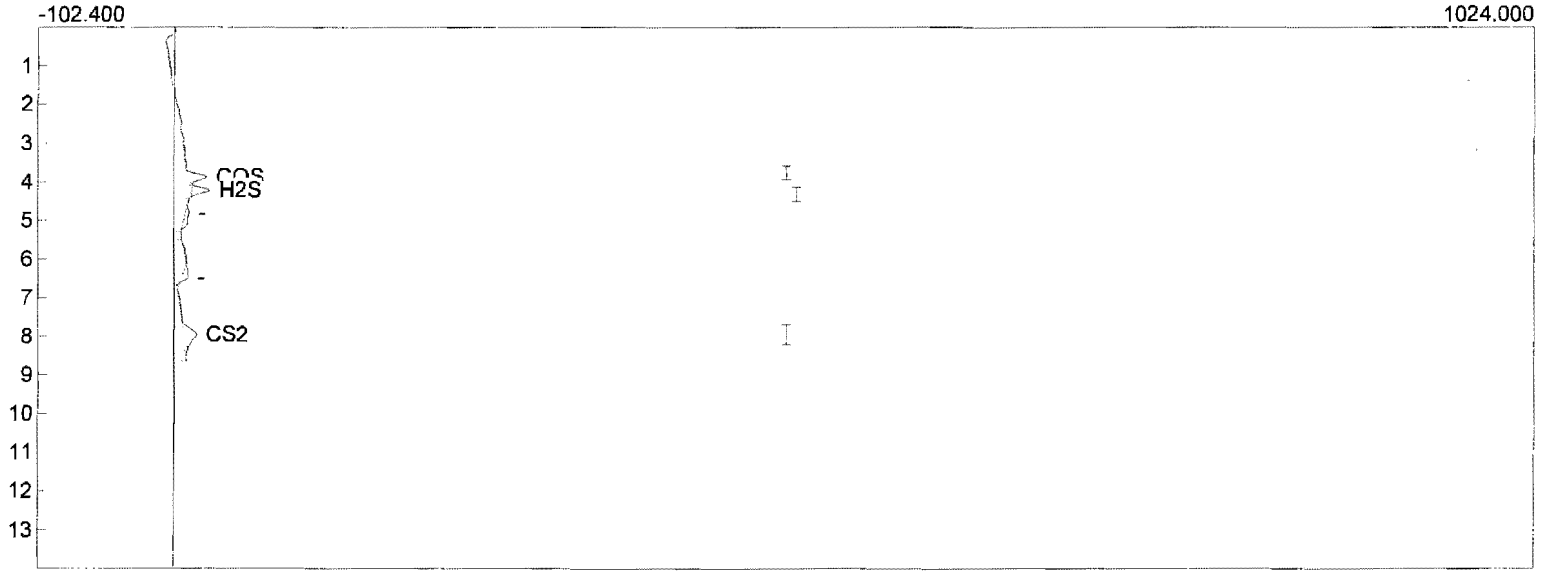
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post12.CHR ()
Sample: 5 ppm post
Operator: SEY



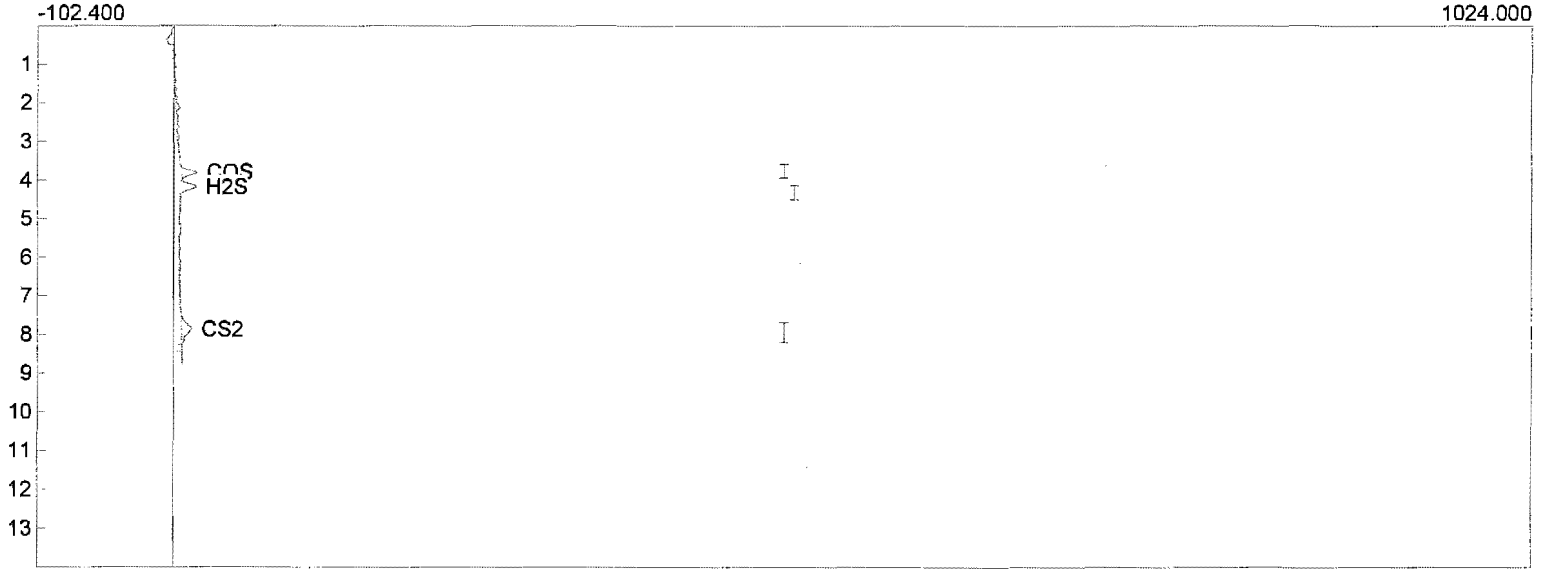
Component	Area
COS	122.2780
H2S	139.7645
CS2	172.6500
	434.6925

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post13.CHR ()
Sample: 5 ppm post
Operator: SEY



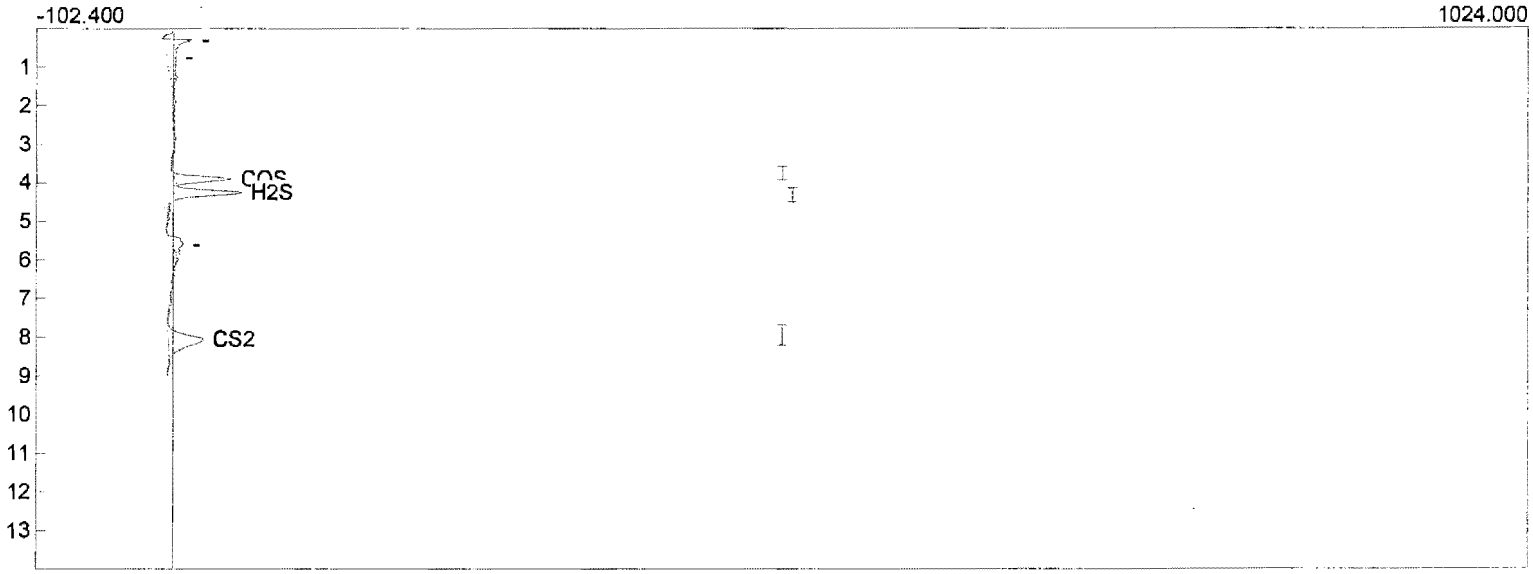
Component	Area
COS	119.4740
H2S	126.2825
CS2	185.2320
	430.9885

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post14.CHR ()
Sample: 5 ppm post
Operator: SEY



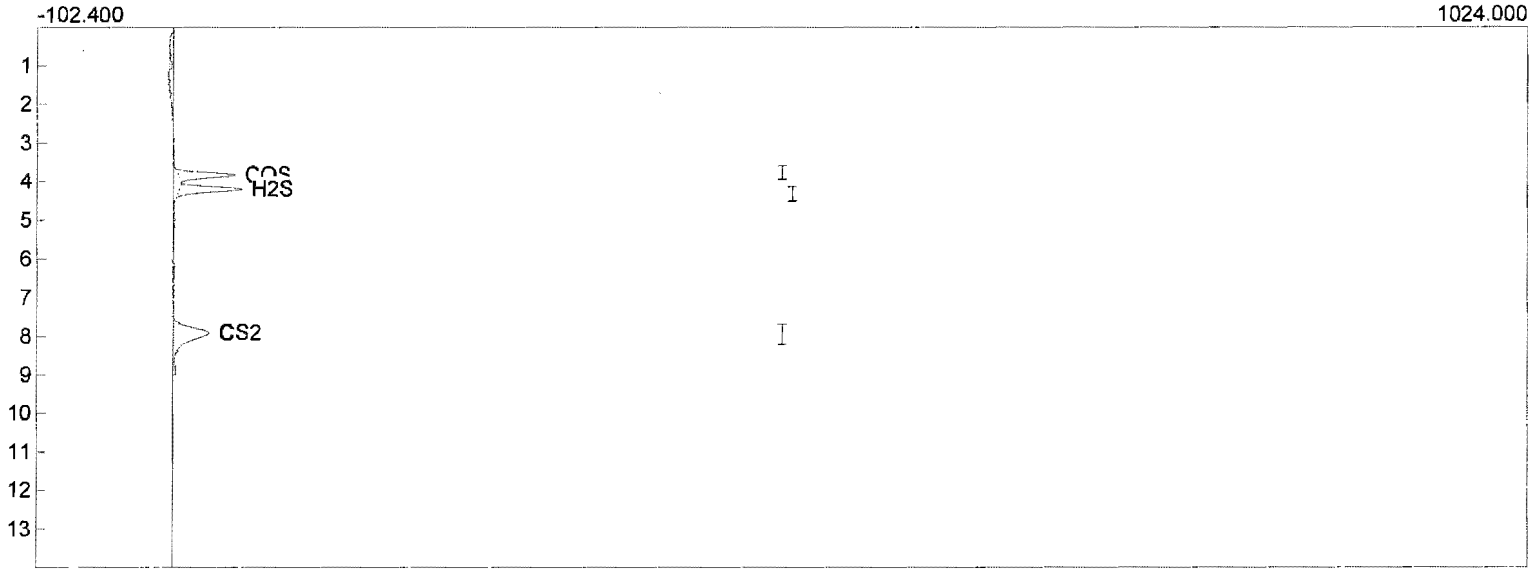
Component	Area
COS	104.8950
H2S	121.4320
CS2	150.8740
	377.2010

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post09.CHR ()
Sample: 10 ppm post
Operator: SEY



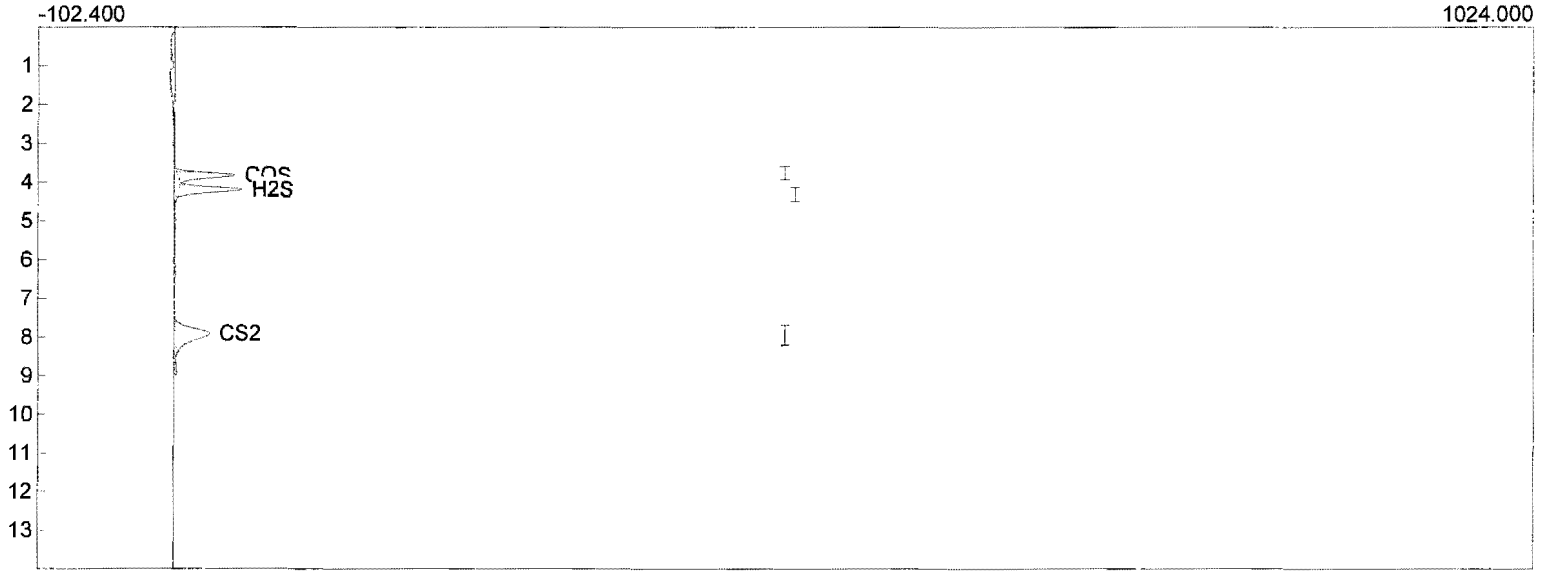
Component	Area
COS	400.1200
H2S	517.9900
CS2	565.9860
	1484.0960

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post10.CHR ()
Sample: 10 ppm post
Operator: SEY



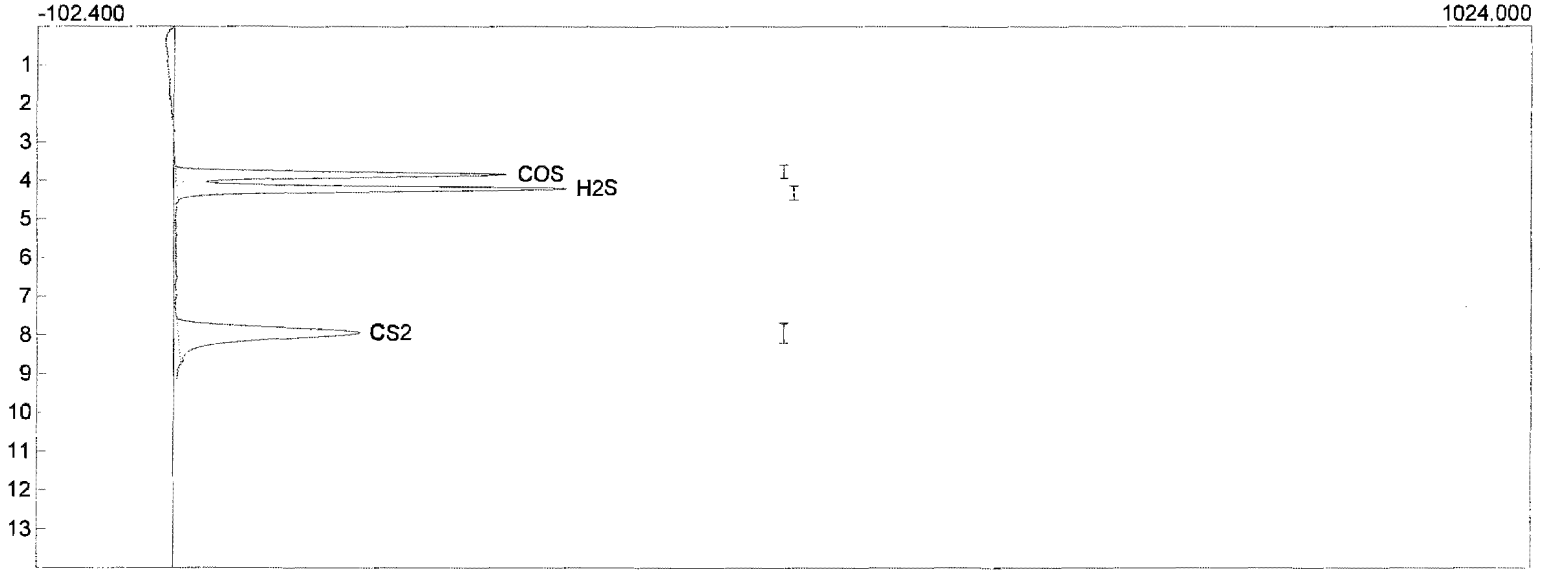
Component	Area
COS	372.0295
H2S	436.3370
CS2	587.4380
	1395.8045

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post11.CHR ()
Sample: 10 ppm post
Operator: SEY



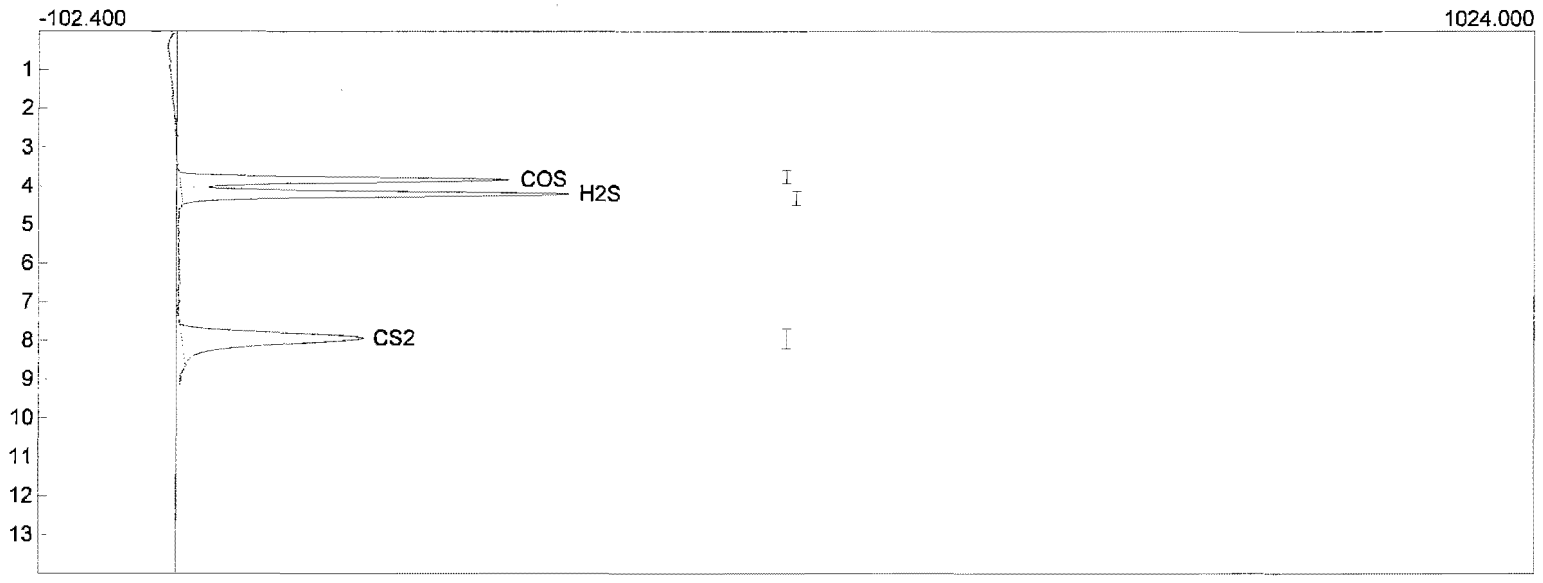
Component	Area
COS	398.4000
H2S	446.2520
CS2	571.4290
	1416.0810

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post05.CHR ()
Sample: 25 ppm post
Operator: SEY



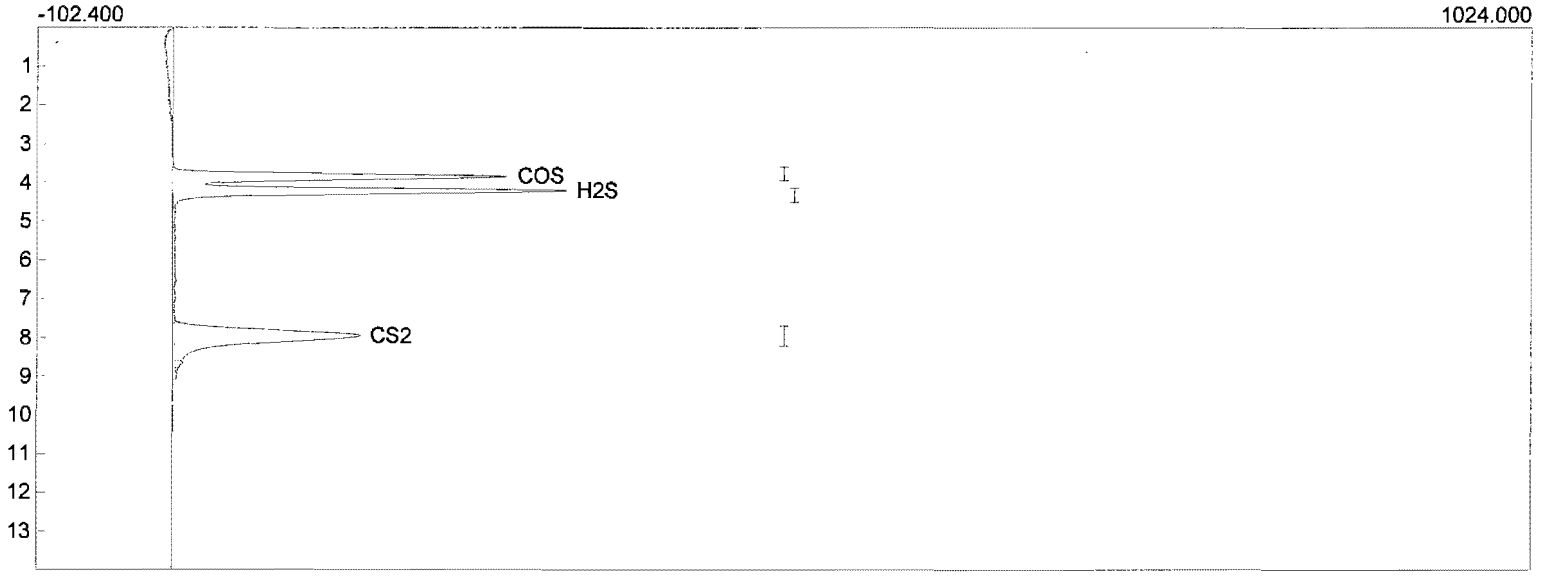
Component	Area
COS	2505.9090
H2S	3061.6400
CS2	3014.4000
	8581.9490

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post06.CHR ()
Sample: 25 ppm post
Operator: SEY



Component	Area
COS	2483.3590
H2S	3026.3360
CS2	2958.0530
	8467.7480

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218post07.CHR ()
Sample: 25 ppm post
Operator: SEY



Component	Area
COS	2550.6590
H2S	3134.8920
CS2	3120.4505
	8806.0015

Analytical Calculation Summary

Calibration Standards Area Linear Regression Fit

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: 38720
Compound Analyzed: Hydrogen Sulfide
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Calibration Standards

Standard #	Standard Peak Area (mv)	Square Root Peak Area (mv)	Standard Concentration (ppm)
1	0.0	0.0	0.0
2	120.6	11.0	5.0
3	462.9	21.5	10.0
4	3,139.4	56.0	25.0

Statistical Analysis Summary

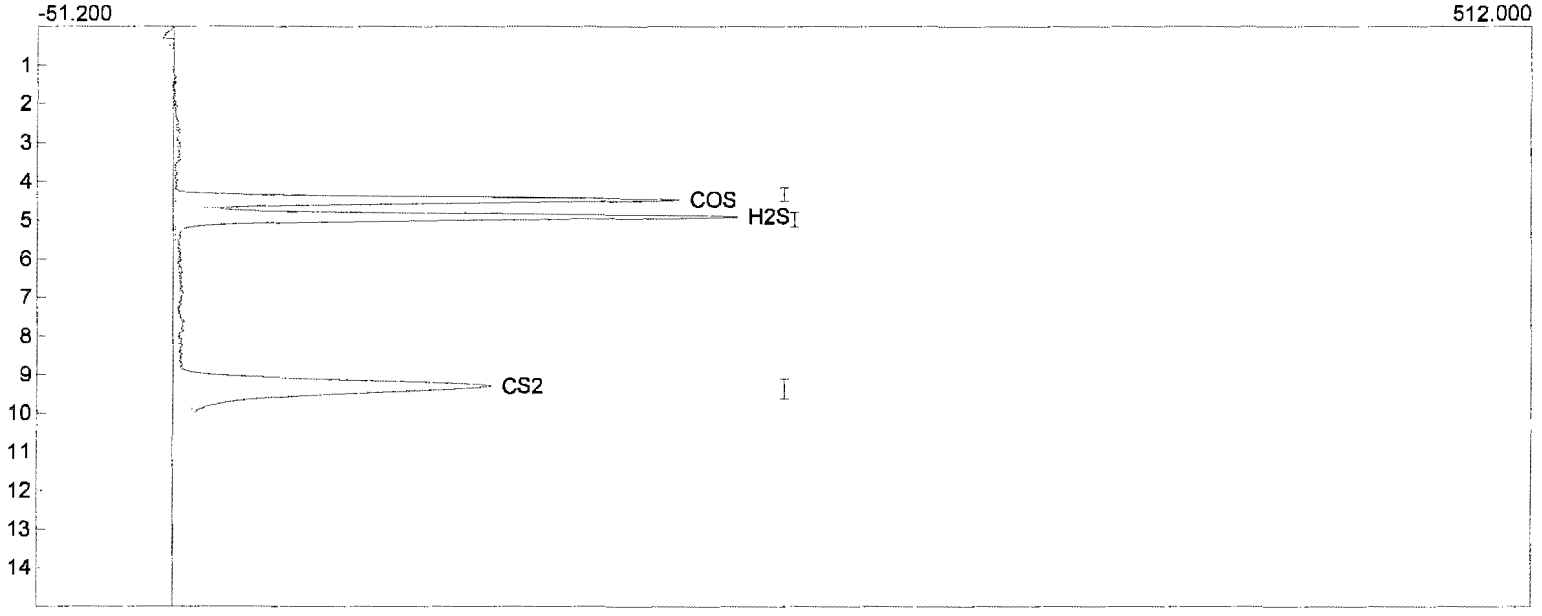
Σxy:	1670.809
Σx:	88.5
Σy:	40
Σx^2:	3723
$\Sigma(x)^2$:	7837
N:	4
m:	0.445418
b:	0.142116

TRS LINE LOSS DATA

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/19/2006
Run Number: 38720
Compound Analyzed: TRS
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Trial #1 Compound	Injected Concentration	Area Counts	Measured Concentration	% Loss (-) or % Gain (+)
Carbonyl Sulfide	25.0	2,235.4	24.31	-2.7
Hydrogen Sulfide	25.0	2,665.7	23.14	-7.4
Carbon Disulfide	25.0	2,819.7	23.73	-5.1

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/19/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1218lineloss01.CHR ()
Sample: Line Loss Test
Operator: SEY



Component	Area
COS	2235.3900
H2S	2665.7120
CS2	2819.7080
	7720.8100

TRS STANDARDS PRETEST DATA

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-2, M15-3
Compound Analyzed: TRS
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Carbonyl Sulfide Standards			
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**
1	0.0	0.0	0.0
2	5.2	210.0	14.5
3	10.4	668.2	25.8
4	26.0	4,131.3	64.3

Hydrogen Sulfide Standards			
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**
1	0.0	0.0	0.0
2	5.0	218.8	14.8
3	10.0	816.8	28.6
4	25.0	5,096.1	71.4

Carbon Disulfide Standards			
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**
1	0.0	0.0	0.0
2	5.2	326.6	18.1
3	10.3	890.5	29.8
4	25.9	4,184.3	64.7

TRS STANDARDS POSTTEST DATA

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-2, M15-3
Compound Analyzed: TRS
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Hydrogen Sulfide Standards				Drift
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**	**%**
1	0.0	0.0	0.0	0.0
2	5.0	201.8	14.2	4.0
3	10.0	832.7	28.9	-1.0
4	25.0	5,333.7	73.0	-2.3

Carbonyl Sulfide Standards				Drift
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**	**%**
1	0.0	0.0	0.0	0.0
2	5.2	200.5	14.2	2.3
3	10.4	711.6	26.7	-3.2
4	26.0	4,134.1	64.3	0.0

Carbon Disulfide Standards				Drift
Standard No	**Concentration**	**Area**	**Sq Rt Area Counts**	**%**
1	0.0	0.0	0.0	0.0
2	5.2	332.1	18.2	-0.8
3	10.3	868.4	29.5	1.2
4	25.9	4,537.7	67.4	-4.1

Analytical Calculation Summary

Calibration Standards Area Linear Regression Fit

Client:	Total
Location:	Port Arthur, Tx
Source:	SRU
Date sampled:	12/20/2006
Run Number:	M15-2, M15-3
Compound Analyzed:	Hydrogen Sulfide
Method:	USEPA Method 15
Instrument:	SRI-9300B
Detector	GC-FPD
Units of Detection:	ppm

Calibration Standards

Standard #	Standard Peak Area (mv)	Square Root Peak Area (mv)	Standard Concentration (ppm)
1	0.0	0.0	0.0
2	218.8	14.8	5.0
3	816.8	28.6	10.0
4	5,096.1	71.4	25.0

Statistical Analysis Summary

Σxy:	2144.437
Σx:	114.8
Σy:	40
Σx^2:	6132
$\Sigma(x)^2$:	13169
N:	4
m:	0.351083
b:	-0.0724

Analytical Calculation Summary

Calibration Standards Area Linear Regression Fit

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-2, M15-3
Compound Analyzed: Carbonyl Sulfide
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Calibration Standards

Standard #	Standard Peak Area (mv)	Square Root Peak Area (mv)	Standard Concentration (ppm)
1	0.0	0.0	0.0
2	210.0	14.5	5.2
3	668.2	25.8	10.4
4	4,131.3	64.3	26.0

Statistical Analysis Summary

Σxy:	2015.343
Σx:	104.6
Σy:	41.6
Σx^2:	5009
$\Sigma(x)^2$:	10945
N:	4
m:	0.407918
b:	-0.26879

Analytical Calculation Summary

Calibration Standards Area Linear Regression Fit

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-2, M15-3
Compound Analyzed: Carbon Disulfide
Method: USEPA Method 15
Instrument: SRI-9300B
Detector GC-FPD
Units of Detection: ppm

Calibration Standards

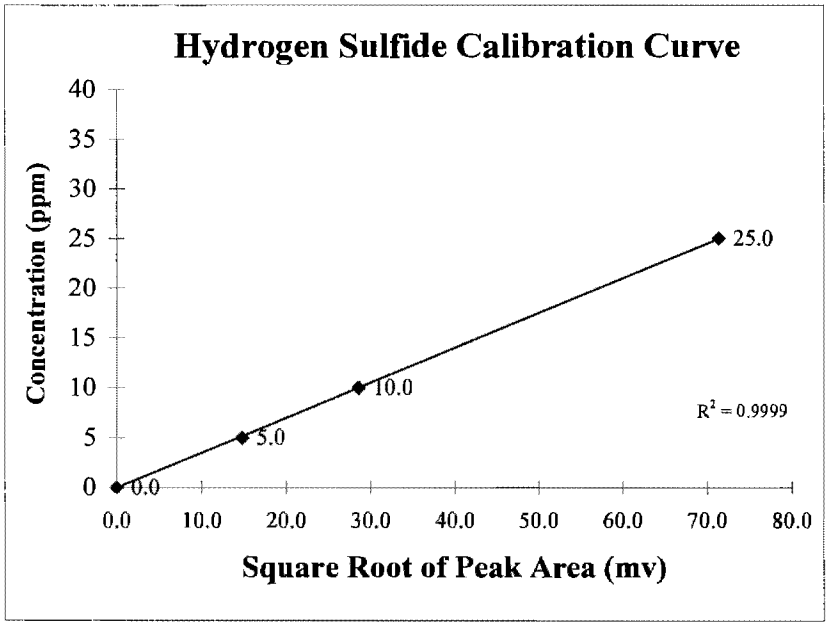
Standard #	Standard Peak Area (mv)	Square Root Peak Area (mv)	Standard Concentration (ppm)
1	0.0	0.0	0.0
2	326.6	18.1	5.2
3	890.5	29.8	10.3
4	4,184.3	64.7	25.9

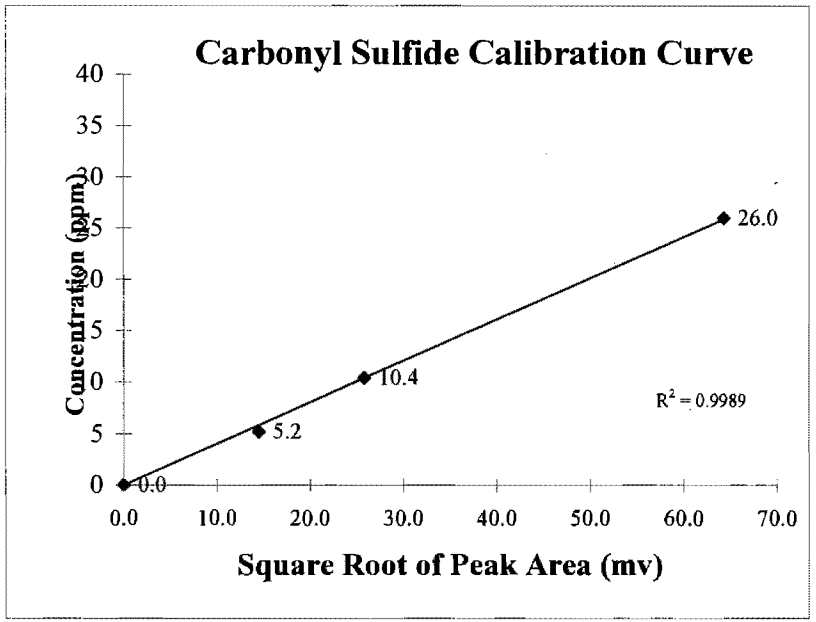
Statistical Analysis Summary

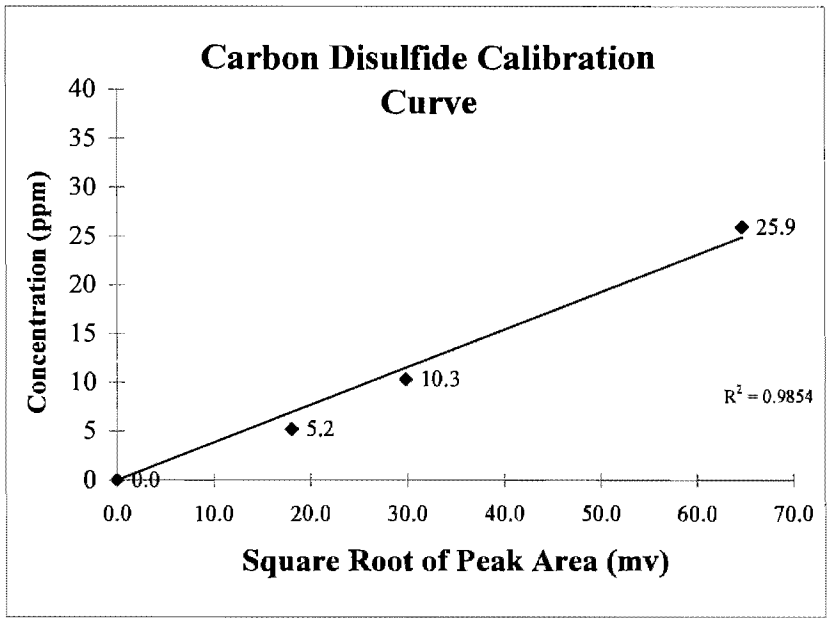
Σxy:	2076.718
Σx:	112.6
Σy:	41.4
Σx^2:	5401
$\Sigma(x)^2$:	12679
N:	4
m:	0.40834
b:	-1.14484

Calibration Curves

December 20, 2006



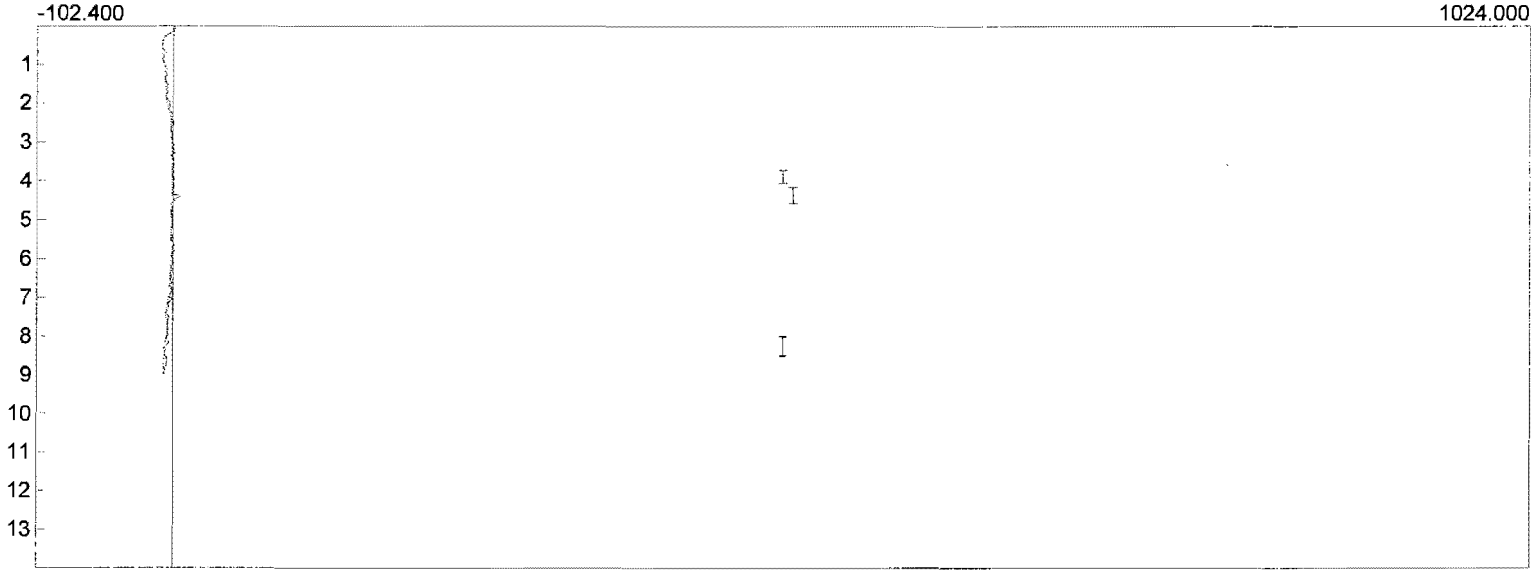




Client: Total
Location: Port Arthur, Tx
Source: SRU
Date: 12/20/2006
1220preXX PRE CAL

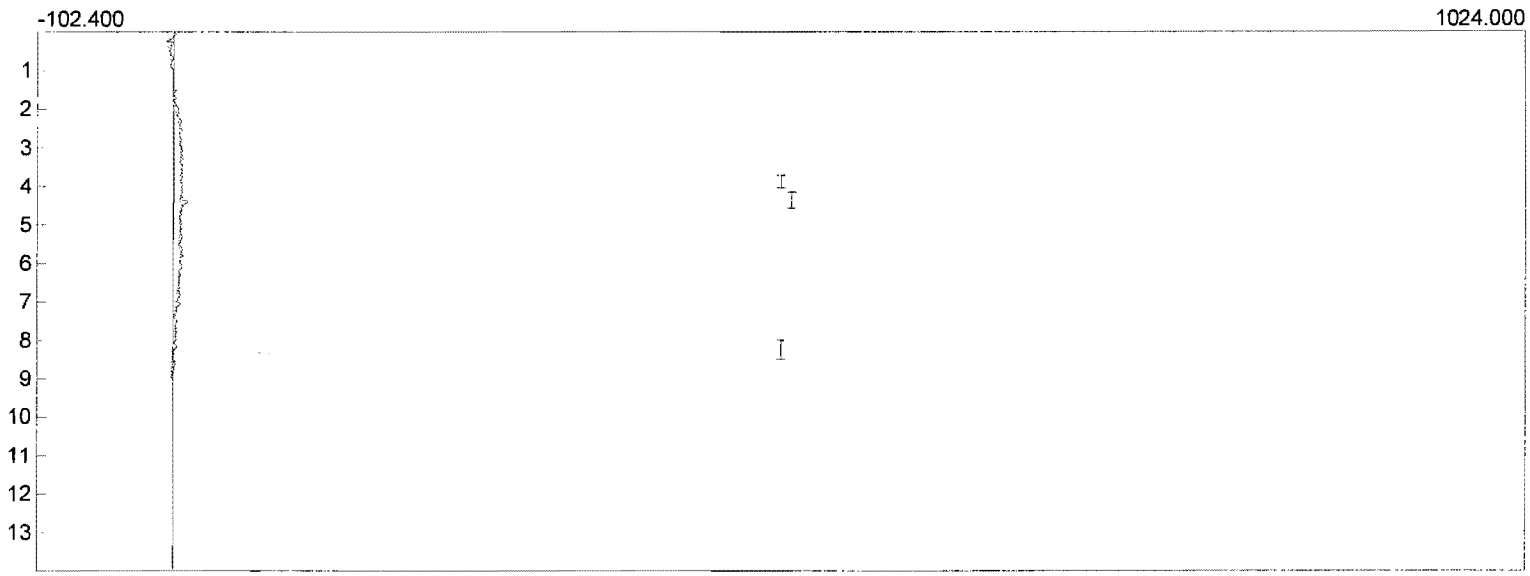
Description	File Name	COS Area (mv)	Square Root COS Area	H2S Area (mv)	Square Root H2S Area	CS2 Area (mv)	Square Root CS2 Area
5 ppm	7	209.69	14.48	234.11	15.30	339.11	18.41
	8	197.96	14.07	211.07	14.53	332.09	18.22
	9	222.46	14.92	211.12	14.53	308.70	17.57
Average		**210.04**	**14.49**	**218.77**	**14.79**	**326.63**	**18.07**
10 ppm	4	669.61	25.88	831.58	28.84	923.85	30.39
	5	650.43	25.50	774.76	27.83	864.12	29.40
	6	684.53	26.16	844.12	29.05	883.55	29.72
Average		**668.19**	**25.85**	**816.82**	**28.58**	**890.51**	**29.84**
25 ppm	1	4193.97	64.76	5026.41	70.90	4279.83	65.42
	2	4167.02	64.55	5217.03	72.23	4113.73	64.14
	3	4032.80	63.50	5045.00	71.03	4159.35	64.49
Average		**4131.26**	**64.27**	**5096.15**	**71.38**	**4184.30**	**64.68**
0 ppm							
	10	0.00	0.00	0.00	0.00	0.00	0.00
	11	0.00	0.00	0.00	0.00	0.00	0.00
	12	0.00	0.00	0.00	0.00	0.00	0.00
Average		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre10.CHR ()
Sample: 0 ppm pre
Operator: SEY



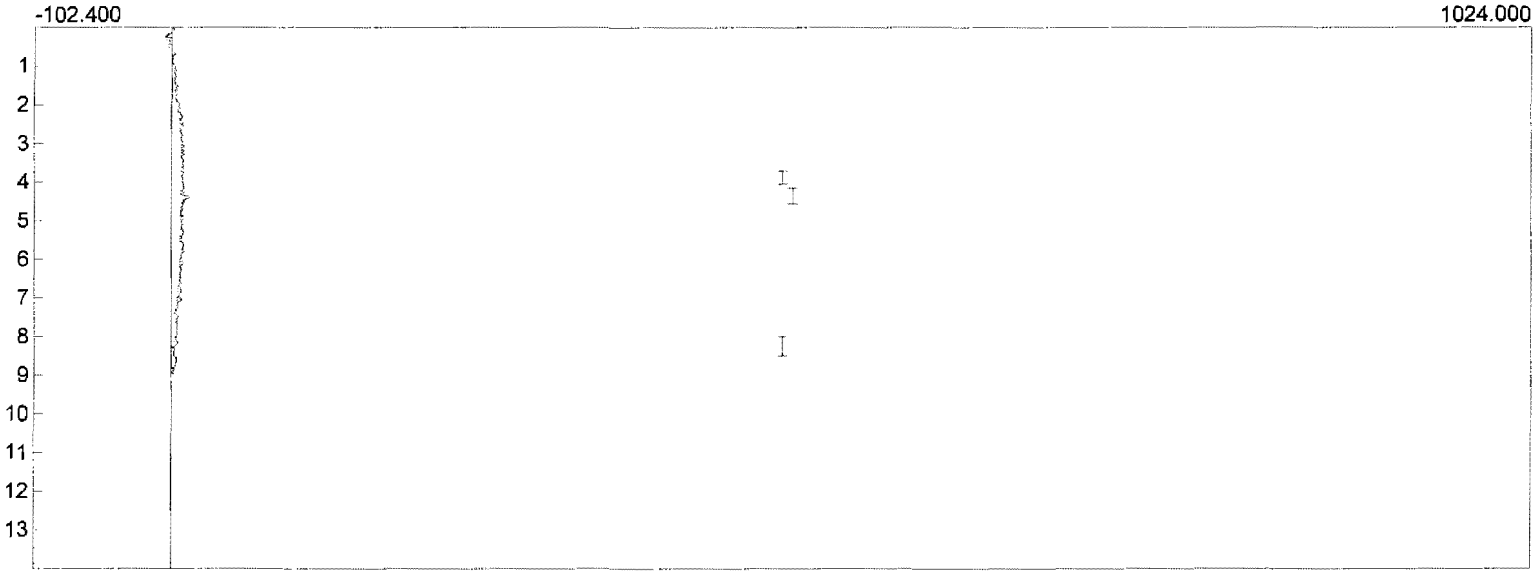
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre11.CHR ()
Sample: 0 ppm pre
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre12.CHR ()
Sample: 0 ppm pre
Operator: SEY

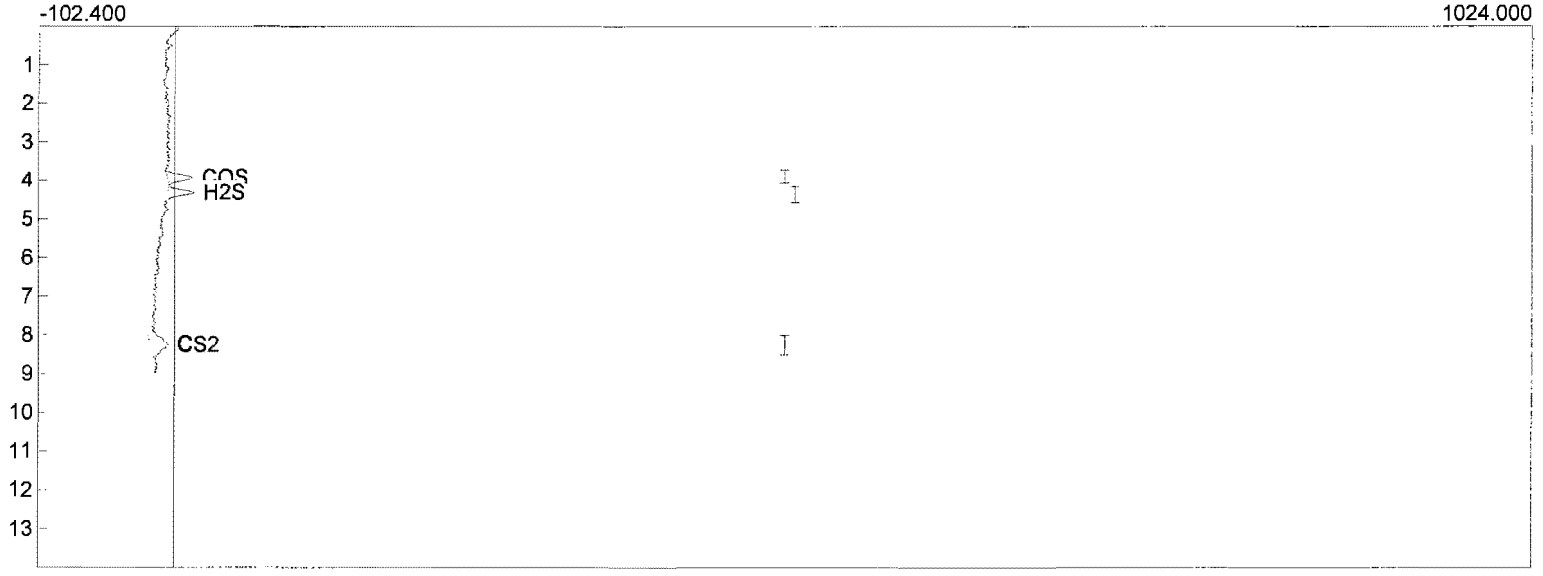


Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre07.chr ()
Sample: 5 ppm pre
Operator: SEY

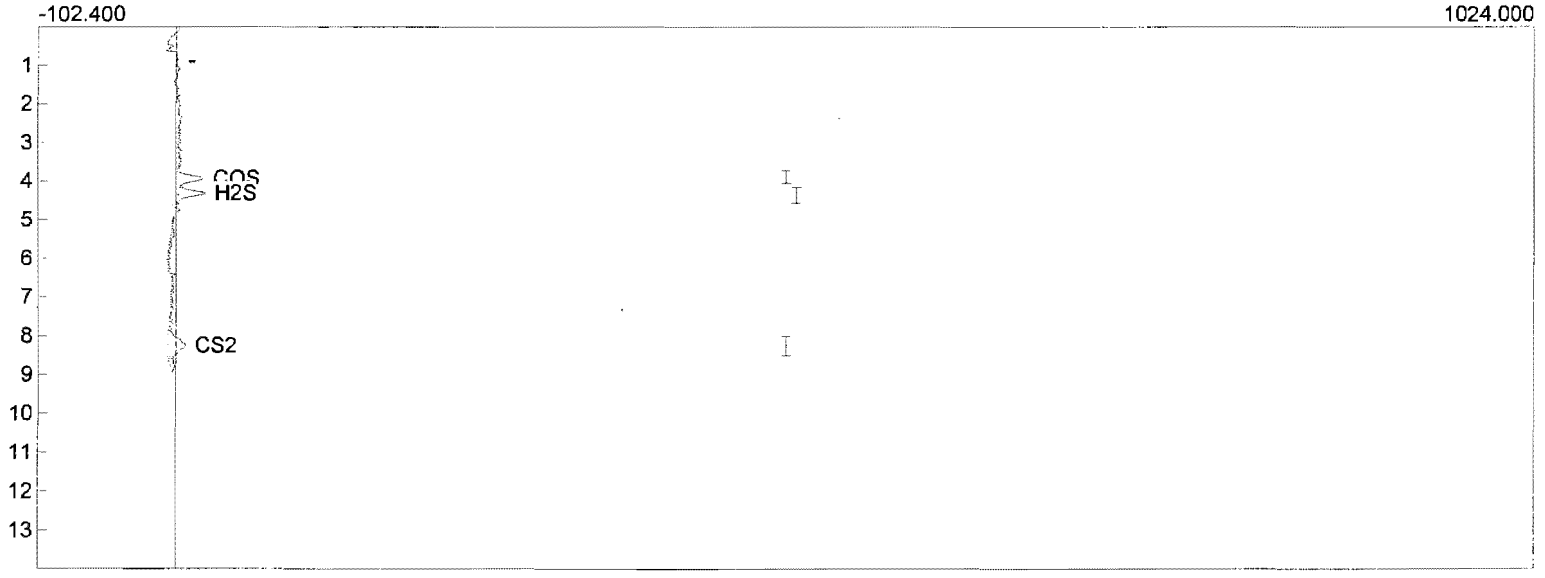
Component	Area
COS	209.6900
H2S	234.1110
CS2	339.1110
	782.9120

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre08.CHR ()
Sample: 5 ppm pre
Operator: SEY



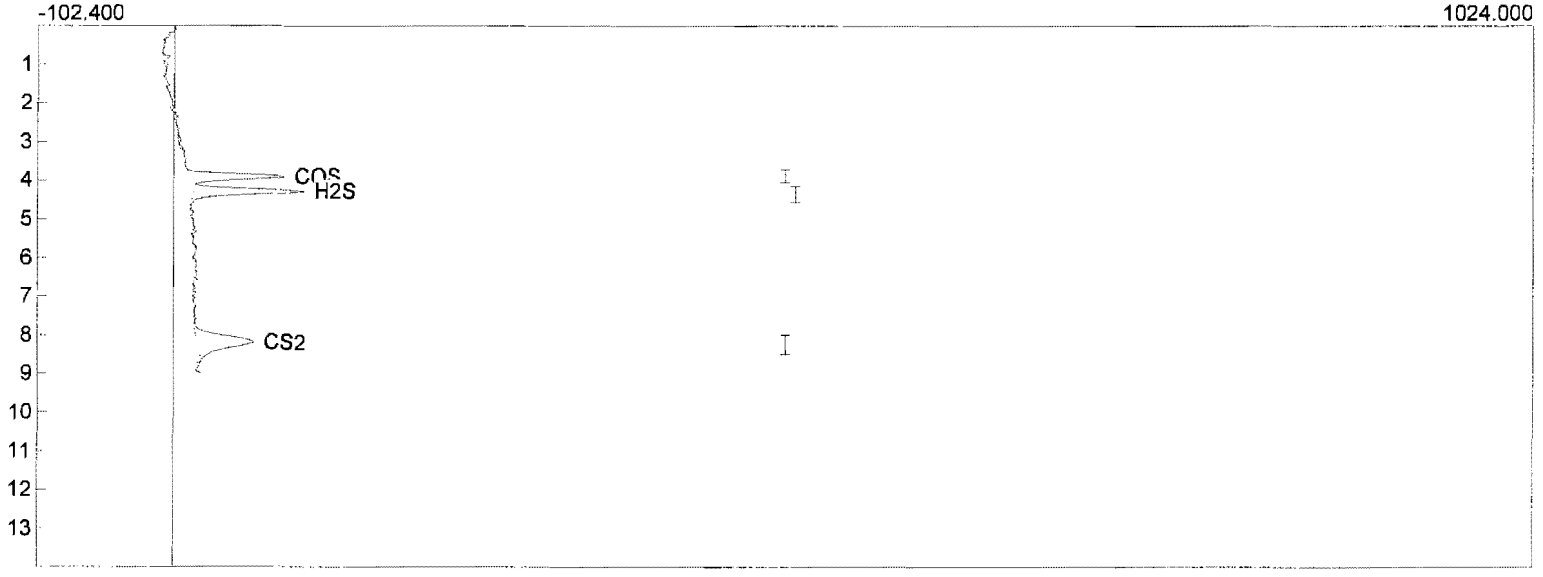
Component	Area
COS	197.9560
H2S	211.0660
CS2	332.0940
	741.1160

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre09.CHR ()
Sample: 5 ppm pre
Operator: SEY



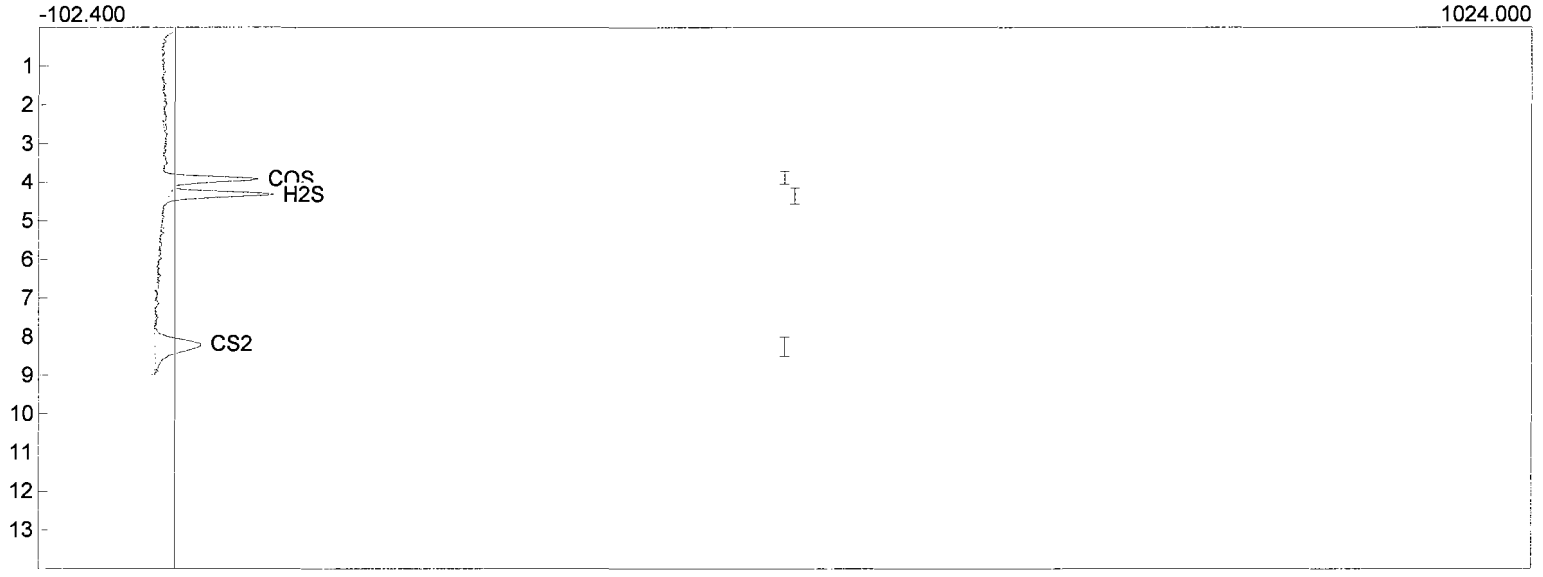
Component	Area
COS	222.4565
H2S	211.1240
CS2	308.7020
	742.2825

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre04.chr ()
Sample: 10 ppm pre
Operator: SEY



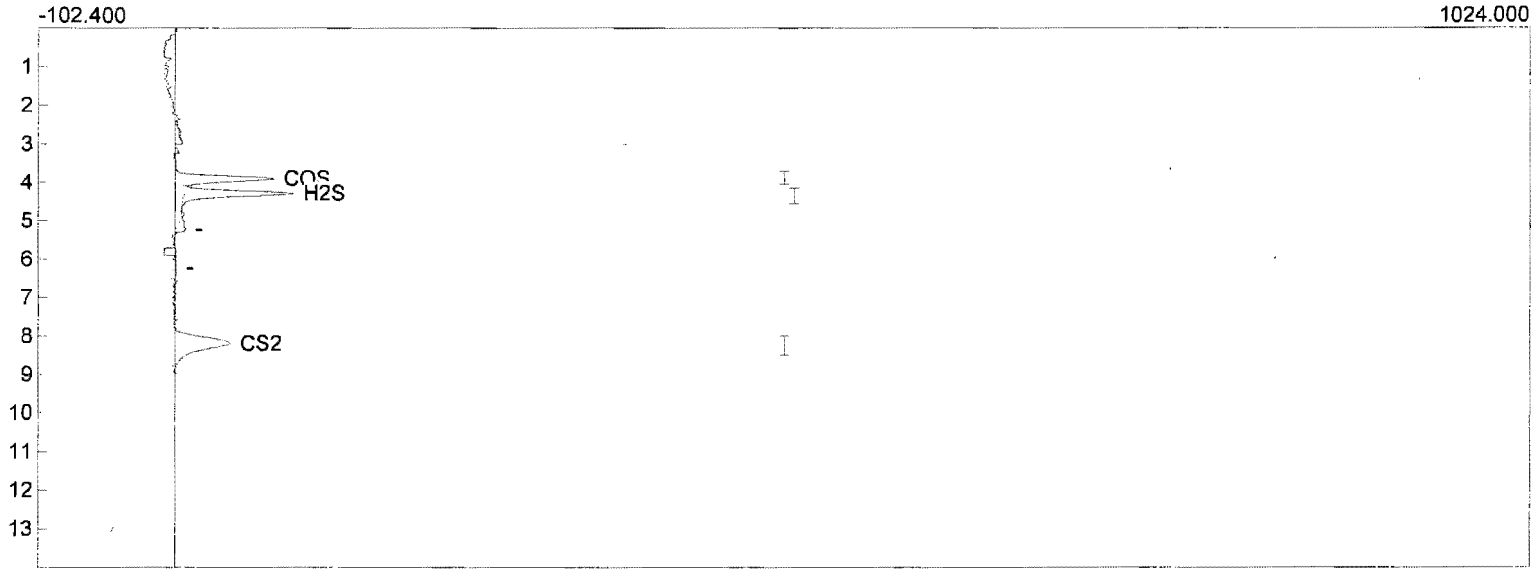
Component	Area
COS	669.6120
H2S	831.5810
CS2	923.8485
	2425.0415

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre05.CHR ()
Sample: 10 ppm pre
Operator: SEY



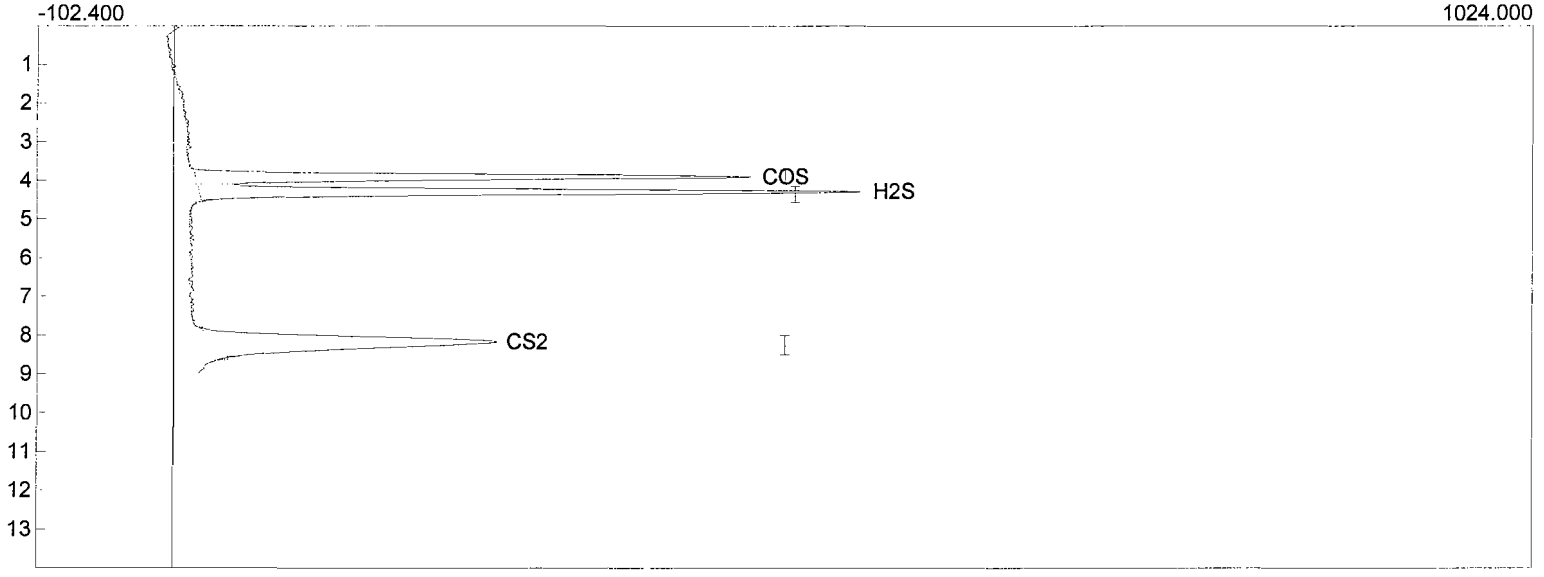
Component	Area
COS	650.4260
H2S	774.7550
CS2	864.1160
	2289.2970

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre06.CHR ()
Sample: 10 ppm pre
Operator: SEY



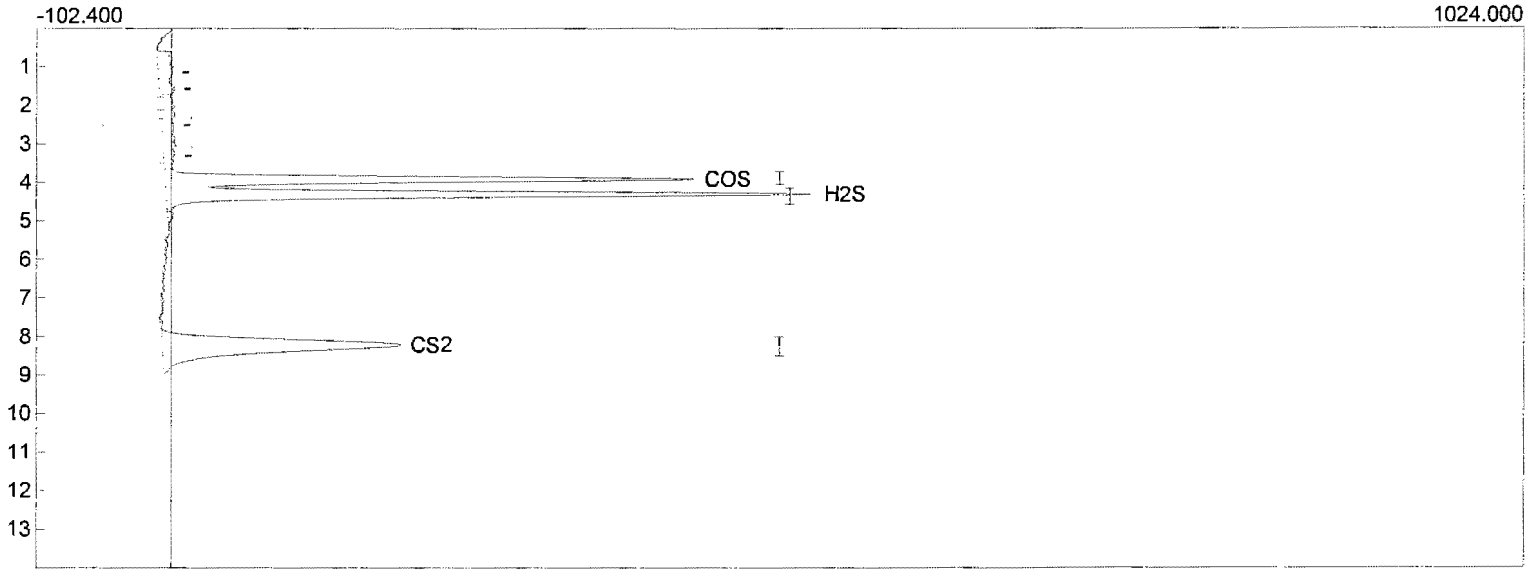
Component	Area
COS	684.5300
H2S	844.1230
CS2	883.5480
	2412.2010

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre01.CHR ()
Sample: 25 ppm pre
Operator: SEY



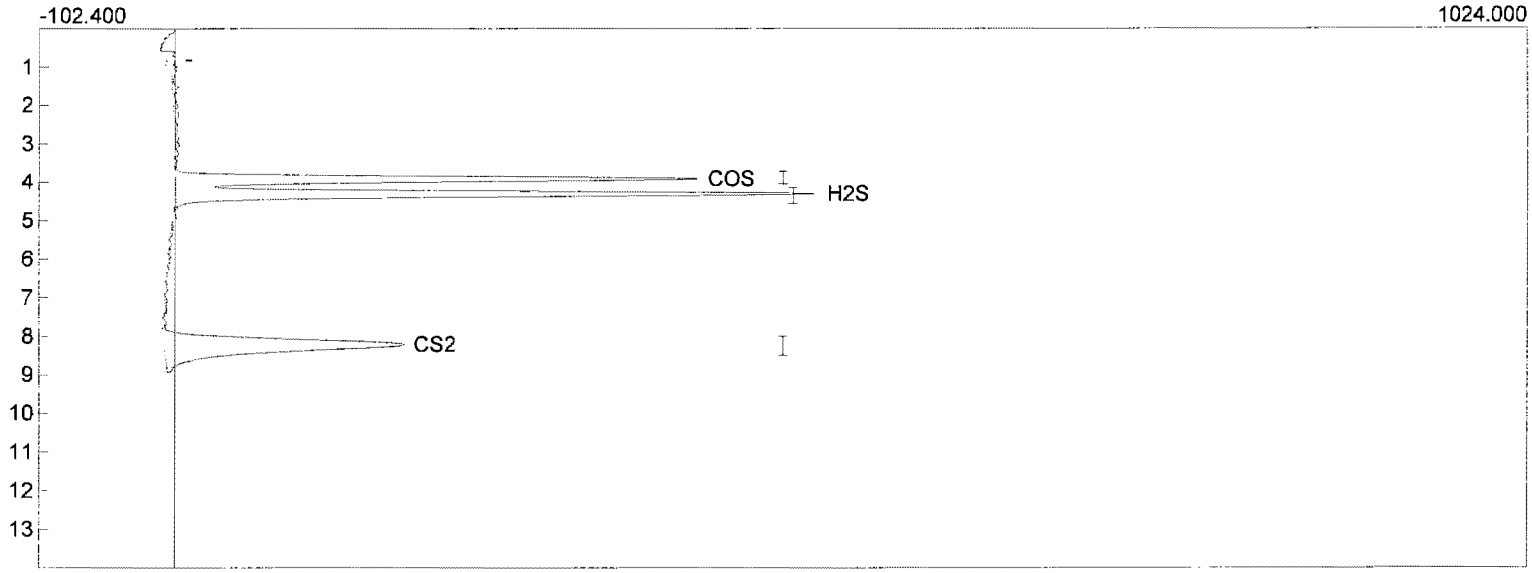
Component	Area
COS	4193.9745
H2S	5026.4060
CS2	4279.8320
	13500.2125

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre02.chr ()
Sample: 25 ppm pre
Operator: SEY



Component	Area
COS	4167.0160
H2S	5217.0290
CS2	4113.7300
	13497.7750

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220pre03.CHR ()
Sample: 25 ppm pre
Operator: SEY

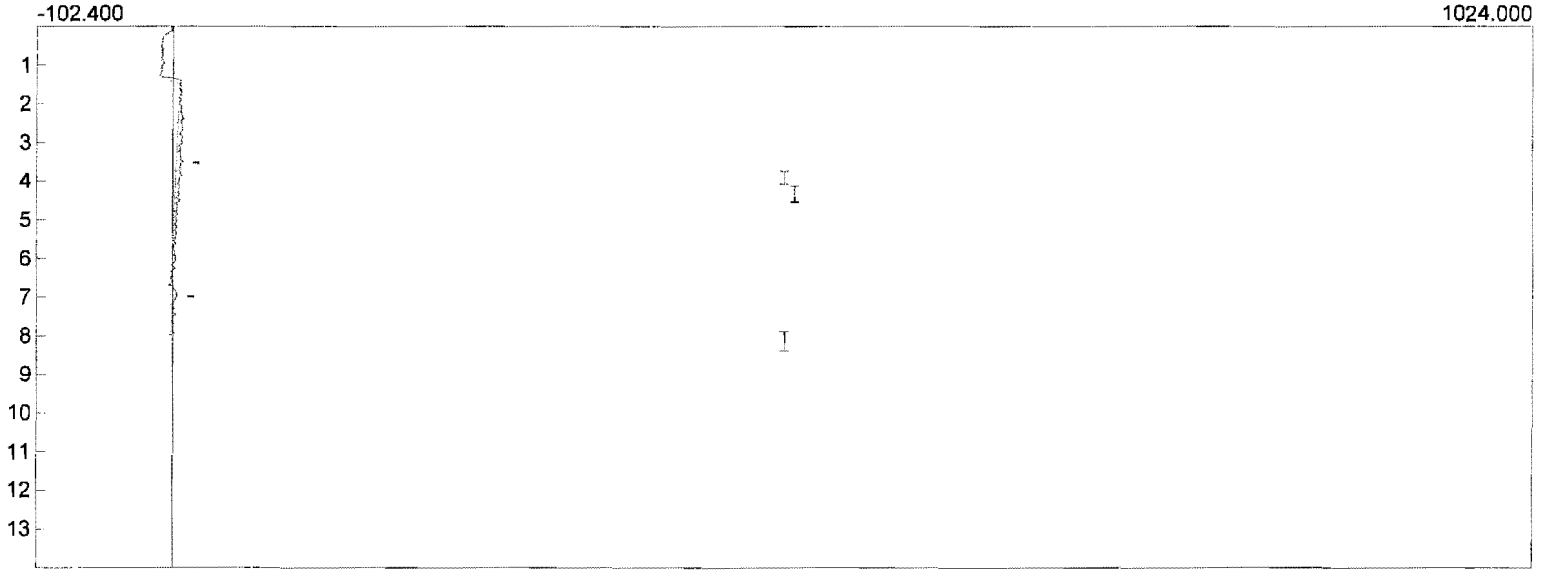


Component	Area
COS	4032.8020
H2S	5044.9970
CS2	4159.3530
	13237.1520

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date: 12/20/2006
1220postXX Post

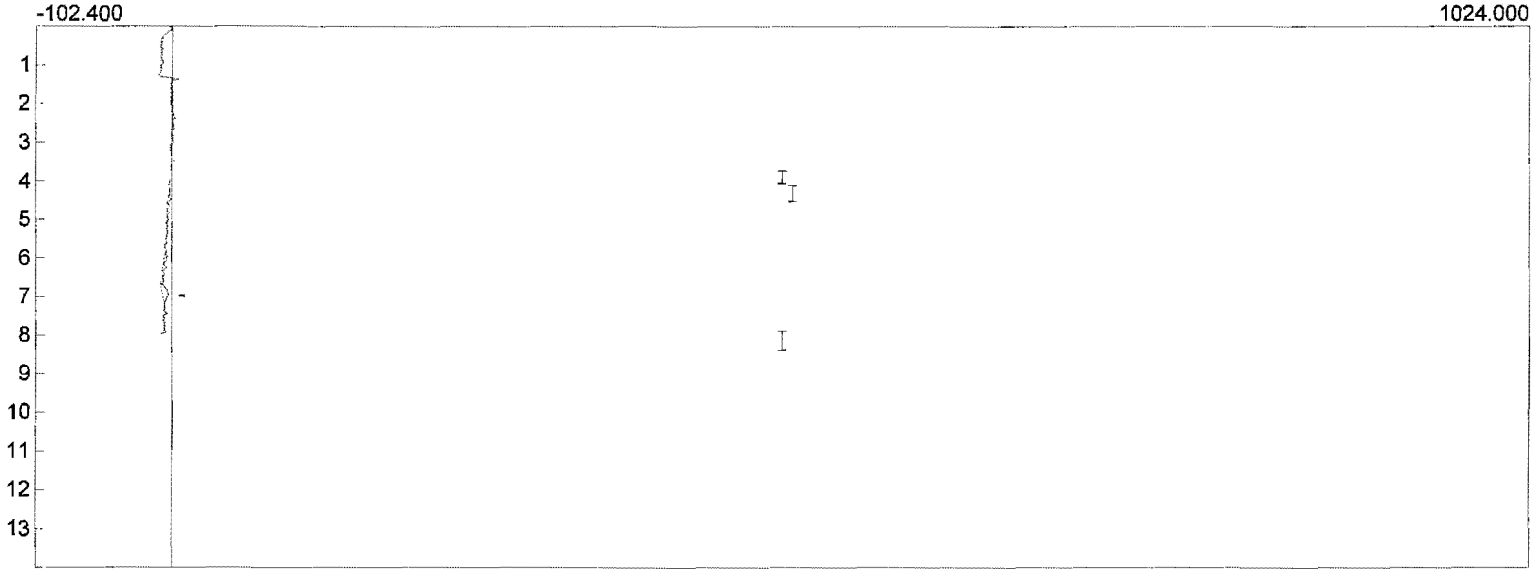
Description	File Name	COS Area (mv)	Square Root COS Area	H2S Area (mv)	Square Root H2S Area	CS2 Area (mv)	Square Root CS2 Area
5 ppm	8	196.24	14.01	205.66	14.34	302.28	17.39
	9	213.36	14.61	200.57	14.16	349.66	18.70
	10	191.77	13.85	199.21	14.11	344.49	18.56
Average		**200.46**	**14.15**	**201.81**	**14.21**	**332.14**	**18.22**
10 ppm	4	696.14	26.38	839.22	28.97	834.22	28.88
	5	714.16	26.72	846.29	29.09	842.10	29.02
	7	724.64	26.92	812.63	28.51	928.94	30.48
Average		**711.65**	**26.68**	**832.71**	**28.86**	**868.42**	**29.46**
25 ppm	1	4483.54	66.96	5557.55	74.55	4511.93	67.17
	2	3959.44	62.92	5221.83	72.26	4363.35	66.06
	3	3959.45	62.92	5221.85	72.26	4737.96	68.83
Average		**4134.14**	**64.27**	**5333.74**	**73.02**	**4537.75**	**67.35**
0 ppm							
	11	0.00	0.00	0.00	0.00	0.00	0.00
	12	0.00	0.00	0.00	0.00	0.00	0.00
	13	0.00	0.00	0.00	0.00	0.00	0.00
Average		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post11.CHR ()
Sample: 0 ppm post
Operator: SEY



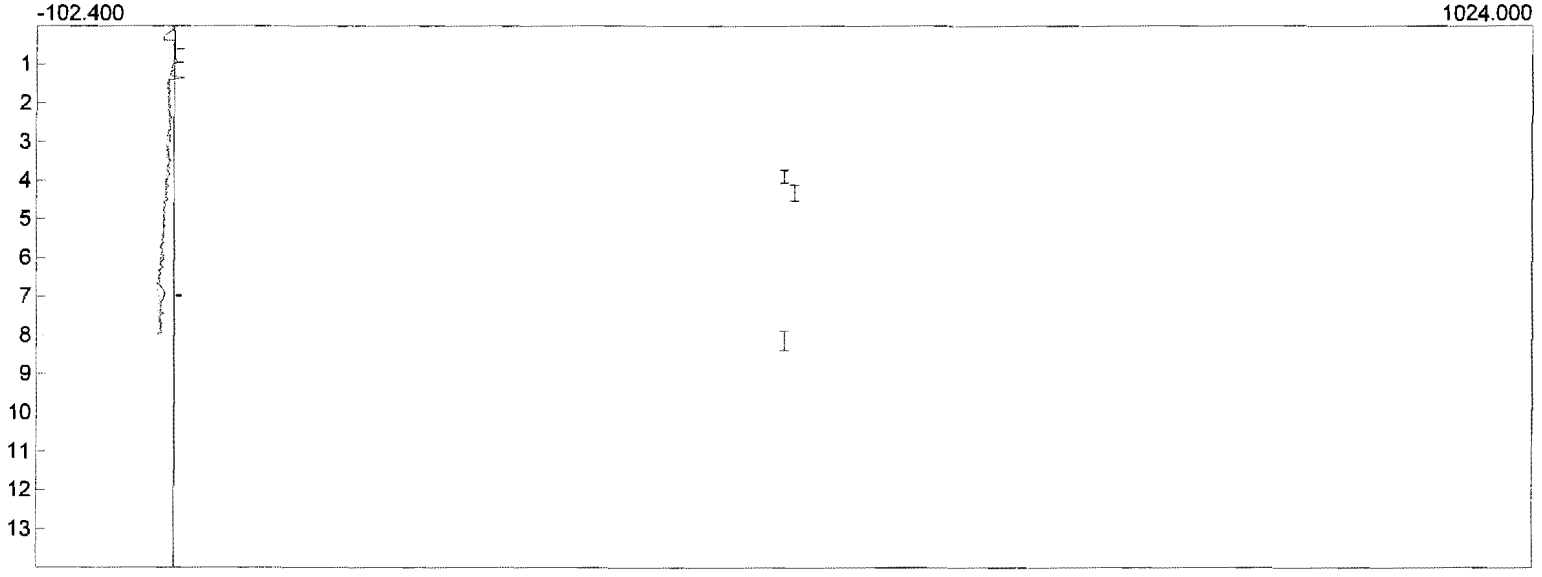
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post12.CHR ()
Sample: 0 ppm post
Operator: SEY



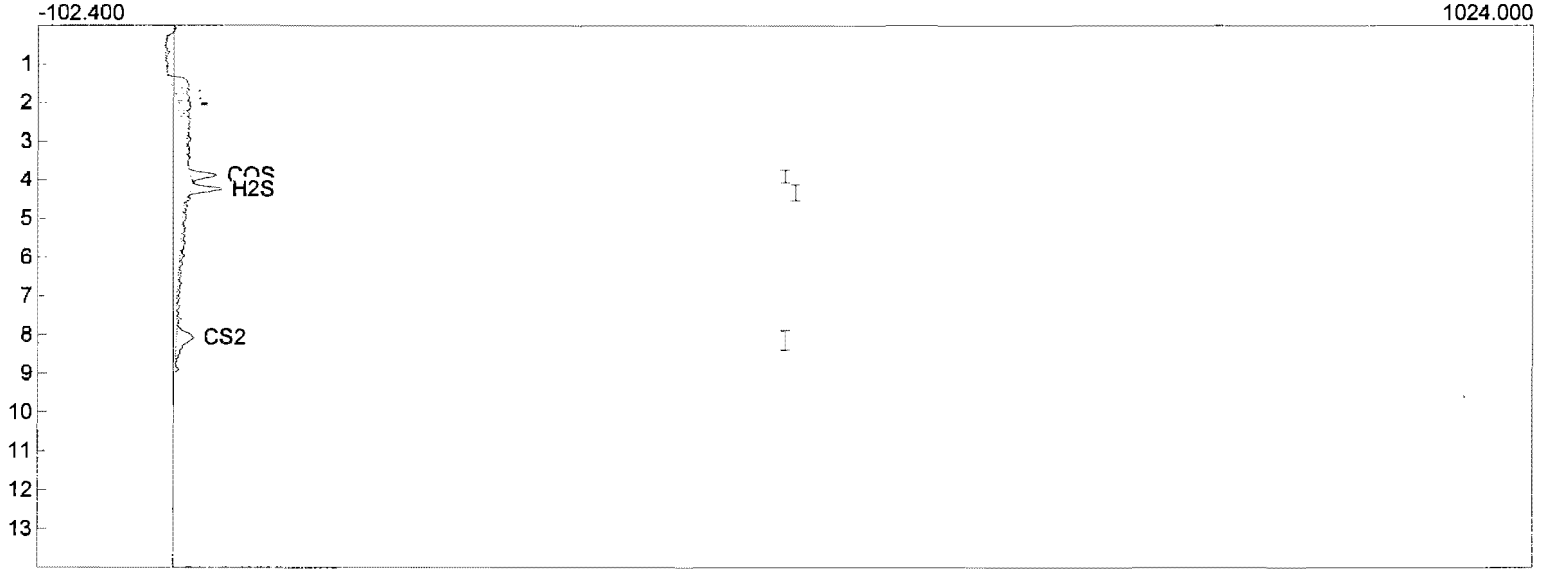
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post13.CHR ()
Sample: 0 ppm post
Operator: SEY



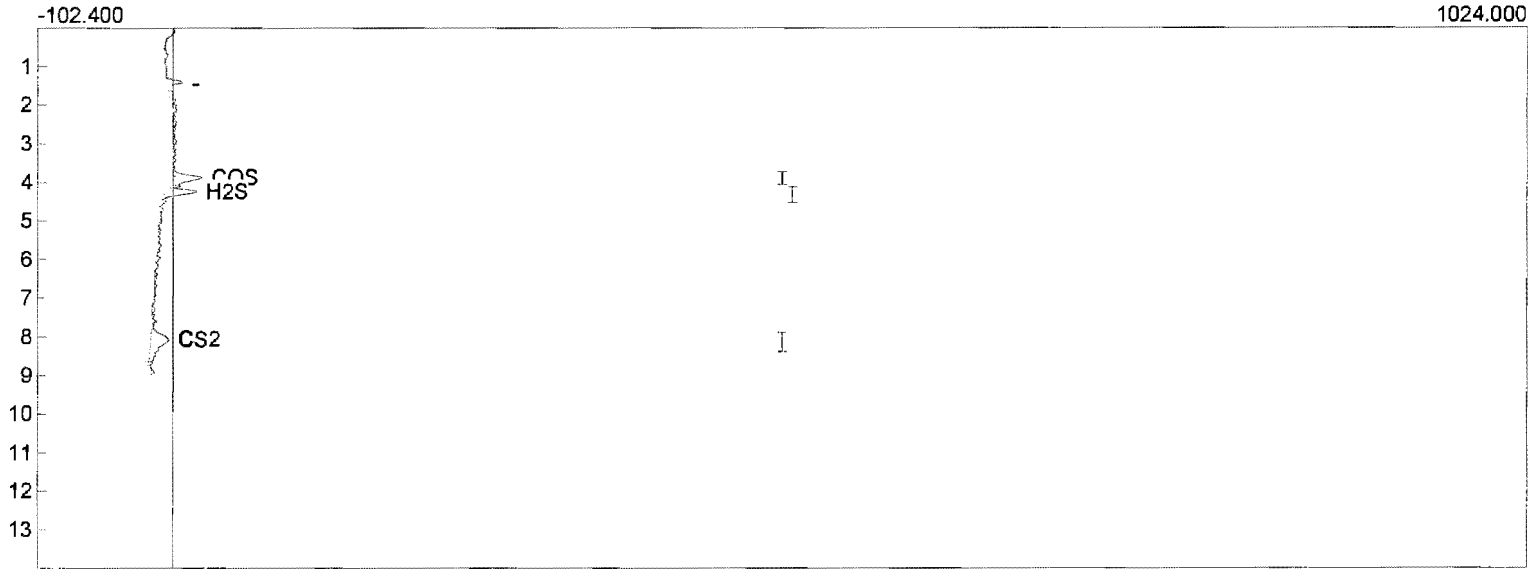
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post08.CHR ()
Sample: 5 ppm post
Operator: SEY



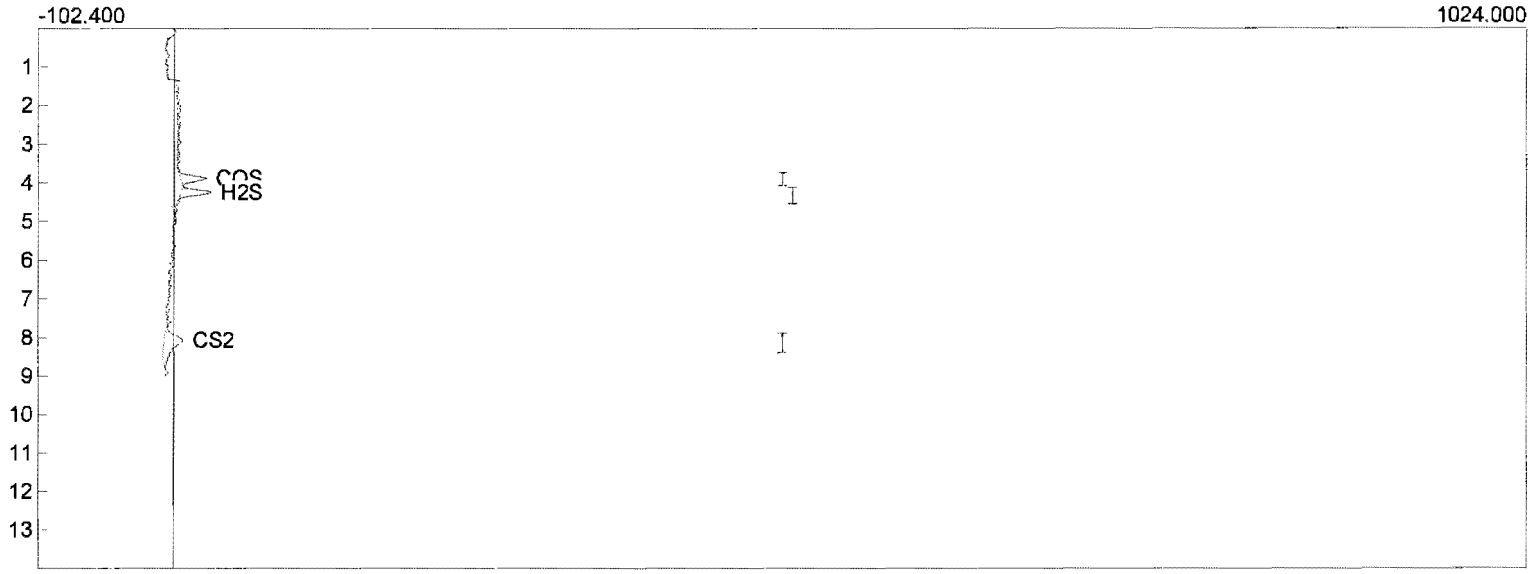
Component	Area
COS	196.2440
H2S	205.6635
CS2	302.2760
	704.1835

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post09.CHR ()
Sample: 5 ppm post
Operator: SEY



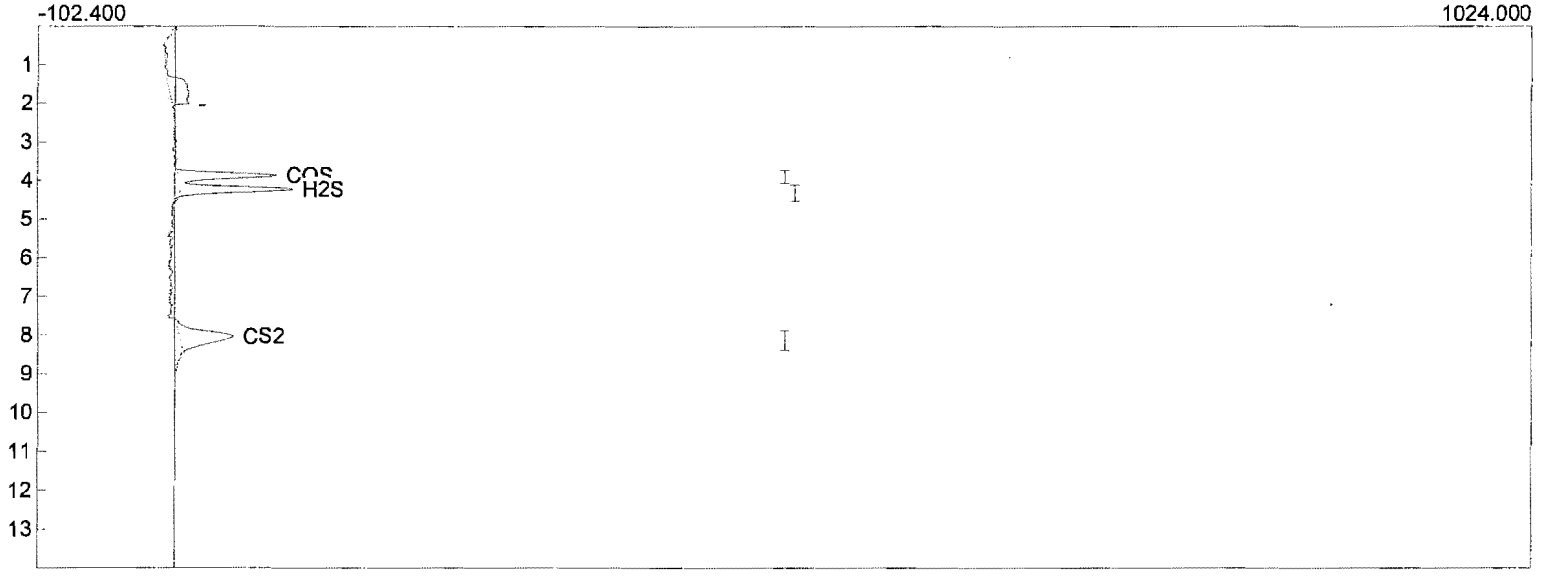
Component	Area
COS	213.3570
H2S	200.5690
CS2	349.6580
	763.5840

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post10.CHR ()
Sample: 5 ppm post
Operator: SEY



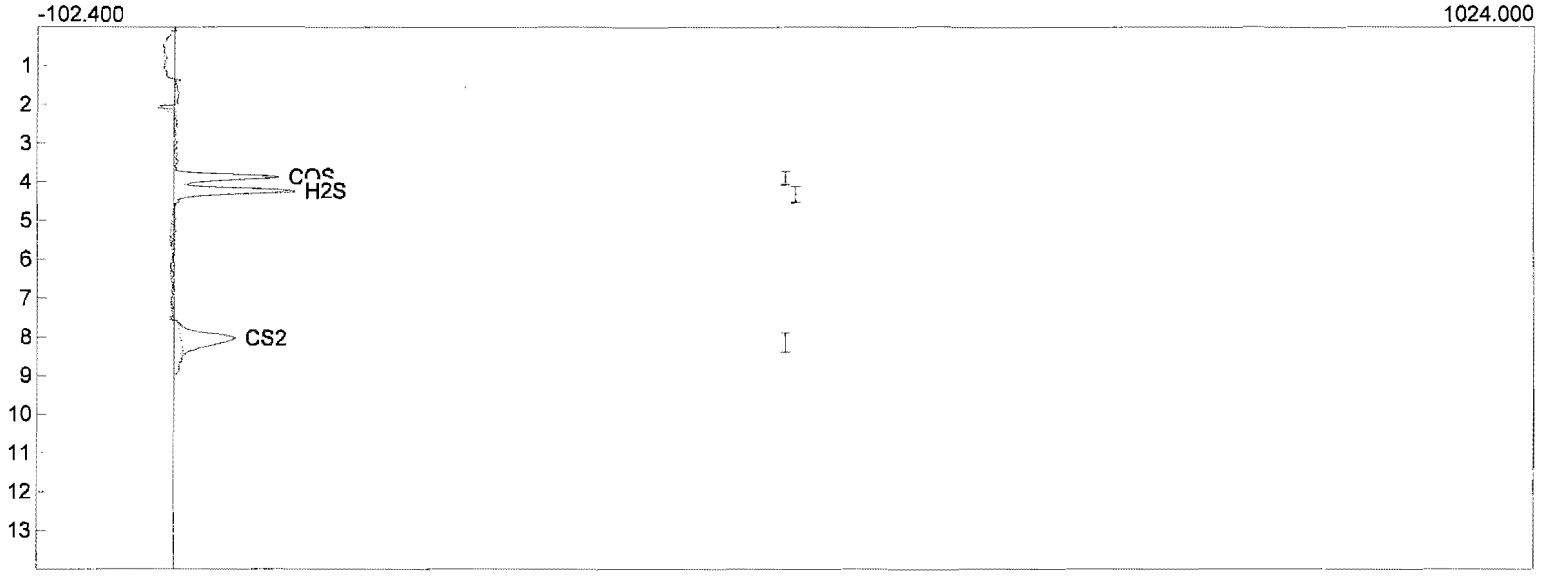
Component	Area
COS	191.7650
H2S	199.2130
CS2	344.4920
	735.4700

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post04.CHR ()
Sample: 10 ppm post
Operator: SEY



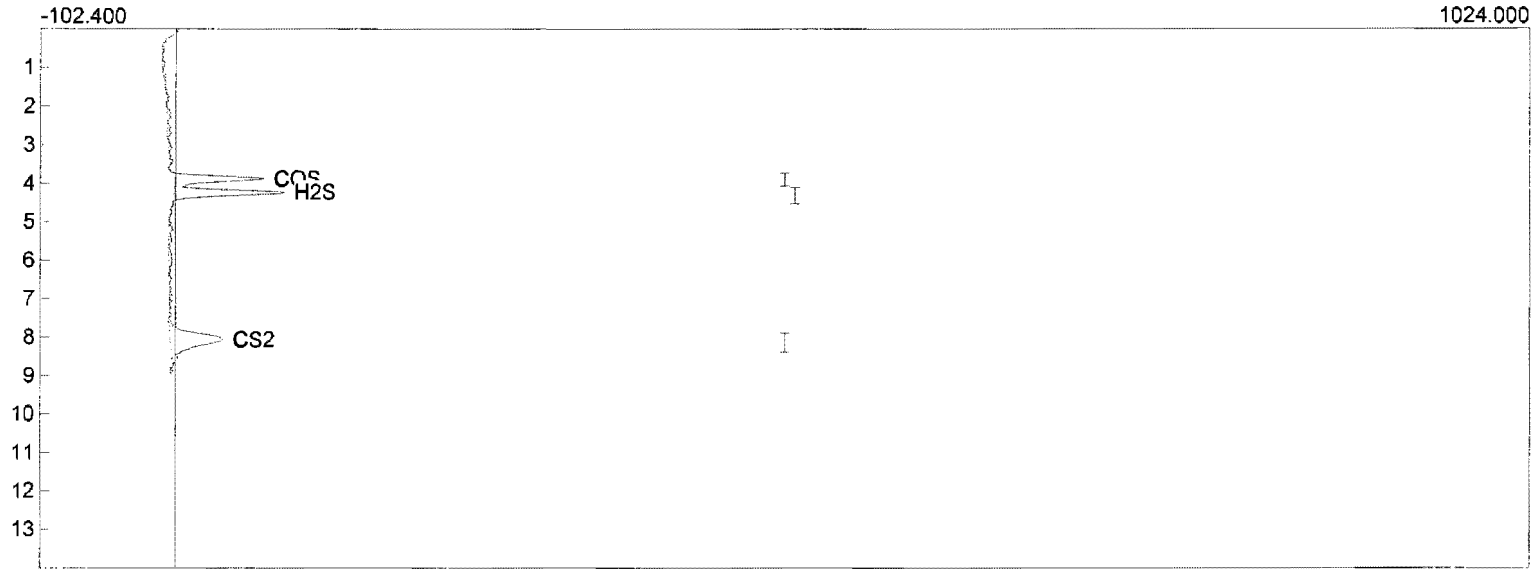
Component	Area
COS	696.1360
H2S	839.2190
CS2	834.2190
	2369.5740

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post05.CHR ()
Sample: 10 ppm post
Operator: SEY



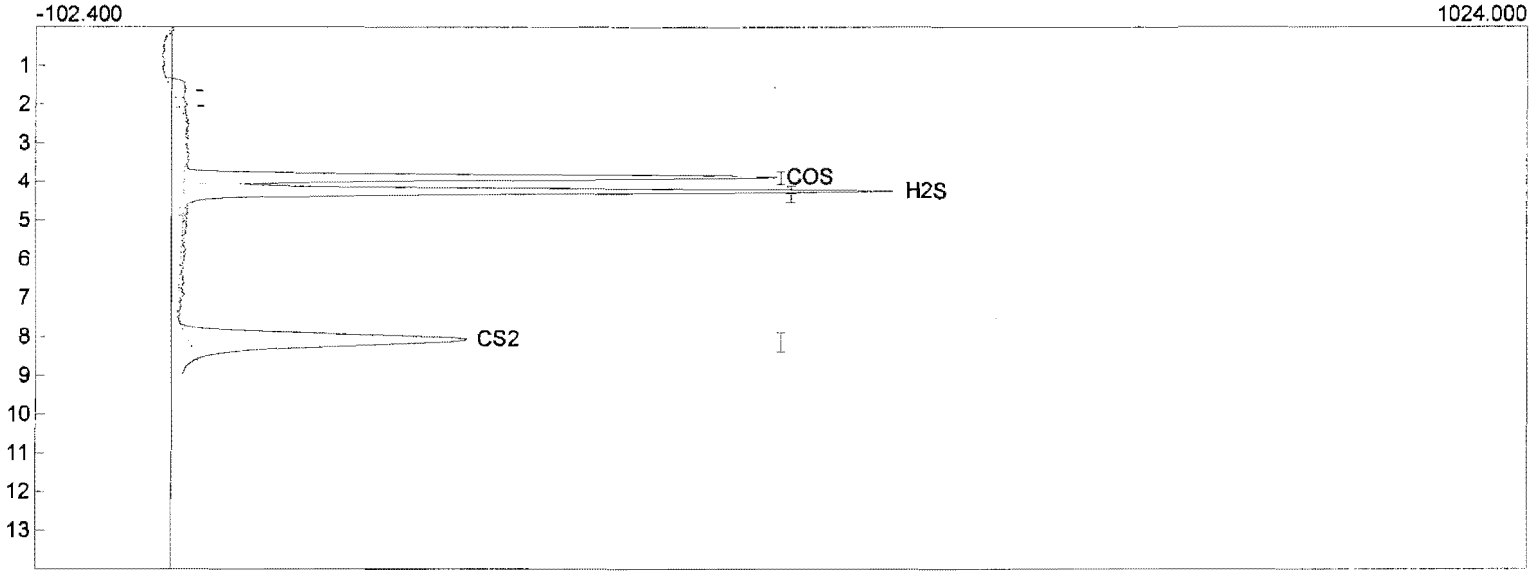
Component	Area
COS	714.1640
H2S	846.2880
CS2	842.0995
	2402.5515

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post07.CHR ()
Sample: 10 ppm post
Operator: SEY



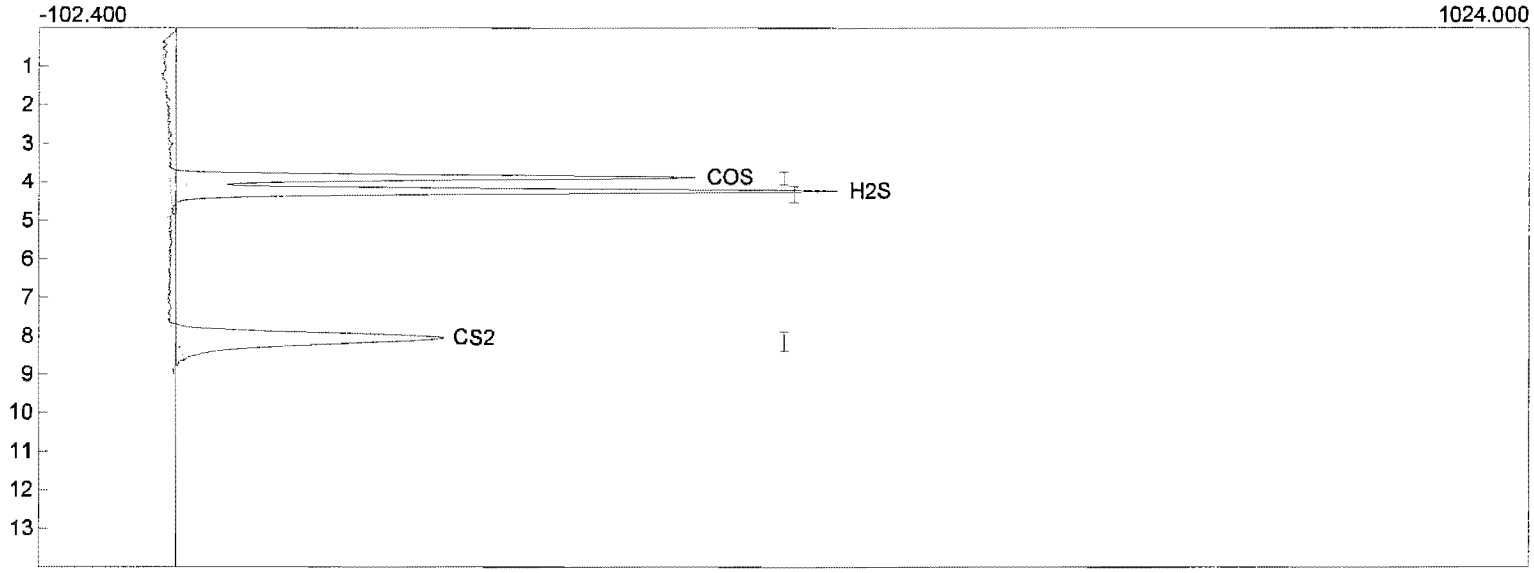
Component	Area
COS	724.6440
H2S	812.6320
CS2	928.9440
	2466.2200

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post01.CHR ()
Sample: 25 ppm post
Operator: SEY



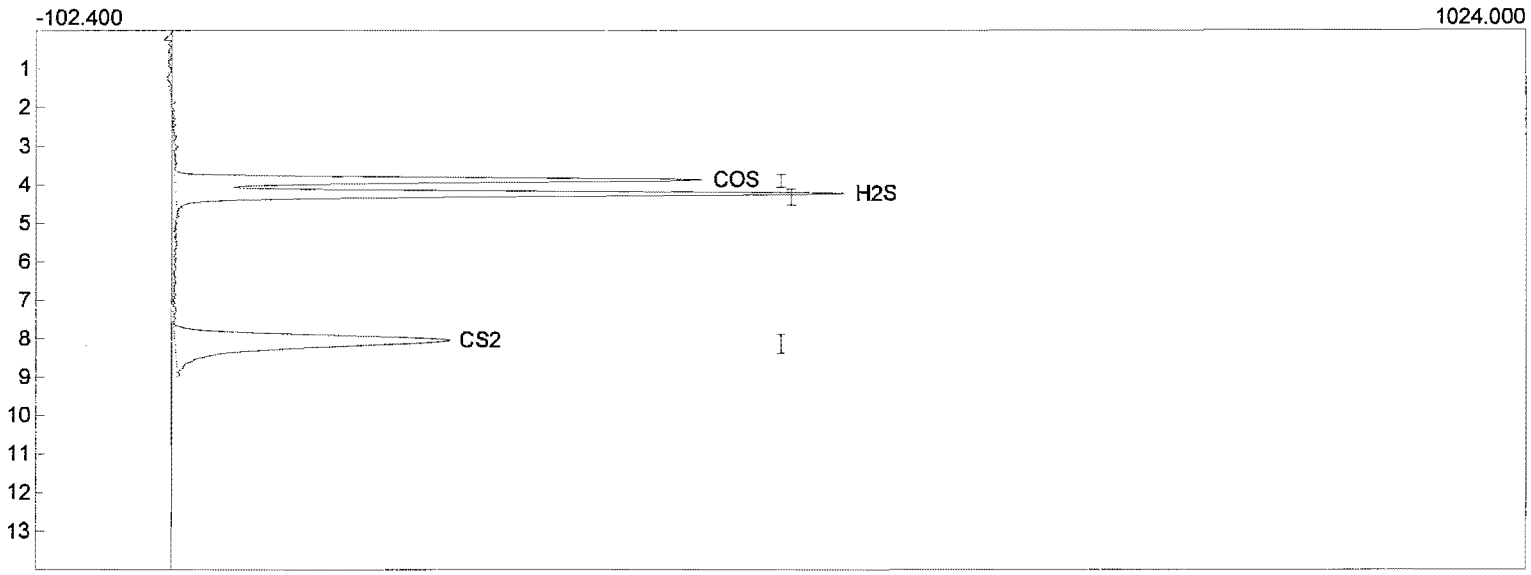
Component	Area
COS	4483.5400
H2S	5557.5450
CS2	4511.9340
	14553.0190

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post02.CHR ()
Sample: 25 ppm post
Operator: SEY



Component	Area
COS	3959.4355
H2S	5221.8305
CS2	4363.3450
	13544.6110

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220post03.CHR ()
Sample: 25 ppm post
Operator: SEY

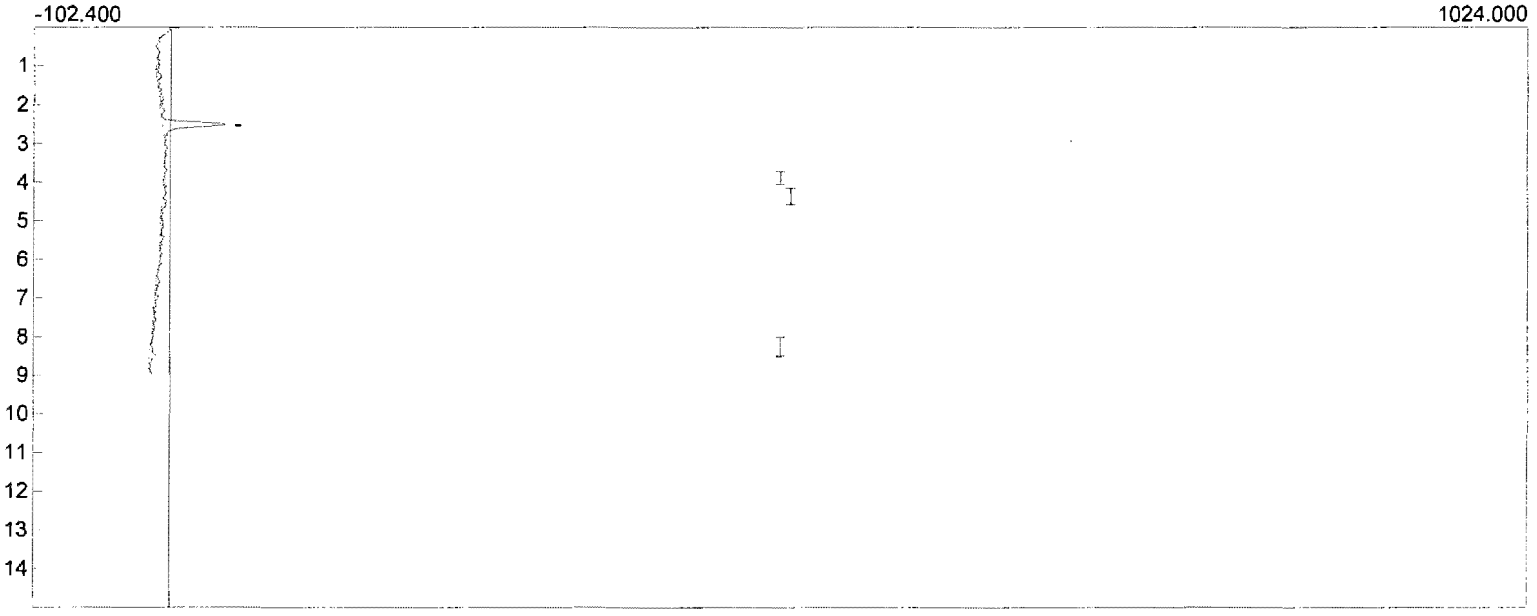


Component	Area
COS	3959.4500
H2S	5221.8520
CS2	4737.9560
	13919.2580

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-2

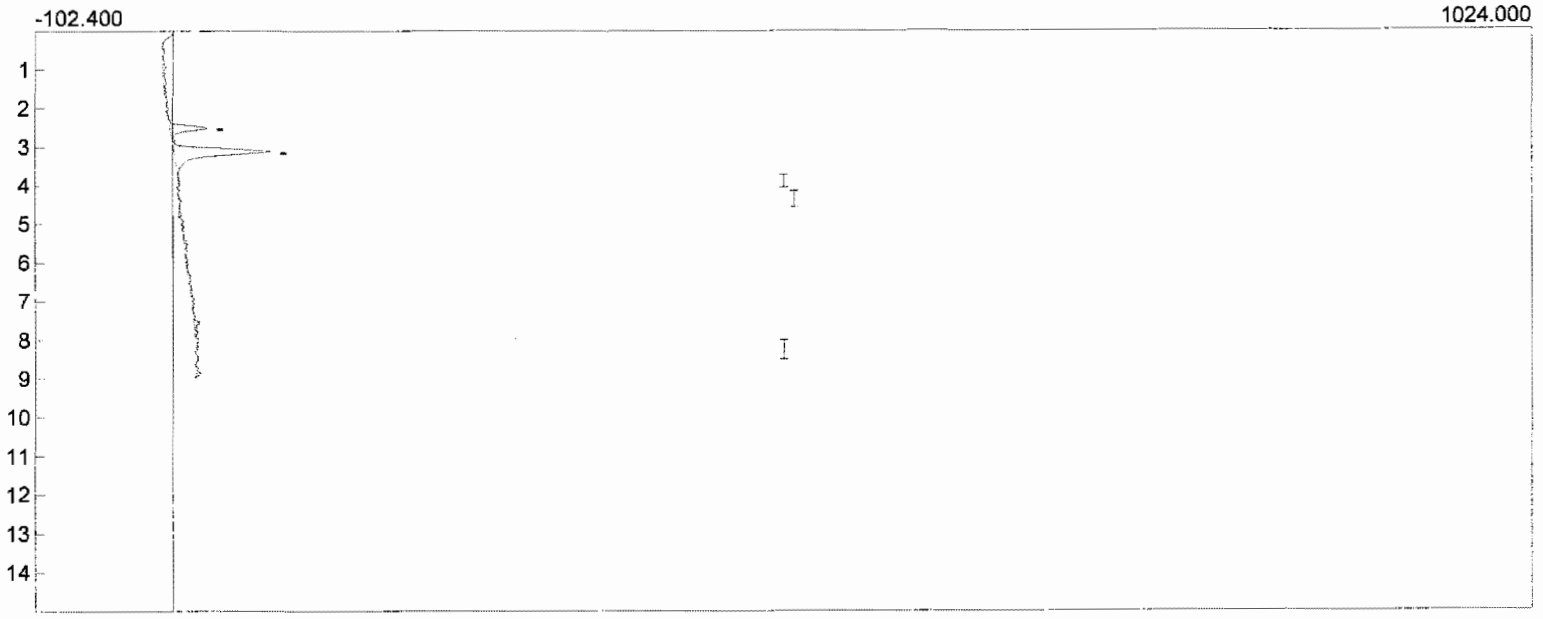
File Name	Time	COS Area	COS ppm	COS ppm Corrected	H_2S Area	H_2S ppm	H_2S ppm Corrected	CS_2 Area	CS_2 ppm	CS_2 ppm Corrected
1220sample02.CHR	10:10:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample03.CHR	10:23:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample04.CHR	10:36:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample05.CHR	10:49:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample06.CHR	11:02:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample07.CHR	11:15:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample08.CHR	11:28:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample09.CHR	11:41:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample10.CHR	11:54:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample11.CHR	12:07:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample12.CHR	12:20:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample13.CHR	12:33:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample14.CHR	12:46:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample15.CHR	12:59:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample16.CHR	13:12:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample17.CHR	13:25:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample18.CHR	13:38:01	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample19.CHR	13:51:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample20.CHR	14:04:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample21.CHR	14:17:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample22.CHR	14:30:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample23.CHR	14:43:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample24.CHR	14:56:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample25.CHR	15:09:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
Average				**<0.31**			**<0.63**			**<0.14**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 10:10:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample02.CHR ()
Sample: Sample Runs
Operator: SEY



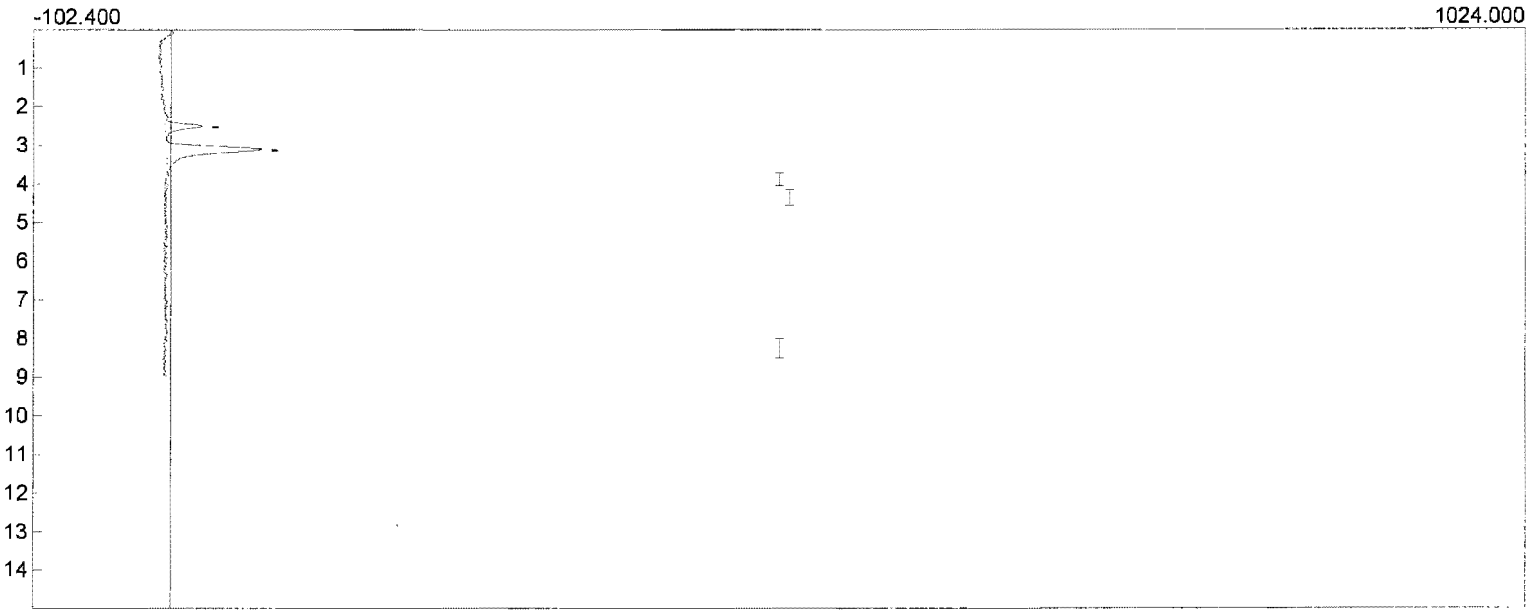
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 10:23:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample03.CHR ()
Sample: Sample Runs
Operator: SEY



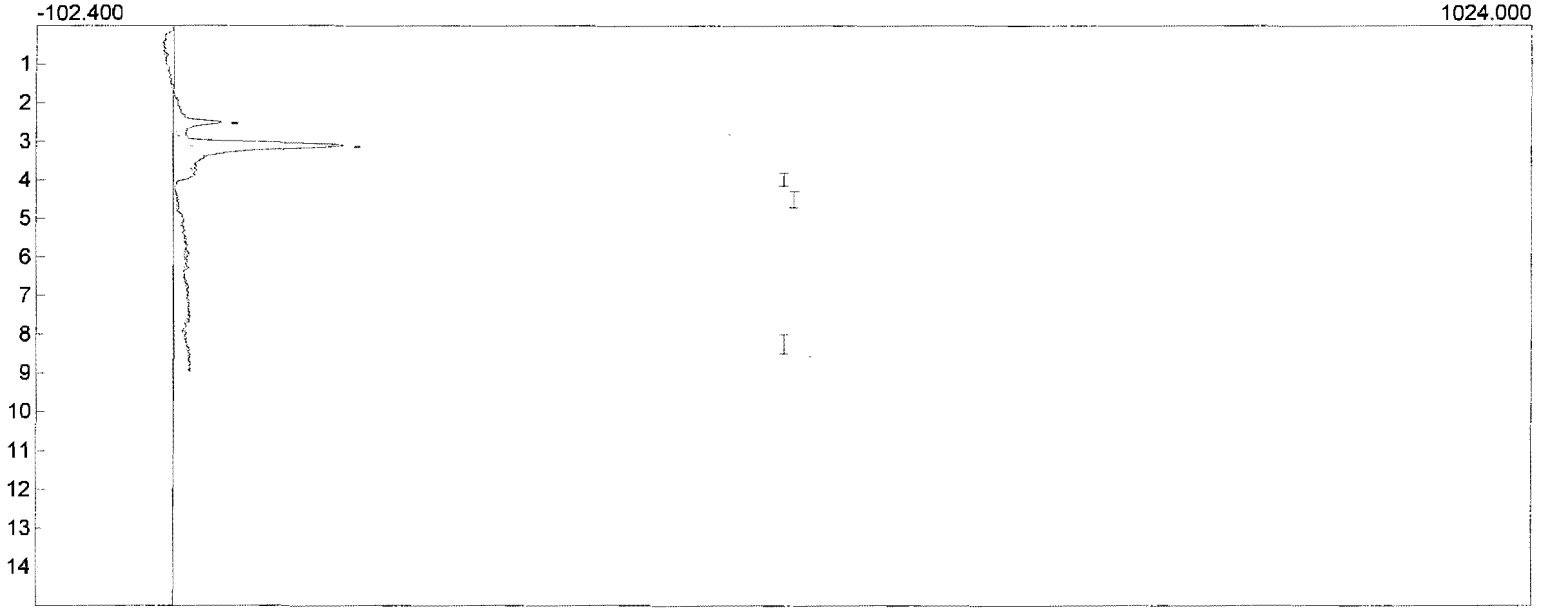
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 10:36:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample04.CHR ()
Sample: Sample Runs
Operator: SEY



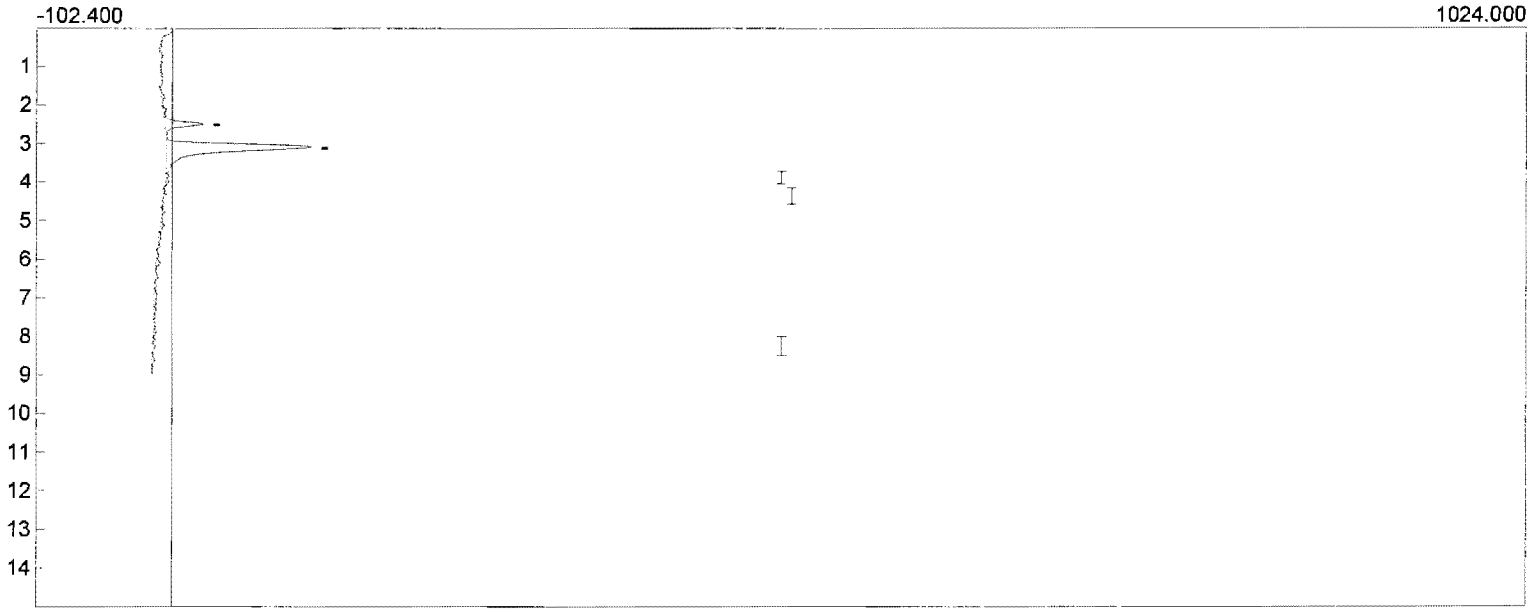
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample05.CHR ()
Sample: Sample Runs
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 11:02:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample06.CHR ()
Sample: Sample Runs
Operator: SEY

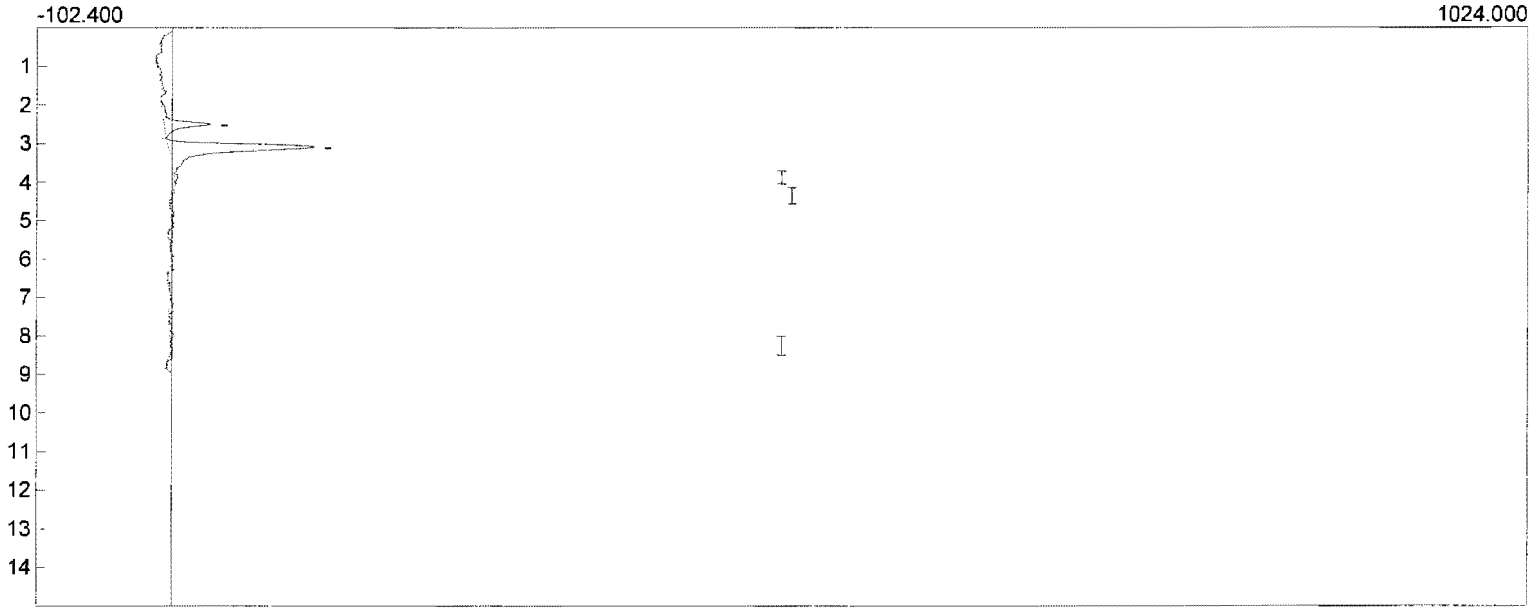


Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 11:15:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample07.CHR ()
Sample: Sample Runs
Operator: SEY

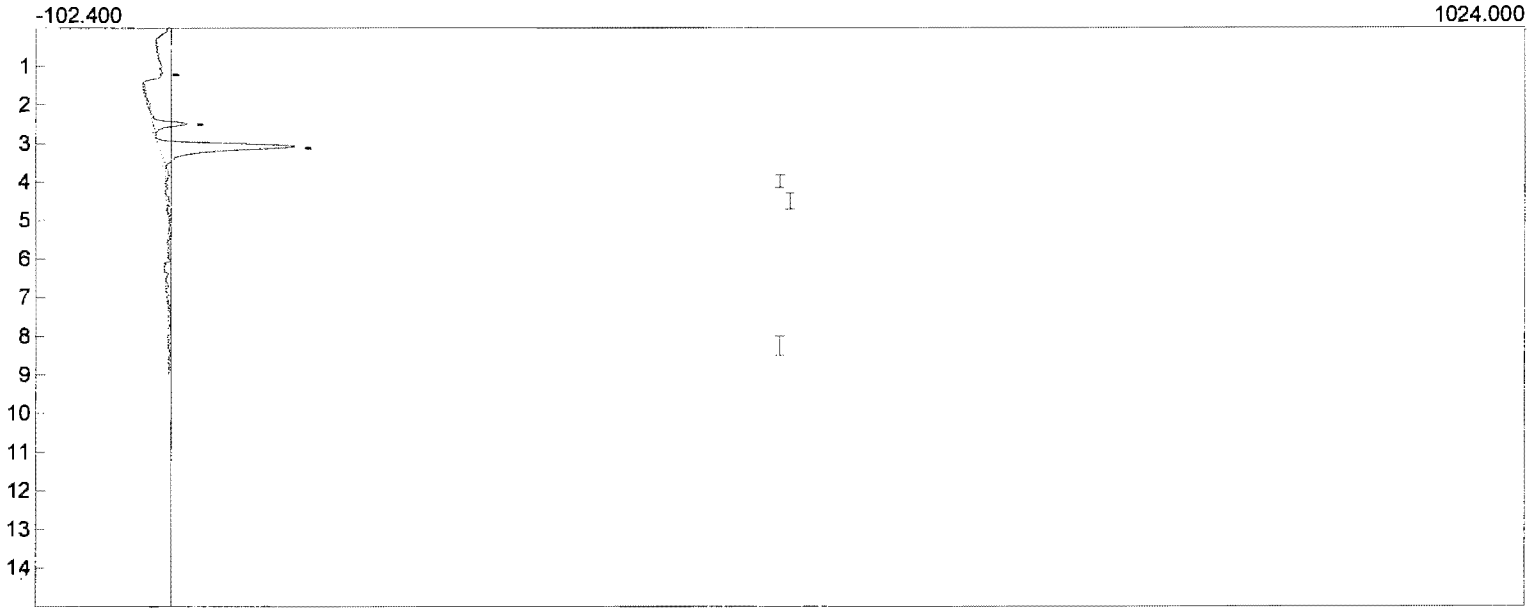
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 11:28:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample08.CHR ()
Sample: Sample Runs
Operator: SEY



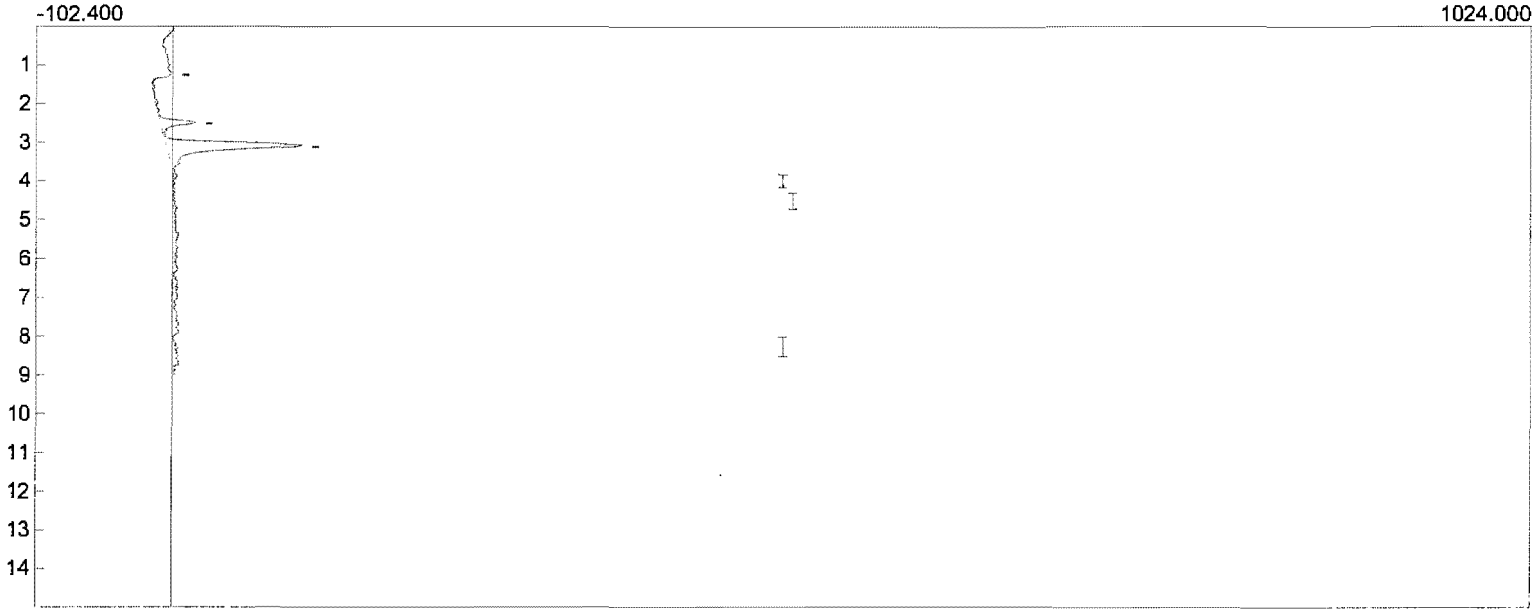
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 11:41:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample09.CHR ()
Sample: Sample Runs
Operator: SEY



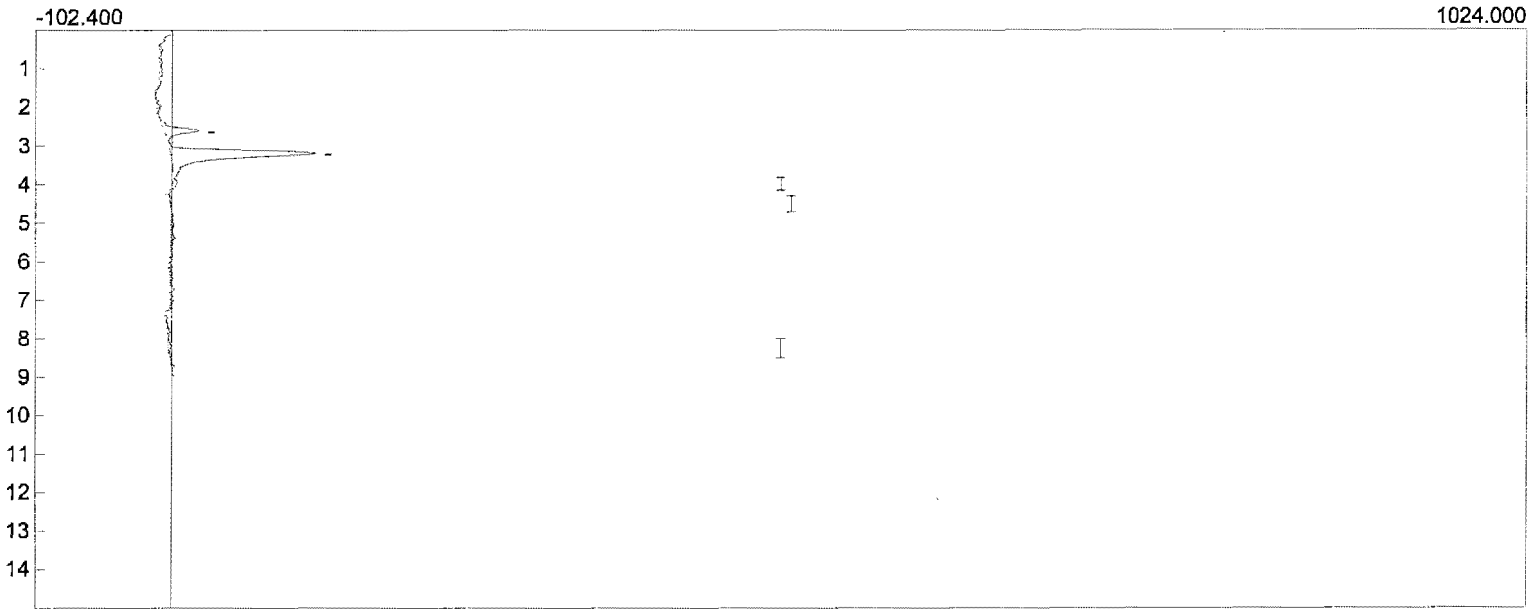
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 11:54:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample10.CHR ()
Sample: Sample Runs
Operator: SEY



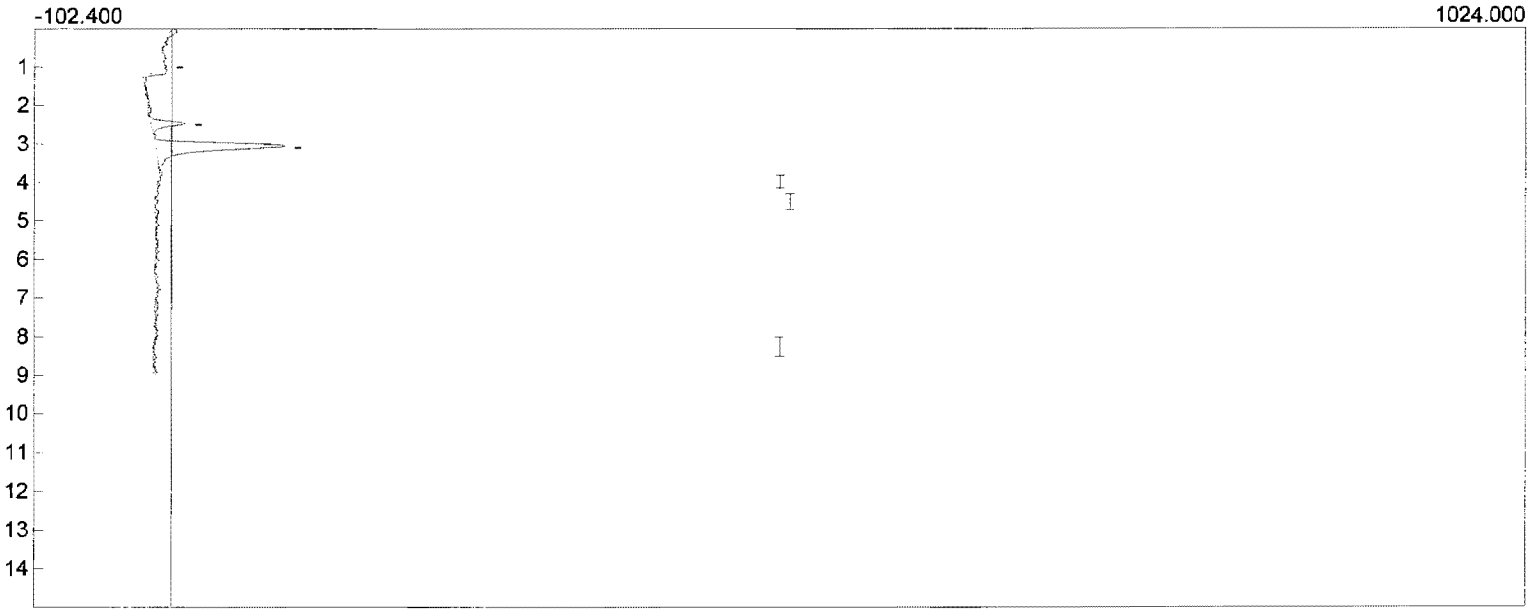
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 12:07:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample11.CHR ()
Sample: Sample Runs
Operator: SEY



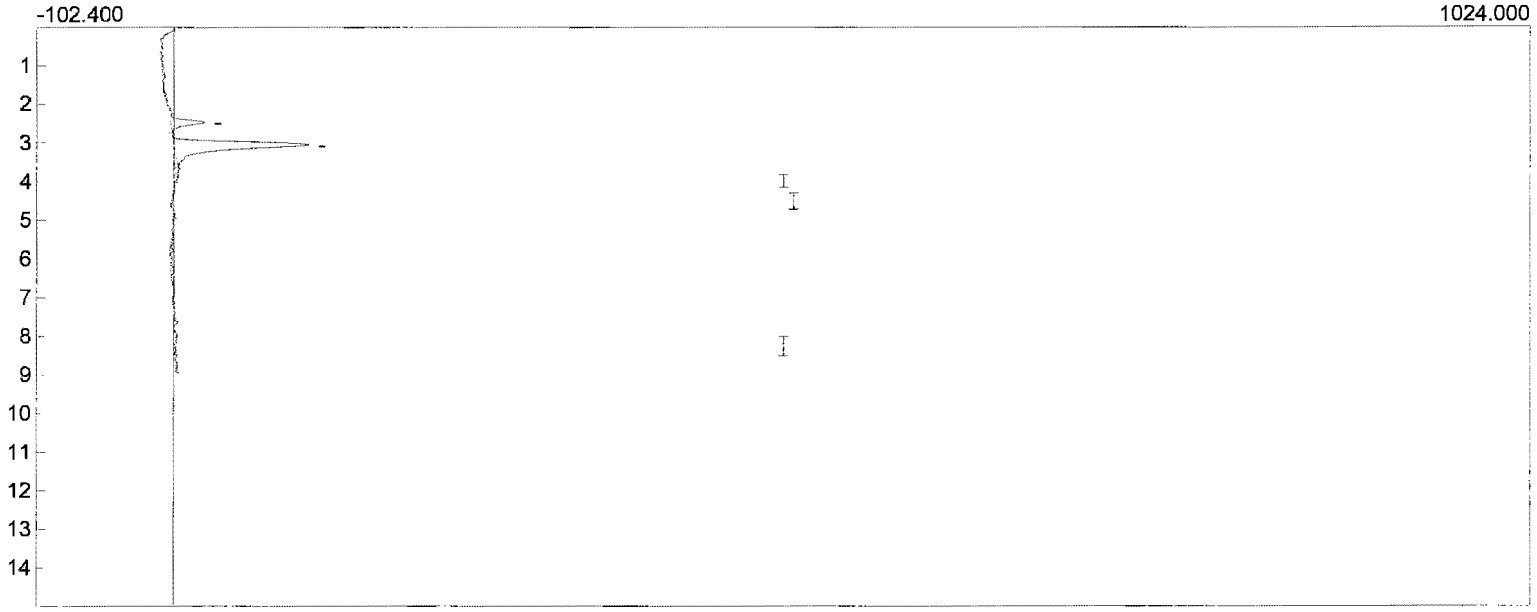
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 12:20:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample12.CHR ()
Sample: Sample Runs
Operator: SEY



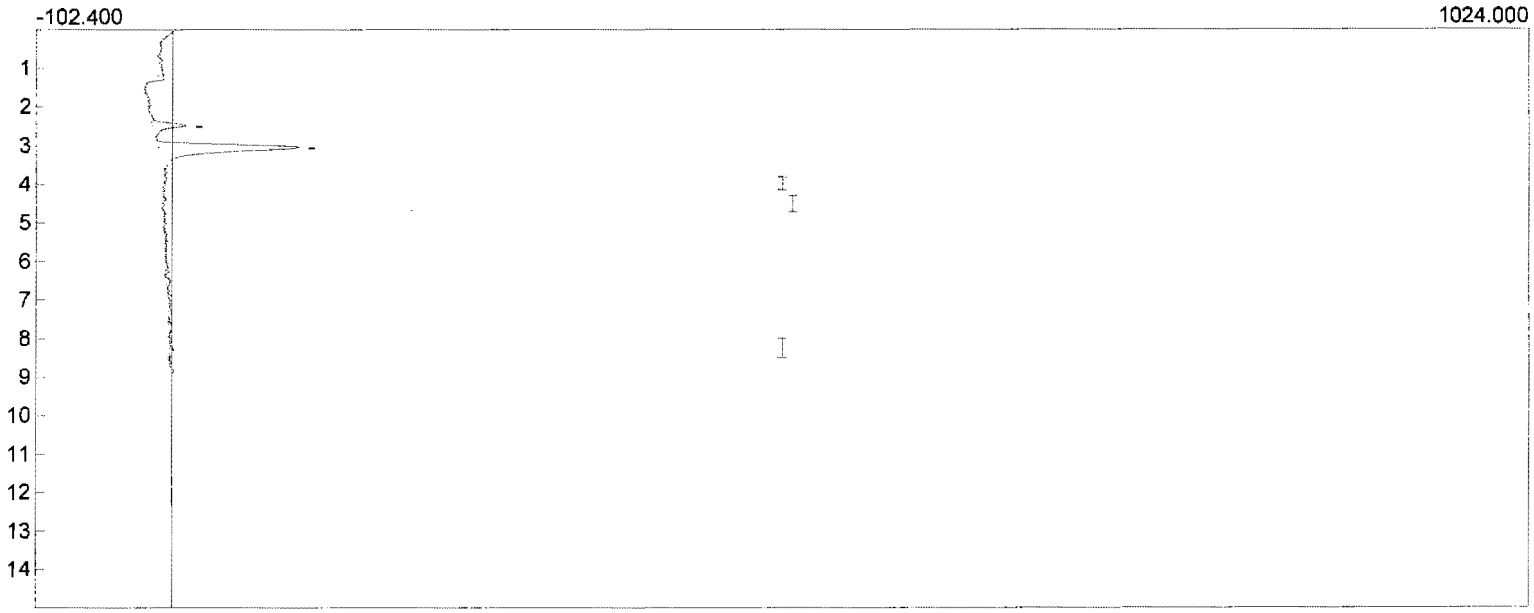
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 12:33:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample13.CHR ()
Sample: Sample Runs
Operator: SEY



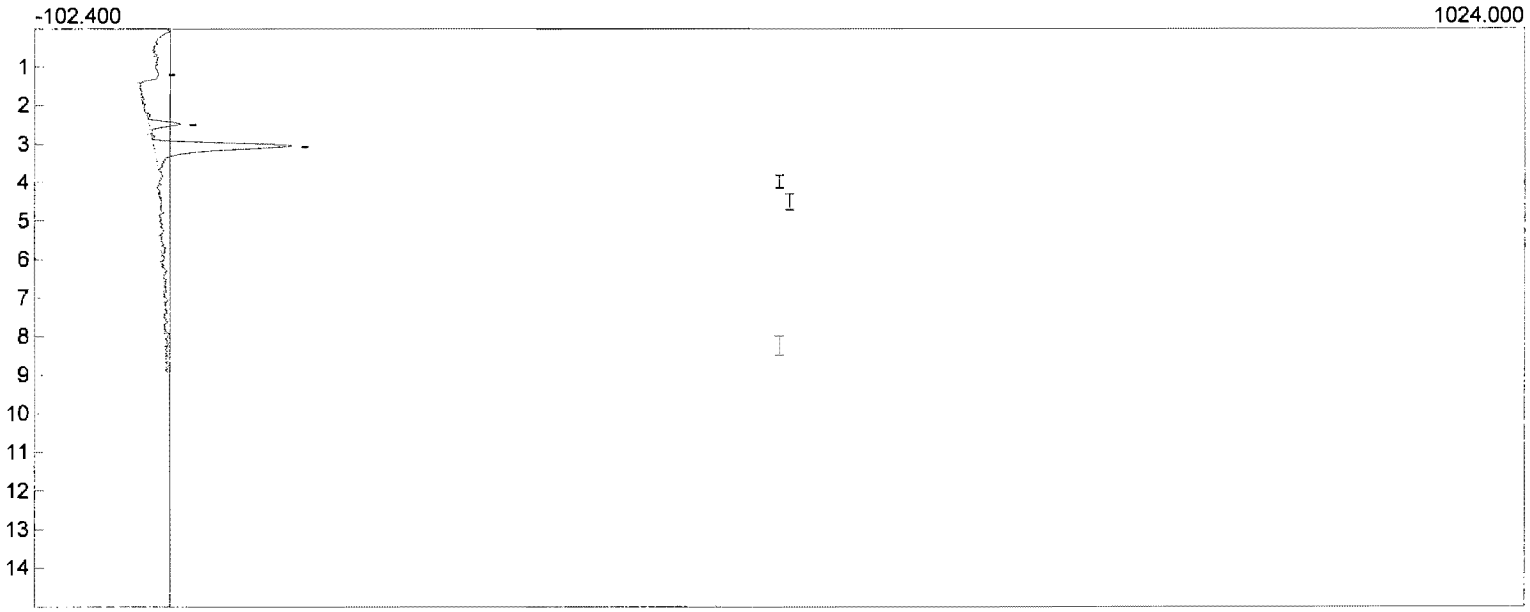
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 12:46:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample14.CHR ()
Sample: Sample Runs
Operator: SEY



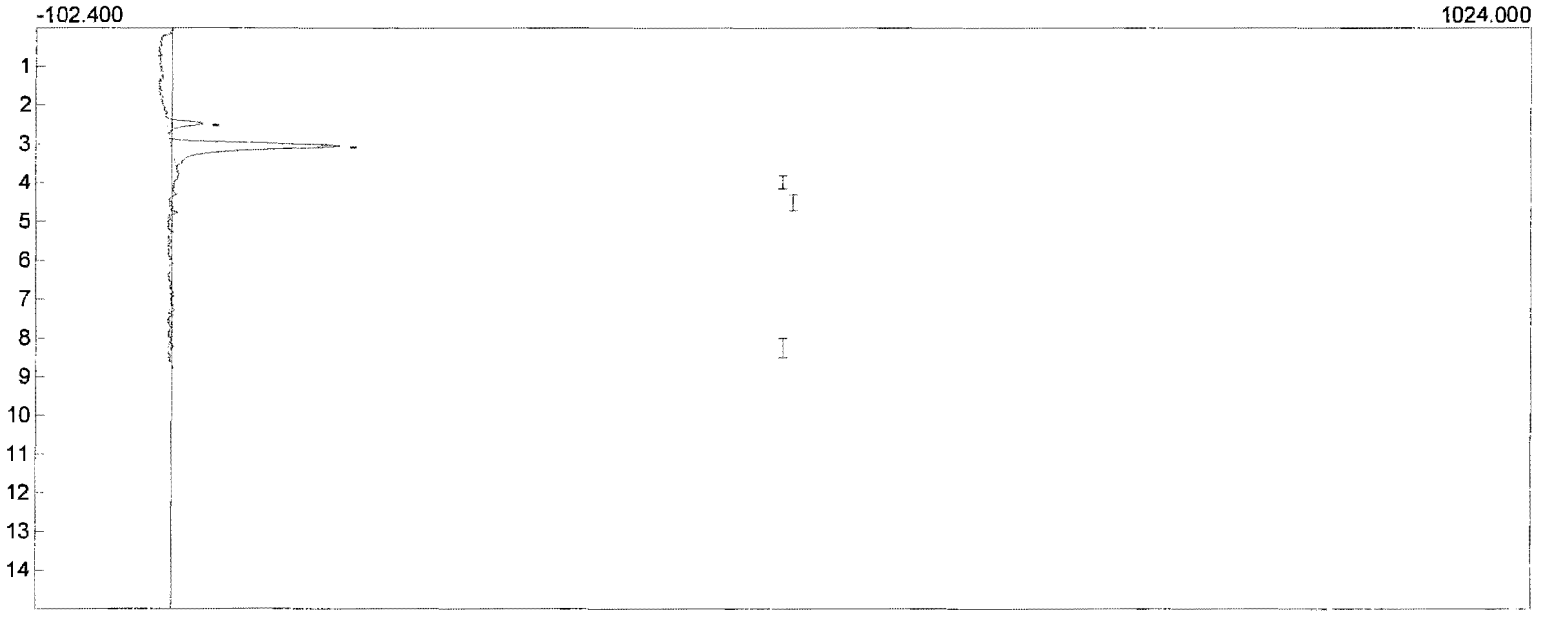
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 12:59:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample15.CHR ()
Sample: Sample Runs
Operator: SEY



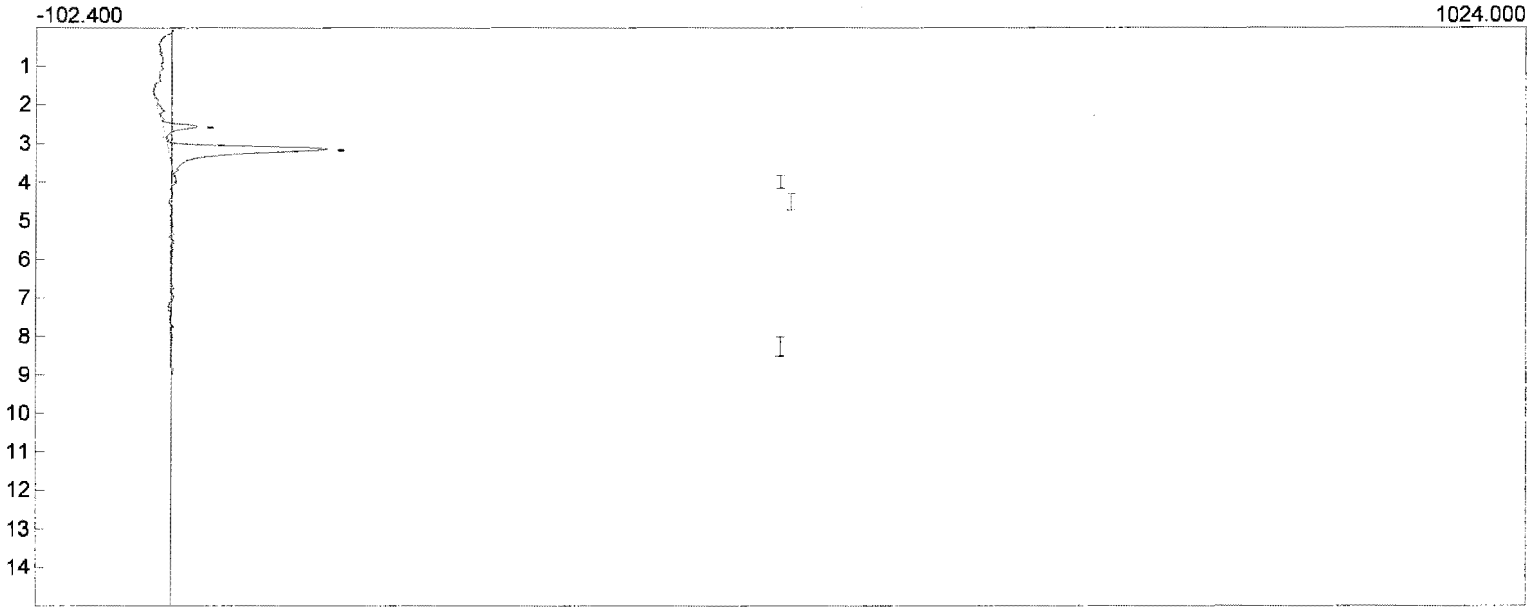
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 13:12:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample16.CHR ()
Sample: Sample Runs
Operator: SEY



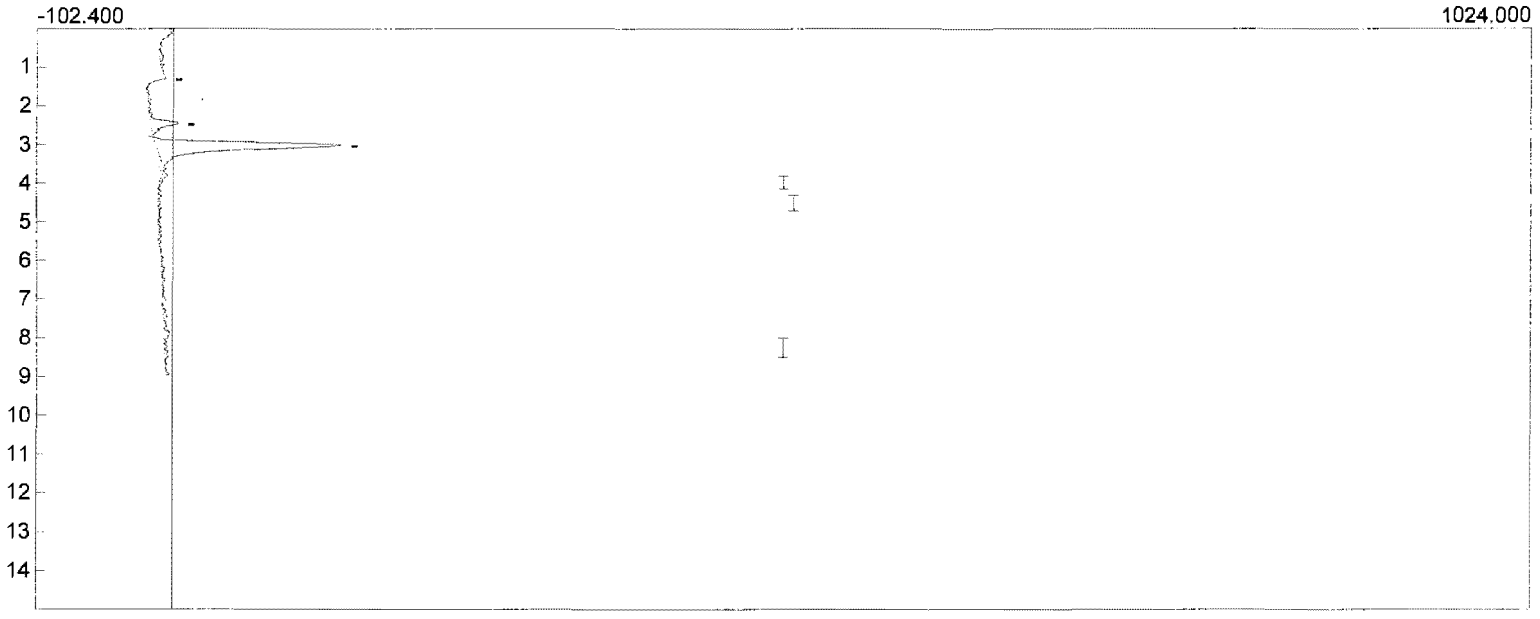
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 13:25:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample17.CHR ()
Sample: Sample Runs
Operator: SEY



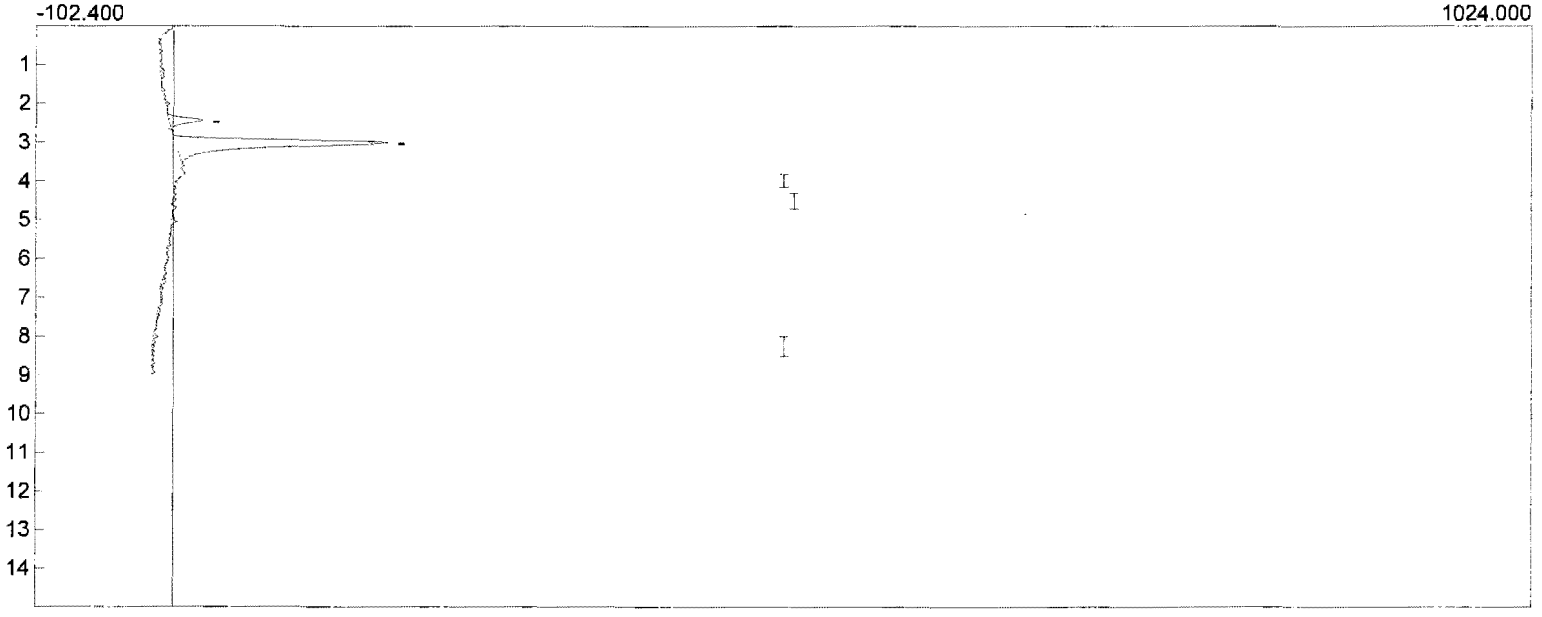
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 13:38:01
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample18.CHR ()
Sample: Sample Runs
Operator: SEY



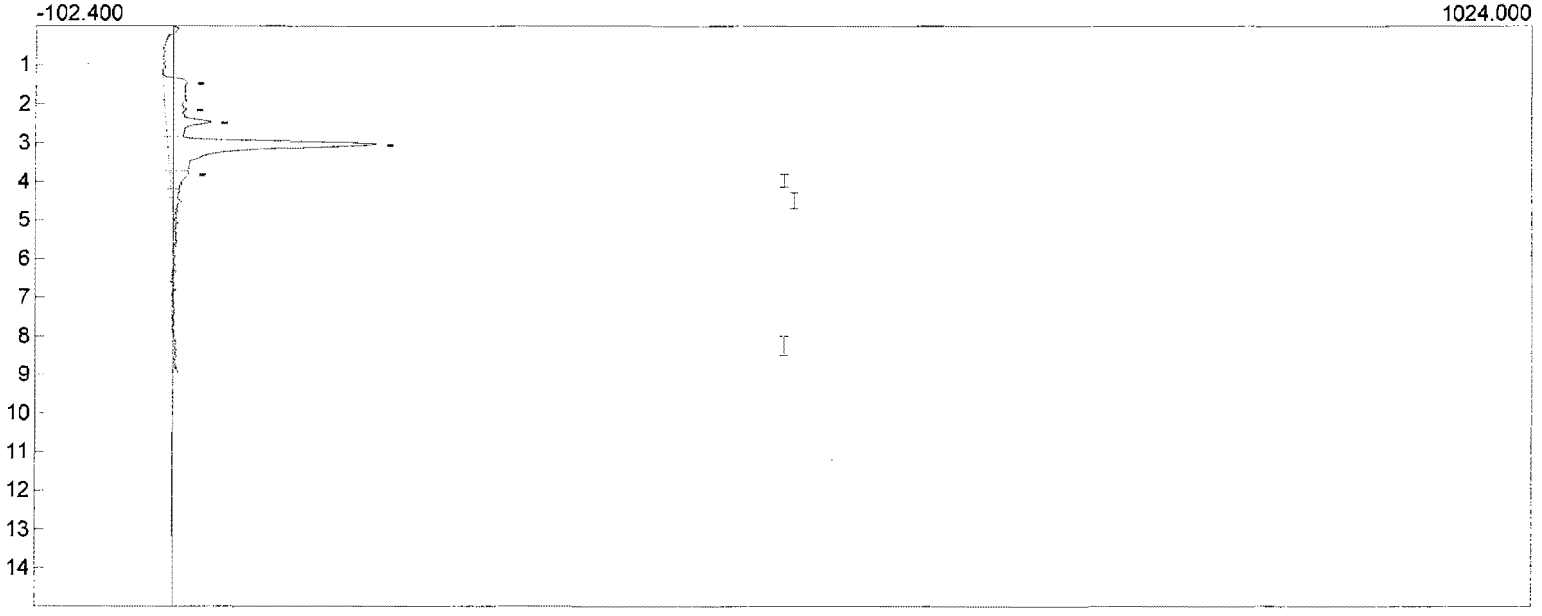
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 13:51:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample19.CHR ()
Sample: Sample Runs
Operator: SEY



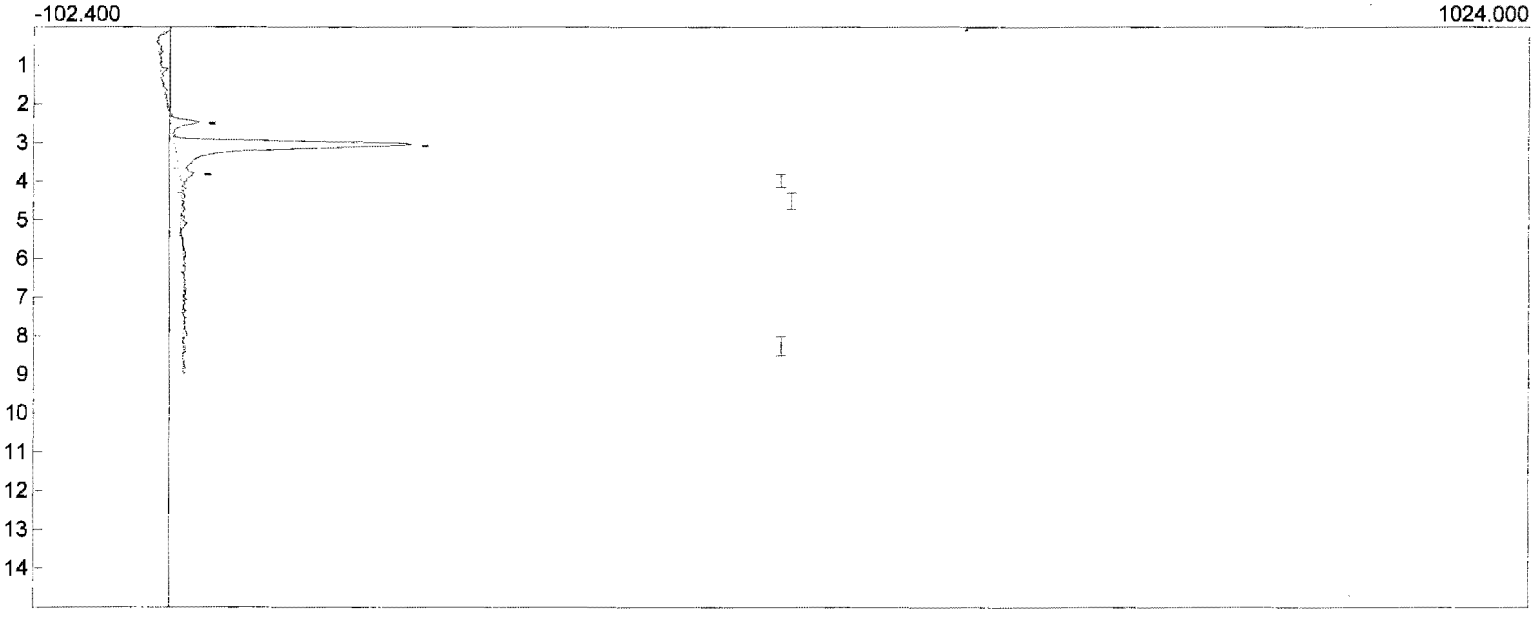
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 14:04:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample20.CHR ()
Sample: Sample Runs
Operator: SEY



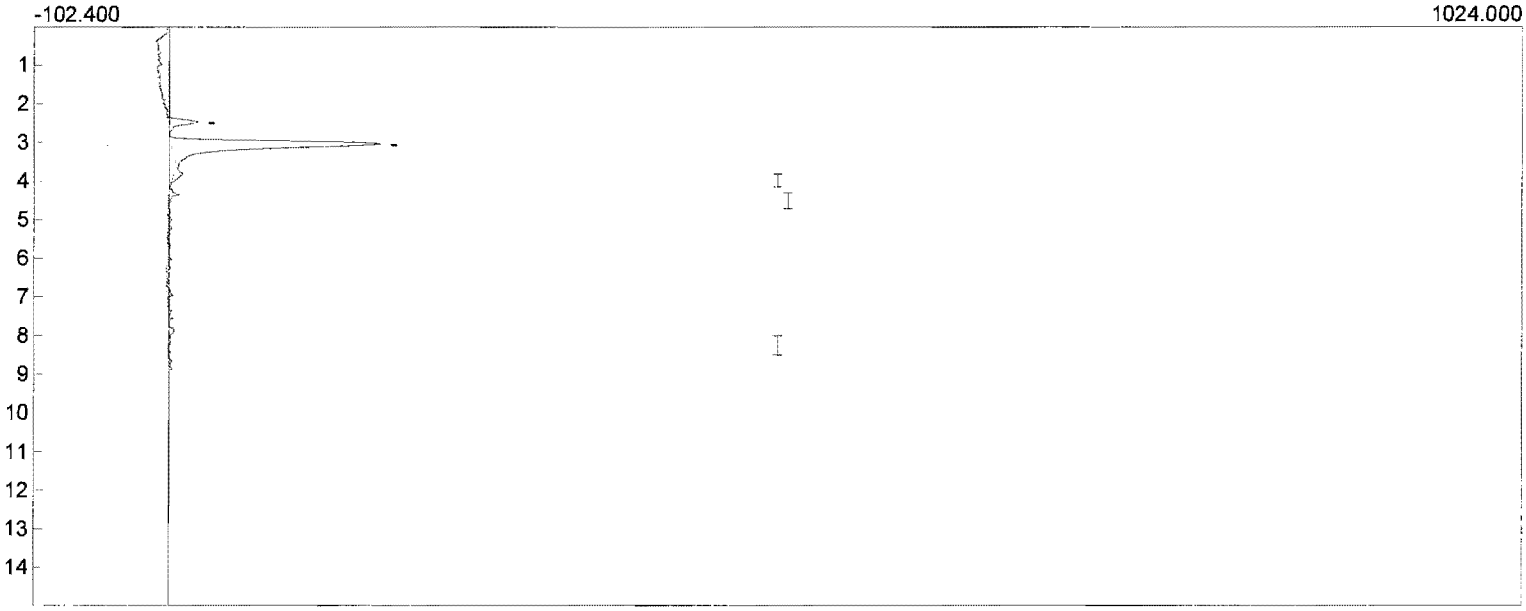
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 14:17:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample21.CHR ()
Sample: Sample Runs
Operator: SEY



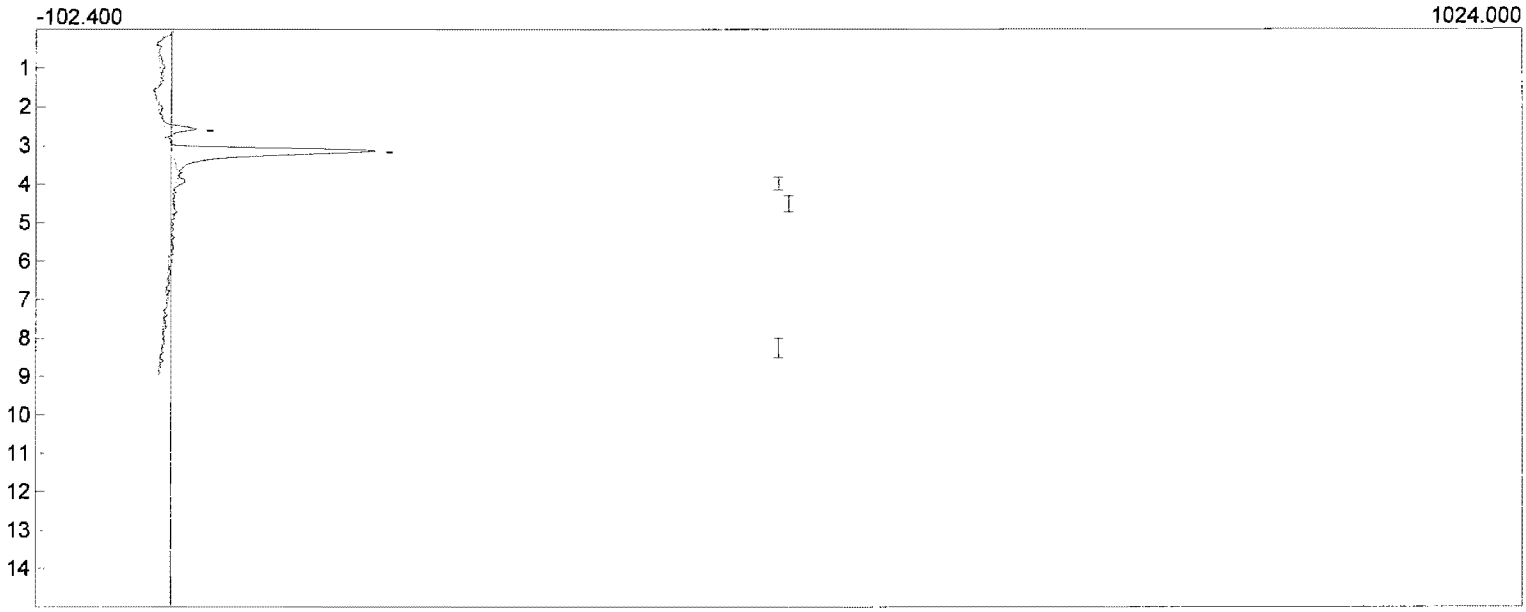
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 14:30:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample22.CHR ()
Sample: Sample Runs
Operator: SEY



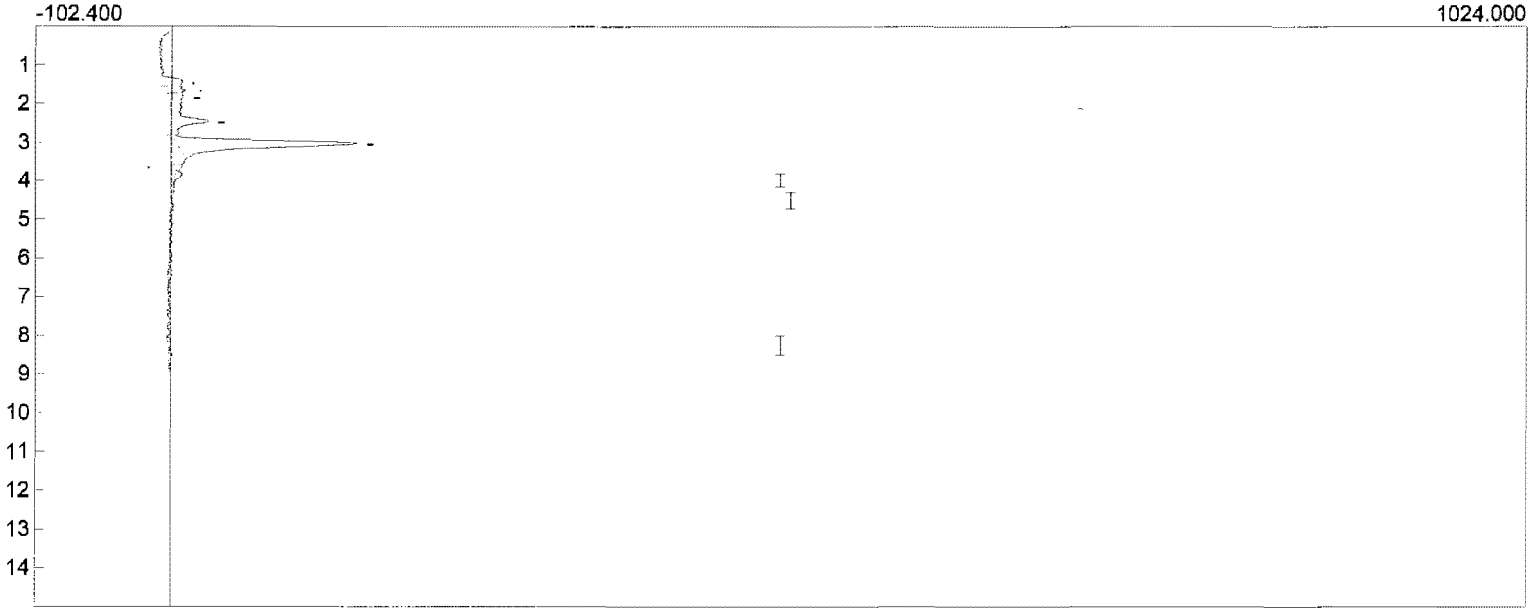
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 14:43:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample23.CHR ()
Sample: Sample Runs
Operator: SEY



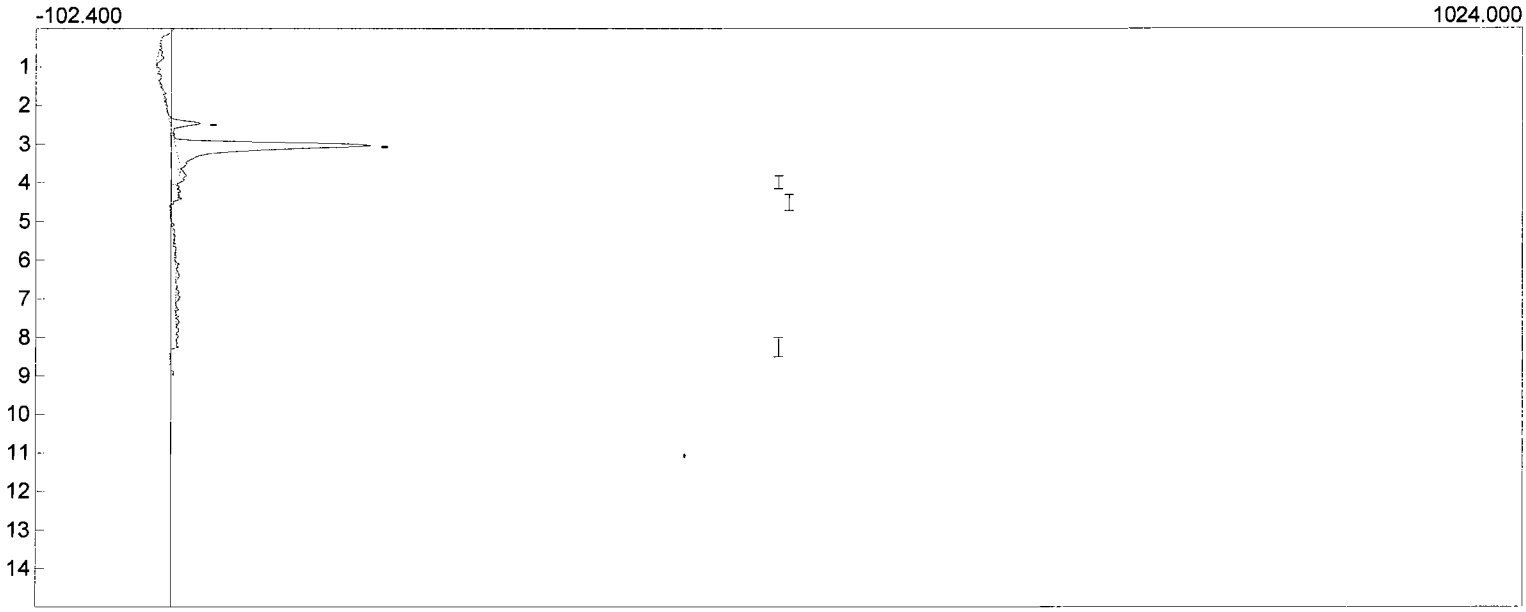
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample24.CHR ()
Sample: Sample Runs
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 15:09:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample25.CHR ()
Sample: Sample Runs
Operator: SEY

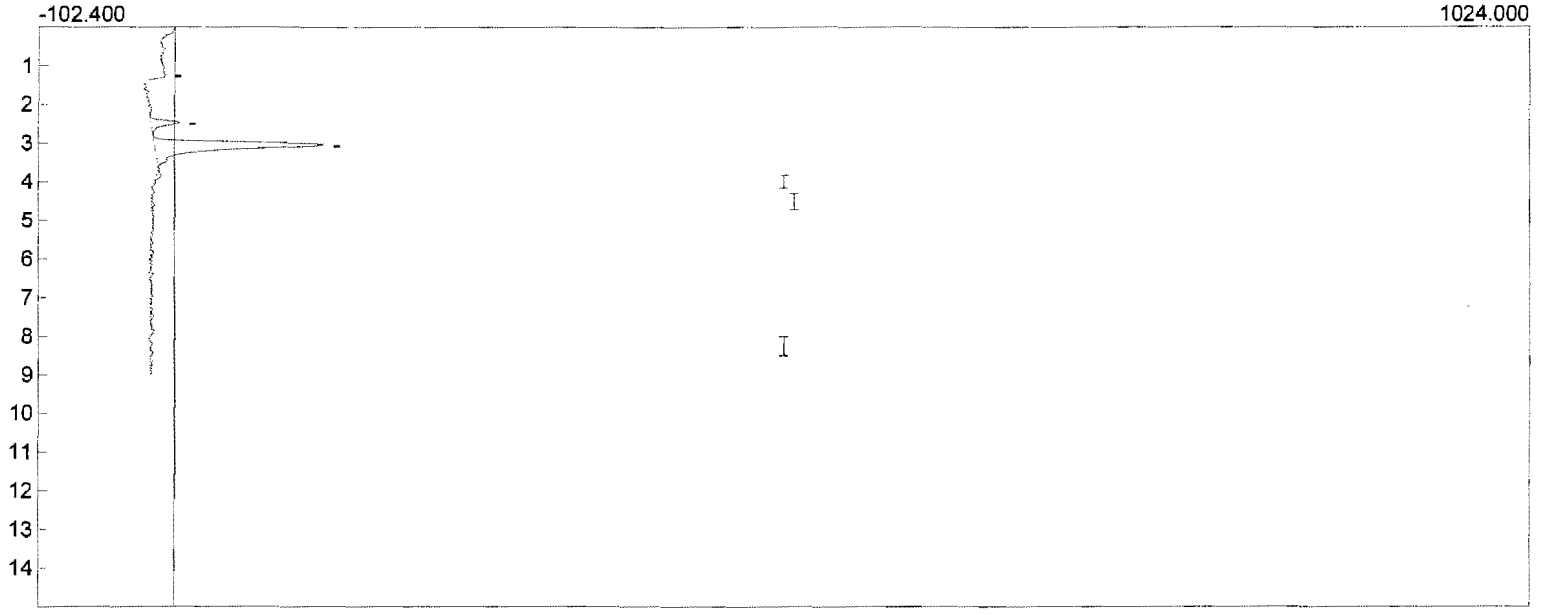


Component	Area
	0.0000

Client: Total
Location: Port Arthur, Tx
Source: SRU
Date sampled: 12/20/2006
Run Number: M15-3

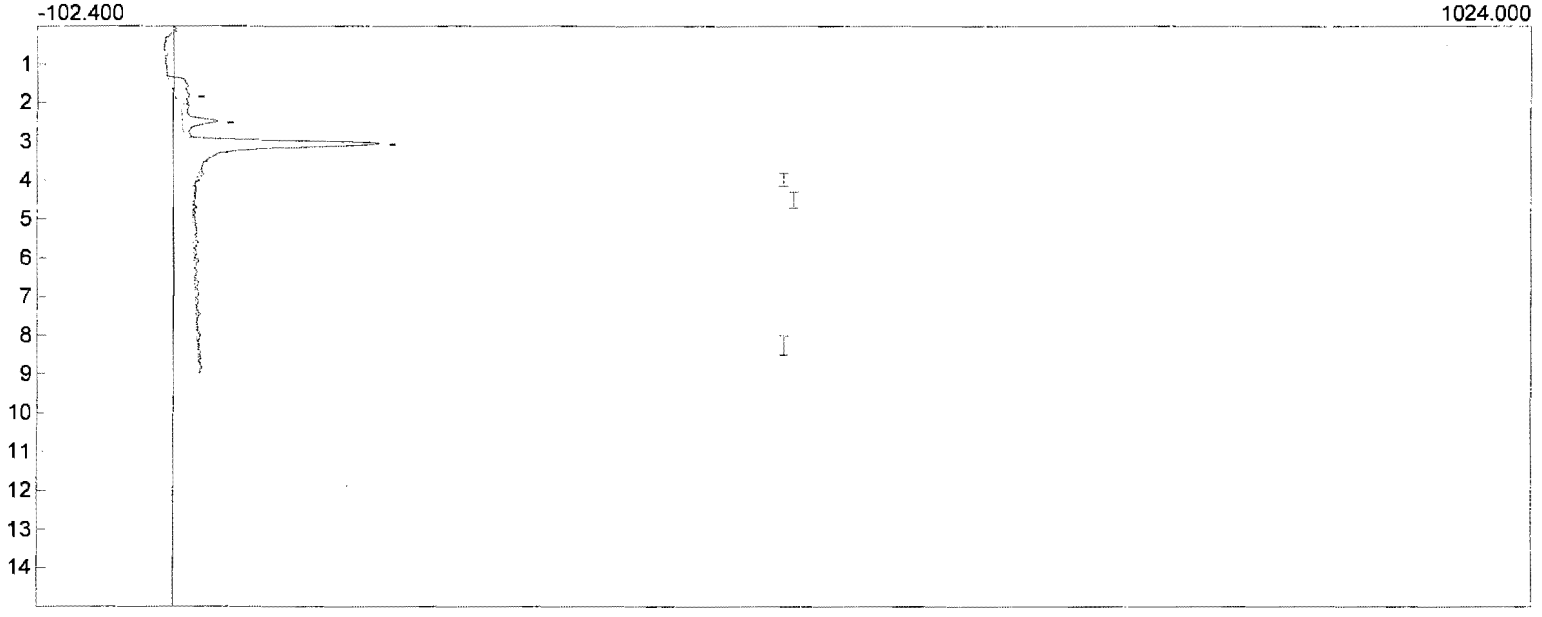
File Name	Time	COS Area	COS ppm	COS ppm Corrected	H_2S Area	H_2S ppm	H_2S ppm Corrected	CS_2 Area	CS_2 ppm	CS_2 ppm Corrected
1220sample26.CHR	15:22:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample27.CHR	15:35:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample28.CHR	15:48:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample29.CHR	16:01:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample30.CHR	16:14:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample31.CHR	16:27:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample32.CHR	16:40:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample33.CHR	16:53:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample34.CHR	17:06:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample35.CHR	17:19:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample36.CHR	17:32:02	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample37.CHR	17:45:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample38.CHR	17:58:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample39.CHR	18:11:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample40.CHR	18:24:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample41.CHR	18:37:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample42.CHR	18:50:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample43.CHR	19:03:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample44.CHR	19:16:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample45.CHR	19:29:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample46.CHR	19:42:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample47.CHR	19:55:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample48.CHR	20:08:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
1220sample49.CHR	20:21:03	1.0	<0.30	<0.31	1.0	<0.59	<0.63	1.5	<0.13	<0.14
Average				**<0.31**			**<0.63**			**<0.14**

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 15:22:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample26.CHR ()
Sample: Sample Runs
Operator: SEY



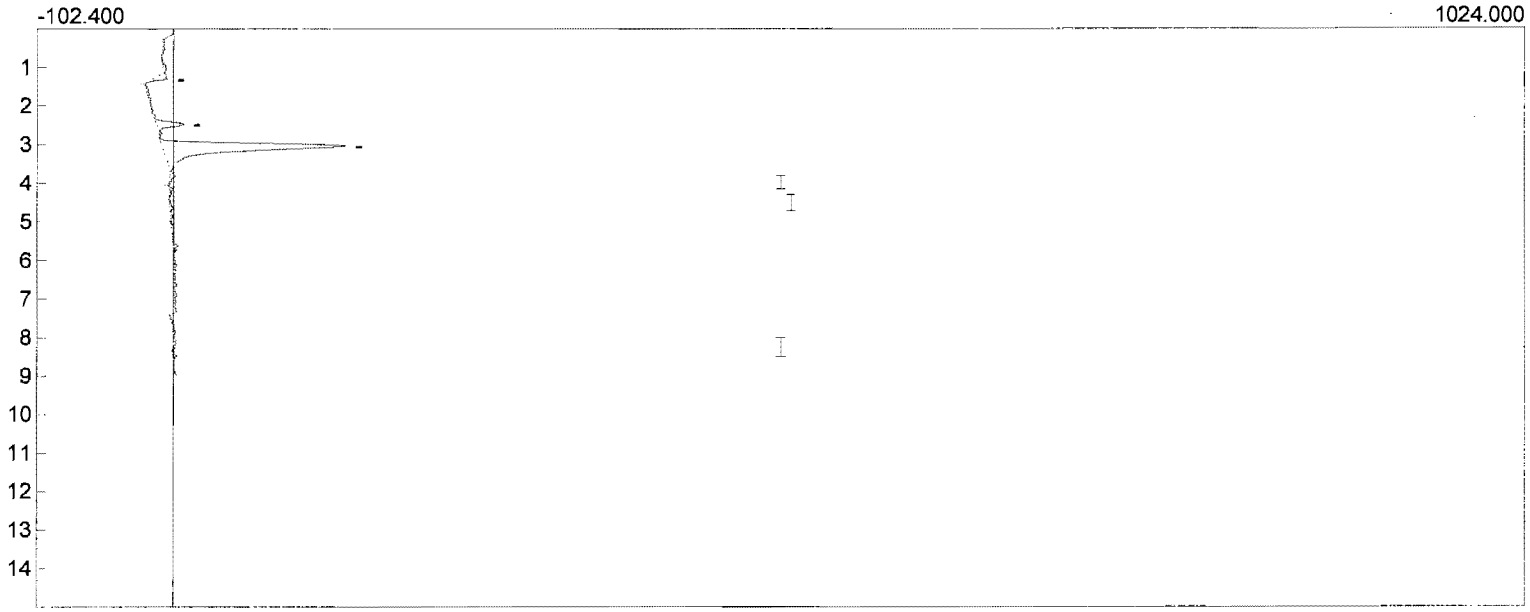
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample27.CHR ()
Sample: Sample Runs
Operator: SEY



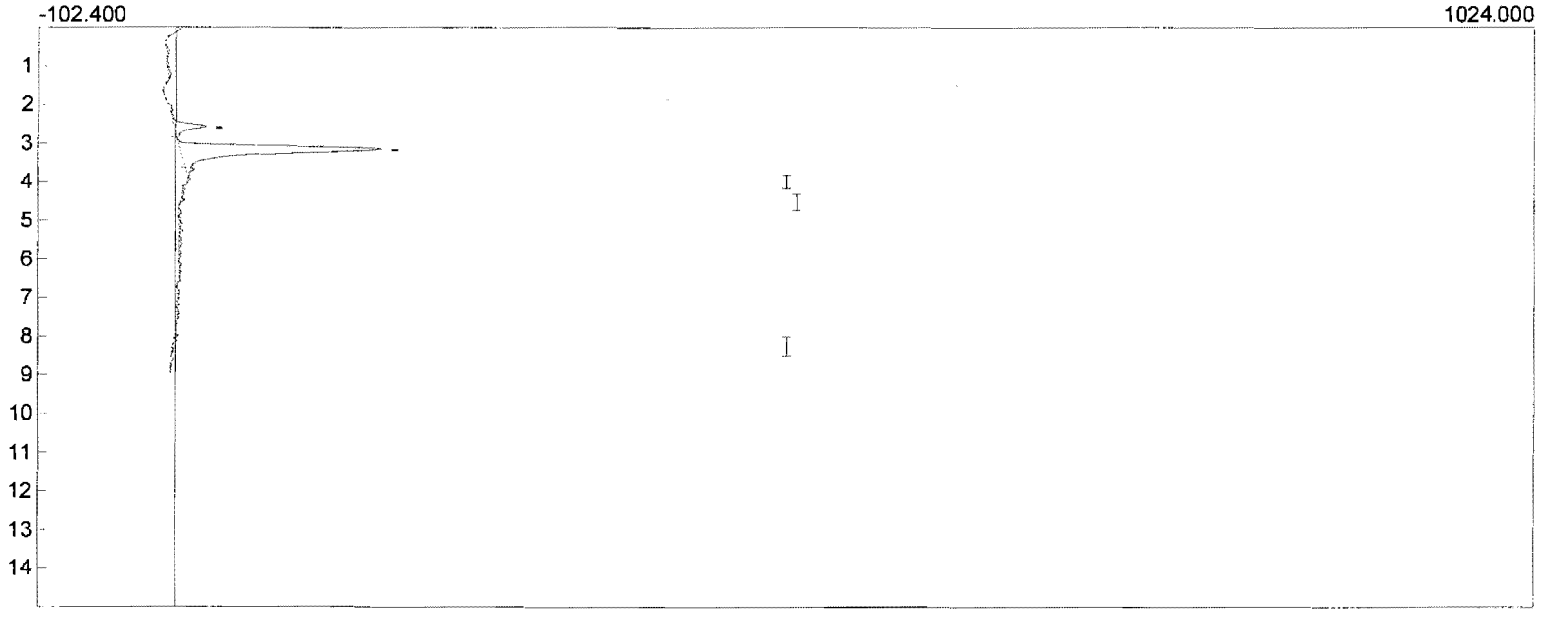
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 15:48:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample28.CHR ()
Sample: Sample Runs
Operator: SEY



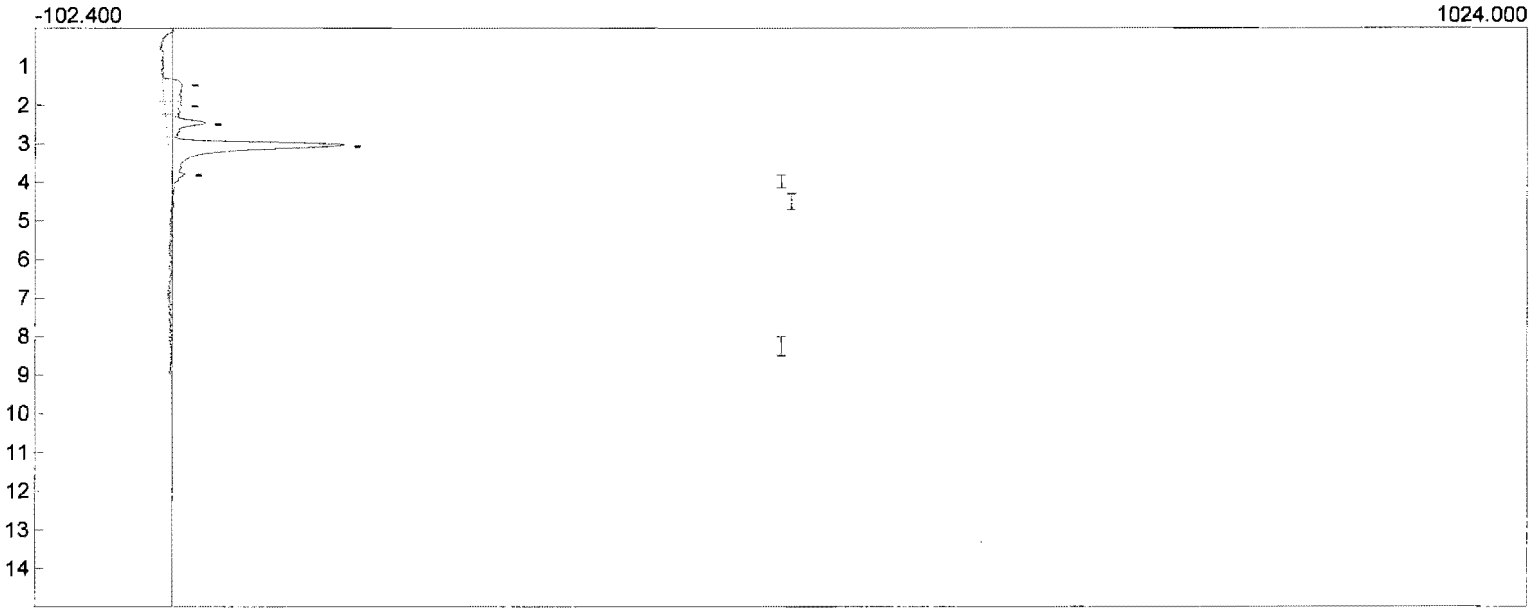
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 16:01:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample29.CHR ()
Sample: Sample Runs
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample30.chr ()
Sample: Sample Runs
Operator: SEY

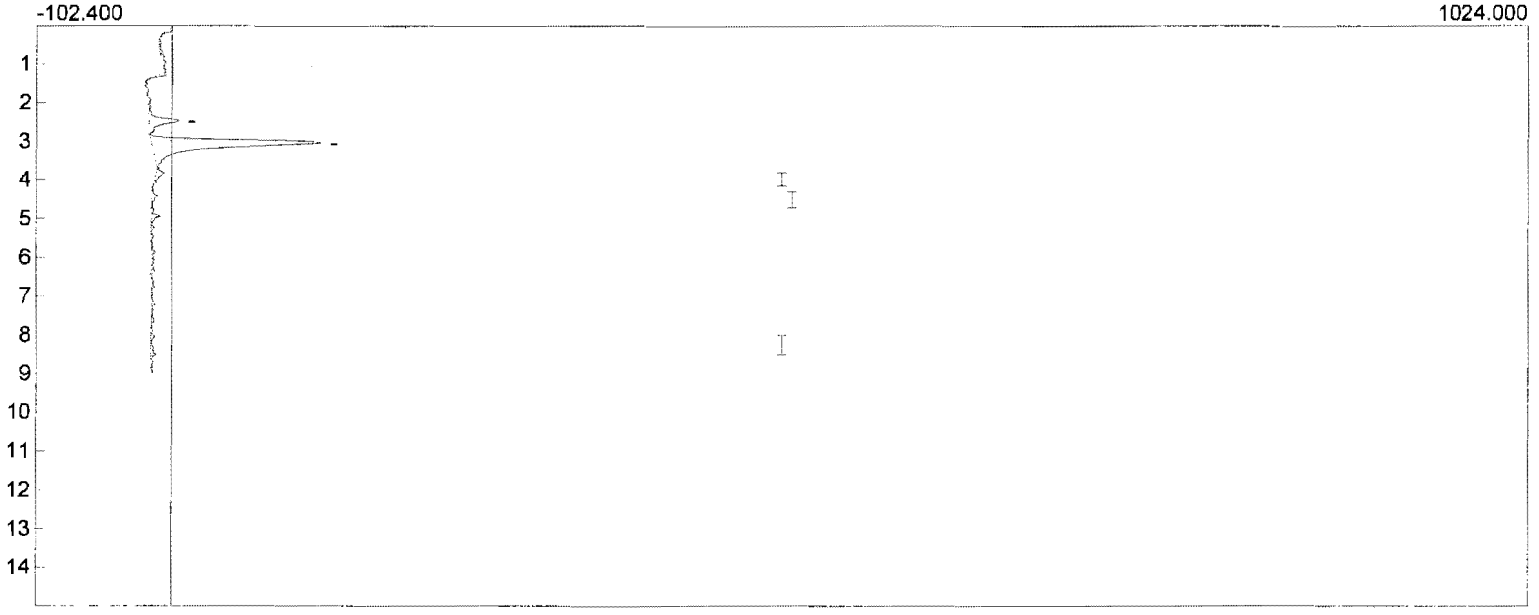


Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 16:27:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample31.CHR ()
Sample: Sample Runs
Operator: SEY

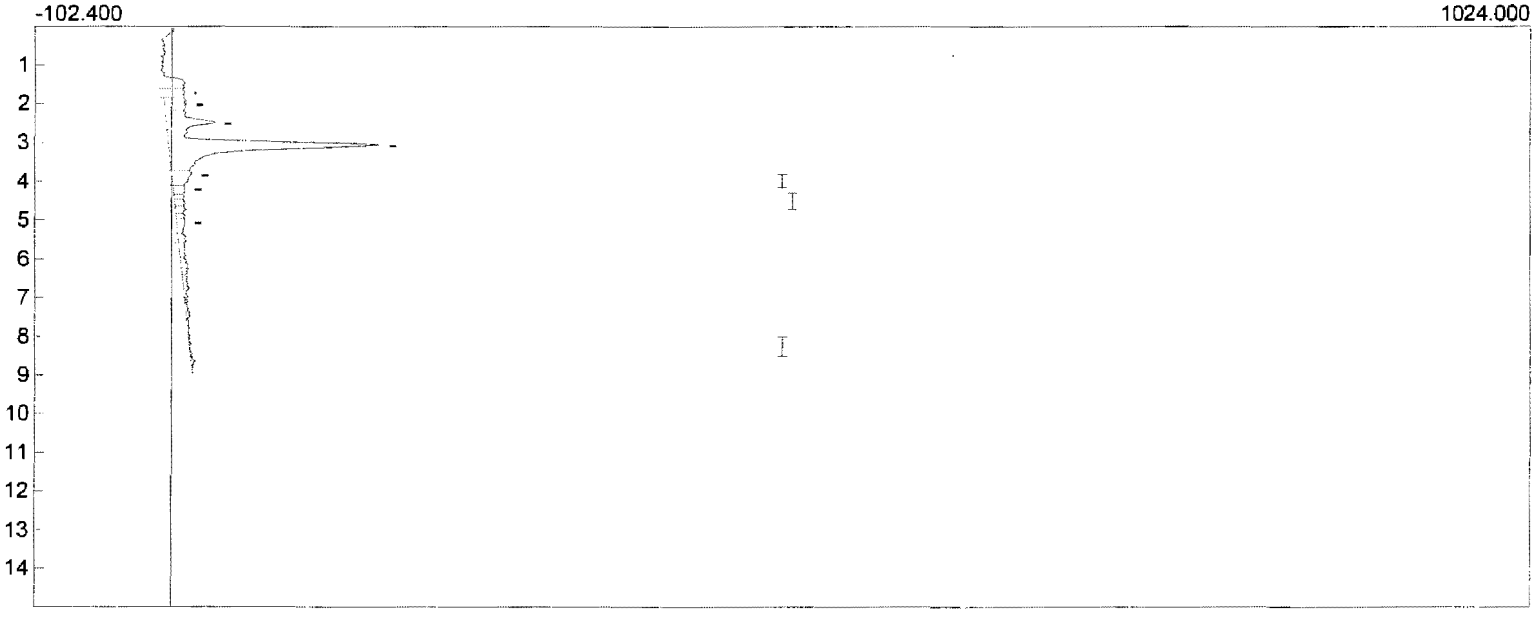
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 16:40:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample32.CHR ()
Sample: Sample Runs
Operator: SEY



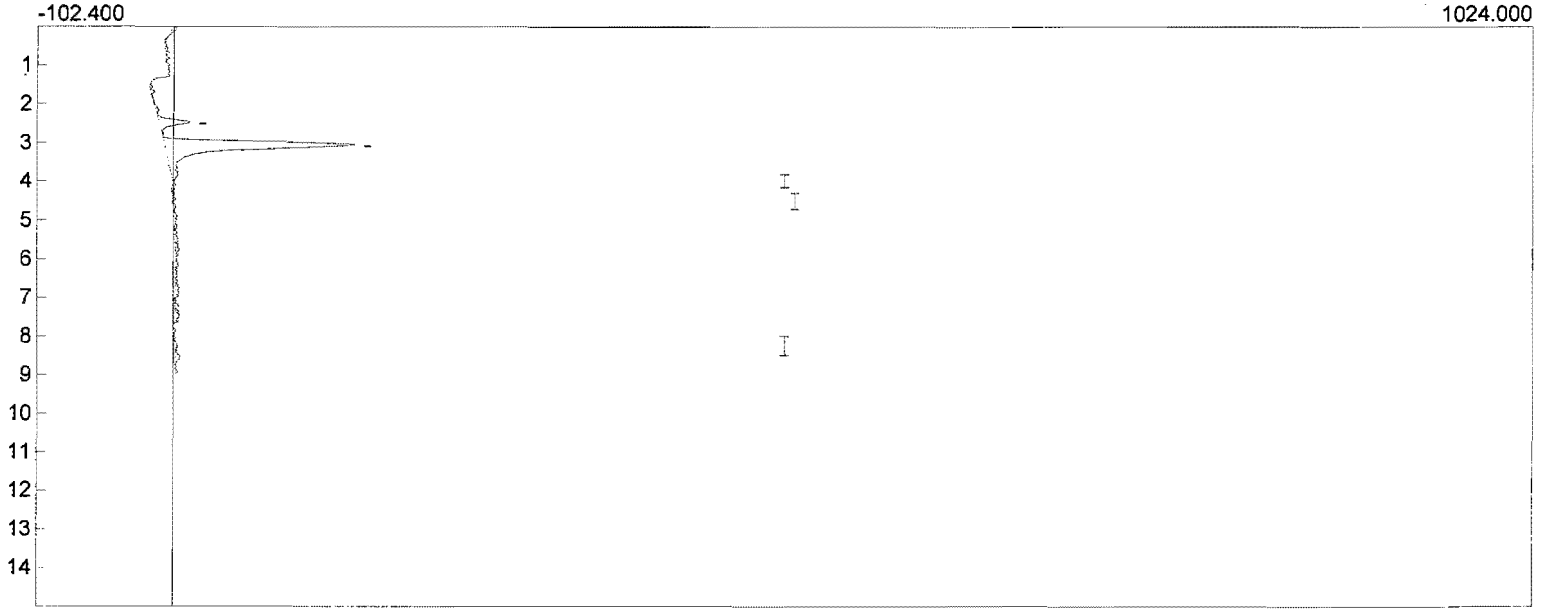
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 16:53:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample33.CHR ()
Sample: Sample Runs
Operator: SEY



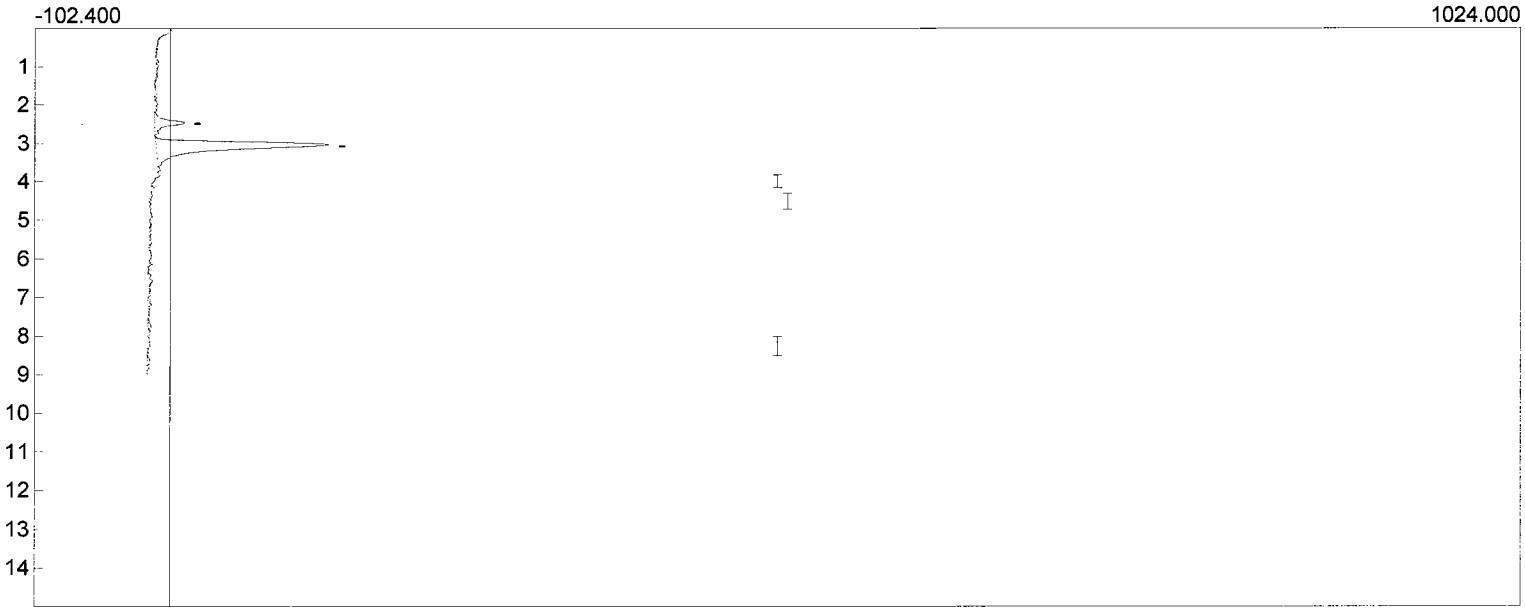
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 17:06:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample34.CHR ()
Sample: Sample Runs
Operator: SEY



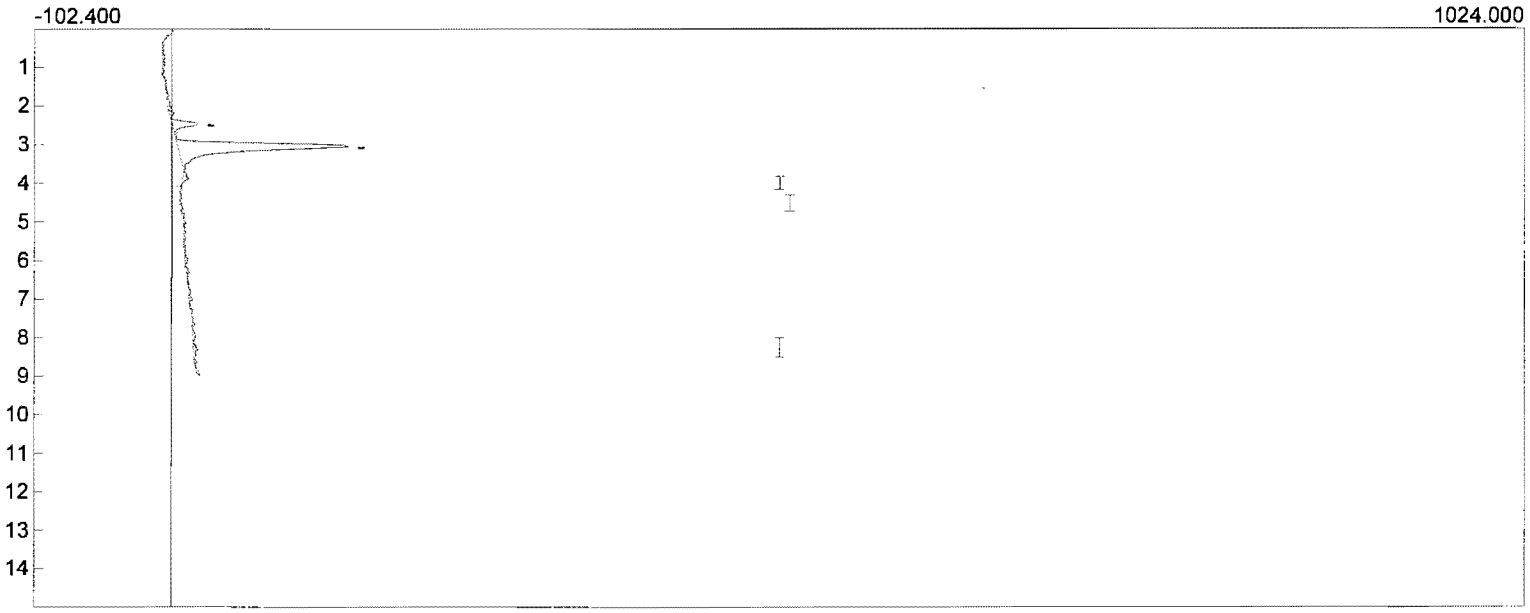
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 17:19:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample35.CHR ()
Sample: Sample Runs
Operator: SEY



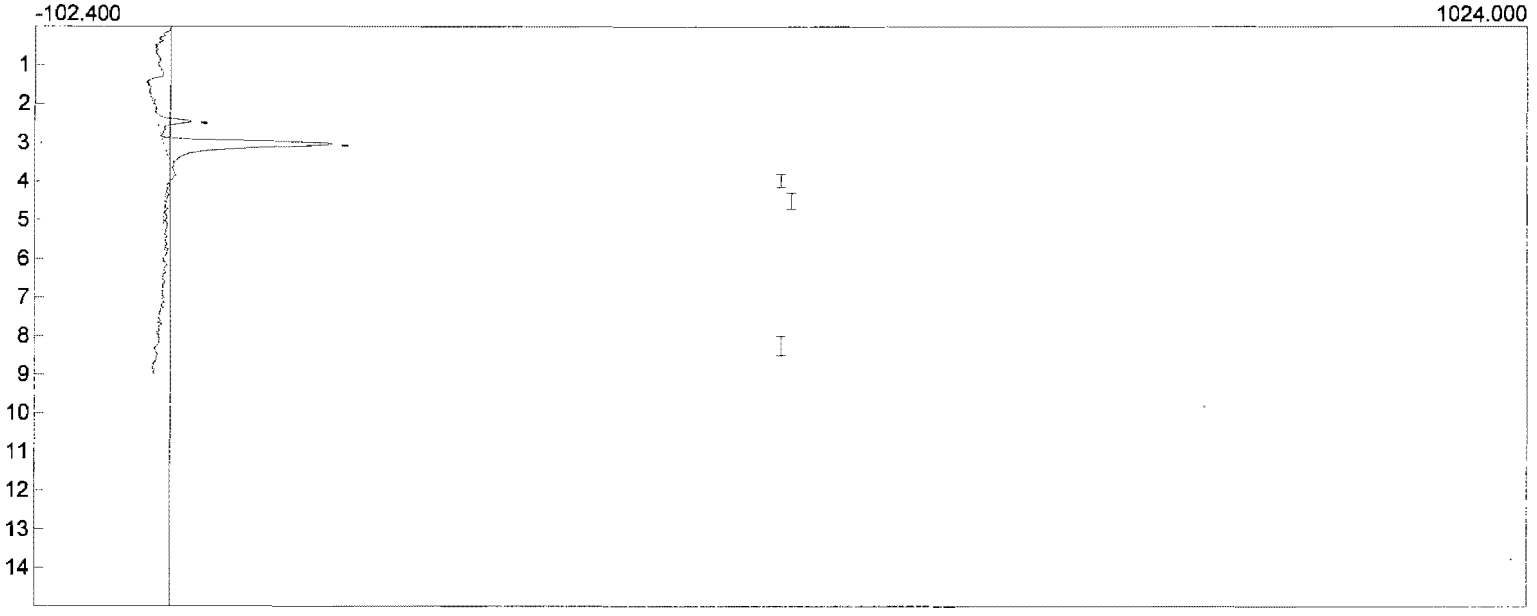
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 17:32:02
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample36.CHR ()
Sample: Sample Runs
Operator: SEY



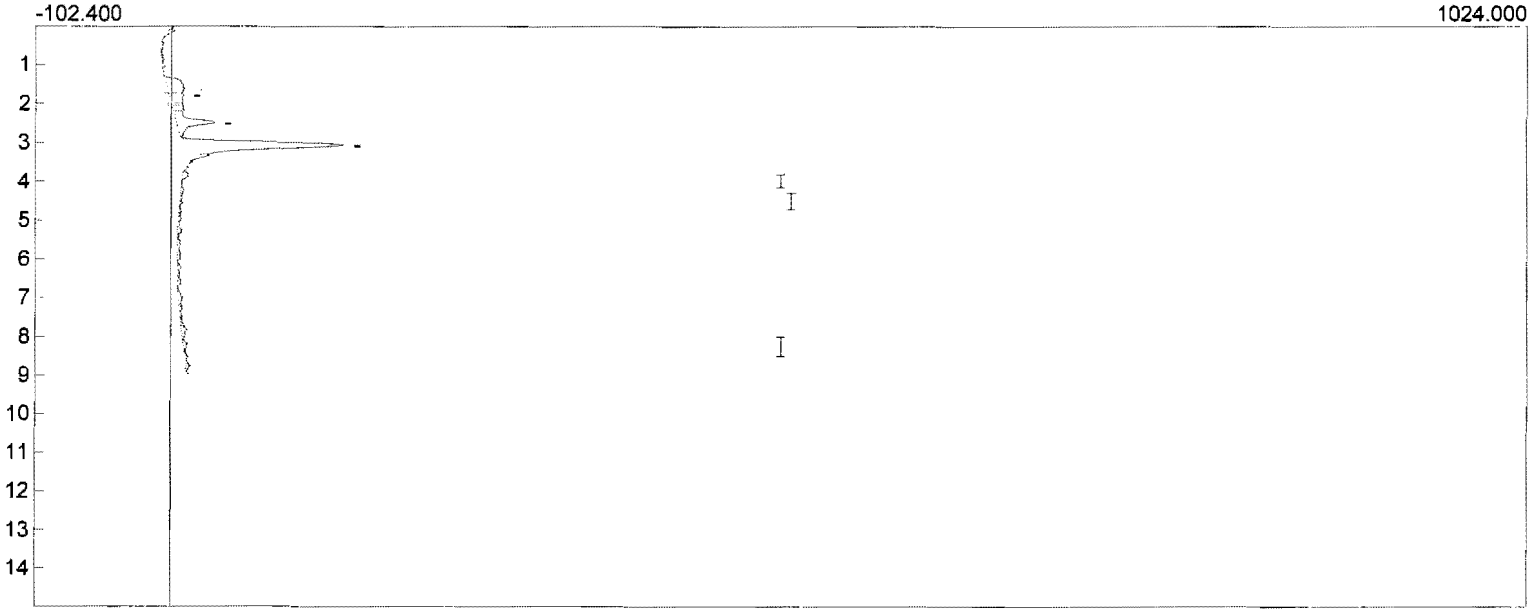
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 17:45:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample37.CHR ()
Sample: Sample Runs
Operator: SEY



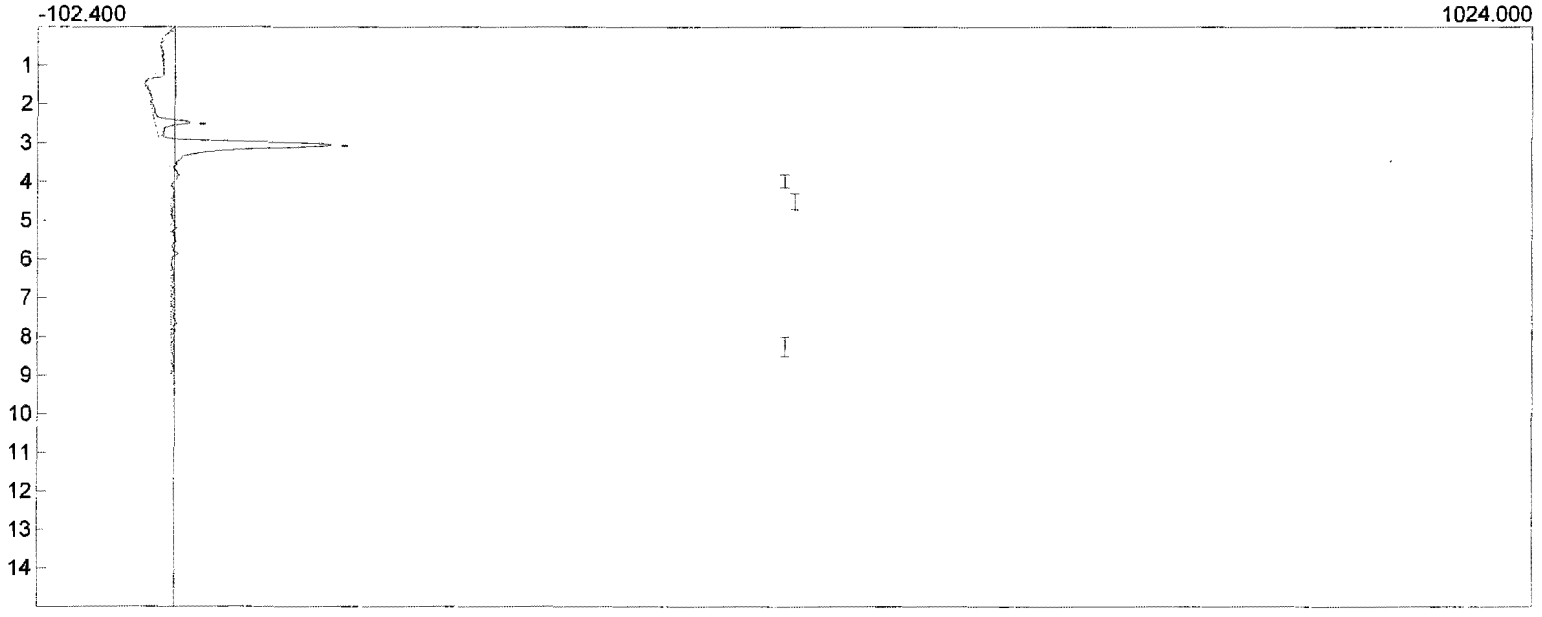
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample38.CHR ()
Sample: Sample Runs
Operator: SEY



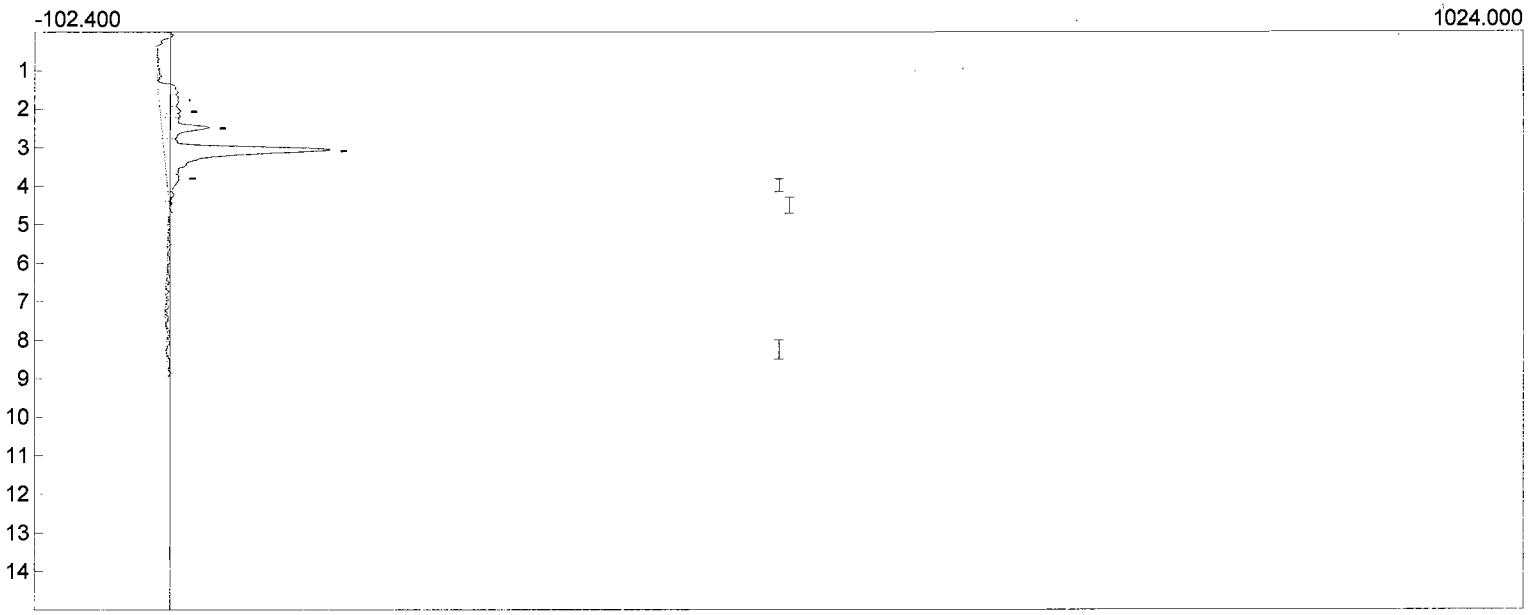
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample39.CHR ()
Sample: Sample Runs
Operator: SEY



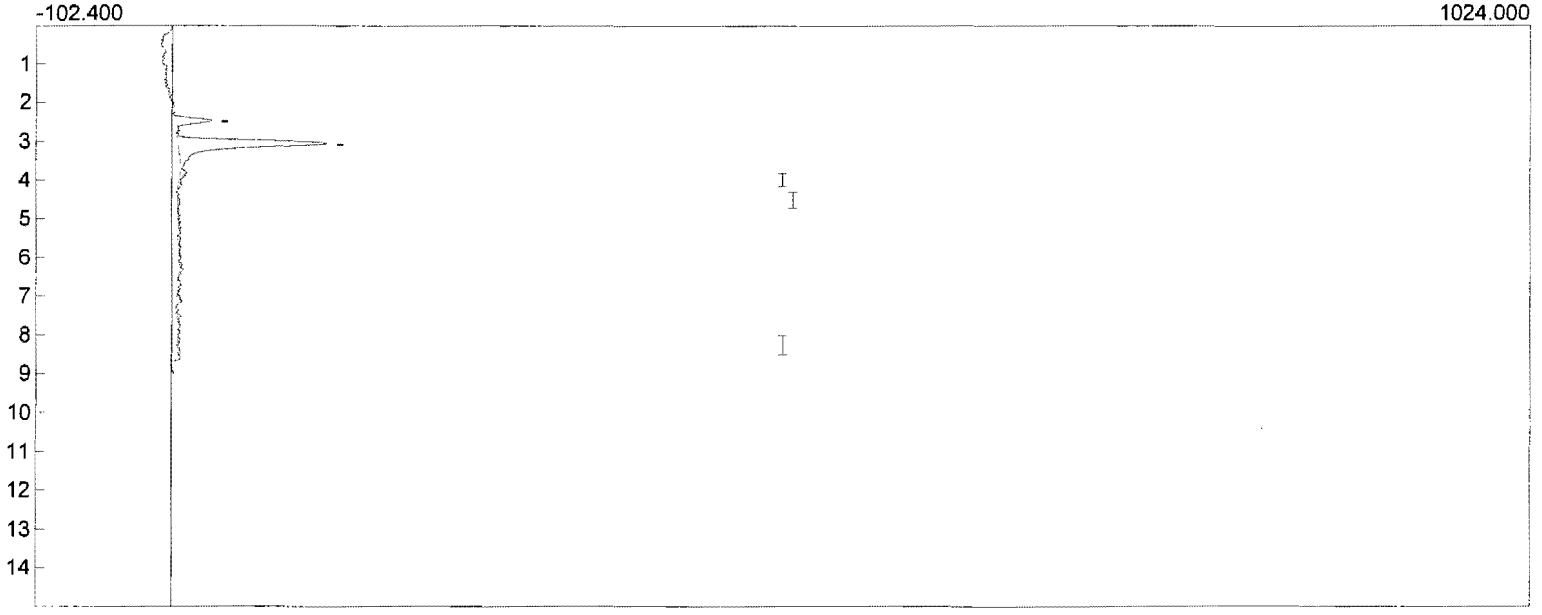
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 18:24:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample40.CHR ()
Sample: Sample Runs
Operator: SEY



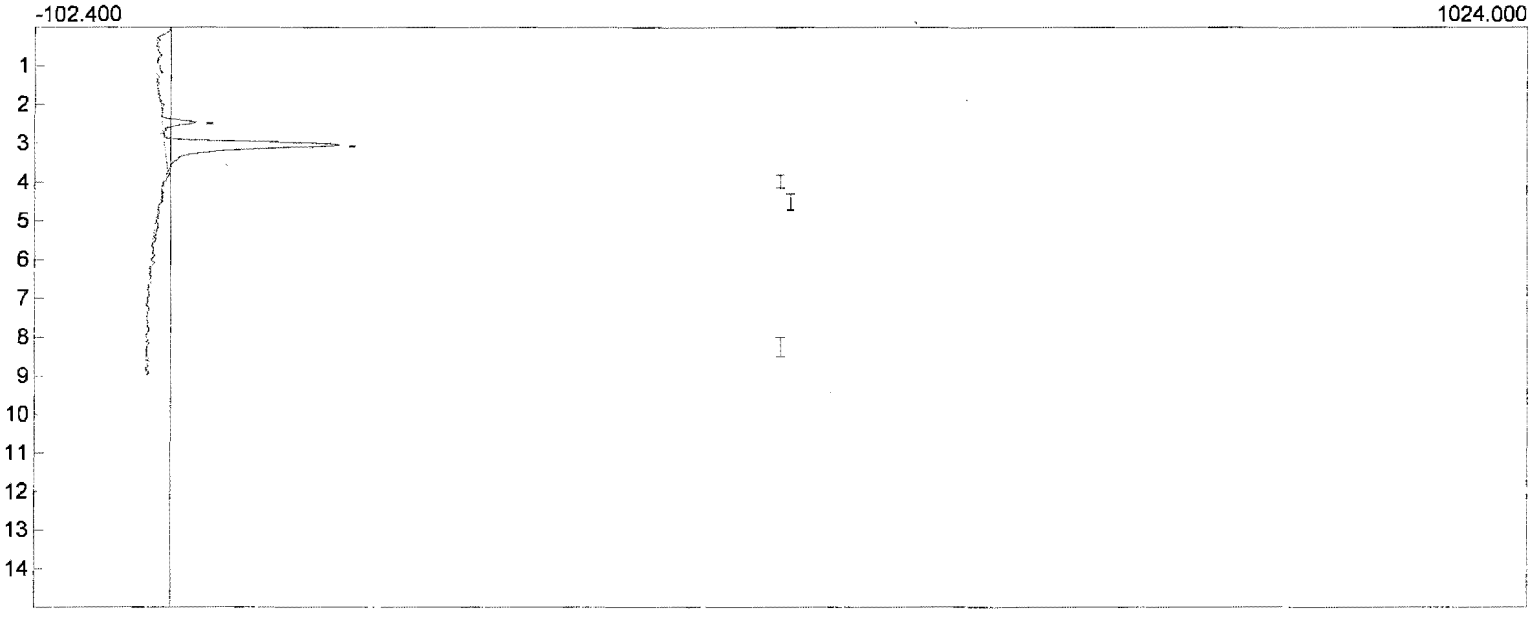
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 18:37:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample41.CHR ()
Sample: Sample Runs
Operator: SEY



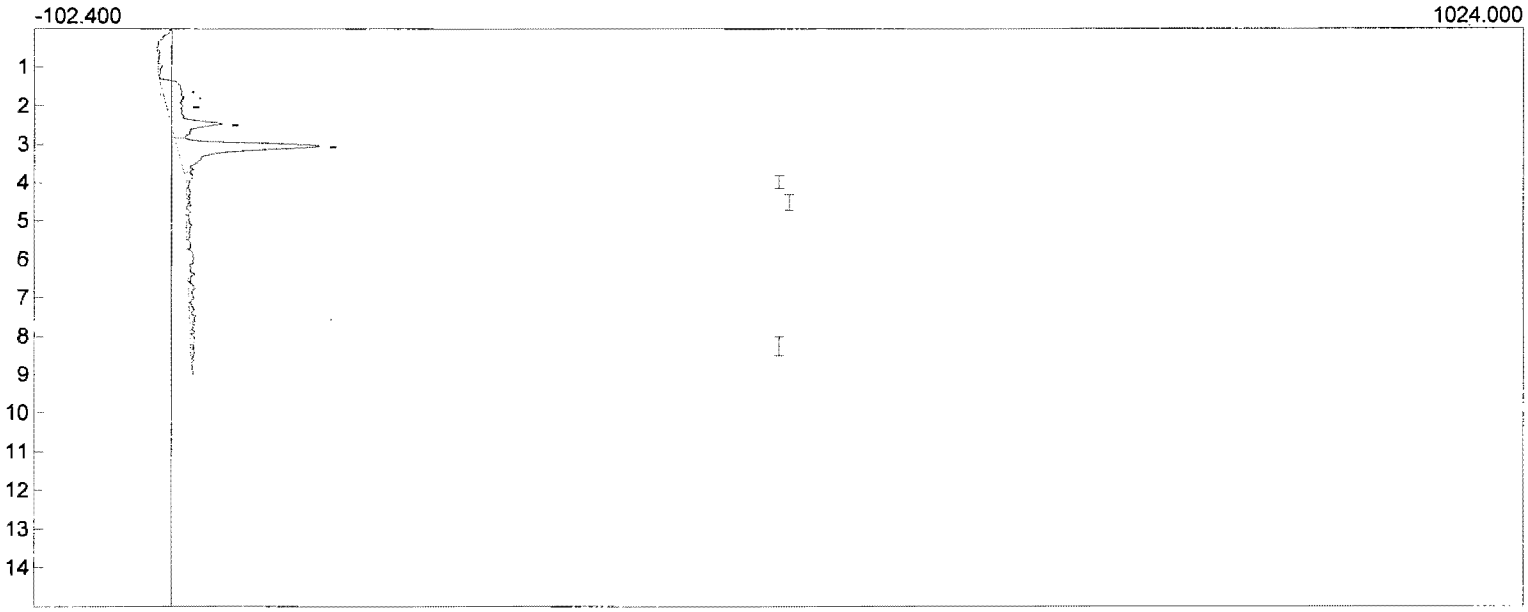
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 18:50:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample42.CHR ()
Sample: Sample Runs
Operator: SEY



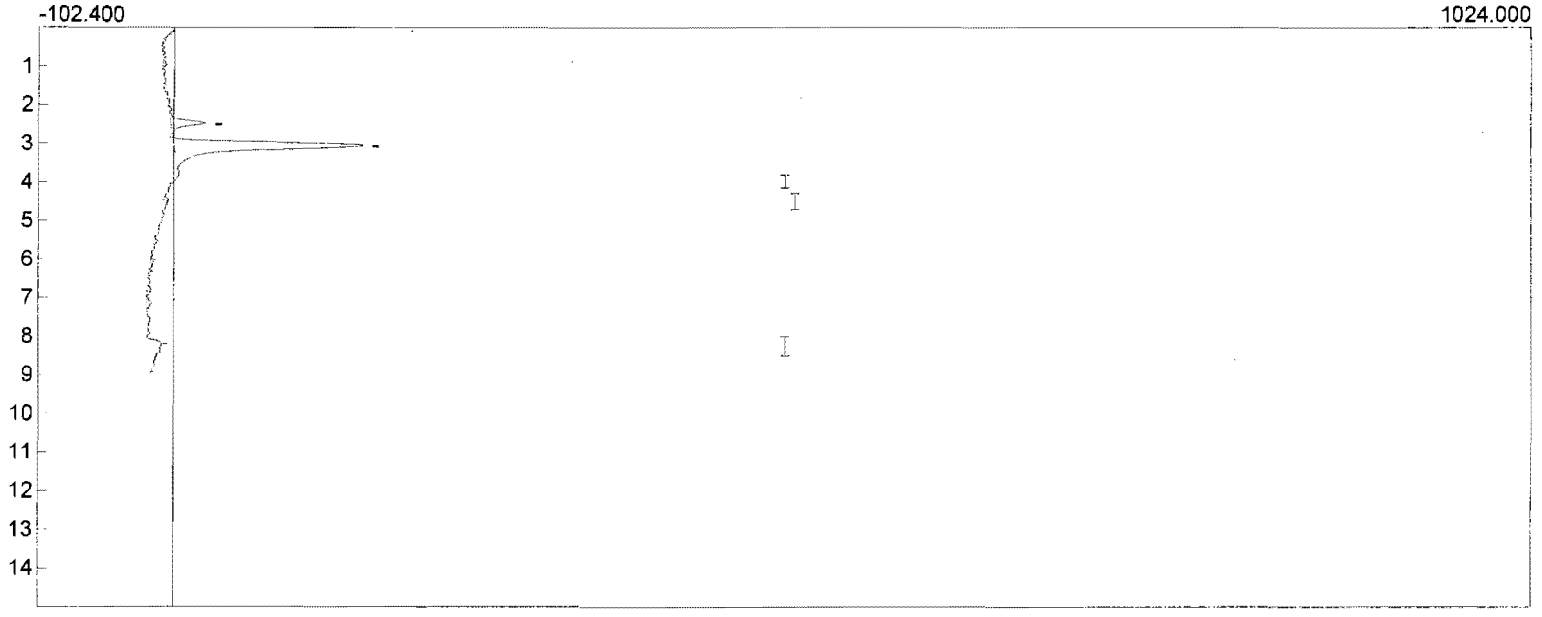
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 19:03:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample43.CHR ()
Sample: Sample Runs
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample44.CHR ()
Sample: Sample Runs
Operator: SEY

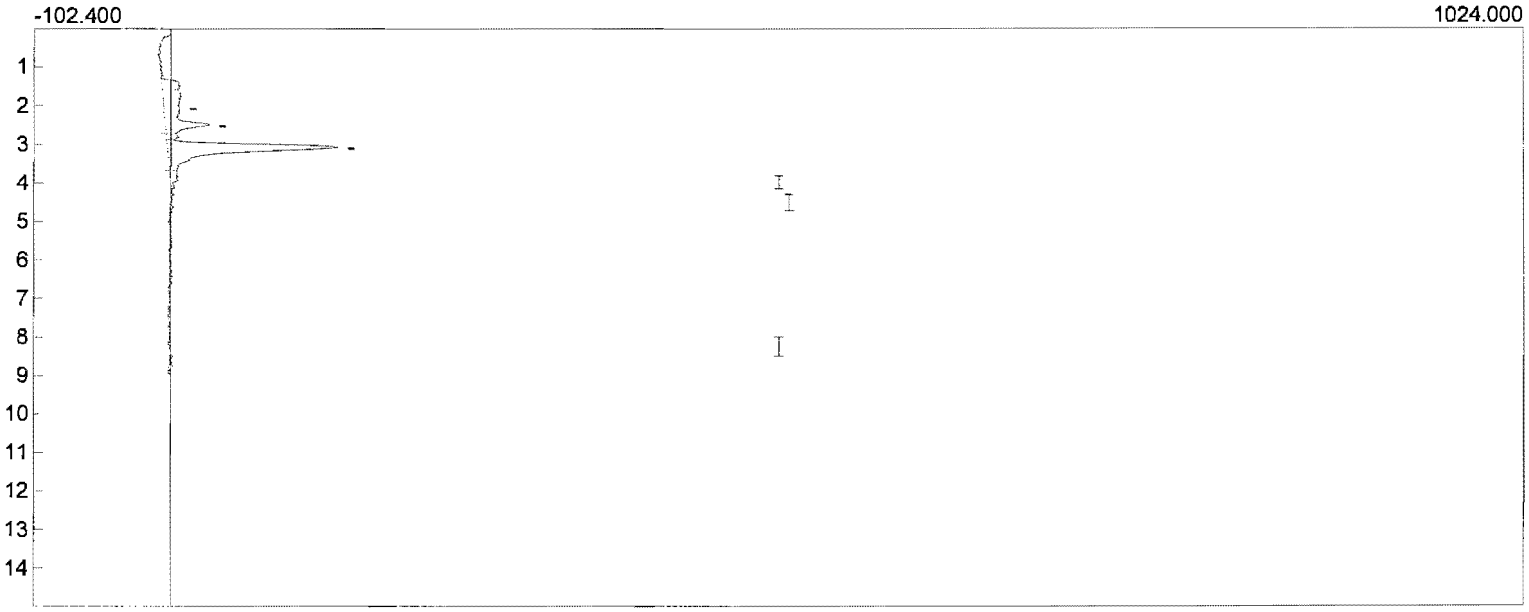


Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 19:29:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample45.CHR ()
Sample: Sample Runs
Operator: SEY

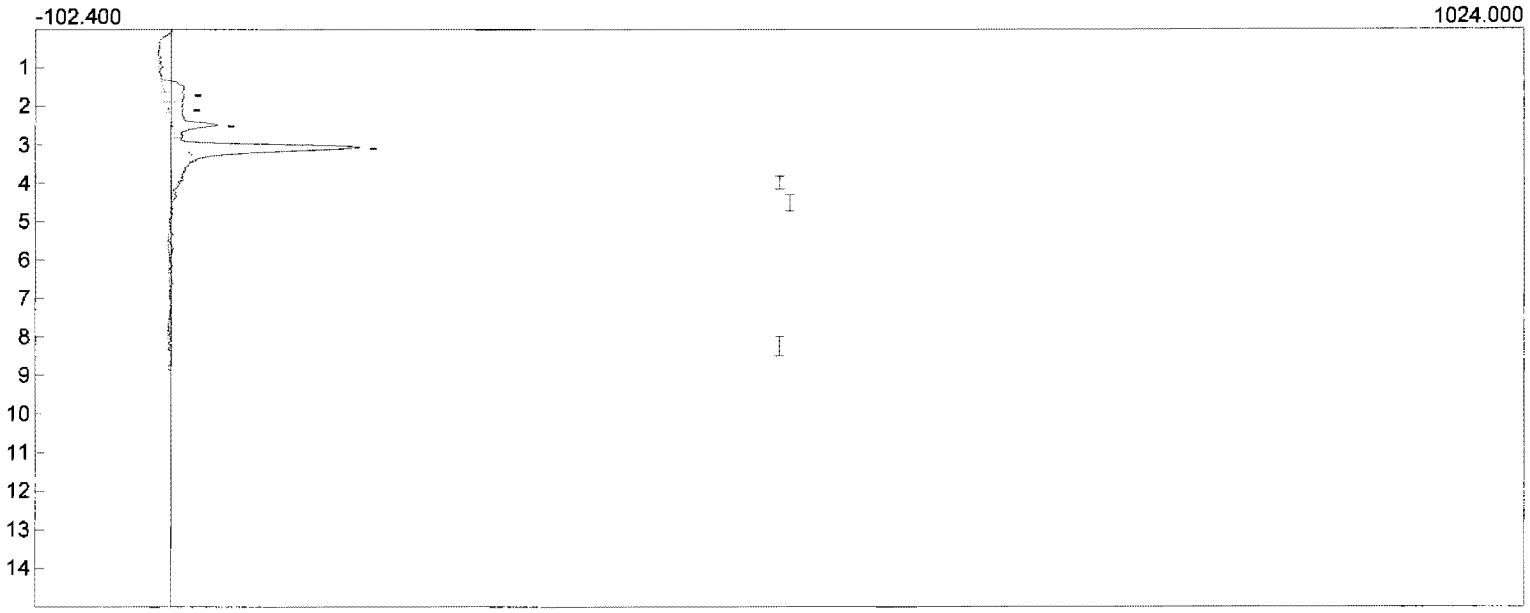
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 19:42:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample46.CHR ()
Sample: Sample Runs
Operator: SEY



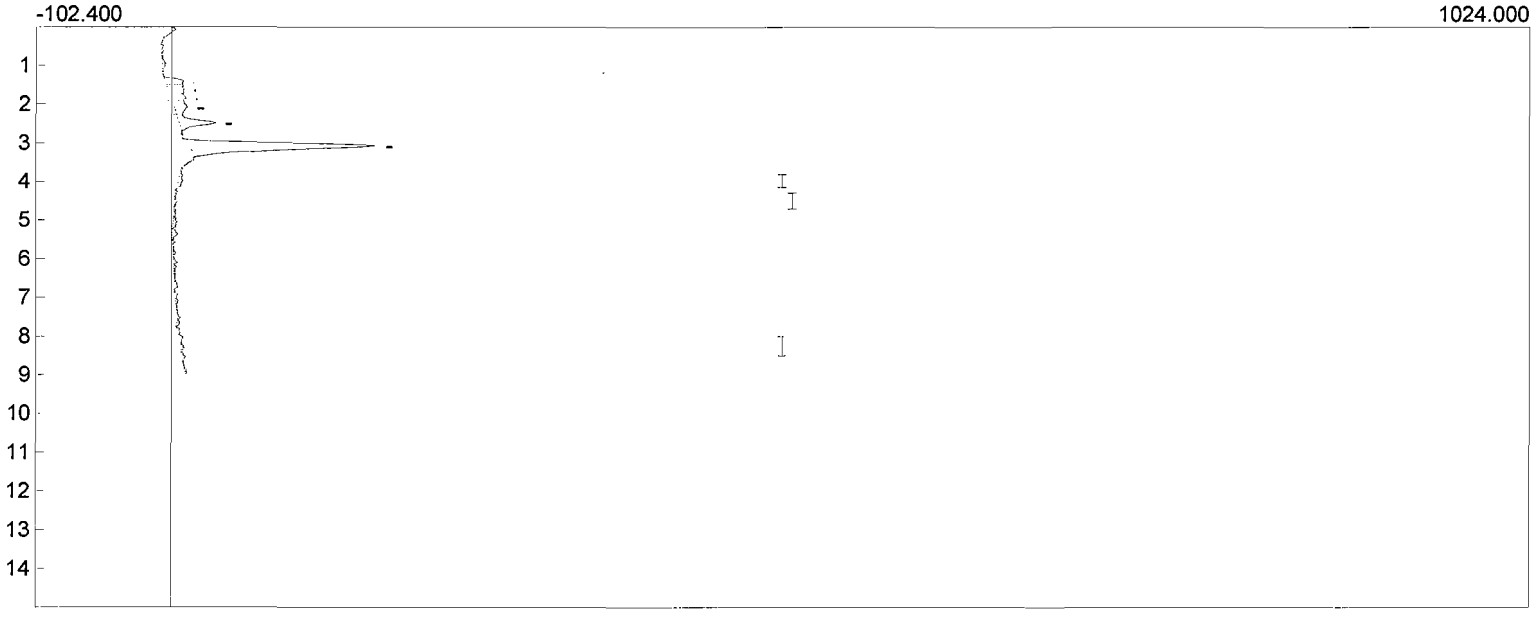
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample47.CHR ()
Sample: Sample Runs
Operator: SEY



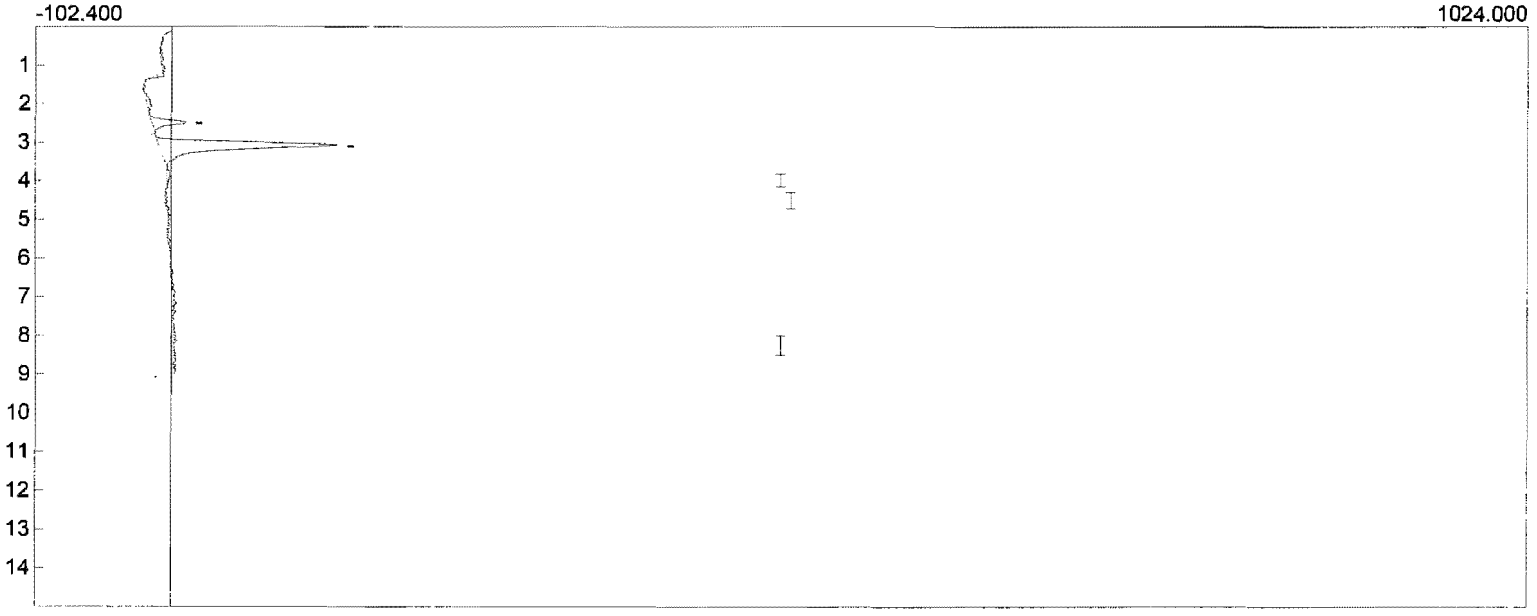
Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Collected: 12/20/2006
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample48.CHR ()
Sample: Sample Runs
Operator: SEY



Component	Area
	0.0000

Lab name: ARI Environmental, Inc.
Client: Total
Client ID: SRU
Analysis date: 12/20/2006 20:21:03
Method: Direct Injection
Description: FPD
Column: Chromasil 310
Carrier: N2@ 750 rot
Temp. prog: exxon2.tem
Data file: 1220sample49.CHR ()
Sample: Sample Runs
Operator: SEY



Component	Area
	0.0000

APPENDIX D

ARI Reference Method Monitoring Data

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 14:55:00	0.0	-1.9	-0.3	0.3	-0.04	7.41	
12/18/06 14:55:15	0.0	-1.9	-0.4	0.3	-0.04	7.41	
12/18/06 14:55:30	0.0	-2.3	-0.4	0.3	-0.04	7.41	
12/18/06 14:55:45	0.0	-1.9	-0.3	0.3	-0.04	7.41	
12/18/06 14:56:00	0.0	-1.9	-0.4	0.3	-0.04	7.41	
12/18/06 14:56:15	0.0	-1.8	-0.4	0.3	-0.04	7.35	
12/18/06 14:56:30	0.1	-1.0	-0.3	0.3	-0.02	5.36	
12/18/06 14:56:45	0.1	-0.9	-0.2	0.2	-0.01	1.84	
12/18/06 14:57:00	0.1	-0.9	-0.3	0.3	-0.02	0.32	
12/18/06 14:57:15	0.1	-0.4	-0.4	0.2	-0.02	0.07	
12/18/06 14:57:30	0.1	-0.4	-0.4	0.2	-0.02	0.03	Calibration Error
12/18/06 14:57:45	0.1	-0.5	-0.4	0.2	-0.02	**0.02**	0.01 Zero CO_2
12/18/06 14:58:00	0.1	-0.9	-0.4	0.2	-0.02	**0.01**	
12/18/06 14:58:15	0.1	-0.5	-0.5	0.1	-0.02	**0.01**	
12/18/06 14:58:30	0.1	-1.3	-0.5	0.2	-0.02	**0.01**	
12/18/06 14:58:45	0.1	-2.9	-0.5	0.1	-0.02	0.68	
12/18/06 14:59:00	0.1	-3.3	-0.5	0.1	-0.03	6.80	
12/18/06 14:59:15	0.1	-3.3	-0.5	0.2	-0.05	12.47	
12/18/06 14:59:30	0.1	-2.9	-0.5	0.1	-0.06	16.11	
12/18/06 14:59:45	0.1	-2.9	-0.5	0.1	-0.07	17.81	
12/18/06 15:00:00	0.1	-2.9	-0.4	0.1	-0.07	18.19	
12/18/06 15:00:15	0.1	-2.9	-0.4	0.1	-0.07	18.25	
12/18/06 15:00:30	0.1	-2.9	-0.4	0.1	-0.07	18.27	
12/18/06 15:00:45	0.1	-2.9	-0.4	0.1	-0.07	18.29	
12/18/06 15:01:00	0.1	-2.9	-0.4	0.1	-0.07	18.29	Calibration Error
12/18/06 15:01:15	0.1	-2.9	-0.5	0.1	-0.07	**18.29**	18.30 18.00% CO_2
12/18/06 15:01:30	0.1	-2.9	-0.4	0.1	-0.07	**18.30**	
12/18/06 15:01:45	0.1	-2.9	-0.5	0.1	-0.07	**18.30**	
12/18/06 15:02:00	0.1	-2.9	-0.5	0.3	-0.07	**18.30**	
12/18/06 15:02:15	0.1	-2.8	-0.4	0.1	-0.07	17.01	
12/18/06 15:02:30	0.1	-2.4	-0.2	0.1	-0.06	12.77	
12/18/06 15:02:45	0.1	-2.4	-0.2	0.1	-0.05	9.90	
12/18/06 15:03:00	0.1	-2.4	-0.4	0.1	-0.05	9.08	
12/18/06 15:03:15	0.1	-2.4	-0.4	0.0	-0.05	8.97	
12/18/06 15:03:30	0.1	-2.4	-0.5	0.0	-0.05	8.95	
12/18/06 15:03:45	0.1	-2.4	-0.4	0.0	-0.05	8.94	
12/18/06 15:04:00	0.1	-2.4	-0.4	0.0	-0.05	8.89	Calibration Error
12/18/06 15:04:15	0.1	-2.4	-0.4	0.1	-0.05	**8.91**	8.92 9.00% CO_2
12/18/06 15:04:30	0.1	-2.4	-0.4	0.1	-0.05	**8.92**	
12/18/06 15:04:45	0.1	-2.4	-0.5	0.0	-0.05	**8.92**	
12/18/06 15:05:00	0.1	-2.4	-0.4	0.0	-0.05	**8.93**	
12/18/06 15:05:15	0.1	-2.3	-0.4	0.0	-0.05	8.91	
12/18/06 15:05:30	0.1	-1.9	-0.4	0.0	-0.05	8.52	
12/18/06 15:05:45	0.1	-1.9	-0.3	0.0	-0.04	6.51	
12/18/06 15:06:00	0.1	-1.9	-0.3	0.0	-0.04	5.33	
12/18/06 15:06:15	0.1	-1.9	-0.4	0.0	-0.04	5.11	
12/18/06 15:06:30	0.1	-1.9	-0.4	0.0	-0.04	5.08	
12/18/06 15:06:45	0.1	-1.9	-0.4	0.0	-0.04	5.07	
12/18/06 15:07:00	0.1	-1.9	-0.5	0.0	-0.04	5.06	Target Concentration #1; Trial #1
12/18/06 15:07:15	0.1	-1.9	-0.4	0.0	-0.04	**5.05**	5.05 5.00% CO_2
12/18/06 15:07:30	0.1	-1.9	-0.3	0.0	-0.04	**5.05**	
12/18/06 15:07:45	0.1	-1.9	-0.5	0.0	-0.04	**5.05**	
12/18/06 15:08:00	0.1	-2.3	-0.4	0.0	-0.04	**5.05**	
12/18/06 15:08:15	0.1	-2.9	-0.4	0.0	-0.04	5.52	
12/18/06 15:08:30	0.1	-2.9	-0.5	0.0	-0.05	8.61	
12/18/06 15:08:45	0.1	-2.9	-0.5	0.0	-0.06	11.49	
12/18/06 15:09:00	0.1	-2.5	-0.5	0.0	-0.06	12.71	
12/18/06 15:09:15	0.1	-2.4	-0.4	0.0	-0.06	12.95	Target Concentration #2; Trial #1
12/18/06 15:09:30	0.1	-2.8	-0.4	0.0	-0.06	**13.00**	13.01 13.00% CO_2
12/18/06 15:09:45	0.1	-2.8	-0.5	0.0	-0.06	**13.01**	
12/18/06 15:10:00	0.1	-2.4	-0.4	0.0	-0.06	**13.01**	
12/18/06 15:10:15	0.1	-2.4	-0.4	0.0	-0.06	**13.02**	
12/18/06 15:10:30	0.1	-2.4	-0.5	0.0	-0.06	13.00	
12/18/06 15:10:45	0.1	-2.8	-0.4	0.0	0.01	12.84	
12/18/06 15:11:00	0.1	-2.4	-0.4	0.0	0.83	10.53	
12/18/06 15:11:15	0.1	-2.4	-0.4	0.0	0.51	8.11	
12/18/06 15:11:30	0.0	-2.4	-0.4	0.0	0.04	7.41	
12/18/06 15:11:45	0.0	-2.4	-0.4	0.0	-0.03	7.40	Mid-Level Concentration; Trial #1
12/18/06 15:12:00	0.0	-2.4	-0.5	0.0	-0.04	**7.41**	7.41 7.49% CO_2
12/18/06 15:12:15	0.0	-2.4	-0.5	0.0	-0.04	**7.41**	
12/18/06 15:12:30	0.0	-2.4	-0.5	0.0	-0.05	**7.41**	
12/18/06 15:12:45	0.0	-2.3	-0.5	0.0	-0.05	**7.41**	
12/18/06 15:13:00	0.4	-1.9	-0.4	0.0	0.14	7.24	
12/18/06 15:13:15	0.3	-1.9	-0.4	0.0	2.31	6.13	
12/18/06 15:13:30	0.1	-1.9	-0.3	0.0	1.42	5.25	
12/18/06 15:13:45	0.1	-1.9	-0.4	0.0	0.19	5.08	
12/18/06 15:14:00	0.1	-1.9	-0.5	0.0	0.00	5.04	
12/18/06 15:14:15	0.1	-1.9	-0.5	0.0	-0.02	5.04	
12/18/06 15:14:30	0.1	-1.9	-0.4	0.0	-0.03	5.03	Target Concentration #1; Trial #2
12/18/06 15:14:45	0.1	-1.9	-0.4	0.0	-0.03	**5.04**	5.04 5.00% CO_2
12/18/06 15:15:00	0.1	-1.9	-0.4	0.0	-0.04	**5.04**	
12/18/06 15:15:15	0.1	-2.0	-0.4	0.0	-0.04	**5.05**	
12/18/06 15:15:30	0.1	-2.4	-0.5	0.0	-0.04	**5.05**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 15:15:45	0.1	-2.9	-0.5	0.0	-0.04	6.04	
12/18/06 15:16:00	0.1	-2.9	-0.6	0.0	-0.05	9.45	
12/18/06 15:16:15	0.1	-2.6	-0.5	0.0	-0.06	11.92	
12/18/06 15:16:30	0.1	-2.9	-0.5	0.0	-0.06	12.81	
12/18/06 15:16:45	0.1	-2.7	-0.5	0.0	-0.06	12.98	
12/18/06 15:17:00	0.1	-2.4	-0.5	0.0	-0.06	13.01	
12/18/06 15:17:15	0.1	-2.4	-0.5	0.0	-0.06	13.01	
12/18/06 15:17:30	0.1	-2.4	-0.5	0.0	-0.06	13.02	
12/18/06 15:17:45	0.1	-2.7	-0.4	0.0	-0.06	13.02	
12/18/06 15:18:00	0.1	-2.4	-0.4	0.0	-0.06	13.02	**Target Concentration #2; Trial #2**
12/18/06 15:18:15	0.1	-2.4	-0.5	0.0	-0.06	**13.02**	**13.02 13.00% CO_2**
12/18/06 15:18:30	0.1	-2.4	-0.4	0.0	-0.06	**13.03**	
12/18/06 15:18:45	0.1	-2.9	-0.6	0.0	-0.06	**13.02**	
12/18/06 15:19:00	0.1	-2.5	-0.6	0.0	-0.06	**13.01**	
12/18/06 15:19:15	0.0	-2.4	-0.5	0.0	-0.02	12.84	
12/18/06 15:19:30	0.0	-2.0	-0.4	0.0	0.38	10.59	
12/18/06 15:19:45	0.0	-2.2	-0.4	0.0	0.20	8.23	
12/18/06 15:20:00	0.0	-2.4	-0.5	0.0	-0.01	7.50	
12/18/06 15:20:15	0.0	-2.4	-0.6	0.0	-0.04	7.43	
12/18/06 15:20:30	0.0	-2.4	-0.6	0.0	-0.04	7.40	**Mid-Level Concentration; Trial #2**
12/18/06 15:20:45	0.0	-2.2	-0.5	0.0	-0.04	**7.42**	**7.42 7.49% CO_2**
12/18/06 15:21:00	0.0	-2.4	-0.6	0.0	-0.04	**7.42**	
12/18/06 15:21:15	0.0	-2.4	-0.5	0.0	-0.04	**7.42**	
12/18/06 15:21:30	0.0	-2.4	-0.4	0.0	-0.05	**7.42**	
12/18/06 15:21:45	0.0	-2.2	-0.4	0.0	-0.04	7.41	
12/18/06 15:22:00	0.1	-1.9	-0.6	0.0	0.01	7.35	
12/18/06 15:22:15	0.1	-1.9	-0.5	0.0	2.25	6.33	
12/18/06 15:22:30	0.1	-1.9	-0.4	0.0	2.40	5.33	
12/18/06 15:22:45	0.1	-1.9	-0.5	0.0	0.43	5.11	
12/18/06 15:23:00	0.1	-1.9	-0.5	0.0	0.03	5.06	
12/18/06 15:23:15	0.1	-1.9	-0.5	0.1	-0.01	5.04	
12/18/06 15:23:30	0.1	-1.9	-0.5	0.0	-0.02	5.04	
12/18/06 15:23:45	0.1	-1.9	-0.6	0.0	-0.03	5.04	**Target Concentration #1; Trial #3**
12/18/06 15:24:00	0.1	-1.9	-0.4	0.0	-0.03	**5.04**	**5.04 5.00% CO_2**
12/18/06 15:24:15	0.1	-1.9	-0.5	0.1	-0.03	**5.04**	
12/18/06 15:24:30	0.1	-1.9	-0.5	0.1	-0.04	**5.04**	
12/18/06 15:24:45	0.1	-2.2	-0.5	0.2	-0.04	**5.04**	
12/18/06 15:25:00	0.1	-2.8	-0.5	0.1	-0.04	5.97	
12/18/06 15:25:15	0.1	-2.4	-0.6	0.1	-0.05	9.36	
12/18/06 15:25:30	0.0	-2.4	-0.6	0.1	-0.06	11.87	
12/18/06 15:25:45	0.0	-2.7	-0.5	0.1	-0.06	12.80	
12/18/06 15:26:00	0.0	-2.4	-0.5	0.2	-0.06	12.96	
12/18/06 15:26:15	0.0	-2.4	-0.5	0.2	-0.06	13.00	
12/18/06 15:26:30	0.0	-2.4	-0.6	0.1	-0.06	13.02	
12/18/06 15:26:45	0.0	-2.7	-0.5	0.1	-0.06	13.02	**Target Concentration #2; Trial #3**
12/18/06 15:27:00	0.0	-2.9	-0.6	0.2	-0.06	**13.03**	**13.02 13.00% CO_2**
12/18/06 15:27:15	0.0	-2.4	-0.6	0.2	-0.06	**13.02**	
12/18/06 15:27:30	0.0	-2.4	-0.5	0.2	-0.06	**13.01**	
12/18/06 15:27:45	0.0	-2.4	-0.5	0.1	-0.06	**13.00**	
12/18/06 15:28:00	0.0	-2.4	-0.4	0.2	-0.06	12.99	
12/18/06 15:28:15	0.0	-2.4	-0.4	0.2	0.31	11.97	
12/18/06 15:28:30	0.0	-2.4	-0.4	0.3	0.57	9.15	
12/18/06 15:28:45	0.0	-1.9	-0.4	0.4	0.11	7.69	
12/18/06 15:29:00	0.0	-1.9	-0.5	0.5	-0.03	7.44	
12/18/06 15:29:15	0.0	-2.4	-0.5	0.9	-0.04	7.42	
12/18/06 15:29:30	0.0	-2.4	-0.5	0.7	-0.04	7.41	
12/18/06 15:29:45	0.0	-2.4	-0.5	0.6	-0.04	7.35	
12/18/06 15:30:00	0.0	-2.0	-0.5	0.5	-0.05	7.36	
12/18/06 15:30:15	0.0	-2.4	-0.5	0.4	-0.05	7.41	
12/18/06 15:30:30	0.0	-2.4	-0.5	0.6	-0.05	7.40	
12/18/06 15:30:45	0.0	-2.2	-0.4	0.6	-0.05	7.40	
12/18/06 15:31:00	0.0	-2.0	-0.5	1.7	-0.05	7.40	
12/18/06 15:31:15	0.0	-2.2	-0.5	0.5	-0.05	7.37	
12/18/06 15:31:30	0.0	-2.4	-0.5	0.4	-0.05	7.40	**Mid-Level Concentration; Trial #3**
12/18/06 15:31:45	0.0	-2.4	-0.5	0.3	-0.05	**7.40**	**7.40 7.49% CO_2**
12/18/06 15:32:00	0.0	-2.4	-0.5	0.5	-0.05	**7.40**	
12/18/06 15:32:15	0.0	-2.4	-0.6	0.3	-0.05	**7.40**	
12/18/06 15:32:30	0.0	-2.4	-0.5	0.8	-0.05	**7.40**	
12/18/06 15:32:45	0.0	-2.4	-0.5	0.5	-0.05	7.39	
12/18/06 15:33:00	0.0	-2.0	-0.5	0.7	-0.05	7.40	
12/18/06 15:33:15	0.0	-0.7	-0.4	0.5	0.71	6.91	
12/18/06 15:33:30	0.2	-0.4	-0.2	0.4	9.83	3.29	
12/18/06 15:33:45	0.2	-0.4	-0.3	0.6	18.56	0.64	
12/18/06 15:34:00	0.1	-0.4	-0.2	0.4	20.50	0.17	
12/18/06 15:34:15							**Switch O_2 and CO_2 Ranges to 0 - 20%**
12/18/06 15:34:30							
12/18/06 15:34:45							
12/18/06 15:35:00							
12/18/06 15:35:15							
12/18/06 15:35:30							
12/18/06 15:35:45							
12/18/06 15:36:00							
12/18/06 15:36:15							

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 15:36:30							
12/18/06 15:36:45							
12/18/06 15:37:00							
12/18/06 15:37:15							
12/18/06 15:37:30							
12/18/06 15:37:45							
12/18/06 15:38:00							
12/18/06 15:38:15							
12/18/06 15:38:30							
12/18/06 15:38:45							
12/18/06 15:39:00							
12/18/06 15:39:15	0.0	-1.9	-0.1	0.7	-0.02	7.41	
12/18/06 15:39:30	0.0	-2.0	-0.1	0.9	-0.02	7.41	
12/18/06 15:39:45	0.0	-2.2	-0.1	0.4	-0.02	7.41	
12/18/06 15:40:00	0.0	-2.2	-0.1	0.5	-0.03	7.41	
12/18/06 15:40:15	0.0	-1.9	-0.1	0.4	-0.03	7.41	
12/18/06 15:40:30	0.0	-1.9	-0.1	0.3	-0.03	7.42	
12/18/06 15:40:45	0.0	-1.9	-0.1	0.0	-0.03	7.42	
12/18/06 15:41:00	0.0	-1.4	0.0	0.2	-0.02	6.13	
12/18/06 15:41:15	0.0	-0.9	0.1	0.5	-0.01	2.53	
12/18/06 15:41:30	0.0	-0.9	0.0	0.3	-0.01	0.48	
12/18/06 15:41:45	0.0	-0.9	-0.2	0.3	-0.01	0.09	
12/18/06 15:42:00	0.0	-0.9	-0.1	0.4	-0.01	0.04	
12/18/06 15:42:15	0.0	-0.9	-0.2	0.2	-0.01	0.02	
12/18/06 15:42:30	0.0	-0.9	-0.1	0.1	-0.01	0.02	
12/18/06 15:42:45	0.0	-0.9	-0.1	0.1	-0.01	0.01	
12/18/06 15:43:00	0.0	-0.9	-0.2	0.1	-0.01	0.01	Calibration Error
12/18/06 15:43:15	**0.0**	**-0.9**	**-0.1**	0.4	**-0.01**	**0.00**	**0.0 Zero NO_x**
12/18/06 15:43:30	**0.0**	**-0.9**	**-0.2**	0.3	**-0.01**	**0.00**	**-0.9 Zero CO**
12/18/06 15:43:45	**0.0**	**-0.9**	**-0.2**	0.2	**-0.01**	**0.00**	**-0.2 Zero SO_2**
12/18/06 15:44:00	**0.0**	**-0.9**	**-0.2**	0.5	**-0.01**	**0.00**	
12/18/06 15:44:15	0.0	-0.9	-0.1	0.1	-0.01	0.00	**-0.01 Zero O_2**
12/18/06 15:44:30	0.0	-1.4	-0.1	0.0	-0.01	0.00	**0.00 Zero CO_2**
12/18/06 15:44:45	0.1	-2.2	-0.3	0.1	-0.01	0.78	
12/18/06 15:45:00	0.1	-2.4	-0.3	0.1	-0.01	4.61	
12/18/06 15:45:15	0.1	-2.4	-0.2	1.5	-0.03	7.33	
12/18/06 15:45:30	0.0	-2.4	-0.2	0.1	-0.04	8.50	
12/18/06 15:45:45	0.0	-2.4	-0.2	0.1	-0.04	8.77	
12/18/06 15:46:00	0.0	-2.4	-0.2	0.4	-0.04	8.85	
12/18/06 15:46:15	0.0	-2.4	-0.1	0.1	-0.04	8.89	
12/18/06 15:46:30	0.0	-2.4	-0.1	0.2	-0.04	8.90	
12/18/06 15:46:45	0.0	-2.4	-0.2	0.0	-0.04	8.91	
12/18/06 15:47:00	0.0	-2.4	-0.2	0.0	-0.04	8.91	Calibration Error
12/18/06 15:47:15	0.0	-2.4	-0.2	0.0	-0.04	**8.92**	**8.92 9.00% CO_2**
12/18/06 15:47:30	0.0	-2.4	-0.3	0.3	-0.04	**8.92**	
12/18/06 15:47:45	0.0	-2.4	-0.2	0.2	-0.04	**8.92**	
12/18/06 15:48:00	0.0	-2.3	-0.2	0.1	-0.04	**8.93**	
12/18/06 15:48:15	0.0	-1.9	-0.2	0.0	-0.04	8.36	
12/18/06 15:48:30	0.0	-1.9	-0.1	0.0	-0.04	6.35	
12/18/06 15:48:45	0.0	-1.9	-0.2	0.1	-0.03	5.30	
12/18/06 15:49:00	0.0	-1.9	-0.2	0.2	-0.03	5.10	
12/18/06 15:49:15	0.0	-1.9	-0.1	0.1	-0.03	5.07	
12/18/06 15:49:30	0.0	-1.9	-0.3	0.4	-0.03	5.06	
12/18/06 15:49:45	0.0	-1.9	-0.2	0.2	-0.03	5.06	Calibration Error
12/18/06 15:50:00	0.0	-1.9	-0.2	0.7	-0.03	**5.06**	**5.05 5.00% CO_2**
12/18/06 15:50:15	0.0	-1.9	-0.2	0.4	-0.03	**5.05**	
12/18/06 15:50:30	0.0	-1.9	-0.2	0.7	-0.03	**5.05**	
12/18/06 15:50:45	0.0	-1.9	-0.2	1.4	-0.03	**5.05**	
12/18/06 15:51:00	0.0	-1.3	-0.2	1.2	-0.03	5.04	
12/18/06 15:51:15	0.1	-0.9	-0.2	0.5	2.00	4.25	
12/18/06 15:51:30	0.2	-0.9	-0.1	0.4	10.49	2.07	
12/18/06 15:51:45	0.2	-0.7	-0.1	0.6	8.65	0.95	
12/18/06 15:52:00	0.1	-0.5	-0.1	0.9	7.11	0.25	
12/18/06 15:52:15	0.1	-0.9	-0.2	0.7	8.00	0.06	
12/18/06 15:52:30	0.1	-0.8	-0.1	0.6	8.59	0.03	
12/18/06 15:52:45	0.1	-0.7	-0.2	0.6	8.81	0.02	
12/18/06 15:53:00	0.1	-0.4	-0.2	0.4	8.91	0.01	
12/18/06 15:53:15	0.1	-0.7	-0.2	0.6	8.95	0.01	
12/18/06 15:53:30	0.1	-0.9	-0.2	0.5	8.97	0.00	
12/18/06 15:53:45	0.1	-0.7	-0.1	0.9	8.98	0.00	
12/18/06 15:54:00	0.1	-0.5	-0.2	0.7	8.99	0.00	Calibration Error
12/18/06 15:54:15	0.0	-0.7	-0.2	0.5	**9.00**	0.00	**9.00 9.00% O_2**
12/18/06 15:54:30	0.0	-0.9	-0.2	0.9	**9.00**	0.00	
12/18/06 15:54:45	0.0	-0.9	-0.2	0.6	**9.00**	0.00	
12/18/06 15:55:00	0.0	-0.9	-0.2	0.6	**9.00**	0.00	
12/18/06 15:55:15	0.0	-0.9	-0.1	0.4	8.84	0.00	
12/18/06 15:55:30	0.0	-0.5	-0.2	0.4	6.85	0.00	
12/18/06 15:55:45	0.0	-0.9	-0.2	0.4	5.02	-0.01	
12/18/06 15:56:00	0.0	-0.9	-0.2	0.6	4.62	-0.01	
12/18/06 15:56:15	0.0	-0.9	-0.2	0.7	4.55	-0.01	
12/18/06 15:56:30	0.0	-0.8	-0.2	0.3	4.52	-0.01	
12/18/06 15:56:45	0.0	-0.7	-0.1	0.4	4.50	-0.01	
12/18/06 15:57:00	0.0	-0.9	-0.2	0.7	4.50	-0.01	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 15:57:15	0.0	-0.9	-0.2	0.5	4.49	-0.01	
12/18/06 15:57:30	0.0	-0.9	-0.2	1.1	4.49	-0.01	
12/18/06 15:57:45	0.0	-0.9	-0.3	1.2	4.49	-0.01	
12/18/06 15:58:00	0.0	-0.9	-0.2	0.6	4.49	-0.01	
12/18/06 15:58:15	0.0	-0.9	-0.2	0.4	4.49	-0.01	
12/18/06 15:58:30	0.0	-0.9	-0.2	0.5	4.49	-0.01	
12/18/06 15:58:45	0.0	-0.9	-0.1	0.3	4.49	-0.01	Calibration Error
12/18/06 15:59:00	0.0	-0.9	-0.3	0.3	**4.49**	-0.01	**4.49 4.50% O_2**
12/18/06 15:59:15	0.0	-0.9	-0.3	0.3	**4.49**	-0.01	
12/18/06 15:59:30	0.0	-0.9	-0.2	0.4	**4.49**	-0.01	
12/18/06 15:59:45	0.0	-0.9	-0.2	0.2	**4.49**	-0.01	
12/18/06 16:00:00	0.0	21.8	-0.2	0.2	4.52	-0.01	
12/18/06 16:00:15	0.1	141.5	-0.2	0.3	7.41	0.00	
12/18/06 16:00:30	0.1	351.6	-0.2	0.5	10.55	0.01	
12/18/06 16:00:45	0.1	430.0	-0.1	0.3	4.52	0.00	
12/18/06 16:01:00	0.1	453.3	-0.2	0.4	0.89	-0.01	
12/18/06 16:01:15	0.1	451.5	-0.2	0.6	0.27	-0.01	
12/18/06 16:01:30	0.1	444.8	-0.2	0.2	0.15	-0.01	
12/18/06 16:01:45	0.1	440.3	-0.1	0.3	0.08	-0.01	
12/18/06 16:02:00	0.1	435.9	-0.2	0.3	0.04	-0.01	
12/18/06 16:02:15	0.0	434.3	-0.3	0.2	0.02	-0.01	
12/18/06 16:02:30	0.0	432.7	-0.2	0.1	0.00	-0.01	
12/18/06 16:02:45	0.0	431.8	-0.1	0.1	0.00	0.00	
12/18/06 16:03:00	0.1	431.3	-0.1	0.1	-0.01	-0.01	
12/18/06 16:03:15	0.1	431.3	-0.2	0.2	-0.01	0.00	
12/18/06 16:03:30	0.1	431.3	-0.2	0.2	-0.01	-0.01	
12/18/06 16:03:45	0.0	431.3	-0.2	0.2	-0.01	-0.01	
12/18/06 16:04:00	0.0	430.8	-0.1	0.1	-0.01	0.00	
12/18/06 16:04:15	0.0	449.8	-0.2	0.1	-0.01	0.00	Calibration Error
12/18/06 16:04:30	0.0	**449.9**	-0.2	0.0	-0.02	-0.01	**449.8 450.0 ppm CO**
12/18/06 16:04:45	0.0	**450.3**	-0.2	0.0	-0.02	-0.01	
12/18/06 16:05:00	0.0	**449.6**	-0.2	0.1	-0.02	-0.01	
12/18/06 16:05:15	0.0	**449.5**	-0.3	0.1	-0.02	-0.01	
12/18/06 16:05:30	0.0	416.1	-0.2	0.2	-0.02	-0.01	
12/18/06 16:05:45	0.0	332.9	-0.1	0.7	-0.02	-0.01	
12/18/06 16:06:00	0.0	243.9	-0.2	0.9	-0.02	-0.01	
12/18/06 16:06:15	0.0	224.4	-0.2	0.2	-0.02	-0.01	Calibration Error
12/18/06 16:06:30	0.0	**219.8**	-0.2	0.4	-0.02	-0.01	**219.4 225.0 ppm CO**
12/18/06 16:06:45	0.0	**219.4**	-0.2	0.2	-0.02	-0.01	
12/18/06 16:07:00	0.0	**219.3**	-0.2	0.0	-0.02	-0.01	
12/18/06 16:07:15	0.0	**218.9**	-0.2	0.1	-0.02	-0.01	
12/18/06 16:07:30	0.0	218.4	-0.2	0.8	-0.02	-0.01	
12/18/06 16:07:45	0.0	204.4	-0.2	0.3	-0.02	-0.01	
12/18/06 16:08:00	0.0	155.8	-0.2	0.4	0.07	-0.01	
12/18/06 16:08:15	0.8	100.8	-0.1	0.0	4.21	0.00	
12/18/06 16:08:30	0.9	30.8	14.8	0.0	6.87	0.00	
12/18/06 16:08:45	0.4	7.6	110.5	0.1	2.47	0.00	
12/18/06 16:09:00	0.4	1.0	228.9	0.1	0.48	-0.01	
12/18/06 16:09:15	0.4	0.3	277.8	0.0	0.12	-0.01	
12/18/06 16:09:30	0.4	-0.4	287.9	0.1	0.05	-0.01	
12/18/06 16:09:45	0.4	-0.4	290.5	0.5	0.01	-0.01	
12/18/06 16:10:00	0.5	-0.4	293.0	0.1	-0.01	-0.01	
12/18/06 16:10:15	0.5	-0.4	295.8	0.0	-0.01	-0.02	
12/18/06 16:10:30	0.5	-0.5	298.5	0.0	-0.02	-0.01	
12/18/06 16:10:45	0.5	-0.9	301.1	0.0	-0.02	-0.01	
12/18/06 16:11:00	0.5	-0.4	302.3	0.0	-0.02	-0.01	
12/18/06 16:11:15	0.4	-0.7	302.3	0.1	-0.02	-0.01	
12/18/06 16:11:30	0.4	-0.5	302.3	0.0	-0.02	-0.01	
12/18/06 16:11:45	0.4	-0.9	302.3	0.0	-0.02	-0.01	
12/18/06 16:12:00	0.4	-0.9	302.3	0.0	-0.02	-0.01	
12/18/06 16:12:15	0.4	-0.9	286.0	0.0	-0.02	-0.01	
12/18/06 16:12:30	0.3	-0.9	269.9	0.0	-0.02	-0.01	
12/18/06 16:12:45	0.3	-0.9	270.0	0.0	-0.02	-0.01	
12/18/06 16:13:00	0.3	-0.9	270.2	0.0	-0.02	-0.01	
12/18/06 16:13:15	0.3	-0.9	270.4	0.0	-0.02	-0.01	
12/18/06 16:13:30	0.3	-0.9	270.5	0.0	-0.02	-0.01	Calibration Error
12/18/06 16:13:45	0.3	-0.9	**270.5**	0.1	-0.02	-0.01	**270.6 270.0 ppm SO_2**
12/18/06 16:14:00	0.3	-0.9	**270.5**	0.0	-0.02	-0.01	
12/18/06 16:14:15	0.3	-0.9	**270.6**	0.0	-0.02	-0.01	
12/18/06 16:14:30	0.3	-0.8	**270.8**	0.0	-0.02	-0.01	
12/18/06 16:14:45	0.2	0.6	271.0	0.1	-0.02	-0.01	
12/18/06 16:15:00	0.2	2.0	261.6	0.2	-0.02	-0.01	
12/18/06 16:15:15	0.2	0.8	203.0	0.4	0.01	0.01	
12/18/06 16:15:30	0.2	-0.5	154.1	0.1	0.00	0.00	
12/18/06 16:15:45	0.2	-0.9	140.8	0.1	-0.02	0.00	
12/18/06 16:16:00	0.2	-0.4	138.6	0.3	-0.03	-0.01	
12/18/06 16:16:15	0.2	-0.7	138.1	0.6	-0.03	-0.01	Calibration Error
12/18/06 16:16:30	0.2	-0.9	**138.0**	0.5	-0.03	-0.01	**137.9 135.0 ppm SO_2**
12/18/06 16:16:45	0.2	-0.9	**137.9**	0.3	-0.03	-0.01	
12/18/06 16:17:00	0.2	-0.9	**137.9**	0.4	-0.03	-0.01	
12/18/06 16:17:15	0.2	-0.9	**137.8**	0.5	-0.03	-0.01	
12/18/06 16:17:30	0.2	-0.9	137.3	0.1	-0.03	-0.01	
12/18/06 16:17:45	0.2	-0.4	136.3	0.2	0.01	-0.01	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
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ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 16:18:00	0.2	0.0	122.3	0.2	2.46	0.00	
12/18/06 16:18:15	0.0	-0.4	89.2	0.3	3.34	0.01	
12/18/06 16:18:30	0.0	-0.4	40.2	0.2	0.74	0.00	
12/18/06 16:18:45	0.0	-0.7	11.3	0.2	0.10	-0.01	
12/18/06 16:19:00	0.0	-0.9	3.3	0.2	0.02	-0.01	
12/18/06 16:19:15	0.0	-0.9	1.5	0.2	-0.01	-0.01	
12/18/06 16:19:30	0.0	-0.8	1.1	0.2	-0.02	-0.01	
12/18/06 16:19:45	0.0	-0.7	0.9	0.3	-0.02	-0.01	
12/18/06 16:20:00	0.0	-0.9	0.8	0.3	-0.02	-0.01	
12/18/06 16:20:15	0.0	-0.9	0.7	0.5	-0.03	-0.01	
12/18/06 16:20:30	0.0	-0.4	0.6	0.7	-0.03	-0.01	
12/18/06 16:20:45	0.0	-0.7	0.5	0.5	-0.03	-0.01	
12/18/06 16:21:00	0.0	-0.9	0.5	0.5	-0.03	-0.01	
12/18/06 16:21:15	0.0	-0.9	0.4	0.7	-0.03	-0.01	
12/18/06 16:21:30	0.0	-0.9	0.3	0.9	-0.03	-0.01	
12/18/06 16:21:45	0.0	-0.9	0.4	0.7	-0.03	-0.01	
12/18/06 16:22:00	0.0	-0.4	0.3	1.1	-0.03	-0.01	
12/18/06 16:22:15	0.0	-0.7	0.3	1.3	-0.03	-0.01	
12/18/06 16:22:30	0.0	-0.9	0.3	0.8	-0.03	-0.01	
12/18/06 16:22:45	0.0	-0.9	0.2	0.9	-0.03	-0.01	
12/18/06 16:23:00	0.0	-0.8	0.2	1.4	-0.03	-0.01	
12/18/06 16:23:15	0.0	-0.7	0.2	0.7	-0.03	-0.01	
12/18/06 16:23:30	0.0	-0.9	0.2	0.5	-0.03	-0.01	
12/18/06 16:23:45	0.0	-0.9	0.2	0.8	-0.03	-0.01	
12/18/06 16:24:00	0.1	-0.4	1.1	0.5	-0.01	-0.01	
12/18/06 16:24:15	3.8	-0.4	10.3	0.9	0.11	0.03	
12/18/06 16:24:30	19.0	-0.9	12.6	1.1	0.11	0.03	
12/18/06 16:24:45	41.3	-0.9	5.9	1.3	0.03	0.00	
12/18/06 16:25:00	45.8	-0.9	2.5	1.0	-0.01	-0.01	
12/18/06 16:25:15	50.6	-0.9	1.6	0.8	-0.02	-0.01	
12/18/06 16:25:30	54.5	-0.9	1.4	0.8	-0.02	-0.01	
12/18/06 16:25:45	57.6	-0.9	1.4	0.7	-0.02	-0.01	
12/18/06 16:26:00	60.8	-0.9	1.4	0.4	-0.02	-0.01	
12/18/06 16:26:15	64.7	-0.9	1.3	0.6	-0.03	-0.02	
12/18/06 16:26:30	69.7	-0.9	1.4	0.6	-0.03	-0.02	
12/18/06 16:26:45	76.0	-0.9	1.4	0.9	-0.03	-0.01	
12/18/06 16:27:00	85.6	-0.9	1.5	1.2	-0.03	-0.02	
12/18/06 16:27:15	96.2	-0.9	1.6	0.5	-0.03	-0.01	
12/18/06 16:27:30	100.1	-0.9	1.7	0.3	-0.03	-0.02	
12/18/06 16:27:45	100.1	-0.9	1.9	0.2	-0.03	-0.02	
12/18/06 16:28:00	100.1	-0.9	2.1	0.2	-0.03	-0.02	
12/18/06 16:28:15	100.1	-0.9	2.1	0.4	-0.03	-0.01	
12/18/06 16:28:30	100.1	-0.9	2.0	0.3	-0.03	-0.01	
12/18/06 16:28:45	100.1	-0.9	1.8	0.7	-0.03	-0.01	
12/18/06 16:29:00	100.1	-0.9	1.5	0.2	-0.03	-0.01	
12/18/06 16:29:15	100.1	-0.9	1.4	0.3	-0.03	-0.01	
12/18/06 16:29:30	100.1	-0.9	1.3	0.0	-0.03	-0.01	
12/18/06 16:29:45	100.0	-0.9	1.1	0.1	-0.03	-0.02	
12/18/06 16:30:00	99.8	-0.9	1.0	0.1	-0.03	-0.01	
12/18/06 16:30:15	96.4	-0.9	0.9	0.1	-0.03	-0.02	
12/18/06 16:30:30	90.8	-0.9	0.7	0.0	-0.03	-0.01	
12/18/06 16:30:45	85.0	-0.9	0.5	0.0	-0.03	-0.01	
12/18/06 16:31:00	83.5	-0.9	0.4	0.0	-0.03	-0.01	
12/18/06 16:31:15	83.1	-0.9	0.3	0.3	-0.03	-0.01	
12/18/06 16:31:30	83.0	-0.9	0.2	0.1	-0.03	-0.01	
12/18/06 16:31:45	83.0	-0.9	0.2	0.2	-0.03	-0.02	
12/18/06 16:32:00	82.8	-0.9	0.2	0.9	-0.03	-0.01	
12/18/06 16:32:15	82.7	-0.9	0.1	0.8	-0.03	-0.02	
12/18/06 16:32:30	82.5	-0.9	0.1	0.5	-0.03	-0.02	
12/18/06 16:32:45	82.1	-0.9	0.1	0.0	-0.03	-0.02	
12/18/06 16:33:00	81.9	-0.9	0.1	0.1	-0.03	-0.02	
12/18/06 16:33:15	81.8	-0.9	0.1	0.1	-0.03	-0.02	
12/18/06 16:33:30	81.7	-0.9	0.1	0.0	-0.03	-0.02	
12/18/06 16:33:45	81.6	-0.9	0.0	0.0	-0.03	-0.02	
12/18/06 16:34:00	81.4	-0.9	0.0	0.1	-0.03	-0.02	
12/18/06 16:34:15	81.6	-0.9	0.0	0.5	-0.03	-0.02	
12/18/06 16:34:30	81.6	-0.9	0.0	0.5	-0.03	-0.02	
12/18/06 16:34:45	81.5	-0.9	0.0	0.5	-0.03	-0.02	
12/18/06 16:35:00	81.3	-0.9	-0.1	0.0	-0.03	-0.02	
12/18/06 16:35:15	81.2	-0.9	-0.1	0.2	-0.03	-0.02	
12/18/06 16:35:30	81.2	-0.9	-0.1	0.4	-0.03	-0.03	
12/18/06 16:35:45	81.2	-0.9	-0.1	0.4	-0.03	-0.02	
12/18/06 16:36:00	81.2	-0.9	-0.1	0.2	-0.03	-0.01	
12/18/06 16:36:15	81.2	-0.9	-0.1	0.2	-0.03	-0.01	
12/18/06 16:36:30	88.2	-0.9	-0.1	0.3	-0.03	-0.01	
12/18/06 16:36:45	92.0	-0.9	-0.1	0.5	-0.03	-0.01	
12/18/06 16:37:00	90.5	-0.9	-0.2	0.7	-0.03	-0.01	
12/18/06 16:37:15	90.4	-0.9	-0.1	0.2	-0.03	-0.01	
12/18/06 16:37:30	90.3	-1.0	-0.1	0.1	-0.03	-0.01	
12/18/06 16:37:45	90.3	-1.0	-0.1	0.6	-0.03	-0.01	
12/18/06 16:38:00	90.4	-0.9	-0.1	0.3	-0.03	-0.01	
12/18/06 16:38:15	99.9	-0.9	-0.2	0.0	-0.03	-0.01	
12/18/06 16:38:30	99.8	-0.9	-0.1	0.1	-0.03	-0.01	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 16:38:45	99.9	-0.9	-0.1	0.2	-0.03	-0.01	
12/18/06 16:39:00	92.3	-0.9	-0.1	0.1	-0.03	-0.01	Calibration Error
12/18/06 16:39:15	**90.1**	-0.9	-0.1	0.2	-0.03	-0.01	90.2 90.0 ppm NO
12/18/06 16:39:30	**90.2**	-0.9	-0.1	0.3	-0.03	-0.01	
12/18/06 16:39:45	**90.2**	-0.9	-0.2	0.4	-0.03	-0.01	
12/18/06 16:40:00	**90.1**	-1.3	-0.1	0.1	-0.03	-0.01	
12/18/06 16:40:15	82.0	-0.9	-0.2	0.2	-0.03	-0.01	
12/18/06 16:40:30	55.3	-0.9	-0.2	0.0	-0.03	-0.01	
12/18/06 16:40:45	49.6	-0.9	-0.2	0.0	-0.03	-0.01	
12/18/06 16:41:00	49.4	-1.0	-0.2	0.0	-0.03	-0.01	
12/18/06 16:41:15	49.3	-1.4	-0.3	0.0	-0.04	-0.01	
12/18/06 16:41:30	49.4	-0.9	-0.2	0.1	-0.03	-0.01	
12/18/06 16:41:45	49.6	-0.9	-0.2	0.7	-0.03	-0.01	
12/18/06 16:42:00	49.7	-0.9	-0.3	0.2	-0.03	-0.01	
12/18/06 16:42:15	49.7	-1.3	-0.3	0.3	-0.03	-0.01	
12/18/06 16:42:30	49.8	-0.9	-0.2	0.2	-0.04	-0.01	
12/18/06 16:42:45	49.8	-0.9	-0.2	0.1	-0.04	-0.01	
12/18/06 16:43:00	49.9	-0.9	-0.2	0.4	-0.03	-0.01	
12/18/06 16:43:15	49.9	-0.9	-0.2	0.5	-0.04	-0.01	
12/18/06 16:43:30	49.9	-1.3	-0.2	0.6	-0.04	-0.01	
12/18/06 16:43:45	49.8	-0.9	-0.2	0.4	-0.03	-0.01	Calibration Error
12/18/06 16:44:00	**49.7**	-0.9	-0.2	0.4	-0.04	-0.01	49.7 50.0 ppm NO
12/18/06 16:44:15	**49.7**	-0.9	-0.2	4.4	-0.04	-0.01	
12/18/06 16:44:30	**49.7**	-1.0	-0.2	3.2	-0.03	-0.02	
12/18/06 16:44:45	**49.7**	-1.0	-0.2	6.0	-0.04	-0.02	
12/18/06 16:45:00	49.4	-0.9	-0.3	0.9	-0.03	-0.02	
12/18/06 16:45:15	45.4	-1.3	-0.3	0.9	-0.03	-0.02	
12/18/06 16:45:30	38.3	-1.4	-0.2	10.2	0.37	0.04	
12/18/06 16:45:45	43.5	-1.4	0.0	32.1	1.03	0.12	
12/18/06 16:46:00	45.6	-1.4	0.3	12.4	0.29	0.03	
12/18/06 16:46:15	46.9	-1.4	0.4	13.0	0.02	-0.01	
12/18/06 16:46:30	47.4	-1.4	0.5	5.5	-0.02	-0.01	
12/18/06 16:46:45	48.0	-1.0	0.6	15.5	-0.03	-0.01	
12/18/06 16:47:00	48.3	-1.4	0.6	29.3	-0.03	-0.01	
12/18/06 16:47:15	48.7	-1.4	0.5	27.0	-0.03	-0.01	
12/18/06 16:47:30	49.1	-1.4	0.5	6.9	-0.03	-0.01	
12/18/06 16:47:45	49.4	-1.4	0.5	7.7	-0.03	-0.01	
12/18/06 16:48:00	49.6	-1.4	0.5	18.2	-0.04	-0.01	
12/18/06 16:48:15	49.9	-1.4	0.6	17.3	-0.04	-0.02	
12/18/06 16:48:30	50.1	-1.4	0.5	19.9	-0.04	-0.01	NO_x Converter Check
12/18/06 16:48:45	**50.2**	-1.4	0.5	6.7	-0.04	-0.01	50.4 50.0 ppm NO_2/N_2
12/18/06 16:49:00	**50.4**	-1.4	0.5	10.7	-0.04	-0.01	Cyl #CC198389
12/18/06 16:49:15	**50.6**	-1.4	0.6	5.3	-0.04	-0.01	
12/18/06 16:49:30	**50.7**	-1.4	0.5	5.1	-0.04	-0.01	100.9 % Conversion
12/18/06 16:49:45	49.5	-1.4	0.6	8.4	-0.04	-0.01	
12/18/06 16:50:00	39.9	-0.9	0.5	4.2	0.03	-0.01	
12/18/06 16:50:15	19.3	-0.9	0.5	3.5	3.95	0.00	
12/18/06 16:50:30	6.9	-0.4	0.6	2.1	13.08	0.02	
12/18/06 16:50:45	4.8	-0.4	0.7	6.5	18.82	0.03	
12/18/06 16:51:00	3.3	4.6	0.5	37.2	20.00	0.03	
12/18/06 16:51:15	7.7	18.5	0.4	0.1	20.53	0.04	
12/18/06 16:51:30	26.1	14.0	0.4	0.1	19.90	0.06	
12/18/06 16:51:45	8.0	3.5	0.4	0.0	11.51	0.05	
12/18/06 16:52:00	0.8	0.0	0.4	0.0	4.16	0.02	
12/18/06 16:52:15	0.6	0.0	0.3	0.0	2.43	0.01	
12/18/06 16:52:30	0.6	-0.3	0.3	0.0	2.12	0.01	
12/18/06 16:52:45	0.6	-0.3	0.2	0.0	1.99	0.00	
12/18/06 16:53:00	0.5	-0.4	0.3	0.0	1.94	0.00	
12/18/06 16:53:15	0.5	-0.4	0.3	0.0	1.92	0.01	
12/18/06 16:53:30	0.5	-0.4	0.3	0.0	1.91	0.01	
12/18/06 16:53:45	0.5	-0.4	0.3	0.0	1.91	0.01	
12/18/06 16:54:00	0.5	-0.4	0.4	0.0	1.90	0.01	
12/18/06 16:54:15	0.4	-0.4	0.4	0.0	1.89	0.01	
12/18/06 16:54:30	0.4	-0.4	0.4	0.0	1.89	0.01	
12/18/06 16:54:45	0.4	-0.4	0.4	0.0	1.90	0.01	
12/18/06 16:55:00	0.4	-0.4	0.4	0.0	2.08	0.01	
12/18/06 16:55:15	0.4	-0.4	0.4	0.0	2.29	0.01	
12/18/06 16:55:30	0.4	-0.4	0.3	0.0	2.34	0.01	
12/18/06 16:55:45	0.4	-0.4	0.3	0.0	2.35	0.01	
12/18/06 16:56:00	0.4	-0.4	0.4	0.0	2.35	0.01	
12/18/06 16:56:15	0.4	-0.4	0.8	0.0	2.28	0.01	
12/18/06 16:56:30	0.4	-0.4	0.7	0.0	1.85	0.01	
12/18/06 16:56:45	0.4	-0.4	0.5	0.0	0.84	0.01	
12/18/06 16:57:00	0.4	-0.3	0.5	0.0	0.33	0.00	
12/18/06 16:57:15	0.4	0.1	0.3	0.0	0.24	0.00	
12/18/06 16:57:30	0.4	-0.4	0.3	0.0	0.21	0.00	
12/18/06 16:57:45	0.4	0.0	0.3	0.0	0.20	0.00	
12/18/06 16:58:00	0.4	0.0	0.4	0.0	0.21	0.00	
12/18/06 16:58:15	0.4	0.0	0.3	0.0	0.21	0.00	
12/18/06 16:58:30	0.4	0.1	0.3	0.0	0.21	0.01	
12/18/06 16:58:45	0.4	-0.3	0.3	0.0	0.21	0.00	
12/18/06 16:59:00	0.4	0.0	0.3	0.0	0.21	0.01	
12/18/06 16:59:15	0.3	0.0	0.3	0.0	0.22	0.01	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 16:59:30	0.3	0.1	0.4	0.0	0.22	0.00	
12/18/06 16:59:45	0.3	0.1	0.3	0.0	0.22	0.00	
12/18/06 17:00:00	0.3	-0.4	0.4	0.0	0.22	0.01	
12/18/06 17:00:15	0.3	0.0	0.3	0.0	0.23	0.01	
12/18/06 17:00:30	0.3	0.1	0.3	0.0	0.23	0.01	
12/18/06 17:00:45	0.3	0.1	0.3	0.0	0.23	0.01	
12/18/06 17:01:00	0.3	0.0	0.3	0.0	0.23	0.01	
12/18/06 17:01:15	0.3	0.0	0.3	0.0	0.23	0.01	
12/18/06 17:01:30	0.3	0.1	0.3	0.0	0.24	0.01	
12/18/06 17:01:45	0.3	0.1	0.4	0.0	0.24	0.01	
12/18/06 17:02:00	0.3	0.1	0.3	0.0	0.24	0.01	
12/18/06 17:02:15	0.3	-0.3	0.3	0.0	0.24	0.01	
12/18/06 17:02:30	0.3	-0.3	0.3	0.4	0.25	0.01	
12/18/06 17:02:45	0.3	0.1	0.3	0.0	0.25	0.01	
12/18/06 17:03:00	0.3	0.1	0.3	0.0	1.56	0.02	
12/18/06 17:03:15	0.3	0.1	0.3	0.3	4.66	0.02	
12/18/06 17:03:30	0.3	0.0	0.3	0.6	2.16	0.02	
12/18/06 17:03:45	0.3	0.0	0.3	0.0	0.67	0.02	
12/18/06 17:04:00	0.3	0.0	0.4	0.0	4.72	0.03	
12/18/06 17:04:15	0.3	0.0	0.4	0.0	10.18	0.03	
12/18/06 17:04:30	0.2	0.0	0.4	0.0	4.92	0.02	
12/18/06 17:04:45	0.3	-0.4	0.3	0.0	1.10	0.01	
12/18/06 17:05:00	0.3	-0.3	0.3	0.0	0.48	0.01	
12/18/06 17:05:15	0.3	0.1	0.4	0.0	0.36	0.01	
12/18/06 17:05:30	0.3	0.1	0.4	0.0	0.31	0.01	
12/18/06 17:05:45	0.3	0.1	0.4	0.0	0.29	0.01	
12/18/06 17:06:00	0.3	-0.4	0.4	0.0	0.28	0.01	
12/18/06 17:06:15	0.3	0.0	0.5	0.0	0.28	0.01	
12/18/06 17:06:30	0.3	0.1	0.5	0.0	0.27	0.01	
12/18/06 17:06:45	0.3	0.1	0.5	0.0	0.27	0.01	
12/18/06 17:07:00	0.3	0.0	0.5	0.0	0.27	0.01	
12/18/06 17:07:15	0.3	-0.4	0.6	0.0	0.28	0.01	
12/18/06 17:07:30	0.3	-0.3	0.5	0.0	0.28	0.01	
12/18/06 17:07:45	0.3	0.1	0.5	0.0	0.28	0.01	
12/18/06 17:08:00	0.3	0.1	0.6	0.0	0.28	0.01	
12/18/06 17:08:15	0.3	0.1	0.6	0.0	0.28	0.01	
12/18/06 17:08:30	0.3	-0.3	0.6	0.0	0.28	0.01	
12/18/06 17:08:45	0.3	0.1	0.6	0.0	0.28	0.01	
12/18/06 17:09:00	0.3	0.1	0.7	0.0	0.28	0.01	
12/18/06 17:09:15	0.3	-0.3	0.7	0.0	0.29	0.01	
12/18/06 17:09:30	0.3	0.0	0.7	0.0	0.29	0.01	
12/18/06 17:09:45	0.3	-0.4	0.7	0.0	0.29	0.01	
12/18/06 17:10:00	0.3	0.1	0.7	0.0	0.29	0.01	
12/18/06 17:10:15	0.3	0.1	0.7	0.0	0.29	0.01	
12/18/06 17:10:30	0.3	0.1	0.7	0.0	0.29	0.01	
12/18/06 17:10:45	0.3	0.1	0.8	0.0	0.29	0.01	
12/18/06 17:11:00	0.3	-0.3	0.8	0.0	0.29	0.01	
12/18/06 17:11:15	0.3	0.1	0.8	0.0	0.29	0.01	
12/18/06 17:11:30	0.3	0.1	0.7	0.0	0.29	0.01	
12/18/06 17:11:45	0.3	0.1	0.7	0.0	0.30	0.01	
12/18/06 17:12:00	0.3	-0.4	0.7	0.0	0.30	0.01	
12/18/06 17:12:15	0.3	-0.4	0.8	0.0	0.30	0.01	
12/18/06 17:12:30	0.3	0.0	0.8	0.0	0.30	0.01	
12/18/06 17:12:45	0.3	0.0	0.8	0.4	0.30	0.01	
12/18/06 17:13:00	0.3	0.0	0.8	0.5	0.30	0.01	
12/18/06 17:13:15	0.3	-0.4	0.8	0.4	0.31	0.01	
12/18/06 17:13:30	0.3	-0.4	0.8	0.4	0.47	0.01	
12/18/06 17:13:45	0.2	-0.4	0.9	0.4	2.04	0.03	
12/18/06 17:14:00	0.2	-0.4	0.9	0.4	5.18	0.05	
12/18/06 17:14:15	0.2	-0.4	0.9	0.4	7.97	0.07	
12/18/06 17:14:30	0.2	-0.4	0.9	0.4	10.04	0.08	
12/18/06 17:14:45	0.2	-0.4	0.9	0.4	12.06	0.09	
12/18/06 17:15:00	0.1	-0.4	0.9	1.0	13.67	0.10	
12/18/06 17:15:15	0.1	0.3	0.9	0.5	15.04	0.11	
12/18/06 17:15:30	0.2	1.5	0.9	0.7	16.06	0.12	
12/18/06 17:15:45	0.2	0.7	0.9	0.3	11.51	0.08	
12/18/06 17:16:00	0.2	0.1	1.0	0.0	10.19	0.05	
12/18/06 17:16:15	0.3	0.1	1.0	0.0	16.97	0.05	
12/18/06 17:16:30	0.7	-0.4	1.0	0.0	16.30	0.04	
12/18/06 17:16:45	0.4	-0.4	0.9	0.0	6.55	0.02	
12/18/06 17:17:00	0.3	-0.4	0.7	0.0	1.30	0.01	
12/18/06 17:17:15	0.3	-0.4	0.7	0.0	0.39	0.01	
12/18/06 17:17:30	0.3	-0.4	0.6	0.0	0.22	0.01	
12/18/06 17:17:45	0.3	-0.4	0.5	0.0	0.12	0.01	
12/18/06 17:18:00	0.3	-0.5	0.4	0.0	0.08	0.01	
12/18/06 17:18:15	0.3	-0.5	0.3	0.0	0.05	0.01	
12/18/06 17:18:30	0.3	-0.4	0.3	0.0	0.04	0.01	
12/18/06 17:18:45	0.3	-0.4	0.3	1.5	0.03	0.01	
12/18/06 17:19:00	0.3	-0.4	0.3	1.8	0.03	0.01	
12/18/06 17:19:15	0.3	-0.8	0.2	1.3	0.03	0.01	
12/18/06 17:19:30	0.3	-0.4	0.3	0.0	0.04	0.01	
12/18/06 17:19:45	0.3	-0.4	0.3	0.2	0.05	0.01	
12/18/06 17:20:00	0.3	-0.4	0.3	0.0	0.57	0.01	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 17:20:15	0.3	-0.4	0.4	0.0	1.54	0.01	
12/18/06 17:20:30	0.2	-0.7	0.3	0.0	5.75	0.02	
12/18/06 17:20:45	0.2	-0.4	0.3	0.0	4.22	0.01	
12/18/06 17:21:00	0.2	-0.4	0.3	0.0	0.89	0.01	
12/18/06 17:21:15	0.2	-0.4	0.3	0.0	0.20	0.00	
12/18/06 17:21:30	0.2	-0.7	0.3	0.0	0.12	0.00	
12/18/06 17:21:45	0.2	-0.9	0.3	0.0	0.08	0.00	
12/18/06 17:22:00	0.2	-0.4	0.2	0.0	0.06	0.00	
12/18/06 17:22:15	0.2	-0.4	0.2	0.0	0.05	0.00	
12/18/06 17:22:30	0.2	-0.4	0.2	0.0	0.05	0.00	
12/18/06 17:22:45	0.2	-0.4	0.2	0.0	0.05	0.00	
12/18/06 17:23:00	0.2	-0.7	0.2	0.0	0.05	0.01	
12/18/06 17:23:15	0.2	-0.4	0.2	0.0	0.05	0.00	
12/18/06 17:23:30	0.2	-0.7	0.2	0.0	0.05	0.00	
12/18/06 17:23:45	0.3	-0.4	0.2	0.0	0.06	0.01	
12/18/06 17:24:00	0.3	-0.7	0.2	0.0	0.05	0.01	System Bias
12/18/06 17:24:15	**0.3**	**-0.9**	**0.1**	**0.0**	**0.05**	**0.01**	**0.2 Zero NO_x**
12/18/06 17:24:30	**0.3**	**-0.4**	**0.1**	**0.0**	**0.05**	**0.01**	**-0.5 Zero CO**
12/18/06 17:24:45	**0.3**	**-0.4**	**0.2**	**0.9**	**0.06**	**0.01**	**0.1 Zero SO_2**
12/18/06 17:25:00	**0.1**	**-0.4**	**0.2**	**0.0**	**0.05**	**0.01**	
12/18/06 17:25:15	9.1	-0.4	0.2	0.0	0.05	0.01	**0.05 Zero O_2**
12/18/06 17:25:30	28.8	-0.9	0.2	0.0	0.33	0.01	**0.01 Zero CO_2**
12/18/06 17:25:45	12.2	-0.5	0.6	0.0	2.24	0.01	
12/18/06 17:26:00	2.8	-0.4	0.8	0.0	3.81	0.01	
12/18/06 17:26:15	1.7	-0.4	0.7	0.0	4.25	0.01	
12/18/06 17:26:30	1.3	-0.9	0.7	0.0	4.37	0.01	
12/18/06 17:26:45	1.0	-0.9	0.5	0.0	4.42	0.01	
12/18/06 17:27:00	0.9	-0.4	0.6	0.0	4.45	0.01	
12/18/06 17:27:15	0.8	-0.4	0.5	0.0	4.46	0.01	
12/18/06 17:27:30	0.7	-0.7	0.5	0.0	4.48	0.01	
12/18/06 17:27:45	0.6	-0.9	0.3	0.0	4.49	0.01	
12/18/06 17:28:00	0.5	-0.4	0.3	0.0	4.51	0.01	
12/18/06 17:28:15	0.5	-0.4	0.3	0.0	4.52	0.01	
12/18/06 17:28:30	0.5	-0.4	0.3	0.0	4.52	0.01	
12/18/06 17:28:45	0.5	-0.4	0.2	0.0	4.53	0.01	
12/18/06 17:29:00	0.4	-0.7	0.2	0.0	4.53	0.01	
12/18/06 17:29:15	0.4	-0.4	0.2	0.0	4.53	0.01	System Bias
12/18/06 17:29:30	0.4	-0.4	0.2	0.0	**4.54**	0.01	**4.54 4.50% O_2**
12/18/06 17:29:45	0.4	-0.4	0.2	0.0	**4.54**	0.01	
12/18/06 17:30:00	0.3	-0.4	0.2	0.6	**4.54**	0.01	
12/18/06 17:30:15	0.4	-0.4	0.2	1.1	**4.54**	0.01	
12/18/06 17:30:30	0.6	-0.4	0.2	0.6	4.93	0.01	
12/18/06 17:30:45	0.4	-0.4	0.2	0.0	10.59	0.03	
12/18/06 17:31:00	0.5	-0.9	0.2	0.0	17.56	0.05	
12/18/06 17:31:15	0.5	-1.8	0.3	0.0	17.56	0.19	
12/18/06 17:31:30	0.4	-1.9	0.2	0.0	8.43	1.89	
12/18/06 17:31:45	0.3	-1.9	0.2	0.0	2.13	3.94	
12/18/06 17:32:00	0.3	-1.4	0.2	0.0	0.59	4.56	
12/18/06 17:32:15	0.3	-1.4	0.3	0.0	0.31	4.64	
12/18/06 17:32:30	0.3	-1.7	0.3	0.0	0.20	4.69	
12/18/06 17:32:45	0.3	-1.9	0.2	0.0	0.14	4.81	
12/18/06 17:33:00	0.3	-1.4	0.2	0.0	0.11	4.90	
12/18/06 17:33:15	0.3	-1.4	0.2	0.0	0.09	4.95	
12/18/06 17:33:30	0.3	-1.4	0.3	0.0	0.09	4.98	
12/18/06 17:33:45	0.3	-1.8	0.3	0.0	0.08	5.00	System Bias
12/18/06 17:34:00	0.3	-1.4	0.3	0.0	0.08	**5.01**	**5.01 5.00% CO_2**
12/18/06 17:34:15	0.3	-1.4	0.3	0.0	0.08	**5.01**	
12/18/06 17:34:30	0.3	-1.4	0.4	0.2	0.07	**5.01**	
12/18/06 17:34:45	0.3	-1.4	0.4	0.1	0.08	**5.02**	
12/18/06 17:35:00	0.6	40.1	0.6	0.0	0.94	4.66	
12/18/06 17:35:15	0.8	113.5	0.6	0.0	5.20	3.46	
12/18/06 17:35:30	0.5	191.5	0.6	0.0	3.23	1.90	
12/18/06 17:35:45	0.4	210.8	0.5	0.0	0.76	0.53	
12/18/06 17:36:00	0.3	215.9	0.5	0.0	0.22	0.15	
12/18/06 17:36:15	0.3	216.1	0.5	0.0	0.15	0.07	System Bias
12/18/06 17:36:30	0.3	**216.4**	0.6	0.0	0.12	0.05	**216.9 225.0 ppm CO**
12/18/06 17:36:45	0.3	**216.4**	0.8	0.0	0.10	0.04	
12/18/06 17:37:00	0.3	**217.2**	0.8	0.0	0.10	0.03	
12/18/06 17:37:15	0.3	**217.4**	0.8	0.0	0.09	0.03	
12/18/06 17:37:30	0.3	212.2	0.8	0.8	0.09	0.03	
12/18/06 17:37:45	0.2	171.1	0.9	0.0	0.09	0.03	
12/18/06 17:38:00	0.1	117.8	1.0	52.1	1.40	0.03	
12/18/06 17:38:15	2.8	95.9	1.1	62.3	8.92	0.05	
12/18/06 17:38:30	9.8	46.3	1.2	11.5	8.41	0.06	
12/18/06 17:38:45	4.4	16.3	7.2	1.0	2.41	0.04	
12/18/06 17:39:00	1.6	3.1	31.0	0.5	0.53	0.03	
12/18/06 17:39:15	1.0	1.3	63.5	0.3	0.26	0.02	
12/18/06 17:39:30	0.9	0.8	90.0	0.2	0.19	0.02	
12/18/06 17:39:45	0.8	0.6	105.8	0.1	0.15	0.02	
12/18/06 17:40:00	0.8	0.1	113.8	0.1	0.12	0.02	
12/18/06 17:40:15	0.7	0.1	117.7	0.0	0.11	0.02	
12/18/06 17:40:30	0.7	0.1	119.8	0.0	0.10	0.02	
12/18/06 17:40:45	0.6	0.1	121.2	0.0	0.10	0.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 17:41:00	0.6	-0.2	122.3	0.0	0.10	0.02	
12/18/06 17:41:15	0.6	0.0	123.2	0.0	0.10	0.02	
12/18/06 17:41:30	0.6	0.1	124.1	0.0	0.10	0.02	
12/18/06 17:41:45	0.5	0.1	124.8	0.0	0.10	0.02	
12/18/06 17:42:00	0.5	0.1	125.6	0.0	0.10	0.02	
12/18/06 17:42:15	0.5	-0.3	126.3	0.0	0.10	0.02	
12/18/06 17:42:30	0.5	-0.4	126.9	0.0	0.09	0.02	
12/18/06 17:42:45	0.5	-0.4	127.4	0.0	0.10	0.02	
12/18/06 17:43:00	0.5	-0.2	128.0	0.0	0.09	0.01	
12/18/06 17:43:15	0.5	0.1	128.6	0.0	0.09	0.01	
12/18/06 17:43:30	0.5	-0.4	129.1	0.0	0.10	0.01	
12/18/06 17:43:45	0.4	-0.4	129.5	0.0	0.10	0.01	
12/18/06 17:44:00	0.4	-0.4	130.0	0.0	0.10	0.01	
12/18/06 17:44:15	0.4	-0.4	130.3	0.0	0.09	0.01	
12/18/06 17:44:30	0.4	-0.2	130.6	0.0	0.10	0.01	
12/18/06 17:44:45	0.4	-0.4	130.7	0.0	0.09	0.01	
12/18/06 17:45:00	0.4	-0.4	130.8	0.0	0.10	0.01	System Bias
12/18/06 17:45:15	0.4	-0.4	**131.0**	0.0	0.10	0.01	131.2 135.0 ppm SO_2
12/18/06 17:45:30	0.4	-0.4	**131.1**	0.0	0.10	0.01	
12/18/06 17:45:45	0.4	-0.4	**131.3**	1.0	0.10	0.01	
12/18/06 17:46:00	0.4	-0.4	**131.2**	0.0	0.10	0.01	
12/18/06 17:46:15	0.4	-0.4	129.1	0.0	0.96	0.01	
12/18/06 17:46:30	0.5	0.8	112.8	0.0	7.77	0.03	
12/18/06 17:46:45	1.3	1.1	91.5	0.0	7.83	0.02	
12/18/06 17:47:00	15.9	0.3	73.3	0.0	2.17	0.01	
12/18/06 17:47:15	24.9	-0.3	53.0	0.0	0.43	0.01	
12/18/06 17:47:30	25.6	-0.4	34.3	0.0	0.22	0.01	
12/18/06 17:47:45	27.8	-0.4	21.8	0.0	0.18	0.01	
12/18/06 17:48:00	31.0	-0.2	15.1	0.0	0.15	0.01	
12/18/06 17:48:15	32.8	-0.4	11.3	0.0	0.12	0.01	
12/18/06 17:48:30	34.2	-0.4	9.1	0.0	0.11	0.01	
12/18/06 17:48:45	35.5	-0.4	7.4	0.0	0.11	0.01	
12/18/06 17:49:00	37.8	-0.2	6.3	0.0	0.11	0.01	
12/18/06 17:49:15	40.1	-0.3	5.4	0.0	0.11	0.01	
12/18/06 17:49:30	44.3	-0.4	4.7	0.0	0.10	0.01	
12/18/06 17:49:45	47.4	-0.4	4.2	0.0	0.10	0.01	
12/18/06 17:50:00	50.3	-0.4	3.8	0.0	0.10	0.01	
12/18/06 17:50:15	50.8	-0.4	3.3	0.0	0.10	0.01	
12/18/06 17:50:30	49.2	-0.4	3.1	0.0	0.10	0.01	
12/18/06 17:50:45	48.7	-0.4	2.9	0.0	0.10	0.01	
12/18/06 17:51:00	48.2	-0.4	2.6	0.0	0.10	0.02	
12/18/06 17:51:15	48.1	-0.4	2.5	0.0	0.10	0.02	
12/18/06 17:51:30	48.0	-0.4	2.3	0.0	0.10	0.02	System Bias
12/18/06 17:51:45	**48.0**	-0.4	2.2	0.0	0.10	0.02	48.1 50.0 ppm NO
12/18/06 17:52:00	**48.1**	-0.4	2.1	0.0	0.10	0.02	
12/18/06 17:52:15	**48.1**	-0.4	2.0	0.0	0.10	0.02	
12/18/06 17:52:30	**48.1**	-0.4	1.9	0.3	0.10	0.02	
12/18/06 17:52:45	48.4	-0.4	1.8	0.8	0.10	0.02	
12/18/06 17:53:00	22.3	-0.4	1.7	0.6	0.45	0.02	
12/18/06 17:53:15	6.3	-0.4	1.9	0.8	6.95	0.04	
12/18/06 17:53:30	1.1	-0.4	2.5	0.7	15.94	0.05	
12/18/06 17:53:45	0.9	-0.4	3.0	0.7	19.79	0.06	
12/18/06 17:54:00	0.7	-0.4	3.0	0.4	20.52	0.06	
12/18/06 17:54:15	0.5	-0.4	2.8	0.5	20.69	0.06	
12/18/06 17:54:30	0.5	-0.4	2.5	0.4	20.79	0.06	
12/18/06 17:54:45	0.4	-0.4	2.3	0.3	20.85	0.06	
12/18/06 17:55:00	0.4	-0.4	2.2	0.2	20.87	0.06	
12/18/06 17:55:15	0.3	-0.4	2.0	0.4	20.89	0.06	
12/18/06 17:55:30	0.3	-0.4	1.9	0.3	20.90	0.06	
12/18/06 17:55:45	0.3	-0.4	1.7	0.3	20.90	0.06	NO_x Response Time
12/18/06 17:56:00	0.3	-0.4	1.6	0.4	20.90	0.06	
12/18/06 17:56:15	0.2	-0.4	1.5	0.3	20.91	0.06	
12/18/06 17:56:30	0.2	-0.7	1.4	0.2	20.91	0.06	
12/18/06 17:56:45	0.2	-0.5	1.4	0.0	20.91	0.06	
12/18/06 17:57:00	26.3	-0.4	1.3	0.0	20.87	0.05	
12/18/06 17:57:15	42.1	-0.4	1.3	0.0	16.98	0.05	
12/18/06 17:57:30	47.2	-0.4	1.3	0.0	6.68	0.02	
12/18/06 17:57:45	46.4	-0.4	1.2	0.0	1.43	0.01	
12/18/06 17:58:00	47.3	-0.4	1.2	0.0	0.52	0.01	
12/18/06 17:58:15	48.0	-0.4	1.2	0.0	0.36	0.01	
12/18/06 17:58:30	48.5	-0.4	1.1	0.0	0.27	0.01	
12/18/06 17:58:45	48.3	-0.4	0.9	0.0	0.20	0.01	
12/18/06 17:59:00	48.2	-0.4	0.8	0.0	0.16	0.01	
12/18/06 17:59:15	48.2	-0.4	0.9	0.0	0.15	0.01	
12/18/06 17:59:30	48.1	-0.4	0.9	0.0	0.14	0.01	
12/18/06 17:59:45	48.4	-0.4	0.8	0.0	0.13	0.01	
12/18/06 18:00:00	47.9	-0.4	0.7	0.0	0.13	0.01	
12/18/06 18:00:15	47.5	-0.8	0.7	0.0	0.12	0.01	
12/18/06 18:00:30	47.1	-0.4	0.7	0.0	0.12	0.01	Begin Response Time Checks
12/18/06 18:00:45	47.1	-0.4	0.7	0.0	0.11	0.01	
12/18/06 18:01:00	47.1	-0.4	0.7	0.2	0.11	0.01	
12/18/06 18:01:15	41.0	-0.4	0.6	0.4	0.11	0.01	
12/18/06 18:01:30	22.5	-0.7	0.5	0.7	1.45	0.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 18:01:45	7.6	-0.8	0.5	0.5	10.35	0.04	
12/18/06 18:02:00	0.7	-0.7	0.6	0.7	17.93	0.05	NO_x Down - 71 seconds
12/18/06 18:02:15	0.5	-0.4	0.7	1.0	20.23	0.06	
12/18/06 18:02:30	0.4	-0.7	0.7	0.3	20.62	0.06	
12/18/06 18:02:45	0.3	-0.9	0.7	0.0	20.74	0.06	
12/18/06 18:03:00	16.6	-0.4	0.7	0.0	20.81	0.06	
12/18/06 18:03:15	30.1	-0.4	0.6	0.0	17.81	0.05	
12/18/06 18:03:30	47.5	-0.4	0.6	0.0	7.41	0.03	
12/18/06 18:03:45	45.9	-0.4	0.6	0.0	1.55	0.02	NO_x Up - 70 seconds
12/18/06 18:04:00	45.7	-0.7	0.6	0.0	0.51	0.02	
12/18/06 18:04:15	45.9	-0.4	0.5	0.0	0.34	0.02	
12/18/06 18:04:30	45.9	-0.4	0.5	0.0	0.25	0.02	
12/18/06 18:04:45	45.8	-0.4	0.6	0.0	0.19	0.02	
12/18/06 18:05:00	45.8	-0.7	0.5	0.0	0.15	0.02	
12/18/06 18:05:15	45.7	-0.5	0.5	0.2	0.13	0.02	
12/18/06 18:05:30	40.6	-0.4	0.5	0.3	0.12	0.02	
12/18/06 18:05:45	14.5	-0.4	0.5	0.1	1.38	0.02	
12/18/06 18:06:00	2.4	-0.4	0.5	0.0	10.22	0.04	
12/18/06 18:06:15	-0.6	-0.4	0.5	0.0	17.48	0.05	
12/18/06 18:06:30	6.8	-0.4	0.5	0.0	12.77	0.04	
12/18/06 18:06:45	3.0	-0.4	0.5	0.0	3.60	0.02	
12/18/06 18:07:00	0.7	-0.4	0.5	0.0	0.66	0.01	
12/18/06 18:07:15	0.6	-0.4	0.4	0.0	0.32	0.02	
12/18/06 18:07:30	0.5	-0.4	0.4	0.0	0.25	0.02	
12/18/06 18:07:45	0.5	-0.4	0.4	0.0	0.19	0.01	
12/18/06 18:08:00	0.5	-0.4	0.4	0.0	0.15	0.01	
12/18/06 18:08:15	0.5	-0.4	0.4	0.9	0.13	0.01	
12/18/06 18:08:30	0.3	-0.4	0.4	1.0	0.13	0.01	
12/18/06 18:08:45	0.2	-0.4	0.4	0.6	3.45	0.02	
12/18/06 18:09:00	0.2	-0.4	0.5	0.3	13.25	0.04	
12/18/06 18:09:15	0.2	-0.4	0.5	0.2	19.09	0.05	
12/18/06 18:09:30	0.1	-0.4	0.5	0.4	20.44	0.05	
12/18/06 18:09:45	0.1	-0.5	0.5	0.6	20.67	0.05	
12/18/06 18:10:00	0.1	-0.7	0.5	0.9	20.78	0.06	
12/18/06 18:10:15	0.1	-0.4	0.5	1.0	20.85	0.06	
12/18/06 18:10:30	0.1	-0.4	0.5	1.3	20.89	0.05	
12/18/06 18:10:45	0.1	-0.4	0.5	0.4	20.90	0.06	
12/18/06 18:11:00	0.0	-0.4	0.4	0.0	20.91	0.05	
12/18/06 18:11:15	1.4	-0.4	0.4	0.0	20.82	0.05	
12/18/06 18:11:30	3.5	-0.4	0.4	0.0	15.62	0.04	
12/18/06 18:11:45	1.0	-0.4	0.3	0.0	5.29	0.02	
12/18/06 18:12:00	0.4	-0.4	0.3	0.0	1.06	0.01	
12/18/06 18:12:15	0.4	-0.4	0.3	0.0	0.44	0.01	O_2 Down = 93 seconds
12/18/06 18:12:30	0.3	-0.4	0.3	0.0	0.32	0.01	
12/18/06 18:12:45	0.3	-0.4	0.4	0.0	0.24	0.01	
12/18/06 18:13:00	0.3	-0.4	0.4	0.0	0.18	0.01	
12/18/06 18:13:15	0.3	-0.4	0.4	0.0	0.14	0.01	
12/18/06 18:13:30	0.3	-0.4	0.3	0.0	0.13	0.01	
12/18/06 18:13:45	0.3	-0.4	0.4	0.0	0.12	0.02	
12/18/06 18:14:00	0.3	-0.4	0.4	0.3	0.12	0.01	
12/18/06 18:14:15	0.3	-0.4	0.4	0.6	0.11	0.01	
12/18/06 18:14:30	0.2	-0.4	0.4	0.5	0.39	0.01	
12/18/06 18:14:45	0.1	-0.4	0.3	0.8	6.91	0.04	
12/18/06 18:15:00	0.1	-0.7	0.4	0.7	16.12	0.05	
12/18/06 18:15:15	0.1	-0.5	0.5	0.6	19.89	0.06	O_2 Up = 96 seconds
12/18/06 18:15:30	0.1	-0.4	0.5	0.6	20.57	0.06	
12/18/06 18:15:45	0.1	-0.4	0.5	0.7	20.72	0.06	
12/18/06 18:16:00	0.1	-0.4	0.4	0.7	20.81	0.06	
12/18/06 18:16:15	0.1	-0.7	0.4	0.6	20.87	0.06	
12/18/06 18:16:30	0.1	-0.4	0.5	0.1	20.90	0.06	
12/18/06 18:16:45	0.0	1.2	0.4	0.0	20.91	0.06	
12/18/06 18:17:00	51.9	2.6	0.4	0.0	19.87	0.07	
12/18/06 18:17:15	52.7	0.6	0.3	0.0	10.94	1.99	
12/18/06 18:17:30	2.3	-1.4	0.3	0.0	2.93	6.05	
12/18/06 18:17:45	1.3	-1.9	0.3	0.0	0.83	7.92	
12/18/06 18:18:00	0.9	-1.9	0.3	0.0	0.39	8.51	
12/18/06 18:18:15	0.8	-2.2	0.4	0.0	0.27	8.71	
12/18/06 18:18:30	0.7	-2.2	0.4	0.0	0.19	8.79	
12/18/06 18:18:45	0.6	-2.2	0.3	0.0	0.13	8.83	
12/18/06 18:19:00	0.6	-2.4	0.4	0.0	0.11	8.85	
12/18/06 18:19:15	0.5	-2.2	0.2	0.1	0.10	8.85	
12/18/06 18:19:30	0.5	-2.2	0.4	0.6	0.09	8.87	
12/18/06 18:19:45	0.5	-1.7	0.4	0.8	0.12	8.82	
12/18/06 18:20:00	0.3	-0.9	0.4	0.6	3.82	6.63	
12/18/06 18:20:15	0.2	-0.8	0.6	0.3	14.74	2.10	
12/18/06 18:20:30	0.1	-0.7	0.6	0.6	19.71	0.44	CO_2 Down = 94 seconds
12/18/06 18:20:45	0.1	-0.8	0.4	0.5	20.54	0.17	
12/18/06 18:21:00	0.1	-0.7	0.4	0.7	20.69	0.12	
12/18/06 18:21:15	0.1	-0.9	0.4	0.3	20.78	0.10	
12/18/06 18:21:30	0.1	-1.2	0.3	0.0	20.85	0.09	
12/18/06 18:21:45	0.2	-1.9	0.4	0.0	20.78	0.21	
12/18/06 18:22:00	0.2	-2.4	0.2	0.0	15.70	2.99	
12/18/06 18:22:15	0.6	-2.4	0.3	0.0	5.44	7.00	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 18:22:30	0.5	-2.4	0.3	0.0	1.24	8.49	
12/18/06 18:22:45	0.5	-2.2	0.3	0.0	0.46	8.77	CO_2 Up = 97 seconds
12/18/06 18:23:00	0.4	-2.4	0.3	0.0	0.30	8.81	
12/18/06 18:23:15	0.4	-2.2	0.4	0.0	0.21	8.85	
12/18/06 18:23:30	0.4	-2.4	0.3	0.0	0.15	8.86	
12/18/06 18:23:45	0.4	-2.3	0.3	0.3	0.12	8.86	
12/18/06 18:24:00	0.4	-1.9	0.3	0.2	0.10	8.87	
12/18/06 18:24:15	0.3	8.8	0.4	0.0	0.34	8.62	
12/18/06 18:24:30	0.6	99.8	0.4	0.0	6.94	5.26	
12/18/06 18:24:45	5.0	278.3	0.4	0.0	12.79	3.08	
12/18/06 18:25:00	2.8	402.6	0.3	0.0	5.21	2.22	
12/18/06 18:25:15	0.8	436.5	0.4	0.0	1.11	0.63	
12/18/06 18:25:30	0.6	442.5	0.4	0.0	0.29	0.17	
12/18/06 18:25:45	0.5	443.0	0.3	0.0	0.22	0.09	
12/18/06 18:26:00	0.5	442.8	0.3	0.0	0.19	0.07	
12/18/06 18:26:15	0.4	442.9	0.3	0.0	0.15	0.06	
12/18/06 18:26:30	0.4	443.3	0.2	0.0	0.13	0.05	
12/18/06 18:26:45	0.4	443.7	0.3	0.0	0.12	0.04	
12/18/06 18:27:00	0.4	433.8	0.3	0.4	0.11	0.04	
12/18/06 18:27:15	0.4	309.9	0.3	0.5	0.11	0.04	
12/18/06 18:27:30	0.3	135.7	0.4	0.5	1.96	0.04	
12/18/06 18:27:45	0.1	38.3	0.3	0.4	11.32	0.06	
12/18/06 18:28:00	0.1	4.6	0.3	0.6	18.37	0.07	CO Down = 79 seconds
12/18/06 18:28:15	0.1	0.3	0.3	0.6	20.33	0.07	
12/18/06 18:28:30	0.1	-0.4	0.4	0.6	20.65	0.07	
12/18/06 18:28:45	0.1	-0.4	0.3	0.7	20.76	0.07	
12/18/06 18:29:00	0.1	-0.4	0.3	0.8	20.83	0.07	
12/18/06 18:29:15	0.1	-0.4	0.3	0.3	20.88	0.07	
12/18/06 18:29:30	0.1	-0.4	0.2	0.3	20.90	0.07	
12/18/06 18:29:45	0.1	36.6	0.2	0.0	20.91	0.07	
12/18/06 18:30:00	0.5	178.0	0.3	0.0	20.90	0.06	
12/18/06 18:30:15	0.5	340.5	0.3	0.0	17.58	0.08	
12/18/06 18:30:30	0.6	426.0	0.3	0.0	7.09	0.06	
12/18/06 18:30:45	0.5	440.9	0.2	0.0	1.47	0.03	CO Up = 77 seconds
12/18/06 18:31:00	0.4	442.8	0.3	0.0	0.49	0.02	
12/18/06 18:31:15	0.4	443.2	0.3	0.0	0.34	0.02	
12/18/06 18:31:30	0.4	443.5	0.3	0.1	0.26	0.02	
12/18/06 18:31:45	0.4	403.8	0.3	0.1	0.19	0.02	
12/18/06 18:32:00	0.3	309.1	0.3	41.0	0.23	0.02	
12/18/06 18:32:15	10.3	201.1	0.3	5.2	4.33	0.03	
12/18/06 18:32:30	23.7	85.3	5.6	0.0	7.21	0.03	
12/18/06 18:32:45	6.8	22.2	60.6	0.0	2.42	0.02	
12/18/06 18:33:00	3.1	3.3	154.2	0.0	0.46	0.02	
12/18/06 18:33:15	2.3	0.8	212.5	0.0	0.19	0.02	
12/18/06 18:33:30	1.9	0.3	236.4	0.0	0.17	0.02	
12/18/06 18:33:45	1.8	0.1	245.3	0.0	0.15	0.02	
12/18/06 18:34:00	1.6	0.1	249.4	0.0	0.13	0.01	
12/18/06 18:34:15	1.5	-0.3	251.8	0.0	0.12	0.01	
12/18/06 18:34:30	1.4	-0.4	253.7	0.0	0.11	0.01	
12/18/06 18:34:45	1.3	-0.4	255.5	0.0	0.11	0.01	
12/18/06 18:35:00	1.2	-0.4	256.9	0.6	0.11	0.01	
12/18/06 18:35:15	0.9	-0.5	257.5	0.3	0.13	0.01	
12/18/06 18:35:30	0.3	-0.9	230.1	0.5	3.90	0.03	
12/18/06 18:35:45	0.1	-0.9	148.8	0.4	13.70	0.04	
12/18/06 18:36:00	0.1	-0.7	70.6	0.9	19.23	0.05	
12/18/06 18:36:15	0.1	-0.4	31.9	1.1	20.46	0.06	
12/18/06 18:36:30	0.1	-0.4	17.2	0.6	20.68	0.06	
12/18/06 18:36:45	0.1	-0.8	11.0	0.3	20.78	0.06	SO_2 Down = 131 seconds
12/18/06 18:37:00	0.1	-0.7	7.9	0.7	20.85	0.06	
12/18/06 18:37:15	0.1	-0.7	6.0	0.9	20.89	0.06	
12/18/06 18:37:30	0.1	-0.7	4.9	1.0	20.90	0.06	
12/18/06 18:37:45	0.1	-0.7	4.2	0.5	20.91	0.06	
12/18/06 18:38:00	0.1	-0.9	3.5	0.7	20.92	0.06	
12/18/06 18:38:15	0.1	-0.7	3.1	0.6	20.92	0.06	
12/18/06 18:38:30	0.1	-0.7	2.8	0.5	20.93	0.06	
12/18/06 18:38:45	0.1	-0.4	2.4	0.4	20.93	0.06	
12/18/06 18:39:00	0.1	-0.4	2.3	0.2	20.93	0.06	
12/18/06 18:39:15	1.0	0.8	2.2	3.4	20.93	0.06	
12/18/06 18:39:30	1.9	2.6	13.2	0.0	19.03	0.06	
12/18/06 18:39:45	1.9	1.6	66.7	0.0	9.08	0.05	
12/18/06 18:40:00	1.6	0.3	152.4	0.0	2.05	0.03	
12/18/06 18:40:15	1.0	-0.3	214.4	0.0	0.58	0.02	
12/18/06 18:40:30	0.9	-0.4	240.4	0.0	0.36	0.02	
12/18/06 18:40:45	0.9	-0.4	250.2	0.0	0.28	0.02	SO_2 Up = 132 seconds
12/18/06 18:41:00	0.8	-0.4	254.5	0.0	0.21	0.02	
12/18/06 18:41:15	0.8	-0.4	256.9	0.0	0.16	0.02	
12/18/06 18:41:30	0.8	-0.4	258.5	0.0	0.13	0.02	
12/18/06 18:41:45	0.7	-0.7	259.6	0.0	0.12	0.02	
12/18/06 18:42:00	0.7	-0.4	260.5	0.0	0.12	0.02	Calibration
12/18/06 18:42:15	0.7	-0.4	261.3	**0.0**	0.11	0.02	**0.0 Zero C_3H_8/N_2**
12/18/06 18:42:30	0.7	-0.4	261.9	**0.0**	0.11	0.02	
12/18/06 18:42:45	0.7	-0.5	262.4	**0.0**	0.11	0.02	
12/18/06 18:43:00	0.7	-0.7	262.8	**0.0**	0.11	0.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/18/06 18:43:15	0.7	-0.4	263.2	0.1	0.11	0.02	
12/18/06 18:43:30	0.5	-0.4	263.5	18.5	0.11	0.02	
12/18/06 18:43:45	0.2	2.5	256.8	98.8	0.91	0.02	
12/18/06 18:44:00	6.7	4.8	219.5	98.8	5.46	0.03	
12/18/06 18:44:15	6.3	2.6	156.4	98.8	3.58	0.04	
12/18/06 18:44:30	0.5	0.1	83.5	98.8	0.95	0.03	
12/18/06 18:44:45	0.5	-0.4	39.4	98.8	0.49	0.01	
12/18/06 18:45:00	0.4	-0.4	20.5	12.1	0.31	0.01	
12/18/06 18:45:15	0.4	-0.4	12.8	12.0	0.22	0.01	
12/18/06 18:45:30	0.3	-0.4	9.3	11.1	0.17	0.01	
12/18/06 18:45:45	0.3	-0.4	7.3	81.5	0.13	0.01	
12/18/06 18:46:00	0.3	-0.4	6.0	82.3	0.12	0.01	
12/18/06 18:46:15	0.3	-0.5	5.1	82.2	0.11	0.01	
12/18/06 18:46:30	0.2	-0.7	4.4	82.3	0.11	0.01	
12/18/06 18:46:45	0.2	-0.8	3.9	82.4	0.10	0.01	
12/18/06 18:47:00	0.2	-0.7	3.5	83.1	0.10	0.01	Calibration
12/18/06 18:47:15	0.2	-0.4	3.2	**85.0**	0.10	0.01	**85.0 85.0 ppm C_3H_8/N_2**
12/18/06 18:47:30	0.1	-0.4	2.9	**85.0**	0.10	0.01	
12/18/06 18:47:45	0.1	-0.5	2.7	**85.0**	0.10	0.01	
12/18/06 18:48:00	0.1	-0.9	2.6	**85.0**	0.10	0.01	
12/18/06 18:48:15	0.1	-0.9	2.3	75.2	0.10	0.01	
12/18/06 18:48:30	0.1	-0.9	2.2	49.1	0.10	0.01	
12/18/06 18:48:45	0.1	-0.8	2.1	49.4	0.10	0.01	
12/18/06 18:49:00	0.1	-0.7	2.0	49.5	0.10	0.01	Calibration
12/18/06 18:49:15	0.1	-0.9	1.8	**49.5**	0.10	0.01	**49.5 50.0 ppm C_3H_8/N_2**
12/18/06 18:49:30	0.1	-0.7	1.8	**49.5**	0.10	0.01	
12/18/06 18:49:45	0.1	-0.7	1.7	**49.5**	0.10	0.01	
12/18/06 18:50:00	0.1	-0.4	1.7	**49.5**	0.09	0.01	
12/18/06 18:50:15	0.1	-0.8	1.6	34.6	0.10	0.01	
12/18/06 18:50:30	0.1	-0.9	1.6	23.8	0.10	0.01	
12/18/06 18:50:45	0.1	-0.9	1.5	24.1	0.10	0.01	
12/18/06 18:51:00	0.1	-0.9	1.4	24.0	0.10	0.02	
12/18/06 18:51:15	0.1	-0.8	1.4	24.0	0.09	0.02	Calibration
12/18/06 18:51:30	0.1	-0.7	1.4	**23.9**	0.09	0.02	**24.0 25.0 ppm C_3H_8/N_2**
12/18/06 18:51:45	0.1	-0.9	1.4	**24.0**	0.09	0.02	
12/18/06 18:52:00	0.1	-0.9	1.2	**24.0**	0.09	0.02	
12/18/06 18:52:15	0.1	-0.8	1.2	**24.0**	0.09	0.02	
12/18/06 18:52:30	0.1	-0.7	1.1	66.2	0.09	0.02	
12/18/06 18:52:45	0.1	-0.9	1.2	84.8	0.09	0.02	
12/18/06 18:53:00	0.1	-0.9	1.2	84.6	0.09	0.02	
12/18/06 18:53:15	0.1	-0.9	1.0	84.5	0.09	0.02	
12/18/06 18:53:30	0.1	-0.9	1.1	84.4	0.09	0.02	
12/18/06 18:53:45	0.1	-0.8	1.0	84.4	0.10	0.02	
12/18/06 18:54:00	0.1	-0.7	1.0	84.1	0.09	0.02	
12/18/06 18:54:15	0.1	-0.9	0.9	9.4	0.09	0.02	
12/18/06 18:54:30	0.1	-0.9	1.0	0.7	0.09	0.02	
12/18/06 18:54:45	0.1	-0.5	1.1	22.5	1.79	0.02	
12/18/06 18:55:00	0.1	-0.9	1.8	95.6	11.07	0.04	THC Response Time #1 = 26 seconds
12/18/06 18:55:15	0.1	-0.9	2.5	85.7	18.22	0.06	
12/18/06 18:55:30	0.1	-0.9	2.6	39.3	16.18	0.05	
12/18/06 18:55:45	0.1	-0.4	2.2	0.9	6.04	0.03	
12/18/06 18:56:00	0.1	-0.7	1.7	0.3	1.46	0.02	
12/18/06 18:56:15	0.1	-0.9	1.5	0.5	7.72	0.04	
12/18/06 18:56:30	0.1	-0.9	1.6	11.3	16.63	0.05	
12/18/06 18:56:45	0.1	-0.9	1.6	80.9	20.08	0.06	
12/18/06 18:57:00	0.1	-0.9	1.6	84.9	20.64	0.06	THC Response Time #2 = 26 seconds
12/18/06 18:57:15	0.1	-0.8	1.5	37.7	17.98	0.05	
12/18/06 18:57:30	0.1	-0.4	1.3	0.5	7.64	0.03	
12/18/06 18:57:45	0.1	-0.9	1.1	0.1	1.96	0.02	
12/18/06 18:58:00	0.1	-0.9	1.1	21.4	7.95	0.03	
12/18/06 18:58:15	0.1	-0.9	1.1	1.1	16.73	0.05	
12/18/06 18:58:30	0.1	-0.9	1.1	0.4	20.01	0.05	
12/18/06 18:58:45	0.1	-0.9	1.1	72.2	17.80	0.04	
12/18/06 18:59:00	0.0	-0.9	1.1	85.9	18.01	0.05	THC Response Time #3 = 26 seconds
12/18/06 18:59:15	0.1	-0.9	1.1	83.9	19.02	0.05	
12/18/06 18:59:30	0.1	-0.9	1.0	83.7	10.51	0.03	
12/18/06 18:59:45	0.1	-0.9	0.9	33.8	2.52	0.01	
12/18/06 19:00:00	0.1	-0.9	0.8	0.4	0.59	0.01	
12/18/06 19:00:15	0.1	-0.9	0.7	0.2	0.84	0.02	
12/18/06 19:00:30	0.1	-0.9	0.7	0.1	8.15	0.03	
12/18/06 19:00:45	0.1	-0.8	0.7	0.2	16.84	0.05	
12/18/06 19:01:00	0.1	-0.7	0.8	0.2	20.09	0.06	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 6:11:00	0.1	-1.4	-4.3	0.0	20.97	0.08	
12/19/06 6:11:15	0.1	-0.7	-4.5	0.0	20.98	0.08	
12/19/06 6:11:30	-0.1	0.0	-4.9	0.0	20.98	0.08	
12/19/06 6:11:45	-0.2	-0.4	-3.8	0.0	19.68	0.08	
12/19/06 6:12:00	0.1	-1.4	-2.6	0.0	9.77	0.06	
12/19/06 6:12:15	0.1	-1.4	-5.1	0.0	2.02	0.04	
12/19/06 6:12:30	0.1	-1.4	-5.4	0.0	0.46	0.03	
12/19/06 6:12:45	0.1	-1.8	-4.6	0.0	0.25	0.03	
12/19/06 6:13:00	0.1	-1.9	-4.3	0.0	0.17	0.04	
12/19/06 6:13:15	0.1	-0.4	-4.4	0.0	0.11	0.03	
12/19/06 6:13:30	0.1	0.1	-4.7	0.0	0.06	0.03	
12/19/06 6:13:45	0.1	0.1	-4.8	0.0	0.04	0.03	
12/19/06 6:14:00	0.1	0.1	-3.2	0.0	0.03	0.03	
12/19/06 6:14:15	0.1	0.1	-1.9	0.0	0.02	0.03	
12/19/06 6:14:30	0.1	0.1	-0.7	0.1	0.02	0.02	
12/19/06 6:14:45	0.1	0.1	-0.3	0.0	0.01	0.02	
12/19/06 6:15:00	0.1	0.1	-0.3	0.1	0.01	0.02	
12/19/06 6:15:15	0.1	0.1	-0.4	0.1	0.01	0.02	
12/19/06 6:15:30	0.1	0.1	-0.3	0.3	0.01	0.02	
12/19/06 6:15:45	0.1	0.1	-0.4	0.2	0.01	0.02	
12/19/06 6:16:00	0.1	0.1	-0.4	0.0	0.00	0.02	
12/19/06 6:16:15	0.1	0.1	-0.5	0.0	0.00	0.02	Calibration Error
12/19/06 6:16:30	**0.1**	**0.1**	**-0.4**	0.0	**0.00**	**0.02**	**0.1 Zero NO_x**
12/19/06 6:16:45	**0.0**	**0.1**	**-0.4**	0.0	**0.00**	**0.02**	**0.1 Zero CO**
12/19/06 6:17:00	**0.0**	**0.1**	**-0.4**	0.1	**0.00**	**0.02**	**-0.4 Zero SO_2**
12/19/06 6:17:15	**0.4**	**0.1**	**-0.4**	0.0	**0.00**	**0.01**	
12/19/06 6:17:30	2.4	0.1	0.2	0.0	0.53	0.02	**0.00 Zero O_2**
12/19/06 6:17:45	1.6	0.1	1.0	0.0	4.51	0.02	**0.02 Zero CO_2**
12/19/06 6:18:00	0.5	0.1	0.3	0.1	7.57	0.02	
12/19/06 6:18:15	0.3	0.1	-0.2	0.0	8.20	0.01	
12/19/06 6:18:30	0.2	0.1	-0.3	0.0	8.36	0.02	
12/19/06 6:18:45	1.0	0.1	-0.3	0.0	8.67	0.02	
12/19/06 6:19:00	1.1	0.1	-0.2	0.0	7.25	0.02	
12/19/06 6:19:15	0.1	0.1	-0.4	0.0	2.33	0.02	
12/19/06 6:19:30	0.1	0.1	-0.5	0.0	0.41	0.02	
12/19/06 6:19:45	0.1	0.1	-0.5	0.0	0.14	0.02	
12/19/06 6:20:00	0.1	0.1	-0.5	0.0	0.09	0.02	
12/19/06 6:20:15	0.1	0.1	-0.5	0.0	0.06	0.02	
12/19/06 6:20:30	0.1	0.1	-0.4	0.0	1.05	0.02	
12/19/06 6:20:45	0.2	0.1	-0.5	0.0	5.51	0.02	
12/19/06 6:21:00	0.1	0.1	-0.6	0.0	8.28	0.02	
12/19/06 6:21:15	0.1	0.1	-0.5	0.0	8.83	0.03	
12/19/06 6:21:30	0.1	0.1	-0.6	0.0	8.92	0.02	
12/19/06 6:21:45	0.1	-0.3	-0.5	0.0	8.96	0.02	
12/19/06 6:22:00	0.1	0.1	-0.5	0.0	8.99	0.02	
12/19/06 6:22:15	0.1	0.1	-0.6	0.0	9.01	0.02	Calibration Error
12/19/06 6:22:30	0.1	0.1	-0.6	0.0	**9.02**	0.02	**9.03 9.00% O_2**
12/19/06 6:22:45	0.1	0.1	-0.6	0.0	**9.03**	0.02	
12/19/06 6:23:00	0.1	-0.3	-0.6	0.0	**9.03**	0.02	
12/19/06 6:23:15	0.1	0.1	-0.5	0.0	**9.02**	0.02	
12/19/06 6:23:30	0.1	0.1	-0.6	0.0	8.11	0.02	
12/19/06 6:23:45	0.1	0.1	-0.6	0.0	5.97	0.02	
12/19/06 6:24:00	0.1	0.1	-0.6	0.0	5.21	0.02	
12/19/06 6:24:15	0.1	0.1	-0.6	0.0	5.09	0.02	
12/19/06 6:24:30	0.1	0.1	-0.6	0.0	5.06	0.02	
12/19/06 6:24:45	0.1	0.1	-0.6	0.0	5.04	0.02	
12/19/06 6:25:00	0.1	0.1	-0.6	0.0	5.03	0.02	
12/19/06 6:25:15	0.1	0.1	-0.7	0.0	4.98	0.02	
12/19/06 6:25:30	0.1	0.1	-0.7	0.0	4.72	0.02	
12/19/06 6:25:45	0.1	0.1	-0.6	0.0	4.56	0.02	
12/19/06 6:26:00	0.1	0.1	-0.6	0.0	4.52	0.02	Calibration Error
12/19/06 6:26:15	0.1	0.1	-0.6	0.0	**4.52**	0.01	**4.51 4.50% O_2**
12/19/06 6:26:30	0.1	0.1	-0.7	0.0	**4.52**	0.01	
12/19/06 6:26:45	0.1	0.1	-0.7	0.0	**4.51**	0.01	
12/19/06 6:27:00	0.1	0.1	-0.7	0.0	**4.51**	0.01	
12/19/06 6:27:15	0.0	-0.7	-0.6	0.0	4.70	0.02	
12/19/06 6:27:30	0.1	-1.4	-0.7	0.0	7.51	0.58	
12/19/06 6:27:45	0.1	-1.4	-0.7	0.0	5.25	3.59	
12/19/06 6:28:00	0.1	-1.8	-0.7	0.0	1.35	5.90	
12/19/06 6:28:15	0.1	-1.4	-0.7	0.0	0.24	7.27	
12/19/06 6:28:30	0.1	-1.9	-0.7	0.0	0.07	8.31	
12/19/06 6:28:45	0.1	-1.5	-0.7	0.0	0.03	8.76	
12/19/06 6:29:00	0.1	-1.4	-0.7	0.0	0.00	8.90	
12/19/06 6:29:15	0.1	-1.4	-0.7	0.0	-0.02	8.93	
12/19/06 6:29:30	0.1	-1.5	-0.7	0.0	-0.03	8.95	Calibration Error
12/19/06 6:29:45	0.1	-1.9	-0.7	0.0	-0.04	**8.96**	**8.97 9.00% CO_2**
12/19/06 6:30:00	0.1	-1.4	-0.7	0.0	-0.04	**8.96**	
12/19/06 6:30:15	0.1	-1.4	-0.7	0.0	-0.04	**8.97**	
12/19/06 6:30:30	0.1	-1.4	-0.7	0.0	-0.04	**8.97**	
12/19/06 6:30:45	0.1	-1.4	-0.7	0.0	-0.04	8.95	
12/19/06 6:31:00	0.1	-1.3	-0.6	0.0	-0.04	7.78	
12/19/06 6:31:15	0.1	-0.9	-0.6	0.0	-0.03	5.62	
12/19/06 6:31:30	0.1	-0.9	-0.7	0.0	-0.03	4.76	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 6:31:45	0.1	-0.9	-0.7	0.0	-0.03	4.65	Calibration Error
12/19/06 6:32:00	0.1	-1.3	-0.7	0.0	-0.03	**4.59**	**4.59 4.50% CO_2**
12/19/06 6:32:15	0.1	-0.9	-0.6	0.1	-0.03	**4.59**	
12/19/06 6:32:30	0.1	-0.9	-0.7	0.1	-0.03	**4.59**	
12/19/06 6:32:45	0.1	-0.9	-0.7	0.0	-0.03	**4.59**	
12/19/06 6:33:00	0.1	16.8	-0.7	0.0	-0.03	4.59	
12/19/06 6:33:15	0.1	167.1	-0.7	0.0	0.58	4.34	
12/19/06 6:33:30	0.3	347.2	-0.6	0.0	3.86	2.84	
12/19/06 6:33:45	0.2	435.3	-0.6	0.0	2.18	0.94	
12/19/06 6:34:00	0.1	453.3	-0.6	0.0	0.37	0.21	Calibration Error
12/19/06 6:34:15	0.1	**455.5**	-0.7	0.0	0.05	0.08	**455.7 450.0 ppm CO**
12/19/06 6:34:30	0.1	**456.1**	-0.7	0.0	0.03	0.05	
12/19/06 6:34:45	0.1	**456.1**	-0.8	0.0	0.01	0.04	
12/19/06 6:35:00	0.1	**455.1**	-0.7	0.0	0.00	0.04	
12/19/06 6:35:15	0.1	454.0	-0.7	0.0	-0.01	0.03	
12/19/06 6:35:30	0.1	425.3	-0.7	0.0	-0.01	0.03	
12/19/06 6:35:45	0.1	326.0	-0.7	0.0	-0.02	0.03	
12/19/06 6:36:00	0.1	249.4	-0.7	0.0	-0.02	0.03	
12/19/06 6:36:15	0.1	225.8	-0.7	0.0	-0.02	0.03	
12/19/06 6:36:30	0.1	221.9	-0.8	0.0	-0.02	0.02	
12/19/06 6:36:45	0.1	221.9	-0.7	0.0	-0.02	0.02	Calibration Error
12/19/06 6:37:00	0.1	**221.9**	-0.7	0.0	-0.02	0.02	**221.7 225.0 ppm CO**
12/19/06 6:37:15	0.1	**221.9**	-0.7	0.0	-0.02	0.02	
12/19/06 6:37:30	0.1	**221.4**	-0.7	0.0	-0.02	0.02	
12/19/06 6:37:45	0.1	**221.4**	-0.8	0.0	-0.02	0.02	
12/19/06 6:38:00	0.1	210.7	-0.7	0.0	-0.02	0.02	
12/19/06 6:38:15	0.6	169.5	-0.7	0.0	0.10	0.02	
12/19/06 6:38:30	3.4	87.4	2.6	0.0	3.09	0.03	
12/19/06 6:38:45	2.1	24.1	54.5	0.0	3.25	0.03	
12/19/06 6:39:00	0.9	4.3	177.1	0.0	0.80	0.02	
12/19/06 6:39:15	0.8	1.3	270.8	0.0	0.13	0.02	
12/19/06 6:39:30	0.6	1.0	299.6	0.1	0.03	0.01	
12/19/06 6:39:45	0.6	0.6	301.7	0.0	0.01	0.02	
12/19/06 6:40:00	0.6	0.6	300.4	0.0	-0.01	0.02	
12/19/06 6:40:15	0.6	0.6	299.9	0.0	-0.01	0.01	
12/19/06 6:40:30	0.5	0.2	300.2	0.0	-0.02	0.01	
12/19/06 6:40:45	0.5	0.2	301.6	0.2	-0.02	0.01	
12/19/06 6:41:00	0.5	0.1	302.3	0.2	-0.02	0.01	
12/19/06 6:41:15	0.5	0.1	302.3	0.0	-0.02	0.01	
12/19/06 6:41:30	0.5	0.1	302.3	0.0	-0.02	0.02	
12/19/06 6:41:45	0.5	0.1	302.3	0.0	-0.02	0.02	
12/19/06 6:42:00	0.5	0.1	302.3	0.0	-0.02	0.02	
12/19/06 6:42:15	0.5	0.1	302.3	0.0	-0.02	0.02	
12/19/06 6:42:30	0.4	0.1	294.1	0.0	-0.02	0.02	
12/19/06 6:42:45	0.4	0.1	269.6	0.0	-0.02	0.02	
12/19/06 6:43:00	0.4	0.1	269.7	0.0	-0.02	0.02	
12/19/06 6:43:15	0.4	0.1	269.9	0.0	-0.02	0.02	Calibration Error
12/19/06 6:43:30	0.4	0.1	**270.1**	0.0	-0.02	0.02	**270.2 270.0 ppm SO_2**
12/19/06 6:43:45	0.4	0.1	**270.2**	0.0	-0.02	0.02	
12/19/06 6:44:00	0.4	0.1	**270.3**	0.0	-0.02	0.02	
12/19/06 6:44:15	0.4	0.8	**270.3**	0.0	-0.02	0.02	
12/19/06 6:44:30	0.4	2.7	269.1	0.0	-0.02	0.02	
12/19/06 6:44:45	0.4	2.3	233.7	0.0	-0.01	0.03	
12/19/06 6:45:00	0.3	0.8	170.0	0.0	-0.01	0.04	
12/19/06 6:45:15	0.3	0.1	143.8	0.1	-0.02	0.02	
12/19/06 6:45:30	0.3	0.1	138.6	0.0	-0.02	0.02	
12/19/06 6:45:45	0.3	0.1	137.7	0.0	-0.03	0.03	
12/19/06 6:46:00	0.3	0.1	137.5	0.0	-0.03	0.01	Calibration Error
12/19/06 6:46:15	0.3	0.1	**137.4**	0.0	-0.03	0.02	**137.2 135.0 ppm SO_2**
12/19/06 6:46:30	0.3	0.1	**137.2**	0.2	-0.03	0.02	
12/19/06 6:46:45	0.3	0.1	**137.2**	0.0	-0.03	0.02	
12/19/06 6:47:00	0.3	0.1	**137.1**	0.0	-0.03	0.02	
12/19/06 6:47:15	0.3	0.1	136.6	0.0	-0.03	0.02	
12/19/06 6:47:30	0.3	0.3	135.3	0.0	-0.01	0.02	
12/19/06 6:47:45	0.2	1.8	118.1	0.0	3.01	0.03	
12/19/06 6:48:00	0.1	2.0	81.5	0.0	9.72	0.04	
12/19/06 6:48:15	0.0	0.8	55.6	0.0	5.07	0.03	
12/19/06 6:48:30	0.0	0.5	22.6	0.0	0.80	0.02	
12/19/06 6:48:45	0.0	0.1	6.0	0.1	0.14	0.02	
12/19/06 6:49:00	0.0	0.1	1.8	0.1	0.07	0.02	
12/19/06 6:49:15	0.0	0.1	0.7	0.0	0.02	0.02	
12/19/06 6:49:30	0.0	0.1	0.4	0.0	-0.01	0.02	
12/19/06 6:49:45	0.0	0.1	0.3	0.0	-0.02	0.02	
12/19/06 6:50:00	0.0	0.1	0.2	0.0	-0.02	0.02	
12/19/06 6:50:15	0.0	0.1	0.1	0.0	-0.02	0.02	
12/19/06 6:50:30	0.0	0.3	0.1	0.0	-0.02	0.01	
12/19/06 6:50:45	0.5	1.5	0.2	0.0	-0.02	0.02	
12/19/06 6:51:00	8.0	1.5	6.8	0.2	0.03	0.02	
12/19/06 6:51:15	21.2	0.7	14.1	0.1	0.06	0.02	
12/19/06 6:51:30	26.4	0.6	7.8	0.0	0.02	0.02	
12/19/06 6:51:45	44.2	0.2	2.6	0.0	0.01	0.01	
12/19/06 6:52:00	62.7	0.1	1.3	0.0	0.00	0.01	
12/19/06 6:52:15	78.3	0.1	1.1	0.0	-0.01	0.01	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
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ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 6:52:30	76.7	0.1	0.9	0.0	-0.02	0.02	
12/19/06 6:52:45	75.0	0.1	0.8	0.0	-0.02	0.02	
12/19/06 6:53:00	73.8	0.1	0.7	0.0	-0.02	0.02	
12/19/06 6:53:15	73.1	0.1	0.5	0.0	-0.02	0.02	
12/19/06 6:53:30	74.3	0.1	0.3	0.0	-0.02	0.01	
12/19/06 6:53:45	76.8	0.1	0.3	0.0	-0.02	0.01	
12/19/06 6:54:00	79.5	0.1	0.2	0.0	-0.02	0.01	
12/19/06 6:54:15	82.5	0.1	0.2	0.0	-0.02	0.01	
12/19/06 6:54:30	84.9	0.1	0.2	0.0	-0.03	0.01	
12/19/06 6:54:45	87.5	0.1	0.1	0.3	-0.02	0.01	
12/19/06 6:55:00	89.4	0.1	0.0	0.0	-0.02	0.02	
12/19/06 6:55:15	91.3	0.1	0.0	0.2	-0.03	0.02	
12/19/06 6:55:30	92.6	0.1	-0.1	0.0	-0.03	0.02	
12/19/06 6:55:45	93.4	0.1	-0.2	0.0	-0.03	0.02	
12/19/06 6:56:00	93.9	0.1	-0.2	0.1	-0.03	0.02	
12/19/06 6:56:15	94.5	0.1	-0.3	0.0	-0.03	0.02	
12/19/06 6:56:30	94.8	0.1	-0.3	0.0	-0.03	0.02	
12/19/06 6:56:45	95.0	0.1	-0.3	0.0	-0.02	0.02	
12/19/06 6:57:00	95.0	0.1	-0.4	0.0	-0.03	0.02	
12/19/06 6:57:15	95.2	0.1	-0.4	0.0	-0.03	0.02	
12/19/06 6:57:30	95.2	0.1	-0.4	0.0	-0.03	0.02	
12/19/06 6:57:45	95.3	0.1	-0.4	0.0	-0.03	0.02	
12/19/06 6:58:00	95.3	0.1	-0.5	0.1	-0.03	0.02	
12/19/06 6:58:15	95.4	0.1	-0.5	0.1	-0.03	0.02	
12/19/06 6:58:30	95.3	0.1	-0.5	0.0	-0.02	0.02	
12/19/06 6:58:45	95.2	0.1	-0.5	0.0	-0.03	0.02	
12/19/06 6:59:00	95.1	0.1	-0.5	0.0	-0.02	0.02	
12/19/06 6:59:15	92.7	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 6:59:30	89.2	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 6:59:45	89.1	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 7:00:00	90.0	0.1	-0.6	0.0	-0.03	0.02	Calibration Error
12/19/06 7:00:15	**90.2**	0.1	-0.6	0.1	-0.03	0.02	**90.1 90.0 ppm NO**
12/19/06 7:00:30	**90.1**	0.1	-0.6	0.2	-0.03	0.02	
12/19/06 7:00:45	**90.0**	0.1	-0.5	0.3	-0.03	0.02	
12/19/06 7:01:00	**90.0**	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 7:01:15	89.3	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 7:01:30	89.4	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 7:01:45	56.3	0.1	-0.6	0.0	-0.03	0.02	
12/19/06 7:02:00	44.6	0.1	-0.7	0.0	-0.03	0.02	
12/19/06 7:02:15	44.5	0.1	-0.7	0.0	-0.03	0.02	
12/19/06 7:02:30	44.4	0.1	-0.7	0.0	-0.03	0.02	Calibration Error
12/19/06 7:02:45	**44.4**	0.1	-0.7	0.0	-0.03	0.02	**44.5 45.0 ppm NO**
12/19/06 7:03:00	**44.5**	0.1	-0.8	0.0	-0.03	0.02	
12/19/06 7:03:15	**44.6**	0.1	-0.7	0.0	-0.03	0.02	
12/19/06 7:03:30	**44.6**	0.1	-0.7	0.0	-0.03	0.02	
12/19/06 7:03:45	43.8	0.1	-0.7	0.0	-0.03	0.01	
12/19/06 7:04:00	38.4	0.1	-0.7	0.0	0.13	0.01	
12/19/06 7:04:15	35.5	0.1	-0.6	0.0	3.39	0.06	
12/19/06 7:04:30	45.1	0.1	-0.3	0.0	3.48	0.06	
12/19/06 7:04:45	46.6	0.1	0.0	0.0	0.70	0.02	
12/19/06 7:05:00	46.7	0.1	0.0	0.0	0.09	0.01	
12/19/06 7:05:15	47.3	0.1	0.0	0.1	0.02	0.01	
12/19/06 7:05:30	47.6	0.1	0.1	0.2	-0.01	0.01	
12/19/06 7:05:45	48.1	0.1	0.0	0.1	-0.02	0.01	
12/19/06 7:06:00	48.3	0.1	0.0	0.0	-0.03	0.01	
12/19/06 7:06:15	48.6	0.1	0.0	0.0	-0.03	0.01	
12/19/06 7:06:30	48.8	0.1	0.0	0.1	-0.03	0.01	
12/19/06 7:06:45	48.9	0.1	0.1	0.0	-0.03	0.02	
12/19/06 7:07:00	49.2	0.1	0.0	0.0	-0.03	0.02	
12/19/06 7:07:15	49.4	0.1	0.1	0.0	-0.03	0.02	NO_x Converter Check
12/19/06 7:07:30	**49.5**	0.1	0.1	0.0	-0.03	0.02	**49.6 50.0 ppm NO_2/N_2**
12/19/06 7:07:45	**49.6**	0.1	0.2	0.0	-0.03	0.02	**Cyl #CC198389**
12/19/06 7:08:00	**49.7**	0.1	0.1	0.0	-0.03	0.02	
12/19/06 7:08:15	**49.6**	0.1	0.1	0.0	-0.03	0.02	**99.1 % Conversion**
12/19/06 7:08:30	49.1	0.1	0.2	5.7	-0.03	0.02	
12/19/06 7:08:45	29.9	2.7	0.1	55.1	0.19	0.02	
12/19/06 7:09:00	15.3	27.1	-0.1	0.7	6.01	0.04	
12/19/06 7:09:15	-0.3	27.6	-0.4	0.0	15.18	0.07	
12/19/06 7:09:30	4.0	10.3	-0.5	0.0	14.00	0.09	
12/19/06 7:09:45	2.4	3.0	-0.5	0.0	4.69	0.05	
12/19/06 7:10:00	0.6	1.3	-0.6	0.0	0.89	0.03	
12/19/06 7:10:15	0.5	1.1	-0.6	0.0	0.36	0.02	
12/19/06 7:10:30	0.4	1.1	-0.5	0.0	0.21	0.03	
12/19/06 7:10:45	0.4	1.1	-0.5	0.0	0.14	0.02	
12/19/06 7:11:00	0.4	1.1	-0.4	0.0	0.10	0.03	
12/19/06 7:11:15	0.4	1.1	-0.4	0.0	0.09	0.03	
12/19/06 7:11:30	0.3	1.1	-0.4	0.0	0.08	0.02	
12/19/06 7:11:45	0.3	1.1	-0.3	0.0	0.08	0.03	
12/19/06 7:12:00	0.3	1.1	-0.2	0.0	0.08	0.03	
12/19/06 7:12:15	0.3	1.1	-0.3	0.0	0.08	0.03	
12/19/06 7:12:30	0.3	1.1	-0.2	0.0	0.08	0.03	
12/19/06 7:12:45	0.3	1.1	-0.1	0.0	0.08	0.03	System Bias
12/19/06 7:13:00	**0.3**	1.3	**-0.2**	**0.0**	**0.08**	**0.03**	**0.0 Zero NO_x**

Total Petrochemicals USA, Inc.: Port Arthur, Texas
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Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 7:13:15	**0.3**	**1.2**	**-0.2**	**0.0**	**0.08**	**0.03**	**1.2 Zero CO**
12/19/06 7:13:30	**0.3**	**1.1**	**-0.2**	**0.0**	**0.08**	**0.03**	**-0.2 Zero SO_2**
12/19/06 7:13:45	**-0.7**	**1.1**	**-0.1**	**0.0**	**0.08**	**0.03**	**0.0 Zero C_3H_8/N_2**
12/19/06 7:14:00	-0.2	1.1	-0.1	0.0	0.22	0.03	**0.08 Zero O_2**
12/19/06 7:14:15	7.5	1.1	0.3	0.0	1.95	0.03	**0.03 Zero CO_2**
12/19/06 7:14:30	3.9	1.1	0.6	0.0	3.80	0.03	
12/19/06 7:14:45	2.1	1.1	0.5	0.0	4.34	0.03	
12/19/06 7:15:00	1.6	1.1	0.3	0.0	4.45	0.03	
12/19/06 7:15:15	1.2	1.1	0.2	0.0	4.48	0.03	
12/19/06 7:15:30	1.1	1.1	0.2	0.0	4.50	0.03	
12/19/06 7:15:45	0.9	1.1	0.2	0.0	4.51	0.03	
12/19/06 7:16:00	0.9	1.1	0.1	0.0	4.52	0.03	
12/19/06 7:16:15	0.8	1.1	0.0	0.0	4.53	0.03	
12/19/06 7:16:30	0.7	1.1	0.1	0.0	4.54	0.03	System Bias
12/19/06 7:16:45	0.7	1.1	0.0	0.0	**4.55**	0.03	**4.56 4.50% O_2**
12/19/06 7:17:00	0.6	1.1	-0.1	0.0	**4.56**	0.03	
12/19/06 7:17:15	0.6	1.1	0.0	0.0	**4.56**	0.03	
12/19/06 7:17:30	0.6	1.1	-0.1	0.0	**4.56**	0.03	
12/19/06 7:17:45	0.7	1.1	-0.2	0.0	4.60	0.03	
12/19/06 7:18:00	0.8	0.3	-0.2	0.0	6.87	0.06	
12/19/06 7:18:15	0.8	0.1	-0.2	0.0	7.26	1.04	
12/19/06 7:18:30	0.4	0.1	-0.2	0.0	2.59	3.20	
12/19/06 7:18:45	0.4	0.1	-0.2	0.0	0.61	4.12	
12/19/06 7:19:00	0.4	0.1	-0.2	0.0	0.25	4.29	
12/19/06 7:19:15	0.4	0.1	-0.2	0.0	0.16	4.31	
12/19/06 7:19:30	0.4	0.1	-0.2	0.0	0.12	4.36	
12/19/06 7:19:45	0.4	0.1	-0.3	0.0	0.10	4.44	
12/19/06 7:20:00	0.4	0.1	-0.3	0.0	0.09	4.50	
12/19/06 7:20:15	0.4	0.1	-0.3	0.0	0.08	4.54	
12/19/06 7:20:30	0.4	0.1	-0.3	0.0	0.08	4.56	
12/19/06 7:20:45	0.4	0.1	-0.3	0.0	0.08	4.56	System Bias
12/19/06 7:21:00	0.4	0.1	-0.3	0.0	0.08	**4.57**	**4.57 4.50% CO_2**
12/19/06 7:21:15	0.4	0.1	-0.3	0.0	0.07	**4.57**	
12/19/06 7:21:30	0.4	0.1	-0.4	0.1	0.08	**4.56**	
12/19/06 7:21:45	0.4	0.5	-0.3	0.0	0.08	**4.57**	
12/19/06 7:22:00	0.5	28.6	-0.3	0.0	0.78	4.28	
12/19/06 7:22:15	0.7	100.0	-0.3	0.0	6.33	2.97	
12/19/06 7:22:30	1.0	188.4	-0.3	0.0	4.58	1.89	
12/19/06 7:22:45	0.8	212.3	-0.3	0.0	1.03	0.59	
12/19/06 7:23:00	0.7	217.9	-0.3	0.0	0.26	0.18	
12/19/06 7:23:15	0.6	218.8	-0.3	0.0	0.17	0.10	System Bias
12/19/06 7:23:30	0.6	**219.4**	-0.3	0.0	0.13	0.08	**219.4 225.0 ppm CO**
12/19/06 7:23:45	0.5	**219.4**	-0.3	0.0	0.10	0.07	
12/19/06 7:24:00	0.5	**219.2**	-0.4	0.0	0.09	0.06	
12/19/06 7:24:15	0.5	**219.4**	-0.4	0.0	0.09	0.06	
12/19/06 7:24:30	0.5	219.9	-0.5	0.0	0.09	0.06	
12/19/06 7:24:45	0.5	203.4	-0.4	0.0	0.09	0.05	
12/19/06 7:25:00	0.5	143.7	-0.4	0.0	0.25	0.05	
12/19/06 7:25:15	3.3	98.9	-0.4	0.0	5.03	0.06	
12/19/06 7:25:30	10.7	50.6	-0.4	0.0	7.00	0.07	
12/19/06 7:25:45	9.0	28.2	-0.3	0.0	2.11	0.07	
12/19/06 7:26:00	14.3	10.6	-0.3	0.0	0.44	0.06	
12/19/06 7:26:15	28.5	5.2	-0.4	0.0	0.24	0.05	
12/19/06 7:26:30	33.8	3.3	-0.3	0.0	0.16	0.05	
12/19/06 7:26:45	38.1	2.7	-0.3	0.0	0.12	0.05	
12/19/06 7:27:00	40.2	2.3	-0.2	0.0	0.10	0.04	
12/19/06 7:27:15	42.0	2.1	-0.2	0.0	0.10	0.04	
12/19/06 7:27:30	43.5	2.1	-0.2	0.0	0.09	0.04	
12/19/06 7:27:45	45.4	2.1	-0.2	0.0	0.09	0.04	
12/19/06 7:28:00	47.1	1.8	-0.3	0.0	0.09	0.04	
12/19/06 7:28:15	48.3	1.6	-0.2	0.0	0.09	0.04	
12/19/06 7:28:30	48.3	1.6	-0.3	0.0	0.09	0.04	
12/19/06 7:28:45	46.6	1.6	-0.3	0.0	0.09	0.04	
12/19/06 7:29:00	45.2	1.6	-0.4	0.0	0.09	0.04	
12/19/06 7:29:15	44.3	1.6	-0.3	0.0	0.09	0.04	
12/19/06 7:29:30	43.8	1.6	-0.4	0.0	0.09	0.04	System Bias
12/19/06 7:29:45	**43.6**	1.6	-0.4	0.0	0.08	0.04	**43.3 45.0 ppm NO**
12/19/06 7:30:00	**43.4**	1.6	-0.5	0.0	0.08	0.04	
12/19/06 7:30:15	**43.2**	1.2	-0.4	0.0	0.08	0.04	
12/19/06 7:30:30	**43.2**	1.3	-0.4	0.0	0.08	0.04	
12/19/06 7:30:45	43.1	1.6	-0.5	0.0	0.08	0.04	
12/19/06 7:31:00	43.3	1.6	-0.5	0.1	0.08	0.04	
12/19/06 7:31:15	37.2	1.6	-0.4	2.6	0.14	0.04	
12/19/06 7:31:30	22.4	1.1	-0.5	14.8	3.88	0.05	
12/19/06 7:31:45	56.2	1.5	-0.3	5.4	7.08	0.05	
12/19/06 7:32:00	42.6	1.6	6.6	0.0	2.43	0.04	
12/19/06 7:32:15	7.1	1.6	36.0	0.0	0.46	0.04	
12/19/06 7:32:30	5.1	1.3	71.8	0.0	0.20	0.04	
12/19/06 7:32:45	4.0	1.2	96.3	0.0	0.15	0.04	
12/19/06 7:33:00	3.3	1.3	109.4	0.0	0.12	0.04	
12/19/06 7:33:15	2.9	1.6	115.6	0.0	0.10	0.04	
12/19/06 7:33:30	2.6	1.1	118.5	0.0	0.09	0.04	
12/19/06 7:33:45	2.4	1.1	120.1	0.0	0.09	0.04	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 7:34:00	2.2	1.6	121.3	0.0	0.09	0.04	
12/19/06 7:34:15	2.0	1.6	122.2	0.0	0.08	0.04	
12/19/06 7:34:30	1.9	1.1	123.0	0.0	0.08	0.04	
12/19/06 7:34:45	1.7	1.5	123.8	0.0	0.08	0.04	
12/19/06 7:35:00	1.6	1.1	124.5	0.0	0.08	0.05	
12/19/06 7:35:15	1.6	1.5	125.2	0.0	0.08	0.05	
12/19/06 7:35:30	1.5	1.1	125.8	0.0	0.08	0.04	
12/19/06 7:35:45	1.4	1.1	126.5	0.0	0.08	0.04	
12/19/06 7:36:00	1.3	1.3	127.1	0.0	0.08	0.04	
12/19/06 7:36:15	1.3	1.6	127.8	0.0	0.08	0.04	
12/19/06 7:36:30	1.2	1.1	128.3	0.0	0.08	0.04	
12/19/06 7:36:45	1.2	1.1	128.7	0.0	0.08	0.04	
12/19/06 7:37:00	1.1	1.3	129.1	0.0	0.08	0.04	
12/19/06 7:37:15	1.1	1.6	129.5	0.0	0.08	0.04	
12/19/06 7:37:30	1.0	1.3	129.9	0.0	0.08	0.04	
12/19/06 7:37:45	1.0	1.1	130.2	0.0	0.08	0.04	
12/19/06 7:38:00	1.0	1.3	130.3	0.0	0.08	0.04	
12/19/06 7:38:15	1.0	1.5	130.5	0.0	0.08	0.04	
12/19/06 7:38:30	0.9	1.3	130.8	0.0	0.08	0.04	
12/19/06 7:38:45	0.9	1.1	130.9	0.1	0.08	0.04	System Bias
12/19/06 7:39:00	0.8	1.3	**131.1**	0.1	0.08	0.04	**131.3 135.0 ppm SO_2**
12/19/06 7:39:15	0.8	1.5	**131.3**	0.2	0.08	0.04	
12/19/06 7:39:30	0.8	8.1	**131.4**	5.1	0.09	0.04	
12/19/06 7:39:45	0.6	50.6	**131.6**	22.0	0.10	0.04	
12/19/06 7:40:00	2.3	67.8	127.9	98.8	0.43	1.07	
12/19/06 7:40:15	4.1	39.4	115.4	98.8	1.35	2.64	
12/19/06 7:40:30	1.6	8.1	97.6	98.8	0.87	1.30	
12/19/06 7:40:45	0.9	2.6	63.0	94.5	0.30	0.27	
12/19/06 7:41:00	0.8	1.6	32.9	85.6	0.20	0.08	
12/19/06 7:41:15	0.7	1.6	18.1	84.6	0.19	0.05	
12/19/06 7:41:30	0.6	1.6	11.7	84.4	0.16	0.04	
12/19/06 7:41:45	0.6	1.2	8.5	85.0	0.13	0.04	
12/19/06 7:42:00	0.5	1.3	6.6	86.1	0.11	0.04	
12/19/06 7:42:15	0.5	1.6	5.3	85.8	0.10	0.04	
12/19/06 7:42:30	0.4	1.3	4.5	85.6	0.10	0.04	
12/19/06 7:42:45	0.3	1.5	3.8	85.6	0.10	0.04	
12/19/06 7:43:00	0.3	1.1	3.3	85.7	0.10	0.04	
12/19/06 7:43:15	0.3	1.2	2.8	85.8	0.10	0.04	
12/19/06 7:43:30	0.2	1.3	2.4	85.8	0.10	0.04	Calibration
12/19/06 7:43:45	0.2	1.3	2.0	**85.9**	0.10	0.04	**86.0 85.0 ppm C_3H_8/N_2**
12/19/06 7:44:00	0.2	1.1	1.7	**86.0**	0.10	0.04	
12/19/06 7:44:15	0.2	1.1	1.5	**86.1**	0.10	0.04	
12/19/06 7:44:30	0.2	1.3	1.4	**86.1**	0.09	0.04	
12/19/06 7:44:45	0.2	1.5	1.2	65.1	0.09	0.04	
12/19/06 7:45:00	0.1	1.1	1.1	50.4	0.10	0.04	
12/19/06 7:45:15	0.1	1.2	1.0	50.6	0.10	0.04	Calibration
12/19/06 7:45:30	0.1	1.6	0.9	**50.6**	0.10	0.04	**50.6 50.0 ppm C_3H_8/N_2**
12/19/06 7:45:45	0.1	1.5	0.9	**50.6**	0.10	0.04	
12/19/06 7:46:00	0.1	1.1	0.7	**50.6**	0.10	0.04	
12/19/06 7:46:15	0.1	1.3	0.7	**50.6**	0.10	0.05	
12/19/06 7:46:30	0.1	1.3	0.7	45.8	0.10	0.04	
12/19/06 7:46:45	0.1	1.6	0.6	24.8	0.10	0.04	
12/19/06 7:47:00	0.1	1.3	0.6	25.3	0.10	0.04	Calibration
12/19/06 7:47:15	0.1	1.1	0.5	**25.3**	0.10	0.04	**25.3 25.0 ppm C_3H_8/N_2**
12/19/06 7:47:30	0.1	1.3	0.4	**25.3**	0.10	0.04	
12/19/06 7:47:45	0.1	1.6	0.3	**25.3**	0.09	0.05	
12/19/06 7:48:00	0.1	1.3	0.3	**25.2**	0.09	0.04	
12/19/06 7:48:15	0.1	3.1	0.3	16.1	0.09	0.04	
12/19/06 7:48:30	1.3	33.1	0.3	6.5	0.10	0.05	
12/19/06 7:48:45	6.9	114.0	1.0	6.3	0.17	0.36	
12/19/06 7:49:00	10.6	178.7	9.8	6.3	1.30	3.07	
12/19/06 7:49:15	12.6	201.8	27.6	6.2	2.63	5.56	
12/19/06 7:49:30	12.7	207.2	44.8	6.2	3.20	6.49	
12/19/06 7:49:45	12.8	207.1	54.5	6.0	3.32	6.61	
12/19/06 7:50:00	12.8	208.7	59.0	6.0	3.36	6.64	
12/19/06 7:50:15	12.8	210.7	61.2	5.7	3.36	6.71	
12/19/06 7:50:30	12.8	210.9	62.3	5.7	3.35	6.73	
12/19/06 7:50:45	12.9	209.7	63.3	5.8	3.34	6.68	
12/19/06 7:51:00	12.9	210.4	64.3	5.6	3.34	6.67	
12/19/06 7:51:15	12.9	212.7	65.2	5.8	3.35	6.72	
12/19/06 7:51:30	12.9	213.4	65.6	5.5	3.34	6.76	
12/19/06 7:51:45	12.9	212.9	66.1	5.7	3.34	6.71	
12/19/06 7:52:00	12.9	211.9	66.7	5.7	3.33	6.67	
12/19/06 7:52:15	13.0	212.7	67.3	5.6	3.34	6.72	
12/19/06 7:52:30	13.2	217.4	67.5	5.4	3.34	6.78	
12/19/06 7:52:45	12.9	219.4	67.2	5.7	3.32	6.76	
12/19/06 7:53:00	12.9	217.7	66.0	5.7	3.30	6.69	
12/19/06 7:53:15	13.0	217.3	65.0	5.7	3.30	6.69	
12/19/06 7:53:30	13.4	218.2	64.4	5.8	3.31	6.76	
12/19/06 7:53:45	13.2	220.7	64.1	5.8	3.32	6.80	
12/19/06 7:54:00	13.1	221.7	63.6	5.5	3.30	6.76	
12/19/06 7:54:15	13.1	219.4	62.8	5.6	3.28	6.71	
12/19/06 7:54:30	13.2	216.9	62.1	5.6	3.27	6.71	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 7:54:45	13.1	217.0	62.3	5.7	3.30	6.77	
12/19/06 7:55:00	13.1	218.7	62.9	5.8	3.32	6.81	
12/19/06 7:55:15	13.0	219.7	63.2	5.6	3.31	6.79	
12/19/06 7:55:30	12.9	218.4	63.3	5.3	3.29	6.72	
12/19/06 7:55:45	13.0	216.5	63.1	5.7	3.29	6.70	
12/19/06 7:56:00	13.0	216.9	62.3	5.6	3.31	6.74	
12/19/06 7:56:15	13.1	218.5	61.4	5.3	3.33	6.79	
12/19/06 7:56:30	13.0	217.2	60.4	5.7	3.33	6.77	
12/19/06 7:56:45	13.0	213.9	59.1	5.6	3.33	6.71	
12/19/06 7:57:00	13.1	211.7	57.8	5.6	3.34	6.69	
12/19/06 7:57:15	13.1	212.5	57.0	5.5	3.36	6.73	
12/19/06 7:57:30	13.0	214.2	56.2	5.4	3.38	6.78	
12/19/06 7:57:45	13.0	214.7	55.2	5.5	3.36	6.76	
12/19/06 7:58:00	13.1	214.4	54.2	5.5	3.34	6.71	
12/19/06 7:58:15	13.0	213.5	53.5	5.5	3.34	6.69	
12/19/06 7:58:30	13.1	213.4	52.9	5.3	3.35	6.74	
12/19/06 7:58:45	13.1	210.2	52.4	4.8	3.35	6.79	
12/19/06 7:59:00	11.9	197.4	51.8	5.1	3.34	6.76	
12/19/06 7:59:15	11.2	192.2	50.4	4.9	3.95	6.40	
12/19/06 7:59:30	12.2	194.2	46.9	4.9	5.22	6.07	
12/19/06 7:59:45	12.5	196.9	45.0	5.1	4.64	6.35	
12/19/06 8:00:00	12.6	198.9	44.7	5.0	4.27	6.50	
12/19/06 8:00:15	12.6	199.7	44.9	4.9	4.16	6.49	
12/19/06 8:00:30	12.5	198.9	45.0	4.9	4.14	6.45	
12/19/06 8:00:45	12.5	196.7	45.1	4.7	4.14	6.46	
12/19/06 8:01:00	11.8	192.4	45.3	4.8	4.15	6.52	
12/19/06 8:01:15	11.5	192.8	45.7	4.7	4.51	6.37	
12/19/06 8:01:30	12.0	194.2	45.6	4.9	5.25	6.11	
12/19/06 8:01:45	12.3	196.2	44.6	5.0	4.84	6.23	
12/19/06 8:02:00	12.3	199.4	44.5	5.0	4.50	6.34	
12/19/06 8:02:15	12.2	202.1	45.3	4.8	4.46	6.42	
12/19/06 8:02:30	12.1	202.7	46.1	4.9	4.45	6.42	
12/19/06 8:02:45	12.1	200.9	46.3	4.9	4.46	6.36	
12/19/06 8:03:00	12.1	199.9	46.8	4.9	4.48	6.31	
12/19/06 8:03:15	12.1	201.6	47.5	4.9	4.53	6.34	
12/19/06 8:03:30	12.1	203.2	46.7	5.0	4.52	6.41	
12/19/06 8:03:45	12.1	205.1	46.6	5.0	4.51	6.40	
12/19/06 8:04:00	12.3	207.9	46.5	5.0	4.51	6.33	
12/19/06 8:04:15	12.6	212.2	46.8	5.1	4.37	6.37	
12/19/06 8:04:30	12.9	216.4	48.2	5.1	3.79	6.62	
12/19/06 8:04:45	13.0	219.4	49.8	5.1	3.47	6.76	
12/19/06 8:05:00	13.0	219.7	50.7	5.0	3.39	6.74	
12/19/06 8:05:15	12.9	218.4	51.6	4.8	3.36	6.68	
12/19/06 8:05:30	13.1	217.9	52.6	5.2	3.35	6.69	
12/19/06 8:05:45	12.9	220.2	53.1	5.0	3.36	6.75	
12/19/06 8:06:00	12.9	221.7	53.0	4.9	3.37	6.78	
12/19/06 8:06:15	12.8	221.2	52.8	4.6	3.36	6.73	
12/19/06 8:06:30	12.9	218.7	52.9	4.8	3.33	6.67	
12/19/06 8:06:45	13.0	217.4	53.3	4.7	3.32	6.70	
12/19/06 8:07:00	13.0	217.7	53.6	4.8	3.32	6.76	
12/19/06 8:07:15	12.9	218.3	53.9	4.4	3.31	6.79	
12/19/06 8:07:30	12.8	217.2	54.1	4.5	3.29	6.75	
12/19/06 8:07:45	12.9	213.8	53.9	4.6	3.28	6.69	
12/19/06 8:08:00	13.0	212.2	53.8	4.7	3.29	6.71	
12/19/06 8:08:15	12.9	213.4	53.7	4.8	3.31	6.78	Stratification Check - Point #1
12/19/06 8:08:30	**12.9**	**215.4**	**53.8**	**4.7**	**3.31**	**6.80**	**12.8 NO_x**
12/19/06 8:08:45	**12.8**	**215.2**	**53.8**	**4.7**	**3.30**	**6.74**	**213.9 CO**
12/19/06 8:09:00	**12.9**	**212.9**	**53.7**	**4.7**	**3.29**	**6.71**	**53.9 SO_2**
12/19/06 8:09:15	**12.9**	**211.9**	**54.5**	**4.9**	**3.30**	**6.74**	**4.7 VOC**
12/19/06 8:09:30	12.9	214.4	53.9	5.0	3.32	6.80	**3.30 O_2**
12/19/06 8:09:45	12.8	218.0	53.4	5.1	3.32	6.80	**6.75 CO_2**
12/19/06 8:10:00	12.8	218.4	53.1	5.0	3.31	6.74	
12/19/06 8:10:15	12.8	215.9	53.2	5.2	3.29	6.71	**-0.32 % Diff. From Avg. NO_x**
12/19/06 8:10:30	12.9	215.9	53.7	4.8	3.26	6.73	**0.77 % Diff. From Avg. CO**
12/19/06 8:10:45	12.9	215.3	54.3	4.7	3.27	6.80	**1.28 % Diff. From Avg. SO_2**
12/19/06 8:11:00	13.0	212.9	54.8	5.1	3.28	6.83	**-1.66 % Diff. From Avg. VOC**
12/19/06 8:11:15	13.1	213.2	54.8	5.1	3.28	6.78	**1.84 % Diff. From Avg. O_2**
12/19/06 8:11:30	13.1	216.2	54.9	4.7	3.28	6.71	**-0.40 % Diff. From Avg. CO_2**
12/19/06 8:11:45	12.9	217.4	55.0	4.7	3.25	6.70	
12/19/06 8:12:00	12.9	215.7	55.2	4.8	3.22	6.75	
12/19/06 8:12:15	13.0	214.0	55.2	4.8	3.23	6.81	
12/19/06 8:12:30	13.0	213.9	55.1	4.9	3.22	6.83	
12/19/06 8:12:45	12.9	215.0	54.8	4.7	3.21	6.80	
12/19/06 8:13:00	13.0	214.7	54.5	4.9	3.20	6.74	
12/19/06 8:13:15	13.0	214.5	54.4	4.8	3.19	6.73	Stratification Check - Point #2
12/19/06 8:13:30	**12.9**	**214.7**	**54.4**	**4.9**	**3.20**	**6.76**	**12.9 NO_x**
12/19/06 8:13:45	**13.0**	**214.4**	**54.2**	**5.1**	**3.21**	**6.83**	**214.1 CO**
12/19/06 8:14:00	**12.9**	**213.9**	**53.6**	**4.9**	**3.22**	**6.82**	**53.7 SO_2**
12/19/06 8:14:15	**12.8**	**213.4**	**52.6**	**5.0**	**3.23**	**6.76**	**5.0 VOC**
12/19/06 8:14:30	12.9	213.2	51.6	5.1	3.22	6.72	**3.22 O_2**
12/19/06 8:14:45	12.9	212.3	51.2	4.9	3.21	6.74	**6.79 CO_2**
12/19/06 8:15:00	12.9	212.4	51.2	5.2	3.21	6.80	
12/19/06 8:15:15	13.0	211.7	51.3	5.1	3.22	6.83	**0.02 % Diff. From Avg. NO_x**

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 8:15:30	13.0	209.7	51.3	4.9	3.23	6.78	0.89 % Diff. From Avg. CO
12/19/06 8:15:45	13.0	208.4	51.4	4.8	3.23	6.73	0.89 % Diff. From Avg. SO_2
12/19/06 8:16:00	13.0	207.9	51.6	4.9	3.22	6.72	2.77 % Diff. From Avg. VOC
12/19/06 8:16:15	13.1	207.7	51.9	4.9	3.20	6.76	-0.68 % Diff. From Avg. O_2
12/19/06 8:16:30	13.1	206.7	52.3	5.0	3.22	6.82	0.21 % Diff. From Avg. CO_2
12/19/06 8:16:45	13.0	207.1	52.3	5.0	3.22	6.82	
12/19/06 8:17:00	13.0	206.9	52.3	4.9	3.22	6.77	
12/19/06 8:17:15	12.9	207.1	52.2	5.0	3.22	6.73	
12/19/06 8:17:30	12.9	208.9	52.1	4.9	3.21	6.73	
12/19/06 8:17:45	12.9	209.6	52.1	4.7	3.21	6.78	
12/19/06 8:18:00	12.9	208.9	52.3	5.1	3.21	6.84	
12/19/06 8:18:15	12.9	209.3	52.3	4.6	3.21	6.83	Stratification Check - Point #3
12/19/06 8:18:30	**12.9**	**209.2**	**52.1**	**4.8**	**3.21**	**6.79**	**12.9 NO_x**
12/19/06 8:18:45	**12.9**	**208.4**	**51.9**	**4.6**	**3.20**	**6.74**	**208.7 CO**
12/19/06 8:19:00	**13.0**	**207.9**	**52.0**	**5.0**	**3.20**	**6.78**	**52.1 SO_2**
12/19/06 8:19:15	**12.9**	**209.3**	**52.3**	**4.6**	**3.20**	**6.84**	**4.8 VOC**
12/19/06 8:19:30	12.8	210.7	52.8	4.8	3.20	6.85	3.20 O_2
12/19/06 8:19:45	12.8	210.8	53.4	4.7	3.19	6.80	6.79 CO_2
12/19/06 8:20:00	12.8	210.4	53.5	4.5	3.17	6.75	
12/19/06 8:20:15	12.8	210.8	53.6	4.7	3.17	6.77	0.31 % Diff. From Avg. NO_x
12/19/06 8:20:30	12.9	211.9	53.9	4.9	3.18	6.82	-1.66 % Diff. From Avg. CO
12/19/06 8:20:45	12.9	214.9	54.1	4.9	3.19	6.85	-2.16 % Diff. From Avg. SO_2
12/19/06 8:21:00	12.9	216.2	54.2	4.8	3.19	6.82	-0.90 % Diff. From Avg. VOC
12/19/06 8:21:15	12.9	214.0	54.0	4.7	3.18	6.76	-1.16 % Diff. From Avg. O_2
12/19/06 8:21:30	13.0	211.2	53.7	4.7	3.18	6.75	0.19 % Diff. From Avg. CO_2
12/19/06 8:21:45	12.9	210.2	53.8	5.0	3.19	6.80	
12/19/06 8:22:00	12.9	211.2	54.1	4.7	3.20	6.85	
12/19/06 8:22:15	12.8	212.2	54.2	4.8	3.21	6.81	12.9 3 Point Average NO_x
12/19/06 8:22:30	12.7	211.2	54.1	4.8	3.21	6.75	212.2 3 Point Average CO
12/19/06 8:22:45	12.8	209.5	54.1	4.7	3.19	6.72	53.2 3 Point Average SO_2
12/19/06 8:23:00	12.8	209.2	54.0	4.8	3.21	6.75	4.8 3 Point Average VOC
12/19/06 8:23:15	12.8	209.2	54.0	4.9	3.22	6.81	3.24 3 Point Average O_2
12/19/06 8:23:30	12.9	209.7	53.9	4.7	3.22	6.81	6.78 3 Point Average CO_2
12/19/06 8:23:45	12.7	209.3	53.9	4.7	3.22	6.77	
12/19/06 8:24:00	12.8	206.7	54.0	4.6	3.22	6.71	
12/19/06 8:24:15	12.8	204.9	53.8	4.6	3.23	6.73	
12/19/06 8:24:30	12.8	204.7	53.6	4.9	3.24	6.80	
12/19/06 8:24:45	12.8	205.8	53.6	4.7	3.25	6.83	
12/19/06 8:25:00	12.8	206.4	53.6	4.7	3.24	6.79	
12/19/06 8:25:15	12.7	204.2	53.3	4.7	3.22	6.73	
12/19/06 8:25:30	12.8	200.9	53.2	4.9	3.21	6.74	
12/19/06 8:25:45	12.8	200.9	53.1	5.0	3.22	6.79	
12/19/06 8:26:00	12.8	202.4	53.0	4.9	3.23	6.83	
12/19/06 8:26:15	12.8	202.6	52.8	4.8	3.23	6.80	
12/19/06 8:26:30	12.7	200.9	52.7	4.8	3.23	6.74	
12/19/06 8:26:45	12.8	199.7	52.5	5.0	3.23	6.73	
12/19/06 8:27:00	12.8	200.2	52.5	4.9	3.23	6.77	
12/19/06 8:27:15	12.8	201.8	52.7	4.9	3.24	6.82	
12/19/06 8:27:30	12.7	201.4	53.0	4.9	3.23	6.80	
12/19/06 8:27:45	12.7	199.2	53.0	4.9	3.23	6.74	
12/19/06 8:28:00	12.7	198.7	53.1	5.0	3.23	6.72	
12/19/06 8:28:15	12.7	201.6	53.3	5.0	3.23	6.78	
12/19/06 8:28:30	12.7	203.9	53.6	4.9	3.23	6.84	
12/19/06 8:28:45	12.7	204.6	53.8	4.8	3.22	6.81	
12/19/06 8:29:00	12.7	203.2	53.9	5.0	3.21	6.75	
12/19/06 8:29:15	12.8	202.1	54.1	4.9	3.22	6.74	
12/19/06 8:29:30	12.8	202.7	54.0	5.0	3.23	6.80	
12/19/06 8:29:45	12.8	205.0	53.7	4.9	3.24	6.83	
12/19/06 8:30:00	12.8	206.4	53.3	4.6	3.24	6.79	
12/19/06 8:30:15	12.7	206.4	53.0	4.7	3.22	6.73	
12/19/06 8:30:30	12.9	206.2	52.7	4.7	3.21	6.74	
12/19/06 8:30:45	12.9	204.9	52.6	4.6	3.20	6.79	
12/19/06 8:31:00	12.9	204.9	52.7	5.0	3.21	6.84	
12/19/06 8:31:15	12.9	207.4	52.8	4.7	3.22	6.80	
12/19/06 8:31:30	12.8	208.2	52.7	4.9	3.22	6.74	
12/19/06 8:31:45	12.9	207.1	52.6	4.7	3.21	6.71	
12/19/06 8:32:00	12.9	205.2	52.7	4.7	3.21	6.73	
12/19/06 8:32:15	13.0	205.2	53.0	4.8	3.22	6.79	
12/19/06 8:32:30	13.1	206.9	52.9	4.9	3.23	6.81	
12/19/06 8:32:45	12.9	209.8	52.8	4.6	3.23	6.76	
12/19/06 8:33:00	12.9	207.9	52.9	4.6	3.21	6.71	
12/19/06 8:33:15	13.0	203.9	53.3	4.5	3.20	6.70	
12/19/06 8:33:30	13.1	204.2	53.5	4.8	3.22	6.75	
12/19/06 8:33:45	13.0	204.7	53.6	4.9	3.22	6.80	
12/19/06 8:34:00	13.1	204.4	53.7	4.6	3.23	6.78	
12/19/06 8:34:15	13.1	206.3	53.6	4.8	3.23	6.72	
12/19/06 8:34:30	13.1	207.7	53.5	4.5	3.21	6.70	
12/19/06 8:34:45	13.1	206.8	53.6	4.6	3.21	6.77	
12/19/06 8:35:00	13.1	206.2	53.8	4.9	3.21	6.81	
12/19/06 8:35:15	13.1	206.1	54.1	4.6	3.22	6.76	
12/19/06 8:35:30	13.1	204.4	54.1	4.6	3.23	6.70	
12/19/06 8:35:45	13.2	202.3	54.0	4.6	3.21	6.71	
12/19/06 8:36:00	13.1	202.4	54.2	4.6	3.22	6.78	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 11:01:30	11.7	206.4	51.9	4.1	3.19	6.77	
12/19/06 11:01:45	11.5	204.7	50.9	4.0	3.18	6.71	
12/19/06 11:02:00	11.7	204.7	49.5	4.2	3.18	6.70	
12/19/06 11:02:15	11.8	206.2	49.8	4.2	3.19	6.76	
12/19/06 11:02:30	11.7	204.2	50.8	50.9	3.20	6.80	
12/19/06 11:02:45	12.0	173.2	51.6	3.7	3.18	6.78	
12/19/06 11:03:00	14.5	93.0	51.4	0.6	3.26	6.45	
12/19/06 11:03:15	6.6	28.8	44.8	0.5	3.33	3.60	
12/19/06 11:03:30	1.2	6.6	30.6	0.4	1.54	1.01	
12/19/06 11:03:45	0.7	1.8	17.4	0.3	0.37	0.24	
12/19/06 11:04:00	0.5	1.6	10.8	0.3	0.17	0.12	
12/19/06 11:04:15	0.4	1.6	8.0	0.3	0.14	0.09	
12/19/06 11:04:30	0.4	1.6	6.7	0.3	0.13	0.08	
12/19/06 11:04:45	0.3	1.3	5.7	0.2	0.13	0.08	
12/19/06 11:05:00	0.3	1.5	4.8	0.3	0.12	0.07	
12/19/06 11:05:15	0.2	1.6	4.0	0.2	0.12	0.06	
12/19/06 11:05:30	0.2	1.6	3.3	0.2	0.11	0.06	
12/19/06 11:05:45	0.2	1.3	2.8	0.2	0.11	0.06	
12/19/06 11:06:00	0.2	1.5	2.2	0.2	0.11	0.06	
12/19/06 11:06:15	0.2	1.6	1.7	0.2	0.11	0.05	
12/19/06 11:06:30	0.2	1.6	1.3	0.2	0.11	0.05	
12/19/06 11:06:45	0.1	1.6	1.1	0.2	0.11	0.05	
12/19/06 11:07:00	0.1	1.6	0.9	0.2	0.11	0.05	
12/19/06 11:07:15	0.1	1.6	0.8	0.2	0.11	0.05	
12/19/06 11:07:30	0.1	1.6	0.6	0.3	0.11	0.05	
12/19/06 11:07:45	0.1	1.6	0.6	0.2	0.11	0.05	
12/19/06 11:08:00	0.1	1.5	0.5	0.2	0.11	0.05	
12/19/06 11:08:15	0.1	1.3	0.5	0.2	0.11	0.05	
12/19/06 11:08:30	0.1	1.6	0.4	0.2	0.11	0.05	
12/19/06 11:08:45	0.1	1.6	0.3	0.2	0.11	0.05	
12/19/06 11:09:00	0.1	1.6	0.3	0.2	0.11	0.05	
12/19/06 11:09:15	0.1	1.6	0.3	0.2	0.11	0.04	
12/19/06 11:09:30	0.1	1.6	0.2	0.2	0.10	0.04	
12/19/06 11:09:45	0.1	1.6	0.2	0.2	0.11	0.04	System Bias
12/19/06 11:10:00	**0.1**	**1.6**	**0.2**	**0.2**	**0.11**	**0.04**	**0.1 Zero NO_x**
12/19/06 11:10:15	**0.1**	**1.6**	**0.1**	**0.2**	**0.10**	**0.04**	**1.6 Zero CO**
12/19/06 11:10:30	**0.1**	**1.6**	**0.1**	**0.2**	**0.11**	**0.04**	**0.1 Zero SO_2**
12/19/06 11:10:45	**0.1**	**1.6**	**0.1**	**0.1**	**0.10**	**0.04**	**0.2 Zero C_3H_8/N_2**
12/19/06 11:11:00	0.1	1.6	0.1	1.5	0.10	0.04	**0.10 Zero O_2**
12/19/06 11:11:15	0.1	2.6	0.1	1.4	0.10	0.04	**0.04 Zero CO_2**
12/19/06 11:11:30	2.9	4.6	0.0	0.2	0.10	0.04	
12/19/06 11:11:45	6.8	4.1	0.0	0.2	0.52	0.04	
12/19/06 11:12:00	2.0	2.7	0.1	0.2	2.64	0.04	
12/19/06 11:12:15	0.8	1.8	0.1	0.1	4.06	0.04	
12/19/06 11:12:30	0.5	1.6	0.1	0.2	4.38	0.04	
12/19/06 11:12:45	0.3	1.6	0.0	0.2	4.43	0.04	
12/19/06 11:13:00	0.3	1.6	0.0	0.2	4.44	0.04	
12/19/06 11:13:15	0.2	1.6	-0.1	0.1	4.45	0.05	
12/19/06 11:13:30	0.2	1.6	0.0	0.1	4.46	0.04	
12/19/06 11:13:45	0.2	1.6	-0.1	0.1	4.48	0.05	
12/19/06 11:14:00	0.2	1.6	-0.1	0.1	4.50	0.05	
12/19/06 11:14:15	0.2	4.6	-0.1	2.3	4.53	0.05	
12/19/06 11:14:30	1.6	36.7	-0.1	0.5	4.55	0.05	
12/19/06 11:14:45	3.5	47.1	0.3	0.3	4.48	0.69	
12/19/06 11:15:00	1.0	23.2	3.5	0.3	4.12	2.14	
12/19/06 11:15:15	0.4	4.8	6.4	0.3	2.69	2.76	
12/19/06 11:15:30	0.2	1.2	4.9	0.3	0.83	3.72	
12/19/06 11:15:45	0.2	0.6	2.9	0.3	0.27	4.01	
12/19/06 11:16:00	0.2	0.6	1.7	0.3	0.17	4.03	
12/19/06 11:16:15	0.2	0.6	1.1	0.3	0.14	4.06	
12/19/06 11:16:30	0.1	0.6	0.7	0.3	0.12	4.22	
12/19/06 11:16:45	0.1	0.6	0.5	0.3	0.11	4.38	
12/19/06 11:17:00	0.1	0.6	0.3	0.3	0.10	4.48	
12/19/06 11:17:15	0.1	0.6	0.2	0.3	0.10	4.53	
12/19/06 11:17:30	0.1	0.6	0.1	0.3	0.09	4.55	
12/19/06 11:17:45	0.1	0.6	0.2	0.3	0.09	4.57	
12/19/06 11:18:00	0.1	0.6	0.2	0.2	0.09	4.58	
12/19/06 11:18:15	0.1	0.6	0.1	0.3	0.09	4.58	System Bias
12/19/06 11:18:30	0.1	0.6	0.1	0.2	0.09	**4.58**	**4.58 4.50% CO_2**
12/19/06 11:18:45	0.1	0.6	0.1	0.2	0.09	**4.59**	
12/19/06 11:19:00	0.1	2.1	0.0	1.9	0.09	**4.58**	
12/19/06 11:19:15	0.0	22.6	0.1	0.6	0.09	**4.59**	
12/19/06 11:19:30	1.1	42.1	0.2	0.2	0.12	4.64	
12/19/06 11:19:45	2.9	28.6	2.6	0.2	0.76	5.06	
12/19/06 11:20:00	0.7	9.1	6.4	0.2	1.84	3.47	
12/19/06 11:20:15	0.2	2.1	5.7	0.2	3.62	0.99	
12/19/06 11:20:30	0.2	1.6	3.2	0.2	4.38	0.24	
12/19/06 11:20:45	0.2	1.6	1.8	0.2	4.51	0.11	
12/19/06 11:21:00	0.1	1.6	1.1	0.2	4.55	0.08	
12/19/06 11:21:15	0.1	1.6	0.8	0.2	4.58	0.07	
12/19/06 11:21:30	0.1	2.0	0.5	0.5	4.64	0.06	
12/19/06 11:21:45	0.3	6.8	0.4	0.9	4.82	0.06	
12/19/06 11:22:00	0.9	21.2	0.3	1.2	5.13	0.11	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 11:22:15	1.7	36.6	0.5	1.4	5.36	0.51	
12/19/06 11:22:30	2.4	49.3	1.7	1.6	5.53	0.98	
12/19/06 11:22:45	3.1	60.5	4.9	1.9	5.71	1.47	
12/19/06 11:23:00	3.7	71.3	9.0	2.8	5.87	1.88	
12/19/06 11:23:15	4.3	89.0	13.2	3.6	6.01	2.21	
12/19/06 11:23:30	6.1	119.9	17.2	3.4	6.13	2.55	
12/19/06 11:23:45	8.9	143.2	23.4	3.4	5.67	3.72	
12/19/06 11:24:00	9.1	150.7	33.3	3.6	4.81	4.94	
12/19/06 11:24:15	9.2	154.0	41.0	4.1	5.04	5.35	
12/19/06 11:24:30	9.5	161.5	44.6	3.5	6.69	5.41	
12/19/06 11:24:45	10.0	163.2	46.4	0.7	7.14	5.55	
12/19/06 11:25:00	9.8	118.6	48.9	0.2	6.35	5.77	
12/19/06 11:25:15	3.4	52.1	48.8	0.2	7.50	5.17	
12/19/06 11:25:30	1.1	14.4	38.8	0.2	11.57	2.30	
12/19/06 11:25:45	0.8	2.6	23.7	0.2	8.20	0.56	
12/19/06 11:26:00	0.4	1.6	12.9	0.2	5.20	0.15	
12/19/06 11:26:15	0.3	1.6	7.8	0.2	4.70	0.09	
12/19/06 11:26:30	0.3	1.6	5.3	0.2	4.63	0.07	
12/19/06 11:26:45	0.2	1.3	3.7	0.2	4.62	0.06	
12/19/06 11:27:00	0.2	1.3	2.7	0.2	4.60	0.06	
12/19/06 11:27:15	0.1	1.1	2.1	0.2	4.59	0.05	
12/19/06 11:27:30	0.1	1.3	1.6	0.2	4.58	0.05	
12/19/06 11:27:45	0.1	1.3	1.3	0.2	4.58	0.05	System Bias
12/19/06 11:28:00	0.1	1.2	1.1	0.2	**4.58**	0.04	**4.57 4.50% O_2**
12/19/06 11:28:15	0.1	1.1	0.9	0.7	**4.57**	0.04	
12/19/06 11:28:30	0.1	12.6	0.7	3.9	**4.57**	0.04	
12/19/06 11:28:45	2.6	59.8	0.7	0.6	**4.57**	0.06	
12/19/06 11:29:00	9.4	93.4	2.9	0.6	4.38	1.49	
12/19/06 11:29:15	3.1	137.7	11.7	0.3	3.93	3.29	
12/19/06 11:29:30	0.5	186.8	16.3	0.3	3.08	1.59	
12/19/06 11:29:45	0.3	213.2	10.9	0.3	1.15	0.35	
12/19/06 11:30:00	0.2	218.0	5.6	0.3	0.35	0.09	
12/19/06 11:30:15	0.2	219.2	3.1	0.3	0.20	0.06	System Bias
12/19/06 11:30:30	0.2	**219.5**	2.0	0.3	0.16	0.05	**219.9 225.0 ppm CO**
12/19/06 11:30:45	0.1	**219.9**	1.4	0.3	0.15	0.04	
12/19/06 11:31:00	0.1	**220.1**	1.1	0.3	0.13	0.04	
12/19/06 11:31:15	0.1	**220.2**	0.8	1.0	0.12	0.04	
12/19/06 11:31:30	0.1	217.9	0.7	3.8	0.12	0.03	
12/19/06 11:31:45	2.6	209.7	0.7	0.7	0.12	0.06	
12/19/06 11:32:00	9.5	178.5	3.7	30.5	0.67	1.66	
12/19/06 11:32:15	3.9	110.8	13.3	51.2	1.62	3.20	
12/19/06 11:32:30	1.4	43.6	18.9	7.5	1.08	1.50	
12/19/06 11:32:45	1.2	9.8	33.7	1.1	0.45	0.31	
12/19/06 11:33:00	0.8	3.6	65.4	0.9	0.21	0.08	
12/19/06 11:33:15	0.7	2.3	93.2	0.7	0.14	0.05	
12/19/06 11:33:30	0.7	2.0	111.0	0.7	0.12	0.04	
12/19/06 11:33:45	0.6	1.6	119.9	0.7	0.11	0.04	
12/19/06 11:34:00	0.6	1.6	124.1	0.6	0.10	0.04	
12/19/06 11:34:15	0.6	1.6	126.3	0.6	0.10	0.03	
12/19/06 11:34:30	0.6	1.6	127.7	0.6	0.10	0.03	
12/19/06 11:34:45	0.5	1.6	128.7	0.5	0.10	0.03	
12/19/06 11:35:00	0.5	1.2	129.4	0.5	0.09	0.03	
12/19/06 11:35:15	0.5	1.1	130.1	0.5	0.09	0.03	
12/19/06 11:35:30	0.5	1.1	130.7	0.5	0.10	0.03	
12/19/06 11:35:45	0.5	1.1	131.2	0.5	0.10	0.03	
12/19/06 11:36:00	0.5	1.1	131.5	0.5	0.10	0.03	
12/19/06 11:36:15	0.6	1.1	131.8	0.4	0.10	0.03	
12/19/06 11:36:30	0.6	1.1	132.1	0.4	0.10	0.03	
12/19/06 11:36:45	0.5	1.1	132.4	0.4	0.10	0.04	
12/19/06 11:37:00	0.5	1.1	132.7	0.4	0.10	0.03	
12/19/06 11:37:15	0.5	1.1	133.0	0.4	0.10	0.03	
12/19/06 11:37:30	0.4	1.1	133.1	0.4	0.10	0.04	
12/19/06 11:37:45	0.4	1.1	133.3	0.4	0.10	0.03	
12/19/06 11:38:00	0.4	1.1	133.4	0.4	0.10	0.03	System Bias
12/19/06 11:38:15	0.4	1.1	**133.6**	0.4	0.10	0.03	**133.7 135.0 ppm SO_2**
12/19/06 11:38:30	0.4	1.1	**133.7**	0.4	0.09	0.03	
12/19/06 11:38:45	0.4	4.3	**133.9**	2.0	0.09	0.03	
12/19/06 11:39:00	0.2	29.5	**133.8**	0.3	0.09	0.04	
12/19/06 11:39:15	1.5	29.6	131.3	0.2	0.32	0.72	
12/19/06 11:39:30	1.5	11.1	120.9	0.2	0.82	1.44	
12/19/06 11:39:45	0.2	3.1	92.6	0.2	0.44	0.51	
12/19/06 11:40:00	0.1	1.1	53.2	0.2	0.17	0.11	
12/19/06 11:40:15	0.1	1.1	27.3	0.2	0.11	0.05	
12/19/06 11:40:30	0.1	1.1	15.3	0.2	0.10	0.04	
12/19/06 11:40:45	0.1	0.8	10.2	0.2	0.10	0.04	
12/19/06 11:41:00	0.1	1.1	7.6	0.1	0.09	0.04	
12/19/06 11:41:15	0.1	1.1	6.0	0.2	0.09	0.04	
12/19/06 11:41:30	0.1	1.3	5.0	0.5	0.09	0.04	
12/19/06 11:41:45	0.2	2.6	4.3	0.7	0.09	0.02	
12/19/06 11:42:00	0.5	3.3	4.0	0.3	0.10	0.05	
12/19/06 11:42:15	4.1	2.1	5.8	0.3	0.15	0.13	
12/19/06 11:42:30	9.4	1.1	11.1	0.2	0.19	0.07	
12/19/06 11:42:45	17.0	1.1	12.2	0.2	0.14	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 11:43:00	18.0	1.1	8.9	0.1	0.11	0.03	
12/19/06 11:43:15	20.6	1.1	6.2	0.2	0.10	0.02	
12/19/06 11:43:30	22.5	1.1	4.9	0.2	0.10	0.03	
12/19/06 11:43:45	24.5	0.8	4.3	0.2	0.10	0.03	
12/19/06 11:44:00	24.5	1.1	3.9	0.2	0.10	0.03	
12/19/06 11:44:15	36.1	1.1	3.6	0.2	0.09	0.02	
12/19/06 11:44:30	40.7	1.1	3.3	0.1	0.09	0.02	
12/19/06 11:44:45	42.2	1.1	3.1	0.2	0.09	0.02	
12/19/06 11:45:00	42.4	1.1	3.1	0.2	0.09	0.02	
12/19/06 11:45:15	42.8	0.8	3.0	0.2	0.09	0.02	
12/19/06 11:45:30	42.3	0.7	2.9	0.2	0.09	0.02	
12/19/06 11:45:45	42.0	1.1	2.8	0.2	0.09	0.02	
12/19/06 11:46:00	42.7	0.9	2.8	0.2	0.09	0.02	
12/19/06 11:46:15	42.4	0.8	2.7	0.2	0.09	0.02	
12/19/06 11:46:30	42.2	1.1	2.6	0.2	0.09	0.02	
12/19/06 11:46:45	43.0	0.8	2.5	0.2	0.08	0.02	
12/19/06 11:47:00	42.7	0.7	2.5	0.2	0.09	0.02	
12/19/06 11:47:15	42.6	1.1	2.5	0.2	0.08	0.02	
12/19/06 11:47:30	42.4	1.1	2.5	0.2	0.09	0.03	
12/19/06 11:47:45	42.0	1.1	2.6	0.2	0.09	0.03	
12/19/06 11:48:00	42.8	0.9	2.6	0.2	0.09	0.03	
12/19/06 11:48:15	42.4	0.6	2.5	0.2	0.09	0.03	
12/19/06 11:48:30	42.2	0.6	2.6	0.2	0.09	0.03	
12/19/06 11:48:45	42.1	0.6	2.6	0.2	0.08	0.03	
12/19/06 11:49:00	41.9	1.1	2.6	0.2	0.08	0.03	
12/19/06 11:49:15	42.2	1.1	2.6	0.2	0.09	0.03	
12/19/06 11:49:30	42.3	0.9	2.4	0.2	0.09	0.03	
12/19/06 11:49:45	42.2	0.6	2.4	0.2	0.08	0.03	
12/19/06 11:50:00	42.2	0.9	2.4	0.2	0.08	0.03	
12/19/06 11:50:15	42.5	0.8	2.4	0.2	0.08	0.03	
12/19/06 11:50:30	42.1	0.7	2.3	0.2	0.08	0.03	
12/19/06 11:50:45	41.9	0.8	2.2	0.3	0.08	0.03	
12/19/06 11:51:00	42.0	0.9	2.2	0.2	0.09	0.03	
12/19/06 11:51:15	42.2	0.6	2.1	0.3	0.08	0.03	
12/19/06 11:51:30	42.1	0.6	2.0	0.2	0.08	0.03	
12/19/06 11:51:45	42.1	0.8	2.1	0.2	0.08	0.03	System Bias
12/19/06 11:52:00	**42.2**	0.6	2.0	0.3	0.08	0.03	42.3 45.0 ppm NO
12/19/06 11:52:15	**42.2**	0.8	1.9	0.3	0.08	0.03	
12/19/06 11:52:30	**42.2**	5.4	1.9	2.8	0.08	0.03	
12/19/06 11:52:45	**42.8**	30.6	1.9	0.7	0.08	0.03	
12/19/06 11:53:00	46.9	38.1	3.7	39.6	0.28	0.68	
12/19/06 11:53:15	41.5	19.8	10.5	56.0	0.93	1.81	
12/19/06 11:53:30	22.9	2.9	11.1	56.5	0.54	0.76	
12/19/06 11:53:45	9.0	1.1	6.1	56.2	0.17	0.16	
12/19/06 11:54:00	3.3	0.9	3.3	56.1	0.11	0.05	
12/19/06 11:54:15	2.3	0.6	2.3	56.1	0.11	0.03	
12/19/06 11:54:30	1.9	0.6	2.0	54.2	0.11	0.03	
12/19/06 11:54:45	1.6	0.6	1.8	51.7	0.10	0.02	
12/19/06 11:55:00	1.3	0.7	1.8	51.4	0.10	0.02	
12/19/06 11:55:15	1.1	0.8	1.7	51.2	0.09	0.02	Calibration
12/19/06 11:55:30	1.0	0.6	1.7	**51.3**	0.09	0.02	51.3 50.0 ppm C_3H_8/N_2
12/19/06 11:55:45	1.0	0.6	1.7	**51.3**	0.08	0.02	
12/19/06 11:56:00	0.9	0.6	1.6	**51.3**	0.08	0.02	
12/19/06 11:56:15	0.7	0.6	1.6	**51.3**	0.08	0.02	
12/19/06 11:56:30	0.6	2.2	1.5	22.4	0.08	0.02	
12/19/06 11:56:45	0.5	30.1	1.6	5.3	0.08	0.02	
12/19/06 11:57:00	6.1	121.1	3.0	5.0	0.18	0.44	
12/19/06 11:57:15	12.0	166.5	15.7	5.0	1.34	3.21	
12/19/06 11:57:30	12.4	191.8	37.0	4.9	2.60	5.58	
12/19/06 11:57:45	12.4	196.9	53.3	4.9	3.12	6.43	
12/19/06 11:58:00	12.4	198.6	60.3	5.0	3.21	6.61	
12/19/06 11:58:15	12.4	198.9	62.9	5.1	3.24	6.70	
12/19/06 11:58:30	12.4	199.4	64.1	5.2	3.26	6.76	
12/19/06 11:58:45	12.3	199.4	64.5	5.1	3.28	6.75	
12/19/06 11:59:00	12.3	198.8	64.5	5.1	3.29	6.68	
12/19/06 11:59:15	12.6	197.4	64.5	5.0	3.29	6.64	
12/19/06 11:59:30	13.1	195.6	64.7	5.0	3.30	6.69	
12/19/06 11:59:45	13.3	194.4	64.9	5.0	3.30	6.77	
12/19/06 12:00:00	13.1	192.9	64.8	5.0	3.32	6.79	
12/19/06 12:00:15	12.8	190.2	64.2	4.8	3.33	6.74	
12/19/06 12:00:30	12.8	185.5	63.4	4.9	3.33	6.69	
12/19/06 12:00:45	13.0	183.7	62.8	4.9	3.31	6.69	
12/19/06 12:01:00	12.9	183.2	62.0	4.9	3.32	6.75	
12/19/06 12:01:15	12.8	183.7	61.6	5.0	3.33	6.80	
12/19/06 12:01:30	12.9	182.3	61.0	5.0	3.33	6.80	
12/19/06 12:01:45	12.7	181.5	60.1	4.8	3.31	6.76	
12/19/06 12:02:00	12.7	179.1	59.8	4.9	3.31	6.70	
12/19/06 12:02:15	12.8	177.5	59.5	4.9	3.32	6.70	
12/19/06 12:02:30	12.7	177.2	59.2	4.9	3.32	6.75	
12/19/06 12:02:45	12.5	179.0	59.3	4.8	3.32	6.80	
12/19/06 12:03:00	12.6	180.6	59.2	4.8	3.31	6.78	
12/19/06 12:03:15	12.6	178.7	58.7	4.6	3.29	6.72	
12/19/06 12:03:30	12.7	176.3	58.6	4.7	3.29	6.69	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 12:03:45	12.7	176.0	58.9	4.9	3.29	6.74	
12/19/06 12:04:00	12.7	178.5	59.4	4.8	3.29	6.80	
12/19/06 12:04:15	12.8	182.0	59.6	4.5	3.29	6.79	
12/19/06 12:04:30	12.9	181.7	59.8	4.6	3.26	6.73	
12/19/06 12:04:45	12.6	180.5	60.3	4.5	3.25	6.69	
12/19/06 12:05:00	12.5	178.5	60.8	4.6	3.25	6.73	
12/19/06 12:05:15	12.5	179.2	61.1	4.5	3.26	6.79	
12/19/06 12:05:30	12.4	182.0	61.2	4.6	3.27	6.80	
12/19/06 12:05:45	12.5	182.0	61.4	4.5	3.24	6.74	
12/19/06 12:06:00	12.6	182.0	61.5	4.5	3.23	6.69	
12/19/06 12:06:15	12.6	182.7	61.9	4.5	3.24	6.72	
12/19/06 12:06:30	12.6	186.8	62.5	4.6	3.25	6.78	
12/19/06 12:06:45	12.4	190.7	62.8	4.5	3.26	6.78	
12/19/06 12:07:00	12.4	192.8	62.6	4.5	3.24	6.73	
12/19/06 12:07:15	12.4	192.2	62.4	4.4	3.23	6.68	
12/19/06 12:07:30	12.4	191.8	62.5	4.4	3.24	6.72	
12/19/06 12:07:45	12.5	193.7	62.6	4.5	3.25	6.78	
12/19/06 12:08:00	12.6	195.1	62.9	4.5	3.25	6.80	
12/19/06 12:08:15	12.6	195.7	63.1	4.5	3.24	6.75	
12/19/06 12:08:30	12.6	196.7	63.4	4.6	3.23	6.70	
12/19/06 12:08:45	12.5	197.7	63.3	4.5	3.22	6.69	
12/19/06 12:09:00	12.4	199.4	63.1	4.4	3.21	6.75	
12/19/06 12:09:15	12.4	199.2	63.2	4.6	3.21	6.80	
12/19/06 12:09:30	12.5	198.4	63.5	4.6	3.21	6.79	
12/19/06 12:09:45	12.4	198.9	63.8	4.6	3.21	6.74	
12/19/06 12:10:00	12.5	199.4	63.6	4.6	3.21	6.70	
12/19/06 12:10:15	12.6	197.2	63.3	4.4	3.22	6.71	
12/19/06 12:10:30	12.5	195.1	63.1	4.4	3.22	6.76	
12/19/06 12:10:45	12.6	193.4	63.2	4.6	3.23	6.80	
12/19/06 12:11:00	12.6	193.6	62.7	4.6	3.25	6.80	
12/19/06 12:11:15	12.6	194.4	62.1	4.5	3.24	6.76	
12/19/06 12:11:30	12.5	193.6	61.5	4.5	3.24	6.71	
12/19/06 12:11:45	12.5	191.9	61.1	4.5	3.24	6.69	
12/19/06 12:12:00	12.6	191.3	61.2	4.6	3.24	6.74	
12/19/06 12:12:15	12.5	191.2	61.5	4.6	3.26	6.79	
12/19/06 12:12:30	12.5	192.2	61.5	4.6	3.25	6.82	
12/19/06 12:12:45	12.5	191.2	61.2	4.5	3.24	6.78	**Begin Run No. 1-1**
12/19/06 12:13:00	**12.6**	**187.4**	**30.9**	**4.5**	**3.23**	**6.73**	**Point #1**
12/19/06 12:13:15	**12.5**	**185.0**	**60.7**	**4.4**	**3.23**	**6.72**	
12/19/06 12:13:30	**12.5**	**183.1**	**60.7**	**4.7**	**3.24**	**6.77**	
12/19/06 12:13:45	**12.6**	**184.7**	**60.7**	**4.7**	**3.24**	**6.82**	
12/19/06 12:14:00	**12.5**	**189.1**	**60.8**	**4.7**	**3.24**	**6.79**	
12/19/06 12:14:15	**12.4**	**189.7**	**60.7**	**4.4**	**3.24**	**6.73**	
12/19/06 12:14:30	**12.4**	**188.2**	**60.9**	**4.5**	**3.24**	**6.72**	
12/19/06 12:14:45	**12.5**	**186.9**	**61.1**	**4.5**	**3.24**	**6.77**	
12/19/06 12:15:00	**12.6**	**186.3**	**61.7**	**4.6**	**3.24**	**6.81**	
12/19/06 12:15:15	**12.5**	**188.5**	**62.1**	**4.6**	**3.24**	**6.79**	
12/19/06 12:15:30	**12.5**	**190.1**	**62.0**	**4.6**	**3.25**	**6.73**	
12/19/06 12:15:45	**12.5**	**191.2**	**61.9**	**4.7**	**3.24**	**6.70**	
12/19/06 12:16:00	**12.5**	**193.7**	**61.8**	**4.5**	**3.23**	**6.73**	
12/19/06 12:16:15	**12.5**	**193.7**	**61.8**	**4.4**	**3.21**	**6.80**	
12/19/06 12:16:30	**12.6**	**191.3**	**61.9**	**4.7**	**3.20**	**6.83**	
12/19/06 12:16:45	**12.5**	**191.4**	**61.9**	**4.6**	**3.21**	**6.81**	
12/19/06 12:17:00	**12.6**	**192.7**	**62.0**	**4.7**	**3.22**	**6.76**	
12/19/06 12:17:15	**12.6**	**193.9**	**62.3**	**4.5**	**3.22**	**6.72**	
12/19/06 12:17:30	**12.5**	**194.4**	**62.5**	**4.7**	**3.22**	**6.71**	
12/19/06 12:17:45	**12.5**	**194.4**	**62.3**	**4.6**	**3.22**	**6.75**	
12/19/06 12:18:00	**12.5**	**193.8**	**62.2**	**4.5**	**3.23**	**6.80**	
12/19/06 12:18:15	**12.5**	**192.4**	**62.9**	**4.5**	**3.24**	**6.82**	
12/19/06 12:18:30	**12.6**	**189.3**	**63.8**	**4.6**	**3.25**	**6.81**	
12/19/06 12:18:45	**12.6**	**189.7**	**63.6**	**4.5**	**3.25**	**6.75**	
12/19/06 12:19:00	**12.6**	**191.4**	**63.1**	**4.6**	**3.24**	**6.71**	
12/19/06 12:19:15	**12.6**	**193.4**	**62.8**	**4.6**	**3.22**	**6.72**	
12/19/06 12:19:30	**12.8**	**195.1**	**62.7**	**4.5**	**3.20**	**6.77**	
12/19/06 12:19:45	**12.6**	**194.9**	**32.9**	**4.4**	**3.22**	**6.82**	
12/19/06 12:20:00	**12.6**	**192.1**	**63.4**	**4.7**	**3.23**	**6.83**	
12/19/06 12:20:15	**12.6**	**191.2**	**64.1**	**4.7**	**3.24**	**6.81**	
12/19/06 12:20:30	**12.5**	**192.7**	**64.6**	**4.6**	**3.23**	**6.75**	
12/19/06 12:20:45	**12.5**	**194.7**	**65.0**	**4.5**	**3.23**	**6.71**	
12/19/06 12:21:00	**12.5**	**196.6**	**65.5**	**4.6**	**3.23**	**6.73**	
12/19/06 12:21:15	**13.0**	**194.2**	**65.9**	**4.5**	**3.22**	**6.80**	
12/19/06 12:21:30	**14.2**	**189.6**	**66.7**	**4.4**	**3.23**	**6.84**	
12/19/06 12:21:45	**13.9**	**187.9**	**67.9**	**4.4**	**3.25**	**6.82**	
12/19/06 12:22:00	**13.2**	**186.3**	**69.4**	**4.5**	**3.26**	**6.75**	
12/19/06 12:22:15	**12.8**	**186.2**	**70.2**	**4.3**	**3.25**	**6.70**	
12/19/06 12:22:30	**12.7**	**166.9**	**70.1**	**4.4**	**3.24**	**6.72**	
12/19/06 12:22:45	**12.8**	**186.4**	**69.9**	**4.5**	**3.23**	**6.79**	
12/19/06 12:23:00	**12.9**	**186.0**	**70.2**	**4.5**	**3.22**	**6.84**	
12/19/06 12:23:15	**12.8**	**185.5**	**70.6**	**4.5**	**3.23**	**6.82**	
12/19/06 12:23:30	**12.9**	**183.8**	**70.8**	**4.5**	**3.24**	**6.75**	
12/19/06 12:23:45	**13.0**	**183.7**	**70.9**	**4.5**	**3.25**	**6.71**	
12/19/06 12:24:00	**13.1**	**184.3**	**71.5**	**4.4**	**3.25**	**6.74**	
12/19/06 12:24:15	**12.9**	**184.0**	**72.3**	**4.6**	**3.24**	**6.80**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 12:24:30	12.9	184.0	73.0	4.5	3.25	6.82	
12/19/06 12:24:45	12.9	183.3	73.7	4.6	3.25	6.79	
12/19/06 12:25:00	12.9	183.0	73.9	4.6	3.24	6.73	
12/19/06 12:25:15	12.9	185.1	74.1	4.3	3.24	6.70	
12/19/06 12:25:30	12.9	183.3	74.7	4.3	3.25	6.73	
12/19/06 12:25:45	13.0	180.5	75.3	4.4	3.24	6.80	
12/19/06 12:26:00	13.1	179.8	76.1	4.6	3.24	6.82	
12/19/06 12:26:15	13.0	183.1	76.9	4.5	3.25	6.78	
12/19/06 12:26:30	12.9	184.8	77.9	4.5	3.23	6.72	
12/19/06 12:26:45	12.9	183.3	79.3	4.6	3.22	6.71	
12/19/06 12:27:00	12.9	181.6	80.0	4.5	3.23	6.75	
12/19/06 12:27:15	12.9	180.5	80.1	4.4	3.26	6.79	
12/19/06 12:27:30	12.9	181.2	80.1	4.5	3.28	6.80	
12/19/06 12:27:45	12.9	182.0	80.3	4.6	3.27	6.77	
12/19/06 12:28:00	12.9	182.6	80.8	4.5	3.26	6.72	
12/19/06 12:28:15	12.8	183.7	81.2	4.4	3.24	6.70	
12/19/06 12:28:30	12.9	185.2	81.6	4.3	3.24	6.73	
12/19/06 12:28:45	12.8	183.3	82.1	4.4	3.23	6.79	
12/19/06 12:29:00	12.8	181.1	82.6	4.2	3.22	6.83	
12/19/06 12:29:15	12.8	178.8	83.0	4.5	3.23	6.82	
12/19/06 12:29:30	13.0	180.0	83.6	4.3	3.24	6.76	
12/19/06 12:29:45	12.8	181.5	83.8	4.6	3.24	6.71	
12/19/06 12:30:00	12.8	181.5	84.2	4.6	3.23	6.70	
12/19/06 12:30:15	12.9	181.5	85.0	4.5	3.25	6.74	
12/19/06 12:30:30	12.8	181.5	85.4	4.6	3.28	6.78	
12/19/06 12:30:45	12.9	181.1	86.0	4.6	3.32	6.79	
12/19/06 12:31:00	12.9	181.6	87.0	4.5	3.32	6.76	
12/19/06 12:31:15	12.8	182.3	87.6	4.6	3.30	6.71	
12/19/06 12:31:30	12.8	182.7	88.0	4.5	3.29	6.67	
12/19/06 12:31:45	12.8	180.8	88.4	4.4	3.27	6.68	
12/19/06 12:32:00	12.8	180.3	89.1	4.7	3.27	6.74	
12/19/06 12:32:15	12.8	183.7	89.9	4.6	3.29	6.76	
12/19/06 12:32:30	12.7	184.5	90.4	4.5	3.30	6.75	
12/19/06 12:32:45	12.8	181.1	90.5	4.7	3.29	6.69	
12/19/06 12:33:00	12.9	177.1	90.7	4.6	3.29	6.67	Point #2
12/19/06 12:33:15	12.8	176.0	91.4	4.6	3.31	6.71	
12/19/06 12:33:30	12.7	177.5	92.1	4.5	3.33	6.76	
12/19/06 12:33:45	12.7	177.1	92.7	4.8	3.32	6.75	
12/19/06 12:34:00	12.8	176.8	93.2	4.9	3.31	6.68	
12/19/06 12:34:15	12.9	178.7	93.3	4.9	3.31	6.66	
12/19/06 12:34:30	12.9	179.6	90.8	5.0	3.29	6.73	
12/19/06 12:34:45	13.0	180.7	85.9	4.6	3.28	6.77	
12/19/06 12:35:00	13.0	182.5	81.1	4.5	3.27	6.73	
12/19/06 12:35:15	13.0	181.3	77.2	4.5	3.26	6.68	
12/19/06 12:35:30	13.1	180.0	74.0	5.0	3.25	6.69	
12/19/06 12:35:45	12.9	181.8	71.7	5.0	3.24	6.76	
12/19/06 12:36:00	12.9	183.3	70.3	4.6	3.24	6.78	
12/19/06 12:36:15	12.9	180.7	68.8	4.8	3.25	6.73	
12/19/06 12:36:30	12.9	177.5	67.5	5.0	3.26	6.67	
12/19/06 12:36:45	12.9	178.6	66.9	5.0	3.27	6.70	
12/19/06 12:37:00	13.0	180.8	67.2	5.0	3.27	6.78	
12/19/06 12:37:15	12.9	180.8	67.0	4.7	3.27	6.78	
12/19/06 12:37:30	12.9	177.5	66.1	4.7	3.27	6.71	
12/19/06 12:37:45	13.1	176.3	65.0	4.7	3.29	6.66	
12/19/06 12:38:00	13.2	178.1	63.9	4.7	3.30	6.71	
12/19/06 12:38:15	13.2	179.6	63.0	4.5	3.28	6.77	
12/19/06 12:38:30	13.2	179.2	62.2	4.7	3.26	6.72	
12/19/06 12:38:45	13.2	177.3	61.6	4.6	3.25	6.66	
12/19/06 12:39:00	13.3	176.5	61.1	4.6	3.25	6.65	
12/19/06 12:39:15	13.4	177.6	60.9	4.6	3.26	6.71	
12/19/06 12:39:30	13.5	180.2	60.5	4.4	3.27	6.75	
12/19/06 12:39:45	13.5	180.6	60.0	4.6	3.26	6.72	
12/19/06 12:40:00	13.5	180.0	59.8	4.7	3.25	6.66	
12/19/06 12:40:15	13.5	181.1	59.9	4.7	3.25	6.66	
12/19/06 12:40:30	13.4	183.0	59.9	4.7	3.27	6.72	
12/19/06 12:40:45	13.3	183.0	59.9	4.7	3.26	6.74	
12/19/06 12:41:00	13.4	181.7	59.5	4.5	3.26	6.69	
12/19/06 12:41:15	13.4	181.0	58.9	4.6	3.25	6.64	
12/19/06 12:41:30	13.5	182.2	58.4	4.5	3.26	6.66	
12/19/06 12:41:45	13.4	182.6	57.9	4.4	3.26	6.73	
12/19/06 12:42:00	13.4	181.1	57.7	4.4	3.25	6.74	
12/19/06 12:42:15	13.4	179.6	57.5	4.4	3.24	6.68	
12/19/06 12:42:30	13.5	177.7	57.0	4.5	3.24	6.63	
12/19/06 12:42:45	13.6	176.6	56.5	4.6	3.28	6.65	
12/19/06 12:43:00	13.6	176.7	56.3	4.6	3.27	6.72	
12/19/06 12:43:15	13.5	177.5	56.1	4.7	3.28	6.72	
12/19/06 12:43:30	13.5	175.8	55.9	4.6	3.29	6.65	
12/19/06 12:43:45	13.5	176.1	55.7	4.5	3.29	6.60	
12/19/06 12:44:00	13.5	176.2	55.4	4.6	3.31	6.61	
12/19/06 12:44:15	13.5	177.3	55.6	4.5	3.31	6.68	
12/19/06 12:44:30	13.6	177.0	55.8	4.6	3.30	6.71	
12/19/06 12:44:45	13.6	176.2	55.7	4.6	3.30	6.67	
12/19/06 12:45:00	13.6	176.2	55.6	4.6	3.29	6.62	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 12:45:15	13.6	177.3	55.4	4.6	3.30	6.63	
12/19/06 12:45:30	13.6	177.3	55.5	4.8	3.30	6.68	
12/19/06 12:45:45	13.6	177.0	55.5	4.8	3.31	6.71	
12/19/06 12:46:00	13.4	177.1	55.5	4.7	3.33	6.66	
12/19/06 12:46:15	13.4	174.1	55.1	4.7	3.33	6.61	
12/19/06 12:46:30	13.5	171.1	55.1	4.7	3.35	6.60	
12/19/06 12:46:45	13.4	173.0	55.4	4.8	3.37	6.65	
12/19/06 12:47:00	13.5	174.6	55.5	4.7	3.37	6.68	
12/19/06 12:47:15	13.6	174.6	55.6	4.7	3.36	6.62	
12/19/06 12:47:30	13.5	174.6	55.7	4.8	3.36	6.55	
12/19/06 12:47:45	13.5	175.3	55.8	4.7	3.37	6.56	
12/19/06 12:48:00	13.6	176.2	55.9	4.8	3.37	6.65	
12/19/06 12:48:15	13.6	177.3	55.9	4.8	3.37	6.65	
12/19/06 12:48:30	13.6	177.5	56.0	4.5	3.36	6.59	
12/19/06 12:48:45	13.6	177.1	56.0	4.9	3.36	6.57	
12/19/06 12:49:00	13.6	177.5	56.3	5.0	3.36	6.61	
12/19/06 12:48:15	13.6	177.5	56.7	4.9	3.36	6.66	
12/19/06 12:49:30	13.5	178.1	56.8	4.9	3.37	6.64	
12/19/06 12:49:45	13.4	178.5	56.4	4.7	3.39	6.57	
12/19/06 12:50:00	13.5	177.3	56.2	4.8	3.37	6.57	
12/19/06 12:50:15	13.6	176.6	56.4	4.8	3.36	6.64	
12/19/06 12:50:30	13.6	177.7	56.6	4.7	3.36	6.69	
12/19/06 12:50:45	13.6	179.6	57.0	4.8	3.35	6.65	
12/19/06 12:51:00	13.5	179.2	57.2	4.6	3.34	6.59	
12/19/06 12:51:15	13.4	177.3	56.9	4.9	3.32	6.56	
12/19/06 12:51:30	13.7	176.1	56.6	4.8	3.34	6.62	
12/19/06 12:51:45	13.5	177.2	56.8	4.9	3.37	6.66	
12/19/06 12:52:00	13.6	178.8	57.1	4.8	3.37	6.65	
12/19/06 12:52:15	13.6	180.7	57.3	5.0	3.36	6.58	
12/19/06 12:52:30	13.5	180.8	57.2	4.8	3.35	6.55	
12/19/06 12:52:45	13.5	179.3	57.3	5.0	3.35	6.57	
12/19/06 12:53:00	13.5	180.2	57.3	5.0	3.36	6.62	Point #3
12/19/06 12:53:15	13.5	181.7	58.3	5.1	3.37	6.63	
12/19/06 12:53:30	13.5	181.8	58.7	4.7	3.36	6.59	
12/19/06 12:53:45	13.5	179.6	57.1	4.8	3.34	6.55	
12/19/06 12:54:00	13.6	178.5	57.0	5.0	3.34	6.57	
12/19/06 12:54:15	13.6	181.8	57.3	5.0	3.36	6.63	
12/19/06 12:54:30	13.5	184.4	57.4	5.0	3.37	6.65	
12/19/06 12:54:45	13.6	184.4	57.4	5.0	3.35	6.62	
12/19/06 12:55:00	13.6	183.5	57.4	5.1	3.35	6.56	
12/19/06 12:55:15	13.5	183.8	57.4	5.0	3.36	6.55	
12/19/06 12:55:30	13.4	185.1	57.5	5.0	3.37	6.59	
12/19/06 12:55:45	13.5	185.8	57.6	4.8	3.37	6.64	
12/19/06 12:56:00	13.6	186.6	57.3	4.7	3.36	6.62	
12/19/08 12:56:15	13.6	186.2	56.9	4.9	3.35	6.57	
12/19/06 12:56:30	13.6	185.3	56.7	5.1	3.34	6.58	
12/19/08 12:56:45	13.7	165.3	56.6	5.0	3.33	6.64	
12/19/06 12:57:00	13.7	187.7	56.6	5.0	3.34	6.67	
12/19/06 12:57:15	13.6	188.4	56.4	4.9	3.34	6.62	
12/19/06 12:57:30	13.6	186.4	56.3	4.9	3.33	6.58	
12/19/06 12:57:45	13.6	184.9	56.3	5.0	3.33	6.59	
12/19/06 12:58:00	13.6	185.7	56.7	5.0	3.34	6.63	
12/19/06 12:58:15	13.6	186.4	57.0	4.6	3.35	6.65	
12/19/06 12:58:30	13.6	187.3	56.9	5.1	3.34	6.59	
12/19/06 12:58:45	13.7	188.8	56.5	5.1	3.33	6.55	
12/19/06 12:59:00	13.6	190.4	56.5	5.0	3.33	6.58	
12/19/06 12:59:15	13.6	191.9	56.6	4.8	3.34	6.65	
12/19/06 12:59:30	13.6	191.3	56.6	4.7	3.33	6.67	
12/19/06 12:59:45	13.6	189.8	56.5	4.9	3.32	6.62	
12/19/06 13:00:00	13.7	189.6	56.3	4.9	3.32	6.58	
12/19/06 13:00:15	13.7	191.1	56.2	5.0	3.31	6.61	
12/19/06 13:00:30	13.7	193.7	56.3	4.9	3.32	6.67	
12/19/06 13:00:45	13.7	194.8	56.4	5.0	3.33	6.69	
12/19/06 13:01:00	13.6	195.1	56.4	4.9	3.32	6.63	
12/19/06 13:01:15	13.6	195.8	56.3	4.9	3.31	6.58	
12/19/06 13:01:30	13.7	195.9	56.8	5.2	3.30	6.59	
12/19/06 13:01:45	13.7	196.3	57.5	5.1	3.31	6.64	
12/19/06 13:02:00	13.6	197.9	57.4	4.8	3.33	6.69	
12/19/06 13:02:15	13.6	197.2	57.1	4.7	3.34	6.67	
12/19/06 13:02:30	13.7	196.8	56.9	4.7	3.32	6.62	
12/19/06 13:02:45	13.6	196.1	56.9	4.8	3.29	6.60	
12/19/08 13:03:00	13.7	195.1	56.6	4.8	3.26	6.63	
12/19/06 13:03:15	13.8	196.6	56.8	4.9	3.27	6.69	
12/19/06 13:03:30	13.7	199.4	56.9	5.1	3.26	6.72	
12/19/06 13:03:45	13.6	200.9	57.1	4.7	3.28	6.68	
12/19/06 13:04:00	13.6	199.4	56.9	4.7	3.26	6.62	
12/19/06 13:04:15	13.7	196.4	57.0	5.0	3.26	6.59	
12/19/08 13:04:30	13.7	197.7	57.1	4.9	3.29	6.63	
12/19/06 13:04:45	13.6	202.2	57.4	4.9	3.29	6.68	
12/19/08 13:05:00	13.6	204.4	57.5	4.8	3.28	6.70	
12/19/06 13:05:15	13.7	202.2	57.5	4.7	3.27	6.66	
12/19/06 13:05:30	13.8	198.7	57.5	4.8	3.28	6.62	
12/19/06 13:05:45	13.8	198.7	57.6	5.0	3.29	6.65	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 13:06:00	13.7	200.6	57.7	5.0	3.29	6.70	
12/19/06 13:06:15	13.7	200.2	57.6	4.8	3.27	6.69	
12/19/06 13:06:30	13.7	198.8	57.6	4.8	3.28	6.63	
12/19/06 13:06:45	13.7	198.4	67.7	5.0	3.30	6.66	
12/19/06 13:07:00	13.7	200.9	57.9	4.9	3.30	6.72	
12/19/06 13:07:15	13.6	203.6	58.3	5.1	3.28	6.72	
12/19/06 13:07:30	13.6	203.6	58.9	4.9	3.27	6.66	
12/19/06 13:07:45	13.5	201.3	59.2	4.8	3.28	6.62	
12/19/06 13:08:00	13.6	201.4	59.4	4.4	3.29	6.65	
12/19/06 13:08:15	13.7	201.8	59.5	4.4	3.30	6.71	
12/19/06 13:08:30	13.6	203.2	59.4	4.6	3.30	6.69	
12/19/06 13:08:45	13.7	204.7	59.4	4.7	3.27	6.64	
12/19/06 13:09:00	13.7	204.9	59.4	4.6	3.24	6.61	
12/19/06 13:09:15	13.7	204.9	59.6	4.7	3.24	6.65	
12/19/06 13:09:30	13.7	206.6	60.0	4.5	3.25	6.72	
12/19/06 13:09:45	13.8	208.1	60.3	4.9	3.24	6.74	
12/19/06 13:10:00	13.7	210.8	60.4	4.9	3.22	6.69	
12/19/06 13:10:15	13.7	212.3	60.5	4.8	3.22	6.64	
12/19/06 13:10:30	13.6	212.2	60.7	4.8	3.22	6.63	
12/19/06 13:10:45	13.7	214.1	61.0	4.5	3.24	6.69	
12/19/06 13:11:00	13.7	214.6	61.8	4.8	3.25	6.73	
12/19/06 13:11:15	13.7	214.9	63.0	4.6	3.24	6.71	
12/19/06 13:11:30	13.7	216.2	33.5	4.5	3.22	6.66	
12/19/06 13:11:45	13.7	218.9	63.3	4.7	3.22	6.64	
12/19/06 13:12:00	13.8	220.9	63.1	4.8	3.21	6.69	
12/19/06 13:12:15	13.8	222.0	63.3	4.7	3.20	6.75	
12/19/06 13:12:30	13.7	225.5	63.3	4.8	3.20	6.74	
12/19/06 13:12:45	13.7	226.8	63.0	4.8	3.20	6.68	
12/19/06 13:13:00	13.5	203.0	62.7	24.3	3.20	6.62	End Run No. 1-1
12/19/06 13:13:15	12.8	129.0	62.3	44.3	3.20	6.60	
12/19/06 13:13:30	11.8	38.3	57.1	51.7	2.97	4.84	
12/19/06 13:13:45	8.3	8.9	40.8	52.2	1.60	1.72	
12/19/06 13:14:00	4.0	0.8	22.4	52.3	0.44	0.36	
12/19/06 13:14:15	1.4	0.2	12.2	52.3	0.17	0.12	
12/19/06 13:14:30	1.0	0.1	8.2	52.4	0.13	0.07	
12/19/06 13:14:45	0.8	0.1	6.6	51.2	0.12	0.06	
12/19/06 13:15:00	0.7	0.1	5.9	50.5	0.10	0.05	
12/19/06 13:15:15	0.6	0.1	5.2	50.5	0.10	0.05	
12/19/06 13:15:30	0.5	0.1	4.6	50.8	0.09	0.04	
12/19/06 13:15:45	0.4	0.1	4.0	50.9	0.09	0.04	
12/19/06 13:16:00	0.4	0.1	3.5	51.2	0.09	0.04	
12/19/06 13:16:15	0.3	0.1	3.0	51.5	0.08	0.03	Calibration
12/19/06 13:16:30	0.3	0.1	2.7	51.4	0.08	0.03	51.5 50.0 ppm C_3H_8/N_2
12/19/06 13:16:45	0.3	0.1	2.4	51.2	0.08	0.03	
12/19/06 13:17:00	0.2	0.1	2.2	51.7	0.08	0.03	
12/19/06 13:17:15	0.2	0.1	2.0	51.6	0.08	0.03	
12/19/06 13:17:30	0.2	0.1	1.9	50.8	0.08	0.03	
12/19/06 13:17:45	0.2	0.1	1.8	40.9	0.08	0.03	
12/19/06 13:18:00	0.1	20.1	1.6	33.4	0.08	0.03	
12/19/06 13:18:15	4.1	56.0	1.6	2.4	0.09	0.09	
12/19/06 13:18:30	9.5	44.0	3.0	0.8	0.63	1.50	
12/19/06 13:18:45	1.7	17.3	7.6	0.6	1.08	1.94	
12/19/06 13:19:00	0.2	2.1	8.8	0.5	0.43	0.58	
12/19/06 13:19:15	0.2	0.3	6.1	0.4	0.13	0.12	
12/19/06 13:19:30	0.1	0.1	3.8	0.4	0.09	0.05	
12/19/06 13:19:45	0.1	0.1	2.8	0.4	0.09	0.03	
12/19/06 13:20:00	0.1	0.1	2.2	0.4	0.10	0.03	
12/19/06 13:20:15	0.1	0.1	1.9	0.4	0.09	0.03	
12/19/06 13:20:30	0.1	0.1	1.8	0.4	0.09	0.03	System Bias
12/19/06 13:20:45	0.1	0.1	1.6	0.4	0.09	0.03	0.1 Zero NO_x
12/19/06 13:21:00	0.1	0.1	1.5	0.3	0.09	0.03	0.1 Zero CO
12/19/06 13:21:15	0.1	0.1	1.5	0.3	0.09	0.03	1.5 Zero SO_2
12/19/06 13:21:30	0.1	0.1	1.4	0.3	0.09	0.03	0.3 Zero C_3H_8/N_2
12/19/06 13:21:45	0.1	0.1	1.3	3.5	0.09	0.03	0.09 Zero O_2
12/19/06 13:22:00	0.0	45.1	1.2	2.3	0.09	0.03	0.03 Zero CO_2
12/19/06 13:22:15	2.4	76.8	1.6	25.9	0.20	0.48	
12/19/06 13:22:30	10.8	47.8	6.3	1.6	1.15	2.50	
12/19/06 13:22:45	30.6	18.2	12.8	1.0	1.21	1.93	
12/19/06 13:23:00	14.3	2.8	11.4	0.8	2.01	0.47	
12/19/06 13:23:15	2.1	0.8	7.0	0.6	3.77	0.11	
12/19/06 13:23:30	1.1	0.1	4.3	0.5	4.33	0.05	
12/19/06 13:23:45	0.8	0.5	3.0	0.5	4.43	0.04	
12/19/06 13:24:00	0.6	0.1	2.4	0.4	4.44	0.04	
12/19/06 13:24:15	0.6	0.1	2.0	0.4	4.46	0.03	
12/19/06 13:24:30	0.5	0.1	1.8	0.4	4.47	0.03	
12/19/06 13:24:45	0.4	0.1	1.6	0.3	4.48	0.03	
12/19/06 13:25:00	0.4	0.1	1.5	0.3	4.50	0.03	
12/19/06 13:25:15	0.4	0.5	1.4	0.3	4.52	0.03	
12/19/06 13:25:30	0.3	0.1	1.3	0.2	4.54	0.03	
12/19/06 13:25:45	0.3	0.1	1.3	0.3	4.54	0.03	
12/19/06 13:26:00	0.3	0.1	1.3	0.2	4.55	0.03	
12/19/06 13:26:15	0.3	0.1	1.2	0.2	4.55	0.03	
12/19/06 13:26:30	0.3	0.1	1.2	0.2	4.55	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 13:26:45	0.3	0.5	1.2	0.2	4.55	0.02	
12/19/06 13:27:00	0.2	0.1	1.2	0.2	4.55	0.02	
12/19/06 13:27:15	0.2	0.1	1.2	0.2	4.55	0.02	System Bias
12/19/06 13:27:30	0.2	0.1	1.2	0.2	**4.55**	0.02	**4.55 4.50% O_2**
12/19/06 13:27:45	0.2	0.1	1.3	0.3	**4.55**	0.02	
12/19/06 13:28:00	0.2	10.1	1.2	2.8	**4.55**	0.02	
12/19/06 13:28:15	2.9	38.4	1.3	0.3	**4.55**	0.02	
12/19/06 13:28:30	6.5	35.6	2.6	0.2	4.44	0.75	
12/19/06 13:28:45	1.2	15.3	6.8	0.2	4.01	1.90	
12/19/06 13:29:00	0.2	1.3	7.5	0.2	2.11	3.11	
12/19/06 13:29:15	0.1	-0.3	5.0	0.2	0.58	4.00	
12/19/06 13:29:30	0.1	-0.7	3.3	0.2	0.22	4.17	
12/19/06 13:29:45	0.1	-0.9	2.5	0.2	0.15	4.16	
12/19/06 13:30:00	0.1	-0.9	2.1	0.2	0.13	4.20	
12/19/06 13:30:15	0.1	-0.9	1.9	0.2	0.11	4.33	
12/19/06 13:30:30	0.1	-0.9	1.8	0.2	0.10	4.43	
12/19/06 13:30:45	0.1	-0.9	1.8	0.2	0.09	4.49	
12/19/06 13:31:00	0.1	-0.9	1.7	0.2	0.08	4.53	
12/19/06 13:31:15	0.1	-0.9	1.6	0.2	0.08	4.54	
12/19/06 13:31:30	0.1	-0.9	1.7	0.2	0.08	4.55	
12/19/06 13:31:45	0.1	-0.9	1.6	0.3	0.08	4.55	
12/19/06 13:32:00	0.1	-0.9	1.7	0.2	0.08	4.55	System Bias
12/19/06 13:32:15	0.1	-0.9	1.6	0.2	0.08	**4.56**	**4.56 4.50% CO_2**
12/19/06 13:32:30	0.1	-0.9	1.6	0.2	0.08	**4.56**	
12/19/06 13:32:45	0.1	-0.9	1.6	0.2	0.08	**4.56**	
12/19/06 13:33:00	0.1	3.1	1.5	2.5	0.08	**4.56**	
12/19/06 13:33:15	1.3	28.1	1.5	3.6	0.08	4.56	
12/19/06 13:33:30	3.0	83.8	2.2	0.4	0.18	4.69	
12/19/06 13:33:45	2.7	144.4	6.4	0.2	0.70	4.60	
12/19/06 13:34:00	1.0	201.2	8.2	0.2	0.49	2.21	
12/19/06 13:34:15	0.4	214.4	5.7	0.2	0.20	0.51	
12/19/06 13:34:30	0.3	217.7	3.4	0.2	0.12	0.15	
12/19/06 13:34:45	0.2	218.3	2.6	0.2	0.10	0.09	
12/19/06 13:35:00	0.2	218.4	2.1	0.2	0.09	0.07	
12/19/06 13:35:15	0.2	218.8	1.9	0.2	0.09	0.06	
12/19/06 13:35:30	0.2	218.4	1.8	0.2	0.09	0.05	System Bias
12/19/06 13:35:45	0.1	**218.4**	1.8	0.2	0.09	0.05	**218.8 225.0 ppm CO**
12/19/06 13:36:00	0.1	**218.9**	1.7	0.2	0.09	0.05	
12/19/06 13:36:15	0.1	**218.9**	1.7	0.2	0.09	0.04	
12/19/06 13:36:30	0.1	**218.9**	1.6	1.4	0.09	0.04	
12/19/06 13:36:45	0.1	220.4	1.6	4.0	0.09	0.04	
12/19/06 13:37:00	3.8	229.9	1.8	16.5	0.09	0.10	
12/19/06 13:37:15	3.4	190.9	7.3	4.5	0.70	1.85	
12/19/06 13:37:30	1.4	90.5	19.8	0.6	1.46	3.01	
12/19/06 13:37:45	0.7	41.8	20.1	0.4	0.76	1.22	
12/19/06 13:38:00	21.1	13.3	11.0	0.2	0.25	0.25	
12/19/06 13:38:15	29.3	5.2	5.8	0.2	0.17	0.08	
12/19/06 13:38:30	32.5	2.6	3.9	0.2	0.13	0.05	
12/19/06 13:38:45	34.4	2.1	3.2	0.1	0.11	0.04	
12/19/06 13:39:00	37.6	1.6	2.8	0.1	0.10	0.03	
12/19/06 13:39:15	39.9	1.6	2.5	0.1	0.10	0.03	
12/19/06 13:39:30	42.7	1.3	2.5	0.1	0.09	0.03	
12/19/06 13:39:45	44.6	1.1	2.4	0.0	0.09	0.03	
12/19/06 13:40:00	46.9	1.1	2.3	0.0	0.09	0.03	
12/19/06 13:40:15	47.6	1.1	2.3	0.0	0.09	0.03	
12/19/06 13:40:30	47.9	0.6	2.4	0.0	0.09	0.03	
12/19/06 13:40:45	48.3	0.6	2.3	0.0	0.09	0.03	
12/19/06 13:41:00	50.6	0.6	2.3	0.0	0.09	0.03	
12/19/06 13:41:15	52.5	0.6	2.2	0.0	0.09	0.02	
12/19/06 13:41:30	54.3	0.6	2.1	0.0	0.09	0.02	
12/19/06 13:41:45	53.2	0.6	1.9	0.0	0.09	0.02	
12/19/06 13:42:00	51.3	0.3	1.9	0.0	0.08	0.02	
12/19/06 13:42:15	50.2	0.1	1.8	0.0	0.09	0.02	
12/19/06 13:42:30	49.3	0.6	1.7	0.0	0.09	0.02	
12/19/06 13:42:45	48.8	0.6	1.6	0.0	0.08	0.02	
12/19/06 13:43:00	47.3	0.1	1.6	0.0	0.08	0.02	
12/19/06 13:43:15	47.1	0.1	1.7	0.0	0.08	0.02	
12/19/06 13:43:30	46.8	0.1	1.7	0.0	0.08	0.02	
12/19/06 13:43:45	45.7	0.5	1.6	0.0	0.08	0.02	
12/19/06 13:44:00	44.5	0.1	1.6	0.0	0.08	0.02	
12/19/06 13:44:15	44.3	0.1	1.6	0.0	0.09	0.02	
12/19/06 13:44:30	44.2	0.3	1.7	0.0	0.09	0.02	
12/19/06 13:44:45	44.0	0.1	1.6	0.0	0.09	0.02	
12/19/06 13:45:00	43.8	0.1	1.5	0.0	0.09	0.02	
12/19/06 13:45:15	43.7	0.1	1.6	0.0	0.09	0.03	
12/19/06 13:45:30	43.5	0.1	1.6	0.0	0.08	0.03	
12/19/06 13:45:45	43.4	0.1	1.6	0.0	0.08	0.03	
12/19/06 13:46:00	43.3	0.3	1.6	0.0	0.08	0.03	System Bias
12/19/06 13:46:15	**43.3**	0.1	1.6	0.0	0.08	0.03	**43.2 45.0 ppm NO**
12/19/06 13:46:30	**43.1**	0.1	1.6	0.0	0.08	0.03	
12/19/06 13:46:45	**43.1**	0.1	1.5	0.0	0.08	0.03	
12/19/06 13:47:00	**43.1**	2.6	1.6	2.7	0.08	0.03	
12/19/06 13:47:15	41.8	30.2	1.6	1.2	0.08	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 13:47:30	60.1	41.6	3.2	35.8	0.22	0.53	
12/19/06 13:47:45	95.1	23.6	10.9	37.7	0.88	1.80	
12/19/06 13:48:00	39.1	3.8	18.6	2.0	0.58	0.87	
12/19/06 13:48:15	11.5	0.8	46.9	0.8	0.19	0.19	
12/19/06 13:48:30	5.8	0.3	84.8	0.6	0.12	0.06	
12/19/06 13:48:45	4.6	0.1	108.4	0.5	0.10	0.04	
12/19/06 13:49:00	3.7	0.1	119.4	0.5	0.09	0.03	
12/19/06 13:49:15	3.3	0.1	124.0	0.4	0.09	0.03	
12/19/06 13:49:30	2.8	0.1	125.9	0.4	0.08	0.03	
12/19/06 13:49:45	2.6	0.1	127.1	0.4	0.08	0.03	
12/19/06 13:50:00	2.3	0.1	127.9	0.4	0.08	0.03	
12/19/06 13:50:15	2.2	0.1	128.6	0.3	0.08	0.03	
12/19/06 13:50:30	2.0	0.1	129.1	0.3	0.08	0.03	
12/19/06 13:50:45	1.9	0.1	129.6	0.3	0.08	0.03	
12/19/06 13:51:00	1.7	0.1	130.2	0.2	0.08	0.02	
12/19/06 13:51:15	1.7	0.1	130.6	0.3	0.08	0.02	
12/19/06 13:51:30	1.5	0.1	130.9	0.2	0.08	0.02	
12/19/06 13:51:45	1.5	0.1	131.2	0.2	0.08	0.02	
12/19/06 13:52:00	1.4	0.3	131.6	0.2	0.08	0.02	
12/19/06 13:52:15	1.4	0.1	132.0	0.1	0.08	0.02	
12/19/06 13:52:30	1.3	0.3	132.3	0.2	0.08	0.02	
12/19/06 13:52:45	1.2	0.2	132.5	0.2	0.08	0.02	
12/19/06 13:53:00	1.2	0.1	132.7	0.1	0.08	0.02	System Bias
12/19/06 13:53:15	1.1	0.1	**133.0**	0.1	0.08	0.02	133.1 135.0 ppm SO_2
12/19/06 13:53:30	1.1	0.1	**133.1**	0.2	0.08	0.02	
12/19/06 13:53:45	1.1	0.1	**133.3**	0.2	0.08	0.02	
12/19/06 13:54:00	1.0	0.1	**133.2**	0.2	0.08	0.02	
12/19/06 13:54:15	1.0	0.5	132.5	4.9	0.08	0.02	
12/19/06 13:54:30	3.5	53.0	133.4	5.6	0.08	0.02	
12/19/06 13:54:45	9.8	117.0	131.1	5.6	0.35	0.96	
12/19/06 13:55:00	12.5	169.0	117.1	5.5	1.72	4.02	
12/19/06 13:55:15	13.1	180.6	97.2	5.4	2.79	6.07	
12/19/06 13:55:30	13.1	185.2	83.2	5.0	3.16	6.71	
12/19/06 13:55:45	12.9	185.6	76.2	5.0	3.21	6.79	
12/19/06 13:56:00	12.9	183.2	71.6	5.0	3.24	6.74	
12/19/06 13:56:15	12.9	182.5	69.4	5.1	3.25	6.71	
12/19/06 13:56:30	13.0	185.7	69.4	5.2	3.25	6.75	
12/19/06 13:56:45	13.0	189.2	70.1	5.0	3.25	6.82	
12/19/06 13:57:00	12.9	190.7	70.6	4.9	3.25	6.82	
12/19/06 13:57:15	13.0	188.2	71.1	5.1	3.24	6.77	
12/19/06 13:57:30	13.2	186.4	71.6	5.1	3.24	6.72	
12/19/06 13:57:45	13.2	187.3	72.0	5.1	3.26	6.74	
12/19/06 13:58:00	13.1	190.4	72.4	5.0	3.26	6.80	
12/19/06 13:58:15	13.1	191.4	72.4	4.9	3.26	6.79	
12/19/06 13:58:30	13.1	191.7	72.2	4.9	3.25	6.73	
12/19/06 13:58:45	13.2	191.5	71.8	5.2	3.25	6.71	Begin Run No. 1-2
12/19/06 13:59:00	**13.0**	**193.2**	**71.9**	**5.4**	**3.24**	**6.77**	**Point #1**
12/19/06 13:59:15	**13.4**	**197.3**	**70.7**	**5.1**	**3.24**	**6.83**	
12/19/06 13:59:30	**14.6**	**199.7**	**69.5**	**4.9**	**3.24**	**6.81**	
12/19/06 13:59:45	**14.4**	**198.7**	**63.8**	**5.0**	**3.23**	**6.73**	
12/19/06 14:00:00	**14.0**	**197.7**	**60.1**	**4.9**	**3.22**	**6.71**	
12/19/06 14:00:15	**13.6**	**199.0**	**60.7**	**5.2**	**3.22**	**6.76**	
12/19/06 14:00:30	**13.3**	**200.9**	**61.8**	**5.0**	**3.24**	**6.81**	
12/19/06 14:00:45	**13.2**	**199.1**	**61.6**	**5.0**	**3.26**	**6.79**	
12/19/06 14:01:00	**13.1**	**194.4**	**61.0**	**5.0**	**3.27**	**6.72**	
12/19/06 14:01:15	**13.2**	**194.7**	**60.2**	**4.9**	**3.28**	**6.67**	
12/19/06 14:01:30	**13.3**	**198.4**	**60.3**	**5.2**	**3.30**	**6.71**	
12/19/06 14:01:45	**13.2**	**201.4**	**60.7**	**5.0**	**3.29**	**6.76**	
12/19/06 14:02:00	**13.2**	**201.4**	**61.7**	**4.9**	**3.27**	**6.79**	
12/19/06 14:02:15	**13.2**	**199.6**	**63.9**	**4.8**	**3.26**	**6.73**	
12/19/06 14:02:30	**13.2**	**198.2**	**65.1**	**5.0**	**3.25**	**6.70**	
12/19/06 14:02:45	**13.2**	**198.9**	**65.2**	**4.8**	**3.24**	**6.75**	
12/19/06 14:03:00	**13.1**	**200.4**	**65.5**	**4.7**	**3.24**	**6.81**	
12/19/06 14:03:15	**13.0**	**199.9**	**65.8**	**4.9**	**3.25**	**6.79**	
12/19/06 14:03:30	**12.9**	**198.9**	**65.8**	**4.8**	**3.26**	**6.72**	
12/19/06 14:03:45	**13.0**	**199.1**	**66.3**	**4.9**	**3.26**	**6.69**	
12/19/06 14:04:00	**13.0**	**199.2**	**66.9**	**4.8**	**3.27**	**6.76**	
12/19/06 14:04:15	**13.0**	**198.8**	**67.6**	**4.9**	**3.28**	**6.80**	
12/19/06 14:04:30	**12.9**	**198.9**	**68.2**	**4.8**	**3.27**	**6.79**	
12/19/06 14:04:45	**13.0**	**200.6**	**68.9**	**4.8**	**3.26**	**6.75**	
12/19/06 14:05:00	**12.9**	**202.2**	**69.3**	**4.8**	**3.25**	**6.73**	
12/19/06 14:05:15	**13.0**	**202.1**	**69.7**	**5.0**	**3.23**	**6.75**	
12/19/06 14:05:30	**13.0**	**201.9**	**70.4**	**5.1**	**3.25**	**6.80**	
12/19/06 14:05:45	**12.8**	**202.6**	**70.8**	**5.1**	**3.28**	**6.80**	
12/19/06 14:06:00	**12.8**	**204.4**	**71.2**	**5.3**	**3.29**	**6.76**	
12/19/06 14:06:15	**12.8**	**205.7**	**71.5**	**5.3**	**3.31**	**6.70**	
12/19/06 14:06:30	**12.8**	**205.2**	**71.7**	**5.3**	**3.32**	**6.67**	
12/19/06 14:06:45	**12.8**	**205.8**	**72.1**	**5.3**	**3.33**	**6.70**	
12/19/06 14:07:00	**12.8**	**207.9**	**72.7**	**5.4**	**3.35**	**6.76**	
12/19/06 14:07:15	**12.7**	**209.9**	**72.7**	**5.2**	**3.35**	**6.78**	
12/19/06 14:07:30	**12.7**	**211.4**	**72.6**	**4.9**	**3.35**	**6.74**	
12/19/06 14:07:45	**12.6**	**211.3**	**72.5**	**5.2**	**3.33**	**6.69**	
12/19/06 14:08:00	**12.7**	**211.4**	**72.6**	**5.0**	**3.31**	**6.69**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 14:08:15	12.7	212.6	73.2	5.2	3.31	6.76	
12/19/06 14:08:30	12.7	213.9	74.0	5.0	3.31	6.81	
12/19/06 14:08:45	12.7	214.1	74.4	5.1	3.31	6.79	
12/19/06 14:09:00	12.7	212.9	74.3	5.0	3.30	6.73	
12/19/06 14:09:15	12.7	213.2	74.3	5.2	3.30	6.70	
12/19/06 14:09:30	12.6	214.9	74.4	5.3	3.32	6.73	
12/19/06 14:09:45	12.7	216.9	74.8	5.4	3.32	6.80	
12/19/06 14:10:00	12.6	219.2	75.5	5.2	3.31	6.81	
12/19/06 14:10:15	12.5	220.8	75.8	5.2	3.31	6.76	
12/19/06 14:10:30	12.5	220.9	76.0	5.1	3.29	6.72	
12/19/06 14:10:45	12.6	220.6	76.3	5.2	3.28	6.73	
12/19/06 14:11:00	12.6	220.2	76.6	5.1	3.29	6.79	
12/19/06 14:11:15	12.6	220.7	76.8	5.2	3.29	6.82	
12/19/06 14:11:30	12.6	222.2	77.0	5.1	3.29	6.78	
12/19/06 14:11:45	12.5	222.0	76.9	5.3	3.28	6.73	
12/19/06 14:12:00	12.5	221.7	76.3	5.3	3.27	6.72	
12/19/06 14:12:15	12.7	221.9	76.2	5.3	3.29	6.75	
12/19/06 14:12:30	12.8	221.2	76.8	5.5	3.31	6.80	
12/19/06 14:12:45	12.5	221.5	77.5	5.3	3.31	6.78	
12/19/06 14:13:00	12.5	222.9	77.4	5.4	3.31	6.72	
12/19/06 14:13:15	12.6	223.5	77.4	5.2	3.31	6.70	
12/19/06 14:13:30	12.6	223.9	77.5	5.2	3.30	6.74	
12/19/06 14:13:45	12.7	223.7	78.1	5.2	3.29	6.81	
12/19/06 14:14:00	12.7	223.9	78.4	5.1	3.29	6.83	
12/19/06 14:14:15	12.6	223.2	78.4	5.1	3.29	6.79	
12/19/06 14:14:30	12.6	221.2	78.3	5.3	3.27	6.73	
12/19/06 14:14:45	12.6	221.2	78.4	5.3	3.27	6.72	
12/19/06 14:15:00	12.6	223.7	78.9	5.4	3.29	6.78	
12/19/06 14:15:15	12.6	226.2	79.3	5.3	3.30	6.81	
12/19/06 14:15:30	12.6	226.2	79.6	5.2	3.30	6.78	
12/19/06 14:15:45	12.7	225.0	79.6	5.2	3.29	6.72	
12/19/06 14:16:00	12.8	225.4	79.6	5.5	3.29	6.71	
12/19/06 14:16:15	12.9	227.3	79.6	5.2	3.29	6.77	
12/19/06 14:16:30	12.8	227.7	79.7	5.3	3.29	6.83	
12/19/06 14:16:45	12.8	225.3	79.4	5.3	3.28	6.79	
12/19/06 14:17:00	12.8	224.2	78.5	5.2	3.29	6.74	
12/19/06 14:17:15	12.8	223.5	77.3	5.3	3.30	6.75	
12/19/06 14:17:30	12.8	222.4	76.0	5.2	3.29	6.80	
12/19/06 14:17:45	12.8	222.9	74.8	5.3	3.29	6.81	
12/19/06 14:18:00	12.8	225.4	73.6	5.3	3.30	6.74	
12/19/06 14:18:15	12.7	227.2	72.3	5.2	3.29	6.70	
12/19/06 14:18:30	12.7	226.9	71.5	5.0	3.29	6.74	
12/19/06 14:18:45	12.8	227.2	71.2	4.9	3.30	6.81	
12/19/06 14:19:00	12.8	229.2	70.9	4.8	3.29	6.82	Point #2
12/19/06 14:19:15	12.8	228.5	70.4	4.7	3.25	6.78	
12/19/06 14:19:30	12.7	225.9	69.8	4.7	3.21	6.74	
12/19/06 14:19:45	12.9	225.4	69.4	5.1	3.21	6.78	
12/19/06 14:20:00	13.0	227.4	69.4	5.2	3.21	6.85	
12/19/06 14:20:15	12.9	228.9	69.5	4.8	3.21	6.86	
12/19/06 14:20:30	12.8	227.9	69.3	4.6	3.19	6.81	
12/19/06 14:20:45	12.9	225.0	69.2	4.7	3.19	6.77	
12/19/06 14:21:00	13.0	222.4	68.8	4.9	3.20	6.79	
12/19/06 14:21:15	13.0	224.9	68.8	5.0	3.22	6.85	
12/19/06 14:21:30	12.8	228.7	68.8	4.8	3.24	6.86	
12/19/06 14:21:45	12.8	227.3	68.2	4.8	3.23	6.81	
12/19/06 14:22:00	12.9	224.2	67.7	4.8	3.22	6.77	
12/19/06 14:22:15	13.0	223.2	67.4	4.9	3.22	6.79	
12/19/06 14:22:30	13.0	223.9	67.4	4.8	3.23	6.87	
12/19/06 14:22:45	13.0	223.8	67.4	4.7	3.23	6.89	
12/19/06 14:23:00	12.9	221.7	67.5	4.6	3.22	6.84	
12/19/06 14:23:15	12.9	219.4	67.7	5.0	3.21	6.78	
12/19/06 14:23:30	12.9	218.7	67.9	5.0	3.20	6.78	
12/19/06 14:23:45	12.9	220.0	68.0	5.0	3.21	6.85	
12/19/06 14:24:00	12.8	221.9	67.7	5.2	3.24	6.87	
12/19/06 14:24:15	12.8	222.7	67.4	5.1	3.24	6.84	
12/19/06 14:24:30	12.8	222.7	66.9	4.9	3.22	6.78	
12/19/06 14:24:45	13.0	222.8	66.2	5.0	3.21	6.78	
12/19/06 14:25:00	13.0	222.7	65.9	5.1	3.21	6.85	
12/19/06 14:25:15	12.9	224.3	65.9	4.9	3.20	6.90	
12/19/06 14:25:30	12.7	225.2	65.8	5.1	3.19	6.88	
12/19/06 14:25:45	12.9	222.5	65.5	5.1	3.16	6.82	
12/19/06 14:26:00	13.0	220.2	65.5	4.9	3.15	6.79	
12/19/06 14:26:15	13.0	220.7	66.0	5.2	3.18	6.83	
12/19/06 14:26:30	12.9	222.2	66.1	5.0	3.20	6.89	
12/19/06 14:26:45	13.0	220.7	65.9	5.2	3.19	6.89	
12/19/06 14:27:00	12.9	218.7	65.3	5.0	3.19	6.83	
12/19/06 14:27:15	12.9	216.9	64.5	5.0	3.18	6.78	
12/19/06 14:27:30	12.9	217.9	63.8	5.1	3.18	6.81	
12/19/06 14:27:45	12.9	220.9	63.7	5.0	3.19	6.87	
12/19/06 14:28:00	12.9	223.4	63.8	4.8	3.19	6.90	
12/19/06 14:28:15	13.0	221.5	63.8	4.8	3.19	6.89	
12/19/06 14:28:30	13.0	217.4	63.9	4.7	3.18	6.83	
12/19/06 14:28:45	13.0	216.3	64.0	4.8	3.17	6.79	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 14:49:45	13.1	201.4	60.4	5.5	3.34	6.79	
12/19/06 14:50:00	13.1	200.9	60.5	5.4	3.33	6.79	
12/19/06 14:50:15	13.0	198.4	60.3	5.4	3.33	6.74	
12/19/06 14:50:30	13.0	196.2	60.1	5.3	3.34	6.71	
12/19/06 14:50:45	13.1	195.8	59.9	5.3	3.35	6.74	
12/19/06 14:51:00	13.0	197.4	59.9	5.0	3.35	6.80	
12/19/06 14:51:15	13.0	197.8	59.9	4.5	3.33	6.79	
12/19/06 14:51:30	13.1	196.9	59.8	5.2	3.31	6.75	
12/19/06 14:51:45	13.2	195.4	60.0	5.4	3.31	6.72	
12/19/06 14:52:00	13.2	195.7	60.6	5.4	3.32	6.76	
12/19/06 14:52:15	13.2	198.2	60.6	5.4	3.33	6.79	
12/19/06 14:52:30	13.1	198.7	60.3	5.2	3.33	6.78	
12/19/06 14:52:45	13.1	195.9	60.0	5.4	3.32	6.72	
12/19/06 14:53:00	13.1	194.2	60.1	5.3	3.33	6.69	
12/19/06 14:53:15	13.2	194.7	60.3	5.2	3.34	6.74	
12/19/06 14:53:30	13.2	196.2	60.3	5.2	3.35	6.80	
12/19/06 14:53:45	13.2	197.6	60.3	5.3	3.34	6.77	
12/19/06 14:54:00	13.1	197.7	60.5	5.2	3.32	6.72	
12/19/06 14:54:15	13.1	199.1	60.5	5.2	3.30	6.71	
12/19/06 14:54:30	13.1	199.9	60.7	5.3	3.30	6.77	
12/19/06 14:54:45	13.1	200.6	61.3	5.3	3.30	6.83	
12/19/06 14:55:00	13.1	200.7	61.6	5.3	3.29	6.80	
12/19/06 14:55:15	13.1	199.2	61.4	5.4	3.29	6.73	
12/19/06 14:55:30	13.1	198.4	61.3	5.5	3.31	6.71	
12/19/06 14:55:45	13.1	199.2	61.2	5.3	3.35	6.76	
12/19/06 14:56:00	13.1	199.9	61.2	5.3	3.35	6.80	
12/19/06 14:56:15	13.1	199.7	61.2	5.3	3.34	6.76	
12/19/06 14:56:30	13.1	198.7	61.2	5.3	3.33	6.70	
12/19/06 14:56:45	13.1	198.9	61.2	5.1	3.33	6.72	
12/19/06 14:57:00	13.1	199.2	61.3	5.4	3.32	6.79	
12/19/06 14:57:15	13.1	200.4	61.5	5.3	3.33	6.80	
12/19/06 14:57:30	13.1	199.9	61.4	5.2	3.32	6.75	
12/19/06 14:57:45	13.2	197.2	61.2	5.4	3.32	6.70	
12/19/06 14:58:00	13.3	196.2	61.0	5.5	3.35	6.71	
12/19/06 14:58:15	13.3	197.1	61.3	5.4	3.37	6.77	
12/19/06 14:58:30	13.3	196.7	61.5	5.5	3.39	6.79	
12/19/06 14:58:45	13.1	198.2	61.4	5.3	3.39	6.74	
12/19/06 14:59:00	12.6	139.8	61.9	2.1	3.35	6.26	End Run No. 1-2
12/19/06 14:59:15	5.4	16.8	64.9	0.1	2.44	3.30	
12/19/06 14:59:30	0.9	3.6	52.0	0.1	0.89	0.87	
12/19/06 14:59:45	0.8	1.0	28.1	0.0	0.23	0.20	
12/19/06 15:00:00	0.6	0.6	14.6	0.0	0.14	0.10	
12/19/06 15:00:15	0.5	0.6	9.7	0.0	0.12	0.08	
12/19/06 15:00:30	0.3	0.6	8.0	0.0	0.11	0.07	
12/19/06 15:00:45	0.3	0.2	6.9	0.0	0.10	0.06	
12/19/06 15:01:00	0.2	0.6	5.6	0.0	0.09	0.05	
12/19/06 15:01:15	0.2	0.6	4.5	0.0	0.09	0.05	
12/19/06 15:01:30	0.2	0.6	3.8	0.0	0.09	0.05	
12/19/06 15:01:45	0.2	0.6	3.2	0.0	0.09	0.05	
12/19/06 15:02:00	0.2	0.3	2.8	0.0	0.08	0.04	
12/19/06 15:02:15	0.2	0.5	2.5	0.0	0.08	0.04	
12/19/06 15:02:30	0.1	0.3	2.3	0.0	0.08	0.04	
12/19/06 15:02:45	0.1	0.6	2.1	0.0	0.08	0.04	
12/19/06 15:03:00	0.1	0.6	2.0	0.0	0.08	0.04	
12/19/06 15:03:15	0.1	0.2	1.9	0.0	0.08	0.04	System Bias
12/19/06 15:03:30	0.1	0.6	1.7	0.0	0.09	0.04	0.1 Zero NO_x
12/19/06 15:03:45	0.1	0.6	1.7	0.0	0.09	0.04	0.6 Zero CO
12/19/06 15:04:00	0.1	0.6	1.6	0.0	0.09	0.04	1.7 Zero SO_2
12/19/06 15:04:15	0.1	0.6	1.6	0.0	0.09	0.04	0.0 Zero C_3H_8/N_2
12/19/06 15:04:30	0.1	3.1	1.5	2.2	0.08	0.03	0.09 Zero O_2
12/19/06 15:04:45	0.5	28.3	1.4	1.8	0.09	0.03	0.04 Zero CO_2
12/19/06 15:05:00	3.3	30.1	1.9	0.1	0.29	0.63	
12/19/06 15:05:15	5.2	14.3	4.6	0.0	0.77	1.30	
12/19/06 15:05:30	4.5	5.3	7.9	0.0	1.49	0.49	
12/19/06 15:05:45	1.1	1.0	8.6	0.0	3.46	0.13	
12/19/06 15:06:00	0.7	0.6	6.4	0.0	4.26	0.05	
12/19/06 15:06:15	0.4	0.6	4.3	0.0	4.41	0.04	
12/19/06 15:06:30	0.3	0.6	3.1	0.0	4.43	0.04	
12/19/06 15:06:45	0.3	0.6	2.5	0.0	4.45	0.04	
12/19/06 15:07:00	0.2	0.6	2.1	0.0	4.46	0.04	
12/19/06 15:07:15	0.2	0.2	1.8	0.0	4.48	0.04	
12/19/06 15:07:30	0.2	0.6	1.6	0.0	4.49	0.04	System Bias
12/19/06 15:07:45	0.2	0.6	1.6	0.0	4.51	0.04	4.53 4.50% O_2
12/19/06 15:08:00	0.2	0.6	1.5	0.0	4.53	0.04	
12/19/06 15:08:15	0.2	0.1	1.4	0.0	4.53	0.04	
12/19/06 15:08:30	0.1	0.1	1.5	0.0	4.54	0.04	
12/19/06 15:08:45	0.1	0.6	1.3	0.0	4.54	0.04	
12/19/06 15:09:00	0.1	1.1	1.2	2.1	4.54	0.04	
12/19/06 15:09:15	0.1	30.8	1.2	0.2	4.54	0.04	
12/19/06 15:09:30	0.1	37.8	1.8	0.1	4.50	0.48	
12/19/06 15:09:45	0.9	16.3	6.5	0.1	4.22	1.88	
12/19/06 15:10:00	0.3	4.1	9.9	0.1	2.75	2.86	
12/19/06 15:10:15	0.2	0.0	7.3	0.1	0.83	3.95	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 15:10:30	0.2	-0.4	4.6	0.1	0.25	4.25	
12/19/06 15:10:45	0.1	-0.4	3.1	0.1	0.15	4.26	
12/19/06 15:11:00	0.1	-0.4	2.3	0.1	0.12	4.27	
12/19/06 15:11:15	0.1	-0.4	2.0	0.1	0.10	4.36	
12/19/06 15:11:30	0.1	-0.4	1.8	0.0	0.09	4.45	
12/19/06 15:11:45	0.1	-0.4	1.6	0.1	0.08	4.51	
12/19/06 15:12:00	0.1	-0.4	1.5	0.1	0.08	4.54	
12/19/06 15:12:15	0.1	-0.8	1.4	0.1	0.07	4.55	
12/19/06 15:12:30	0.1	-0.4	1.4	0.1	0.07	4.56	
12/19/06 15:12:45	0.1	-0.5	1.3	0.1	0.07	4.57	System Bias
12/19/06 15:13:00	0.1	-0.7	1.2	0.0	0.07	**4.56**	**4.57 4.50% CO_2**
12/19/06 15:13:15	0.1	-0.5	1.3	0.0	0.07	**4.57**	
12/19/06 15:13:30	0.1	-0.7	1.2	0.1	0.07	**4.57**	
12/19/06 15:13:45	0.1	0.1	1.2	2.4	0.07	**4.57**	
12/19/06 15:14:00	0.1	19.6	1.1	5.4	0.07	4.58	
12/19/06 15:14:15	7.1	105.1	1.8	1.4	0.09	4.61	
12/19/06 15:14:30	9.7	128.2	20.0	0.3	1.02	5.39	
12/19/06 15:14:45	7.2	142.0	78.4	0.1	2.47	6.12	
12/19/06 15:15:00	1.5	175.2	101.6	0.1	1.72	4.34	
12/19/06 15:15:15	0.3	211.1	61.4	0.0	0.56	1.47	
12/19/06 15:15:30	0.3	216.9	25.6	0.1	0.18	0.32	
12/19/06 15:15:45	0.2	218.4	11.4	0.0	0.11	0.12	
12/19/06 15:16:00	0.2	218.7	6.6	0.1	0.10	0.09	
12/19/06 15:16:15	0.2	218.9	4.6	0.0	0.09	0.07	System Bias
12/19/06 15:16:30	0.1	**218.9**	3.5	0.1	0.09	0.06	**219.1 225.0 ppm CO**
12/19/06 15:16:45	0.1	**219.0**	2.9	0.0	0.08	0.06	
12/19/06 15:17:00	0.1	**219.2**	2.5	0.0	0.08	0.04	
12/19/06 15:17:15	0.1	**219.3**	2.1	2.6	0.08	0.04	
12/19/06 15:17:30	0.1	217.2	1.9	0.9	0.08	0.04	
12/19/06 15:17:45	0.0	193.8	2.4	0.9	0.13	0.27	
12/19/06 15:18:00	0.9	129.5	8.5	0.1	0.91	1.91	
12/19/06 15:18:15	0.8	51.7	15.9	0.0	0.97	1.54	
12/19/06 15:18:30	8.7	23.6	12.5	0.0	0.35	0.40	
12/19/06 15:18:45	23.3	7.1	7.2	0.0	0.19	0.11	
12/19/06 15:19:00	25.8	3.6	4.5	0.0	0.14	0.05	
12/19/06 15:19:15	28.2	2.6	3.4	0.0	0.11	0.04	
12/19/06 15:19:30	31.3	2.3	2.9	0.0	0.10	0.04	
12/19/06 15:19:45	35.2	1.6	2.5	0.0	0.09	0.04	
12/19/06 15:20:00	37.7	1.6	2.3	0.0	0.09	0.04	
12/19/06 15:20:15	39.6	1.6	2.2	0.0	0.09	0.04	
12/19/06 15:20:30	40.6	1.3	2.1	0.0	0.09	0.04	
12/19/06 15:20:45	41.0	1.1	2.0	0.0	0.09	0.04	
12/19/06 15:21:00	41.3	1.1	1.9	0.0	0.08	0.04	
12/19/06 15:21:15	42.7	1.1	1.8	0.0	0.08	0.04	
12/19/06 15:21:30	44.7	1.1	1.8	0.0	0.08	0.04	
12/19/06 15:21:45	46.9	1.1	1.6	0.0	0.08	0.04	
12/19/06 15:22:00	47.5	0.8	1.5	0.0	0.08	0.04	
12/19/06 15:22:15	46.4	0.6	1.4	0.0	0.08	0.04	
12/19/06 15:22:30	45.4	0.6	1.4	0.0	0.08	0.04	
12/19/06 15:22:45	44.6	0.6	1.3	0.0	0.08	0.04	
12/19/06 15:23:00	44.1	0.6	1.2	0.0	0.08	0.04	
12/19/06 15:23:15	43.9	0.6	1.3	0.0	0.08	0.04	
12/19/06 15:23:30	43.7	0.6	1.2	0.0	0.08	0.04	
12/19/06 15:23:45	43.6	0.6	1.3	0.0	0.08	0.04	System Bias
12/19/06 15:24:00	**43.6**	0.6	1.2	0.0	0.08	0.04	**43.5 45.0 ppm NO**
12/19/06 15:24:15	**43.5**	0.6	1.1	0.0	0.08	0.04	
12/19/06 15:24:30	**43.5**	0.6	1.1	0.4	0.08	0.03	
12/19/06 15:24:45	**43.5**	7.6	1.2	2.7	0.08	0.03	
12/19/06 15:25:00	44.4	35.3	1.3	4.6	0.08	0.04	
12/19/06 15:25:15	64.4	35.2	3.6	29.2	0.46	1.01	
12/19/06 15:25:30	49.7	16.1	10.1	13.8	1.00	1.65	
12/19/06 15:25:45	17.6	2.2	21.8	0.7	0.43	0.53	
12/19/06 15:26:00	8.6	0.8	58.0	0.4	0.15	0.12	
12/19/06 15:26:15	5.3	0.6	93.2	0.3	0.10	0.05	
12/19/06 15:26:30	4.1	0.6	113.0	0.3	0.09	0.04	
12/19/06 15:26:45	3.4	0.6	121.7	0.3	0.08	0.03	
12/19/06 15:27:00	2.9	0.6	125.3	0.2	0.08	0.03	
12/19/06 15:27:15	2.6	0.6	126.9	0.2	0.08	0.03	
12/19/06 15:27:30	2.4	0.6	127.8	0.2	0.08	0.03	
12/19/06 15:27:45	2.2	0.6	128.5	0.2	0.08	0.03	
12/19/06 15:28:00	2.0	0.6	129.1	0.2	0.08	0.03	
12/19/06 15:28:15	1.9	0.6	129.6	0.2	0.08	0.03	
12/19/06 15:28:30	1.8	0.6	130.0	0.2	0.08	0.03	
12/19/06 15:28:45	1.7	0.6	130.4	0.1	0.08	0.03	
12/19/06 15:29:00	1.6	0.6	130.8	0.1	0.08	0.03	
12/19/06 15:29:15	1.5	0.6	131.2	0.1	0.08	0.03	
12/19/06 15:29:30	1.5	0.6	131.5	0.1	0.08	0.03	
12/19/06 15:29:45	1.4	0.6	131.9	0.2	0.08	0.03	
12/19/06 15:30:00	1.3	0.6	132.1	0.1	0.08	0.03	
12/19/06 15:30:15	1.3	0.6	132.4	0.1	0.08	0.03	
12/19/06 15:30:30	1.3	0.6	132.6	0.1	0.08	0.03	
12/19/06 15:30:45	1.2	0.6	132.8	0.1	0.08	0.03	
12/19/06 15:31:00	1.2	0.6	133.1	0.1	0.08	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 15:31:15	1.1	0.6	133.2	0.1	0.08	0.03	
12/19/06 15:31:30	1.1	0.6	133.3	0.1	0.08	0.03	
12/19/06 15:31:45	1.0	0.6	133.4	0.1	0.08	0.04	
12/19/06 15:32:00	1.0	0.6	133.6	0.1	0.08	0.03	
12/19/06 15:32:15	1.0	0.6	133.7	0.1	0.08	0.03	System Bias
12/19/06 15:32:30	1.0	0.6	**133.7**	0.0	0.08	0.04	**133.8 135.0 ppm SO_2**
12/19/06 15:32:45	0.9	0.6	**133.8**	1.0	0.08	0.04	
12/19/06 15:33:00	0.9	9.6	**134.0**	2.8	0.08	0.04	
12/19/06 15:33:15	2.9	45.3	**133.9**	13.8	0.08	0.06	
12/19/06 15:33:30	2.8	39.7	130.4	51.5	0.54	1.20	
12/19/06 15:33:45	1.0	14.7	118.1	54.3	1.05	1.74	
12/19/06 15:34:00	0.5	3.1	85.1	55.1	0.44	0.54	
12/19/06 15:34:15	0.3	1.0	44.1	55.5	0.14	0.12	
12/19/06 15:34:30	0.3	0.6	20.7	54.9	0.10	0.05	
12/19/06 15:34:45	0.3	0.6	11.3	54.5	0.10	0.04	
12/19/06 15:35:00	0.3	0.6	7.7	52.4	0.09	0.04	
12/19/06 15:35:15	0.3	0.6	5.9	51.9	0.09	0.04	
12/19/06 15:35:30	0.3	0.6	4.9	51.9	0.09	0.04	
12/19/06 15:35:45	0.3	0.6	4.3	51.8	0.08	0.04	
12/19/06 15:36:00	0.3	0.6	3.7	51.7	0.08	0.04	
12/19/06 15:36:15	0.3	1.0	3.4	51.8	0.08	0.03	
12/19/06 15:36:30	0.4	0.6	3.1	51.8	0.08	0.04	
12/19/06 15:36:45	0.3	0.6	2.9	51.8	0.08	0.03	
12/19/06 15:37:00	0.3	0.6	2.7	51.8	0.08	0.03	
12/19/06 15:37:15	0.3	0.6	2.6	51.9	0.08	0.03	
12/19/06 15:37:30	0.3	0.6	2.5	51.9	0.08	0.03	
12/19/06 15:37:45	0.3	0.6	2.4	51.5	0.08	0.03	Calibration
12/19/06 15:38:00	0.3	0.6	2.2	**51.1**	0.08	0.03	**51.4 50.0 ppm C_3H_8/N_2**
12/19/06 15:38:15	0.2	0.6	2.1	**51.4**	0.08	0.03	
12/19/06 15:38:30	0.2	0.6	2.0	**51.5**	0.08	0.03	
12/19/06 15:38:45	0.2	0.6	2.0	**51.5**	0.08	0.03	
12/19/06 15:39:00	0.2	0.6	1.9	51.4	0.08	0.03	
12/19/06 15:39:15	0.2	5.0	1.9	9.0	0.08	0.03	
12/19/06 15:39:30	2.4	56.3	1.9	5.4	0.08	0.03	
12/19/06 15:39:45	7.0	131.6	6.3	5.4	0.42	1.13	
12/19/06 15:40:00	11.4	175.8	25.6	5.4	1.90	4.19	
12/19/06 15:40:15	12.4	190.4	49.1	5.3	2.98	6.07	
12/19/06 15:40:30	12.4	191.2	63.2	5.3	3.33	6.55	
12/19/06 15:40:45	12.3	190.6	68.3	5.4	3.38	6.64	
12/19/06 15:41:00	12.5	192.4	70.2	5.3	3.39	6.72	
12/19/06 15:41:15	12.6	194.1	71.0	5.5	3.42	6.77	
12/19/06 15:41:30	12.5	195.6	71.4	5.2	3.43	6.76	
12/19/06 15:41:45	12.5	195.7	71.5	5.2	3.43	6.71	
12/19/06 15:42:00	13.1	194.6	71.3	5.2	3.42	6.69	
12/19/06 15:42:15	13.2	195.8	70.8	5.1	3.42	6.73	
12/19/06 15:42:30	13.0	198.4	70.0	5.2	3.43	6.80	
12/19/06 15:42:45	12.9	202.1	70.1	4.9	3.41	6.82	Begin Run No. 1-3
12/19/06 15:43:00	**12.9**	**204.7**	**70.0**	**4.9**	**3.38**	**6.77**	**Point #1**
12/19/06 15:43:15	**13.2**	**204.1**	**69.8**	**5.0**	**3.37**	**6.74**	
12/19/06 15:43:30	**13.2**	**201.8**	**70.4**	**4.9**	**3.35**	**6.76**	
12/19/06 15:43:45	**13.0**	**200.2**	**71.3**	**5.1**	**3.36**	**6.83**	
12/19/06 15:44:00	**13.2**	**199.4**	**71.8**	**5.1**	**3.38**	**6.85**	
12/19/06 15:44:15	**12.8**	**201.7**	**71.3**	**4.9**	**3.39**	**6.81**	
12/19/06 15:44:30	**12.8**	**201.7**	**70.8**	**5.0**	**3.40**	**6.75**	
12/19/06 15:44:45	**12.9**	**199.9**	**72.5**	**5.0**	**3.39**	**6.74**	
12/19/06 15:45:00	**12.8**	**200.7**	**75.4**	**5.0**	**3.41**	**6.77**	
12/19/06 15:45:15	**12.9**	**202.4**	**73.7**	**4.9**	**3.42**	**6.82**	
12/19/06 15:45:30	**12.9**	**201.7**	**71.4**	**4.9**	**3.41**	**6.83**	
12/19/06 15:45:45	**12.9**	**198.3**	**70.1**	**4.9**	**3.39**	**6.78**	
12/19/06 15:46:00	**13.0**	**194.2**	**69.6**	**4.9**	**3.38**	**6.75**	
12/19/06 15:46:15	**13.0**	**192.1**	**69.7**	**4.8**	**3.39**	**6.76**	
12/19/06 15:46:30	**13.0**	**193.2**	**69.5**	**4.7**	**3.42**	**6.81**	
12/19/06 15:46:45	**12.9**	**192.6**	**69.2**	**5.0**	**3.42**	**6.83**	
12/19/06 15:47:00	**12.9**	**191.4**	**68.6**	**4.8**	**3.42**	**6.78**	
12/19/06 15:47:15	**12.7**	**191.9**	**67.9**	**4.8**	**3.42**	**6.73**	
12/19/06 15:47:30	**12.8**	**191.6**	**67.2**	**4.9**	**3.42**	**6.74**	
12/19/06 15:47:45	**12.8**	**191.9**	**66.8**	**4.9**	**3.43**	**6.80**	
12/19/06 15:48:00	**12.7**	**191.9**	**66.4**	**4.8**	**3.46**	**6.84**	
12/19/06 15:48:15	**12.8**	**191.3**	**65.8**	**4.8**	**3.46**	**6.80**	
12/19/06 15:48:30	**12.8**	**190.2**	**65.3**	**4.8**	**3.45**	**6.74**	
12/19/06 15:48:45	**12.8**	**188.7**	**65.4**	**4.7**	**3.44**	**6.73**	
12/19/06 15:49:00	**12.9**	**187.9**	**65.6**	**4.8**	**3.44**	**6.79**	
12/19/06 15:49:15	**12.8**	**190.3**	**65.6**	**4.7**	**3.44**	**6.84**	
12/19/06 15:49:30	**12.8**	**191.1**	**65.4**	**4.7**	**3.43**	**6.83**	
12/19/06 15:49:45	**12.8**	**188.8**	**65.3**	**4.9**	**3.42**	**6.77**	
12/19/06 15:50:00	**13.0**	**189.2**	**65.3**	**4.9**	**3.42**	**6.75**	
12/19/06 15:50:15	**13.0**	**191.2**	**65.5**	**5.0**	**3.44**	**6.79**	
12/19/06 15:50:30	**13.0**	**192.3**	**65.5**	**4.9**	**3.45**	**6.84**	
12/19/06 15:50:45	**13.0**	**193.8**	**65.6**	**4.8**	**3.45**	**6.83**	
12/19/06 15:51:00	**13.0**	**191.9**	**65.7**	**4.8**	**3.44**	**6.77**	
12/19/06 15:51:15	**12.9**	**190.6**	**66.2**	**4.7**	**3.44**	**6.74**	
12/19/06 15:51:30	**13.0**	**192.1**	**66.8**	**4.9**	**3.44**	**6.78**	
12/19/06 15:51:45	**13.0**	**195.4**	**67.5**	**4.8**	**3.43**	**6.83**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 15:52:00	12.9	197.3	68.1	4.7	3.42	6.82	
12/19/06 15:52:15	13.0	195.4	68.6	4.6	3.41	6.78	
12/19/06 15:52:30	13.0	193.9	69.0	4.6	3.40	6.74	
12/19/06 15:52:45	13.0	196.7	69.9	4.8	3.39	6.77	
12/19/06 15:53:00	13.0	201.2	70.9	4.6	3.39	6.84	
12/19/06 15:53:15	12.8	201.8	71.9	4.7	3.38	6.86	
12/19/06 15:53:30	12.8	201.8	73.1	4.7	3.36	6.81	
12/19/06 15:53:45	12.9	203.3	74.0	4.6	3.36	6.76	
12/19/06 15:54:00	12.9	205.6	74.6	4.7	3.35	6.79	
12/19/06 15:54:15	12.8	207.2	75.4	4.6	3.36	6.86	
12/19/06 15:54:30	12.8	208.3	76.2	4.5	3.36	6.89	
12/19/06 15:54:45	12.8	207.7	76.7	4.5	3.35	6.82	
12/19/06 15:55:00	12.8	206.9	77.1	4.6	3.34	6.77	
12/19/06 15:55:15	12.8	208.6	77.8	4.5	3.33	6.77	
12/19/06 15:55:30	12.7	212.3	78.6	4.6	3.33	6.81	
12/19/06 15:55:45	12.6	215.1	79.2	4.6	3.33	6.87	
12/19/06 15:56:00	12.5	215.1	79.9	4.7	3.33	6.88	
12/19/06 15:56:15	12.5	213.3	80.5	4.7	3.33	6.84	
12/19/06 15:56:30	12.5	212.9	81.2	4.7	3.33	6.79	
12/19/06 15:56:45	12.5	213.3	81.6	4.7	3.34	6.77	
12/19/06 15:57:00	12.5	212.2	81.9	4.6	3.35	6.82	
12/19/06 15:57:15	12.5	211.4	82.3	4.6	3.37	6.87	
12/19/06 15:57:30	12.5	211.8	82.6	4.6	3.38	6.88	
12/19/06 15:57:45	12.8	211.7	82.8	4.6	3.37	6.82	
12/19/06 15:58:00	13.5	210.6	82.8	4.6	3.35	6.78	
12/19/06 15:58:15	13.0	209.3	83.5	4.7	3.34	6.79	
12/19/06 15:58:30	12.8	208.9	84.9	4.6	3.35	6.85	
12/19/06 15:58:45	12.7	207.2	85.8	4.6	3.36	6.90	
12/19/06 15:59:00	12.6	205.7	86.6	4.6	3.37	6.88	
12/19/06 15:59:15	12.4	204.2	87.0	4.7	3.37	6.81	
12/19/06 15:59:30	12.4	202.3	86.5	4.8	3.38	6.78	
12/19/06 15:59:45	12.4	200.7	85.7	4.8	3.38	6.82	
12/19/06 16:00:00	12.4	199.6	85.4	4.9	3.40	6.88	
12/19/06 16:00:15	12.3	198.6	85.4	4.7	3.41	6.89	
12/19/06 16:00:30	12.3	197.1	85.5	4.7	3.40	6.84	
12/19/06 16:00:45	12.3	195.7	85.8	4.7	3.39	6.80	
12/19/06 16:01:00	12.4	195.7	86.5	4.8	3.38	6.82	
12/19/06 16:01:15	12.3	198.7	87.8	4.8	3.38	6.88	
12/19/06 16:01:30	12.3	202.1	88.7	4.8	3.38	6.91	
12/19/06 16:01:45	12.3	200.3	89.3	4.9	3.36	6.88	
12/19/06 16:02:00	12.5	197.3	89.8	4.7	3.35	6.83	
12/19/06 16:02:15	12.4	195.8	89.6	4.6	3.36	6.80	
12/19/06 16:02:30	12.3	195.1	89.7	4.6	3.36	6.83	
12/19/06 16:02:45	12.3	195.4	90.4	4.8	3.38	6.89	
12/19/06 16:03:00	12.4	196.2	90.6	4.7	3.39	6.91	Point #2
12/19/06 16:03:15	12.2	196.9	91.2	4.5	3.39	6.86	
12/19/06 16:03:30	12.2	196.6	90.5	4.5	3.38	6.80	
12/19/06 16:03:45	12.2	196.6	90.7	4.4	3.36	6.80	
12/19/06 16:04:00	12.3	197.3	90.8	4.8	3.33	6.84	
12/19/06 16:04:15	12.5	198.2	91.0	4.7	3.32	6.91	
12/19/06 16:04:30	12.5	200.1	91.0	4.6	3.31	6.93	
12/19/06 16:04:45	12.4	200.3	90.4	4.7	3.28	6.89	
12/19/06 16:05:00	12.7	199.6	89.4	4.8	3.25	6.84	
12/19/06 16:05:15	12.5	200.7	88.9	4.7	3.25	6.83	
12/19/06 16:05:30	12.4	202.2	89.3	4.6	3.26	6.88	
12/19/06 16:05:45	12.4	202.6	89.5	5.0	3.28	6.93	
12/19/06 16:06:00	12.4	204.1	88.9	4.7	3.30	6.91	
12/19/06 16:06:15	12.3	205.4	88.4	4.6	3.29	6.87	
12/19/06 16:06:30	12.4	205.1	88.1	4.7	3.28	6.79	
12/19/06 16:06:45	12.5	206.1	87.8	4.8	3.27	6.81	
12/19/06 16:07:00	12.5	209.1	87.5	4.6	3.27	6.87	
12/19/06 16:07:15	12.3	210.9	87.4	4.6	3.26	6.92	
12/19/06 16:07:30	12.4	210.6	87.3	4.6	3.25	6.90	
12/19/06 16:07:45	12.5	209.6	87.5	4.7	3.25	6.84	
12/19/06 16:08:00	12.5	207.7	87.9	4.7	3.25	6.82	
12/19/06 16:08:15	12.5	206.6	87.7	4.8	3.26	6.88	
12/19/06 16:08:30	12.6	207.3	87.5	4.7	3.26	6.92	
12/19/06 16:08:45	12.5	206.8	87.4	4.8	3.27	6.89	
12/19/06 16:09:00	12.5	205.7	86.7	4.7	3.27	6.84	
12/19/06 16:09:15	12.6	205.3	85.4	4.7	3.28	6.83	
12/19/06 16:09:30	12.8	206.8	83.4	4.8	3.30	6.88	
12/19/06 16:09:45	12.9	207.6	81.1	4.9	3.29	8.93	
12/19/06 16:10:00	13.1	207.9	78.8	4.7	3.27	6.91	
12/19/06 16:10:15	12.9	207.6	76.6	4.8	3.26	6.86	
12/19/06 16:10:30	13.0	205.3	74.6	4.9	3.26	6.84	
12/19/06 16:10:45	13.0	205.3	72.7	5.1	3.26	6.90	
12/19/06 16:11:00	12.8	206.4	71.1	5.0	3.28	6.95	
12/19/06 16:11:15	12.9	204.8	70.0	5.0	3.29	6.94	
12/19/06 16:11:30	12.9	203.7	69.8	4.9	3.30	6.88	
12/19/06 16:11:45	12.8	201.4	70.3	4.9	3.31	6.83	
12/19/06 16:12:00	12.9	199.2	70.5	5.0	3.32	6.86	
12/19/06 16:12:15	13.1	199.7	70.0	4.9	3.34	6.92	
12/19/06 16:12:30	13.1	202.7	69.1	4.9	3.35	6.94	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 16:12:45	13.0	202.6	67.6	4.9	3.32	6.90	
12/19/06 16:13:00	13.0	199.6	66.4	4.9	3.29	6.86	
12/19/06 16:13:15	13.1	197.3	65.9	4.9	3.30	6.87	
12/19/06 16:13:30	13.1	196.9	65.7	4.8	3.31	6.92	
12/19/06 16:13:45	13.2	197.9	65.6	4.9	3.32	6.95	
12/19/06 16:14:00	13.0	200.2	66.1	4.7	3.32	6.91	
12/19/06 16:14:15	12.9	199.7	77.4	4.9	3.31	6.84	
12/19/06 16:14:30	13.1	198.6	88.5	4.9	3.31	6.84	
12/19/06 16:14:45	13.1	198.7	82.3	4.8	3.32	6.90	
12/19/06 16:15:00	13.0	200.2	74.1	4.9	3.35	6.94	
12/19/06 16:15:15	12.9	200.8	69.6	4.9	3.35	6.92	
12/19/06 16:15:30	12.9	199.3	67.5	4.8	3.33	6.85	
12/19/06 16:15:45	12.9	197.6	66.3	4.9	3.33	6.83	
12/19/06 16:16:00	13.0	198.7	65.6	5.0	3.34	6.88	
12/19/06 16:16:15	13.0	199.8	65.4	5.0	3.35	6.93	
12/19/06 16:16:30	12.9	200.2	65.3	5.1	3.35	6.92	
12/19/06 16:16:45	12.8	202.1	35.1	5.0	3.35	6.84	
12/19/06 16:17:00	12.9	202.4	64.9	4.9	3.33	6.80	
12/19/06 16:17:15	12.9	202.4	65.1	5.0	3.33	6.84	
12/19/06 16:17:30	13.0	202.8	65.2	4.9	3.34	6.90	
12/19/06 16:17:45	13.0	203.3	65.2	5.1	3.34	6.93	
12/19/06 16:18:00	12.9	202.6	65.1	5.0	3.36	6.88	
12/19/06 16:18:15	12.9	202.8	65.0	4.9	3.35	6.83	
12/19/06 16:18:30	12.8	205.1	65.0	4.9	3.34	6.81	
12/19/06 16:18:45	12.9	203.9	65.2	4.9	3.34	6.86	
12/19/06 16:19:00	13.0	202.2	65.2	5.2	3.34	6.91	
12/19/06 16:19:15	13.0	202.8	64.9	5.0	3.36	6.92	
12/19/06 16:19:30	13.0	203.4	64.7	4.9	3.37	6.88	
12/19/06 16:19:45	12.9	201.6	64.6	5.0	3.36	6.82	
12/19/06 16:20:00	12.9	199.8	64.4	5.0	3.37	6.76	
12/19/06 16:20:15	12.9	200.0	64.3	5.0	3.38	6.80	
12/19/06 16:20:30	12.8	202.1	64.2	5.3	3.39	6.87	
12/19/06 16:20:45	12.7	203.2	64.3	5.0	3.39	6.88	
12/19/06 16:21:00	12.6	202.7	64.3	5.0	3.38	6.82	
12/19/06 16:21:15	12.7	201.7	64.0	5.1	3.38	6.76	
12/19/06 16:21:30	12.6	202.3	63.9	5.1	3.37	6.77	
12/19/06 16:21:45	12.6	202.9	64.1	5.2	3.38	6.83	
12/19/06 16:22:00	12.6	202.2	64.1	5.0	3.39	6.87	
12/19/06 16:22:15	12.6	200.7	63.9	4.9	3.39	6.83	
12/19/06 16:22:30	12.6	199.2	63.6	5.1	3.40	6.76	
12/19/06 16:22:45	12.6	198.9	63.5	5.1	3.40	6.76	
12/19/06 16:23:00	12.7	198.6	63.4	5.1	3.40	6.83	Point #3
12/19/06 16:23:15	12.7	198.4	63.1	5.1	3.42	6.85	
12/19/06 16:23:30	12.7	198.1	32.8	5.2	3.42	6.80	
12/19/06 16:23:45	12.6	196.7	62.5	5.2	3.41	6.74	
12/19/06 16:24:00	12.7	196.1	62.4	5.2	3.42	6.75	
12/19/06 16:24:15	12.6	194.9	62.6	5.2	3.43	6.81	
12/19/06 16:24:30	12.6	194.4	62.7	4.8	3.42	6.83	
12/19/06 16:24:45	12.6	193.2	62.7	5.0	3.43	6.78	
12/19/06 16:25:00	12.6	192.6	62.5	5.0	3.42	6.72	
12/19/06 16:25:15	12.6	192.7	62.3	5.0	3.41	6.73	
12/19/06 16:25:30	12.5	192.9	62.8	5.1	3.41	6.80	
12/19/06 16:25:45	12.5	192.2	64.6	5.1	3.42	6.82	
12/19/06 16:26:00	12.5	190.7	65.1	5.1	3.42	6.78	
12/19/06 16:26:15	12.5	189.7	64.1	5.1	3.42	6.73	
12/19/06 16:26:30	12.5	189.4	63.0	5.0	3.43	6.73	
12/19/06 16:26:45	12.4	190.9	62.6	5.0	3.41	6.80	
12/19/06 16:27:00	12.4	192.7	62.6	5.0	3.41	6.84	
12/19/06 16:27:15	12.4	191.9	62.6	5.2	3.40	6.81	
12/19/06 16:27:30	12.3	190.7	62.5	5.1	3.39	6.76	
12/19/06 16:27:45	12.4	188.7	62.4	5.3	3.39	6.75	
12/19/06 16:28:00	12.5	188.1	62.4	5.2	3.40	6.80	
12/19/06 16:28:15	12.5	189.9	62.4	5.1	3.41	6.84	
12/19/06 16:28:30	12.5	190.8	62.1	5.1	3.39	6.80	
12/19/06 16:28:45	12.6	189.9	61.7	5.1	3.39	6.75	
12/19/06 16:29:00	12.5	189.5	61.6	5.0	3.39	6.74	
12/19/06 16:29:15	12.4	190.4	62.2	5.0	3.39	6.81	
12/19/06 16:29:30	12.4	191.7	62.6	4.4	3.38	6.84	
12/19/06 16:29:45	12.3	194.7	62.3	3.9	3.37	6.81	
12/19/06 16:30:00	12.4	196.2	61.9	4.5	3.36	6.76	
12/19/06 16:30:15	12.4	196.7	31.6	5.0	3.36	6.76	
12/19/06 16:30:30	12.4	197.7	61.5	5.0	3.38	6.81	
12/19/06 16:30:45	12.5	200.2	61.7	5.0	3.38	6.85	
12/19/06 16:31:00	12.5	201.7	62.1	5.0	3.37	6.83	
12/19/06 16:31:15	12.4	201.4	62.5	5.1	3.35	6.77	
12/19/06 16:31:30	12.5	202.2	62.7	5.0	3.33	6.76	
12/19/06 16:31:45	12.5	203.2	62.7	5.0	3.33	6.82	
12/19/06 16:32:00	12.5	203.8	62.5	4.8	3.33	6.87	
12/19/06 16:32:15	12.6	205.2	62.3	4.7	3.33	6.85	
12/19/06 16:32:30	12.6	205.1	62.1	4.6	3.31	6.80	
12/19/06 16:32:45	12.7	203.7	62.1	4.7	3.29	6.78	
12/19/06 16:33:00	12.7	204.2	62.2	4.8	3.27	6.82	
12/19/06 16:33:15	12.7	204.4	62.3	4.8	3.27	6.89	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 16:33:30	12.8	204.8	62.3	4.8	3.28	6.90	
12/19/06 16:33:45	12.8	205.4	62.3	4.8	3.27	6.85	
12/19/06 16:34:00	12.8	205.2	52.1	4.9	3.26	6.80	
12/19/06 16:34:15	12.9	205.4	62.2	4.7	3.26	6.81	
12/19/06 16:34:30	12.9	205.8	62.4	4.8	3.28	6.87	
12/19/06 16:34:45	12.7	207.2	62.5	4.3	3.29	6.90	
12/19/06 16:35:00	12.7	207.8	62.7	4.1	3.28	6.86	
12/19/06 16:35:15	12.7	206.2	62.4	4.2	3.27	6.80	
12/19/06 16:35:30	12.9	203.9	62.3	4.1	3.28	6.79	
12/19/06 16:35:45	12.9	202.2	62.3	4.6	3.29	6.85	
12/19/06 16:36:00	13.0	201.9	62.3	4.5	3.29	6.91	
12/19/06 16:36:15	13.0	202.2	62.2	4.8	3.29	6.89	
12/19/06 16:36:30	13.0	202.1	62.0	4.8	3.30	6.83	
12/19/06 16:36:45	13.0	200.7	62.0	4.8	3.30	6.79	
12/19/06 16:37:00	13.0	200.3	62.2	4.7	3.29	6.80	
12/19/06 16:37:15	13.0	201.2	62.4	4.7	3.32	6.85	
12/19/06 16:37:30	12.9	201.1	62.5	4.7	3.32	6.88	
12/19/06 16:37:45	12.9	199.7	62.4	4.6	3.31	6.84	
12/19/06 16:38:00	13.0	199.1	62.1	4.7	3.30	6.80	
12/19/06 16:38:15	13.0	198.9	62.0	4.7	3.30	6.81	
12/19/06 16:38:30	13.1	200.6	62.3	4.9	3.30	6.88	
12/19/06 16:38:45	13.0	202.7	62.4	4.6	3.29	6.91	
12/19/06 16:39:00	13.0	202.6	62.5	4.7	3.27	6.87	
12/19/06 16:39:15	13.0	201.9	62.3	4.8	3.27	6.81	
12/19/06 16:39:30	13.1	203.1	62.4	4.6	3.27	6.82	
12/19/06 16:39:45	13.1	204.2	62.6	4.8	3.27	6.90	
12/19/06 16:40:00	13.0	205.2	62.8	4.4	3.27	6.92	
12/19/06 16:40:15	13.0	204.9	63.2	4.6	3.27	6.87	
12/19/06 16:40:30	13.0	204.2	63.3	4.7	3.26	6.81	
12/19/06 16:40:45	13.0	205.2	53.7	4.8	3.25	6.84	
12/19/06 16:41:00	13.0	208.3	64.3	4.6	3.26	6.91	
12/19/06 16:41:15	12.8	209.7	64.4	4.6	3.25	6.93	
12/19/06 16:41:30	12.9	207.4	64.2	4.7	3.24	6.87	
12/19/06 16:41:45	12.8	209.4	64.0	4.7	3.25	6.81	
12/19/06 16:42:00	12.7	212.8	64.1	4.8	3.26	6.86	
12/19/06 16:42:15	12.7	215.9	64.4	4.8	3.25	6.92	
12/19/06 16:42:30	12.8	216.4	64.6	4.6	3.24	6.91	
12/19/06 16:42:45	12.7	213.7	64.6	4.5	3.24	6.84	
12/19/06 16:43:00	12.7	210.2	64.7	5.2	3.25	6.83	End Run No. 1-3
12/19/06 16:43:15	12.7	199.9	64.9	43.2	3.25	6.89	
12/19/06 16:43:30	13.0	151.2	65.2	0.9	3.25	6.94	
12/19/06 16:43:45	10.2	56.8	63.0	0.6	3.13	6.00	
12/19/06 16:44:00	2.4	16.9	49.5	0.5	1.97	2.70	
12/19/06 16:44:15	0.8	2.3	29.1	0.5	0.61	0.62	
12/19/06 16:44:30	0.5	1.2	15.1	0.5	0.18	0.17	
12/19/06 16:44:45	0.4	0.8	9.6	0.4	0.12	0.10	
12/19/06 16:45:00	0.4	1.1	7.8	0.4	0.11	0.08	
12/19/06 16:45:15	0.3	0.8	7.1	0.4	0.09	0.07	
12/19/06 16:45:30	0.3	1.0	6.1	0.4	0.09	0.06	
12/19/06 16:45:45	0.2	0.8	5.1	0.4	0.08	0.06	
12/19/06 16:46:00	0.2	0.6	4.1	0.3	0.08	0.05	
12/19/06 16:46:15	0.2	0.8	3.4	0.4	0.08	0.05	
12/19/06 16:46:30	0.1	0.6	2.8	0.3	0.08	0.05	
12/19/06 16:46:45	0.1	0.6	2.4	0.3	0.08	0.05	
12/19/06 16:47:00	0.1	0.6	2.1	0.3	0.08	0.04	
12/19/06 16:47:15	0.1	0.6	1.9	0.3	0.08	0.04	
12/19/06 16:47:30	0.1	1.0	1.6	0.3	0.08	0.04	
12/19/06 16:47:45	0.1	0.6	1.5	0.3	0.07	0.04	
12/19/06 16:48:00	0.1	0.6	1.4	0.3	0.07	0.04	System Bias
12/19/06 16:48:15	0.1	0.8	1.4	0.3	0.07	0.04	0.1 Zero NO_x
12/19/06 16:48:30	0.1	0.6	1.3	0.3	0.07	0.04	0.6 Zero CO
12/19/06 16:48:45	0.1	0.6	1.2	0.3	0.07	0.04	1.3 Zero SO_2
12/19/06 16:49:00	0.1	0.6	1.2	0.3	0.08	0.03	0.3 Zero C_3H_8/N_2
12/19/06 16:49:15	0.1	0.8	1.1	2.3	0.08	0.03	0.07 Zero O_2
12/19/06 16:49:30	0.0	18.3	1.1	2.0	0.08	0.03	0.04 Zero CO_2
12/19/06 16:49:45	0.2	38.6	1.2	7.4	0.13	0.24	
12/19/06 16:50:00	1.4	29.1	2.9	0.6	0.71	1.45	
12/19/06 16:50:15	2.2	8.8	6.3	0.5	0.92	1.00	
12/19/06 16:50:30	1.5	2.8	8.2	0.4	2.54	0.24	
12/19/06 16:50:45	0.8	1.1	7.0	0.3	4.00	0.07	
12/19/06 16:51:00	0.4	1.1	4.7	0.3	4.37	0.04	
12/19/06 16:51:15	0.3	0.8	3.1	0.3	4.42	0.04	
12/19/06 16:51:30	0.3	0.6	2.4	0.3	4.44	0.03	
12/19/06 16:51:45	0.2	0.6	1.9	0.3	4.46	0.03	
12/19/06 16:52:00	0.2	0.6	1.7	0.2	4.47	0.03	
12/19/06 16:52:15	0.2	0.8	1.4	0.2	4.49	0.03	
12/19/06 16:52:30	0.2	0.7	1.3	0.2	4.50	0.03	
12/19/06 16:52:45	0.2	0.6	1.2	0.2	4.52	0.03	
12/19/06 16:53:00	0.1	0.6	1.2	0.2	4.53	0.03	System Bias
12/19/06 16:53:15	0.1	0.6	1.1	0.2	4.54	0.03	4.54 4.50% O_2
12/19/06 16:53:30	0.1	0.6	1.1	0.2	4.54	0.03	
12/19/06 16:53:45	0.1	5.8	1.1	3.2	4.54	0.03	
12/19/06 16:54:00	0.8	36.9	1.1	0.9	4.54	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 16:54:15	5.3	44.1	1.8	0.3	4.47	0.69	
12/19/06 16:54:30	2.9	22.7	6.2	0.2	4.13	2.08	
12/19/06 16:54:45	0.2	3.1	8.2	0.3	2.56	3.00	
12/19/06 16:55:00	0.1	0.3	5.7	0.2	0.75	4.00	
12/19/06 16:55:15	0.1	-0.4	3.5	0.3	0.24	4.27	
12/19/06 16:55:30	0.1	-0.4	2.4	0.3	0.15	4.27	
12/19/06 16:55:45	0.1	-0.4	1.8	0.3	0.12	4.28	
12/19/06 16:56:00	0.1	-0.4	1.5	0.3	0.10	4.37	
12/19/06 16:56:15	0.1	-0.4	1.3	0.3	0.09	4.47	
12/19/06 16:56:30	0.1	-0.4	1.2	0.2	0.08	4.52	
12/19/06 16:56:45	0.1	-0.4	1.1	0.3	0.08	4.55	
12/19/06 16:57:00	0.1	-0.4	1.0	0.3	0.08	4.56	
12/19/06 16:57:15	0.1	-0.4	1.0	0.3	0.08	4.56	
12/19/06 16:57:30	0.1	-0.4	1.0	0.3	0.08	4.55	System Bias
12/19/06 16:57:45	0.1	-0.4	0.9	0.3	0.07	**4.56**	**4.56 4.50% CO_2**
12/19/06 16:58:00	0.1	-0.4	0.9	0.2	0.08	**4.56**	
12/19/06 16:58:15	0.1	-0.4	0.9	0.2	0.07	**4.56**	
12/19/06 16:58:30	0.1	0.3	0.9	3.4	0.07	**4.56**	
12/19/06 16:58:45	2.0	40.8	0.9	1.3	0.07	4.56	
12/19/06 16:59:00	7.0	78.9	1.7	0.3	0.24	4.77	
12/19/06 16:59:15	2.4	154.5	6.9	0.2	0.96	4.85	
12/19/06 16:59:30	0.3	195.6	8.9	0.2	0.62	2.38	
12/19/06 16:59:45	0.2	215.9	5.9	0.2	0.22	0.55	
12/19/06 17:00:00	0.1	218.2	3.2	0.2	0.11	0.16	
12/19/06 17:00:15	0.1	218.7	2.2	0.2	0.10	0.09	
12/19/06 17:00:30	0.1	218.9	1.7	0.2	0.09	0.07	System Bias
12/19/06 17:00:45	0.1	**219.2**	1.5	0.2	0.09	0.06	**219.2 225.0 ppm CO**
12/19/06 17:01:00	0.1	**218.9**	1.2	0.2	0.09	0.05	
12/19/06 17:01:15	0.1	**219.4**	1.1	0.2	0.09	0.05	
12/19/06 17:01:30	0.1	**219.4**	1.0	2.5	0.09	0.04	
12/19/06 17:01:45	0.7	222.4	1.0	4.3	0.09	0.04	
12/19/06 17:02:00	2.2	193.6	1.5	1.6	0.17	0.38	
12/19/06 17:02:15	1.2	98.8	5.7	0.3	0.74	1.67	
12/19/06 17:02:30	1.4	46.3	8.7	0.3	0.57	0.91	
12/19/06 17:02:45	7.6	15.1	6.2	0.1	0.23	0.21	
12/19/06 17:03:00	26.2	6.3	3.8	0.1	0.16	0.07	
12/19/06 17:03:15	25.2	2.8	2.7	0.1	0.12	0.04	
12/19/06 17:03:30	27.2	2.2	2.2	0.1	0.10	0.04	
12/19/06 17:03:45	29.7	2.1	1.8	0.1	0.10	0.03	
12/19/06 17:04:00	33.2	1.7	1.7	0.1	0.10	0.04	
12/19/06 17:04:15	34.9	1.8	1.6	0.1	0.10	0.03	
12/19/06 17:04:30	36.7	1.6	1.5	0.1	0.09	0.03	
12/19/06 17:04:45	37.5	1.1	1.5	0.0	0.09	0.03	
12/19/06 17:05:00	38.3	1.1	1.5	0.1	0.09	0.03	
12/19/06 17:05:15	38.8	1.1	1.4	0.1	0.09	0.03	
12/19/06 17:05:30	40.3	1.1	1.5	0.0	0.09	0.03	
12/19/06 17:05:45	41.9	1.1	1.3	0.1	0.09	0.03	
12/19/06 17:06:00	44.6	1.0	1.2	0.0	0.09	0.03	
12/19/06 17:06:15	45.5	0.6	1.2	0.0	0.09	0.04	
12/19/06 17:06:30	44.8	0.8	1.0	0.0	0.09	0.04	
12/19/06 17:06:45	43.8	0.8	1.0	0.0	0.09	0.04	
12/19/06 17:07:00	42.7	0.8	1.0	0.0	0.09	0.04	
12/19/06 17:07:15	42.3	0.8	0.9	0.0	0.09	0.04	
12/19/06 17:07:30	41.8	0.6	0.8	0.1	0.09	0.03	
12/19/06 17:07:45	41.6	0.6	0.9	0.0	0.08	0.03	
12/19/06 17:08:00	41.4	0.7	0.9	0.0	0.08	0.03	System Bias
12/19/06 17:08:15	**41.3**	0.8	0.9	0.0	0.08	0.03	**41.1 45.0 ppm NO**
12/19/06 17:08:30	**41.2**	0.8	0.8	0.1	0.08	0.03	
12/19/06 17:08:45	**41.0**	0.6	0.9	0.0	0.08	0.03	
12/19/06 17:09:00	**41.0**	0.6	0.9	0.0	0.08	0.04	
12/19/06 17:09:15	40.7	0.6	0.9	0.1	0.09	0.03	
12/19/06 17:09:30	40.5	0.8	0.9	0.0	0.08	0.03	
12/19/06 17:09:45	40.4	4.1	0.8	4.0	0.08	0.03	
12/19/06 17:10:00	37.0	49.1	0.8	0.4	0.08	0.03	
12/19/06 17:10:15	19.1	71.0	2.8	15.7	0.29	0.83	
12/19/06 17:10:30	70.5	38.1	11.3	25.8	1.17	2.69	
12/19/06 17:10:45	81.5	8.6	18.6	2.1	0.85	1.51	
12/19/06 17:11:00	9.4	2.0	40.7	0.6	0.25	0.32	
12/19/06 17:11:15	6.5	0.8	79.4	0.5	0.12	0.08	
12/19/06 17:11:30	4.4	0.6	105.5	0.4	0.10	0.05	
12/19/06 17:11:45	3.7	0.6	118.2	0.4	0.09	0.04	
12/19/06 17:12:00	3.0	0.6	123.5	0.4	0.09	0.03	
12/19/06 17:12:15	2.8	0.6	125.8	0.4	0.08	0.03	
12/19/06 17:12:30	2.5	0.8	127.0	0.4	0.08	0.03	
12/19/06 17:12:45	2.3	0.6	127.8	0.4	0.08	0.03	
12/19/06 17:13:00	2.0	0.6	128.3	0.3	0.08	0.03	
12/19/06 17:13:15	1.9	0.6	128.8	0.3	0.08	0.03	
12/19/06 17:13:30	1.8	0.6	129.3	0.3	0.08	0.03	
12/19/06 17:13:45	1.7	0.6	129.8	0.3	0.08	0.03	
12/19/06 17:14:00	1.6	0.6	130.3	0.3	0.08	0.03	
12/19/06 17:14:15	1.5	0.6	130.7	0.3	0.08	0.03	
12/19/06 17:14:30	1.4	0.8	131.2	0.3	0.08	0.03	
12/19/06 17:14:45	1.4	0.6	131.6	0.3	0.08	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 17:15:00	1.3	0.6	132.0	0.3	0.08	0.03	
12/19/06 17:15:15	1.3	0.6	132.2	0.3	0.08	0.03	
12/19/06 17:15:30	1.2	0.6	132.3	0.3	0.08	0.03	
12/19/06 17:15:45	1.2	0.6	132.6	0.3	0.08	0.03	
12/19/06 17:16:00	1.2	0.6	132.8	0.3	0.08	0.03	
12/19/06 17:16:15	1.1	0.6	133.1	0.3	0.08	0.03	
12/19/06 17:16:30	1.1	0.6	133.3	0.2	0.08	0.03	
12/19/06 17:16:45	1.1	0.6	133.4	0.2	0.08	0.03	System Bias
12/19/06 17:17:00	1.0	0.6	**133.4**	0.3	0.08	0.03	**133.5 135.0 ppm SO_2**
12/19/06 17:17:15	1.0	0.6	**133.5**	0.3	0.08	0.03	
12/19/06 17:17:30	1.0	7.8	**133.6**	3.7	0.08	0.03	
12/19/06 17:17:45	3.3	45.1	**133.7**	1.9	0.08	0.03	
12/19/06 17:18:00	6.3	54.5	131.4	44.0	0.32	0.90	
12/19/06 17:18:15	2.2	28.6	122.0	51.7	1.10	2.38	
12/19/06 17:18:30	0.7	7.7	98.5	52.2	0.69	1.15	
12/19/06 17:18:45	0.3	1.6	57.8	52.5	0.20	0.24	
12/19/06 17:19:00	0.3	1.0	27.7	52.6	0.10	0.07	
12/19/06 17:19:15	0.3	0.6	14.3	52.5	0.10	0.05	
12/19/06 17:19:30	0.3	0.6	9.2	51.5	0.09	0.04	
12/19/06 17:19:45	0.2	0.6	6.8	50.7	0.09	0.04	Calibration
12/19/06 17:20:00	0.2	0.6	5.5	**50.6**	0.09	0.04	**50.7 50.0 ppm C_3H_8/N_2**
12/19/06 17:20:15	0.2	0.6	4.7	**50.6**	0.08	0.03	
12/19/06 17:20:30	0.2	0.6	4.1	**50.7**	0.08	0.03	
12/19/06 17:20:45	0.2	0.3	3.6	**50.9**	0.08	0.03	
12/19/06 17:21:00	0.3	0.5	3.3	50.7	0.08	0.03	
12/19/06 17:21:15	0.3	4.1	3.1	10.3	0.08	0.03	
12/19/06 17:21:30	0.5	57.8	2.8	5.5	0.08	0.04	
12/19/06 17:21:45	5.0	138.2	6.4	5.4	0.36	1.05	
12/19/06 17:22:00	12.8	185.2	23.8	5.4	1.71	4.24	
12/19/06 17:22:15	13.1	203.2	15.3	5.3	2.74	6.27	
12/19/06 17:22:30	13.2	205.7	58.9	5.4	3.08	6.79	
12/19/06 17:22:45	13.2	205.7	63.7	5.3	3.13	6.84	
12/19/06 17:23:00	13.3	206.4	64.9	5.3	3.15	6.89	
12/19/06 17:23:15	13.4	207.9	65.3	5.6	3.16	6.97	
12/19/06 17:23:30	13.5	210.1	65.7	5.3	3.15	7.01	
12/19/06 17:23:45	13.6	209.4	65.8	5.3	3.14	6.96	
12/19/06 17:24:00	13.7	206.7	67.4	5.4	3.16	6.90	
12/19/06 17:24:15	13.8	205.4	68.0	5.3	3.17	6.90	
12/19/06 17:24:30	14.2	208.7	67.7	5.1	3.18	6.98	
12/19/06 17:24:45	14.6	207.2	65.7	5.0	3.19	7.02	
12/19/06 17:25:00	14.7	206.4	64.2	4.9	3.18	7.00	
12/19/06 17:25:15	14.3	205.9	63.9	4.8	3.19	6.94	
12/19/06 17:25:30	14.2	206.7	63.7	5.0	3.22	6.92	
12/19/06 17:25:45	14.1	207.7	64.1	4.9	3.22	6.98	Begin Run No. 1-4
12/19/06 17:26:00	**13.9**	**209.8**	**64.8**	**4.8**	**3.22**	**7.04**	**Point #1**
12/19/06 17:26:15	**13.8**	**208.7**	**64.0**	**4.8**	**3.21**	**7.02**	
12/19/06 17:26:30	**13.9**	**204.4**	**62.5**	**4.9**	**3.20**	**6.95**	
12/19/06 17:26:45	**14.0**	**201.2**	**61.9**	**5.0**	**3.22**	**6.92**	
12/19/06 17:27:00	**13.9**	**204.4**	**62.1**	**4.8**	**3.25**	**6.97**	
12/19/06 17:27:15	**13.6**	**208.4**	**62.7**	**4.8**	**3.26**	**7.01**	
12/19/06 17:27:30	**13.6**	**206.9**	**63.4**	**4.8**	**3.24**	**6.98**	
12/19/06 17:27:45	**13.7**	**203.9**	**63.7**	**4.7**	**3.24**	**6.91**	
12/19/06 17:28:00	**13.6**	**202.6**	**63.7**	**4.7**	**3.25**	**6.91**	
12/19/06 17:28:15	**13.5**	**202.7**	**63.9**	**4.7**	**3.26**	**6.97**	
12/19/06 17:28:30	**13.5**	**202.7**	**64.2**	**4.6**	**3.25**	**7.00**	
12/19/06 17:28:45	**13.5**	**201.4**	**64.6**	**4.6**	**3.24**	**6.95**	
12/19/06 17:29:00	**13.4**	**200.6**	**64.9**	**4.7**	**3.24**	**6.90**	
12/19/06 17:29:15	**13.5**	**201.9**	**65.1**	**4.9**	**3.25**	**6.91**	
12/19/06 17:29:30	**13.4**	**206.4**	**65.1**	**4.8**	**3.25**	**6.98**	
12/19/06 17:29:45	**13.2**	**207.7**	**64.7**	**4.7**	**3.24**	**7.01**	
12/19/06 17:30:00	**13.2**	**204.2**	**64.3**	**4.6**	**3.23**	**6.97**	
12/19/06 17:30:15	**13.3**	**201.4**	**63.9**	**4.6**	**3.25**	**6.90**	
12/19/06 17:30:30	**13.3**	**201.9**	**63.8**	**4.8**	**3.26**	**6.92**	
12/19/06 17:30:45	**13.2**	**204.4**	**63.9**	**4.9**	**3.26**	**6.99**	
12/19/06 17:31:00	**13.1**	**204.6**	**64.0**	**4.9**	**3.25**	**7.01**	
12/19/06 17:31:15	**13.0**	**201.9**	**63.8**	**4.8**	**3.27**	**6.94**	
12/19/06 17:31:30	**13.1**	**198.4**	**63.9**	**4.9**	**3.30**	**6.88**	
12/19/06 17:31:45	**13.1**	**198.2**	**64.6**	**5.1**	**3.33**	**6.90**	
12/19/06 17:32:00	**13.1**	**202.4**	**65.4**	**4.9**	**3.34**	**6.96**	
12/19/06 17:32:15	**12.9**	**204.7**	**65.6**	**4.9**	**3.33**	**6.97**	
12/19/06 17:32:30	**12.9**	**202.3**	**65.4**	**4.9**	**3.34**	**6.91**	
12/19/06 17:32:45	**13.1**	**200.4**	**64.9**	**5.2**	**3.35**	**6.86**	
12/19/06 17:33:00	**13.1**	**203.6**	**64.8**	**5.1**	**3.37**	**6.90**	
12/19/06 17:33:15	**13.0**	**207.2**	**64.6**	**4.9**	**3.37**	**6.95**	
12/19/06 17:33:30	**12.9**	**206.3**	**64.3**	**5.0**	**3.36**	**6.93**	
12/19/06 17:33:45	**13.0**	**204.2**	**64.2**	**5.0**	**3.35**	**6.88**	
12/19/06 17:34:00	**13.1**	**205.2**	**64.3**	**4.9**	**3.35**	**6.88**	
12/19/06 17:34:15	**12.9**	**206.2**	**64.2**	**5.0**	**3.36**	**6.94**	
12/19/06 17:34:30	**12.9**	**206.2**	**64.1**	**4.9**	**3.35**	**6.96**	
12/19/06 17:34:45	**12.9**	**205.9**	**63.8**	**5.0**	**3.34**	**6.90**	
12/19/06 17:35:00	**13.0**	**205.8**	**63.6**	**5.0**	**3.34**	**6.85**	
12/19/06 17:35:15	**13.7**	**206.7**	**64.0**	**4.9**	**3.35**	**6.89**	
12/19/06 17:35:30	**13.3**	**208.6**	**65.3**	**5.0**	**3.36**	**6.96**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 17:35:45	13.0	209.9	66.2	4.8	3.36	6.97	
12/19/06 17:36:00	13.0	209.2	65.6	4.9	3.34	6.91	
12/19/06 17:36:15	13.2	207.7	64.8	4.9	3.33	6.86	
12/19/06 17:36:30	13.0	208.1	64.8	5.0	3.35	6.89	
12/19/06 17:36:45	12.9	208.9	64.7	5.1	3.35	6.96	
12/19/06 17:37:00	12.9	209.6	64.4	4.9	3.35	6.97	
12/19/06 17:37:15	12.9	209.2	63.9	4.9	3.34	6.92	
12/19/06 17:37:30	12.8	208.8	63.5	5.0	3.33	6.88	
12/19/06 17:37:45	12.8	210.4	63.3	5.1	3.34	6.90	
12/19/06 17:38:00	12.8	214.2	63.4	4.9	3.34	6.96	
12/19/06 17:38:15	12.8	216.2	63.5	5.0	3.33	6.97	
12/19/06 17:38:30	12.9	214.2	63.3	4.9	3.32	6.92	
12/19/06 17:38:45	13.1	211.7	63.5	4.8	3.32	6.88	
12/19/06 17:39:00	13.2	213.6	64.1	4.9	3.34	6.90	
12/19/06 17:39:15	13.1	216.7	64.3	4.9	3.34	6.96	
12/19/06 17:39:30	13.1	215.1	64.2	4.9	3.32	6.97	
12/19/06 17:39:45	13.1	210.9	63.9	5.1	3.31	6.92	
12/19/06 17:40:00	13.1	209.9	63.5	5.0	3.32	6.88	
12/19/06 17:40:15	13.1	211.9	63.1	5.2	3.34	6.92	
12/19/06 17:40:30	13.2	214.1	63.2	5.0	3.34	6.98	
12/19/06 17:40:45	13.2	215.2	63.4	4.9	3.33	6.98	
12/19/06 17:41:00	13.1	213.1	63.4	4.8	3.33	6.90	
12/19/06 17:41:15	13.2	211.7	63.1	4.8	3.33	6.86	
12/19/06 17:41:30	13.1	214.1	62.9	4.8	3.32	6.91	
12/19/06 17:41:45	13.2	216.9	63.0	4.8	3.33	6.98	
12/19/06 17:42:00	13.2	216.1	63.2	4.8	3.32	6.99	
12/19/06 17:42:15	13.3	212.7	63.1	4.8	3.31	6.93	
12/19/06 17:42:30	13.3	210.7	62.8	4.8	3.32	6.88	
12/19/06 17:42:45	13.3	210.9	62.8	4.8	3.33	6.89	
12/19/06 17:43:00	13.2	211.3	63.1	5.0	3.34	6.96	
12/19/06 17:43:15	13.3	211.2	63.2	4.9	3.34	6.97	
12/19/06 17:43:30	13.3	211.9	63.0	4.7	3.35	6.92	
12/19/06 17:43:45	13.4	210.7	62.8	4.8	3.34	6.86	
12/19/06 17:44:00	13.3	209.9	62.8	5.0	3.35	6.88	
12/19/06 17:44:15	13.2	212.2	63.1	4.8	3.35	6.95	
12/19/06 17:44:30	13.3	213.8	63.5	5.0	3.35	6.98	
12/19/06 17:44:45	13.3	213.4	63.4	4.7	3.33	6.92	
12/19/06 17:45:00	13.3	211.7	63.2	4.8	3.33	6.86	
12/19/06 17:45:15	13.4	211.4	63.1	4.9	3.35	6.87	
12/19/06 17:45:30	13.4	213.7	63.0	4.8	3.36	6.94	
12/19/06 17:45:45	13.4	215.2	61.4	4.6	3.37	6.97	
12/19/06 17:46:00	13.3	214.3	63.3	4.6	3.36	6.93	Point #2
12/19/06 17:46:15	13.4	211.7	63.0	4.7	3.35	6.87	
12/19/06 17:46:30	13.4	209.8	62.8	4.9	3.34	6.87	
12/19/06 17:46:45	13.4	210.7	62.7	5.2	3.35	6.93	
12/19/06 17:47:00	13.3	212.9	62.6	4.8	3.36	6.97	
12/19/06 17:47:15	13.5	214.2	62.5	4.9	3.34	6.93	
12/19/06 17:47:30	13.5	212.7	61.7	4.9	3.32	6.88	
12/19/06 17:47:45	13.6	212.2	60.8	4.9	3.31	6.88	
12/19/06 17:48:00	13.7	213.7	61.0	5.1	3.32	6.94	
12/19/06 17:48:15	13.5	214.7	62.4	4.9	3.33	6.99	
12/19/06 17:48:30	13.4	214.2	62.8	4.9	3.32	6.97	
12/19/06 17:48:45	13.3	212.2	62.1	4.9	3.31	6.90	
12/19/06 17:49:00	13.3	211.4	61.6	5.0	3.30	6.87	
12/19/06 17:49:15	13.3	211.7	61.3	4.9	3.30	6.89	
12/19/06 17:49:30	13.3	213.4	61.2	5.1	3.31	6.96	
12/19/06 17:49:45	13.3	215.4	61.4	5.0	3.32	6.99	
12/19/06 17:50:00	13.2	215.8	61.3	4.8	3.31	6.94	
12/19/06 17:50:15	13.1	214.7	61.1	4.8	3.31	6.87	
12/19/06 17:50:30	13.2	213.1	60.9	5.0	3.31	6.89	
12/19/06 17:50:45	13.3	212.4	61.0	5.0	3.31	6.94	
12/19/06 17:51:00	13.2	212.7	61.2	5.0	3.33	6.97	
12/19/06 17:51:15	13.3	211.9	61.2	5.0	3.33	6.95	
12/19/06 17:51:30	13.3	211.7	61.1	5.1	3.33	6.89	
12/19/06 17:51:45	13.4	211.7	61.3	5.1	3.34	6.85	
12/19/06 17:52:00	13.3	211.9	61.6	5.4	3.34	6.90	
12/19/06 17:52:15	13.4	212.2	61.7	5.4	3.35	6.93	
12/19/06 17:52:30	13.2	211.4	61.5	5.4	3.37	6.92	
12/19/06 17:52:45	13.2	210.2	61.3	5.5	3.39	6.85	
12/19/06 17:53:00	13.1	210.8	60.9	5.6	3.41	6.82	
12/19/06 17:53:15	13.0	211.2	60.8	5.6	3.42	6.86	
12/19/06 17:53:30	13.1	210.4	60.9	5.5	3.43	6.89	
12/19/06 17:53:45	13.2	209.2	61.1	5.7	3.44	6.87	
12/19/06 17:54:00	13.2	207.3	61.0	5.6	3.45	6.81	
12/19/06 17:54:15	13.2	206.7	60.8	5.6	3.46	6.77	
12/19/06 17:54:30	13.2	208.6	60.9	5.7	3.47	6.81	
12/19/06 17:54:45	13.2	210.2	61.5	5.7	3.47	6.87	
12/19/06 17:55:00	13.2	209.8	61.8	5.8	3.46	6.85	
12/19/06 17:55:15	13.2	208.7	61.7	5.8	3.45	6.80	
12/19/06 17:55:30	13.1	207.9	61.2	5.7	3.46	6.77	
12/19/06 17:55:45	13.2	208.4	60.9	5.6	3.48	6.82	
12/19/06 17:56:00	13.1	209.4	60.8	5.6	3.49	6.87	
12/19/06 17:56:15	13.1	208.7	60.7	5.6	3.47	6.85	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 17:56:30	13.1	205.9	60.5	5.6	3.47	6.80	
12/19/06 17:56:45	13.1	206.2	60.5	5.5	3.47	6.78	
12/19/06 17:57:00	13.1	208.1	60.7	5.5	3.48	6.84	
12/19/06 17:57:15	13.2	208.7	61.0	5.6	3.47	6.89	
12/19/06 17:57:30	13.2	207.8	61.1	5.7	3.45	6.87	
12/19/06 17:57:45	13.1	207.7	61.1	5.7	3.44	6.81	
12/19/06 17:58:00	13.1	208.8	61.0	5.6	3.45	6.81	
12/19/06 17:58:15	13.2	210.7	60.8	5.6	3.45	6.90	
12/19/06 17:58:30	13.1	211.8	60.8	5.7	3.44	6.91	
12/19/06 17:58:45	13.2	210.9	60.9	5.7	3.42	6.86	
12/19/06 17:59:00	13.2	212.7	61.0	5.7	3.43	6.83	
12/19/06 17:59:15	13.0	213.9	61.2	5.8	3.45	6.88	
12/19/06 17:59:30	13.0	212.4	61.5	5.5	3.44	6.94	
12/19/06 17:59:45	13.1	209.7	61.5	5.6	3.43	6.91	
12/19/06 18:00:00	13.2	207.8	61.4	5.6	3.44	6.81	
12/19/06 18:00:15	13.3	207.9	61.3	5.6	3.46	6.81	
12/19/06 18:00:30	13.2	207.8	61.3	5.3	3.45	6.89	
12/19/06 18:00:45	13.2	206.9	61.2	5.4	3.44	6.91	
12/19/06 18:01:00	13.3	205.7	61.1	5.4	3.44	6.85	
12/19/06 18:01:15	13.3	205.2	61.2	5.3	3.45	6.81	
12/19/06 18:01:30	13.2	207.1	61.2	5.5	3.45	6.88	
12/19/06 18:01:45	13.2	206.9	61.2	5.2	3.43	6.93	
12/19/06 18:02:00	13.3	205.2	61.3	5.4	3.42	6.87	
12/19/06 18:02:15	13.4	204.7	61.5	5.4	3.44	6.82	
12/19/06 18:02:30	13.3	206.3	61.5	5.5	3.46	6.86	
12/19/06 18:02:45	13.3	207.9	61.5	5.4	3.44	6.92	
12/19/06 18:03:00	13.3	207.2	61.4	5.5	3.43	6.88	
12/19/06 18:03:15	13.4	205.9	61.3	5.4	3.43	6.82	
12/19/06 18:03:30	13.4	206.7	61.1	5.6	3.44	6.83	
12/19/06 18:03:45	13.4	207.9	61.2	5.5	3.46	6.89	
12/19/06 18:04:00	13.3	208.8	61.3	5.5	3.46	6.91	
12/19/06 18:04:15	13.3	207.9	61.2	5.6	3.44	6.85	
12/19/06 18:04:30	13.3	207.4	60.9	5.5	3.45	6.80	
12/19/06 18:04:45	13.3	207.9	61.1	5.6	3.45	6.82	
12/19/06 18:05:00	13.3	210.1	61.4	5.4	3.46	6.89	
12/19/06 18:05:15	13.2	209.7	61.5	5.4	3.45	6.91	
12/19/06 18:05:30	13.3	205.9	61.3	5.4	3.44	6.86	
12/19/06 18:05:45	13.4	204.7	60.8	5.6	3.43	6.81	
12/19/06 18:06:00	13.5	205.9	60.6	5.6	3.45	6.83	Point #3
12/19/06 18:06:15	13.4	207.9	60.9	5.3	3.45	6.89	
12/19/06 18:06:30	13.4	207.3	61.2	5.3	3.45	6.89	
12/19/06 18:06:45	13.5	206.2	61.2	5.4	3.45	6.83	
12/19/06 18:07:00	13.6	206.3	61.1	4.8	3.45	6.81	
12/19/06 18:07:15	13.6	208.2	61.2	4.9	3.46	6.85	
12/19/06 18:07:30	13.6	210.3	61.5	5.2	3.44	6.90	
12/19/06 18:07:45	13.6	209.2	61.5	4.9	3.43	6.89	
12/19/06 18:08:00	13.6	206.8	61.2	5.3	3.40	6.84	
12/19/06 18:08:15	13.9	207.4	61.3	5.4	3.42	6.83	
12/19/06 18:08:30	13.7	211.2	62.0	5.4	3.42	6.89	
12/19/06 18:08:45	13.7	211.9	62.5	5.4	3.40	6.92	
12/19/06 18:09:00	13.7	210.7	62.8	5.5	3.40	6.86	
12/19/06 18:09:15	13.6	210.7	62.4	5.6	3.41	6.82	
12/19/06 18:09:30	13.6	214.3	62.0	5.4	3.41	6.84	
12/19/06 18:09:45	13.6	215.7	61.8	5.3	3.42	6.90	
12/19/06 18:10:00	13.6	215.7	61.4	5.4	3.42	6.91	
12/19/06 18:10:15	13.5	214.4	61.1	5.5	3.41	6.86	
12/19/06 18:10:30	13.6	212.3	61.0	5.6	3.40	6.84	
12/19/06 18:10:45	13.6	212.4	60.9	5.6	3.41	6.86	
12/19/06 18:11:00	13.6	213.6	60.9	5.4	3.43	6.90	
12/19/06 18:11:15	13.6	213.4	60.7	5.4	3.42	6.87	
12/19/06 18:11:30	13.7	209.3	60.8	5.5	3.42	6.82	
12/19/06 18:11:45	13.7	207.4	60.9	5.5	3.43	6.84	
12/19/06 18:12:00	13.7	209.7	61.0	5.6	3.44	6.90	
12/19/06 18:12:15	13.5	210.2	61.0	5.4	3.44	6.91	
12/19/06 18:12:30	13.5	209.2	60.8	5.3	3.44	6.85	
12/19/06 18:12:45	13.6	207.7	60.5	5.4	3.45	6.80	
12/19/06 18:13:00	13.6	206.7	60.3	5.5	3.47	6.83	
12/19/06 18:13:15	13.5	208.2	60.4	5.5	3.46	6.89	
12/19/06 18:13:30	13.4	207.3	60.6	5.3	3.44	6.90	
12/19/06 18:13:45	13.4	204.4	60.8	5.4	3.43	6.84	
12/19/06 18:14:00	13.5	203.6	60.9	5.6	3.45	6.81	
12/19/06 18:14:15	13.4	206.4	61.1	5.6	3.46	6.86	
12/19/06 18:14:30	13.4	208.1	61.2	5.4	3.45	6.91	
12/19/06 18:14:45	13.3	205.9	61.1	5.3	3.44	6.88	
12/19/06 18:15:00	13.4	203.3	61.0	5.3	3.45	6.82	
12/19/06 18:15:15	13.5	203.4	60.9	5.4	3.46	6.83	
12/19/06 18:15:30	13.4	205.6	61.0	5.5	3.46	6.90	
12/19/06 18:15:45	13.3	205.9	60.9	5.2	3.45	6.92	
12/19/06 18:16:00	13.3	205.1	60.7	5.5	3.43	6.87	
12/19/06 18:16:15	13.4	205.7	60.5	5.3	3.44	6.83	
12/19/06 18:16:30	13.4	207.2	61.1	5.5	3.44	6.86	
12/19/06 18:16:45	13.4	207.9	62.0	5.5	3.45	6.92	
12/19/06 18:17:00	13.3	207.1	62.5	5.5	3.44	6.92	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 18:17:15	13.2	204.9	62.4	5.5	3.44	6.85	
12/19/06 18:17:30	13.2	203.1	62.2	5.5	3.46	6.82	
12/19/06 18:17:45	13.2	203.9	62.1	5.7	3.48	6.87	
12/19/06 18:18:00	13.2	206.1	61.9	5.6	3.47	6.93	
12/19/06 18:18:15	13.2	206.4	61.8	5.6	3.46	6.91	
12/19/06 18:18:30	13.2	204.4	61.6	5.5	3.45	6.85	
12/19/06 18:18:45	13.3	202.9	61.7	5.6	3.45	6.84	
12/19/06 18:19:00	13.3	205.9	61.8	5.6	3.46	6.90	
12/19/06 18:19:15	13.1	207.7	61.8	5.5	3.45	6.93	
12/19/06 18:19:30	13.1	204.9	61.8	5.4	3.44	6.89	
12/19/06 18:19:45	13.1	202.9	62.0	5.3	3.45	6.82	
12/19/06 18:20:00	13.2	202.8	62.3	5.6	3.47	6.82	
12/19/06 18:20:15	13.2	204.7	62.5	5.6	3.48	6.88	
12/19/06 18:20:30	13.2	205.7	62.7	5.6	3.46	6.92	
12/19/06 18:20:45	13.1	204.2	62.7	5.6	3.46	6.87	
12/19/06 18:21:00	13.2	202.6	62.1	5.5	3.46	6.81	
12/19/06 18:21:15	13.2	203.4	61.7	5.6	3.47	6.83	
12/19/06 18:21:30	13.1	204.6	61.5	5.6	3.47	6.89	
12/19/06 18:21:45	13.0	204.4	61.5	5.5	3.46	6.91	
12/19/06 18:22:00	13.1	202.2	61.6	5.5	3.45	6.86	
12/19/06 18:22:15	13.2	201.2	61.9	5.8	3.48	6.81	
12/19/06 18:22:30	13.2	204.4	62.3	5.6	3.48	6.85	
12/19/06 18:22:45	13.2	206.7	62.4	5.7	3.48	6.91	
12/19/06 18:23:00	13.1	206.3	62.4	5.6	3.47	6.90	
12/19/06 18:23:15	13.1	203.7	62.2	5.7	3.46	6.65	
12/19/06 18:23:30	13.1	202.6	62.1	5.8	3.46	6.82	
12/19/06 18:23:45	13.1	203.2	62.2	5.7	3.48	6.87	
12/19/06 18:24:00	13.2	203.2	62.1	5.5	3.48	6.91	
12/19/06 18:24:15	13.3	201.9	61.9	5.6	3.48	6.89	
12/19/06 18:24:30	13.4	200.4	61.7	5.5	3.47	6.83	
12/19/06 16:24:45	13.4	200.7	61.5	5.4	3.48	6.83	
12/19/06 18:25:00	13.4	201.3	61.5	5.7	3.49	6.89	
12/19/06 18:25:15	13.4	200.2	61.6	5.6	3.48	6.92	
12/19/06 18:25:30	13.4	197.6	61.7	5.7	3.46	6.87	
12/19/06 18:25:45	13.5	196.7	61.8	5.6	3.50	6.81	
12/19/06 18:26:00	13.5	199.6	61.7	5.7	3.51	6.84	End Run No. 1-4
12/19/06 18:26:15	13.5	201.7	61.5	15.2	3.51	6.91	
12/19/06 18:26:30	13.5	186.1	61.5	32.4	3.49	6.91	
12/19/06 18:26:45	11.9	125.7	61.3	0.8	3.48	6.84	
12/19/06 18:27:00	8.2	39.6	57.5	0.6	3.18	5.21	
12/19/06 18:27:15	2.3	10.8	42.7	0.5	1.67	1.97	
12/19/06 18:27:30	0.8	1.5	23.8	0.4	0.45	0.42	
12/19/06 18:27:45	0.7	0.8	12.8	0.4	0.17	0.14	
12/19/06 18:28:00	0.6	0.6	8.9	0.4	0.12	0.09	
12/19/06 18:28:15	0.5	0.6	8.6	0.4	0.11	0.07	
12/19/06 18:28:30	0.3	0.6	8.8	0.3	0.10	0.06	
12/19/06 18:28:45	0.3	0.6	7.9	0.3	0.09	0.06	
12/19/06 18:29:00	0.2	0.6	6.3	0.3	0.09	0.05	
12/19/06 18:29:15	0.2	0.6	4.9	0.3	0.09	0.05	
12/19/06 18:29:30	0.2	0.6	3.7	0.3	0.08	0.05	
12/19/06 18:29:45	0.2	0.6	3.0	0.3	0.08	0.05	
12/19/06 18:30:00	0.2	0.6	2.6	0.2	0.08	0.05	
12/19/06 18:30:15	0.2	0.6	2.2	0.2	0.09	0.05	
12/19/06 18:30:30	0.2	0.6	2.0	0.2	0.08	0.05	
12/19/06 18:30:45	0.1	0.6	1.7	0.3	0.08	0.04	
12/19/06 18:31:00	0.1	0.6	1.6	0.2	0.08	0.04	
12/19/06 18:31:15	0.1	0.6	1.4	0.2	0.08	0.04	
12/19/06 18:31:30	0.1	0.6	1.4	0.2	0.08	0.04	
12/19/06 18:31:45	0.1	0.6	1.2	0.2	0.08	0.04	System Bias
12/19/06 18:32:00	0.1	0.6	1.1	0.2	0.08	0.04	0.1 Zero NO_x
12/19/06 18:32:15	0.1	0.6	1.1	0.2	0.08	0.04	0.6 Zero CO
12/19/06 18:32:30	0.1	0.6	1.1	0.2	0.08	0.04	1.1 Zero SO_2
12/19/06 18:32:45	0.1	0.6	1.1	0.2	0.08	0.04	0.2 Zero C_3H_8/N_2
12/19/06 18:33:00	0.4	3.1	1.0	0.9	0.08	0.04	0.08 Zero O_2
12/19/06 18:33:15	1.2	4.3	1.1	0.4	0.10	0.04	0.04 Zero CO_2
12/19/06 18:33:30	1.9	2.7	2.2	0.3	1.07	0.04	
12/19/06 18:33:45	1.5	1.1	3.8	0.3	3.28	0.04	
12/19/06 18:34:00	0.7	0.6	3.6	0.2	4.19	0.03	
12/19/06 18:34:15	0.5	0.6	2.6	0.2	4.36	0.03	
12/19/06 18:34:30	0.4	0.6	1.9	0.2	4.39	0.03	
12/19/06 18:34:45	0.3	0.6	1.5	0.2	4.41	0.03	
12/19/06 18:35:00	0.3	0.6	1.4	0.1	4.43	0.03	
12/19/06 18:35:15	0.2	0.6	1.2	0.1	4.45	0.03	
12/19/06 18:35:30	0.2	0.6	1.1	0.1	4.46	0.03	
12/19/06 18:35:45	0.2	0.6	1.0	0.1	4.48	0.03	
12/19/06 18:36:00	0.2	0.2	1.0	0.1	4.49	0.03	
12/19/06 18:36:15	0.2	0.6	0.9	0.1	4.50	0.03	
12/19/06 18:36:30	0.2	0.6	0.9	0.1	4.51	0.03	
12/19/06 18:36:45	0.1	0.6	0.9	0.1	4.51	0.03	
12/19/06 18:37:00	0.1	0.5	0.8	0.1	4.51	0.03	
12/19/06 18:37:15	0.1	0.3	0.8	0.1	4.51	0.03	System Bias
12/19/06 18:37:30	0.1	0.6	0.7	0.1	4.51	0.03	4.51 4.50% O_2
12/19/06 18:37:45	0.1	0.6	0.8	0.1	4.51	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 18:38:00	0.1	5.1	0.7	3.1	**4.52**	0.03	
12/19/06 18:38:15	0.7	32.3	0.6	0.6	**4.51**	0.03	
12/19/06 18:38:30	4.6	41.8	1.3	0.2	4.44	0.75	
12/19/06 18:38:45	3.3	21.6	4.4	0.2	4.12	2.13	
12/19/06 18:39:00	0.3	2.4	6.4	0.2	2.52	3.03	
12/19/06 18:39:15	0.2	0.0	4.7	0.2	0.70	4.02	
12/19/06 18:39:30	0.1	-0.4	3.0	0.2	0.20	4.27	
12/19/06 18:39:45	0.1	-0.4	2.1	0.2	0.12	4.27	
12/19/06 18:40:00	0.1	-0.4	1.5	0.2	0.09	4.28	
12/19/06 18:40:15	0.1	-0.4	1.3	0.2	0.07	4.38	
12/19/06 18:40:30	0.1	-0.4	1.1	0.2	0.06	4.46	
12/19/06 18:40:45	0.1	-0.4	1.0	0.2	0.05	4.52	
12/19/06 18:41:00	0.1	-0.4	0.9	0.2	0.05	4.54	
12/19/06 18:41:15	0.1	-0.8	0.8	0.3	0.05	4.56	
12/19/06 18:41:30	0.1	-0.4	0.9	0.2	0.04	4.56	
12/19/06 18:41:45	0.1	-0.4	0.9	0.3	0.04	4.57	
12/19/06 18:42:00	0.1	-0.4	0.9	0.2	0.04	4.57	System Bias
12/19/06 18:42:15	0.1	-0.4	0.8	0.3	0.04	**4.57**	4.57 4.50% CO_2
12/19/06 18:42:30	0.1	-0.4	0.8	0.3	0.04	**4.57**	
12/19/06 18:42:45	0.1	-0.4	0.7	2.0	0.04	**4.57**	
12/19/06 18:43:00	0.1	13.6	0.8	1.5	0.04	**4.58**	
12/19/06 18:43:15	0.2	50.3	0.7	0.4	0.05	4.60	
12/19/06 18:43:30	0.7	120.5	2.5	0.3	0.51	4.92	
12/19/06 18:43:45	0.6	184.2	5.4	0.2	0.68	3.41	
12/19/06 18:44:00	0.2	212.8	4.9	0.2	0.27	1.03	
12/19/06 18:44:15	0.2	217.7	3.0	0.2	0.10	0.24	
12/19/06 18:44:30	0.1	218.5	2.0	0.2	0.06	0.11	
12/19/06 18:44:45	0.1	218.9	1.4	0.3	0.06	0.08	
12/19/06 18:45:00	0.1	219.4	1.2	0.3	0.06	0.06	
12/19/06 18:45:15	0.1	219.0	1.1	0.2	0.05	0.06	
12/19/06 18:45:30	0.1	219.4	0.9	0.3	0.05	0.05	System Bias
12/19/06 18:45:45	0.1	**219.4**	0.9	0.3	0.05	0.05	219.6 225.0 ppm CO
12/19/06 18:46:00	0.1	**219.4**	0.8	0.2	0.05	0.05	
12/19/06 18:46:15	0.1	**219.8**	0.8	2.3	0.05	0.04	
12/19/06 18:46:30	0.0	**219.7**	0.8	4.1	0.05	0.03	
12/19/06 18:46:45	3.5	191.6	1.0	2.8	0.08	0.18	
12/19/06 18:47:00	5.5	112.8	3.8	0.5	0.64	1.39	
12/19/06 18:47:15	3.1	47.9	7.1	0.3	0.67	1.05	
12/19/06 18:47:30	9.5	17.9	5.8	0.2	0.24	0.27	
12/19/06 18:47:45	18.6	6.3	3.5	0.3	0.13	0.08	
12/19/06 18:48:00	25.2	2.9	2.4	0.2	0.08	0.04	
12/19/06 18:48:15	25.5	2.6	1.8	0.2	0.06	0.04	
12/19/06 18:48:30	28.0	2.1	1.6	0.2	0.05	0.04	
12/19/06 18:48:45	30.8	2.1	1.6	0.2	0.05	0.03	
12/19/06 18:49:00	33.1	2.0	1.5	0.2	0.05	0.03	
12/19/06 18:49:15	34.7	1.6	1.4	0.2	0.04	0.03	
12/19/06 18:49:30	35.9	1.1	1.4	0.2	0.04	0.03	
12/19/06 18:49:45	36.4	1.1	1.4	0.2	0.04	0.03	
12/19/06 18:50:00	37.1	1.1	1.3	0.2	0.04	0.03	
12/19/06 18:50:15	38.4	1.1	1.2	0.1	0.04	0.03	
12/19/06 18:50:30	40.5	1.1	1.2	0.1	0.04	0.03	
12/19/06 18:50:45	43.1	0.7	1.1	0.1	0.04	0.03	
12/19/06 18:51:00	44.8	1.0	1.1	0.2	0.04	0.03	
12/19/06 18:51:15	44.0	1.0	1.0	0.1	0.04	0.03	
12/19/06 18:51:30	43.0	1.1	1.0	0.1	0.04	0.03	
12/19/06 18:51:45	42.3	0.7	0.9	0.1	0.04	0.04	
12/19/06 18:52:00	41.8	0.6	0.9	0.1	0.04	0.04	
12/19/06 18:52:15	41.7	0.6	0.8	0.1	0.04	0.04	
12/19/06 18:52:30	41.6	0.6	0.9	0.1	0.04	0.04	System Bias
12/19/06 18:52:45	**41.6**	0.6	0.9	0.1	0.04	0.04	41.6 45.0 ppm NO
12/19/06 18:53:00	**41.6**	1.0	0.9	0.1	0.03	0.03	
12/19/06 18:53:15	**41.5**	0.6	0.9	0.2	0.04	0.03	
12/19/06 18:53:30	**41.6**	0.6	0.8	0.3	0.04	0.03	
12/19/06 18:53:45	30.3	0.6	0.9	7.1	0.05	0.04	
12/19/06 18:54:00	39.8	0.6	0.9	26.0	2.30	0.04	
12/19/06 18:54:15	80.7	0.6	1.8	7.6	4.38	0.04	
12/19/06 18:54:30	35.3	0.6	18.5	0.6	1.34	0.04	
12/19/06 18:54:45	7.7	0.6	60.4	0.4	0.24	0.04	
12/19/06 18:55:00	5.0	0.6	95.2	0.4	0.09	0.04	
12/19/06 18:55:15	4.0	0.6	113.6	0.4	0.07	0.03	
12/19/06 18:55:30	3.4	0.6	121.5	0.3	0.06	0.03	
12/19/06 18:55:45	3.0	0.6	124.9	0.3	0.05	0.03	
12/19/06 18:56:00	2.7	0.6	126.5	0.3	0.04	0.03	
12/19/06 18:56:15	2.4	0.6	127.6	0.3	0.04	0.03	
12/19/06 18:56:30	2.2	0.6	128.5	0.3	0.04	0.03	
12/19/06 18:56:45	2.1	0.6	129.1	0.3	0.04	0.03	
12/19/06 18:57:00	1.9	0.6	129.7	0.3	0.04	0.03	
12/19/06 18:57:15	1.8	0.6	130.2	0.2	0.04	0.03	
12/19/06 18:57:30	1.7	0.6	130.7	0.2	0.04	0.03	
12/19/06 18:57:45	1.6	0.6	131.1	0.2	0.03	0.03	
12/19/06 18:58:00	1.5	0.6	131.5	0.2	0.03	0.03	
12/19/06 18:58:15	1.4	0.6	131.8	0.2	0.03	0.03	
12/19/06 18:58:30	1.4	0.6	132.0	0.2	0.03	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/19/06 18:58:45	1.3	0.6	132.3	0.2	0.04	0.03	
12/19/06 18:59:00	1.3	0.6	132.6	0.2	0.03	0.03	
12/19/06 18:59:15	1.2	0.6	132.9	0.2	0.03	0.03	
12/19/06 18:59:30	1.2	0.6	133.1	0.1	0.03	0.03	
12/19/06 18:59:45	1.1	0.6	133.3	0.2	0.03	0.03	
12/19/06 19:00:00	1.1	0.6	133.5	0.2	0.03	0.03	
12/19/06 19:00:15	1.1	0.6	133.6	0.2	0.04	0.03	
12/19/06 19:00:30	1.0	0.6	133.7	0.2	0.03	0.03	
12/19/06 19:00:45	1.0	0.6	133.9	0.2	0.03	0.03	
12/19/06 19:01:00	1.0	0.6	134.0	0.2	0.03	0.03	
12/19/06 19:01:15	0.9	0.6	134.0	0.2	0.03	0.03	
12/19/06 19:01:30	0.9	0.6	134.1	0.2	0.03	0.03	
12/19/06 19:01:45	0.9	0.6	134.2	0.2	0.03	0.03	
12/19/06 19:02:00	0.9	0.6	134.3	0.2	0.03	0.03	
12/19/06 19:02:15	0.9	0.6	134.5	0.2	0.03	0.03	
12/19/06 19:02:30	0.8	0.6	134.5	0.2	0.03	0.03	
12/19/06 19:02:45	0.8	0.6	134.6	0.2	0.03	0.03	System Bias
12/19/06 19:03:00	0.8	0.6	**134.6**	0.2	0.03	0.03	**134.7 135.0 ppm SO_2**
12/19/06 19:03:15	0.8	0.6	**134.7**	0.2	0.03	0.03	
12/19/06 19:03:30	0.8	0.6	**134.7**	0.5	0.03	0.03	
12/19/06 19:03:45	0.8	0.6	**134.7**	7.0	0.03	0.03	
12/19/06 19:04:00	0.7	1.3	132.0	48.2	1.28	0.03	
12/19/06 19:04:15	0.5	2.1	117.9	52.5	5.22	0.05	
12/19/06 19:04:30	0.3	1.5	88.2	52.8	2.49	0.04	
12/19/06 19:04:45	0.2	1.1	48.6	53.1	0.43	0.04	
12/19/06 19:05:00	0.2	0.6	23.4	53.2	0.11	0.04	
12/19/06 19:05:15	0.2	0.6	12.9	53.1	0.08	0.04	
12/19/06 19:05:30	0.2	0.6	8.5	51.7	0.07	0.03	
12/19/06 19:05:45	0.2	0.6	6.6	51.2	0.06	0.03	Calibration
12/19/06 19:06:00	0.3	0.6	5.4	**51.1**	0.05	0.03	**51.2 50.0 ppm C_3H_8/N_2**
12/19/06 19:06:15	0.3	0.6	4.6	**51.2**	0.04	0.03	
12/19/06 19:06:30	0.3	0.6	4.1	**51.2**	0.04	0.03	
12/19/06 19:06:45	0.3	0.6	3.6	**51.2**	0.03	0.03	
12/19/06 19:07:00	0.3	0.6	3.3	51.2	0.03	0.03	
12/19/06 19:07:15	0.3	0.6	3.0	18.5	0.03	0.03	
12/19/06 19:07:30	0.3	0.6	2.8	33.8	0.03	0.03	
12/19/06 19:07:45	0.2	0.6	2.7	1.0	0.87	0.04	
12/19/06 19:08:00	0.2	0.6	3.2	0.7	6.77	0.05	
12/19/06 19:08:15	0.1	0.6	3.5	0.6	5.20	0.04	
12/19/06 19:08:30	0.1	0.6	2.8	0.5	1.05	0.03	
12/19/06 19:08:45	0.1	0.6	2.3	0.5	0.19	0.03	
12/19/06 19:09:00	0.1	0.6	2.1	0.5	0.10	0.03	
12/19/06 19:09:15	0.1	0.6	1.9	0.4	0.09	0.03	
12/19/06 19:09:30	0.1	0.6	1.7	0.5	0.06	0.03	
12/19/06 19:09:45	0.1	0.6	1.7	0.4	0.05	0.03	
12/19/06 19:10:00	0.1	0.6	1.6	0.4	0.04	0.03	
12/19/06 19:10:15	0.1	0.6	1.5	0.4	0.04	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 6:31:15	0.2	0.1	-19.8	0.9	20.41	0.06	
12/20/06 6:31:30	0.2	2.7	-19.5	0.8	20.41	0.07	
12/20/06 6:31:45	14.8	6.0	-19.6	0.8	20.40	0.06	
12/20/06 6:32:00	12.4	3.7	-18.9	0.8	17.64	0.06	
12/20/06 6:32:15	0.5	0.8	-17.6	0.9	7.21	0.04	
12/20/06 6:32:30	0.2	-0.3	-17.9	0.9	1.32	0.02	
12/20/06 6:32:45	0.2	-0.4	-18.1	0.9	0.30	0.02	
12/20/06 6:33:00	0.2	-0.4	-18.3	0.8	0.15	0.02	
12/20/06 6:33:15	0.1	-0.4	-19.0	0.8	0.11	0.02	
12/20/06 6:33:30	0.1	-0.4	-19.0	0.8	0.09	0.02	
12/20/06 6:33:45	0.1	-0.4	-19.2	0.8	0.08	0.02	
12/20/06 6:34:00	0.1	-0.4	-19.1	0.8	0.08	0.02	
12/20/06 6:34:15	0.1	-0.4	-18.9	0.8	0.07	0.02	
12/20/06 6:34:30	0.1	-0.4	-18.9	0.8	0.07	0.02	
12/20/06 6:34:45	0.1	-0.8	-18.6	0.8	0.07	0.02	
12/20/06 6:35:00	0.1	-0.8	-19.1	0.8	0.07	0.02	
12/20/06 6:35:15	0.1	-0.4	-19.3	0.7	0.06	0.02	
12/20/06 6:35:30	0.1	-0.4	-19.3	0.8	0.06	0.02	
12/20/06 6:35:45	0.1	-0.4	-10.0	0.8	0.06	0.02	
12/20/06 6:36:00	0.1	-0.4	-0.2	0.8	0.06	0.02	
12/20/06 6:36:15	0.1	-0.9	-0.1	0.8	0.06	0.02	
12/20/06 6:36:30	0.1	-0.5	-0.1	0.8	0.06	0.02	
12/20/06 6:36:45	0.1	-0.8	-1.0	0.8	0.06	0.03	
12/20/06 6:37:00	0.1	-0.8	-1.2	0.8	0.06	0.02	
12/20/06 6:37:15	0.1	-0.5	-0.2	0.7	0.06	0.03	
12/20/06 6:37:30	0.1	-0.9	0.9	0.7	0.05	0.02	
12/20/06 6:37:45	0.1	-0.9	1.4	0.7	0.05	0.02	
12/20/06 6:38:00	0.1	-0.5	1.5	0.7	0.05	0.03	
12/20/06 6:38:15	0.1	-0.9	1.9	0.6	0.05	0.03	
12/20/06 6:38:30	0.1	-0.5	1.9	0.6	0.05	0.03	
12/20/06 6:38:45	0.1	-0.9	1.8	0.6	0.05	0.02	
12/20/06 6:39:00	0.1	-0.5	1.9	0.6	0.05	0.03	
12/20/06 6:39:15	0.1	-0.8	2.0	0.6	0.05	0.03	
12/20/06 6:39:30	0.1	-0.4	2.1	0.6	0.05	0.02	
12/20/06 6:39:45	0.1	-0.9	2.5	0.6	0.05	0.03	
12/20/06 6:40:00	0.1	-0.9	2.4	0.6	0.05	0.03	
12/20/06 6:40:15	0.1	-0.9	2.3	0.5	0.05	0.02	
12/20/06 6:40:30	0.1	-0.9	2.1	0.5	0.05	0.02	
12/20/06 6:40:45	0.1	-0.9	2.4	0.5	0.05	0.02	
12/20/06 6:41:00	0.1	-0.9	2.3	0.6	0.04	0.02	
12/20/06 6:41:15	0.1	-0.5	2.4	0.6	0.04	0.02	
12/20/06 6:41:30	0.1	-0.9	1.8	0.5	0.04	0.02	
12/20/06 6:41:45	0.1	-0.9	-0.4	0.5	0.04	0.02	
12/20/06 6:42:00	0.1	-0.9	-0.1	0.5	0.04	0.02	Calibration Error
12/20/06 6:42:15	**0.1**	**-0.8**	**-0.2**	0.5	**0.04**	**0.02**	**0.1 Zero NO_x**
12/20/06 6:42:30	**0.1**	**-0.8**	**0.0**	0.5	**0.04**	**0.02**	**-0.6 Zero CO**
12/20/06 6:42:45	**0.1**	**-0.8**	**0.1**	0.5	**0.04**	**0.02**	**0.0 Zero SO_2**
12/20/06 6:43:00	**0.1**	**0.0**	**0.1**	0.5	**0.04**	**0.02**	
12/20/06 6:43:15	7.6	0.0	0.4	0.6	0.56	0.02	**0.04 Zero O_2**
12/20/06 6:43:30	3.1	-0.4	0.3	0.5	4.42	0.02	**0.02 Zero CO_2**
12/20/06 6:43:45	1.4	-0.5	0.3	0.5	7.44	0.02	
12/20/06 6:44:00	0.8	-0.9	0.2	0.5	8.12	0.02	
12/20/06 6:44:15	0.6	-0.9	0.3	0.5	8.33	0.02	
12/20/06 6:44:30	0.5	-0.9	0.4	0.5	8.56	0.02	
12/20/06 6:44:45	0.4	-0.9	0.1	0.6	8.68	0.02	
12/20/06 6:45:00	0.3	-0.9	0.3	0.5	8.74	0.02	
12/20/06 6:45:15	0.3	-0.9	0.4	0.5	8.76	0.02	
12/20/06 6:45:30	0.3	-0.9	0.5	0.5	8.77	0.02	
12/20/06 6:45:45	0.3	-0.9	0.4	0.6	8.77	0.02	
12/20/06 6:46:00	0.3	-0.9	0.4	0.5	8.78	0.02	
12/20/06 6:46:15	0.2	-0.9	0.6	0.6	8.78	0.02	
12/20/06 6:46:30	0.2	-0.9	0.5	0.6	8.78	0.02	
12/20/06 6:46:45	0.2	-0.9	0.4	0.6	8.78	0.03	
12/20/06 6:47:00	0.2	-0.9	0.4	0.6	8.88	0.03	
12/20/06 6:47:15	0.2	-0.9	0.5	0.5	9.02	0.02	
12/20/06 6:47:30	0.2	-0.9	0.3	0.6	9.03	0.02	
12/20/06 6:47:45	0.2	-0.9	0.3	0.6	9.03	0.02	Calibration Error
12/20/06 6:48:00	0.2	-0.9	0.4	0.6	**9.02**	0.02	**9.02 9.00% O_2**
12/20/06 6:48:15	0.2	-0.9	0.1	0.6	**9.02**	0.02	
12/20/06 6:48:30	0.2	-0.9	0.1	0.6	**9.02**	0.03	
12/20/06 6:48:45	0.2	-0.9	0.2	0.6	**9.02**	0.03	
12/20/06 6:49:00	0.2	-0.9	0.5	0.6	9.02	0.03	
12/20/06 6:49:15	0.2	-0.7	0.3	0.6	8.95	0.03	
12/20/06 6:49:30	0.1	-0.9	0.5	0.6	7.35	0.03	
12/20/06 6:49:45	0.2	-0.9	0.5	0.7	5.25	0.03	
12/20/06 6:50:00	0.2	-0.9	0.7	0.6	4.66	0.03	
12/20/06 6:50:15	0.2	-0.9	0.7	0.7	4.57	0.03	
12/20/06 6:50:30	0.2	-0.9	0.6	0.6	4.56	0.03	Calibration Error
12/20/06 6:50:45	0.2	-0.9	0.8	0.6	**4.55**	0.03	**4.55 4.50% O_2**
12/20/06 6:51:00	0.2	-0.9	0.9	0.7	**4.55**	0.03	
12/20/06 6:51:15	0.2	-0.9	0.9	0.7	**4.55**	0.03	
12/20/06 6:51:30	0.3	-0.9	1.0	0.7	**4.54**	0.03	
12/20/06 6:51:45	1.4	-1.7	1.0	0.7	4.97	0.04	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 6:52:00	1.0	-1.9	1.1	0.7	6.85	1.21	
12/20/06 6:52:15	0.2	-2.4	0.8	0.7	3.58	4.28	
12/20/06 6:52:30	0.2	-2.4	0.6	0.7	0.84	6.18	
12/20/06 6:52:45	0.2	-2.4	0.8	0.7	0.18	7.45	
12/20/06 6:53:00	0.2	-2.4	0.7	0.7	0.06	8.34	
12/20/06 6:53:15	0.2	-2.4	0.9	0.8	0.04	8.67	
12/20/06 6:53:30	0.2	-2.4	1.1	0.8	0.03	8.76	
12/20/06 6:53:45	0.1	-2.4	1.0	0.7	0.02	8.81	
12/20/06 6:54:00	0.1	-2.4	1.0	0.7	0.02	8.82	
12/20/06 6:54:15	0.1	-2.4	1.2	0.7	0.02	8.81	
12/20/06 6:54:30	0.1	-2.4	1.3	0.8	0.02	8.83	
12/20/06 6:54:45	0.1	-2.4	1.4	0.7	0.02	8.83	
12/20/06 6:55:00	0.1	-2.4	1.5	0.8	0.02	8.85	
12/20/06 6:55:15	0.1	-2.4	1.5	0.7	0.02	8.97	
12/20/06 6:55:30	0.1	-2.4	1.6	0.8	0.02	8.98	Calibration Error
12/20/06 6:55:45	0.1	-2.4	1.7	0.7	0.02	**8.98**	8.99 9.00% CO_2
12/20/06 6:56:00	0.1	-2.4	1.9	0.7	0.02	**8.99**	
12/20/06 6:56:15	0.1	-2.4	1.8	0.8	0.01	**8.98**	
12/20/06 6:56:30	0.1	-2.4	2.0	0.7	0.01	**8.99**	
12/20/06 6:56:45	0.1	-1.9	2.0	0.8	0.01	8.94	
12/20/06 6:57:00	0.1	-1.9	2.2	0.7	0.02	7.52	
12/20/06 6:57:15	0.1	-1.9	2.4	0.8	0.02	5.53	
12/20/06 6:57:30	0.1	-1.9	2.5	0.8	0.02	4.78	
12/20/06 6:57:45	0.1	-1.9	2.4	0.8	0.03	4.66	
12/20/06 6:58:00	0.1	-1.9	3.0	0.8	0.03	4.64	
12/20/06 6:58:15	0.1	-1.9	2.8	0.8	0.03	4.64	
12/20/06 6:58:30	0.1	-1.9	2.7	0.8	0.03	4.63	Calibration Error
12/20/06 6:58:45	0.1	-1.9	2.9	0.8	0.03	**4.59**	4.59 4.50% CO_2
12/20/06 6:59:00	0.1	-1.9	2.9	0.8	0.02	**4.59**	
12/20/06 6:59:15	0.1	-1.9	3.2	0.8	0.02	**4.59**	
12/20/06 6:59:30	0.1	-1.9	3.3	0.8	0.02	**4.60**	
12/20/06 6:59:45	0.1	-1.9	3.6	0.8	0.02	4.59	
12/20/06 7:00:00	0.1	2.2	3.9	0.8	0.02	4.59	
12/20/06 7:00:15	0.5	156.5	4.0	0.8	0.44	4.41	
12/20/06 7:00:30	1.4	309.7	4.1	0.8	4.21	3.05	
12/20/06 7:00:45	0.7	427.8	4.4	0.8	3.02	1.20	
12/20/06 7:01:00	0.3	449.1	4.8	0.8	0.67	0.30	Calibration Error
12/20/06 7:01:15	0.2	**454.2**	4.9	0.8	0.13	0.10	454.6 450.0 ppm CO
12/20/06 7:01:30	0.2	**455.5**	5.2	0.8	0.07	0.06	
12/20/06 7:01:45	0.1	**454.7**	5.6	0.8	0.06	0.05	
12/20/06 7:02:00	0.1	**453.9**	5.6	0.8	0.05	0.05	
12/20/06 7:02:15	0.1	452.8	5.6	0.8	0.05	0.04	
12/20/06 7:02:30	0.2	451.9	5.8	0.9	0.04	0.04	
12/20/06 7:02:45	0.2	383.1	6.0	0.8	0.04	0.04	
12/20/06 7:03:00	0.2	301.0	6.1	0.9	0.04	0.04	
12/20/06 7:03:15	0.1	235.2	6.3	0.9	0.04	0.04	
12/20/06 7:03:30	0.2	223.5	6.4	0.9	0.04	0.03	Calibration Error
12/20/06 7:03:45	0.2	**221.2**	6.7	0.9	0.04	0.03	220.9 225.0 ppm CO
12/20/06 7:04:00	0.2	**220.9**	6.9	0.9	0.04	0.03	
12/20/06 7:04:15	0.2	**221.2**	7.0	0.8	0.04	0.03	
12/20/06 7:04:30	0.2	**220.5**	7.0	0.8	0.03	0.03	
12/20/06 7:04:45	0.2	218.7	7.4	0.8	0.03	0.03	
12/20/06 7:05:00	0.2	196.6	7.5	0.9	0.04	0.03	
12/20/06 7:05:15	0.4	120.2	7.8	0.9	0.48	0.03	
12/20/06 7:05:30	5.8	62.9	8.0	0.8	3.34	0.05	
12/20/06 7:05:45	29.3	16.3	8.3	0.8	1.98	0.06	
12/20/06 7:06:00	44.3	4.5	8.9	0.8	0.47	0.04	
12/20/06 7:06:15	56.8	1.1	9.3	0.8	0.14	0.03	
12/20/06 7:06:30	75.8	0.2	9.9	0.8	0.09	0.02	
12/20/06 7:06:45	94.6	0.1	10.4	0.8	0.07	0.02	
12/20/06 7:07:00	88.8	0.1	10.6	0.7	0.05	0.02	
12/20/06 7:07:15	76.1	-0.4	10.4	0.7	0.04	0.02	
12/20/06 7:07:30	72.5	-0.4	10.7	0.7	0.04	0.02	
12/20/06 7:07:45	70.0	-0.4	10.8	0.7	0.04	0.02	
12/20/06 7:08:00	68.2	-0.4	11.0	0.7	0.04	0.03	
12/20/06 7:08:15	66.9	-0.4	11.2	0.7	0.04	0.03	
12/20/06 7:08:30	66.1	-0.8	11.6	0.6	0.03	0.02	
12/20/06 7:08:45	65.6	-0.9	12.1	0.7	0.03	0.02	
12/20/06 7:09:00	65.8	-0.9	12.2	0.6	0.03	0.02	
12/20/06 7:09:15	66.5	-0.9	12.5	0.6	0.03	0.02	
12/20/06 7:09:30	67.9	-0.9	12.9	0.6	0.03	0.02	
12/20/06 7:09:45	70.2	-0.7	13.1	0.6	0.03	0.02	
12/20/06 7:10:00	72.8	-0.9	13.4	0.5	0.03	0.02	
12/20/06 7:10:15	75.9	-0.9	13.4	0.6	0.03	0.02	
12/20/06 7:10:30	79.1	-0.9	13.6	0.6	0.03	0.02	
12/20/06 7:10:45	81.8	-0.9	13.8	0.6	0.03	0.02	
12/20/06 7:11:00	83.8	-0.9	14.5	0.6	0.03	0.02	
12/20/06 7:11:15	85.5	-0.9	14.8	0.6	0.03	0.02	
12/20/06 7:11:30	86.5	-0.9	14.8	0.6	0.03	0.02	
12/20/06 7:11:45	87.3	-0.9	15.2	0.6	0.03	0.02	
12/20/06 7:12:00	87.7	-0.9	15.6	0.6	0.03	0.02	
12/20/06 7:12:15	87.8	-0.9	15.8	0.6	0.03	0.02	
12/20/06 7:12:30	87.8	-0.9	16.2	0.6	0.03	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 7:12:45	87.9	-0.9	16.4	0.6	0.03	0.03	
12/20/06 7:13:00	87.8	-0.9	16.8	0.6	0.03	0.03	
12/20/06 7:13:15	89.5	-0.9	17.4	0.6	0.03	0.03	
12/20/06 7:13:30	89.7	-0.9	17.9	0.6	0.03	0.03	
12/20/06 7:13:45	89.9	-0.9	17.6	0.6	0.03	0.03	
12/20/06 7:14:00	90.1	-0.9	17.6	0.6	0.03	0.03	Calibration Error
12/20/06 7:14:15	**90.1**	-0.9	18.4	0.6	0.03	0.03	89.8 90.0 ppm NO
12/20/06 7:14:30	**89.9**	-0.9	9.3	0.7	0.03	0.03	
12/20/06 7:14:45	**89.7**	-0.9	0.7	0.7	0.03	0.03	
12/20/06 7:15:00	**89.7**	-0.9	0.9	0.6	0.03	0.03	
12/20/06 7:15:15	78.2	-0.9	1.2	0.7	0.03	0.02	
12/20/06 7:15:30	42.9	-0.9	1.6	0.6	0.03	0.02	
12/20/06 7:15:45	44.0	-0.9	2.1	0.6	0.03	0.02	
12/20/06 7:16:00	43.8	-0.9	2.5	0.7	0.03	0.03	
12/20/06 7:16:15	43.7	-0.9	2.5	0.7	0.03	0.03	Calibration Error
12/20/06 7:16:30	**43.7**	-0.9	3.0	0.7	0.03	0.02	43.9 45.0 ppm NO
12/20/06 7:16:45	**43.8**	-0.9	3.1	0.7	0.03	0.02	
12/20/06 7:17:00	**43.9**	-0.9	3.6	0.7	0.03	0.02	
12/20/06 7:17:15	**44.0**	-0.9	3.9	0.8	0.03	0.02	
12/20/06 7:17:30	48.0	-0.9	4.4	0.8	0.03	0.02	
12/20/06 7:17:45	67.0	-0.9	4.9	0.7	0.03	0.02	
12/20/06 7:18:00	75.1	-0.9	5.2	0.7	0.03	0.02	
12/20/06 7:18:15	61.4	-0.9	5.4	0.8	0.03	0.02	
12/20/06 7:18:30	1.6	-0.9	5.7	0.8	0.03	0.02	
12/20/06 7:18:45	1.0	-0.9	6.0	0.8	0.03	0.02	
12/20/06 7:19:00	0.7	-0.9	6.3	0.8	0.03	0.02	
12/20/06 7:19:15	0.5	-0.9	6.7	0.8	0.03	0.02	
12/20/06 7:19:30	0.5	-0.9	7.2	0.8	0.03	0.02	
12/20/06 7:19:45	0.4	-0.9	7.5	0.8	0.03	0.02	
12/20/06 7:20:00	0.4	-0.9	7.8	0.8	0.03	0.02	
12/20/06 7:20:15	0.4	-0.9	8.1	0.8	0.03	0.02	
12/20/06 7:20:30	0.4	-0.9	8.4	0.8	0.03	0.02	
12/20/06 7:20:45	0.3	-0.9	8.5	0.8	0.03	0.02	
12/20/06 7:21:00	0.3	-0.9	8.7	0.8	0.03	0.02	
12/20/06 7:21:15	0.3	-0.9	8.9	0.8	0.03	0.02	
12/20/06 7:21:30	0.5	-0.9	9.2	0.8	0.03	0.02	
12/20/06 7:21:45	1.5	-0.9	9.8	0.8	0.04	0.02	
12/20/06 7:22:00	28.5	-0.9	10.2	0.8	1.91	0.03	
12/20/06 7:22:15	45.0	-0.9	11.1	0.8	3.66	0.03	
12/20/06 7:22:30	46.3	-0.9	12.1	0.8	1.13	0.03	
12/20/06 7:22:45	46.7	-0.9	12.7	0.8	0.19	0.02	
12/20/06 7:23:00	47.1	-0.9	13.2	0.8	0.06	0.02	
12/20/06 7:23:15	47.3	-0.9	13.6	0.8	0.04	0.02	
12/20/06 7:23:30	47.5	-1.3	13.8	0.8	0.03	0.02	
12/20/06 7:23:45	47.6	-0.9	14.3	0.8	0.03	0.02	
12/20/06 7:24:00	47.8	-0.9	15.0	0.8	0.03	0.03	
12/20/06 7:24:15	47.9	-0.9	-30.4	0.8	0.03	0.02	
12/20/06 7:24:30	48.0	-0.9	-50.5	0.8	0.03	0.02	
12/20/06 7:24:45	48.1	-1.2	20.6	0.8	0.03	0.02	NO_x Converter Check
12/20/06 7:25:00	**48.2**	-1.0	18.7	0.8	0.03	0.02	48.2 50.0 ppm NO_2/N_2
12/20/06 7:25:15	**48.2**	-0.9	19.0	0.9	0.03	0.03	Cyl #CC198389
12/20/06 7:25:30	**48.2**	-0.9	19.4	0.8	0.03	0.03	
12/20/06 7:25:45	**48.2**	-0.9	19.8	0.8	0.03	0.03	96.4 % Conversion
12/20/06 7:26:00	47.4	-0.9	20.6	0.9	0.03	0.03	
12/20/06 7:26:15	39.7	-0.7	20.9	0.9	0.11	0.03	
12/20/06 7:26:30	17.0	-0.4	20.3	0.8	4.63	0.04	
12/20/06 7:26:45	10.7	0.1	20.0	0.9	14.00	0.06	
12/20/06 7:27:00	5.9	0.1	20.5	0.8	19.27	0.07	
12/20/06 7:27:15	3.9	0.1	20.9	0.9	20.61	0.07	
12/20/06 7:27:30	2.5	0.1	21.2	0.9	20.87	0.07	
12/20/06 7:27:45	1.9	0.1	21.3	0.9	20.92	0.06	
12/20/06 7:28:00	1.3	0.1	21.2	0.9	20.94	0.06	
12/20/06 7:28:15	1.1	0.1	20.8	0.9	20.95	0.06	
12/20/06 7:28:30	0.8	0.5	20.2	0.9	20.96	0.07	
12/20/06 7:28:45	-0.7	1.6	19.5	0.9	20.96	0.07	
12/20/06 7:29:00	-0.1	1.2	19.2	0.8	20.68	0.06	
12/20/06 7:29:15	5.7	0.1	19.0	0.8	21.56	0.04	
12/20/06 7:29:30	2.7	-0.4	19.1	0.8	24.00	0.03	
12/20/06 7:29:45	2.0	-0.4	19.7	0.8	24.86	0.02	
12/20/06 7:30:00	1.4	-0.4	20.5	0.8	25.03	0.02	
12/20/06 7:30:15	1.2	-0.7	21.3	0.8	25.07	0.02	
12/20/06 7:30:30	1.0	-0.9	22.0	0.7	25.08	0.02	
12/20/06 7:30:45	0.9	-0.4	22.4	0.7	25.09	0.02	
12/20/06 7:31:00	0.4	-0.4	22.9	0.7	24.25	0.02	
12/20/06 7:31:15	0.3	-0.4	23.4	0.7	15.19	0.03	
12/20/06 7:31:30	0.3	-0.4	23.9	0.6	4.30	0.02	
12/20/06 7:31:45	0.3	-0.9	24.2	0.6	0.71	0.02	
12/20/06 7:32:00	0.3	-0.5	24.2	0.6	0.20	0.03	
12/20/06 7:32:15	0.3	-0.4	24.4	0.6	0.11	0.02	
12/20/06 7:32:30	0.3	-0.7	24.6	0.6	0.08	0.01	
12/20/06 7:32:45	0.3	-0.4	24.6	0.6	0.07	0.01	
12/20/06 7:33:00	0.2	-0.8	25.0	0.6	0.06	0.02	
12/20/06 7:33:15	0.2	-0.7	25.1	0.6	0.06	0.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 7:33:30	0.2	-0.7	25.5	0.6	0.05	0.02	
12/20/06 7:33:45	0.2	-0.7	25.9	0.6	0.05	0.02	
12/20/06 7:34:00	0.2	-0.5	26.2	0.5	0.05	0.02	
12/20/06 7:34:15	0.2	-0.7	26.7	0.5	0.04	0.02	
12/20/06 7:34:30	0.2	-0.9	27.0	0.5	0.05	0.02	
12/20/06 7:34:45	0.2	-0.9	27.3	0.6	0.05	0.02	
12/20/06 7:35:00	0.2	-0.9	27.5	0.5	0.04	0.02	
12/20/06 7:35:15	0.2	-0.9	27.9	0.5	0.04	0.02	
12/20/06 7:35:30	0.2	-0.9	28.2	0.5	0.04	0.02	
12/20/06 7:35:45	0.2	-0.9	28.5	0.5	0.04	0.02	
12/20/06 7:36:00	0.2	-0.9	28.9	0.5	0.04	0.03	
12/20/06 7:36:15	0.2	-0.9	29.1	0.5	0.04	0.03	
12/20/06 7:36:30	0.2	-0.9	29.4	0.5	0.04	0.03	
12/20/06 7:36:45	0.2	-0.9	29.7	0.5	0.04	0.03	
12/20/06 7:37:00	0.2	-0.9	29.9	0.5	0.04	0.03	
12/20/06 7:37:15	0.2	-0.9	30.1	0.5	0.04	0.03	
12/20/06 7:37:30	0.2	-0.9	30.4	0.5	0.04	0.03	
12/20/06 7:37:45	0.2	-0.9	30.7	0.5	0.04	0.03	
12/20/06 7:38:00	0.2	-0.8	31.0	0.5	0.04	0.02	
12/20/06 7:38:15	0.2	-0.7	31.4	0.5	0.04	0.02	
12/20/06 7:38:30	0.2	-0.9	31.8	0.5	0.04	0.02	
12/20/06 7:38:45	0.2	-0.9	32.2	0.5	0.04	0.02	
12/20/06 7:39:00	0.2	-0.9	32.7	0.5	0.04	0.02	
12/20/06 7:39:15	0.2	-0.7	33.1	0.6	0.04	0.03	
12/20/06 7:39:30	0.2	-0.8	33.5	0.5	0.04	0.02	
12/20/06 7:39:45	0.2	-0.9	33.9	0.6	0.04	0.02	
12/20/06 7:40:00	0.2	-0.9	34.2	0.6	0.04	0.02	
12/20/06 7:40:15	0.2	-0.9	34.5	0.5	0.03	0.03	
12/20/06 7:40:30	0.2	-0.8	34.9	0.5	0.03	0.03	
12/20/06 7:40:45	0.2	-0.7	47.5	0.6	0.03	0.02	
12/20/06 7:41:00	0.2	-0.9	34.1	0.6	0.03	0.02	
12/20/06 7:41:15	0.2	-0.9	75.4	0.6	0.03	0.02	
12/20/06 7:41:30	0.2	-0.9	-75.9	0.6	0.03	0.02	
12/20/06 7:41:45	0.2	-0.9	10.8	0.6	0.03	0.02	
12/20/06 7:42:00	0.2	-0.8	38.1	0.6	0.03	0.02	
12/20/06 7:42:15	0.2	-0.7	38.2	0.6	0.03	0.02	
12/20/06 7:42:30	0.2	-0.9	38.7	0.6	0.03	0.02	
12/20/06 7:42:45	0.2	-0.9	39.0	0.6	0.03	0.02	
12/20/06 7:43:00	0.2	-0.9	39.6	0.6	0.03	0.02	
12/20/06 7:43:15	0.2	-0.7	39.8	0.6	0.03	0.02	
12/20/06 7:43:30	0.1	-0.8	9.9	0.7	0.03	0.02	
12/20/06 7:43:45	0.1	-0.9	0.3	0.6	0.03	0.02	
12/20/06 7:44:00	0.1	-0.9	0.7	0.7	0.03	0.02	
12/20/06 7:44:15	0.1	-0.9	1.5	0.7	0.03	0.02	
12/20/06 7:44:30	0.1	-0.9	2.5	0.7	0.03	0.02	
12/20/06 7:44:45	0.1	-0.9	4.0	0.7	0.01	0.02	
12/20/06 7:45:00	0.1	-0.9	4.4	0.7	-0.04	0.01	
12/20/06 7:45:15	0.1	-0.9	4.9	0.7	-0.04	0.01	
12/20/06 7:45:30	0.1	-0.9	1.8	0.7	-0.04	0.02	
12/20/06 7:45:45	0.1	-0.9	-0.5	0.7	-0.04	0.02	
12/20/06 7:46:00	0.1	-0.9	-2.2	0.7	-0.04	0.02	
12/20/06 7:46:15	0.1	-0.9	-3.0	0.7	-0.04	0.02	
12/20/06 7:46:30	0.1	-0.9	-4.5	0.8	-0.04	0.03	
12/20/06 7:46:45	0.1	-0.9	-6.4	0.8	-0.04	0.03	
12/20/06 7:47:00	0.1	-0.9	-8.4	0.7	-0.04	0.03	
12/20/06 7:47:15	0.1	-0.9	-10.2	0.7	-0.04	0.03	
12/20/06 7:47:30	0.1	-0.9	-11.9	0.7	-0.04	0.03	
12/20/06 7:47:45	0.1	-0.9	-13.4	0.7	-0.04	0.03	
12/20/06 7:48:00	0.1	-0.9	-16.1	0.7	-0.04	0.04	
12/20/06 7:48:15	0.1	-0.9	-18.4	0.7	-0.03	0.04	
12/20/06 7:48:30	0.1	-0.9	-19.3	0.7	-0.03	0.04	
12/20/06 7:48:45	0.1	-0.9	-20.2	0.7	-0.03	0.04	
12/20/06 7:49:00	0.1	-1.0	-21.0	0.7	-0.03	0.04	
12/20/06 7:49:15	0.1	-1.2	-21.5	0.7	-0.03	0.04	
12/20/06 7:49:30	0.1	-0.9	-22.0	0.8	-0.03	0.05	
12/20/06 7:49:45	0.1	-0.9	-22.5	0.7	-0.03	0.05	
12/20/06 7:50:00	0.1	-0.9	-22.6	0.7	-0.03	0.05	
12/20/06 7:50:15	0.1	-0.9	-22.9	0.8	-0.03	0.05	
12/20/06 7:50:30	0.1	-1.2	-23.4	0.8	-0.03	0.05	
12/20/06 7:50:45	0.1	-0.9	-23.9	0.7	-0.02	0.05	
12/20/06 7:51:00	0.1	-0.9	-24.4	0.7	-0.02	0.04	
12/20/06 7:51:15	0.1	-0.9	-24.7	0.7	-0.02	0.04	
12/20/06 7:51:30	0.1	-0.9	-24.9	0.8	-0.02	0.04	
12/20/06 7:51:45	0.1	-0.9	-25.2	0.8	-0.02	0.04	
12/20/06 7:52:00	0.1	-0.9	-25.4	0.8	-0.02	0.04	
12/20/06 7:52:15	0.1	-0.9	-25.6	0.8	-0.01	0.04	
12/20/06 7:52:30	0.1	-0.9	-25.8	0.8	-0.01	0.04	
12/20/06 7:52:45	0.1	-0.9	-26.0	0.7	-0.01	0.05	
12/20/06 7:53:00	0.1	-1.0	-26.2	0.8	-0.01	0.05	
12/20/06 7:53:15	0.1	-1.4	-26.3	0.8	0.00	0.05	
12/20/06 7:53:30	0.1	-1.0	-26.5	0.8	0.00	0.05	
12/20/06 7:53:45	0.1	-0.9	-26.9	0.8	0.00	0.05	
12/20/06 7:54:00	0.1	-0.9	-27.2	0.8	0.01	0.05	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 7:54:15	0.1	-0.9	-27.6	0.8	0.01	0.05	
12/20/06 7:54:30	0.1	-1.1	-27.7	0.9	0.01	0.05	
12/20/06 7:54:45	0.1	-1.2	-27.8	0.8	0.02	0.05	
12/20/06 7:55:00	0.1	-0.9	-27.8	0.9	0.02	0.05	
12/20/06 7:55:15	0.1	-0.9	-28.0	0.8	0.03	0.05	
12/20/06 7:55:30	0.1	-0.9	-28.3	0.8	0.03	0.05	
12/20/06 7:55:45	0.1	-0.9	-28.3	0.8	0.04	0.05	
12/20/06 7:56:00	0.1	-1.2	-28.5	0.9	0.04	0.05	
12/20/06 7:56:15	0.1	-0.9	-28.8	0.9	0.05	0.05	
12/20/06 7:56:30	0.1	-0.9	-28.9	0.9	0.05	0.05	
12/20/06 7:56:45	0.1	-0.9	-28.9	0.8	0.06	0.06	
12/20/06 7:57:00	0.1	-0.9	-29.1	0.9	0.07	0.06	
12/20/06 7:57:15	0.1	-1.2	-29.2	0.8	0.07	0.06	
12/20/06 7:57:30	0.1	-1.0	-29.5	0.8	0.08	0.06	
12/20/06 7:57:45	0.1	-0.9	-29.6	0.8	0.08	0.06	
12/20/06 7:58:00	0.1	-0.9	-29.9	0.8	0.09	0.06	
12/20/06 7:58:15	0.1	-0.9	-29.9	0.8	0.10	0.06	
12/20/06 7:58:30	0.1	-1.0	-30.0	0.9	0.11	0.06	
12/20/06 7:58:45	0.1	-1.2	-30.1	0.9	0.11	0.06	
12/20/06 7:59:00	0.1	-0.9	-30.1	0.8	0.12	0.06	
12/20/06 7:59:15	0.1	-0.9	-30.3	0.8	0.13	0.06	
12/20/06 7:59:30	0.1	-0.9	-30.3	0.8	0.14	0.07	
12/20/06 7:59:45	0.1	-0.9	-30.5	0.8	0.14	0.07	
12/20/06 8:00:00	0.1	-1.3	-31.4	0.7	0.15	0.07	
12/20/06 8:00:15	0.1	-1.4	-50.5	0.7	0.16	0.08	
12/20/06 8:00:30	0.1	-1.0	-60.7	0.7	0.17	0.08	
12/20/06 8:00:45	0.1	-1.2	-57.0	0.7	0.18	0.08	
12/20/06 8:01:00	0.1	-1.0	-55.4	0.6	0.19	0.08	
12/20/06 8:01:15	0.1	-1.2	-55.5	0.6	0.20	0.08	
12/20/06 8:01:30	0.1	-1.4	-55.6	0.6	0.21	0.08	
12/20/06 8:01:45	0.1	-1.2	-56.0	0.6	0.22	0.08	
12/20/06 8:02:00	0.1	-1.0	-56.0	0.6	0.23	0.07	
12/20/06 8:02:15	0.1	-1.2	-55.7	0.6	0.24	0.07	
12/20/06 8:02:30	0.1	-1.0	-0.2	0.6	0.25	0.07	
12/20/06 8:02:45	0.1	-1.4	-0.2	0.6	0.27	0.07	
12/20/06 8:03:00	0.1	-1.3	-2.6	0.8	0.76	0.05	
12/20/06 8:03:15	0.4	-0.9	-11.3	0.6	0.27	0.04	
12/20/06 8:03:30	0.9	-0.5	-13.0	0.5	3.23	0.05	
12/20/06 8:03:45	0.9	-0.4	-8.9	0.5	12.90	0.06	
12/20/06 8:04:00	0.8	-0.8	1.0	0.5	18.92	0.07	
12/20/06 8:04:15	0.5	-0.9	1.3	0.5	15.00	0.06	
12/20/06 8:04:30	0.1	-0.9	1.4	0.6	4.86	0.04	
12/20/06 8:04:45	0.1	-0.9	1.2	0.5	0.74	0.03	
12/20/06 8:05:00	0.1	-0.9	1.1	0.5	0.17	0.03	
12/20/06 8:05:15	0.1	-0.9	0.8	0.5	0.08	0.03	
12/20/06 8:05:30	0.1	-0.9	0.6	0.5	0.06	0.02	
12/20/06 8:05:45	0.1	-0.9	0.4	0.5	0.05	0.03	
12/20/06 8:06:00	0.1	-0.9	0.3	0.5	0.04	0.02	
12/20/06 8:06:15	0.1	-0.9	0.3	0.5	0.04	0.02	
12/20/06 8:06:30	0.1	-0.9	0.3	0.5	0.04	0.02	
12/20/06 8:06:45	0.1	-0.9	0.4	0.5	0.04	0.03	
12/20/06 8:07:00	0.1	-0.9	0.6	0.5	0.04	0.02	
12/20/06 8:07:15	0.1	-0.9	0.6	0.5	0.04	0.02	
12/20/06 8:07:30	0.1	-0.9	0.4	0.5	0.04	0.03	
12/20/06 8:07:45	0.1	-0.9	0.3	0.5	0.04	0.02	
12/20/06 8:08:00	0.1	-0.9	0.3	0.5	0.04	0.02	
12/20/06 8:08:15	0.0	-0.9	0.2	0.5	0.04	0.02	
12/20/06 8:08:30	0.0	-0.9	0.1	0.5	0.04	0.03	
12/20/06 8:08:45	0.0	-0.9	0.0	0.5	0.04	0.03	
12/20/06 8:09:00	0.0	-0.9	0.0	0.5	0.04	0.03	
12/20/06 8:09:15	0.0	-0.9	-0.2	0.6	0.04	0.02	
12/20/06 8:09:30	0.0	-0.9	-0.3	0.6	0.04	0.02	
12/20/06 8:09:45	0.0	-0.9	-0.3	0.6	0.04	0.03	
12/20/06 8:10:00	0.0	-0.9	-0.4	0.6	0.04	0.03	
12/20/06 8:10:15	0.0	-0.9	-0.2	0.6	0.04	0.03	
12/20/06 8:10:30	0.0	-0.9	-0.2	0.6	0.04	0.03	
12/20/06 8:10:45	0.0	-0.9	-0.2	0.6	0.04	0.03	
12/20/06 8:11:00	0.0	-0.9	0.0	0.6	0.04	0.03	
12/20/06 8:11:15	0.0	-0.9	0.0	0.6	0.04	0.03	
12/20/06 8:11:30	0.0	-0.9	0.1	0.6	0.04	0.03	
12/20/06 8:11:45	0.0	-0.9	0.3	0.7	0.04	0.03	
12/20/06 8:12:00	0.0	-0.9	0.5	0.6	0.03	0.03	
12/20/06 8:12:15	0.0	-0.9	0.7	0.6	0.03	0.03	
12/20/06 8:12:30	0.0	-0.9	0.8	0.6	0.03	0.03	
12/20/06 8:12:45	0.0	-0.9	1.0	0.7	0.04	0.03	
12/20/06 8:13:00	0.0	-0.9	1.1	0.7	0.04	0.03	
12/20/06 8:13:15	0.0	-0.9	1.3	0.6	0.03	0.03	
12/20/06 8:13:30	0.0	-0.9	1.5	0.6	0.03	0.03	
12/20/06 8:13:45	0.0	-0.9	1.7	0.6	0.04	0.03	
12/20/06 8:14:00	0.0	-0.9	2.0	0.6	0.03	0.03	
12/20/06 8:14:15	0.0	-0.9	2.4	0.6	0.04	0.03	
12/20/06 8:14:30	0.0	-0.9	3.1	0.7	0.03	0.03	
12/20/06 8:14:45	0.0	-0.9	3.6	0.7	0.03	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 8:15:00	0.0	-0.9	4.2	0.7	0.03	0.03	
12/20/06 8:15:15	0.0	-0.9	4.9	0.7	0.03	0.03	
12/20/06 8:15:30	0.0	-0.9	5.5	0.7	0.03	0.03	
12/20/06 8:15:45	0.0	-0.9	6.0	0.7	-0.04	0.02	
12/20/06 8:16:00	0.0	-0.9	5.9	0.7	-0.04	0.02	
12/20/06 8:16:15	0.0	-0.9	5.0	0.7	-0.04	0.02	
12/20/06 8:16:30	0.0	-0.9	3.9	0.7	-0.04	0.02	
12/20/06 8:16:45	0.0	-0.9	2.0	0.7	-0.04	0.02	
12/20/06 8:17:00	0.0	-0.9	0.1	0.7	-0.04	0.03	
12/20/06 8:17:15	0.0	-0.9	-1.0	0.7	-0.04	0.03	
12/20/06 8:17:30	0.0	-0.9	-1.0	0.7	-0.04	0.03	
12/20/06 8:17:45	0.0	-0.9	-0.8	0.7	-0.04	0.03	
12/20/06 8:18:00	0.0	-0.9	-1.3	0.7	-0.04	0.03	
12/20/06 8:18:15	0.0	-0.9	-1.4	0.7	-0.04	0.03	
12/20/06 8:18:30	0.0	-0.9	-1.6	0.8	-0.04	0.02	
12/20/06 8:18:45	0.0	-0.9	-1.7	0.7	-0.04	0.03	
12/20/06 8:19:00	0.0	-0.9	-1.9	0.7	-0.03	0.03	
12/20/06 8:19:15	0.0	-0.9	-2.0	0.7	-0.03	0.03	
12/20/06 8:19:30	0.0	-0.9	-2.0	0.7	-0.03	0.03	
12/20/06 8:19:45	0.0	-0.9	-2.1	0.8	-0.03	0.03	
12/20/06 8:20:00	0.0	-0.9	-2.2	0.7	-0.03	0.03	
12/20/06 8:20:15	0.0	-0.9	-2.3	0.7	-0.03	0.03	
12/20/06 8:20:30	0.0	-0.8	-2.6	0.8	0.37	0.04	
12/20/06 8:20:45	-0.2	-0.4	-2.5	0.8	0.10	0.04	
12/20/06 8:21:00	3.5	-0.9	23.6	0.8	0.35	0.04	
12/20/06 8:21:15	4.4	-0.9	114.9	0.8	0.48	0.03	
12/20/06 8:21:30	3.2	-0.9	209.8	0.7	0.20	0.02	
12/20/06 8:21:45	2.8	-0.9	252.1	0.7	0.08	0.03	
12/20/06 8:22:00	2.5	-0.9	260.7	0.8	0.05	0.03	
12/20/06 8:22:15	2.4	-0.9	261.7	0.8	0.04	0.03	
12/20/06 8:22:30	2.3	-1.3	262.6	0.8	0.04	0.03	
12/20/06 8:22:45	2.2	-0.9	264.1	0.8	0.04	0.03	
12/20/06 8:23:00	2.1	-0.9	265.7	0.8	0.04	0.03	
12/20/06 8:23:15	2.0	-0.9	267.2	0.8	0.04	0.03	
12/20/06 8:23:30	1.9	-0.9	268.5	0.8	0.04	0.03	
12/20/06 8:23:45	1.8	-0.9	269.5	0.8	0.04	0.03	
12/20/06 8:24:00	1.7	-0.9	270.3	0.8	0.04	0.03	
12/20/06 8:24:15	1.7	-0.9	270.7	0.8	0.04	0.03	
12/20/06 8:24:30	1.5	-0.9	270.9	0.8	0.04	0.03	
12/20/06 8:24:45	1.5	-0.9	271.1	0.8	0.03	0.03	
12/20/06 8:25:00	1.4	-0.9	249.9	0.8	-0.02	0.02	
12/20/06 8:25:15	1.3	-0.9	169.6	0.8	-0.04	0.02	
12/20/06 8:25:30	1.3	-0.8	154.1	0.8	-0.04	0.02	
12/20/06 8:25:45	1.3	-0.7	153.7	0.8	-0.04	0.03	
12/20/06 8:26:00	0.4	-0.9	153.7	0.9	-0.04	0.03	
12/20/06 8:26:15	0.1	-0.9	153.6	0.9	-0.04	0.03	
12/20/06 8:26:30	0.0	-0.9	153.3	0.8	-0.04	0.04	
12/20/06 8:26:45	0.0	-0.9	153.2	0.8	-0.04	0.04	
12/20/06 8:27:00	0.0	-0.9	153.0	0.8	-0.04	0.03	
12/20/06 8:27:15	0.0	-0.9	152.7	0.9	-0.04	0.03	
12/20/06 8:27:30	0.0	-0.9	152.5	0.8	-0.04	0.03	
12/20/06 8:27:45	0.0	-0.9	152.2	0.9	-0.04	0.03	
12/20/06 8:28:00	0.3	-0.4	152.0	0.9	-0.04	0.03	
12/20/06 8:28:15	0.4	-0.2	151.7	0.9	-0.04	0.03	
12/20/06 8:28:30	0.4	0.1	151.5	0.8	-0.04	0.03	
12/20/06 8:28:45	0.3	0.1	151.2	0.9	-0.04	0.03	
12/20/06 8:29:00	0.3	0.1	151.0	0.8	-0.03	0.03	
12/20/06 8:29:15	0.3	0.1	151.0	0.8	-0.03	0.03	
12/20/06 8:29:30	0.2	0.1	150.9	0.8	-0.03	0.03	
12/20/06 8:29:45	0.2	0.1	150.8	0.8	-0.03	0.03	
12/20/06 8:30:00	0.2	0.1	150.7	0.8	-0.03	0.03	
12/20/06 8:30:15	0.2	0.1	150.6	0.8	-0.03	0.03	
12/20/06 8:30:30	0.2	0.0	127.1	0.8	-0.03	0.03	
12/20/06 8:30:45	0.2	-0.2	27.2	0.8	-0.03	0.03	
12/20/06 8:31:00	0.2	0.1	-0.1	0.7	-0.03	0.03	
12/20/06 8:31:15	0.2	0.1	-2.4	0.7	-0.02	0.03	
12/20/06 8:31:30	0.2	0.1	-2.7	0.7	-0.02	0.03	
12/20/06 8:31:45	0.2	0.1	-2.8	0.7	-0.02	0.03	
12/20/06 8:32:00	0.2	0.0	-2.9	0.7	-0.02	0.03	
12/20/06 8:32:15	0.1	-0.2	-3.0	0.6	-0.02	0.03	
12/20/06 8:32:30	0.1	0.1	-3.0	0.6	-0.01	0.04	
12/20/06 8:32:45	0.1	0.1	-3.1	0.6	7.03	0.06	
12/20/06 8:33:00	0.1	0.1	-3.5	0.6	20.84	0.08	
12/20/06 8:33:15	0.1	-0.2	-4.2	0.6	20.96	0.08	
12/20/06 8:33:30	0.1	-0.3	-4.7	0.6	20.98	0.08	
12/20/06 8:33:45	0.1	0.1	-5.2	0.6	21.00	0.07	
12/20/06 8:34:00	0.1	0.1	-5.4	0.6	21.00	0.07	
12/20/06 8:34:15	0.1	0.1	-5.4	0.6	21.00	0.07	
12/20/06 8:34:30	0.1	0.0	-0.3	0.6	21.00	0.07	
12/20/06 8:34:45	0.1	-0.2	-0.5	0.6	21.00	0.07	
12/20/06 8:35:00	0.1	-0.4	-0.6	0.6	21.00	0.07	
12/20/06 8:35:15	0.1	-0.2	-0.8	0.6	21.00	0.08	
12/20/06 8:35:30	0.1	0.0	-0.9	0.5	21.00	0.07	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 8:35:45	0.1	-0.4	-1.0	0.5	21.00	0.08	
12/20/06 8:36:00	0.1	-0.3	-1.0	0.5	21.00	0.08	
12/20/06 8:36:15	0.1	-0.2	-1.1	0.6	21.00	0.08	
12/20/06 8:36:30	0.1	0.1	-1.2	0.5	21.01	0.08	
12/20/06 8:36:45	0.1	-0.2	-1.3	0.5	21.01	0.07	
12/20/06 8:37:00	0.1	0.0	-1.4	0.5	21.00	0.07	
12/20/06 8:37:15	0.1	-0.4	-0.3	0.5	21.00	0.07	
12/20/06 8:37:30	0.1	0.0	-0.3	0.5	21.01	0.07	
12/20/06 8:37:45	0.1	-0.4	-0.4	0.5	21.01	0.07	
12/20/06 8:38:00	1.1	-0.4	-0.5	0.6	20.93	0.07	
12/20/06 8:38:15	1.0	-0.4	0.0	0.5	15.57	0.06	
12/20/06 8:38:30	0.0	-0.9	-0.1	0.6	4.93	0.04	
12/20/06 8:38:45	0.0	-0.7	-0.5	0.5	0.90	0.03	
12/20/06 8:39:00	0.0	-0.4	-0.8	0.6	0.24	0.03	
12/20/06 8:39:15	0.0	-0.7	-1.0	0.6	0.12	0.03	
12/20/06 8:39:30	0.0	-0.4	-0.2	0.6	0.09	0.03	
12/20/06 8:39:45	0.0	-0.7	2.0	0.6	0.07	0.03	
12/20/06 8:40:00	0.0	-0.8	3.0	0.6	0.07	0.03	
12/20/06 8:40:15	0.0	-0.7	3.1	0.6	0.06	0.03	
12/20/06 8:40:30	0.0	-0.9	3.1	0.6	0.06	0.03	
12/20/06 8:40:45	0.0	-0.7	2.9	0.6	0.06	0.02	
12/20/06 8:41:00	0.0	-0.5	2.9	0.7	0.06	0.02	
12/20/06 8:41:15	0.0	-0.9	2.8	0.6	0.05	0.02	
12/20/06 8:41:30	0.0	-0.5	2.7	0.6	0.05	0.02	
12/20/06 8:41:45	0.0	-0.9	2.6	0.6	0.04	0.03	
12/20/06 8:42:00	0.0	-0.4	2.6	0.7	-0.02	0.02	
12/20/06 8:42:15	0.0	-0.4	-21.2	0.7	-0.02	0.01	
12/20/06 8:42:30	0.1	-0.4	0.0	0.6	-0.01	0.02	
12/20/06 8:42:45	0.1	-0.2	0.0	0.6	-0.02	0.03	
12/20/06 8:43:00	0.1	0.1	0.0	0.7	-0.02	0.03	
12/20/06 8:43:15	0.1	0.1	0.0	0.7	-0.01	0.03	
12/20/06 8:43:30	0.1	0.1	0.0	0.7	-0.01	0.04	
12/20/06 8:43:45	0.1	0.1	0.0	0.7	-0.01	0.03	
12/20/06 8:44:00	0.1	0.1	0.0	0.7	-0.01	0.04	
12/20/06 8:44:15	0.1	0.1	0.0	0.7	-0.01	0.04	
12/20/06 8:44:30	0.1	0.1	0.0	0.7	-0.01	0.04	
12/20/06 8:44:45	0.1	0.1	0.0	0.7	-0.01	0.04	
12/20/06 8:45:00	0.1	0.1	0.0	0.7	-0.01	0.03	
12/20/06 8:45:15	0.1	0.1	0.0	0.7	-0.01	0.03	
12/20/06 8:45:30	0.1	0.1	0.0	0.7	0.00	0.03	
12/20/06 8:45:45	0.1	0.1	0.0	0.7	0.00	0.03	
12/20/06 8:46:00	0.1	0.1	0.0	0.7	0.00	0.03	
12/20/06 8:46:15	0.1	0.1	0.0	0.8	0.00	0.03	
12/20/06 8:46:30	0.1	0.1	0.0	0.7	0.00	0.04	
12/20/06 8:46:45	0.1	0.1	-75.9	0.8	0.01	0.04	
12/20/06 8:47:00	0.1	0.1	-19.4	0.8	0.01	0.04	
12/20/06 8:47:15	0.1	0.1	-34.5	0.7	0.01	0.04	
12/20/06 8:47:30	0.1	0.1	-35.8	0.7	0.02	0.04	
12/20/06 8:47:45	0.1	0.1	-36.1	0.7	0.02	0.04	
12/20/06 8:48:00	0.1	-0.3	-36.1	0.8	0.03	0.04	
12/20/06 8:48:15	0.1	0.1	-36.0	0.8	0.04	0.04	
12/20/06 8:48:30	0.1	0.1	-35.8	0.8	0.05	0.04	
12/20/06 8:48:45	0.1	0.1	-27.9	0.8	0.06	0.04	
12/20/06 8:49:00	0.1	0.1	-27.4	0.8	0.08	0.05	
12/20/06 8:49:15	0.1	0.1	-35.5	0.8	0.09	0.04	
12/20/06 8:49:30	0.1	0.1	-36.1	0.8	0.10	0.04	
12/20/06 8:49:45	0.1	0.1	-35.9	0.8	0.12	0.04	
12/20/06 8:50:00	0.1	0.1	-35.9	0.8	0.14	0.05	
12/20/06 8:50:15	0.1	0.1	-35.9	0.8	0.15	0.04	
12/20/06 8:50:30	0.1	0.1	-36.6	0.8	0.17	0.05	
12/20/06 8:50:45	0.1	0.1	-39.1	0.8	0.18	0.05	
12/20/06 8:51:00	0.1	0.1	-39.7	0.9	0.19	0.05	
12/20/06 8:51:15	0.1	0.1	-39.7	0.8	0.21	0.05	
12/20/06 8:51:30	0.1	0.1	-39.6	0.8	0.22	0.04	
12/20/06 8:51:45	0.1	-0.2	-39.6	0.8	0.23	0.04	
12/20/06 8:52:00	0.1	-0.3	-2.7	0.9	0.24	0.05	
12/20/06 8:52:15	0.1	0.1	265.8	0.8	0.25	0.04	
12/20/06 8:52:30	0.1	0.1	302.5	0.8	0.27	0.04	
12/20/06 8:52:45	0.1	0.1	302.5	0.8	0.28	0.05	
12/20/06 8:53:00	0.1	0.1	302.5	0.8	0.29	0.04	
12/20/06 8:53:15	0.1	-0.2	302.5	0.9	0.30	0.04	
12/20/06 8:53:30	0.1	0.1	302.4	0.9	0.31	0.04	
12/20/06 8:53:45	0.1	0.1	302.4	0.8	0.32	0.04	
12/20/06 8:54:00	0.1	0.1	272.1	0.9	0.33	0.04	
12/20/06 8:54:15	0.1	0.1	234.5	0.8	0.34	0.04	
12/20/06 8:54:30	0.1	0.0	236.5	0.9	0.35	0.05	
12/20/06 8:54:45	0.1	-0.2	242.2	0.9	0.36	0.04	
12/20/06 8:55:00	0.1	0.1	254.9	0.9	0.37	0.05	
12/20/06 8:55:15	0.1	0.1	239.4	0.9	0.38	0.05	
12/20/06 8:55:30	0.1	0.1	163.3	0.9	0.39	0.05	
12/20/06 8:55:45	0.1	0.1	129.6	0.9	0.40	0.05	
12/20/06 8:56:00	0.1	-0.3	127.6	0.9	0.41	0.05	
12/20/06 8:56:15	0.1	0.1	137.6	0.9	0.42	0.05	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 8:56:30	0.1	0.1	200.4	0.9	0.43	0.05	
12/20/06 8:56:45	0.1	0.1	259.8	0.9	0.45	0.05	
12/20/06 8:57:00	0.1	0.1	194.7	0.9	0.45	0.05	
12/20/06 8:57:15	0.1	-0.2	95.5	0.9	0.47	0.05	
12/20/06 8:57:30	0.1	0.1	-23.0	0.9	0.48	0.05	
12/20/06 8:57:45	0.1	0.1	-44.1	0.9	0.49	0.05	
12/20/06 8:58:00	0.1	0.1	-46.2	0.9	0.49	0.05	
12/20/06 8:58:15	0.1	0.1	-46.4	0.9	0.51	0.05	
12/20/06 8:58:30	0.1	0.0	-43.2	0.9	0.52	0.05	
12/20/06 8:58:45	0.1	-0.4	-27.3	0.9	0.53	0.05	
12/20/06 8:59:00	0.1	0.1	-24.6	0.9	0.54	0.05	
12/20/06 8:59:15	0.1	0.1	-24.5	0.9	0.55	0.06	
12/20/06 8:59:30	0.1	0.1	-24.5	0.9	0.56	0.06	
12/20/06 8:59:45	0.1	0.1	-27.8	0.9	0.57	0.06	
12/20/06 9:00:00	0.1	0.0	-42.7	0.9	0.58	0.06	
12/20/06 9:00:15	0.1	-0.2	-46.0	0.9	0.59	0.06	
12/20/06 9:00:30	0.1	0.1	-48.0	0.9	0.60	0.06	
12/20/06 9:00:45	0.1	0.1	-45.6	0.9	0.61	0.06	
12/20/06 9:01:00	0.1	0.1	-45.2	0.9	0.62	0.06	
12/20/06 9:01:15	0.1	-0.2	-45.2	0.9	0.63	0.06	
12/20/06 9:01:30	0.1	0.1	-45.2	0.8	0.63	0.07	
12/20/06 9:01:45	0.1	-0.2	-45.1	0.8	0.66	0.07	
12/20/06 9:02:00	0.1	-0.4	-45.1	0.8	0.67	0.07	
12/20/06 9:02:15	0.1	-0.4	-45.5	0.8	0.68	0.06	
12/20/06 9:02:30	0.1	-0.4	-46.1	0.8	10.71	0.08	
12/20/06 9:02:45	0.1	-0.4	-46.1	0.7	20.85	0.09	
12/20/06 9:03:00	0.1	-0.3	-46.6	0.7	20.98	0.09	
12/20/06 9:03:15	0.1	0.1	-47.1	0.7	21.00	0.08	
12/20/06 9:03:30	0.1	0.1	-0.5	0.7	21.00	0.08	
12/20/06 9:03:45	0.1	0.1	-0.5	0.7	21.01	0.07	
12/20/06 9:04:00	0.1	-0.3	-0.7	0.7	21.01	0.07	
12/20/06 9:04:15	0.1	0.1	-0.8	0.6	21.01	0.07	
12/20/06 9:04:30	0.8	0.0	-0.9	0.7	21.01	0.07	
12/20/06 9:04:45	2.3	-0.4	-0.4	0.6	19.68	0.06	
12/20/06 9:05:00	0.8	-0.4	0.6	0.6	9.89	0.04	
12/20/06 9:05:15	0.1	-0.7	-0.1	0.6	2.17	0.03	
12/20/06 9:05:30	0.1	-0.8	0.2	0.6	0.44	0.03	
12/20/06 9:05:45	0.1	-0.4	1.2	0.6	0.16	0.02	
12/20/06 9:06:00	0.1	-0.4	1.8	0.6	0.09	0.02	
12/20/06 9:06:15	0.0	-0.4	1.7	0.6	0.08	0.03	
12/20/06 9:06:30	0.0	-0.9	1.6	0.6	0.07	0.02	
12/20/06 9:06:45	0.0	-0.6	1.7	0.6	0.06	0.02	
12/20/06 9:07:00	0.0	-0.9	1.6	0.5	0.06	0.02	
12/20/06 9:07:15	0.0	-0.5	1.6	0.5	0.05	0.02	
12/20/06 9:07:30	0.0	-0.4	1.5	0.5	0.05	0.02	
12/20/06 9:07:45	0.0	-0.8	1.5	0.5	0.05	0.02	
12/20/06 9:08:00	0.0	-0.9	1.5	0.6	0.05	0.03	
12/20/06 9:08:15	0.0	-0.9	1.4	0.5	0.05	0.02	
12/20/06 9:08:30	0.0	-0.5	1.5	0.6	0.05	0.02	
12/20/06 9:08:45	0.0	-0.5	1.4	0.5	0.05	0.02	
12/20/06 9:09:00	0.0	-0.9	1.3	0.5	0.05	0.03	
12/20/06 9:09:15	0.0	-0.9	1.4	0.5	0.05	0.03	
12/20/06 9:09:30	0.0	-0.9	1.3	0.5	0.05	0.03	
12/20/06 9:09:45	0.0	-0.9	1.4	0.5	0.04	0.03	
12/20/06 9:10:00	0.0	-0.4	0.1	0.5	0.04	0.02	
12/20/06 9:10:15	0.0	-0.8	-0.4	0.5	0.04	0.03	Calibration Error
12/20/06 9:10:30	0.0	-0.9	**-0.3**	0.5	0.04	0.03	**-0.3 Zero SO_2**
12/20/06 9:10:45	0.0	-0.9	**-0.4**	0.5	0.04	0.03	
12/20/06 9:11:00	0.0	-0.8	**-0.3**	0.5	0.04	0.03	
12/20/06 9:11:15	0.0	-0.4	**-0.4**	0.5	0.04	0.03	
12/20/06 9:11:30	0.0	-0.5	-0.3	0.5	0.04	0.03	
12/20/06 9:11:45	0.0	-0.9	-0.3	0.5	0.04	0.03	
12/20/06 9:12:00	-0.2	-0.4	-0.3	0.5	0.04	0.03	
12/20/06 9:12:15	0.9	-0.4	5.8	0.5	0.04	0.03	
12/20/06 9:12:30	2.3	-0.4	73.0	0.5	0.09	0.03	
12/20/06 9:12:45	1.7	-0.8	182.8	0.5	0.08	0.03	
12/20/06 9:13:00	1.4	-0.9	243.5	0.6	0.05	0.03	
12/20/06 9:13:15	1.3	-0.5	261.4	0.5	0.04	0.03	
12/20/06 9:13:30	1.2	-0.8	265.4	0.6	0.04	0.03	
12/20/06 9:13:45	1.1	-0.4	266.6	0.5	0.04	0.03	
12/20/06 9:14:00	1.1	-0.5	267.5	0.6	0.04	0.03	
12/20/06 9:14:15	1.0	-0.9	268.3	0.6	0.04	0.03	
12/20/06 9:14:30	1.0	-0.9	269.5	0.6	0.04	0.03	
12/20/06 9:14:45	0.9	-0.5	270.5	0.6	0.04	0.03	
12/20/06 9:15:00	0.9	-0.4	271.4	0.6	0.04	0.03	
12/20/06 9:15:15	0.9	-0.4	271.9	0.6	0.04	0.03	
12/20/06 9:15:30	0.8	-0.9	272.2	0.6	0.04	0.03	
12/20/06 9:15:45	0.8	-0.5	272.6	0.6	0.03	0.03	
12/20/06 9:16:00	0.8	-0.4	272.7	0.6	0.04	0.03	
12/20/06 9:16:15	0.7	-0.4	273.0	0.6	0.03	0.03	
12/20/06 9:16:30	0.7	-0.8	273.2	0.6	0.03	0.03	Calibration Error
12/20/06 9:16:45	0.7	-0.8	**273.0**	0.6	0.03	0.03	**273.1 270.0 ppm SO_2**
12/20/06 9:17:00	0.7	-0.9	**273.1**	0.6	0.03	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 9:17:15	0.7	-0.5	**273.1**	0.7	0.03	0.02	
12/20/06 9:17:30	0.7	-0.8	**273.2**	0.7	0.03	0.02	
12/20/06 9:17:45	0.5	-0.4	271.6	0.7	0.03	0.02	
12/20/06 9:18:00	0.5	-0.5	238.8	0.7	0.04	0.02	
12/20/06 9:18:15	0.5	-0.5	178.9	0.7	0.05	0.02	
12/20/06 9:18:30	0.5	-0.8	148.7	0.7	0.04	0.02	
12/20/06 9:18:45	0.5	-0.4	140.9	0.7	0.03	0.02	
12/20/06 9:19:00	0.5	-0.8	139.3	0.6	0.03	0.02	
12/20/06 9:19:15	0.5	-0.8	138.9	0.7	0.03	0.02	
12/20/06 9:19:30	0.5	-0.8	138.7	0.8	0.03	0.02	
12/20/06 9:19:45	0.4	-0.8	138.7	0.7	0.03	0.02	
12/20/06 9:20:00	0.4	-0.4	138.7	0.8	0.03	0.02	
12/20/06 9:20:15	0.4	-0.8	138.6	0.7	0.03	0.02	
12/20/06 9:20:30	0.4	-0.5	138.6	0.7	0.03	0.02	
12/20/06 9:20:45	0.4	-0.9	138.5	0.7	0.03	0.02	Calibration Error
12/20/06 9:21:00	0.4	-0.8	**138.3**	0.8	0.03	0.02	138.2 135.0 ppm SO_2
12/20/06 9:21:15	0.4	-0.8	**138.3**	0.8	0.03	0.02	
12/20/06 9:21:30	0.4	-0.5	**138.2**	0.8	0.03	0.02	
12/20/06 9:21:45	0.4	-0.9	**138.1**	0.9	0.03	0.02	
12/20/06 9:22:00	0.4	-0.8	137.5	0.9	0.02	0.02	
12/20/06 9:22:15	0.6	-0.4	135.8	0.8	0.06	0.02	
12/20/06 9:22:30	0.6	0.0	116.9	17.0	3.41	0.03	
12/20/06 9:22:45	0.4	20.2	74.6	0.9	8.79	0.04	
12/20/06 9:23:00	1.4	33.7	32.6	0.4	14.75	0.06	
12/20/06 9:23:15	1.0	21.3	10.9	0.3	16.76	0.13	
12/20/06 9:23:30	0.1	5.5	3.8	0.3	8.01	0.11	
12/20/06 9:23:45	0.0	1.0	2.0	0.4	1.75	0.05	
12/20/06 9:24:00	0.0	0.6	1.5	0.3	0.38	0.03	
12/20/06 9:24:15	0.0	0.6	1.2	0.4	0.19	0.03	
12/20/06 9:24:30	0.0	0.5	1.1	0.4	0.14	0.03	
12/20/06 9:24:45	0.0	0.1	1.1	0.4	0.12	0.03	
12/20/06 9:25:00	0.0	0.6	0.9	0.4	0.11	0.03	
12/20/06 9:25:15	0.0	0.2	0.9	0.4	0.11	0.03	
12/20/06 9:25:30	0.0	0.2	0.7	0.4	0.10	0.03	
12/20/06 9:25:45	0.0	0.2	0.6	0.4	0.10	0.03	
12/20/06 9:26:00	0.0	0.1	0.6	0.4	0.09	0.02	
12/20/06 9:26:15	0.0	0.1	0.6	0.4	0.09	0.02	
12/20/06 9:26:30	0.0	0.1	0.6	0.3	0.09	0.02	System Bias
12/20/06 9:26:45	**0.0**	**0.1**	**0.5**	**0.4**	**0.09**	**0.02**	**0.0 Zero NO_x**
12/20/06 9:27:00	**0.0**	**0.5**	**0.4**	**0.5**	**0.09**	**0.02**	**0.2 Zero CO**
12/20/06 9:27:15	**0.0**	**0.1**	**0.4**	**0.4**	**0.09**	**0.02**	**0.4 Zero SO_2**
12/20/06 9:27:30	**0.3**	**0.1**	**0.3**	**0.4**	**0.09**	**0.02**	**0.4 Zero C_3H_8/N_2**
12/20/06 9:27:45	1.1	0.1	5.1	0.4	0.47	0.02	**0.09 Zero O_2**
12/20/06 9:28:00	0.5	0.1	13.5	0.4	2.59	0.02	**0.02 Zero CO_2**
12/20/06 9:28:15	0.1	0.1	11.2	0.3	4.09	0.02	
12/20/06 9:28:30	0.1	0.5	6.1	0.3	4.47	0.02	
12/20/06 9:28:45	0.1	0.1	3.4	0.4	4.54	0.02	
12/20/06 9:29:00	0.1	0.1	2.2	0.4	4.55	0.02	
12/20/06 9:29:15	0.0	0.1	1.6	0.4	4.56	0.02	
12/20/06 9:29:30	0.0	0.1	1.3	0.4	4.56	0.02	System Bias
12/20/06 9:29:45	0.0	0.1	1.1	0.4	**4.57**	0.02	4.60 4.50% O_2
12/20/06 9:30:00	0.0	0.1	0.8	0.4	**4.59**	0.02	
12/20/06 9:30:15	0.0	0.1	0.7	2.2	**4.61**	0.02	
12/20/06 9:30:30	0.3	18.3	0.6	1.0	**4.62**	0.02	
12/20/06 9:30:45	0.8	40.4	0.8	0.5	4.61	0.18	
12/20/06 9:31:00	0.6	26.4	4.9	0.4	4.37	1.57	
12/20/06 9:31:15	0.4	6.6	9.2	0.4	3.50	2.41	
12/20/06 9:31:30	0.1	0.3	6.9	0.4	1.38	3.49	
12/20/06 9:31:45	0.1	-0.8	3.5	0.4	0.36	4.01	
12/20/06 9:32:00	0.1	-0.9	2.0	0.3	0.15	4.09	
12/20/06 9:32:15	0.0	-0.9	1.2	0.3	0.11	4.09	
12/20/06 9:32:30	0.0	-0.9	0.8	0.3	0.10	4.21	
12/20/06 9:32:45	0.0	-0.9	0.5	0.3	0.09	4.36	
12/20/06 9:33:00	0.0	-0.9	0.5	0.3	0.08	4.47	
12/20/06 9:33:15	0.0	-0.9	0.3	0.3	0.08	4.53	
12/20/06 9:33:30	0.0	-0.9	0.3	0.2	0.08	4.56	
12/20/06 9:33:45	0.0	-0.9	0.2	0.2	0.08	4.56	
12/20/06 9:34:00	0.0	-0.9	0.2	0.2	0.08	4.58	System Bias
12/20/06 9:34:15	0.0	-0.9	0.1	0.2	0.07	**4.57**	4.58 4.50% CO_2
12/20/06 9:34:30	0.0	-0.9	0.0	0.3	0.07	**4.58**	
12/20/06 9:34:45	0.0	2.8	0.1	3.0	0.07	**4.58**	
12/20/06 9:35:00	-0.2	45.8	0.0	0.6	0.07	**4.58**	
12/20/06 9:35:15	1.4	85.9	1.5	0.3	0.30	4.83	
12/20/06 9:35:30	2.7	145.5	9.2	0.2	1.21	5.17	
12/20/06 9:35:45	0.2	194.6	11.5	0.1	0.84	2.86	
12/20/06 9:36:00	0.1	214.4	6.8	0.2	0.31	0.77	
12/20/06 9:36:15	0.1	218.2	2.9	0.1	0.14	0.20	
12/20/06 9:36:30	0.1	218.9	1.4	0.1	0.10	0.10	
12/20/06 9:36:45	0.1	218.9	0.8	0.1	0.09	0.07	System Bias
12/20/06 9:37:00	0.1	**219.4**	0.5	0.0	0.08	0.06	219.6 225.0 ppm CO
12/20/06 9:37:15	0.0	**219.4**	0.3	0.1	0.08	0.05	
12/20/06 9:37:30	0.0	**219.9**	0.2	0.1	0.08	0.05	
12/20/06 9:37:45	0.0	**219.5**	0.1	0.5	0.08	0.04	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
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ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 9:38:00	0.0	218.5	-0.1	1.9	0.08	0.04	
12/20/06 9:38:15	4.1	209.9	0.0	0.1	0.08	0.05	
12/20/06 9:38:30	4.9	146.3	2.0	0.1	0.43	1.04	
12/20/06 9:38:45	0.7	74.4	7.9	0.1	0.99	1.83	
12/20/06 9:39:00	0.4	31.7	9.3	0.0	0.50	0.67	
12/20/06 9:39:15	12.3	12.6	6.6	0.0	0.21	0.17	
12/20/06 9:39:30	21.8	4.5	3.9	0.0	0.16	0.06	
12/20/06 9:39:45	28.0	1.8	2.5	0.0	0.12	0.04	
12/20/06 9:40:00	30.0	1.5	1.7	0.0	0.10	0.03	
12/20/06 9:40:15	32.8	1.1	1.1	0.0	0.09	0.03	
12/20/06 9:40:30	34.3	1.1	0.7	0.0	0.09	0.03	
12/20/06 9:40:45	35.8	0.7	0.6	0.0	0.09	0.02	
12/20/06 9:41:00	40.3	0.6	0.5	0.0	0.09	0.03	
12/20/06 9:41:15	44.4	0.6	0.3	0.0	0.08	0.02	
12/20/06 9:41:30	45.9	0.6	0.1	0.0	0.08	0.02	
12/20/06 9:41:45	44.8	0.6	-0.1	0.0	0.08	0.02	
12/20/06 9:42:00	44.4	0.6	-0.1	0.1	0.08	0.02	
12/20/06 9:42:15	44.0	0.6	-0.2	0.0	0.08	0.02	
12/20/06 9:42:30	43.7	0.6	-0.2	0.0	0.08	0.03	
12/20/06 9:42:45	43.5	0.6	-0.2	0.0	0.08	0.02	
12/20/06 9:43:00	43.3	0.5	-0.1	0.0	0.08	0.02	
12/20/06 9:43:15	43.2	0.1	-0.2	0.0	0.08	0.02	
12/20/06 9:43:30	43.0	0.5	-0.3	0.0	0.08	0.02	
12/20/06 9:43:45	42.8	0.5	-0.3	0.0	0.08	0.02	
12/20/06 9:44:00	42.6	0.1	-0.2	0.0	0.08	0.02	
12/20/06 9:44:15	42.5	0.1	-0.4	0.0	0.08	0.02	System Bias
12/20/06 9:44:30	**42.3**	0.1	-0.3	0.0	0.08	0.02	**42.2 45.0 ppm NO**
12/20/06 9:44:45	**42.3**	0.1	-0.3	0.1	0.08	0.02	
12/20/06 9:45:00	**42.1**	0.1	-0.4	0.1	0.08	0.02	
12/20/06 9:45:15	**42.1**	0.1	-0.4	2.2	0.08	0.02	
12/20/06 9:45:30	41.8	20.7	-0.3	0.8	0.08	0.02	
12/20/06 9:45:45	49.4	49.2	0.1	2.9	0.12	0.24	
12/20/06 9:46:00	84.1	33.8	5.3	5.7	0.80	1.76	
12/20/06 9:46:15	43.7	9.8	12.2	0.8	0.90	1.50	
12/20/06 9:46:30	12.9	1.3	34.3	0.3	0.30	0.40	
12/20/06 9:46:45	5.8	0.6	77.1	0.3	0.11	0.09	
12/20/06 9:47:00	4.6	0.5	105.7	0.2	0.08	0.04	
12/20/06 9:47:15	3.6	0.1	117.9	0.3	0.07	0.03	
12/20/06 9:47:30	3.1	0.2	122.6	0.3	0.08	0.03	
12/20/06 9:47:45	2.6	0.2	124.8	0.3	0.07	0.03	
12/20/06 9:48:00	2.4	0.1	125.9	0.3	0.07	0.03	
12/20/06 9:48:15	2.1	0.1	126.7	0.3	0.07	0.03	
12/20/06 9:48:30	2.0	0.1	127.2	0.3	0.07	0.03	
12/20/06 9:48:45	1.8	0.1	127.8	0.2	0.07	0.03	
12/20/06 9:49:00	1.7	0.1	128.4	0.3	0.07	0.02	
12/20/06 9:49:15	1.6	0.1	128.7	0.3	0.07	0.02	
12/20/06 9:49:30	1.5	0.1	128.9	0.3	0.07	0.02	
12/20/06 9:49:45	1.4	0.1	129.2	0.3	0.07	0.02	
12/20/06 9:50:00	1.4	0.1	129.4	0.3	0.07	0.03	
12/20/06 9:50:15	1.3	0.1	129.7	0.3	0.07	0.02	
12/20/06 9:50:30	1.3	0.1	130.0	0.3	0.07	0.02	
12/20/06 9:50:45	1.2	0.1	130.2	0.3	0.07	0.02	
12/20/06 9:51:00	1.2	0.5	130.5	0.3	0.07	0.02	
12/20/06 9:51:15	1.1	0.1	130.8	0.3	0.07	0.02	
12/20/06 9:51:30	1.1	0.1	131.0	0.4	0.07	0.02	
12/20/06 9:51:45	1.0	0.1	131.1	0.3	0.07	0.02	
12/20/06 9:52:00	1.0	0.1	131.3	0.4	0.07	0.02	
12/20/06 9:52:15	1.0	0.1	131.5	0.3	0.07	0.02	System Bias
12/20/06 9:52:30	1.0	0.1	**131.6**	0.3	0.07	0.02	**131.7 135.0 ppm SO_2**
12/20/06 9:52:45	0.9	0.1	**131.6**	1.1	0.07	0.02	
12/20/06 9:53:00	0.9	10.9	**131.9**	2.3	0.07	0.02	
12/20/06 9:53:15	5.3	42.2	**131.9**	52.5	0.07	0.05	
12/20/06 9:53:30	6.3	37.1	129.2	87.5	0.52	1.26	
12/20/06 9:53:45	1.7	15.6	118.8	89.2	1.04	1.89	
12/20/06 9:54:00	1.1	2.3	85.7	87.8	0.50	0.63	
12/20/06 9:54:15	1.0	0.7	40.6	75.9	0.21	0.13	
12/20/06 9:54:30	1.2	0.1	17.1	72.4	0.17	0.04	
12/20/06 9:54:45	1.1	0.1	8.7	72.2	0.15	0.03	
12/20/06 9:55:00	1.1	0.3	5.5	72.2	0.12	0.02	
12/20/06 9:55:15	0.9	0.1	4.1	72.1	0.09	0.03	
12/20/06 9:55:30	0.7	0.3	3.3	72.5	0.08	0.02	
12/20/06 9:55:45	0.6	0.2	2.7	72.5	0.07	0.03	
12/20/06 9:56:00	0.4	0.3	2.2	79.7	0.07	0.02	
12/20/06 9:56:15	0.3	0.2	1.8	85.1	0.07	0.02	Calibration
12/20/06 9:56:30	0.3	0.1	1.5	**85.2**	0.07	0.01	**85.3 85.0 ppm C_3H_8/N_2**
12/20/06 9:56:45	0.3	0.1	1.4	**85.3**	0.07	0.01	
12/20/06 9:57:00	0.2	0.1	1.1	**85.3**	0.07	0.02	
12/20/06 9:57:15	0.2	0.1	0.9	**85.3**	0.07	0.02	
12/20/06 9:57:30	0.2	0.3	0.8	80.2	0.07	0.02	
12/20/06 9:57:45	0.2	0.5	0.8	50.3	0.07	0.02	Calibration
12/20/06 9:58:00	0.1	0.1	0.6	**50.3**	0.07	0.02	**50.3 50.0 ppm C_3H_8/N_2**
12/20/06 9:58:15	0.1	0.1	0.5	**50.3**	0.07	0.02	
12/20/06 9:58:30	0.1	0.1	0.5	**50.3**	0.07	0.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 9:58:45	0.1	0.1	0.4	50.2	0.07	0.02	
12/20/06 9:59:00	0.1	0.1	0.3	50.3	0.07	0.02	
12/20/06 9:59:15	0.1	0.1	0.3	28.7	0.07	0.02	
12/20/06 9:59:30	0.1	0.1	0.2	25.3	0.07	0.03	Calibration
12/20/06 9:59:45	0.1	0.1	0.1	25.3	0.07	0.02	25.2 25.0 ppm C_3H_8/N_2
12/20/06 10:00:00	0.1	0.1	0.0	25.2	0.07	0.02	
12/20/06 10:00:15	0.1	0.1	0.0	25.2	0.07	0.02	
12/20/06 10:00:30	0.1	0.1	0.0	25.1	0.07	0.03	
12/20/06 10:00:45	0.1	0.1	-0.1	16.7	0.07	0.02	
12/20/06 10:01:00	0.1	24.6	-0.1	5.7	0.07	0.02	
12/20/06 10:01:15	7.1	80.6	0.4	5.3	0.09	0.17	
12/20/06 10:01:30	11.7	146.7	9.6	5.2	0.95	2.45	
12/20/06 10:01:45	13.2	167.3	28.5	5.1	2.34	5.23	
12/20/06 10:02:00	13.4	172.5	44.9	5.1	3.08	6.56	
12/20/06 10:02:15	13.5	172.5	53.0	5.2	3.28	6.83	
12/20/06 10:02:30	13.5	174.4	55.9	5.1	3.31	6.81	
12/20/06 10:02:45	13.6	175.8	57.1	5.0	3.31	6.78	
12/20/06 10:03:00	13.6	176.4	57.8	4.8	3.29	6.80	
12/20/06 10:03:15	13.7	176.1	58.4	5.1	3.28	6.88	
12/20/06 10:03:30	13.8	176.4	59.1	4.8	3.27	6.95	
12/20/06 10:03:45	13.7	175.7	58.9	4.9	3.26	6.94	
12/20/06 10:04:00	13.9	176.2	58.5	4.9	3.24	6.89	
12/20/06 10:04:15	14.0	177.3	58.4	4.6	3.23	6.85	
12/20/06 10:04:30	14.0	175.9	58.2	4.8	3.22	6.85	
12/20/06 10:04:45	14.1	175.8	57.6	4.9	3.23	6.93	Begin Run No. 2-1
12/20/06 10:05:00	13.9	177.9	57.1	4.7	3.24	6.98	Point #1
12/20/06 10:05:15	14.0	179.2	57.0	4.6	3.25	6.98	
12/20/06 10:05:30	14.1	178.7	57.1	4.7	3.25	6.93	
12/20/06 10:05:45	14.0	178.1	56.9	4.6	3.24	6.88	
12/20/06 10:06:00	14.1	178.2	56.6	4.6	3.23	6.87	
12/20/06 10:06:15	14.1	178.3	56.4	4.6	3.22	6.90	
12/20/06 10:06:30	14.0	179.2	55.9	4.6	3.22	6.96	
12/20/06 10:06:45	14.0	180.2	55.8	4.6	3.21	7.00	
12/20/06 10:07:00	13.9	180.9	55.8	4.7	3.21	6.98	
12/20/06 10:07:15	13.9	181.3	55.8	4.7	3.21	6.93	
12/20/06 10:07:30	13.9	181.2	56.0	4.6	3.21	6.89	
12/20/06 10:07:45	13.9	181.8	56.0	4.7	3.21	6.87	
12/20/06 10:08:00	13.9	184.4	55.8	4.5	3.20	6.91	
12/20/06 10:08:15	14.5	183.8	56.0	4.6	3.20	6.97	
12/20/06 10:08:30	14.6	181.2	55.7	4.5	3.21	6.99	
12/20/06 10:08:45	14.2	179.7	53.7	4.4	3.24	6.96	
12/20/06 10:09:00	14.0	179.2	51.9	4.6	3.23	6.90	
12/20/06 10:09:15	13.9	178.4	51.5	4.5	3.22	6.86	
12/20/06 10:09:30	13.9	179.4	51.7	4.3	3.22	6.85	
12/20/06 10:09:45	13.9	180.7	51.8	4.2	3.22	6.90	
12/20/06 10:10:00	13.9	180.4	51.6	4.2	3.22	6.97	
12/20/06 10:10:15	13.9	178.4	51.4	4.3	3.22	7.01	
12/20/06 10:10:30	13.9	175.2	51.6	4.2	3.24	6.98	
12/20/06 10:10:45	13.8	173.7	51.8	4.3	3.25	6.92	
12/20/06 10:11:00	13.9	172.5	51.8	4.1	3.24	6.89	
12/20/06 10:11:15	13.9	172.8	52.1	4.0	3.24	6.89	
12/20/06 10:11:30	13.9	174.4	52.4	4.3	3.24	6.93	
12/20/06 10:11:45	13.9	176.8	52.5	4.1	3.24	6.99	
12/20/06 10:12:00	14.0	178.7	52.6	3.9	3.23	7.03	
12/20/06 10:12:15	14.0	176.9	53.1	4.0	3.21	7.00	
12/20/06 10:12:30	14.0	172.7	53.8	4.1	3.20	6.95	
12/20/06 10:12:45	14.1	173.8	54.1	4.0	3.20	6.90	
12/20/06 10:13:00	13.9	179.7	54.1	4.1	3.19	6.89	
12/20/06 10:13:15	14.0	184.1	54.2	4.0	3.18	6.92	
12/20/06 10:13:30	14.0	187.7	54.4	4.0	3.18	6.98	
12/20/06 10:13:45	14.0	189.7	54.5	4.0	3.19	7.02	
12/20/06 10:14:00	14.0	191.4	54.9	3.9	3.19	7.03	
12/20/06 10:14:15	14.0	191.9	55.4	4.1	3.16	7.00	
12/20/06 10:14:30	14.0	190.7	55.8	4.1	3.14	6.95	
12/20/06 10:14:45	14.1	191.2	55.9	4.1	3.13	6.92	
12/20/06 10:15:00	13.9	196.9	55.8	4.2	3.13	6.94	
12/20/06 10:15:15	13.9	198.9	55.8	4.3	3.13	6.99	
12/20/06 10:15:30	13.8	198.9	55.9	4.4	3.13	7.05	
12/20/06 10:15:45	13.8	197.9	56.4	4.6	3.14	7.04	
12/20/06 10:16:00	13.7	202.4	57.5	4.4	3.19	6.96	
12/20/06 10:16:15	13.6	206.3	57.5	4.6	3.22	6.88	
12/20/06 10:16:30	13.5	208.7	56.5	4.4	3.23	6.84	
12/20/06 10:16:45	13.6	210.0	55.6	4.5	3.24	6.89	
12/20/06 10:17:00	13.6	211.4	55.4	4.5	3.25	6.95	
12/20/06 10:17:15	13.6	211.0	55.4	4.5	3.26	6.98	
12/20/06 10:17:30	13.5	209.7	55.7	4.6	3.27	6.95	
12/20/06 10:17:45	13.5	208.9	55.6	4.5	3.27	6.87	
12/20/06 10:18:00	13.4	211.4	55.4	4.5	3.26	6.83	
12/20/06 10:18:15	13.4	213.9	55.9	4.4	3.25	6.84	
12/20/06 10:18:30	13.4	212.7	56.8	4.7	3.25	6.91	
12/20/06 10:18:45	13.5	209.9	56.2	4.6	3.26	6.98	
12/20/06 10:19:00	13.5	207.7	55.4	4.6	3.28	6.97	
12/20/06 10:19:15	13.4	206.3	55.4	4.5	3.30	6.90	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 10:19:30	13.4	205.2	56.3	4.6	3.28	6.86	
12/20/06 10:19:45	13.5	206.5	56.7	4.6	3.27	6.86	
12/20/06 10:20:00	13.4	207.7	56.9	4.5	3.28	6.91	
12/20/06 10:20:15	13.5	207.2	56.9	4.7	3.28	6.98	
12/20/06 10:20:30	13.4	206.2	56.5	4.6	3.28	6.99	
12/20/06 10:20:45	13.4	205.2	56.0	4.4	3.29	6.92	
12/20/06 10:21:00	13.3	204.2	55.4	4.5	3.29	6.86	
12/20/06 10:21:15	13.3	204.3	54.6	4.6	3.28	6.83	
12/20/06 10:21:30	13.4	205.7	54.4	4.6	3.27	6.87	
12/20/06 10:21:45	13.4	205.6	54.7	4.5	3.27	6.94	
12/20/06 10:22:00	13.5	204.2	55.3	4.6	3.28	6.98	
12/20/06 10:22:15	13.5	203.4	55.4	4.6	3.29	6.97	
12/20/06 10:22:30	13.5	203.2	55.0	4.6	3.31	6.92	
12/20/06 10:22:45	13.5	203.4	54.9	4.7	3.30	6.87	
12/20/06 10:23:00	13.5	204.2	55.0	4.6	3.26	6.85	
12/20/06 10:23:15	13.5	206.4	55.0	4.5	3.28	6.89	
12/20/06 10:23:30	13.5	207.9	54.9	4.5	3.26	6.96	
12/20/06 10:23:45	13.6	209.2	55.0	4.4	3.26	7.01	
12/20/06 10:24:00	13.8	208.4	55.2	4.5	3.26	7.00	
12/20/06 10:24:15	13.8	207.6	56.6	4.6	3.26	6.95	
12/20/06 10:24:30	13.7	208.7	56.3	4.7	3.26	6.91	
12/20/06 10:24:45	13.7	211.7	56.6	4.6	3.25	6.88	
12/20/06 10:25:00	13.6	214.4	56.6	4.5	3.25	6.89	Point #2
12/20/06 10:25:15	13.7	216.8	56.6	4.6	3.26	6.94	
12/20/06 10:25:30	13.6	217.9	56.6	4.6	3.27	7.00	
12/20/06 10:25:45	13.9	219.5	56.6	4.4	3.27	7.01	
12/20/06 10:26:00	13.7	220.4	57.2	4.4	3.26	6.97	
12/20/06 10:26:15	13.7	219.2	57.7	4.4	3.24	6.90	
12/20/06 10:26:30	13.8	220.9	57.3	4.4	3.22	6.87	
12/20/06 10:26:45	13.8	222.7	56.9	4.4	3.23	6.92	
12/20/06 10:27:00	13.9	221.9	56.8	4.4	3.24	7.01	
12/20/06 10:27:15	13.9	219.9	56.7	4.4	3.24	7.05	
12/20/06 10:27:30	13.9	216.4	56.5	4.3	3.24	7.00	
12/20/06 10:27:45	13.8	215.0	56.2	4.3	3.24	6.93	
12/20/06 10:28:00	13.9	215.9	56.0	4.2	3.23	6.69	
12/20/06 10:28:15	13.9	216.9	56.0	4.3	3.22	6.92	
12/20/06 10:28:30	14.0	215.9	56.1	4.3	3.23	6.97	
12/20/06 10:28:45	14.1	214.7	56.2	4.4	3.25	6.99	
12/20/06 10:29:00	14.0	214.7	56.0	4.3	3.25	6.97	
12/20/06 10:29:15	13.8	215.3	55.8	4.2	3.24	6.91	
12/20/06 10:29:30	13.9	214.4	55.6	4.1	3.23	6.87	
12/20/06 10:29:45	13.9	212.8	56.4	4.3	3.23	6.89	
12/20/06 10:30:00	14.1	212.7	55.7	4.4	3.23	6.97	
12/20/06 10:30:15	14.0	213.7	56.3	4.3	3.25	7.01	
12/20/06 10:30:30	13.9	213.4	56.7	4.3	3.27	6.98	
12/20/06 10:30:45	13.8	212.5	56.7	4.4	3.27	6.90	
12/20/06 10:31:00	13.8	212.7	56.4	4.4	3.27	6.88	
12/20/06 10:31:15	13.8	211.7	56.4	4.2	3.26	6.92	
12/20/06 10:31:30	13.9	210.9	56.4	4.2	3.28	6.99	
12/20/08 10:31:45	13.8	210.9	56.6	4.2	3.27	7.01	
12/20/06 10:32:00	13.8	208.4	57.0	4.1	3.27	6.97	
12/20/06 10:32:15	13.8	206.7	67.0	4.1	3.27	6.92	
12/20/06 10:32:30	13.8	208.7	56.7	4.2	3.26	6.90	
12/20/06 10:32:45	13.8	210.9	56.3	4.2	3.26	6.94	
12/20/06 10:33:00	13.7	213.4	56.1	4.3	3.25	7.00	
12/20/06 10:33:15	13.6	212.7	56.3	4.3	3.26	7.02	
12/20/06 10:33:30	13.6	209.4	56.5	4.3	3.26	6.98	
12/20/06 10:33:45	13.6	208.9	56.6	4.4	3.26	6.92	
12/20/06 10:34:00	13.6	211.4	56.7	4.4	3.26	6.89	
12/20/06 10:34:15	13.4	213.9	56.5	4.2	3.26	6.91	
12/20/06 10:34:30	13.4	215.9	56.3	4.5	3.24	6.97	
12/20/06 10:34:45	13.5	217.5	56.4	4.2	3.24	7.01	
12/20/06 10:35:00	13.5	215.4	56.5	4.4	3.24	7.01	
12/20/06 10:35:15	13.5	212.0	56.8	4.3	3.25	6.97	
12/20/06 10:35:30	13.4	210.2	57.1	4.3	3.25	6.92	
12/20/06 10:35:45	13.3	211.2	57.4	4.4	3.25	6.89	
12/20/06 10:36:00	13.3	213.7	57.1	4.3	3.25	6.92	
12/20/06 10:36:15	13.3	213.9	56.9	4.4	3.25	6.97	
12/20/06 10:36:30	13.3	213.7	56.8	4.4	3.26	7.03	
12/20/06 10:36:45	13.2	213.9	56.6	4.5	3.26	7.04	
12/20/06 10:37:00	13.3	215.2	56.8	4.6	3.26	6.99	
12/20/06 10:37:15	13.2	214.5	57.1	4.5	3.26	6.91	
12/20/06 10:37:30	13.2	214.4	57.0	4.4	3.24	6.86	
12/20/06 10:37:45	13.2	216.0	56.9	4.4	3.24	6.91	
12/20/06 10:38:00	13.2	217.9	56.8	4.5	3.25	6.96	
12/20/06 10:38:15	13.2	217.5	56.5	4.4	3.27	7.01	
12/20/06 10:38:30	13.2	213.7	56.4	4.3	3.28	7.01	
12/20/06 10:38:45	13.1	208.9	56.5	4.4	3.28	6.98	
12/20/06 10:39:00	13.1	204.7	56.5	4.3	3.27	6.92	
12/20/06 10:39:15	13.0	204.4	56.2	4.5	3.29	6.88	
12/20/06 10:39:30	13.1	207.2	55.6	4.3	3.28	6.90	
12/20/06 10:39:45	13.1	208.3	55.3	4.4	3.27	6.96	
12/20/06 10:40:00	13.1	208.2	55.1	4.4	3.28	7.00	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 10:40:15	13.1	206.1	55.5	4.5	3.28	7.01	
12/20/06 10:40:30	13.1	202.9	57.2	4.5	3.28	6.98	
12/20/06 10:40:45	13.1	202.5	58.4	4.4	3.28	6.92	
12/20/06 10:41:00	13.1	204.2	58.4	4.4	3.28	6.88	
12/20/06 10:41:15	13.1	206.2	57.8	4.4	3.27	6.90	
12/20/06 10:41:30	13.1	208.2	57.1	4.4	3.25	6.96	
12/20/06 10:41:45	13.0	208.4	56.7	4.5	3.24	7.03	
12/20/06 10:42:00	13.0	207.2	56.6	4.4	3.25	7.05	
12/20/06 10:42:15	13.1	204.2	56.5	4.4	3.25	7.02	
12/20/06 10:42:30	13.2	202.9	56.3	4.4	3.26	6.95	
12/20/06 10:42:45	13.1	203.6	56.1	4.4	3.26	6.90	
12/20/06 10:43:00	13.2	204.9	55.9	4.2	3.25	6.93	
12/20/06 10:43:15	13.2	204.9	55.9	4.5	3.25	7.02	
12/20/06 10:43:30	13.2	202.9	56.1	4.5	3.25	7.07	
12/20/06 10:43:45	13.1	202.5	56.3	4.5	3.24	7.03	
12/20/06 10:44:00	13.2	203.4	56.1	4.4	3.23	6.96	
12/20/06 10:44:15	13.2	204.6	55.7	4.3	3.23	6.92	
12/20/06 10:44:30	13.2	205.7	55.4	4.4	3.23	6.95	
12/20/06 10:44:45	13.2	205.4	55.4	4.2	3.24	7.02	
12/20/06 10:45:00	13.2	205.2	55.5	4.5	3.25	7.05	Point #3
12/20/06 10:45:15	13.2	206.8	55.7	4.4	3.25	7.01	
12/20/06 10:45:30	13.2	208.7	55.6	4.9	3.24	6.95	
12/20/06 10:45:45	13.2	212.9	55.6	4.8	3.23	6.93	
12/20/06 10:46:00	13.3	217.2	55.7	4.7	3.22	6.98	
12/20/06 10:46:15	13.5	217.3	55.7	4.7	3.19	7.04	
12/20/06 10:46:30	13.6	216.4	55.1	4.9	3.16	7.08	
12/20/06 10:46:45	13.5	216.9	54.1	4.6	3.15	7.05	
12/20/06 10:47:00	13.6	218.2	53.7	4.9	3.14	6.99	
12/20/06 10:47:15	13.6	221.3	54.0	4.7	3.14	6.95	
12/20/06 10:47:30	13.6	223.4	54.0	4.6	3.14	6.97	
12/20/06 10:47:45	13.6	222.2	53.4	4.7	3.13	7.02	
12/20/06 10:48:00	13.7	220.4	52.9	4.9	3.14	7.09	
12/20/06 10:48:15	13.7	221.9	52.5	4.7	3.14	7.09	
12/20/06 10:48:30	13.8	223.4	52.1	4.8	3.15	7.03	
12/20/06 10:48:45	13.8	223.2	51.6	4.8	3.13	6.98	
12/20/06 10:49:00	14.0	224.2	51.1	4.7	3.12	6.96	
12/20/06 10:49:15	13.9	225.5	50.9	4.6	3.12	7.00	
12/20/06 10:49:30	13.9	224.7	50.9	4.8	3.13	7.08	
12/20/06 10:49:45	13.9	224.4	50.9	4.7	3.14	7.10	
12/20/06 10:50:00	13.8	224.7	50.8	4.6	3.13	7.05	
12/20/06 10:50:15	13.9	223.3	50.5	4.5	3.12	6.98	
12/20/06 10:50:30	14.0	222.7	50.8	4.6	3.12	6.98	
12/20/06 10:50:45	14.0	222.2	51.2	4.6	3.13	7.03	
12/20/06 10:51:00	14.0	222.4	51.4	4.7	3.14	7.09	
12/20/06 10:51:15	13.9	224.3	51.6	4.5	3.15	7.07	
12/20/06 10:51:30	13.9	225.2	51.4	4.3	3.15	7.01	
12/20/06 10:51:45	13.8	223.3	51.3	4.4	3.13	6.97	
12/20/06 10:52:00	14.0	221.9	51.7	4.4	3.12	7.00	
12/20/06 10:52:15	14.1	222.7	52.5	4.7	3.13	7.07	
12/20/06 10:52:30	14.0	225.7	53.2	4.6	3.13	7.10	
12/20/06 10:52:45	13.9	227.9	53.2	4.6	3.14	7.06	
12/20/06 10:53:00	13.9	226.2	53.0	4.3	3.13	6.99	
12/20/06 10:53:15	14.0	223.4	53.2	4.4	3.13	6.97	
12/20/06 10:53:30	14.0	223.7	53.5	4.3	3.14	7.02	
12/20/06 10:53:45	13.9	224.4	53.7	4.4	3.16	7.07	
12/20/06 10:54:00	13.8	223.9	53.7	4.4	3.16	7.07	
12/20/06 10:54:15	13.8	221.5	53.5	4.3	3.14	7.01	
12/20/06 10:54:30	13.9	219.9	53.3	4.2	3.13	6.98	
12/20/06 10:54:45	13.9	219.4	53.5	4.4	3.13	7.01	
12/20/06 10:55:00	13.8	219.2	53.9	4.4	3.14	7.07	
12/20/06 10:55:15	13.7	218.7	54.3	4.6	3.14	7.06	
12/20/06 10:55:30	13.7	218.4	54.4	4.4	3.14	7.01	
12/20/06 10:55:45	13.7	218.8	54.2	4.3	3.14	6.96	
12/20/06 10:56:00	13.6	218.9	54.2	4.4	3.14	6.98	
12/20/06 10:56:15	13.6	221.3	54.4	4.4	3.15	7.04	
12/20/06 10:56:30	13.6	224.7	54.5	4.2	3.15	7.09	
12/20/06 10:56:45	13.5	223.9	54.7	4.3	3.13	7.07	
12/20/06 10:57:00	13.6	222.7	54.7	4.3	3.12	7.01	
12/20/06 10:57:15	13.6	222.7	54.6	4.3	3.13	6.98	
12/20/06 10:57:30	13.6	222.9	54.7	4.4	3.13	7.01	
12/20/06 10:57:45	13.5	227.0	54.8	4.4	3.13	7.07	
12/20/06 10:58:00	13.4	229.7	54.9	4.3	3.13	7.12	
12/20/06 10:58:15	13.4	229.7	55.3	4.3	3.11	7.11	
12/20/06 10:58:30	13.3	230.9	55.6	4.4	3.11	7.06	
12/20/06 10:58:45	13.3	235.0	55.7	4.2	3.11	7.02	
12/20/06 10:59:00	13.3	237.4	56.0	4.1	3.09	7.05	
12/20/06 10:59:15	13.3	236.2	56.1	4.2	3.09	7.10	
12/20/06 10:59:30	13.3	234.4	56.5	4.3	3.09	7.13	
12/20/06 10:59:45	13.2	234.2	57.1	4.4	3.08	7.11	
12/20/06 11:00:00	13.1	236.9	57.4	4.5	3.08	7.05	
12/20/06 11:00:15	13.1	243.3	57.6	4.4	3.08	7.02	
12/20/06 11:00:30	13.1	246.9	57.7	4.5	3.07	7.04	
12/20/06 11:00:45	13.1	246.4	58.1	4.6	3.06	7.09	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 11:01:00	13.1	244.4	58.3	4.5	3.05	7.15	
12/20/06 11:01:15	13.1	242.3	58.3	4.5	3.07	7.15	
12/20/06 11:01:30	13.1	241.4	58.1	4.7	3.09	7.10	
12/20/06 11:01:45	13.1	243.8	58.0	4.6	3.09	7.05	
12/20/06 11:02:00	13.1	244.7	57.8	4.7	3.09	7.02	
12/20/06 11:02:15	13.0	244.5	57.8	4.7	3.08	7.04	
12/20/06 11:02:30	13.0	245.7	57.7	4.5	3.08	7.10	
12/20/06 11:02:45	12.9	244.0	58.0	4.5	3.07	7.16	
12/20/06 11:03:00	13.1	240.4	58.6	4.8	3.08	7.15	
12/20/06 11:03:15	13.1	239.4	58.6	4.7	3.10	7.08	
12/20/06 11:03:30	13.1	239.9	58.2	4.7	3.09	7.02	
12/20/06 11:03:45	13.0	241.8	57.9	4.7	3.08	7.02	
12/20/06 11:04:00	12.9	242.6	57.9	4.6	3.08	7.05	
12/20/06 11:04:15	13.0	240.5	58.1	5.0	3.08	7.13	
12/20/06 11:04:30	13.0	240.2	58.1	4.6	3.10	7.15	
12/20/06 11:04:45	12.9	238.3	58.3	4.7	3.12	7.10	
12/20/06 11:05:00	13.0	235.2	58.3	11.9	3.12	7.04	End Run No. 2-1
12/20/06 11:05:15	13.0	211.5	58.2	45.2	3.10	7.03	
12/20/06 11:05:30	9.9	133.2	58.0	35.3	3.09	7.04	
12/20/06 11:05:45	5.9	53.5	53.8	50.0	2.86	5.38	
12/20/06 11:06:00	3.0	11.1	38.8	50.7	1.60	2.12	
12/20/06 11:06:15	1.2	1.8	22.2	51.0	0.48	0.47	
12/20/06 11:06:30	0.6	0.6	12.3	51.0	0.16	0.15	
12/20/06 11:06:45	0.4	0.6	7.7	51.2	0.11	0.09	Calibration
12/20/06 11:07:00	0.3	0.6	6.4	50.9	0.09	0.07	50.6 50.0 ppm C_3H_8/N_2
12/20/06 11:07:15	0.2	0.5	5.9	50.4	0.09	0.05	
12/20/06 11:07:30	0.2	0.1	4.7	50.5	0.09	0.05	
12/20/06 11:07:45	0.2	0.1	3.3	50.4	0.08	0.04	
12/20/06 11:08:00	0.2	0.1	2.2	50.9	0.08	0.04	
12/20/06 11:08:15	0.2	2.0	1.2	26.0	0.08	0.04	
12/20/06 11:08:30	0.1	31.8	0.8	38.4	0.08	0.04	
12/20/06 11:08:45	2.0	84.0	0.5	34.8	0.12	0.28	
12/20/06 11:09:00	7.2	74.8	4.2	3.3	0.96	2.55	
12/20/06 11:09:15	4.7	33.2	12.1	1.7	1.46	3.03	
12/20/06 11:09:30	2.3	7.3	12.9	1.3	1.43	1.10	
12/20/06 11:09:45	1.2	1.6	8.1	1.2	3.28	0.23	
12/20/06 11:10:00	0.6	0.6	4.3	1.0	4.29	0.08	
12/20/06 11:10:15	0.4	0.2	2.2	0.9	4.51	0.05	
12/20/06 11:10:30	0.3	0.1	1.1	0.9	4.54	0.04	
12/20/06 11:10:45	0.3	0.3	0.4	0.8	4.55	0.04	
12/20/06 11:11:00	0.2	0.1	0.1	0.8	4.56	0.04	
12/20/06 11:11:15	0.2	0.3	-0.1	0.8	4.57	0.04	
12/20/06 11:11:30	0.2	0.1	-0.2	0.8	4.58	0.04	
12/20/06 11:11:45	0.2	0.1	-0.4	0.7	4.59	0.04	
12/20/06 11:12:00	0.1	0.1	-0.6	0.7	4.61	0.03	System Bias
12/20/06 11:12:15	0.1	0.1	-0.6	0.6	4.62	0.03	4.62 4.50% O_2
12/20/06 11:12:30	0.1	0.1	-0.6	2.0	4.62	0.03	
12/20/06 11:12:45	0.1	18.9	-0.6	2.4	4.63	0.03	
12/20/06 11:13:00	0.1	54.5	-0.7	0.6	4.62	0.10	
12/20/06 11:13:15	0.8	42.6	1.3	0.6	4.38	1.45	
12/20/06 11:13:30	0.7	14.8	6.1	0.6	3.86	2.42	
12/20/06 11:13:45	0.2	2.2	6.3	0.5	1.90	3.40	
12/20/06 11:14:00	0.1	-0.7	3.5	0.5	0.50	4.11	
12/20/06 11:14:15	0.1	-0.9	1.6	0.5	0.16	4.26	
12/20/06 11:14:30	0.1	-0.9	0.5	0.5	0.10	4.26	
12/20/06 11:14:45	0.1	-0.9	0.0	0.5	0.08	4.31	
12/20/06 11:15:00	0.1	-0.9	-0.4	0.5	0.07	4.41	
12/20/06 11:15:15	0.1	-0.9	-0.5	0.5	0.07	4.50	
12/20/06 11:15:30	0.1	-0.9	-0.7	0.5	0.06	4.54	
12/20/06 11:15:45	0.1	-0.9	-0.7	0.5	0.06	4.57	
12/20/06 11:16:00	0.1	-0.9	-0.7	0.4	0.06	4.58	
12/20/06 11:16:15	0.1	-0.9	-0.9	0.4	0.06	4.58	
12/20/06 11:16:30	0.1	-0.9	-0.8	0.4	0.06	4.58	System Bias
12/20/06 11:16:45	0.1	-1.0	-0.8	0.4	0.06	4.59	4.59 4.50% CO_2
12/20/06 11:17:00	0.1	-1.2	-0.9	0.4	0.06	4.59	
12/20/06 11:17:15	0.1	-0.9	-1.0	0.4	0.06	4.59	
12/20/06 11:17:30	0.1	-0.9	-0.9	2.6	0.06	4.58	
12/20/06 11:17:45	0.5	27.9	-1.0	4.7	0.06	4.59	
12/20/06 11:18:00	1.4	74.5	-0.9	1.1	0.08	4.66	
12/20/06 11:18:15	1.4	119.2	3.2	0.5	0.79	5.41	
12/20/06 11:18:30	0.9	170.9	10.4	0.4	1.17	4.60	
12/20/06 11:18:45	0.3	204.7	9.5	0.3	0.51	1.80	
12/20/06 11:19:00	0.2	216.7	4.6	0.4	0.17	0.41	
12/20/06 11:19:15	0.1	218.3	1.8	0.3	0.09	0.14	
12/20/06 11:19:30	0.1	218.7	0.7	0.4	0.08	0.09	
12/20/06 11:19:45	0.1	218.9	0.0	0.3	0.07	0.06	
12/20/06 11:20:00	0.1	218.9	-0.3	0.4	0.07	0.05	
12/20/06 11:20:15	0.1	219.3	-0.4	0.3	0.07	0.04	System Bias
12/20/06 11:20:30	0.1	219.4	-0.5	0.3	0.07	0.04	219.4 225.0 ppm CO
12/20/06 11:20:45	0.1	219.4	-0.7	0.3	0.07	0.04	
12/20/06 11:21:00	0.1	219.4	-0.8	0.3	0.07	0.04	
12/20/06 11:21:15	0.1	219.4	-0.9	2.2	0.07	0.04	
12/20/06 11:21:30	0.0	218.9	-0.8	1.8	0.07	0.03	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 11:21:45	1.0	201.1	-0.7	18.7	0.09	0.17	
12/20/06 11:22:00	3.8	134.7	2.7	1.3	0.71	1.74	
12/20/06 11:22:15	1.5	65.8	8.4	0.5	0.98	1.85	
12/20/06 11:22:30	7.3	25.1	7.5	0.4	0.39	0.54	
12/20/06 11:22:45	17.6	10.1	3.4	0.3	0.17	0.13	
12/20/06 11:23:00	25.9	3.6	1.3	0.3	0.12	0.06	
12/20/06 11:23:15	27.0	1.8	0.7	0.2	0.09	0.04	
12/20/06 11:23:30	28.6	1.6	0.2	0.2	0.08	0.04	
12/20/06 11:23:45	31.5	1.6	-0.1	0.2	0.08	0.04	
12/20/06 11:24:00	34.3	1.6	-0.1	0.2	0.08	0.03	
12/20/06 11:24:15	36.8	1.2	-0.1	0.1	0.07	0.03	
12/20/06 11:24:30	38.9	0.8	-0.2	0.1	0.07	0.03	
12/20/06 11:24:45	40.7	0.6	-0.4	0.1	0.07	0.03	
12/20/06 11:25:00	42.0	0.6	-0.3	0.1	0.07	0.03	
12/20/06 11:25:15	42.9	0.6	-0.2	0.1	0.07	0.03	
12/20/06 11:25:30	44.2	0.6	-0.3	0.1	0.07	0.03	
12/20/06 11:25:45	46.2	0.3	-0.4	0.1	0.07	0.03	
12/20/06 11:26:00	48.5	0.3	-0.4	0.1	0.07	0.03	
12/20/06 11:26:15	49.5	0.3	-0.6	0.1	0.07	0.03	
12/20/06 11:26:30	49.0	0.1	-0.7	0.1	0.07	0.03	
12/20/06 11:26:45	47.8	0.4	-0.8	0.1	0.07	0.03	
12/20/06 11:27:00	47.0	0.1	-0.9	0.1	0.07	0.03	
12/20/06 11:27:15	46.4	0.1	-1.0	0.5	0.06	0.02	
12/20/06 11:27:30	46.1	6.1	-0.9	1.0	0.07	0.02	
12/20/06 11:27:45	43.1	24.5	-0.9	0.1	0.07	0.03	
12/20/06 11:28:00	38.6	21.6	0.0	0.0	0.26	0.62	
12/20/06 11:28:15	43.0	7.1	2.4	0.1	0.51	0.91	
12/20/06 11:28:30	44.8	1.3	2.4	0.1	0.22	0.32	
12/20/06 11:28:45	44.2	0.1	1.1	0.1	0.09	0.07	
12/20/06 11:29:00	44.4	0.1	0.0	0.1	0.07	0.03	
12/20/06 11:29:15	44.4	0.1	-0.4	0.1	0.07	0.03	System Bias
12/20/06 11:29:30	**44.4**	0.1	-0.6	0.0	0.06	0.02	**44.3 45.0 ppm NO**
12/20/06 11:29:45	**44.3**	0.1	-0.6	0.0	0.06	0.02	
12/20/06 11:30:00	**44.2**	0.1	-0.8	0.0	0.06	0.02	
12/20/06 11:30:15	**44.1**	0.1	-0.8	0.1	0.06	0.02	
12/20/06 11:30:30	44.6	0.1	-0.8	0.0	0.06	0.02	
12/20/06 11:30:45	36.1	0.1	-0.9	0.0	0.06	0.02	
12/20/06 11:31:00	8.6	0.1	-0.9	0.0	0.06	0.02	
12/20/06 11:31:15	1.8	0.1	-1.0	0.0	0.06	0.02	
12/20/06 11:31:30	1.0	0.1	-1.0	0.0	0.06	0.02	
12/20/06 11:31:45	0.7	0.1	-1.1	0.0	0.06	0.03	
12/20/06 11:32:00	0.7	0.1	-1.1	0.0	0.06	0.02	
12/20/06 11:32:15	0.6	0.1	-1.0	0.0	0.06	0.02	
12/20/06 11:32:30	0.5	0.1	-1.0	0.0	0.06	0.03	
12/20/06 11:32:45	0.5	0.1	-0.9	0.0	0.06	0.03	
12/20/06 11:33:00	0.5	0.1	-1.0	0.0	0.06	0.03	
12/20/06 11:33:15	0.4	0.1	-1.0	0.0	0.06	0.03	System Bias
12/20/06 11:33:30	**0.4**	**0.1**	**-1.0**	**0.0**	**0.06**	**0.03**	**0.4 Zero NO_x**
12/20/06 11:33:45	**0.4**	**0.1**	**-1.0**	**0.0**	**0.06**	**0.03**	**0.1 Zero CO**
12/20/06 11:34:00	**0.4**	**0.1**	**-1.1**	**0.0**	**0.06**	**0.03**	**-1.1 Zero SO_2**
12/20/06 11:34:15	**0.4**	**0.1**	**-1.1**	**0.0**	**0.06**	**0.03**	**0.0 Zero C_3H_8/N_2**
12/20/06 11:34:30	0.4	0.1	-1.0	2.2	0.06	0.03	**0.06 Zero O_2**
12/20/06 11:34:45	0.9	27.7	-1.0	0.5	0.06	0.03	**0.03 Zero CO_2**
12/20/06 11:35:00	14.0	41.8	-0.6	13.8	0.11	0.29	
12/20/06 11:35:15	71.2	22.7	3.3	23.3	0.69	1.61	
12/20/06 11:35:30	47.3	7.1	9.0	2.0	0.63	1.09	
12/20/06 11:35:45	11.8	0.8	31.1	0.4	0.21	0.27	
12/20/06 11:36:00	6.4	0.1	69.5	0.3	0.10	0.08	
12/20/06 11:36:15	4.9	0.1	97.4	0.3	0.08	0.04	
12/20/06 11:36:30	3.9	0.1	111.8	0.3	0.07	0.03	
12/20/06 11:36:45	3.4	0.1	118.3	0.3	0.06	0.03	
12/20/06 11:37:00	3.0	0.1	121.0	0.2	0.06	0.03	
12/20/06 11:37:15	2.8	0.1	122.6	0.3	0.06	0.03	
12/20/06 11:37:30	2.5	0.1	123.6	0.2	0.06	0.02	
12/20/06 11:37:45	2.3	0.1	124.5	0.2	0.06	0.03	
12/20/06 11:38:00	2.1	0.1	125.1	0.2	0.06	0.03	
12/20/06 11:38:15	2.0	0.1	125.7	0.2	0.06	0.03	
12/20/06 11:38:30	1.9	0.1	126.3	0.2	0.06	0.03	
12/20/06 11:38:45	1.9	0.1	126.6	0.2	0.06	0.02	
12/20/06 11:39:00	1.7	0.1	127.0	0.1	0.06	0.02	
12/20/06 11:39:15	1.7	0.1	127.3	0.1	0.06	0.02	
12/20/06 11:39:30	1.6	0.1	127.8	0.1	0.06	0.02	
12/20/06 11:39:45	1.6	0.1	127.9	0.1	0.06	0.02	
12/20/06 11:40:00	1.5	0.1	128.3	0.1	0.06	0.02	
12/20/06 11:40:15	1.4	0.1	128.5	0.1	0.06	0.02	
12/20/06 11:40:30	1.4	0.1	128.9	0.1	0.06	0.02	
12/20/06 11:40:45	1.3	0.1	129.1	0.1	0.06	0.02	
12/20/06 11:41:00	1.3	0.1	129.3	0.1	0.06	0.02	
12/20/06 11:41:15	1.3	0.1	129.4	0.1	0.06	0.02	
12/20/06 11:41:30	1.2	0.1	129.5	0.1	0.06	0.02	
12/20/06 11:41:45	1.2	0.1	129.6	0.1	0.06	0.02	
12/20/06 11:42:00	1.1	0.1	129.7	0.1	0.06	0.02	
12/20/06 11:42:15	1.1	0.1	129.6	0.1	0.06	0.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 11:42:30	1.1	0.1	129.8	0.1	0.06	0.02	
12/20/06 11:42:45	1.1	0.5	129.8	0.1	0.06	0.02	System Bias
12/20/06 11:43:00	1.0	0.1	**129.9**	0.1	0.06	0.02	**130.0 135.0 ppm SO_2**
12/20/06 11:43:15	1.0	0.1	**129.9**	0.1	0.06	0.02	
12/20/06 11:43:30	1.0	0.1	**130.0**	2.0	0.06	0.02	
12/20/06 11:43:45	1.0	24.9	**130.2**	5.0	0.06	0.03	
12/20/06 11:44:00	2.3	95.8	129.6	4.9	0.08	0.16	
12/20/06 11:44:15	10.0	181.1	120.1	4.9	0.86	2.42	
12/20/06 11:44:30	13.6	209.2	100.5	4.9	2.17	5.28	
12/20/06 11:44:45	13.9	221.7	82.4	4.9	2.89	6.68	
12/20/06 11:45:00	14.1	224.4	72.7	5.0	3.09	7.02	
12/20/06 11:45:15	14.1	223.9	68.9	5.0	3.13	7.06	
12/20/06 11:45:30	14.1	223.7	67.1	5.0	3.13	7.02	
12/20/06 11:45:45	14.2	224.8	65.8	4.9	3.13	6.97	
12/20/06 11:46:00	14.4	226.4	64.8	4.8	3.12	6.96	
12/20/06 11:46:15	14.5	226.4	64.0	5.0	3.14	7.04	
12/20/06 11:46:30	14.7	227.4	62.9	5.0	3.14	7.09	
12/20/06 11:46:45	14.7	228.9	61.9	4.9	3.14	7.07	Begin Run No. 2-2
12/20/06 11:47:00	**14.4**	**228.2**	**61.8**	**4.8**	**3.14**	**7.01**	**Point #1**
12/20/06 11:47:15	**14.6**	**225.5**	**61.4**	**4.6**	**3.12**	**6.98**	
12/20/06 11:47:30	**14.7**	**223.9**	**60.4**	**4.9**	**3.12**	**7.00**	
12/20/06 11:47:45	**14.7**	**222.4**	**59.9**	**4.7**	**3.13**	**7.06**	
12/20/06 11:48:00	**14.7**	**220.2**	**59.5**	**5.0**	**3.15**	**7.10**	
12/20/06 11:48:15	**14.6**	**220.9**	**59.2**	**4.9**	**3.16**	**7.08**	
12/20/06 11:48:30	**14.6**	**222.7**	**59.0**	**5.0**	**3.16**	**7.02**	
12/20/06 11:48:45	**14.6**	**224.2**	**58.6**	**5.0**	**3.16**	**6.97**	
12/20/06 11:49:00	**14.4**	**225.4**	**58.6**	**5.1**	**3.17**	**6.98**	
12/20/06 11:49:15	**14.5**	**228.3**	**58.3**	**4.9**	**3.18**	**7.04**	
12/20/06 11:49:30	**14.4**	**228.9**	**58.3**	**4.9**	**3.20**	**7.09**	
12/20/06 11:49:45	**14.3**	**226.2**	**58.2**	**4.8**	**3.20**	**7.06**	
12/20/06 11:50:00	**14.4**	**224.7**	**58.0**	**4.8**	**3.19**	**7.01**	
12/20/06 11:50:15	**14.4**	**222.2**	**57.8**	**4.9**	**3.18**	**6.98**	
12/20/06 11:50:30	**14.5**	**221.2**	**57.8**	**5.0**	**3.18**	**7.00**	
12/20/06 11:50:45	**14.5**	**222.8**	**57.8**	**5.0**	**3.20**	**7.08**	
12/20/06 11:51:00	**14.4**	**224.2**	**57.8**	**5.0**	**3.21**	**7.08**	
12/20/06 11:51:15	**14.3**	**224.3**	**57.5**	**4.7**	**3.20**	**7.04**	
12/20/06 11:51:30	**14.3**	**223.2**	**57.4**	**4.7**	**3.20**	**6.99**	
12/20/06 11:51:45	**14.3**	**222.5**	**57.6**	**4.7**	**3.22**	**7.03**	
12/20/06 11:52:00	**14.3**	**224.4**	**58.2**	**5.0**	**3.22**	**7.10**	
12/20/06 11:52:15	**14.1**	**228.5**	**58.5**	**4.6**	**3.20**	**7.10**	
12/20/06 11:52:30	**14.2**	**228.2**	**58.2**	**4.6**	**3.19**	**7.02**	
12/20/06 11:52:45	**14.2**	**224.0**	**57.6**	**4.6**	**3.18**	**6.99**	
12/20/06 11:53:00	**14.2**	**220.9**	**57.6**	**4.6**	**3.19**	**7.05**	
12/20/06 11:53:15	**14.2**	**221.4**	**57.8**	**4.8**	**3.20**	**7.11**	
12/20/06 11:53:30	**14.2**	**221.4**	**58.7**	**5.0**	**3.21**	**7.10**	
12/20/06 11:53:45	**14.1**	**222.3**	**60.2**	**4.8**	**3.20**	**7.03**	
12/20/06 11:54:00	**14.2**	**222.2**	**60.8**	**4.8**	**3.20**	**6.99**	
12/20/06 11:54:15	**14.2**	**222.7**	**60.6**	**4.8**	**3.20**	**7.03**	
12/20/06 11:54:30	**14.2**	**223.9**	**60.1**	**4.8**	**3.21**	**7.11**	
12/20/06 11:54:45	**14.2**	**223.9**	**59.7**	**4.8**	**3.23**	**7.12**	
12/20/06 11:55:00	**14.1**	**223.4**	**59.3**	**4.8**	**3.22**	**7.07**	
12/20/06 11:55:15	**14.1**	**222.4**	**59.0**	**4.9**	**3.21**	**7.01**	
12/20/06 11:55:30	**14.1**	**222.4**	**58.7**	**4.8**	**3.21**	**7.00**	
12/20/06 11:55:45	**14.1**	**222.3**	**58.5**	**4.8**	**3.21**	**7.07**	
12/20/06 11:56:00	**14.1**	**219.9**	**58.4**	**4.9**	**3.21**	**7.12**	
12/20/06 11:56:15	**14.1**	**220.7**	**58.3**	**4.9**	**3.22**	**7.11**	
12/20/06 11:56:30	**14.1**	**221.7**	**58.1**	**4.8**	**3.22**	**7.04**	
12/20/06 11:56:45	**14.0**	**221.2**	**57.7**	**4.7**	**3.21**	**7.00**	
12/20/06 11:57:00	**14.1**	**219.9**	**57.4**	**4.7**	**3.21**	**7.02**	
12/20/06 11:57:15	**14.1**	**217.2**	**57.2**	**4.7**	**3.22**	**7.08**	
12/20/06 11:57:30	**14.2**	**216.4**	**57.1**	**4.9**	**3.23**	**7.11**	
12/20/06 11:57:45	**14.2**	**215.9**	**57.2**	**4.8**	**3.24**	**7.07**	
12/20/06 11:58:00	**14.4**	**216.2**	**61.5**	**4.9**	**3.24**	**7.01**	
12/20/06 11:58:15	**14.2**	**217.0**	**67.9**	**4.9**	**3.24**	**6.98**	
12/20/06 11:58:30	**14.1**	**217.4**	**65.7**	**4.8**	**3.24**	**7.01**	
12/20/06 11:58:45	**14.0**	**217.7**	**61.1**	**4.8**	**3.25**	**7.07**	
12/20/06 11:59:00	**14.0**	**215.4**	**58.9**	**4.7**	**3.24**	**7.10**	
12/20/06 11:59:15	**14.1**	**210.4**	**58.2**	**4.8**	**3.24**	**7.09**	
12/20/06 11:59:30	**14.2**	**208.9**	**57.7**	**4.9**	**3.25**	**7.03**	
12/20/06 11:59:45	**14.2**	**209.3**	**57.1**	**4.8**	**3.26**	**6.96**	
12/20/06 12:00:00	**14.2**	**211.2**	**56.6**	**4.9**	**3.26**	**6.95**	
12/20/06 12:00:15	**14.0**	**214.7**	**56.2**	**4.8**	**3.26**	**7.00**	
12/20/06 12:00:30	**14.1**	**215.2**	**56.0**	**4.7**	**3.25**	**7.06**	
12/20/06 12:00:45	**14.1**	**213.3**	**56.4**	**4.9**	**3.25**	**7.09**	
12/20/06 12:01:00	**14.0**	**213.4**	**56.7**	**4.8**	**3.27**	**7.06**	
12/20/06 12:01:15	**13.8**	**213.9**	**57.2**	**4.9**	**3.26**	**7.00**	
12/20/06 12:01:30	**13.9**	**213.7**	**62.0**	**5.0**	**3.25**	**6.96**	
12/20/06 12:01:45	**14.1**	**215.2**	**65.7**	**4.9**	**3.23**	**6.97**	
12/20/06 12:02:00	**14.1**	**216.4**	**63.3**	**5.0**	**3.24**	**7.04**	
12/20/06 12:02:15	**14.0**	**217.0**	**60.7**	**5.0**	**3.26**	**7.09**	
12/20/06 12:02:30	**14.0**	**217.2**	**59.5**	**4.9**	**3.26**	**7.10**	
12/20/06 12:02:45	**13.9**	**216.3**	**58.8**	**4.8**	**3.25**	**7.04**	
12/20/06 12:03:00	**14.0**	**215.7**	**58.2**	**4.8**	**3.24**	**6.98**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 12:03:15	14.1	215.9	58.3	4.8	3.24	6.97	
12/20/06 12:03:30	14.3	215.9	59.5	4.9	3.25	7.04	
12/20/06 12:03:45	14.4	216.7	60.1	4.8	3.25	7.11	
12/20/06 12:04:00	14.3	217.9	60.0	4.8	3.26	7.12	
12/20/06 12:04:15	14.3	218.5	59.2	4.9	3.26	7.06	
12/20/06 12:04:30	14.4	218.9	58.3	4.9	3.24	7.01	
12/20/06 12:04:45	14.4	218.5	58.2	4.8	3.23	7.00	
12/20/06 12:05:00	14.3	218.7	58.3	4.9	3.23	7.05	
12/20/06 12:05:15	14.4	216.0	58.2	5.0	3.24	7.11	
12/20/06 12:05:30	14.4	214.9	58.2	5.0	3.25	7.12	
12/20/06 12:05:45	14.3	214.8	58.0	4.8	3.26	7.08	
12/20/06 12:06:00	14.2	215.2	57.7	5.0	3.25	7.02	
12/20/06 12:06:15	14.2	217.2	57.4	4.9	3.25	6.99	
12/20/06 12:06:30	14.3	218.2	57.1	5.0	3.24	7.02	
12/20/06 12:06:45	14.2	217.3	56.9	5.0	3.23	7.09	
12/20/06 12:07:00	14.1	215.7	57.0	5.0	3.24	7.13	Point #2
12/20/06 12:07:15	14.1	213.2	57.2	4.9	3.25	7.11	
12/20/06 12:07:30	14.1	211.9	57.2	5.0	3.25	7.04	
12/20/06 12:07:45	14.1	211.9	57.1	5.1	3.25	6.99	
12/20/06 12:08:00	14.0	212.2	57.0	5.0	3.25	7.00	
12/20/06 12:08:15	14.1	211.5	57.1	4.9	3.25	7.06	
12/20/06 12:08:30	14.2	209.9	57.4	5.0	3.26	7.12	
12/20/06 12:08:45	14.2	207.5	57.6	5.2	3.27	7.12	
12/20/06 12:09:00	14.2	206.9	57.5	5.1	3.28	7.07	
12/20/06 12:09:15	14.1	209.7	57.0	5.1	3.28	7.01	
12/20/06 12:09:30	14.1	210.4	56.6	5.0	3.26	6.99	
12/20/06 12:09:45	14.2	209.9	56.5	5.1	3.25	7.04	
12/20/06 12:10:00	14.2	209.7	56.7	5.2	3.26	7.11	
12/20/06 12:10:15	14.2	209.2	56.9	5.1	3.27	7.14	
12/20/06 12:10:30	14.1	207.9	57.0	5.0	3.28	7.09	
12/20/06 12:10:45	14.1	208.2	57.1	5.2	3.27	7.02	
12/20/06 12:11:00	14.1	209.7	56.9	5.1	3.26	7.01	
12/20/06 12:11:15	14.0	210.9	56.7	5.0	3.25	7.06	
12/20/06 12:11:30	14.1	211.2	56.8	4.9	3.24	7.15	
12/20/06 12:11:45	14.1	211.2	57.1	4.9	3.25	7.14	
12/20/06 12:12:00	14.2	210.4	57.1	4.9	3.24	7.10	
12/20/06 12:12:15	14.2	211.0	57.1	4.8	3.22	7.06	
12/20/06 12:12:30	14.1	211.7	57.0	4.8	3.20	7.06	
12/20/06 12:12:45	14.1	212.4	57.1	4.6	3.19	7.11	
12/20/06 12:13:00	14.1	212.4	57.3	4.5	3.19	7.17	
12/20/06 12:13:15	14.2	211.0	57.7	4.7	3.17	7.17	
12/20/06 12:13:30	14.2	208.8	58.0	4.9	3.17	7.12	
12/20/06 12:13:45	14.1	210.9	57.7	4.6	3.16	7.06	
12/20/06 12:14:00	14.1	213.0	57.7	4.6	3.15	7.06	
12/20/06 12:14:15	14.3	212.5	57.7	4.7	3.13	7.12	
12/20/06 12:14:30	14.3	210.5	57.7	5.0	3.14	7.17	
12/20/06 12:14:45	14.3	210.5	57.9	4.9	3.15	7.18	
12/20/06 12:15:00	14.3	213.1	58.2	4.8	3.15	7.13	
12/20/06 12:15:15	14.2	214.3	58.3	4.8	3.15	7.07	
12/20/06 12:15:30	14.2	216.1	58.5	4.8	3.14	7.06	
12/20/06 12:15:45	14.3	218.0	58.5	5.0	3.14	7.10	
12/20/06 12:16:00	14.3	218.4	58.4	5.1	3.15	7.17	
12/20/06 12:16:15	14.4	217.9	58.4	5.0	3.15	7.18	
12/20/06 12:16:30	14.3	218.7	58.6	4.7	3.16	7.12	
12/20/06 12:16:45	14.3	219.0	58.6	4.8	3.16	7.07	
12/20/06 12:17:00	14.3	217.5	58.5	4.8	3.14	7.06	
12/20/06 12:17:15	14.3	218.2	58.3	4.8	3.13	7.11	
12/20/06 12:17:30	14.4	217.0	58.3	5.0	3.13	7.18	
12/20/06 12:17:45	14.5	215.7	58.4	4.8	3.15	7.20	
12/20/06 12:18:00	14.4	214.5	58.3	4.8	3.16	7.15	
12/20/06 12:18:15	14.3	213.0	58.0	4.9	3.16	7.08	
12/20/06 12:18:30	14.3	213.8	57.8	4.9	3.16	7.05	
12/20/06 12:18:45	14.4	216.0	57.7	4.7	3.16	7.09	
12/20/06 12:19:00	14.5	218.3	57.5	4.6	3.16	7.16	
12/20/06 12:19:15	14.4	215.8	57.3	4.7	3.17	7.20	
12/20/06 12:19:30	14.5	213.2	57.5	4.7	3.15	7.16	
12/20/06 12:19:45	14.5	212.9	57.6	4.7	3.16	7.08	
12/20/06 12:20:00	14.5	212.9	57.6	4.9	3.16	7.07	
12/20/06 12:20:15	14.5	213.4	57.4	4.6	3.15	7.12	
12/20/06 12:20:30	14.5	212.7	57.2	4.9	3.15	7.16	
12/20/06 12:20:45	14.5	213.0	57.1	4.7	3.16	7.19	
12/20/06 12:21:00	14.5	213.0	57.0	5.0	3.17	7.17	
12/20/06 12:21:15	14.3	213.8	57.1	4.9	3.17	7.12	
12/20/06 12:21:30	14.3	213.4	57.4	4.8	3.15	7.07	
12/20/06 12:21:45	14.3	213.2	57.4	4.7	3.15	7.08	
12/20/06 12:22:00	14.4	212.0	57.1	4.8	3.15	7.13	
12/20/06 12:22:15	14.4	212.9	56.9	4.8	3.17	7.19	
12/20/06 12:22:30	14.4	213.7	56.9	4.7	3.17	7.22	
12/20/06 12:22:45	14.3	212.7	57.0	4.9	3.16	7.16	
12/20/06 12:23:00	14.3	211.2	57.0	4.8	3.16	7.10	
12/20/06 12:23:15	14.3	210.3	56.8	4.8	3.14	7.06	
12/20/06 12:23:30	14.3	209.5	56.8	4.8	3.14	7.11	
12/20/06 12:23:45	14.4	208.9	57.0	4.9	3.14	7.18	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 12:24:00	14.5	210.0	57.1	5.1	3.16	7.21	
12/20/06 12:24:15	14.4	211.7	57.4	4.9	3.17	7.18	
12/20/06 12:24:30	14.3	213.9	57.3	4.9	3.17	7.11	
12/20/06 12:24:45	14.2	215.9	57.0	4.7	3.16	7.07	
12/20/06 12:25:00	14.1	215.5	56.9	4.7	3.14	7.10	
12/20/06 12:25:15	14.2	214.8	56.8	4.5	3.12	7.18	
12/20/06 12:25:30	14.3	213.7	57.0	4.5	3.13	7.23	
12/20/06 12:25:45	14.3	212.5	57.0	4.7	3.14	7.22	
12/20/06 12:26:00	14.3	212.5	57.0	4.7	3.15	7.16	
12/20/06 12:26:15	14.2	214.4	56.8	4.7	3.14	7.10	
12/20/06 12:26:30	14.1	216.3	57.0	4.6	3.12	7.10	
12/20/06 12:26:45	14.2	214.7	57.2	4.8	3.12	7.17	
12/20/06 12:27:00	14.3	214.3	57.1	4.7	3.13	7.22	Point #3
12/20/06 12:27:15	14.1	214.7	57.1	4.8	3.16	7.20	
12/20/06 12:27:30	14.2	215.4	56.9	4.6	3.16	7.14	
12/20/06 12:27:45	14.2	215.4	56.5	4.7	3.15	7.07	
12/20/06 12:28:00	14.2	215.4	56.3	4.6	3.15	7.07	
12/20/06 12:28:15	14.3	214.8	56.4	4.8	3.14	7.14	
12/20/06 12:28:30	14.2	214.8	56.5	4.8	3.14	7.21	
12/20/06 12:28:45	14.0	214.7	56.6	4.8	3.15	7.22	
12/20/06 12:29:00	14.0	213.5	56.5	4.9	3.15	7.15	
12/20/06 12:29:15	14.0	214.7	56.1	4.6	3.16	7.08	
12/20/06 12:29:30	14.0	215.8	55.6	4.7	3.16	7.07	
12/20/06 12:29:45	14.0	217.4	55.4	4.7	3.15	7.12	
12/20/06 12:30:00	14.0	217.8	55.2	4.8	3.15	7.18	
12/20/06 12:30:15	14.1	214.8	55.3	4.9	3.15	7.22	
12/20/06 12:30:30	14.2	212.5	55.5	4.7	3.16	7.19	
12/20/06 12:30:45	14.1	211.7	55.3	4.8	3.18	7.12	
12/20/06 12:31:00	14.0	212.8	55.0	4.6	3.17	7.09	
12/20/06 12:31:15	14.1	213.4	54.9	4.7	3.15	7.10	
12/20/06 12:31:30	14.0	212.7	55.0	4.8	3.14	7.16	
12/20/06 12:31:45	14.1	210.8	55.1	4.6	3.15	7.21	
12/20/06 12:32:00	14.2	209.3	55.2	4.8	3.17	7.22	
12/20/06 12:32:15	14.0	208.9	55.0	4.9	3.18	7.19	
12/20/06 12:32:30	14.0	209.3	54.8	4.8	3.18	7.13	
12/20/06 12:32:45	14.0	210.0	55.0	4.8	3.17	7.09	
12/20/06 12:33:00	14.1	210.8	55.6	4.6	3.17	7.11	
12/20/06 12:33:15	14.0	209.4	55.8	4.7	3.17	7.16	
12/20/06 12:33:30	14.0	206.4	55.8	4.7	3.18	7.20	
12/20/06 12:33:45	14.1	204.4	55.7	4.8	3.19	7.18	
12/20/06 12:34:00	14.1	205.2	55.4	5.0	3.20	7.12	
12/20/06 12:34:15	14.0	206.8	55.3	3.8	3.19	7.07	
12/20/06 12:34:30	14.0	207.5	55.1	3.7	3.18	7.09	
12/20/06 12:34:45	14.0	207.5	54.9	4.6	3.17	7.15	
12/20/06 12:35:00	14.1	207.5	54.7	5.1	3.18	7.20	
12/20/06 12:35:15	14.1	206.8	54.3	4.9	3.20	7.21	
12/20/06 12:35:30	14.0	204.9	54.2	5.0	3.20	7.16	
12/20/06 12:35:45	14.1	203.3	54.4	4.8	3.20	7.08	
12/20/06 12:36:00	14.3	203.3	54.5	4.9	3.20	7.05	
12/20/06 12:36:15	14.1	204.2	54.7	4.7	3.21	7.08	
12/20/06 12:36:30	14.2	205.3	55.6	4.7	3.21	7.14	
12/20/06 12:36:45	14.2	204.3	56.2	4.7	3.20	7.20	
12/20/06 12:37:00	14.2	199.8	56.1	4.8	3.20	7.19	
12/20/06 12:37:15	14.2	196.9	55.7	4.8	3.20	7.14	
12/20/06 12:37:30	14.2	199.2	55.1	4.9	3.20	7.08	
12/20/06 12:37:45	14.1	202.2	54.4	4.9	3.20	7.06	
12/20/06 12:38:00	14.1	202.9	54.5	4.7	3.19	7.10	
12/20/06 12:38:15	14.2	201.6	34.9	4.8	3.20	7.17	
12/20/06 12:38:30	14.3	198.9	55.2	4.8	3.21	7.19	
12/20/06 12:38:45	14.3	198.9	55.2	5.0	3.24	7.16	
12/20/06 12:39:00	14.3	199.3	55.1	4.9	3.25	7.08	
12/20/06 12:39:15	14.3	200.2	54.7	4.9	3.25	7.03	
12/20/06 12:39:30	14.2	204.3	54.4	5.0	3.24	7.04	
12/20/06 12:39:45	14.2	207.2	54.3	5.1	3.23	7.10	
12/20/06 12:40:00	14.3	207.9	54.4	5.0	3.23	7.17	
12/20/06 12:40:15	14.3	206.3	54.5	5.1	3.24	7.16	
12/20/06 12:40:30	14.4	202.9	54.5	5.0	3.25	7.11	
12/20/06 12:40:45	14.4	201.6	54.4	5.1	3.26	7.05	
12/20/06 12:41:00	14.4	202.7	54.2	5.0	3.27	7.03	
12/20/06 12:41:15	14.4	203.3	54.1	5.0	3.27	7.04	
12/20/06 12:41:30	14.4	202.5	54.1	5.0	3.28	7.11	
12/20/06 12:41:45	14.4	202.9	54.3	5.0	3.28	7.16	
12/20/06 12:42:00	14.5	202.5	54.5	5.1	3.28	7.14	
12/20/06 12:42:15	14.4	203.8	54.6	5.1	3.28	7.08	
12/20/06 12:42:30	14.3	206.8	54.5	5.1	3.27	7.03	
12/20/06 12:42:45	14.3	209.5	54.4	5.1	3.24	7.05	
12/20/06 12:43:00	14.3	210.7	54.4	4.9	3.23	7.12	
12/20/06 12:43:15	14.3	210.5	54.6	5.1	3.23	7.18	
12/20/06 12:43:30	14.4	209.4	54.7	5.0	3.24	7.18	
12/20/06 12:43:45	14.3	209.8	54.7	5.1	3.24	7.11	
12/20/06 12:44:00	14.2	211.7	54.1	4.9	3.24	7.05	
12/20/06 12:44:15	14.4	211.0	53.8	4.7	3.24	7.05	
12/20/06 12:44:30	14.4	209.2	53.5	5.0	3.25	7.10	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 12:44:45	**14.4**	**208.7**	**53.4**	**4.9**	**3.25**	**7.17**	
12/20/06 12:45:00	**14.3**	**207.5**	**53.4**	**4.8**	**3.25**	**7.15**	
12/20/06 12:45:15	**14.3**	**206.5**	**53.5**	**4.9**	**3.25**	**7.08**	
12/20/06 12:45:30	**14.4**	**208.0**	**53.5**	**4.9**	**3.24**	**7.03**	
12/20/06 12:45:45	**14.3**	**210.5**	**53.7**	**4.9**	**3.22**	**7.05**	
12/20/06 12:46:00	**14.2**	**213.5**	**53.9**	**5.0**	**3.21**	**7.12**	
12/20/06 12:46:15	**14.3**	**213.7**	**54.1**	**4.9**	**3.22**	**7.16**	
12/20/06 12:46:30	**14.3**	**212.5**	**54.1**	**5.2**	**3.22**	**7.13**	
12/20/06 12:46:45	**14.3**	**212.3**	**54.1**	**5.2**	**3.23**	**7.09**	
12/20/06 12:47:00	14.2	213.8	54.2	5.0	3.23	7.03	**End Run No. 2-2**
12/20/06 12:47:15	14.2	213.0	54.2	5.2	3.24	7.04	
12/20/06 12:47:30	14.2	210.4	53.9	5.0	3.27	7.09	
12/20/06 12:47:45	14.1	207.9	53.7	5.1	3.30	7.13	
12/20/06 12:48:00	14.1	207.5	53.8	8.3	3.33	7.10	
12/20/06 12:48:15	14.0	162.7	54.0	9.9	3.33	7.04	
12/20/06 12:48:30	15.4	78.8	55.8	11.3	3.27	6.54	
12/20/06 12:48:45	10.8	22.9	66.1	0.8	2.39	3.50	
12/20/06 12:49:00	1.8	4.2	82.7	0.4	0.91	0.98	
12/20/06 12:49:15	1.4	1.1	98.9	0.3	0.24	0.24	
12/20/06 12:49:30	1.2	1.1	110.9	0.3	0.12	0.12	
12/20/06 12:49:45	1.1	1.1	118.7	0.2	0.09	0.09	
12/20/06 12:50:00	1.0	1.1	122.1	0.3	0.09	0.08	
12/20/06 12:50:15	0.9	1.0	123.1	0.2	0.08	0.07	
12/20/06 12:50:30	0.9	0.6	123.2	0.2	0.08	0.06	
12/20/06 12:50:45	0.8	0.6	123.2	0.2	0.08	0.06	
12/20/06 12:51:00	0.8	0.6	123.2	0.2	0.08	0.05	
12/20/06 12:51:15	0.8	1.0	123.5	0.2	0.08	0.05	
12/20/06 12:51:30	0.8	0.6	123.8	0.2	0.08	0.05	
12/20/06 12:51:45	0.8	0.6	124.3	0.2	0.08	0.05	
12/20/06 12:52:00	0.7	0.6	124.7	0.2	0.08	0.05	
12/20/06 12:52:15	0.7	1.1	125.0	0.1	0.08	0.04	
12/20/06 12:52:30	0.7	0.7	125.6	0.1	0.08	0.04	
12/20/06 12:52:45	0.7	0.6	126.0	0.1	0.07	0.04	
12/20/06 12:53:00	0.7	0.6	126.0	0.1	0.08	0.04	
12/20/06 12:53:15	0.7	0.6	126.1	0.1	0.07	0.04	
12/20/06 12:53:30	0.7	0.6	126.2	0.1	0.07	0.04	
12/20/06 12:53:45	0.7	0.6	126.3	0.1	0.07	0.04	
12/20/06 12:54:00	0.6	0.6	126.5	0.1	0.07	0.04	**System Bias**
12/20/06 12:54:15	0.6	0.7	**126.8**	0.1	0.07	0.04	**127.0 135.0 ppm SO_2**
12/20/06 12:54:30	0.6	0.7	**126.9**	0.1	0.07	0.04	**0.6 Zero NO_x**
12/20/06 12:54:45	0.6	0.6	**127.1**	0.1	0.07	0.04	**0.7 Zero CO**
12/20/06 12:55:00	0.6	0.6	**127.1**	0.1	0.07	0.03	**0.1 Zero C_3H_8**
12/20/06 12:55:15	0.6	1.0	127.4	2.2	0.07	0.04	**0.07 Zero O_2**
12/20/06 12:55:30	0.5	23.4	127.5	0.5	0.07	0.04	**0.04 Zero CO_2**
12/20/06 12:55:45	2.5	48.9	127.1	0.1	0.11	0.24	
12/20/06 12:56:00	5.4	36.2	121.3	0.0	0.74	1.68	
12/20/06 12:56:15	2.5	13.2	107.0	0.0	0.95	1.44	
12/20/06 12:56:30	1.1	3.5	78.6	0.0	2.15	0.39	
12/20/06 12:56:45	0.7	1.1	46.9	0.0	3.90	0.11	
12/20/06 12:57:00	0.4	0.7	25.2	0.0	4.44	0.06	
12/20/06 12:57:15	0.3	0.6	14.3	0.0	4.53	0.05	
12/20/06 12:57:30	0.2	0.6	9.2	0.0	4.55	0.05	
12/20/06 12:57:45	0.2	0.7	6.3	0.0	4.55	0.04	
12/20/06 12:58:00	0.2	0.7	4.7	0.0	4.56	0.04	
12/20/06 12:58:15	0.2	0.6	3.6	0.0	4.57	0.04	
12/20/06 12:58:30	0.2	0.6	2.7	0.0	4.59	0.04	
12/20/06 12:58:45	0.2	0.6	2.1	0.0	4.60	0.04	
12/20/06 12:59:00	0.2	0.6	1.6	0.0	4.61	0.04	
12/20/06 12:59:15	0.1	0.6	1.3	0.0	4.62	0.04	
12/20/06 12:59:30	0.1	0.6	1.1	0.0	4.62	0.04	**System Bias**
12/20/06 12:59:45	0.1	0.7	0.8	0.0	**4.63**	0.04	**4.63 4.50% O_2**
12/20/06 13:00:00	0.1	1.1	0.6	0.0	**4.63**	0.05	
12/20/06 13:00:15	0.1	0.6	0.5	0.0	**4.63**	0.05	
12/20/06 13:00:30	0.1	0.6	0.4	1.3	**4.63**	0.04	
12/20/06 13:00:45	0.1	17.2	0.3	1.6	4.63	0.04	
12/20/06 13:01:00	1.2	43.9	0.2	0.1	4.63	0.07	
12/20/06 13:01:15	4.7	36.0	1.7	0.0	4.46	1.24	
12/20/06 13:01:30	1.8	13.5	6.1	0.0	3.94	2.33	
12/20/06 13:01:45	0.4	1.6	6.6	0.1	1.93	3.37	
12/20/06 13:02:00	0.2	0.2	4.2	0.1	0.51	4.11	
12/20/06 13:02:15	0.1	-0.2	2.4	0.0	0.16	4.25	
12/20/06 13:02:30	0.1	-0.4	1.4	0.0	0.10	4.25	
12/20/06 13:02:45	0.1	-0.4	0.8	0.0	0.09	4.29	
12/20/06 13:03:00	0.1	-0.4	0.5	0.0	0.08	4.40	
12/20/06 13:03:15	0.1	-0.2	0.4	0.0	0.07	4.48	
12/20/06 13:03:30	0.1	-0.4	0.2	0.0	0.07	4.53	
12/20/06 13:03:45	0.1	-0.4	0.0	0.0	0.07	4.55	
12/20/06 13:04:00	0.1	-0.4	-0.1	0.1	0.06	4.56	
12/20/06 13:04:15	0.1	-0.2	-0.1	0.0	0.06	4.57	
12/20/06 13:04:30	0.1	-0.3	-0.1	0.0	0.06	4.58	
12/20/06 13:04:45	0.1	-0.4	-0.2	0.0	0.06	4.58	**System Bias**
12/20/06 13:05:00	0.1	-0.4	-0.2	0.0	0.06	**4.58**	**4.58 4.50% CO_2**
12/20/06 13:05:15	0.1	-0.2	-0.3	0.0	0.06	**4.58**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
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Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 13:05:30	0.1	1.2	-0.3	4.9	0.06	**4.58**	
12/20/06 13:05:45	1.6	65.8	-0.2	1.9	0.06	**4.58**	
12/20/06 13:06:00	4.6	104.8	0.8	0.2	0.23	4.85	
12/20/06 13:06:15	6.8	136.0	9.8	0.1	1.48	5.94	
12/20/06 13:06:30	2.3	170.6	20.3	0.1	1.67	5.06	
12/20/06 13:06:45	0.4	208.7	16.9	0.0	0.68	2.07	
12/20/06 13:07:00	0.3	217.0	8.9	0.0	0.21	0.48	
12/20/06 13:07:15	0.2	219.2	4.4	0.0	0.10	0.16	
12/20/06 13:07:30	0.2	219.8	2.4	0.0	0.08	0.10	System Bias
12/20/06 13:07:45	0.2	**219.9**	1.5	0.0	0.08	0.08	**220.1 225.0 ppm CO**
12/20/06 13:08:00	0.1	**219.9**	0.9	0.0	0.07	0.07	
12/20/06 13:08:15	0.1	**220.2**	0.4	0.0	0.07	0.06	
12/20/06 13:08:30	0.1	**220.4**	0.3	1.8	0.07	0.07	
12/20/06 13:08:45	0.1	218.9	0.2	0.1	0.07	0.06	
12/20/06 13:09:00	0.0	184.8	0.2	0.0	0.12	0.26	
12/20/06 13:09:15	0.4	94.8	2.5	0.1	0.59	1.31	
12/20/06 13:09:30	0.7	45.3	5.3	0.1	0.53	0.86	
12/20/06 13:09:45	9.5	14.6	4.9	0.0	0.22	0.24	
12/20/06 13:10:00	24.2	6.2	3.4	0.0	0.15	0.09	
12/20/06 13:10:15	23.9	2.8	2.5	0.1	0.11	0.06	
12/20/06 13:10:30	24.2	2.6	1.6	0.0	0.08	0.05	
12/20/06 13:10:45	25.9	2.3	0.9	0.1	0.08	0.05	
12/20/06 13:11:00	29.5	2.1	0.7	0.1	0.08	0.05	
12/20/06 13:11:15	31.7	1.8	0.6	0.0	0.08	0.05	
12/20/06 13:11:30	34.1	2.0	0.2	0.0	0.08	0.05	
12/20/06 13:11:45	35.8	1.6	0.1	0.0	0.08	0.05	
12/20/06 13:12:00	37.8	1.6	0.0	0.0	0.08	0.05	
12/20/06 13:12:15	38.9	1.3	0.1	0.1	0.07	0.04	
12/20/06 13:12:30	40.7	1.1	0.0	0.1	0.07	0.04	
12/20/06 13:12:45	42.6	1.1	0.0	0.0	0.07	0.04	
12/20/06 13:13:00	45.4	1.1	-0.2	0.1	0.07	0.04	
12/20/06 13:13:15	47.8	1.1	-0.1	0.1	0.07	0.04	
12/20/06 13:13:30	48.5	1.1	-0.3	0.0	0.07	0.04	
12/20/06 13:13:45	48.2	1.1	-0.4	0.0	0.07	0.04	
12/20/06 13:14:00	47.2	1.1	-0.5	0.0	0.07	0.04	
12/20/06 13:14:15	46.6	1.1	-0.5	0.0	0.07	0.04	
12/20/06 13:14:30	46.2	1.1	-0.6	0.0	0.07	0.04	
12/20/06 13:14:45	45.9	0.8	-0.4	0.0	0.07	0.04	
12/20/06 13:15:00	45.7	1.1	-0.5	0.0	0.07	0.03	
12/20/06 13:15:15	45.7	1.1	-0.6	0.0	0.07	0.04	
12/20/06 13:15:30	45.6	1.1	-0.6	0.0	0.07	0.04	
12/20/06 13:15:45	45.6	1.1	-0.6	0.0	0.07	0.04	System Bias
12/20/06 13:16:00	**45.5**	1.1	**-0.6**	0.0	0.07	0.03	**45.4 45.0 ppm NO**
12/20/06 13:16:15	**45.5**	1.1	**-0.6**	0.0	0.07	0.04	**-0.6 Zero SO_2**
12/20/06 13:16:30	**45.4**	1.1	**-0.6**	0.0	0.07	0.03	
12/20/06 13:16:45	**45.3**	7.3	**-0.6**	5.1	0.07	0.04	
12/20/06 13:17:00	38.1	54.0	-0.7	5.5	0.07	0.03	
12/20/06 13:17:15	21.4	152.2	1.5	5.8	0.34	1.03	
12/20/06 13:17:30	16.0	198.6	13.6	5.1	1.64	4.16	
12/20/06 13:17:45	14.4	207.9	32.9	0.3	2.70	6.29	
12/20/06 13:18:00	24.1	148.7	48.4	21.3	3.09	6.99	
12/20/06 13:18:15	45.0	51.8	52.2	55.4	2.80	5.93	
12/20/06 13:18:30	31.9	15.3	39.0	57.6	1.39	2.64	
12/20/06 13:18:45	15.7	2.3	20.3	58.6	0.38	0.59	
12/20/06 13:19:00	4.2	1.2	9.0	54.1	0.13	0.15	
12/20/06 13:19:15	3.1	1.1	4.5	52.8	0.09	0.08	
12/20/06 13:19:30	2.5	1.1	2.7	51.5	0.08	0.06	
12/20/06 13:19:45	2.1	1.1	1.5	51.1	0.08	0.05	
12/20/06 13:20:00	1.8	1.1	0.9	51.7	0.08	0.05	
12/20/06 13:20:15	1.7	0.8	0.4	51.7	0.08	0.05	
12/20/06 13:20:30	1.5	1.1	0.2	51.7	0.07	0.04	Calibration
12/20/06 13:20:45	1.5	1.1	0.0	**51.6**	0.07	0.04	**51.6 50.0 ppm C_3H_8/N_2**
12/20/06 13:21:00	1.4	1.1	-0.2	**51.6**	0.07	0.05	
12/20/06 13:21:15	1.4	0.8	-0.3	**51.6**	0.07	0.04	
12/20/06 13:21:30	1.3	1.0	-0.4	**51.7**	0.07	0.04	
12/20/06 13:21:45	1.2	1.1	-0.4	51.7	0.07	0.04	
12/20/06 13:22:00	1.1	1.1	-0.4	38.2	0.07	0.04	
12/20/06 13:22:15	1.6	22.3	-0.5	5.5	0.07	0.04	
12/20/06 13:22:30	3.9	88.0	-0.4	5.3	0.08	0.12	
12/20/06 13:22:45	9.2	178.7	4.6	5.3	0.75	2.10	
12/20/06 13:23:00	13.8	211.2	20.7	5.2	2.11	5.05	
12/20/06 13:23:15	14.0	225.6	39.9	5.2	2.90	6.60	
12/20/06 13:23:30	14.1	227.3	52.7	5.1	3.13	7.05	
12/20/06 13:23:45	14.2	224.7	58.5	5.0	3.17	7.14	
12/20/06 13:24:00	14.3	221.9	60.8	5.0	3.17	7.11	
12/20/06 13:24:15	14.5	222.2	61.7	5.0	3.18	7.05	
12/20/06 13:24:30	14.4	224.4	61.6	4.9	3.18	7.03	
12/20/06 13:24:45	14.3	225.7	61.1	4.9	3.17	7.07	Begin Run No. 2-3
12/20/06 13:25:00	**14.4**	**226.1**	**61.0**	**5.0**	**3.16**	**7.14**	Point #1
12/20/06 13:25:15	**14.5**	**225.1**	**61.2**	**5.1**	**3.17**	**7.18**	
12/20/06 13:25:30	**14.4**	**224.5**	**61.1**	**5.0**	**3.19**	**7.14**	
12/20/06 13:25:45	**14.5**	**224.2**	**61.1**	**4.7**	**3.19**	**7.09**	
12/20/06 13:26:00	**14.5**	**223.3**	**61.0**	**4.9**	**3.19**	**7.04**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 13:26:15	14.3	223.2	61.1	4.9	3.18	7.06	
12/20/06 13:26:30	14.3	224.5	61.1	4.9	3.17	7.13	
12/20/06 13:26:45	14.3	224.6	61.1	5.1	3.17	7.19	
12/20/06 13:27:00	14.2	224.6	61.2	5.0	3.17	7.18	
12/20/06 13:27:15	14.2	225.6	61.1	4.9	3.17	7.11	
12/20/06 13:27:30	14.2	225.1	60.9	4.9	3.18	7.08	
12/20/06 13:27:45	14.2	224.9	60.8	4.9	3.18	7.10	
12/20/06 13:28:00	14.2	225.4	60.4	4.9	3.19	7.13	
12/20/06 13:28:15	14.1	226.9	60.1	5.0	3.19	7.19	
12/20/06 13:28:30	14.1	226.1	60.3	4.9	3.18	7.18	
12/20/06 13:28:45	14.1	227.1	60.4	4.5	3.17	7.13	
12/20/06 13:29:00	14.0	227.5	60.3	4.7	3.17	7.08	
12/20/06 13:29:15	14.1	226.9	60.2	4.6	3.16	7.10	
12/20/06 13:29:30	14.1	227.6	60.3	4.8	3.16	7.16	
12/20/06 13:29:45	14.2	227.9	60.4	4.8	3.17	7.20	
12/20/06 13:30:00	14.2	228.0	60.4	4.7	3.18	7.18	
12/20/06 13:30:15	14.2	226.1	60.5	4.8	3.17	7.12	
12/20/06 13:30:30	14.2	225.0	60.5	4.8	3.17	7.06	
12/20/06 13:30:45	14.3	225.1	60.4	4.6	3.18	7.05	
12/20/06 13:31:00	14.3	225.0	60.2	4.6	3.18	7.12	
12/20/06 13:31:15	14.4	226.6	60.4	4.7	3.19	7.18	
12/20/06 13:31:30	14.2	228.5	60.6	4.8	3.19	7.16	
12/20/06 13:31:45	14.2	230.9	60.7	4.7	3.18	7.11	
12/20/06 13:32:00	14.2	230.2	60.4	4.7	3.16	7.05	
12/20/06 13:32:15	14.2	228.9	60.3	4.7	3.15	7.08	
12/20/06 13:32:30	14.2	229.5	60.4	4.9	3.16	7.15	
12/20/06 13:32:45	14.2	229.2	60.3	4.8	3.18	7.18	
12/20/06 13:33:00	14.2	228.1	60.3	4.8	3.19	7.13	
12/20/06 13:33:15	14.3	226.6	60.6	4.6	3.20	7.06	
12/20/06 13:33:30	14.3	226.1	60.7	4.7	3.20	7.04	
12/20/06 13:33:45	14.3	225.6	60.2	4.8	3.19	7.10	
12/20/06 13:34:00	14.4	225.4	59.6	4.8	3.19	7.19	
12/20/06 13:34:15	14.5	225.6	59.3	4.7	3.19	7.18	
12/20/06 13:34:30	14.3	225.5	59.5	4.8	3.19	7.10	
12/20/06 13:34:45	14.3	225.9	59.5	4.6	3.18	7.05	
12/20/06 13:35:00	14.4	226.8	59.4	4.8	3.17	7.06	
12/20/06 13:35:15	14.3	227.4	59.3	4.6	3.17	7.12	
12/20/06 13:35:30	14.4	227.0	59.3	4.8	3.18	7.18	
12/20/06 13:35:45	14.4	225.9	59.3	4.8	3.19	7.18	
12/20/06 13:36:00	14.4	226.1	59.0	4.7	3.20	7.12	
12/20/06 13:36:15	14.3	227.1	59.0	4.6	3.20	7.06	
12/20/06 13:36:30	14.4	227.8	58.7	4.8	3.19	7.07	
12/20/06 13:36:45	14.5	228.2	58.6	4.7	3.19	7.13	
12/20/06 13:37:00	14.4	228.0	58.6	4.8	3.20	7.18	
12/20/06 13:37:15	14.3	227.6	58.6	4.7	3.22	7.17	
12/20/06 13:37:30	14.3	226.6	58.5	4.7	3.24	7.11	
12/20/06 13:37:45	14.3	226.6	59.2	4.6	3.25	7.06	
12/20/06 13:38:00	14.2	227.3	60.1	4.7	3.25	7.08	
12/20/06 13:38:15	14.1	227.9	60.6	4.6	3.23	7.13	
12/20/06 13:38:30	14.2	227.9	60.6	4.7	3.23	7.16	
12/20/06 13:38:45	14.2	225.9	60.1	4.8	3.24	7.16	
12/20/06 13:39:00	14.2	224.3	59.7	4.9	3.25	7.11	
12/20/06 13:39:15	14.2	226.4	59.6	4.9	3.25	7.08	
12/20/06 13:39:30	14.0	228.9	59.2	4.8	3.26	7.06	
12/20/06 13:39:45	14.1	232.4	58.8	4.9	3.25	7.08	
12/20/06 13:40:00	14.3	233.4	58.8	4.8	3.24	7.11	
12/20/06 13:40:15	14.3	231.6	59.3	4.7	3.24	7.15	
12/20/06 13:40:30	14.2	229.4	59.9	4.8	3.24	7.18	
12/20/06 13:40:45	14.2	226.6	59.9	4.9	3.25	7.17	
12/20/06 13:41:00	14.1	226.0	59.4	4.9	3.25	7.11	
12/20/06 13:41:15	13.9	226.9	58.8	4.8	3.25	7.08	
12/20/06 13:41:30	13.9	228.2	58.4	5.0	3.24	7.06	
12/20/06 13:41:45	14.0	230.7	58.0	4.7	3.23	7.06	
12/20/06 13:42:00	14.1	230.5	58.1	4.9	3.25	7.12	
12/20/06 13:42:15	14.1	228.2	58.4	4.8	3.27	7.17	
12/20/06 13:42:30	14.0	227.1	58.2	5.0	3.29	7.15	
12/20/06 13:42:45	13.9	227.4	58.2	4.9	3.29	7.10	
12/20/06 13:43:00	13.7	227.9	57.8	4.9	3.28	7.05	
12/20/06 13:43:15	13.9	227.9	57.5	4.9	3.27	7.05	
12/20/06 13:43:30	13.9	227.9	57.5	5.0	3.27	7.10	
12/20/06 13:43:45	14.0	226.6	57.8	4.8	3.27	7.16	
12/20/06 13:44:00	14.0	224.0	58.1	4.9	3.29	7.17	
12/20/06 13:44:15	14.0	221.7	57.9	4.8	3.29	7.11	
12/20/06 13:44:30	14.0	221.8	57.5	5.1	3.29	7.04	
12/20/06 13:44:45	13.9	224.7	57.2	4.8	3.28	7.03	
12/20/06 13:45:00	13.9	225.8	56.9	4.7	3.27	7.09	Point #2
12/20/06 13:45:15	13.9	225.1	57.0	4.8	3.27	7.15	
12/20/06 13:45:30	13.9	224.9	57.0	4.7	3.27	7.17	
12/20/06 13:45:45	14.0	221.4	57.0	4.8	3.27	7.12	
12/20/06 13:46:00	14.0	219.7	56.9	4.8	3.26	7.06	
12/20/06 13:46:15	14.0	222.2	56.7	4.7	3.27	7.04	
12/20/06 13:46:30	13.9	226.0	56.6	4.7	3.27	7.04	
12/20/06 13:46:45	13.9	228.9	57.0	4.7	3.27	7.10	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 13:47:00	13.9	228.9	57.3	4.8	3.26	7.15	
12/20/06 13:47:15	13.8	225.1	57.6	4.7	3.26	7.16	
12/20/06 13:47:30	13.9	222.2	57.5	4.7	3.26	7.11	
12/20/06 13:47:45	13.9	221.7	57.4	4.7	3.27	7.05	
12/20/06 13:48:00	13.9	225.3	57.3	4.8	3.26	7.03	
12/20/06 13:48:15	13.9	228.1	57.3	4.8	3.26	7.07	
12/20/06 13:48:30	13.9	229.1	57.3	4.8	3.25	7.13	
12/20/06 13:48:45	14.0	227.1	57.4	4.8	3.26	7.18	
12/20/06 13:49:00	13.9	225.3	57.3	4.9	3.25	7.17	
12/20/06 13:49:15	13.9	225.4	57.1	4.8	3.26	7.11	
12/20/06 13:49:30	13.9	227.4	56.8	4.8	3.26	7.05	
12/20/06 13:49:45	14.0	229.7	57.0	4.8	3.24	7.05	
12/20/06 13:50:00	14.0	230.5	57.3	4.6	3.24	7.10	
12/20/06 13:50:15	14.0	228.9	57.7	4.7	3.24	7.17	
12/20/06 13:50:30	13.9	227.6	57.8	4.9	3.26	7.18	
12/20/06 13:50:45	13.9	226.9	58.0	4.9	3.25	7.14	
12/20/06 13:51:00	13.8	228.5	58.2	4.7	3.25	7.06	
12/20/06 13:51:15	13.7	229.7	57.9	4.7	3.25	7.03	
12/20/06 13:51:30	13.8	230.2	57.6	4.8	3.24	7.07	
12/20/06 13:51:45	13.9	229.7	57.5	4.8	3.25	7.15	
12/20/06 13:52:00	13.8	228.7	57.7	4.9	3.27	7.20	
12/20/06 13:52:15	13.9	228.4	57.8	4.7	3.27	7.16	
12/20/06 13:52:30	13.9	226.8	57.6	4.7	3.26	7.06	
12/20/06 13:52:45	13.9	226.1	57.8	4.6	3.26	7.02	
12/20/06 13:53:00	14.0	226.5	57.9	4.9	3.26	7.08	
12/20/06 13:53:15	13.9	227.4	57.6	4.6	3.25	7.16	
12/20/06 13:53:30	13.8	226.5	57.5	4.7	3.25	7.16	
12/20/06 13:53:45	13.6	224.9	57.0	4.6	3.24	7.10	
12/20/06 13:54:00	13.9	223.3	56.8	4.7	3.23	7.05	
12/20/06 13:54:15	13.9	222.9	56.4	4.6	3.24	7.07	
12/20/06 13:54:30	14.0	222.7	56.5	4.7	3.25	7.14	
12/20/06 13:54:45	13.9	223.4	56.8	4.3	3.26	7.17	
12/20/06 13:55:00	13.9	223.3	56.5	4.1	3.26	7.11	
12/20/06 13:55:15	14.0	222.4	56.4	4.5	3.26	7.06	
12/20/06 13:55:30	14.0	222.4	56.2	4.8	3.26	7.05	
12/20/06 13:55:45	13.9	222.4	56.3	4.4	3.26	7.11	
12/20/06 13:56:00	13.8	220.3	56.7	4.7	3.25	7.16	
12/20/06 13:56:15	13.8	217.4	56.7	4.5	3.26	7.13	
12/20/06 13:56:30	13.6	216.3	57.0	4.8	3.26	7.06	
12/20/06 13:56:45	13.7	216.9	57.9	4.7	3.26	7.04	
12/20/06 13:57:00	13.7	219.2	58.3	4.6	3.26	7.10	
12/20/06 13:57:15	13.6	220.4	58.1	4.5	3.26	7.16	
12/20/06 13:57:30	13.5	219.4	57.8	4.6	3.25	7.15	
12/20/06 13:57:45	13.5	217.9	57.3	4.6	3.25	7.08	
12/20/06 13:58:00	13.5	217.4	56.7	4.5	3.25	7.03	
12/20/06 13:58:15	13.5	217.2	56.4	4.6	3.25	7.08	
12/20/06 13:58:30	13.5	216.8	56.5	4.7	3.26	7.15	
12/20/06 13:58:45	13.5	217.7	56.2	4.7	3.26	7.16	
12/20/06 13:59:00	13.3	217.7	55.8	4.4	3.24	7.11	
12/20/06 13:59:15	13.3	216.4	55.7	4.5	3.24	7.06	
12/20/06 13:59:30	13.4	215.4	55.6	4.5	3.22	7.08	
12/20/06 13:59:45	13.5	216.4	55.8	3.7	3.23	7.15	
12/20/06 14:00:00	13.4	217.2	55.8	4.4	3.25	7.19	
12/20/06 14:00:15	13.4	217.9	55.8	4.3	3.24	7.15	
12/20/06 14:00:30	13.3	216.9	55.9	4.3	3.23	7.08	
12/20/06 14:00:45	13.4	215.9	55.6	4.4	3.23	7.05	
12/20/06 14:01:00	13.4	217.5	55.6	4.5	3.24	7.10	
12/20/06 14:01:15	13.3	219.9	56.1	4.6	3.24	7.17	
12/20/06 14:01:30	13.3	220.7	56.2	4.4	3.24	7.16	
12/20/06 14:01:45	13.3	219.4	56.1	4.4	3.24	7.10	
12/20/06 14:02:00	13.3	217.5	56.0	4.4	3.23	7.06	
12/20/06 14:02:15	13.3	217.2	55.7	4.6	3.23	7.06	
12/20/06 14:02:30	13.3	218.2	55.7	4.4	3.24	7.14	
12/20/06 14:02:45	13.2	219.4	55.5	4.6	3.25	7.17	
12/20/06 14:03:00	13.1	219.0	55.4	4.4	3.25	7.11	
12/20/06 14:03:15	13.2	219.2	55.5	4.4	3.24	7.06	
12/20/06 14:03:30	13.2	219.7	55.7	4.5	3.24	7.07	
12/20/06 14:03:45	13.2	219.9	56.0	4.6	3.22	7.14	
12/20/06 14:04:00	13.1	220.7	56.3	4.5	3.22	7.19	
12/20/06 14:04:15	13.1	219.9	56.3	4.5	3.23	7.16	
12/20/06 14:04:30	13.1	220.5	56.0	4.3	3.22	7.09	
12/20/06 14:04:45	13.1	222.2	55.8	4.5	3.22	7.08	
12/20/06 14:05:00	13.1	223.0	55.6	4.6	3.21	7.13	Point #3
12/20/06 14:05:15	13.1	224.4	55.3	4.5	3.21	7.17	
12/20/06 14:05:30	13.1	223.3	55.5	4.4	3.22	7.17	
12/20/06 14:05:45	13.2	222.2	55.6	4.4	3.22	7.12	
12/20/06 14:06:00	13.2	222.3	55.3	4.5	3.23	7.05	
12/20/06 14:06:15	13.4	222.2	55.1	4.5	3.22	7.06	
12/20/06 14:06:30	13.5	220.9	55.1	4.7	3.23	7.12	
12/20/06 14:06:45	13.5	220.7	55.3	4.6	3.25	7.16	
12/20/06 14:07:00	13.4	222.4	55.2	4.7	3.26	7.13	
12/20/06 14:07:15	13.4	223.4	55.2	4.6	3.25	7.07	
12/20/06 14:07:30	13.5	222.4	55.1	4.6	3.24	7.04	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 14:07:45	13.6	221.4	54.8	4.7	3.24	7.08	
12/20/06 14:08:00	13.8	221.9	55.0	4.8	3.25	7.14	
12/20/06 14:08:15	14.0	222.7	55.3	4.7	3.26	7.15	
12/20/06 14:08:30	14.2	223.4	55.8	4.6	3.26	7.09	
12/20/06 14:08:45	14.2	221.9	56.5	4.6	3.26	7.04	
12/20/06 14:09:00	14.1	220.2	57.2	4.6	3.26	7.05	
12/20/06 14:09:15	14.4	219.9	57.1	4.6	3.26	7.12	
12/20/06 14:09:30	14.4	219.7	56.8	4.7	3.27	7.17	
12/20/06 14:09:45	14.4	220.2	56.5	4.7	3.26	7.15	
12/20/06 14:10:00	14.4	220.7	56.3	4.6	3.25	7.08	
12/20/06 14:10:15	14.4	220.2	56.3	4.6	3.23	7.05	
12/20/06 14:10:30	14.6	219.9	56.7	4.7	3.24	7.08	
12/20/06 14:10:45	14.7	220.4	56.9	4.7	3.26	7.15	
12/20/06 14:11:00	14.7	220.8	57.2	4.8	3.26	7.16	
12/20/06 14:11:15	14.7	220.2	57.5	4.9	3.26	7.11	
12/20/06 14:11:30	14.8	219.4	57.7	4.6	3.25	7.05	
12/20/06 14:11:45	15.0	218.4	57.6	4.8	3.26	7.06	
12/20/06 14:12:00	15.0	217.3	58.0	4.8	3.27	7.12	
12/20/06 14:12:15	15.0	216.2	58.5	4.8	3.28	7.14	
12/20/06 14:12:30	15.0	214.8	58.8	4.8	3.28	7.11	
12/20/06 14:12:45	15.1	214.4	58.6	4.9	3.27	7.04	
12/20/06 14:13:00	15.1	214.9	58.8	4.8	3.27	7.03	
12/20/06 14:13:15	15.0	216.2	59.1	4.7	3.27	7.08	
12/20/06 14:13:30	15.0	218.3	59.2	4.9	3.26	7.14	
12/20/06 14:13:45	15.1	218.4	59.1	4.6	3.26	7.14	
12/20/06 14:14:00	15.1	218.7	59.0	4.1	3.25	7.08	
12/20/06 14:14:15	15.0	218.2	58.8	4.4	3.26	7.03	
12/20/06 14:14:30	15.1	218.3	58.9	4.8	3.26	7.04	
12/20/06 14:14:45	15.2	217.9	59.0	4.2	3.28	7.10	
12/20/06 14:15:00	15.1	218.4	59.0	3.8	3.31	7.14	
12/20/06 14:15:15	15.1	220.9	59.1	4.7	3.33	7.10	
12/20/06 14:15:30	14.9	220.3	59.0	4.2	3.32	7.04	
12/20/06 14:15:45	14.9	216.7	58.4	3.8	3.31	7.01	
12/20/06 14:16:00	15.0	215.7	59.0	4.9	3.32	7.04	
12/20/06 14:16:15	15.0	219.2	60.3	5.0	3.34	7.11	
12/20/06 14:16:30	14.9	222.9	60.7	5.1	3.34	7.12	
12/20/06 14:16:45	15.0	223.4	61.1	5.1	3.33	7.08	
12/20/06 14:17:00	14.9	222.8	61.6	5.1	3.30	7.05	
12/20/06 14:17:15	14.9	223.2	62.3	5.1	3.31	7.07	
12/20/06 14:17:30	15.0	223.0	62.5	5.1	3.32	7.13	
12/20/06 14:17:45	15.0	221.2	62.0	5.1	3.34	7.14	
12/20/06 14:18:00	15.0	218.8	62.2	5.2	3.34	7.06	
12/20/06 14:18:15	15.0	219.2	62.1	5.1	3.33	7.01	
12/20/06 14:18:30	15.0	221.2	61.9	5.2	3.34	7.05	
12/20/06 14:18:45	15.0	222.4	62.2	5.1	3.34	7.12	
12/20/06 14:19:00	14.8	222.4	62.3	5.1	3.35	7.14	
12/20/06 14:19:15	14.7	220.2	62.3	5.2	3.34	7.08	
12/20/06 14:19:30	14.8	218.9	62.1	5.1	3.32	7.03	
12/20/06 14:19:45	14.8	219.9	61.9	5.2	3.33	7.04	
12/20/06 14:20:00	14.8	221.0	62.3	5.2	3.33	7.11	
12/20/06 14:20:15	14.8	221.4	62.5	5.1	3.34	7.16	
12/20/06 14:20:30	14.7	219.9	62.9	5.2	3.35	7.14	
12/20/06 14:20:45	14.7	218.9	63.1	5.1	3.35	7.07	
12/20/06 14:21:00	14.6	218.5	63.0	5.1	3.34	7.02	
12/20/06 14:21:15	14.7	216.4	63.2	5.2	3.34	7.04	
12/20/06 14:21:30	14.9	215.5	63.6	5.2	3.35	7.11	
12/20/06 14:21:45	14.9	215.7	64.1	5.2	3.38	7.13	
12/20/06 14:22:00	14.7	214.0	64.1	5.1	3.39	7.09	
12/20/06 14:22:15	14.6	211.2	64.3	5.1	3.39	7.03	
12/20/06 14:22:30	14.7	210.2	64.2	5.1	3.38	7.01	
12/20/06 14:22:45	14.8	211.4	64.6	5.2	3.39	7.06	
12/20/06 14:23:00	14.7	213.2	64.9	5.2	3.40	7.12	
12/20/06 14:23:15	14.6	212.9	65.1	5.0	3.39	7.11	
12/20/06 14:23:30	14.7	211.3	65.0	5.1	3.37	7.05	
12/20/06 14:23:45	14.7	209.9	64.8	5.0	3.37	7.01	
12/20/06 14:24:00	14.8	209.5	64.6	5.0	3.38	7.05	
12/20/06 14:24:15	14.8	209.9	64.4	5.1	3.38	7.11	
12/20/06 14:24:30	14.6	211.8	64.2	4.9	3.38	7.11	
12/20/06 14:24:45	14.6	212.7	64.3	5.0	3.37	7.05	
12/20/06 14:25:00	14.7	211.8	63.8	5.1	3.35	7.02	End Run No. 2-3
12/20/06 14:25:15	14.8	208.2	63.4	58.8	3.36	7.06	
12/20/06 14:25:30	14.7	158.7	62.9	32.7	3.37	7.14	
12/20/06 14:25:45	11.0	79.0	61.5	48.2	3.31	6.64	
12/20/06 14:26:00	7.0	25.9	50.8	48.9	2.36	3.51	
12/20/06 14:26:15	3.1	4.8	31.3	48.5	0.86	0.96	
12/20/06 14:26:30	1.7	1.7	15.5	48.8	0.22	0.24	
12/20/06 14:26:45	1.2	1.3	9.3	48.8	0.11	0.12	
12/20/06 14:27:00	1.0	1.5	8.2	49.2	0.10	0.09	
12/20/06 14:27:15	0.9	1.1	7.5	48.7	0.09	0.08	
12/20/06 14:27:30	0.8	1.1	6.0	48.8	0.09	0.07	Calibration
12/20/06 14:27:45	0.7	1.1	4.1	48.8	0.08	0.06	48.9 50.0 ppm C_3H_8/N_2
12/20/06 14:28:00	0.7	1.1	3.0	49.0	0.08	0.06	
12/20/06 14:28:15	0.6	1.1	2.4	48.9	0.08	0.06	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 14:28:30	0.6	1.1	2.0	**48.9**	0.08	0.05	
12/20/06 14:28:45	0.5	1.1	2.0	50.9	0.08	0.05	
12/20/06 14:29:00	0.5	1.1	2.0	51.7	0.08	0.05	
12/20/06 14:29:15	0.4	1.1	1.5	33.2	0.08	0.05	
12/20/06 14:29:30	0.4	25.2	0.9	5.6	0.08	0.05	
12/20/06 14:29:45	6.6	97.0	0.7	39.8	0.10	0.19	
12/20/06 14:30:00	9.3	116.0	4.6	27.1	0.92	2.47	
12/20/06 14:30:15	11.0	70.0	17.7	2.2	2.14	4.65	
12/20/06 14:30:30	24.9	24.4	26.6	1.4	1.66	2.96	
12/20/06 14:30:45	12.8	4.8	18.9	1.1	1.87	0.77	
12/20/06 14:31:00	3.5	1.7	9.0	0.9	3.67	0.18	
12/20/06 14:31:15	1.9	1.1	4.4	0.8	4.39	0.09	
12/20/06 14:31:30	1.4	1.3	2.3	0.7	4.53	0.07	
12/20/06 14:31:45	1.1	1.1	1.3	0.6	4.55	0.06	
12/20/06 14:32:00	0.9	1.1	0.7	0.6	4.56	0.06	
12/20/06 14:32:15	0.9	1.1	0.4	0.6	4.57	0.05	
12/20/06 14:32:30	0.7	1.1	0.3	0.5	4.57	0.05	
12/20/06 14:32:45	0.7	1.1	0.1	0.5	4.59	0.05	
12/20/06 14:33:00	0.6	1.1	-0.1	0.5	4.60	0.05	
12/20/06 14:33:15	0.6	1.1	-0.2	0.4	4.61	0.05	
12/20/06 14:33:30	0.5	1.1	-0.2	0.4	4.62	0.05	
12/20/06 14:33:45	0.5	1.1	-0.3	0.4	4.62	0.05	System Bias
12/20/06 14:34:00	0.5	1.1	-0.3	0.4	**4.63**	0.05	**4.63 4.50% O_2**
12/20/06 14:34:15	0.5	1.1	-0.3	2.4	**4.63**	0.05	
12/20/06 14:34:30	0.4	25.5	-0.4	1.5	**4.63**	0.05	
12/20/06 14:34:45	5.9	43.6	-0.2	0.4	**4.62**	0.22	
12/20/06 14:35:00	6.1	26.7	1.8	0.4	4.38	1.57	
12/20/06 14:35:15	0.9	8.3	5.5	0.4	3.53	2.45	
12/20/06 14:35:30	0.4	0.8	5.1	0.4	1.36	3.69	
12/20/06 14:35:45	0.2	0.1	2.9	0.4	0.34	4.24	
12/20/06 14:36:00	0.2	0.1	1.3	0.4	0.13	4.32	
12/20/06 14:36:15	0.2	0.1	0.6	0.4	0.09	4.31	
12/20/06 14:36:30	0.2	0.1	0.3	0.4	0.08	4.37	
12/20/06 14:36:45	0.2	0.1	0.1	0.4	0.07	4.46	
12/20/06 14:37:00	0.2	0.1	-0.1	0.4	0.07	4.53	
12/20/06 14:37:15	0.2	0.1	-0.3	0.4	0.07	4.56	
12/20/06 14:37:30	0.2	0.1	-0.4	0.5	0.07	4.57	
12/20/06 14:37:45	0.2	0.1	-0.3	0.4	0.06	4.58	
12/20/06 14:38:00	0.2	0.1	-0.5	0.4	0.06	4.59	
12/20/06 14:38:15	0.2	0.1	-0.5	0.4	0.06	4.60	System Bias
12/20/06 14:38:30	0.2	0.1	-0.5	0.4	0.06	**4.60**	**4.61 4.50% CO_2**
12/20/06 14:38:45	0.1	0.1	-0.4	0.4	0.06	**4.61**	
12/20/06 14:39:00	0.1	0.2	-0.4	1.7	0.06	**4.61**	
12/20/06 14:39:15	0.2	11.6	-0.5	6.6	0.06	**4.61**	
12/20/06 14:39:30	0.5	50.2	-0.4	0.8	0.06	4.59	
12/20/06 14:39:45	1.6	101.0	0.7	0.5	0.44	4.97	
12/20/06 14:40:00	2.0	177.8	4.0	0.4	0.82	4.14	
12/20/06 14:40:15	1.2	208.2	4.5	0.4	0.39	1.53	
12/20/06 14:40:30	0.7	218.7	2.6	0.4	0.14	0.36	
12/20/06 14:40:45	0.5	219.7	1.2	0.4	0.09	0.14	
12/20/06 14:41:00	0.5	220.4	0.4	0.4	0.08	0.09	
12/20/06 14:41:15	0.4	220.7	0.1	0.4	0.08	0.08	System Bias
12/20/06 14:41:30	0.4	**220.9**	0.0	0.4	0.08	0.07	**220.9 225.0 ppm CO**
12/20/06 14:41:45	0.3	**220.9**	-0.2	0.4	0.07	0.07	
12/20/06 14:42:00	0.3	**220.9**	-0.3	0.5	0.07	0.06	
12/20/06 14:42:15	0.3	**220.9**	-0.4	1.2	0.07	0.06	
12/20/06 14:42:30	0.3	220.7	-0.3	1.9	0.07	0.06	
12/20/06 14:42:45	2.5	208.7	-0.4	11.7	0.07	0.07	
12/20/06 14:43:00	2.7	129.5	0.5	0.8	0.38	0.92	
12/20/06 14:43:15	1.6	70.0	3.6	0.4	0.74	1.34	
12/20/06 14:43:30	6.4	23.8	4.1	0.3	0.34	0.46	
12/20/06 14:43:45	20.8	10.8	2.4	0.3	0.17	0.13	
12/20/06 14:44:00	28.6	3.8	1.3	0.2	0.12	0.07	
12/20/06 14:44:15	27.9	3.1	0.9	0.2	0.09	0.06	
12/20/06 14:44:30	30.5	2.6	0.6	0.1	0.08	0.05	
12/20/06 14:44:45	33.5	2.6	0.3	0.1	0.08	0.05	
12/20/06 14:45:00	35.9	2.1	0.2	0.1	0.08	0.05	
12/20/06 14:45:15	37.4	2.1	0.2	0.1	0.08	0.05	
12/20/06 14:45:30	38.2	2.1	0.2	0.0	0.08	0.05	
12/20/06 14:45:45	39.3	2.1	0.1	0.0	0.08	0.05	
12/20/06 14:46:00	40.4	1.6	0.2	0.1	0.07	0.05	
12/20/06 14:46:15	41.5	1.6	0.1	0.1	0.07	0.05	
12/20/06 14:46:30	43.0	1.6	-0.1	0.1	0.07	0.05	
12/20/06 14:46:45	45.2	1.6	0.0	0.1	0.07	0.05	
12/20/06 14:47:00	47.4	1.5	-0.1	0.0	0.07	0.05	
12/20/06 14:47:15	49.4	1.1	-0.2	0.1	0.07	0.05	
12/20/06 14:47:30	49.4	1.6	-0.3	0.1	0.07	0.05	
12/20/06 14:47:45	48.4	1.6	-0.3	0.0	0.07	0.05	
12/20/06 14:48:00	47.5	1.6	-0.3	0.1	0.07	0.05	
12/20/06 14:48:15	46.8	1.3	-0.4	0.1	0.07	0.05	
12/20/06 14:48:30	46.3	1.2	-0.5	0.1	0.07	0.05	
12/20/06 14:48:45	45.9	1.3	-0.3	0.1	0.07	0.05	
12/20/06 14:49:00	45.6	1.6	-0.4	0.0	0.07	0.05	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 14:49:15	45.4	1.3	-0.5	0.1	0.07	0.05	System Bias
12/20/06 14:49:30	**45.2**	1.1	**-0.4**	0.1	0.07	0.05	44.9 45.0 ppm NO
12/20/06 14:49:45	**45.1**	1.1	**-0.4**	0.0	0.07	0.05	-0.4 Zero SO_2
12/20/06 14:50:00	**44.8**	1.5	**-0.5**	0.0	0.07	0.05	
12/20/06 14:50:15	**44.6**	1.3	**-0.4**	1.3	0.07	0.05	
12/20/06 14:50:30	44.4	15.1	-0.4	1.4	0.07	0.04	
12/20/06 14:50:45	35.1	45.1	-0.4	5.0	0.07	0.09	
12/20/06 14:51:00	66.0	36.1	1.9	21.0	0.55	1.35	
12/20/06 14:51:15	92.4	15.6	7.1	8.3	0.95	1.77	
12/20/06 14:51:30	28.4	2.7	18.5	0.5	0.39	0.55	
12/20/06 14:51:45	9.6	1.3	51.2	0.3	0.13	0.14	
12/20/06 14:52:00	6.3	1.6	84.6	0.3	0.09	0.06	
12/20/06 14:52:15	4.9	1.6	105.6	0.3	0.08	0.05	
12/20/06 14:52:30	4.2	1.5	116.2	0.3	0.07	0.05	
12/20/06 14:52:45	3.7	1.1	120.9	0.3	0.07	0.04	
12/20/06 14:53:00	3.3	1.1	123.2	0.3	0.07	0.04	
12/20/06 14:53:15	3.0	1.3	124.7	0.2	0.07	0.04	
12/20/06 14:53:30	2.8	1.5	125.7	0.2	0.07	0.04	
12/20/06 14:53:45	2.6	1.1	126.3	0.2	0.07	0.04	
12/20/06 14:54:00	2.5	1.1	126.9	0.2	0.07	0.05	
12/20/06 14:54:15	2.3	1.3	127.4	0.2	0.07	0.05	
12/20/06 14:54:30	2.2	1.6	127.8	0.2	0.07	0.04	
12/20/06 14:54:45	2.1	1.3	128.0	0.2	0.07	0.04	
12/20/06 14:55:00	2.0	1.1	128.4	0.2	0.07	0.04	
12/20/06 14:55:15	1.9	1.3	128.9	0.2	0.07	0.04	
12/20/06 14:55:30	1.9	1.6	129.2	0.2	0.07	0.04	
12/20/06 14:55:45	1.8	1.3	129.5	0.2	0.07	0.04	
12/20/06 14:56:00	1.7	1.1	129.8	0.1	0.07	0.04	
12/20/06 14:56:15	1.6	1.1	129.9	0.2	0.07	0.04	
12/20/06 14:56:30	1.6	1.2	130.1	0.1	0.07	0.04	
12/20/06 14:56:45	1.5	1.6	130.2	0.2	0.07	0.04	
12/20/06 14:57:00	1.5	1.1	130.4	0.2	0.07	0.04	
12/20/06 14:57:15	1.5	1.1	130.6	0.2	0.06	0.05	System Bias
12/20/06 14:57:30	**1.4**	**1.6**	**130.8**	**0.2**	**0.07**	**0.04**	130.9 135.0 ppm SO_2
12/20/06 14:57:45	**1.4**	**1.3**	**130.8**	**0.2**	**0.07**	**0.04**	1.4 Zero NO_x
12/20/06 14:58:00	**1.4**	**1.2**	**130.9**	**0.2**	**0.06**	**0.05**	1.4 Zero CO
12/20/06 14:58:15	**1.3**	**1.3**	**130.9**	**0.2**	**0.07**	**0.05**	0.2 Zero C_3H_8
12/20/06 14:58:30	1.3	5.0	131.0	4.2	0.07	0.05	0.06 Zero O_2
12/20/06 14:58:45	1.1	41.8	131.0	5.5	0.06	0.05	0.04 Zero CO_2
12/20/06 14:59:00	5.6	140.7	128.5	5.4	0.25	0.74	
12/20/06 14:59:15	13.4	189.2	113.8	5.3	1.55	3.75	
12/20/06 14:59:30	13.8	213.0	93.3	5.5	2.77	6.01	
12/20/06 14:59:45	14.0	215.2	77.5	5.3	3.27	6.78	
12/20/06 15:00:00	14.2	215.2	69.9	5.3	3.37	6.93	
12/20/06 15:00:15	14.3	213.9	67.0	5.4	3.39	7.03	
12/20/06 15:00:30	14.3	213.7	65.6	5.5	3.42	7.09	
12/20/06 15:00:45	14.4	214.9	64.8	5.4	3.42	7.09	
12/20/06 15:01:00	14.4	217.3	34.3	5.4	3.41	7.03	
12/20/06 15:01:15	14.5	216.9	63.5	5.2	3.42	6.99	
12/20/06 15:01:30	14.7	218.8	63.1	5.3	3.42	7.04	
12/20/06 15:01:45	14.8	218.4	62.9	5.4	3.41	7.12	
12/20/06 15:02:00	15.0	219.2	62.8	5.4	3.42	7.12	
12/20/06 15:02:15	15.3	219.7	62.8	5.2	3.41	7.06	
12/20/06 15:02:30	15.2	217.4	62.7	5.1	3.40	7.01	
12/20/06 15:02:45	15.0	215.9	62.4	5.3	3.40	7.04	Begin Run No. 2-4
12/20/06 15:03:00	**14.9**	**217.3**	**62.2**	**5.3**	**3.40**	**7.10**	Point #1
12/20/06 15:03:15	**14.9**	**218.9**	**61.9**	**5.3**	**3.41**	**7.13**	
12/20/06 15:03:30	**15.2**	**220.2**	**61.9**	**5.3**	**3.40**	**7.08**	
12/20/06 15:03:45	**14.8**	**220.4**	**61.5**	**5.2**	**3.40**	**7.02**	
12/20/06 15:04:00	**14.8**	**217.5**	**61.6**	**5.3**	**3.40**	**7.02**	
12/20/06 15:04:15	**14.8**	**216.2**	**61.4**	**5.3**	**3.41**	**7.07**	
12/20/06 15:04:30	**14.9**	**217.0**	**61.3**	**5.2**	**3.42**	**7.12**	
12/20/06 15:04:45	**14.7**	**217.2**	**61.1**	**5.3**	**3.43**	**7.10**	
12/20/06 15:05:00	**14.7**	**216.3**	**60.7**	**5.0**	**3.42**	**7.03**	
12/20/06 15:05:15	**14.7**	**215.2**	**60.3**	**5.2**	**3.41**	**7.01**	
12/20/06 15:05:30	**14.9**	**214.4**	**60.3**	**5.2**	**3.41**	**7.06**	
12/20/06 15:05:45	**14.8**	**214.7**	**60.5**	**5.3**	**3.43**	**7.11**	
12/20/06 15:06:00	**14.7**	**214.3**	**60.2**	**5.1**	**3.44**	**7.10**	
12/20/06 15:06:15	**14.7**	**213.4**	**60.0**	**5.1**	**3.43**	**7.03**	
12/20/06 15:06:30	**14.8**	**212.4**	**59.6**	**5.2**	**3.42**	**6.99**	
12/20/06 15:06:45	**14.8**	**212.4**	**59.8**	**5.3**	**3.42**	**7.01**	
12/20/06 15:07:00	**14.9**	**214.4**	**59.8**	**5.3**	**3.44**	**7.08**	
12/20/08 15:07:15	**14.8**	**216.9**	**59.8**	**5.1**	**3.45**	**7.11**	
12/20/06 15:07:30	**14.8**	**216.5**	**59.9**	**5.2**	**3.43**	**7.07**	
12/20/06 15:07:45	**14.9**	**214.7**	**60.1**	**5.2**	**3.41**	**7.01**	
12/20/06 15:08:00	**15.0**	**213.8**	**60.1**	**5.1**	**3.42**	**7.01**	
12/20/06 15:08:15	**14.9**	**215.7**	**60.1**	**5.1**	**3.43**	**7.09**	
12/20/06 15:08:30	**14.9**	**217.4**	**60.1**	**5.1**	**3.43**	**7.14**	
12/20/06 15:08:45	**14.9**	**215.4**	**60.0**	**5.0**	**3.42**	**7.10**	
12/20/06 15:09:00	**15.0**	**214.0**	**60.0**	**5.1**	**3.42**	**7.04**	
12/20/06 15:09:15	**15.0**	**214.7**	**59.8**	**5.1**	**3.44**	**7.02**	
12/20/06 15:09:30	**15.0**	**215.2**	**59.3**	**5.1**	**3.44**	**7.04**	
12/20/08 15:09:45	**14.9**	**216.4**	**59.0**	**5.2**	**3.44**	**7.10**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 15:10:00	14.9	217.9	59.0	5.3	3.44	7.12	
12/20/06 15:10:15	14.8	219.4	58.7	5.1	3.44	7.06	
12/20/06 15:10:30	14.7	218.8	58.5	5.2	3.43	7.02	
12/20/06 15:10:45	14.9	218.4	58.7	5.0	3.41	7.02	
12/20/06 15:11:00	14.9	218.5	58.5	5.1	3.41	7.07	
12/20/06 15:11:15	14.8	218.9	58.9	5.1	3.42	7.13	
12/20/06 15:11:30	14.8	219.3	59.0	5.1	3.43	7.14	
12/20/06 15:11:45	14.9	218.4	59.2	5.1	3.42	7.09	
12/20/06 15:12:00	14.9	218.5	59.3	5.1	3.42	7.04	
12/20/06 15:12:15	14.9	219.4	60.1	5.1	3.42	7.01	
12/20/06 15:12:30	14.8	220.0	60.3	5.1	3.42	7.06	
12/20/06 15:12:45	14.8	218.2	60.0	5.1	3.43	7.13	
12/20/06 15:13:00	14.8	217.7	60.1	5.0	3.44	7.15	
12/20/06 15:13:15	14.8	217.2	60.0	5.0	3.44	7.09	
12/20/06 15:13:30	14.8	218.7	59.7	5.0	3.44	7.03	
12/20/06 15:13:45	14.8	219.7	59.4	5.1	3.42	7.02	
12/20/06 15:14:00	14.9	220.0	59.4	5.0	3.42	7.07	
12/20/06 15:14:15	14.9	217.9	60.0	4.9	3.44	7.13	
12/20/06 15:14:30	14.8	214.7	62.6	4.9	3.45	7.13	
12/20/06 15:14:45	14.8	214.4	63.5	4.9	3.45	7.09	
12/20/06 15:15:00	14.8	215.9	61.6	5.0	3.44	7.04	
12/20/06 15:15:15	14.8	216.4	60.0	5.0	3.43	7.03	
12/20/06 15:15:30	14.8	218.3	59.1	5.2	3.44	7.08	
12/20/06 15:15:45	14.7	219.4	59.0	4.9	3.45	7.14	
12/20/06 15:16:00	14.7	217.3	59.0	5.0	3.43	7.13	
12/20/06 15:16:15	14.6	214.4	59.0	5.0	3.42	7.07	
12/20/06 15:16:30	14.8	212.3	59.0	5.0	3.42	7.03	
12/20/06 15:16:45	14.8	212.2	59.1	5.1	3.44	7.06	
12/20/06 15:17:00	14.8	212.8	59.1	4.9	3.45	7.12	
12/20/06 15:17:15	14.8	211.7	58.6	4.9	3.45	7.12	
12/20/06 15:17:30	14.8	209.2	58.2	4.8	3.45	7.06	
12/20/06 15:17:45	14.7	208.4	57.9	4.9	3.45	7.02	
12/20/06 15:18:00	14.8	208.9	57.9	5.0	3.45	7.06	
12/20/06 15:18:15	14.8	209.7	58.1	5.0	3.46	7.13	
12/20/06 15:18:30	14.7	212.0	58.2	4.8	3.46	7.12	
12/20/06 15:18:45	14.7	212.2	58.2	4.8	3.45	7.05	
12/20/06 15:19:00	14.7	210.5	58.2	4.7	3.43	7.02	
12/20/06 15:19:15	14.8	209.7	58.4	4.8	3.43	7.07	
12/20/06 15:19:30	14.8	210.8	58.6	5.0	3.43	7.13	
12/20/06 15:19:45	14.7	213.4	58.4	4.9	3.44	7.13	
12/20/06 15:20:00	14.6	216.5	58.1	4.8	3.44	7.07	
12/20/06 15:20:15	14.6	213.9	57.9	4.9	3.42	7.04	
12/20/06 15:20:30	14.8	211.3	58.2	4.9	3.41	7.07	
12/20/06 15:20:45	14.8	213.8	58.8	5.0	3.43	7.12	
12/20/06 15:21:00	14.8	216.8	59.0	5.1	3.45	7.15	
12/20/06 15:21:15	14.7	216.4	59.0	5.2	3.44	7.11	
12/20/06 15:21:30	14.8	216.2	58.9	5.1	3.44	7.05	
12/20/06 15:21:45	14.7	217.2	59.0	5.2	3.46	7.01	
12/20/06 15:22:00	14.7	218.7	59.0	5.2	3.47	7.06	
12/20/06 15:22:15	14.8	218.8	59.0	5.2	3.48	7.13	
12/20/06 15:22:30	14.8	216.9	58.7	5.2	3.48	7.09	
12/20/06 15:22:45	14.7	217.2	58.7	5.1	3.49	7.02	
12/20/06 15:23:00	14.7	216.2	58.5	5.1	3.48	7.01	Point #2
12/20/06 15:23:15	14.8	215.0	58.6	5.2	3.49	7.06	
12/20/06 15:23:30	14.8	215.0	59.0	5.3	3.51	7.11	
12/20/06 15:23:45	14.6	215.4	58.9	5.2	3.51	7.11	
12/20/06 15:24:00	14.5	215.7	58.7	5.1	3.49	7.07	
12/20/06 15:24:15	14.4	216.4	58.4	5.0	3.48	7.03	
12/20/06 15:24:30	14.5	215.5	58.4	5.1	3.47	7.05	
12/20/06 15:24:45	14.7	214.4	58.5	5.1	3.48	7.10	
12/20/06 15:25:00	14.7	216.3	58.6	5.2	3.50	7.11	
12/20/06 15:25:15	14.6	217.4	58.3	5.2	3.50	7.06	
12/20/06 15:25:30	14.5	217.0	58.4	5.3	3.49	7.01	
12/20/06 15:25:45	14.6	216.7	58.3	5.4	3.49	7.02	
12/20/06 15:26:00	14.5	218.0	58.4	5.3	3.49	7.09	
12/20/06 15:26:15	14.4	219.2	58.5	5.1	3.49	7.13	
12/20/06 15:26:30	14.4	218.0	58.3	5.0	3.49	7.09	
12/20/06 15:26:45	14.5	214.3	58.1	5.1	3.49	7.03	
12/20/06 15:27:00	14.6	212.5	58.1	5.4	3.49	7.02	
12/20/06 15:27:15	14.5	214.0	58.2	5.4	3.51	7.07	
12/20/06 15:27:30	14.4	215.5	58.4	5.2	3.51	7.12	
12/20/06 15:27:45	14.3	214.8	58.2	5.1	3.50	7.10	
12/20/06 15:28:00	14.4	211.5	58.0	5.2	3.48	7.03	
12/20/06 15:28:15	14.5	209.7	57.8	5.2	3.49	7.03	
12/20/06 15:28:30	14.5	210.3	57.9	5.2	3.51	7.09	
12/20/06 15:28:45	14.3	212.2	58.0	5.3	3.52	7.13	
12/20/06 15:29:00	14.3	212.4	57.8	5.2	3.50	7.08	
12/20/06 15:29:15	14.3	211.3	57.5	5.1	3.48	7.02	
12/20/06 15:29:30	14.4	209.3	57.3	5.3	3.49	7.03	
12/20/06 15:29:45	14.4	208.9	57.2	5.2	3.51	7.09	
12/20/06 15:30:00	14.3	210.5	57.4	5.2	3.52	7.12	
12/20/06 15:30:15	14.3	211.7	57.8	5.3	3.50	7.08	
12/20/06 15:30:30	14.3	211.7	58.1	5.3	3.49	7.02	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 15:30:45	14.3	210.2	58.1	5.2	3.50	7.02	
12/20/06 15:31:00	14.3	210.3	58.2	5.3	3.51	7.08	
12/20/06 15:31:15	14.2	211.8	58.1	5.2	3.52	7.12	
12/20/06 15:31:30	14.1	213.3	58.0	5.2	3.52	7.07	
12/20/06 15:31:45	14.1	212.2	57.9	5.1	3.50	7.02	
12/20/06 15:32:00	14.2	210.4	57.9	5.3	3.49	7.03	
12/20/06 15:32:15	14.2	210.8	58.1	5.3	3.49	7.09	
12/20/06 15:32:30	14.2	212.2	57.9	5.3	3.51	7.13	
12/20/06 15:32:45	14.0	212.9	57.9	5.2	3.51	7.09	
12/20/06 15:33:00	14.1	212.2	57.8	5.2	3.50	7.03	
12/20/06 15:33:15	14.1	211.8	57.7	5.1	3.50	7.01	
12/20/06 15:33:30	14.1	211.0	57.7	5.3	3.50	7.06	
12/20/06 15:33:45	14.2	211.4	57.9	5.2	3.51	7.13	
12/20/06 15:34:00	14.2	211.9	58.2	5.2	3.51	7.12	
12/20/06 15:34:15	14.1	211.5	57.9	5.2	3.51	7.06	
12/20/06 15:34:30	14.0	210.8	57.5	5.1	3.50	7.01	
12/20/06 15:34:45	14.1	210.8	57.4	5.4	3.50	7.03	
12/20/06 15:35:00	14.2	211.9	57.5	5.1	3.50	7.09	
12/20/06 15:35:15	14.2	211.9	57.6	4.6	3.51	7.13	
12/20/06 15:35:30	14.2	212.0	57.6	4.5	3.51	7.10	
12/20/06 15:35:45	14.1	212.4	57.5	5.3	3.50	7.04	
12/20/06 15:36:00	14.2	211.7	57.2	5.4	3.48	7.01	
12/20/06 15:36:15	14.4	210.5	58.3	5.4	3.50	7.05	
12/20/06 15:36:30	14.4	211.4	62.1	5.1	3.51	7.11	
12/20/06 15:36:45	14.4	211.0	64.4	4.9	3.51	7.13	
12/20/06 15:37:00	14.3	210.7	64.8	5.2	3.50	7.08	
12/20/06 15:37:15	14.2	212.2	64.2	4.9	3.49	7.02	
12/20/06 15:37:30	14.2	213.0	63.6	5.2	3.48	7.03	
12/20/06 15:37:45	14.3	213.4	62.8	5.1	3.48	7.10	
12/20/06 15:38:00	14.4	212.7	61.6	5.2	3.49	7.15	
12/20/06 15:38:15	14.4	211.2	61.5	5.1	3.49	7.11	
12/20/06 15:38:30	14.3	210.4	62.3	5.0	3.49	7.07	
12/20/06 15:38:45	14.3	210.8	61.9	4.8	3.48	7.02	
12/20/06 15:39:00	14.3	212.2	61.2	4.7	3.48	7.06	
12/20/06 15:39:15	14.4	212.9	60.4	4.7	3.48	7.13	
12/20/06 15:39:30	14.5	212.4	59.9	4.8	3.48	7.15	
12/20/06 15:39:45	14.5	213.2	59.5	4.9	3.49	7.11	
12/20/06 15:40:00	14.4	218.0	59.2	4.9	3.49	7.04	
12/20/06 15:40:15	14.3	214.9	58.9	4.9	3.49	7.01	
12/20/06 15:40:30	14.4	213.9	59.0	4.8	3.47	7.03	
12/20/06 15:40:45	14.4	213.2	59.3	4.9	3.47	7.08	
12/20/06 15:41:00	14.5	210.5	59.4	5.0	3.47	7.11	
12/20/06 15:41:15	14.6	207.9	59.5	4.9	3.49	7.13	
12/20/06 15:41:30	14.6	206.9	59.3	4.9	3.51	7.09	
12/20/06 15:41:45	14.6	206.5	58.6	5.0	3.51	7.03	
12/20/06 15:42:00	14.7	208.2	58.0	4.9	3.50	7.00	
12/20/06 15:42:15	14.7	210.0	57.8	4.8	3.50	7.01	
12/20/06 15:42:30	14.7	211.5	58.0	4.8	3.50	7.06	
12/20/06 15:42:45	14.7	210.8	58.4	4.7	3.50	7.10	
12/20/06 15:43:00	14.7	208.3	58.2	4.9	3.51	7.13	Point #3
12/20/06 15:43:15	14.6	208.3	57.9	4.9	3.51	7.09	
12/20/06 15:43:30	14.5	207.5	57.4	5.1	3.51	7.02	
12/20/06 15:43:45	14.7	205.7	57.0	5.2	3.50	6.98	
12/20/06 15:44:00	14.7	205.3	56.6	4.9	3.51	6.99	
12/20/06 15:44:15	14.7	207.2	56.7	5.1	3.51	7.06	
12/20/06 15:44:30	14.8	208.3	57.0	5.0	3.52	7.11	
12/20/06 15:44:45	14.8	207.5	56.9	5.0	3.52	7.10	
12/20/06 15:45:00	14.8	207.7	56.9	5.0	3.51	7.05	
12/20/06 15:45:15	14.8	208.8	56.6	5.1	3.50	6.98	
12/20/06 15:45:30	14.8	209.7	56.5	5.2	3.49	7.00	
12/20/06 15:45:45	14.8	210.4	56.5	5.2	3.48	7.08	
12/20/06 15:46:00	14.8	211.7	56.7	5.1	3.49	7.13	
12/20/06 15:46:15	14.8	211.7	56.6	5.1	3.51	7.09	
12/20/06 15:46:30	14.7	210.7	56.5	4.9	3.50	7.03	
12/20/06 15:46:45	14.7	208.8	56.1	4.9	3.50	6.99	
12/20/06 15:47:00	14.8	208.7	55.9	5.2	3.50	7.04	
12/20/06 15:47:15	14.8	210.5	55.9	5.2	3.51	7.11	
12/20/06 15:47:30	14.8	210.9	56.2	5.3	3.52	7.12	
12/20/06 15:47:45	14.7	210.5	56.6	5.1	3.51	7.08	
12/20/06 15:48:00	14.8	209.9	56.7	5.1	3.50	7.03	
12/20/06 15:48:15	14.8	210.3	56.6	5.0	3.49	7.02	
12/20/06 15:48:30	14.8	211.2	56.7	4.8	3.49	7.06	
12/20/06 15:48:45	14.8	209.3	57.2	4.8	3.49	7.12	
12/20/06 15:49:00	14.9	206.3	57.1	4.7	3.50	7.13	
12/20/06 15:49:15	14.9	206.3	56.5	4.7	3.51	7.09	
12/20/06 15:49:30	14.9	205.7	56.1	5.0	3.50	7.04	
12/20/06 15:49:45	14.9	206.0	55.6	4.9	3.47	7.02	
12/20/06 15:50:00	14.9	208.0	55.2	4.8	3.46	7.02	
12/20/06 15:50:15	14.9	207.7	55.3	4.7	3.44	7.09	
12/20/06 15:50:30	15.0	204.0	55.5	4.6	3.45	7.14	
12/20/06 15:50:45	15.0	199.6	56.0	4.7	3.46	7.14	
12/20/06 15:51:00	15.0	197.9	56.0	4.9	3.47	7.10	
12/20/06 15:51:15	15.0	200.2	56.1	4.9	3.48	7.04	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 15:51:30	15.1	204.5	55.7	4.7	3.47	7.00	
12/20/06 15:51:45	15.0	206.4	55.6	4.4	3.46	7.02	
12/20/06 15:52:00	15.0	204.2	55.5	4.5	3.44	7.08	
12/20/06 15:52:15	15.0	203.0	55.5	4.6	3.45	7.13	
12/20/06 15:52:30	15.0	202.2	55.4	4.8	3.45	7.15	
12/20/06 15:52:45	14.9	201.0	55.6	4.6	3.45	7.11	
12/20/06 15:53:00	14.9	201.3	55.9	4.5	3.44	7.05	
12/20/06 15:53:15	14.9	199.8	55.6	4.5	3.44	7.00	
12/20/06 15:53:30	14.9	200.1	55.5	4.5	3.44	7.03	
12/20/06 15:53:45	14.9	204.2	55.9	4.4	3.45	7.11	
12/20/06 15:54:00	14.8	206.0	56.0	4.8	3.46	7.16	
12/20/06 15:54:15	14.7	203.4	55.6	4.9	3.45	7.10	
12/20/06 15:54:30	14.7	202.2	55.2	4.7	3.43	7.03	
12/20/06 15:54:45	14.7	204.4	55.1	4.5	3.42	7.02	
12/20/06 15:55:00	14.7	207.2	55.1	4.7	3.42	7.09	
12/20/06 15:55:15	14.6	211.3	55.0	4.7	3.42	7.16	
12/20/06 15:55:30	14.4	212.2	55.0	4.8	3.41	7.15	
12/20/06 15:55:45	14.4	213.3	55.0	4.6	3.39	7.10	
12/20/06 15:56:00	14.5	210.5	55.4	4.7	3.39	7.07	
12/20/06 15:56:15	14.6	208.3	55.6	4.8	3.39	7.11	
12/20/06 15:56:30	14.6	210.0	55.9	4.6	3.39	7.15	
12/20/06 15:56:45	14.5	212.7	56.1	4.5	3.41	7.15	
12/20/06 15:57:00	14.6	211.9	55.9	4.4	3.40	7.10	
12/20/06 15:57:15	14.6	209.7	55.7	4.5	3.39	7.05	
12/20/06 15:57:30	14.6	209.2	55.8	4.4	3.39	7.08	
12/20/06 15:57:45	14.6	211.0	55.8	4.7	3.39	7.15	
12/20/06 15:58:00	14.5	212.0	55.8	4.6	3.40	7.16	
12/20/06 15:58:15	14.5	211.3	55.8	4.4	3.41	7.11	
12/20/06 15:58:30	14.6	208.3	55.6	4.4	3.41	7.05	
12/20/06 15:58:45	14.6	208.7	56.1	4.5	3.42	7.07	
12/20/06 15:59:00	14.6	210.9	56.3	4.8	3.42	7.13	
12/20/06 15:59:15	14.5	213.2	56.0	4.7	3.41	7.16	
12/20/06 15:59:30	14.5	212.2	55.8	4.7	3.40	7.12	
12/20/06 15:59:45	14.5	209.5	57.7	4.4	3.39	7.04	
12/20/06 16:00:00	14.7	207.3	59.4	4.7	3.40	7.04	
12/20/06 16:00:15	14.7	207.3	58.4	4.6	3.42	7.10	
12/20/06 16:00:30	14.7	209.4	56.9	4.5	3.44	7.13	
12/20/06 16:00:45	14.6	207.5	56.0	4.5	3.43	7.09	
12/20/06 16:01:00	14.6	204.9	55.5	4.7	3.42	7.03	
12/20/06 16:01:15	14.7	203.4	55.2	4.7	3.42	7.02	
12/20/06 16:01:30	14.7	204.4	55.4	4.6	3.42	7.08	
12/20/06 16:01:45	14.6	204.8	55.7	4.6	3.43	7.13	
12/20/06 16:02:00	14.6	205.7	55.5	4.6	3.43	7.11	
12/20/06 16:02:15	14.6	206.0	54.9	4.8	3.43	7.04	
12/20/06 16:02:30	14.7	205.4	54.6	4.5	3.42	6.99	
12/20/06 16:02:45	14.7	203.9	54.3	4.6	3.42	7.03	
12/20/06 16:03:00	14.8	202.3	54.6	4.7	3.42	7.10	End Run No. 2-4
12/20/06 16:03:15	14.8	201.5	55.3	4.7	3.43	7.12	
12/20/06 16:03:30	14.7	201.8	55.5	4.6	3.44	7.08	
12/20/06 16:03:45	14.7	203.3	55.5	4.5	3.43	7.02	
12/20/06 16:04:00	14.8	205.3	56.4	4.8	3.43	6.97	
12/20/06 16:04:15	14.8	201.9	57.1	7.1	3.43	7.01	
12/20/06 16:04:30	14.8	148.6	56.4	4.9	3.43	7.07	
12/20/06 16:04:45	16.1	111.5	57.1	3.0	3.27	6.04	
12/20/06 16:05:00	9.6	68.9	62.7	0.5	2.37	3.80	
12/20/06 16:05:15	4.9	28.8	66.9	0.1	1.82	3.05	
12/20/06 16:05:30	3.0	7.7	65.5	0.1	1.30	1.10	
12/20/06 16:05:45	1.9	2.5	51.9	0.1	3.05	0.28	
12/20/06 16:06:00	1.1	1.6	32.9	0.1	4.24	0.12	
12/20/06 16:06:15	0.8	1.6	19.8	0.0	4.50	0.09	
12/20/06 16:06:30	0.7	1.6	12.8	0.1	4.54	0.08	
12/20/06 16:06:45	0.6	1.6	8.7	0.1	4.55	0.07	
12/20/06 16:07:00	0.6	1.6	6.4	0.0	4.55	0.07	
12/20/06 16:07:15	0.5	1.2	4.9	0.0	4.56	0.06	System Bias
12/20/06 16:07:30	0.4	1.6	4.0	0.0	4.57	0.06	4.59 4.50% O_2
12/20/06 16:07:45	0.4	1.2	3.4	1.8	4.59	0.06	
12/20/06 16:08:00	0.2	21.8	2.8	0.7	4.60	0.06	
12/20/06 16:08:15	1.4	44.9	2.2	0.1	4.60	0.16	
12/20/06 16:08:30	5.0	32.1	3.3	0.0	4.41	1.55	
12/20/06 16:08:45	2.1	10.5	7.4	0.1	3.77	2.46	
12/20/06 16:09:00	0.5	1.3	7.7	0.1	1.62	3.59	
12/20/06 16:09:15	0.3	0.6	5.0	0.1	0.41	4.22	
12/20/06 16:09:30	0.3	0.3	3.1	0.0	0.15	4.33	
12/20/06 16:09:45	0.2	0.5	1.9	0.1	0.10	4.32	
12/20/06 16:10:00	0.2	0.6	1.3	0.1	0.08	4.36	
12/20/06 16:10:15	0.2	0.6	1.0	0.1	0.08	4.45	
12/20/06 16:10:30	0.2	0.3	0.8	0.0	0.07	4.52	
12/20/06 16:10:45	0.2	0.2	0.7	0.1	0.07	4.55	
12/20/06 16:11:00	0.2	0.3	0.4	0.1	0.07	4.57	
12/20/06 16:11:15	0.2	0.6	0.3	0.1	0.07	4.58	System Bias
12/20/06 16:11:30	0.2	0.3	0.3	0.1	0.07	4.58	4.59 4.50% CO_2
12/20/06 16:11:45	0.2	0.5	0.3	0.1	0.06	4.59	
12/20/06 16:12:00	0.1	1.1	0.3	2.0	0.06	4.59	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 16:12:15	0.4	20.7	0.2	0.5	0.06	4.59	
12/20/06 16:12:30	1.0	63.5	0.2	0.2	0.10	4.66	
12/20/06 16:12:45	1.0	121.1	1.8	0.1	0.73	5.05	
12/20/06 16:13:00	0.8	190.7	5.1	0.1	0.78	3.36	
12/20/06 16:13:15	0.4	213.2	5.0	0.1	0.30	0.99	
12/20/06 16:13:30	0.3	219.4	3.1	0.0	0.12	0.26	
12/20/06 16:13:45	0.2	220.3	1.8	0.0	0.08	0.13	
12/20/06 16:14:00	0.2	220.4	1.2	0.0	0.08	0.10	
12/20/06 16:14:15	0.2	220.8	0.6	0.0	0.07	0.08	System Bias
12/20/06 16:14:30	0.2	**221.4**	0.3	0.1	0.07	0.08	**221.2 225.0 ppm CO**
12/20/06 16:14:45	0.2	**221.0**	0.3	0.0	0.07	0.07	
12/20/06 16:15:00	0.2	**221.2**	0.1	0.0	0.07	0.06	
12/20/06 16:15:15	0.2	**221.4**	0.1	2.0	0.07	0.06	
12/20/06 16:15:30	1.0	217.9	-0.1	0.3	0.07	0.06	
12/20/06 16:15:45	5.2	187.4	0.0	0.2	0.12	0.27	
12/20/06 16:16:00	3.0	99.3	1.6	0.5	0.73	1.46	
12/20/06 16:16:15	2.3	48.7	4.4	0.1	0.68	1.00	
12/20/06 16:16:30	9.0	16.3	4.8	0.1	0.25	0.27	
12/20/06 16:16:45	21.9	7.0	3.4	0.1	0.16	0.10	
12/20/06 16:17:00	24.3	3.6	2.4	0.1	0.11	0.06	
12/20/06 16:17:15	23.4	3.1	1.7	0.1	0.08	0.06	
12/20/06 16:17:30	26.4	3.1	1.2	0.1	0.08	0.05	
12/20/06 16:17:45	29.2	2.7	0.9	0.1	0.07	0.05	
12/20/06 16:18:00	32.4	2.6	0.7	0.1	0.07	0.05	
12/20/06 16:18:15	34.0	2.2	0.5	0.1	0.07	0.05	
12/20/06 16:18:30	35.7	2.1	0.4	0.0	0.07	0.05	
12/20/06 16:18:45	37.0	2.1	0.5	0.0	0.07	0.05	
12/20/06 16:19:00	38.2	2.1	0.4	0.0	0.07	0.05	
12/20/06 16:19:15	39.3	1.7	0.3	0.1	0.07	0.05	
12/20/06 16:19:30	41.6	1.6	0.3	0.0	0.07	0.05	
12/20/06 16:19:45	43.8	1.6	0.2	0.0	0.07	0.05	
12/20/06 16:20:00	46.5	1.6	0.2	0.0	0.07	0.04	
12/20/06 16:20:15	47.5	1.6	0.0	0.0	0.06	0.04	
12/20/06 16:20:30	46.9	1.6	0.0	0.0	0.06	0.04	
12/20/06 16:20:45	46.1	1.6	-0.1	0.0	0.06	0.05	
12/20/06 16:21:00	45.4	1.6	-0.2	0.0	0.06	0.05	
12/20/06 16:21:15	45.1	1.6	-0.1	0.0	0.06	0.05	
12/20/06 16:21:30	44.9	1.1	-0.2	0.0	0.06	0.05	
12/20/06 16:21:45	44.7	1.5	-0.2	0.0	0.06	0.05	
12/20/06 16:22:00	44.6	1.3	-0.2	0.0	0.06	0.05	System Bias
12/20/06 16:22:15	**44.6**	1.6	-0.2	0.0	0.06	0.05	**44.5 45.0 ppm NO**
12/20/06 16:22:30	**44.6**	1.1	-0.3	0.0	0.06	0.05	**-0.3 Zero SO_2**
12/20/06 16:22:45	**44.5**	1.1	-0.3	0.0	0.06	0.05	
12/20/06 16:23:00	**44.5**	1.3	-0.3	0.0	0.06	0.05	
12/20/06 16:23:15	44.4	1.1	-0.2	2.1	0.06	0.05	
12/20/06 16:23:30	42.7	30.8	-0.2	3.1	0.06	0.05	
12/20/06 16:23:45	35.8	80.3	0.0	2.6	0.09	0.24	
12/20/06 16:24:00	53.4	65.0	4.7	10.3	1.03	2.42	
12/20/06 16:24:15	49.4	29.3	13.9	2.6	1.73	3.12	
12/20/06 16:24:30	21.7	4.8	21.0	0.3	0.77	1.15	
12/20/06 16:24:45	12.8	1.8	49.2	0.2	0.18	0.24	
12/20/06 16:25:00	6.4	1.6	86.0	0.2	0.08	0.09	
12/20/06 16:25:15	5.1	1.6	108.3	0.2	0.06	0.06	
12/20/06 16:25:30	4.1	1.1	118.3	0.1	0.06	0.06	
12/20/06 16:25:45	3.7	1.1	122.8	0.1	0.06	0.05	
12/20/06 16:26:00	3.2	1.1	125.1	0.1	0.06	0.05	
12/20/06 16:26:15	3.0	1.1	126.4	0.1	0.06	0.05	
12/20/06 16:26:30	2.7	1.3	127.2	0.1	0.06	0.05	
12/20/06 16:26:45	2.6	1.5	128.0	0.1	0.06	0.04	
12/20/06 16:27:00	2.3	1.1	128.6	0.1	0.06	0.05	
12/20/06 16:27:15	2.3	1.1	129.0	0.1	0.06	0.04	
12/20/06 16:27:30	2.1	1.3	129.4	0.1	0.06	0.04	
12/20/06 16:27:45	2.1	1.2	129.9	0.1	0.06	0.04	
12/20/06 16:28:00	1.9	1.1	130.2	0.1	0.06	0.04	
12/20/06 16:28:15	1.9	1.1	130.5	0.0	0.06	0.04	
12/20/06 16:28:30	1.8	1.1	131.0	0.0	0.06	0.04	
12/20/06 16:28:45	1.7	1.1	131.2	0.0	0.06	0.04	
12/20/06 16:29:00	1.7	1.1	131.3	0.0	0.06	0.04	
12/20/06 16:29:15	1.6	1.1	131.5	0.0	0.06	0.04	
12/20/06 16:29:30	1.6	1.3	131.7	0.0	0.06	0.04	
12/20/06 16:29:45	1.5	1.2	132.0	0.0	0.05	0.04	System Bias
12/20/06 16:30:00	1.5	1.1	**132.0**	0.0	0.06	0.04	**132.1 135.0 ppm SO_2**
12/20/06 16:30:15	1.5	1.1	**132.1**	0.0	0.06	0.04	**1.4 Zero NO_x**
12/20/06 16:30:30	1.4	1.1	**132.0**	0.0	0.06	0.04	**1.3 Zero CO**
12/20/06 16:30:45	1.4	1.8	**132.2**	3.7	0.06	0.04	**0.9 Zero C_3H_8**
12/20/06 16:31:00	1.4	53.5	132.3	1.2	0.06	0.04	**0.06 Zero O_2**
12/20/06 16:31:15	3.8	85.0	129.4	18.7	0.29	0.82	**0.04 Zero CO_2**
12/20/06 16:31:30	8.4	51.0	116.7	47.2	1.53	3.22	
12/20/06 16:31:45	2.7	19.6	101.3	48.6	1.49	2.52	
12/20/06 16:32:00	0.9	3.3	74.0	49.0	0.48	0.66	
12/20/06 16:32:15	0.4	2.1	40.7	49.3	0.13	0.16	
12/20/06 16:32:30	0.4	0.8	20.6	49.2	0.08	0.08	
12/20/06 16:32:45	0.4	1.5	11.7	49.0	0.07	0.05	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 16:33:00	0.4	1.3	7.6	48.0	0.07	0.05	
12/20/06 16:33:15	0.4	1.1	5.4	47.8	0.06	0.05	Calibration
12/20/06 16:33:30	0.4	1.3	4.0	**47.7**	0.06	0.04	**47.7 50.0 ppm C_3H_8/N_2**
12/20/06 16:33:45	0.4	1.1	3.0	**47.6**	0.06	0.05	
12/20/06 16:34:00	0.4	1.6	2.6	**47.6**	0.06	0.05	
12/20/06 16:34:15	0.4	1.6	2.1	**47.8**	0.06	0.05	
12/20/06 16:34:30	0.4	1.1	1.7	47.7	0.05	0.05	
12/20/06 16:34:45	0.5	2.2	1.5	9.0	0.05	0.05	
12/20/06 16:35:00	0.9	64.5	1.3	4.9	0.05	0.05	
12/20/06 16:35:15	5.6	131.6	3.7	4.7	0.38	1.06	
12/20/06 16:35:30	13.5	185.7	16.8	4.7	1.87	4.10	
12/20/06 16:35:45	13.9	197.9	35.4	4.9	3.04	6.12	
12/20/06 16:36:00	14.0	203.9	49.2	4.8	3.45	6.81	
12/20/06 16:36:15	14.0	206.5	55.9	4.8	3.52	6.96	
12/20/06 16:36:30	14.0	209.2	58.5	4.7	3.53	6.94	
12/20/06 16:36:45	14.0	207.9	59.5	4.6	3.51	6.90	
12/20/06 16:37:00	14.2	205.2	60.3	4.7	3.50	6.90	
12/20/06 16:37:15	14.3	206.0	60.9	4.7	3.52	6.97	
12/20/06 16:37:30	14.3	207.9	60.9	4.7	3.53	7.03	
12/20/06 16:37:45	14.8	207.3	60.6	4.5	3.52	7.01	Begin Run No. 3-1
12/20/06 16:38:00	**14.8**	**202.9**	**59.9**	**4.6**	**3.51**	**6.94**	**Point #1**
12/20/06 16:38:15	**14.6**	**201.7**	**59.5**	**4.6**	**3.52**	**6.92**	
12/20/06 16:38:30	**14.5**	**201.4**	**59.6**	**4.6**	**3.53**	**6.97**	
12/20/06 16:38:45	**14.7**	**201.9**	**59.4**	**4.6**	**3.54**	**7.03**	
12/20/06 16:39:00	**14.4**	**202.9**	**59.0**	**4.5**	**3.54**	**7.02**	
12/20/06 16:39:15	**14.3**	**202.9**	**58.8**	**4.5**	**3.54**	**6.95**	
12/20/06 16:39:30	**14.5**	**201.7**	**58.9**	**4.6**	**3.53**	**6.92**	
12/20/06 16:39:45	**14.5**	**201.9**	**59.1**	**4.6**	**3.52**	**6.96**	
12/20/06 16:40:00	**14.4**	**202.7**	**59.1**	**4.5**	**3.54**	**7.01**	
12/20/06 16:40:15	**14.3**	**202.9**	**58.7**	**4.5**	**3.55**	**7.01**	
12/20/06 16:40:30	**14.3**	**202.2**	**58.2**	**4.6**	**3.54**	**6.95**	
12/20/06 16:40:45	**14.2**	**202.0**	**57.8**	**4.5**	**3.53**	**6.91**	
12/20/06 16:41:00	**14.4**	**201.9**	**57.4**	**4.4**	**3.53**	**6.93**	
12/20/06 16:41:15	**14.4**	**200.7**	**57.4**	**4.5**	**3.54**	**7.00**	
12/20/06 16:41:30	**14.3**	**201.2**	**57.9**	**4.5**	**3.55**	**7.01**	
12/20/06 16:41:45	**14.1**	**201.5**	**58.3**	**4.5**	**3.54**	**6.96**	
12/20/06 16:42:00	**14.1**	**199.9**	**58.1**	**4.5**	**3.53**	**6.90**	
12/20/06 16:42:15	**14.1**	**198.4**	**57.6**	**4.3**	**3.53**	**6.92**	
12/20/06 16:42:30	**14.1**	**200.7**	**57.3**	**4.4**	**3.53**	**6.98**	
12/20/06 16:42:45	**14.0**	**201.3**	**57.3**	**4.2**	**3.54**	**7.01**	
12/20/06 16:43:00	**13.9**	**199.9**	**56.9**	**4.1**	**3.53**	**6.97**	
12/20/06 16:43:15	**13.9**	**197.1**	**56.6**	**4.2**	**3.53**	**6.92**	
12/20/06 16:43:30	**14.0**	**194.2**	**56.5**	**4.3**	**3.53**	**6.91**	
12/20/06 16:43:45	**14.1**	**194.2**	**56.9**	**4.4**	**3.53**	**6.96**	
12/20/06 16:44:00	**14.0**	**196.2**	**56.9**	**4.3**	**3.56**	**6.99**	
12/20/06 16:44:15	**14.0**	**195.7**	**56.9**	**4.3**	**3.56**	**6.94**	
12/20/06 16:44:30	**14.1**	**194.2**	**56.9**	**4.3**	**3.55**	**6.88**	
12/20/06 16:44:45	**14.1**	**194.3**	**57.2**	**4.3**	**3.55**	**6.88**	
12/20/06 16:45:00	**14.1**	**195.7**	**57.5**	**4.4**	**3.56**	**6.94**	
12/20/06 16:45:15	**14.1**	**197.2**	**57.3**	**4.4**	**3.55**	**6.98**	
12/20/06 16:45:30	**14.1**	**197.2**	**57.2**	**4.2**	**3.54**	**6.95**	
12/20/06 16:45:45	**14.1**	**195.8**	**57.5**	**4.2**	**3.54**	**6.89**	
12/20/06 16:46:00	**14.0**	**195.2**	**58.1**	**4.3**	**3.53**	**6.86**	
12/20/06 16:46:15	**13.9**	**196.9**	**58.3**	**4.4**	**3.54**	**6.91**	
12/20/06 16:46:30	**13.9**	**199.7**	**57.7**	**4.4**	**3.55**	**6.97**	
12/20/06 16:46:45	**13.8**	**199.9**	**57.2**	**4.2**	**3.55**	**6.95**	
12/20/06 16:47:00	**13.8**	**198.2**	**57.0**	**4.3**	**3.54**	**6.90**	
12/20/06 16:47:15	**13.8**	**196.7**	**56.8**	**4.3**	**3.53**	**6.86**	
12/20/06 16:47:30	**13.8**	**196.9**	**56.7**	**4.5**	**3.54**	**6.88**	
12/20/06 16:47:45	**13.9**	**198.6**	**56.9**	**4.5**	**3.54**	**6.95**	
12/20/06 16:48:00	**13.9**	**199.7**	**57.0**	**4.6**	**3.55**	**6.97**	
12/20/06 16:48:15	**13.8**	**198.9**	**57.3**	**4.4**	**3.54**	**6.92**	
12/20/06 16:48:30	**13.8**	**196.2**	**57.6**	**4.5**	**3.54**	**6.88**	
12/20/06 16:48:45	**13.8**	**194.7**	**57.5**	**4.5**	**3.54**	**6.90**	
12/20/06 16:49:00	**13.8**	**195.7**	**57.4**	**4.5**	**3.56**	**6.96**	
12/20/06 16:49:15	**13.7**	**198.3**	**57.3**	**4.4**	**3.56**	**6.99**	
12/20/06 16:49:30	**13.7**	**198.4**	**58.8**	**4.4**	**3.55**	**6.93**	
12/20/06 16:49:45	**13.9**	**196.3**	**59.5**	**4.8**	**3.53**	**6.86**	
12/20/06 16:50:00	**13.9**	**194.4**	**58.1**	**4.8**	**3.53**	**6.90**	
12/20/06 16:50:15	**13.8**	**194.6**	**57.3**	**4.8**	**3.54**	**6.97**	
12/20/06 16:50:30	**13.7**	**195.9**	**57.2**	**4.6**	**3.55**	**6.99**	
12/20/06 16:50:45	**13.7**	**196.8**	**56.4**	**4.6**	**3.55**	**6.94**	
12/20/06 16:51:00	**13.7**	**194.7**	**56.1**	**4.6**	**3.53**	**6.88**	
12/20/06 16:51:15	**13.7**	**192.1**	**56.0**	**4.5**	**3.51**	**6.89**	
12/20/06 16:51:30	**13.9**	**189.2**	**55.6**	**4.6**	**3.52**	**6.95**	
12/20/06 16:51:45	**13.8**	**189.9**	**55.7**	**4.5**	**3.53**	**6.99**	
12/20/06 16:52:00	**13.7**	**192.2**	**55.8**	**4.5**	**3.54**	**6.95**	
12/20/06 16:52:15	**13.7**	**192.1**	**55.6**	**4.4**	**3.54**	**6.89**	
12/20/06 16:52:30	**13.7**	**190.2**	**55.1**	**4.5**	**3.53**	**6.87**	
12/20/06 16:52:45	**13.8**	**188.7**	**54.9**	**4.7**	**3.53**	**6.92**	
12/20/06 16:53:00	**13.8**	**188.9**	**54.9**	**4.8**	**3.54**	**6.96**	
12/20/06 16:53:15	**13.8**	**189.8**	**55.3**	**4.6**	**3.55**	**6.98**	
12/20/06 16:53:30	**13.8**	**191.2**	**55.4**	**4.5**	**3.54**	**6.93**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 16:53:45	13.7	190.2	55.1	4.6	3.52	6.89	
12/20/06 16:54:00	13.7	189.7	55.0	4.5	3.52	6.88	
12/20/06 16:54:15	13.9	189.6	54.9	4.5	3.53	6.93	
12/20/06 16:54:30	13.9	189.4	54.9	4.5	3.53	6.98	
12/20/06 16:54:45	13.8	189.0	55.2	4.6	3.53	6.94	
12/20/06 16:55:00	13.8	189.4	55.4	4.6	3.51	6.88	
12/20/06 16:55:15	13.9	189.9	54.9	4.7	3.50	6.84	
12/20/06 16:55:30	13.9	191.2	55.1	4.5	3.50	6.88	
12/20/06 16:55:45	13.9	192.4	55.4	4.6	3.51	6.94	
12/20/06 16:56:00	13.9	195.7	55.8	4.5	3.51	6.97	
12/20/06 16:56:15	13.9	197.1	56.2	4.3	3.51	6.92	
12/20/06 16:56:30	13.9	195.4	56.2	4.2	3.48	6.87	
12/20/06 16:56:45	14.0	193.6	56.2	4.3	3.47	6.89	
12/20/06 16:57:00	14.1	193.4	56.5	4.5	3.48	6.95	
12/20/06 16:57:15	14.2	196.6	56.8	4.8	3.49	6.99	
12/20/06 16:57:30	14.2	200.2	56.8	4.6	3.50	6.94	
12/20/06 16:57:45	14.1	200.4	56.5	4.5	3.49	6.88	
12/20/06 16:58:00	14.1	197.7	56.5	4.4	3.48	6.87	Point #2
12/20/06 16:58:15	14.2	195.8	56.4	4.5	3.48	6.92	
12/20/06 16:58:30	14.3	197.4	56.4	4.5	3.50	6.97	
12/20/06 16:58:45	14.2	200.6	56.3	4.4	3.51	6.96	
12/20/06 16:59:00	14.1	200.7	56.2	4.4	3.49	6.91	
12/20/06 16:59:15	14.2	198.6	56.1	4.4	3.47	6.86	
12/20/06 16:59:30	14.3	196.9	56.2	4.4	3.48	6.88	
12/20/06 16:59:45	14.4	195.9	56.3	4.4	3.49	6.94	
12/20/06 17:00:00	14.4	195.9	56.4	4.4	3.50	6.97	
12/20/06 17:00:15	14.4	196.1	56.3	4.5	3.52	6.92	
12/20/06 17:00:30	14.4	194.9	56.3	4.5	3.52	6.85	
12/20/06 17:00:45	14.5	193.9	56.1	4.6	3.51	6.88	
12/20/06 17:01:00	14.5	195.4	56.1	4.7	3.51	6.91	
12/20/06 17:01:15	14.4	197.4	56.2	4.7	3.51	6.94	
12/20/06 17:01:30	14.4	199.2	56.3	4.5	3.51	6.90	
12/20/06 17:01:45	14.4	198.8	56.2	4.6	3.50	6.86	
12/20/06 17:02:00	14.4	198.2	55.9	4.6	3.50	6.87	
12/20/06 17:02:15	14.5	199.4	56.0	4.8	3.51	6.93	
12/20/06 17:02:30	14.5	200.7	56.1	4.5	3.52	6.96	
12/20/08 17:02:45	14.4	199.4	56.1	4.5	3.51	6.91	
12/20/06 17:03:00	14.6	197.4	56.0	4.7	3.49	6.87	
12/20/06 17:03:15	14.6	197.9	55.9	5.1	3.50	6.89	
12/20/06 17:03:30	14.5	199.2	56.3	5.1	3.52	6.95	
12/20/06 17:03:45	14.5	199.7	56.1	4.9	3.51	6.97	
12/20/06 17:04:00	14.4	199.4	55.6	4.7	3.51	6.92	
12/20/06 17:04:15	14.5	197.8	55.3	4.5	3.51	6.85	
12/20/06 17:04:30	14.6	195.4	55.2	4.5	3.52	6.88	
12/20/06 17:04:45	14.7	194.7	55.1	4.5	3.53	6.96	
12/20/06 17:05:00	14.5	196.4	55.0	4.5	3.53	6.99	
12/20/06 17:05:15	14.6	196.2	55.0	4.6	3.52	6.93	
12/20/06 17:05:30	14.6	194.2	55.2	4.5	3.50	6.87	
12/20/06 17:05:45	14.8	193.8	55.5	4.8	3.50	6.88	
12/20/06 17:08:00	14.6	195.4	55.9	4.9	3.53	6.94	
12/20/06 17:06:15	14.5	196.1	56.2	4.7	3.52	6.97	
12/20/06 17:06:30	14.4	195.4	58.0	4.8	3.51	6.93	
12/20/06 17:06:45	14.5	195.9	55.8	4.8	3.51	6.87	
12/20/06 17:07:00	14.6	196.7	55.6	4.9	3.51	6.88	
12/20/06 17:07:15	14.7	197.1	56.1	4.7	3.51	6.95	
12/20/06 17:07:30	14.6	196.2	56.5	4.8	3.52	6.98	
12/20/06 17:07:45	14.6	196.1	56.3	4.6	3.51	6.92	
12/20/06 17:08:00	14.6	196.2	55.8	4.7	3.52	6.86	
12/20/06 17:08:15	14.7	195.2	55.8	4.6	3.52	6.89	
12/20/06 17:08:30	14.7	195.2	55.8	4.9	3.52	6.94	
12/20/06 17:08:45	14.6	195.6	55.7	4.7	3.53	6.95	
12/20/06 17:09:00	14.6	194.2	55.7	3.7	3.53	6.90	
12/20/06 17:09:15	14.7	192.6	55.5	4.3	3.52	6.85	
12/20/06 17:09:30	14.7	191.9	55.3	4.6	3.53	6.86	
12/20/06 17:09:45	14.7	191.8	55.4	4.8	3.53	6.93	
12/20/06 17:10:00	14.7	192.7	55.6	4.8	3.53	6.97	
12/20/06 17:10:15	14.7	192.9	55.3	4.7	3.53	6.93	
12/20/06 17:10:30	14.7	192.4	55.4	4.5	3.52	6.87	
12/20/06 17:10:45	14.8	191.6	56.1	4.4	3.52	6.87	
12/20/06 17:11:00	14.7	191.7	56.6	4.5	3.53	6.93	
12/20/06 17:11:15	14.8	192.3	56.3	4.6	3.53	6.95	
12/20/06 17:11:30	14.8	192.9	55.8	4.6	3.51	6.92	
12/20/06 17:11:45	14.7	192.2	55.4	4.9	3.50	6.86	
12/20/06 17:12:00	14.6	193.4	55.5	4.9	3.51	6.86	
12/20/06 17:12:15	14.8	196.1	55.6	5.0	3.52	6.94	
12/20/06 17:12:30	14.6	198.7	56.0	4.8	3.50	6.99	
12/20/06 17:12:45	14.6	199.7	55.8	4.6	3.46	6.97	
12/20/06 17:13:00	14.7	199.4	55.5	4.7	3.44	6.90	
12/20/06 17:13:15	14.8	200.2	56.0	5.0	3.44	6.90	
12/20/06 17:13:30	14.8	201.9	57.3	4.9	3.44	6.97	
12/20/06 17:13:45	14.6	202.7	58.6	4.8	3.44	7.02	
12/20/06 17:14:00	14.5	200.9	59.2	4.9	3.41	6.99	
12/20/06 17:14:15	14.6	198.2	59.1	4.7	3.40	6.93	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 17:14:30	14.7	197.7	59.0	4.8	3.41	6.91	
12/20/06 17:14:45	14.7	199.8	59.3	4.8	3.42	6.98	
12/20/06 17:15:00	14.5	201.2	58.9	4.8	3.42	7.03	
12/20/06 17:15:15	14.5	198.9	58.6	4.7	3.41	7.00	
12/20/06 17:15:30	14.5	196.2	58.2	4.9	3.41	6.92	
12/20/06 17:15:45	14.7	195.7	58.6	4.9	3.43	6.90	
12/20/06 17:16:00	14.7	197.2	59.3	4.9	3.45	6.96	
12/20/06 17:16:15	14.7	197.9	60.5	4.8	3.45	7.02	
12/20/06 17:16:30	14.7	197.4	60.2	4.8	3.44	6.99	
12/20/06 17:16:45	14.7	196.4	59.8	4.8	3.42	6.93	
12/20/06 17:17:00	14.7	197.9	59.3	4.8	3.42	6.91	
12/20/06 17:17:15	14.7	199.1	58.9	4.9	3.43	6.97	
12/20/06 17:17:30	14.5	200.2	58.6	4.8	3.42	7.03	
12/20/06 17:17:45	14.5	201.8	58.4	4.7	3.42	7.00	
12/20/06 17:18:00	14.4	202.2	57.7	5.2	3.42	6.95	Point #3
12/20/06 17:18:15	14.4	203.3	57.6	5.3	3.41	6.93	
12/20/06 17:18:30	14.4	204.7	57.4	5.0	3.41	6.97	
12/20/06 17:18:45	14.2	204.2	57.2	5.0	3.40	7.03	
12/20/06 17:19:00	14.2	202.4	56.9	3.9	3.38	7.03	
12/20/06 17:19:15	14.2	201.9	56.7	4.6	3.38	6.98	
12/20/06 17:19:30	14.2	202.4	56.7	5.1	3.39	6.97	
12/20/06 17:19:45	14.2	203.2	57.1	5.2	3.40	7.00	
12/20/06 17:20:00	14.2	202.2	56.8	5.1	3.39	7.02	
12/20/06 17:20:15	14.2	201.0	56.7	5.1	3.39	6.97	
12/20/06 17:20:30	14.2	201.2	57.4	5.1	3.40	6.94	
12/20/06 17:20:45	14.2	203.2	58.1	5.3	3.40	6.98	
12/20/06 17:21:00	14.0	206.2	58.3	5.2	3.40	7.05	
12/20/06 17:21:15	14.0	206.7	57.7	5.1	3.38	7.02	
12/20/06 17:21:30	14.0	205.2	57.1	5.0	3.36	6.97	
12/20/06 17:21:45	14.1	203.4	56.8	5.1	3.37	6.98	
12/20/06 17:22:00	14.0	204.7	56.8	4.9	3.39	7.05	
12/20/06 17:22:15	13.9	208.0	56.9	4.9	3.40	7.08	
12/20/06 17:22:30	13.9	208.9	56.9	5.1	3.38	7.03	
12/20/06 17:22:45	13.9	207.7	56.7	5.4	3.37	6.99	
12/20/06 17:23:00	13.9	207.9	56.7	5.1	3.38	7.01	
12/20/06 17:23:15	14.0	209.0	56.9	5.1	3.38	7.07	
12/20/06 17:23:30	13.9	210.9	57.0	5.0	3.37	7.08	
12/20/06 17:23:45	13.8	213.5	56.9	5.0	3.37	7.03	
12/20/06 17:24:00	13.8	214.2	56.4	4.9	3.35	7.00	
12/20/06 17:24:15	13.9	213.4	56.5	5.0	3.33	7.04	
12/20/06 17:24:30	13.9	214.7	56.8	4.8	3.35	7.10	
12/20/06 17:24:45	13.8	216.9	56.7	5.0	3.38	7.09	
12/20/06 17:25:00	13.6	218.4	56.3	5.1	3.36	7.03	
12/20/06 17:25:15	13.6	219.0	56.1	5.1	3.34	7.02	
12/20/06 17:25:30	13.7	218.9	56.4	5.1	3.35	7.07	
12/20/06 17:25:45	13.7	218.9	56.5	5.3	3.36	7.12	
12/20/06 17:26:00	13.6	218.7	56.3	5.4	3.38	7.09	
12/20/06 17:26:15	13.6	218.4	55.9	5.4	3.38	7.02	
12/20/06 17:26:30	13.6	220.4	55.7	5.4	3.37	7.00	
12/20/06 17:26:45	13.6	223.2	56.0	5.4	3.36	7.07	
12/20/06 17:27:00	13.5	224.4	56.4	5.4	3.35	7.13	
12/20/06 17:27:15	13.5	224.4	56.3	5.1	3.35	7.11	
12/20/06 17:27:30	13.5	223.7	56.0	4.1	3.36	7.04	
12/20/06 17:27:45	13.7	221.4	55.8	5.0	3.36	7.03	
12/20/06 17:28:00	13.7	220.4	55.6	5.3	3.37	7.10	
12/20/06 17:28:15	13.7	221.8	55.5	5.5	3.37	7.15	
12/20/06 17:28:30	13.7	222.4	55.5	5.4	3.37	7.12	
12/20/06 17:28:45	13.6	222.8	55.6	5.3	3.35	7.05	
12/20/06 17:29:00	13.7	222.7	56.0	5.3	3.35	7.04	
12/20/06 17:29:15	13.8	221.9	56.7	5.3	3.35	7.11	
12/20/06 17:29:30	13.8	221.2	57.4	5.3	3.36	7.15	
12/20/06 17:29:45	13.7	220.9	57.3	5.2	3.37	7.11	
12/20/06 17:30:00	13.7	220.9	56.4	5.0	3.35	7.04	
12/20/06 17:30:15	13.8	220.2	55.9	5.0	3.35	7.04	
12/20/06 17:30:30	13.9	220.4	56.1	5.2	3.36	7.10	
12/20/06 17:30:45	13.9	222.0	56.4	5.0	3.37	7.16	
12/20/06 17:31:00	13.8	222.7	56.8	5.1	3.36	7.14	
12/20/06 17:31:15	13.8	220.7	56.5	5.1	3.35	7.07	
12/20/06 17:31:30	13.9	219.9	56.1	5.2	3.35	7.02	
12/20/06 17:31:45	13.9	220.3	55.9	5.5	3.36	7.04	
12/20/06 17:32:00	13.9	222.2	56.2	5.1	3.36	7.12	
12/20/06 17:32:15	14.0	222.3	56.4	5.2	3.36	7.16	
12/20/06 17:32:30	14.0	221.2	56.5	5.1	3.36	7.11	
12/20/06 17:32:45	14.0	220.5	56.7	5.2	3.36	7.05	
12/20/06 17:33:00	14.0	220.2	56.8	5.1	3.36	7.02	
12/20/06 17:33:15	14.0	219.8	56.7	5.0	3.35	7.05	
12/20/06 17:33:30	14.0	219.4	56.6	5.2	3.35	7.11	
12/20/06 17:33:45	14.1	220.2	66.4	5.0	3.36	7.14	
12/20/06 17:34:00	14.0	220.2	56.6	5.0	3.37	7.09	
12/20/06 17:34:15	14.1	218.3	57.2	5.1	3.36	7.03	
12/20/06 17:34:30	14.1	217.9	57.8	5.2	3.37	7.01	
12/20/06 17:34:45	14.1	220.4	57.6	5.4	3.36	7.06	
12/20/06 17:35:00	14.0	222.7	57.4	5.4	3.36	7.12	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 17:35:15	**14.1**	**223.3**	**57.3**	**5.1**	**3.35**	**7.13**	
12/20/06 17:35:30	**14.1**	**221.9**	**57.2**	**5.2**	**3.35**	**7.07**	
12/20/06 17:35:45	**14.1**	**220.9**	**57.2**	**5.2**	**3.35**	**7.03**	
12/20/06 17:36:00	**14.2**	**220.9**	**57.3**	**5.2**	**3.34**	**7.03**	
12/20/06 17:36:15	**14.2**	**221.7**	**57.1**	**5.3**	**3.35**	**7.07**	
12/20/06 17:36:30	**14.2**	**220.9**	**56.8**	**5.2**	**3.36**	**7.13**	
12/20/06 17:36:45	**14.2**	**219.4**	**56.7**	**5.2**	**3.36**	**7.14**	
12/20/06 17:37:00	**14.2**	**218.7**	**56.6**	**5.1**	**3.38**	**7.10**	
12/20/06 17:37:15	**14.1**	**219.5**	**56.4**	**5.0**	**3.37**	**7.04**	
12/20/06 17:37:30	**14.1**	**220.7**	**56.3**	**5.0**	**3.35**	**7.00**	
12/20/06 17:37:45	**14.2**	**221.3**	**56.2**	**5.1**	**3.34**	**7.02**	
12/20/06 17:38:00	14.2	216.4	56.3	57.3	3.34	7.08	**End Run No. 3-1**
12/20/06 17:38:15	14.7	158.7	56.4	8.3	3.35	7.13	
12/20/06 17:38:30	13.3	76.5	54.9	0.8	3.27	6.39	
12/20/06 17:38:45	7.6	25.3	45.5	0.6	2.39	3.16	
12/20/06 17:39:00	3.3	5.3	30.0	0.4	2.84	0.78	
12/20/06 17:39:15	1.6	2.2	17.3	0.4	4.13	0.21	
12/20/06 17:39:30	1.0	1.6	11.8	0.3	4.49	0.12	
12/20/06 17:39:45	0.8	1.6	9.8	0.3	4.55	0.09	
12/20/06 17:40:00	0.6	1.6	7.9	0.2	4.56	0.08	
12/20/06 17:40:15	0.6	1.6	5.7	0.2	4.56	0.07	
12/20/06 17:40:30	0.5	1.3	3.9	0.2	4.57	0.07	
12/20/06 17:40:45	0.4	1.5	2.6	0.2	4.57	0.06	
12/20/06 17:41:00	0.4	1.6	1.8	0.2	4.58	0.06	**System Bias**
12/20/06 17:41:15	0.4	1.6	1.2	0.1	**4.60**	0.06	**4.61 4.50% O_2**
12/20/06 17:41:30	0.3	1.3	0.8	2.5	**4.61**	0.06	
12/20/06 17:41:45	1.2	27.3	0.6	1.9	**4.61**	0.06	
12/20/06 17:42:00	6.0	56.0	0.6	0.2	**4.61**	0.21	
12/20/06 17:42:15	4.6	38.0	2.8	0.2	4.35	1.82	
12/20/06 17:42:30	1.2	13.1	7.7	0.2	3.71	2.63	
12/20/06 17:42:45	0.5	1.3	7.7	0.2	1.60	3.64	
12/20/06 17:43:00	0.3	0.6	4.6	0.3	0.40	4.24	
12/20/06 17:43:15	0.3	0.6	2.4	0.2	0.14	4.33	
12/20/06 17:43:30	0.2	0.3	1.2	0.3	0.09	4.33	
12/20/06 17:43:45	0.2	0.5	0.7	0.2	0.07	4.38	
12/20/06 17:44:00	0.2	0.1	0.3	0.2	0.07	4.47	
12/20/06 17:44:15	0.2	0.6	0.3	0.2	0.06	4.54	
12/20/06 17:44:30	0.2	0.6	0.1	0.2	0.06	4.57	
12/20/06 17:44:45	0.2	0.5	0.1	0.2	0.06	4.59	
12/20/06 17:45:00	0.2	0.1	0.0	0.2	0.06	4.60	
12/20/06 17:45:15	0.2	0.2	-0.1	0.2	0.05	4.60	**System Bias**
12/20/06 17:45:30	0.2	0.3	-0.3	0.2	0.05	**4.60**	**4.61 4.50% CO_2**
12/20/06 17:45:45	0.2	0.5	-0.2	0.2	0.05	**4.60**	
12/20/06 17:46:00	0.2	0.1	-0.2	0.2	0.05	**4.61**	
12/20/06 17:46:15	0.2	1.8	-0.1	1.8	0.05	**4.61**	
12/20/06 17:46:30	1.0	18.8	-0.3	1.2	0.05	4.61	
12/20/06 17:46:45	2.7	67.9	-0.3	0.3	0.09	4.67	
12/20/06 17:47:00	1.4	132.5	1.1	0.2	0.58	4.84	
12/20/06 17:47:15	0.6	198.9	3.1	0.2	0.55	2.81	
12/20/06 17:47:30	0.4	215.4	2.6	0.2	0.22	0.75	
12/20/06 17:47:45	0.3	220.0	1.5	0.2	0.10	0.22	
12/20/06 17:48:00	0.2	220.7	0.7	0.2	0.07	0.13	
12/20/06 17:48:15	0.2	220.5	0.4	0.2	0.07	0.10	
12/20/06 17:48:30	0.2	221.2	0.1	0.2	0.06	0.09	
12/20/06 17:48:45	0.2	221.0	-0.2	0.2	0.06	0.08	**System Bias**
12/20/06 17:49:00	0.2	**221.4**	-0.2	0.1	0.06	0.08	**221.4 225.0 ppm CO**
12/20/06 17:49:15	0.2	**221.4**	-0.2	0.2	0.06	0.08	
12/20/06 17:49:30	0.2	**221.4**	-0.2	0.3	0.06	0.06	
12/20/06 17:49:45	0.2	**221.4**	-0.3	2.3	0.06	0.06	
12/20/06 17:50:00	0.3	214.4	-0.4	2.6	0.06	0.06	
12/20/06 17:50:15	0.4	140.5	0.2	0.3	0.34	0.86	
12/20/06 17:50:30	1.0	77.5	2.9	0.2	0.79	1.50	
12/20/06 17:50:45	4.1	25.6	4.3	0.1	0.39	0.55	
12/20/06 17:51:00	18.9	11.3	2.9	0.1	0.18	0.15	
12/20/06 17:51:15	24.5	4.3	1.7	0.1	0.12	0.07	
12/20/06 17:51:30	24.3	3.3	1.1	0.1	0.08	0.06	
12/20/06 17:51:45	25.0	3.1	0.7	0.1	0.07	0.06	
12/20/06 17:52:00	27.8	2.8	0.5	0.1	0.07	0.05	
12/20/06 17:52:15	30.7	2.6	0.3	0.0	0.07	0.05	
12/20/06 17:52:30	33.0	2.6	0.3	0.1	0.07	0.05	
12/20/06 17:52:45	34.6	2.1	0.3	0.0	0.07	0.05	
12/20/06 17:53:00	35.8	2.1	0.2	0.1	0.07	0.05	
12/20/06 17:53:15	37.0	2.1	0.3	0.0	0.06	0.05	
12/20/06 17:53:30	38.1	2.1	0.3	0.0	0.06	0.05	
12/20/06 17:53:45	39.6	1.6	0.1	0.1	0.06	0.05	
12/20/06 17:54:00	41.6	1.6	0.1	0.0	0.06	0.05	
12/20/06 17:54:15	44.1	1.6	0.1	0.1	0.06	0.05	
12/20/06 17:54:30	46.0	1.6	0.0	0.1	0.06	0.05	
12/20/06 17:54:45	46.5	1.6	0.1	0.1	0.06	0.05	
12/20/06 17:55:00	45.9	1.6	-0.1	0.0	0.06	0.05	
12/20/06 17:55:15	45.0	1.6	-0.2	0.1	0.06	0.05	
12/20/06 17:55:30	44.3	1.6	-0.2	0.1	0.06	0.05	
12/20/06 17:55:45	43.9	1.6	-0.2	0.0	0.06	0.05	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 17:56:00	43.7	1.6	-0.1	0.1	0.06	0.05	
12/20/06 17:56:15	43.5	1.6	-0.3	0.0	0.06	0.05	
12/20/06 17:56:30	43.3	1.6	-0.3	0.0	0.06	0.05	
12/20/06 17:56:45	43.3	1.6	-0.4	0.1	0.06	0.05	System Bias
12/20/06 17:57:00	**43.1**	1.3	**-0.4**	0.1	0.05	0.05	**43.0 45.0 ppm NO**
12/20/06 17:57:15	**43.1**	1.6	**-0.4**	0.0	0.06	0.05	**-0.4 Zero SO_2**
12/20/06 17:57:30	**43.0**	1.6	**-0.4**	0.1	0.06	0.05	
12/20/06 17:57:45	**42.9**	2.1	**-0.3**	1.5	0.06	0.05	
12/20/06 17:58:00	42.9	16.3	-0.3	0.3	0.05	0.05	
12/20/06 17:58:15	34.2	36.8	-0.2	6.9	0.08	0.18	
12/20/06 17:58:30	29.8	26.1	2.0	14.0	0.56	1.29	
12/20/06 17:58:45	47.4	6.5	7.0	2.1	0.61	1.04	
12/20/06 17:59:00	22.5	2.3	27.5	0.3	0.19	0.28	
12/20/06 17:59:15	7.3	1.6	65.7	0.3	0.09	0.09	
12/20/06 17:59:30	5.4	1.6	95.5	0.3	0.07	0.06	
12/20/06 17:59:45	4.5	1.6	112.2	0.3	0.06	0.06	
12/20/06 18:00:00	3.9	1.6	120.0	0.2	0.05	0.05	
12/20/06 18:00:15	3.4	1.6	123.7	0.2	0.05	0.05	
12/20/06 18:00:30	3.1	1.6	125.6	0.2	0.05	0.05	
12/20/06 18:00:45	2.8	1.6	126.8	0.2	0.05	0.06	
12/20/06 18:01:00	2.6	1.6	127.6	0.2	0.05	0.06	
12/20/06 18:01:15	2.5	1.6	128.3	0.2	0.05	0.06	
12/20/06 18:01:30	2.3	1.3	128.9	0.2	0.05	0.05	
12/20/06 18:01:45	2.2	1.2	129.4	0.1	0.05	0.05	
12/20/06 18:02:00	2.1	1.6	129.7	0.1	0.05	0.04	
12/20/06 18:02:15	2.0	1.6	130.0	0.1	0.05	0.04	
12/20/06 18:02:30	1.9	1.6	130.3	0.1	0.05	0.04	
12/20/06 18:02:45	1.8	1.2	130.5	0.1	0.05	0.04	
12/20/06 18:03:00	1.8	1.6	130.8	0.1	0.05	0.04	
12/20/06 18:03:15	1.7	1.6	131.2	0.1	0.05	0.04	
12/20/06 18:03:30	1.7	1.6	131.4	0.1	0.05	0.05	
12/20/06 18:03:45	1.6	1.1	131.6	0.1	0.05	0.04	
12/20/06 18:04:00	1.6	1.1	131.8	0.1	0.05	0.04	System Bias
12/20/06 18:04:15	**1.5**	**1.5**	**131.9**	**0.1**	**0.05**	**0.04**	**131.9 135.0 ppm SO_2**
12/20/06 18:04:30	**1.5**	**1.3**	**132.0**	**0.1**	**0.05**	**0.04**	**1.4 Zero NO_x**
12/20/06 18:04:45	**1.4**	**1.5**	**132.0**	**0.1**	**0.05**	**0.04**	**1.3 Zero CO**
12/20/06 18:05:00	**1.4**	**1.1**	**131.8**	**0.9**	**0.05**	**0.04**	**0.3 Zero C_3H_8**
12/20/06 18:05:15	1.3	14.7	131.6	2.7	0.05	0.04	**0.05 Zero O_2**
12/20/06 18:05:30	3.9	57.5	131.5	6.7	0.05	0.07	**0.04 Zero CO_2**
12/20/06 18:05:45	9.2	56.3	128.7	44.6	0.54	1.50	
12/20/06 18:06:00	4.3	27.8	119.7	48.4	1.19	2.43	Calibration
12/20/06 18:06:15	1.2	4.8	94.0	**48.7**	0.56	0.92	**49.0 50.0 ppm C_3H_8/N_2**
12/20/06 18:06:30	0.4	2.1	54.5	**49.0**	0.14	0.20	
12/20/06 18:06:45	0.4	1.6	27.5	**49.1**	0.07	0.08	
12/20/06 18:07:00	0.4	1.3	14.6	**49.1**	0.06	0.06	
12/20/06 18:07:15	0.4	1.2	9.1	48.4	0.06	0.05	
12/20/06 18:07:30	0.4	1.6	6.3	47.9	0.06	0.05	
12/20/06 18:07:45	0.4	5.6	4.6	13.8	0.06	0.05	
12/20/06 18:08:00	0.3	46.6	3.5	4.9	0.06	0.05	
12/20/06 18:08:15	6.7	149.8	6.0	4.8	0.26	0.83	
12/20/06 18:08:30	13.2	196.4	23.7	4.9	1.55	3.96	
12/20/06 18:08:45	13.6	222.0	50.9	4.8	2.70	6.22	
12/20/06 18:09:00	13.7	225.7	72.5	4.7	3.15	6.96	
12/20/06 18:09:15	13.8	223.5	82.6	4.7	3.23	7.03	
12/20/06 18:09:30	13.9	222.2	86.8	4.9	3.24	7.01	
12/20/06 18:09:45	14.0	223.4	88.8	4.9	3.26	7.04	
12/20/06 18:10:00	14.0	225.6	90.7	4.8	3.27	7.11	
12/20/06 18:10:15	14.3	226.3	92.1	4.6	3.26	7.14	
12/20/06 18:10:30	14.6	223.7	92.7	4.8	3.25	7.08	
12/20/06 18:10:45	15.1	222.8	92.6	4.7	3.26	7.03	Begin Run No. 3-2
12/20/06 18:11:00	**14.5**	**224.7**	**92.1**	**4.8**	**3.27**	**7.06**	Point #1
12/20/06 18:11:15	**14.3**	**227.4**	**91.9**	**4.8**	**3.27**	**7.14**	
12/20/06 18:11:30	**14.3**	**228.7**	**91.5**	**4.6**	**3.27**	**7.13**	
12/20/06 18:11:45	**14.2**	**226.8**	**91.3**	**4.7**	**3.26**	**7.06**	
12/20/06 18:12:00	**14.3**	**226.4**	**91.1**	**4.8**	**3.24**	**7.05**	
12/20/06 18:12:15	**14.3**	**227.8**	**91.5**	**4.7**	**3.25**	**7.09**	
12/20/06 18:12:30	**14.2**	**229.4**	**92.0**	**4.6**	**3.25**	**7.17**	
12/20/06 18:12:45	**14.1**	**230.5**	**92.6**	**4.7**	**3.24**	**7.16**	
12/20/06 18:13:00	**14.1**	**230.4**	**92.5**	**4.4**	**3.23**	**7.10**	
12/20/06 18:13:15	**14.2**	**227.6**	**92.6**	**4.6**	**3.22**	**7.05**	
12/20/06 18:13:30	**14.3**	**226.6**	**93.0**	**4.7**	**3.23**	**7.08**	
12/20/06 18:13:45	**14.3**	**227.8**	**93.4**	**4.7**	**3.25**	**7.15**	
12/20/06 18:14:00	**14.1**	**228.9**	**93.5**	**4.5**	**3.25**	**7.15**	
12/20/06 18:14:15	**14.2**	**228.0**	**93.5**	**4.5**	**3.24**	**7.09**	
12/20/06 18:14:30	**14.2**	**226.1**	**93.7**	**4.6**	**3.24**	**7.04**	
12/20/06 18:14:45	**14.3**	**225.9**	**93.6**	**4.6**	**3.23**	**7.08**	
12/20/06 18:15:00	**14.4**	**228.9**	**93.8**	**4.5**	**3.24**	**7.15**	
12/20/06 18:15:15	**14.4**	**230.9**	**94.1**	**4.3**	**3.25**	**7.16**	
12/20/06 18:15:30	**14.3**	**230.2**	**94.7**	**4.3**	**3.25**	**7.10**	
12/20/06 18:15:45	**14.2**	**228.9**	**95.2**	**4.4**	**3.24**	**7.06**	
12/20/06 18:16:00	**14.3**	**229.7**	**95.1**	**4.5**	**3.25**	**7.10**	
12/20/06 18:16:15	**14.2**	**232.4**	**94.5**	**4.4**	**3.26**	**7.16**	
12/20/06 18:16:30	**14.2**	**232.9**	**94.0**	**4.4**	**3.26**	**7.15**	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 18:16:45	14.1	230.3	93.4	4.4	3.24	7.09	
12/20/06 18:17:00	14.0	230.7	92.7	4.4	3.24	7.06	
12/20/06 18:17:15	13.9	233.0	92.0	4.5	3.26	7.10	
12/20/06 18:17:30	13.9	233.6	91.3	4.4	3.26	7.17	
12/20/06 18:17:45	13.8	233.4	90.4	4.4	3.25	7.15	
12/20/06 18:18:00	13.9	232.7	89.5	4.4	3.24	7.08	
12/20/06 18:18:15	14.0	230.0	89.3	4.5	3.25	7.07	
12/20/06 18:18:30	14.0	228.7	89.8	4.6	3.26	7.13	
12/20/06 18:18:45	13.9	230.0	89.5	4.5	3.28	7.18	
12/20/06 18:19:00	13.7	229.9	88.1	4.5	3.29	7.14	
12/20/06 18:19:15	13.8	226.3	86.0	4.5	3.28	7.08	
12/20/06 18:19:30	13.9	223.9	83.8	4.7	3.28	7.07	
12/20/06 18:19:45	13.9	223.5	81.8	4.8	3.29	7.13	
12/20/06 18:20:00	13.9	223.9	79.9	4.8	3.31	7.18	
12/20/06 18:20:15	13.8	223.3	78.4	4.6	3.32	7.14	
12/20/06 18:20:30	13.7	222.2	76.7	4.7	3.31	7.08	
12/20/06 18:20:45	13.8	222.5	75.1	4.6	3.31	7.06	
12/20/06 18:21:00	13.7	223.4	74.4	4.7	3.31	7.12	
12/20/06 18:21:15	13.6	222.7	74.2	4.7	3.31	7.18	
12/20/06 18:21:30	13.6	221.2	73.7	4.7	3.31	7.16	
12/20/06 18:21:45	13.6	218.2	72.7	4.6	3.30	7.10	
12/20/06 18:22:00	13.6	217.2	71.5	4.5	3.30	7.06	
12/20/06 18:22:15	13.6	215.9	70.1	4.6	3.30	7.09	
12/20/06 18:22:30	13.6	215.4	69.1	4.8	3.32	7.16	
12/20/06 18:22:45	13.6	214.7	68.3	4.9	3.32	7.18	
12/20/06 18:23:00	13.6	215.4	67.4	4.9	3.32	7.13	
12/20/06 18:23:15	13.6	214.8	66.4	4.8	3.31	7.07	
12/20/06 18:23:30	13.6	214.2	65.8	4.9	3.32	7.07	
12/20/06 18:23:45	13.7	215.4	66.2	5.0	3.33	7.13	
12/20/06 18:24:00	13.5	217.2	69.2	4.9	3.33	7.16	
12/20/06 18:24:15	13.5	218.2	72.2	4.9	3.32	7.13	
12/20/06 18:24:30	13.5	218.7	73.2	4.9	3.30	7.08	
12/20/06 18:24:45	13.5	219.3	73.2	5.0	3.30	7.06	
12/20/06 18:25:00	13.5	221.2	72.5	5.0	3.30	7.12	
12/20/06 18:25:15	13.6	222.2	71.9	4.8	3.30	7.17	
12/20/06 18:25:30	13.7	219.9	71.2	4.8	3.29	7.13	
12/20/06 18:25:45	13.5	214.2	71.0	5.1	3.29	7.07	
12/20/06 18:26:00	13.5	213.7	70.8	5.0	3.30	7.08	
12/20/06 18:26:15	13.5	216.7	69.6	4.9	3.31	7.15	
12/20/06 18:26:30	13.3	219.2	68.3	4.9	3.30	7.18	
12/20/06 18:26:45	13.2	219.0	68.2	4.8	3.29	7.11	
12/20/06 18:27:00	13.3	219.7	68.3	4.8	3.28	7.06	
12/20/06 18:27:15	13.4	218.8	68.6	5.0	3.28	7.09	
12/20/06 18:27:30	13.4	218.9	69.3	4.9	3.29	7.17	
12/20/06 18:27:45	13.4	220.9	69.6	4.9	3.30	7.18	
12/20/06 18:28:00	13.4	220.4	69.6	5.1	3.30	7.12	
12/20/06 18:28:15	13.4	218.4	69.3	5.1	3.30	7.07	
12/20/06 18:28:30	13.5	218.7	69.6	5.0	3.29	7.10	
12/20/06 18:28:45	13.5	218.8	70.0	4.8	3.30	7.17	
12/20/06 18:29:00	13.5	217.8	70.3	4.8	3.29	7.19	
12/20/06 18:29:15	13.5	216.0	70.5	4.6	3.29	7.14	
12/20/06 18:29:30	13.6	214.3	70.9	4.8	3.29	7.07	
12/20/06 18:29:45	13.6	214.4	71.4	4.8	3.30	7.09	
12/20/06 18:30:00	13.6	216.2	71.8	4.9	3.31	7.16	
12/20/06 18:30:15	13.6	215.9	71.7	5.2	3.30	7.20	
12/20/06 18:30:30	13.8	214.5	71.7	5.3	3.30	7.15	
12/20/06 18:30:45	13.6	212.2	71.6	5.0	3.30	7.09	
12/20/06 18:31:00	13.6	211.8	71.4	5.0	3.31	7.08	Point #2
12/20/06 18:31:15	13.7	213.0	71.8	5.1	3.32	7.14	
12/20/06 18:31:30	13.8	213.8	72.6	5.0	3.31	7.19	
12/20/06 18:31:45	13.7	214.8	73.0	4.9	3.30	7.15	
12/20/06 18:32:00	13.6	213.3	73.0	4.8	3.30	7.09	
12/20/06 18:32:15	13.8	210.7	72.7	5.0	3.30	7.11	
12/20/06 18:32:30	13.9	210.3	72.6	5.1	3.32	7.17	
12/20/06 18:32:45	13.7	211.9	72.4	5.0	3.33	7.20	
12/20/06 18:33:00	13.7	210.0	72.1	5.0	3.32	7.14	
12/20/06 18:33:15	13.8	207.4	72.0	5.1	3.31	7.08	
12/20/06 18:33:30	13.9	209.7	72.0	5.1	3.32	7.09	
12/20/06 18:33:45	13.8	213.9	72.5	5.2	3.32	7.16	
12/20/06 18:34:00	13.8	216.5	73.1	5.0	3.30	7.19	
12/20/06 18:34:15	13.9	215.7	73.7	4.9	3.29	7.13	
12/20/06 18:34:30	13.9	213.8	73.6	5.0	3.29	7.08	
12/20/06 18:34:45	14.1	213.8	73.7	5.1	3.29	7.11	
12/20/06 18:35:00	14.1	216.0	74.1	5.0	3.30	7.18	
12/20/06 18:35:15	14.1	218.5	74.7	4.9	3.29	7.19	
12/20/06 18:35:30	14.1	220.8	74.9	3.6	3.27	7.13	
12/20/06 18:35:45	14.1	219.8	74.8	4.6	3.26	7.08	
12/20/06 18:36:00	14.2	219.4	74.9	4.9	3.26	7.12	
12/20/06 18:36:15	14.2	220.2	74.6	5.0	3.28	7.19	
12/20/06 18:36:30	14.2	220.9	74.8	5.1	3.28	7.20	
12/20/06 18:36:45	14.2	220.8	74.8	5.1	3.28	7.12	
12/20/06 18:37:00	14.2	221.5	75.3	5.1	3.27	7.08	
12/20/06 18:37:15	14.2	225.2	76.9	5.4	3.27	7.11	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 18:37:30	14.2	229.7	77.6	5.2	3.27	7.19	
12/20/06 18:37:45	14.3	231.5	77.6	4.8	3.26	7.20	
12/20/06 18:38:00	14.1	228.2	77.3	5.0	3.24	7.16	
12/20/06 18:38:15	14.2	225.3	77.1	4.8	3.22	7.10	
12/20/06 18:38:30	14.4	225.3	77.1	4.8	3.22	7.11	
12/20/06 18:38:45	14.4	226.5	77.3	5.1	3.22	7.19	
12/20/06 18:39:00	14.4	227.6	77.6	5.2	3.21	7.24	
12/20/06 18:39:15	14.4	230.3	77.7	4.9	3.21	7.20	
12/20/06 18:39:30	14.3	230.7	77.3	4.8	3.21	7.13	
12/20/06 18:39:45	14.2	226.8	76.9	4.6	3.19	7.11	
12/20/06 18:40:00	14.4	224.2	76.4	4.8	3.19	7.16	
12/20/06 18:40:15	14.5	226.2	76.6	4.8	3.21	7.23	
12/20/06 18:40:30	14.4	229.9	77.0	4.7	3.22	7.24	
12/20/06 18:40:45	14.4	230.2	77.5	4.8	3.21	7.19	
12/20/06 18:41:00	14.3	228.3	78.9	4.8	3.19	7.15	
12/20/06 18:41:15	14.4	226.8	79.4	5.0	3.20	7.14	
12/20/06 18:41:30	14.4	226.8	79.4	4.8	3.21	7.18	
12/20/06 18:41:45	14.6	227.3	80.3	5.0	3.23	7.22	
12/20/06 18:42:00	14.5	225.8	81.5	4.8	3.24	7.19	
12/20/06 18:42:15	14.5	223.9	80.7	4.7	3.22	7.13	
12/20/06 18:42:30	14.5	223.5	78.8	5.0	3.22	7.11	
12/20/06 18:42:45	14.6	224.0	77.0	4.9	3.22	7.16	
12/20/06 18:43:00	14.5	224.0	75.8	5.0	3.24	7.22	
12/20/06 18:43:15	14.5	223.4	74.8	4.8	3.23	7.21	
12/20/06 18:43:30	14.5	220.8	73.6	3.9	3.24	7.15	
12/20/06 18:43:45	14.4	219.3	72.5	4.6	3.23	7.11	
12/20/06 18:44:00	14.6	217.8	71.7	4.9	3.22	7.15	
12/20/06 18:44:15	14.6	218.4	70.9	4.9	3.23	7.22	
12/20/06 18:44:30	14.6	219.2	70.0	4.8	3.26	7.22	
12/20/06 18:44:45	14.5	219.2	68.9	4.8	3.26	7.16	
12/20/06 18:45:00	14.5	218.0	68.8	4.9	3.25	7.10	
12/20/06 18:45:15	14.6	216.8	69.7	4.9	3.24	7.12	
12/20/06 18:45:30	14.6	216.8	70.3	4.9	3.24	7.18	
12/20/06 18:45:45	14.6	216.3	70.1	5.0	3.24	7.23	
12/20/06 18:46:00	14.6	217.4	69.6	4.9	3.25	7.20	
12/20/06 18:46:15	14.6	215.2	68.5	4.8	3.25	7.13	
12/20/06 18:46:30	14.7	211.8	67.4	4.9	3.23	7.10	
12/20/06 16:46:45	14.8	212.5	66.3	4.9	3.24	7.12	
12/20/06 18:47:00	14.8	216.3	65.5	5.1	3.26	7.19	
12/20/06 18:47:15	14.8	219.7	64.9	4.6	3.26	7.21	
12/20/06 18:47:30	14.7	218.9	64.6	4.8	3.25	7.18	
12/20/06 18:47:45	14.7	215.8	64.2	4.6	3.25	7.12	
12/20/06 18:48:00	14.6	212.8	63.6	4.9	3.25	7.12	
12/20/06 18:48:15	14.7	213.2	63.4	4.9	3.25	7.18	
12/20/06 18:48:30	14.7	215.0	63.4	4.7	3.26	7.23	
12/20/06 18:48:45	14.7	215.8	63.1	4.8	3.26	7.20	
12/20/06 18:49:00	14.6	215.8	62.8	4.7	3.25	7.14	
12/20/06 18:49:15	14.7	215.7	82.7	4.9	3.23	7.12	
12/20/06 18:49:30	14.8	217.2	63.0	4.8	3.24	7.18	
12/20/06 18:49:45	14.8	217.5	63.2	4.9	3.25	7.25	
12/20/06 18:50:00	14.7	217.5	63.3	4.7	3.24	7.24	
12/20/06 18:50:15	14.7	217.5	63.0	4.8	3.24	7.18	
12/20/06 18:50:30	14.6	217.2	62.4	4.6	3.24	7.12	
12/20/06 18:50:45	14.6	214.8	62.0	3.6	3.23	7.13	
12/20/06 18:51:00	14.7	215.2	62.1	4.6	3.24	7.19	Point #3
12/20/06 18:51:15	14.6	217.3	62.2	5.0	3.26	7.21	
12/20/06 18:51:30	14.4	219.5	62.1	4.9	3.26	7.16	
12/20/06 18:51:45	14.4	219.4	81.9	4.9	3.26	7.10	
12/20/06 18:52:00	14.4	217.2	61.9	4.8	3.25	7.10	
12/20/06 18:52:15	14.5	216.4	62.1	4.8	3.25	7.17	
12/20/06 18:52:30	14.5	216.8	62.5	5.0	3.26	7.22	
12/20/06 18:52:45	14.4	217.4	62.5	4.9	3.28	7.19	
12/20/06 18:53:00	14.4	215.9	61.9	4.7	3.25	7.13	
12/20/06 18:53:15	14.4	213.0	61.4	4.8	3.25	7.09	
12/20/06 18:53:30	14.4	212.3	61.3	5.0	3.26	7.13	
12/20/06 18:53:45	14.4	215.8	61.3	5.0	3.27	7.20	
12/20/06 18:54:00	14.4	218.0	62.2	5.2	3.27	7.22	
12/20/06 18:54:15	14.2	218.0	62.2	5.1	3.28	7.17	
12/20/06 18:54:30	14.1	216.2	61.3	5.1	3.29	7.10	
12/20/06 18:54:45	14.1	215.9	60.8	5.2	3.32	7.08	
12/20/06 18:55:00	14.2	215.9	60.7	5.3	3.35	7.13	
12/20/06 18:55:15	14.1	216.2	60.8	5.3	3.37	7.19	
12/20/06 18:55:30	14.0	216.9	60.4	5.2	3.38	7.17	
12/20/06 18:55:45	14.0	216.7	59.9	5.1	3.37	7.11	
12/20/06 18:56:00	13.9	215.2	59.5	5.2	3.36	7.08	
12/20/06 18:56:15	13.9	213.9	59.2	5.2	3.36	7.10	
12/20/06 18:56:30	14.0	214.7	59.5	5.2	3.37	7.16	
12/20/06 18:56:45	14.1	215.5	59.8	5.1	3.37	7.19	
12/20/06 18:57:00	13.9	214.8	59.8	5.2	3.36	7.15	
12/20/06 18:57:15	14.0	212.5	59.4	5.2	3.36	7.09	
12/20/06 18:57:30	14.0	212.2	59.0	5.4	3.38	7.11	
12/20/06 18:57:45	13.8	214.9	58.9	5.2	3.38	7.17	
12/20/06 18:58:00	13.8	216.8	59.4	5.2	3.36	7.21	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 18:58:15	13.8	216.7	59.6	5.3	3.35	7.15	
12/20/06 18:58:30	13.8	214.4	59.5	5.2	3.35	7.09	
12/20/06 18:58:45	13.8	212.5	59.4	5.6	3.35	7.12	
12/20/06 18:59:00	13.9	215.5	59.7	5.4	3.37	7.20	
12/20/06 18:59:15	13.6	220.0	59.8	5.3	3.38	7.22	
12/20/06 18:59:30	13.6	218.5	59.5	5.3	3.36	7.16	
12/20/06 18:59:45	13.8	214.7	59.4	5.5	3.34	7.11	
12/20/06 19:00:00	13.7	214.3	59.7	5.5	3.36	7.14	
12/20/06 19:00:15	13.8	215.7	59.7	5.3	3.38	7.21	
12/20/06 19:00:30	13.7	216.8	59.6	5.4	3.38	7.22	
12/20/06 19:00:45	13.6	216.7	59.5	5.2	3.36	7.16	
12/20/06 19:01:00	13.7	218.5	59.4	5.4	3.36	7.11	
12/20/06 19:01:15	13.6	221.7	60.3	5.4	3.36	7.15	
12/20/06 19:01:30	13.5	224.6	64.4	5.3	3.35	7.23	
12/20/06 19:01:45	13.5	222.3	68.0	5.3	3.32	7.23	
12/20/06 19:02:00	13.7	218.9	68.6	5.2	3.32	7.17	
12/20/06 19:02:15	13.7	217.9	67.7	5.7	3.35	7.14	
12/20/06 19:02:30	13.7	219.8	66.6	5.7	3.37	7.19	
12/20/06 19:02:45	13.6	221.7	65.4	4.5	3.36	7.24	
12/20/06 19:03:00	13.6	222.0	64.0	5.1	3.35	7.19	
12/20/06 19:03:15	13.6	221.3	62.3	5.3	3.36	7.13	
12/20/06 19:03:30	13.7	220.2	61.3	5.3	3.37	7.13	
12/20/06 19:03:45	13.7	219.8	62.0	5.2	3.37	7.22	
12/20/06 19:04:00	13.8	218.7	63.5	5.3	3.37	7.24	
12/20/06 19:04:15	13.7	217.5	64.1	5.3	3.37	7.17	
12/20/06 19:04:30	13.7	216.0	64.0	5.3	3.35	7.13	
12/20/06 19:04:45	13.8	217.3	63.6	5.3	3.35	7.17	
12/20/06 19:05:00	13.8	219.5	63.1	5.4	3.38	7.24	
12/20/06 19:05:15	13.8	218.5	62.4	5.3	3.38	7.25	
12/20/06 19:05:30	13.7	216.3	61.7	5.3	3.36	7.18	
12/20/06 19:05:45	13.6	214.7	61.0	5.3	3.35	7.14	
12/20/06 19:06:00	13.9	213.5	60.6	5.4	3.36	7.17	
12/20/06 19:06:15	13.9	214.2	60.6	5.3	3.37	7.25	
12/20/06 19:06:30	13.7	216.0	60.7	5.2	3.37	7.28	
12/20/06 19:06:45	13.7	215.5	60.7	5.1	3.37	7.23	
12/20/06 19:07:00	13.8	212.9	60.6	5.3	3.36	7.18	
12/20/06 19:07:15	13.8	213.3	60.4	5.5	3.36	7.20	
12/20/06 19:07:30	13.7	215.5	60.4	5.5	3.36	7.28	
12/20/06 19:07:45	13.7	217.4	60.6	5.4	3.35	7.30	
12/20/06 19:08:00	13.6	216.7	60.4	5.5	3.34	7.26	
12/20/06 19:08:15	13.7	215.7	60.1	5.3	3.34	7.20	
12/20/06 19:08:30	13.8	214.5	59.7	5.3	3.35	7.21	
12/20/06 19:08:45	13.9	213.9	59.7	5.3	3.36	7.29	
12/20/06 19:09:00	13.8	213.5	60.0	5.2	3.36	7.34	
12/20/06 19:09:15	13.8	210.9	60.2	5.2	3.35	7.31	
12/20/06 19:09:30	13.9	208.7	60.1	5.3	3.34	7.25	
12/20/06 19:09:45	13.9	207.9	60.1	5.5	3.35	7.25	
12/20/06 19:10:00	13.9	211.7	60.3	5.4	3.35	7.32	
12/20/06 19:10:15	13.8	213.5	60.3	5.2	3.35	7.37	
12/20/06 19:10:30	13.8	210.2	60.6	5.4	3.35	7.31	
12/20/06 19:10:45	13.9	207.0	60.6	5.4	3.35	7.26	
12/20/06 19:11:00	13.9	208.2	60.6	49.5	3.36	7.31	End Run No. 3-2
12/20/06 19:11:15	13.9	162.7	60.4	17.2	3.35	7.39	
12/20/06 19:11:30	11.8	79.9	59.2	0.9	3.28	6.78	
12/20/06 19:11:45	7.7	24.8	49.7	0.6	2.44	3.56	
12/20/06 19:12:00	3.2	5.7	33.3	0.5	2.67	0.95	
12/20/06 19:12:15	1.7	2.0	19.2	0.4	4.03	0.25	
12/20/06 19:12:30	1.0	1.6	12.2	0.4	4.47	0.13	
12/20/06 19:12:45	0.8	1.6	9.7	0.3	4.54	0.10	
12/20/06 19:13:00	0.6	1.6	7.8	0.3	4.55	0.09	
12/20/06 19:13:15	0.6	1.6	6.0	0.3	4.56	0.08	
12/20/06 19:13:30	0.5	1.6	4.3	0.2	4.56	0.08	
12/20/06 19:13:45	0.4	1.6	3.0	0.2	4.57	0.07	
12/20/06 19:14:00	0.4	1.6	2.1	0.2	4.58	0.07	
12/20/06 19:14:15	0.3	1.6	1.5	0.2	4.59	0.07	
12/20/06 19:14:30	0.3	1.6	1.1	0.2	4.60	0.06	
12/20/06 19:14:45	0.3	1.6	0.8	0.2	4.61	0.06	System Bias
12/20/06 19:15:00	0.3	1.6	0.6	0.1	4.61	0.06	4.62 4.50% O_2
12/20/06 19:15:15	0.3	1.3	0.5	0.8	4.62	0.06	
12/20/06 19:15:30	0.3	7.2	0.4	0.9	4.62	0.06	
12/20/06 19:15:45	0.3	18.5	0.3	0.2	4.62	0.08	
12/20/06 19:16:00	0.8	14.0	0.6	0.2	4.53	0.71	
12/20/06 19:16:15	0.6	3.6	2.0	0.2	3.62	1.89	
12/20/06 19:16:30	0.4	0.8	2.2	0.3	1.37	3.40	
12/20/06 19:16:45	0.2	0.6	1.5	0.3	0.33	4.00	
12/20/06 19:17:00	0.2	0.6	0.8	0.3	0.12	4.09	
12/20/06 19:17:15	0.2	0.3	0.4	0.2	0.08	4.08	
12/20/06 19:17:30	0.2	0.1	0.2	0.3	0.07	4.12	
12/20/06 19:17:45	0.2	0.6	0.1	0.3	0.07	4.20	
12/20/06 19:18:00	0.2	0.6	-0.1	0.3	0.06	4.27	
12/20/06 19:18:15	0.2	0.6	-0.1	0.3	0.06	4.31	
12/20/06 19:18:30	0.2	0.2	-0.2	0.2	0.06	4.33	
12/20/06 19:18:45	0.2	0.6	-0.2	0.3	0.05	4.33	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 19:19:00	0.2	0.6	-0.2	0.2	0.05	4.34	
12/20/06 19:19:15	0.2	0.6	-0.2	0.2	0.05	4.34	
12/20/06 19:19:30	0.2	0.2	-0.2	0.2	0.05	4.35	
12/20/06 19:19:45	0.2	0.3	-0.3	0.2	0.05	4.35	System Bias
12/20/06 19:20:00	0.2	0.6	-0.3	0.2	0.05	**4.35**	4.36 4.50% CO_2
12/20/06 19:20:15	0.2	0.6	-0.4	0.2	0.05	**4.35**	
12/20/06 19:20:30	0.2	2.5	-0.3	4.3	0.05	**4.36**	
12/20/06 19:20:45	3.1	67.0	-0.4	2.4	0.05	**4.37**	
12/20/06 19:21:00	10.7	100.4	0.5	0.5	0.30	4.80	
12/20/06 19:21:15	4.3	137.2	8.7	0.3	1.64	6.10	
12/20/06 19:21:30	1.4	175.3	18.5	0.3	1.60	4.85	
12/20/06 19:21:45	0.6	211.7	15.8	0.2	0.59	1.82	
12/20/06 19:22:00	0.4	218.7	8.4	0.2	0.17	0.42	
12/20/06 19:22:15	0.3	220.4	4.0	0.2	0.08	0.16	
12/20/06 19:22:30	0.3	220.8	2.2	0.2	0.07	0.11	
12/20/06 19:22:45	0.2	221.2	1.2	0.2	0.06	0.10	System Bias
12/20/06 19:23:00	0.2	**221.0**	0.8	0.2	0.06	0.08	221.3 225.0 ppm CO
12/20/06 19:23:15	0.2	**221.4**	0.5	0.2	0.06	0.08	
12/20/06 19:23:30	0.2	**221.4**	0.2	0.1	0.06	0.07	
12/20/06 19:23:45	0.2	**221.4**	0.1	0.8	0.06	0.07	
12/20/06 19:24:00	0.2	221.0	0.0	1.8	0.06	0.07	
12/20/06 19:24:15	2.0	200.4	-0.1	3.1	0.06	0.09	
12/20/06 19:24:30	2.0	144.0	0.9	0.3	0.40	1.08	
12/20/06 19:24:45	1.5	62.0	4.3	0.2	0.80	1.57	
12/20/06 19:25:00	2.6	28.2	5.2	0.1	0.37	0.54	
12/20/06 19:25:15	20.4	9.1	3.4	0.1	0.17	0.16	
12/20/06 19:25:30	25.3	4.6	2.0	0.1	0.12	0.08	
12/20/06 19:25:45	24.0	3.3	1.3	0.1	0.08	0.07	
12/20/06 19:26:00	25.0	3.1	0.9	0.1	0.07	0.06	
12/20/06 19:26:15	28.5	3.1	0.7	0.1	0.07	0.06	
12/20/06 19:26:30	30.9	2.7	0.6	0.1	0.06	0.06	
12/20/06 19:26:45	33.4	2.6	0.5	0.1	0.06	0.06	
12/20/06 19:27:00	34.6	2.6	0.3	0.1	0.06	0.06	
12/20/06 19:27:15	36.2	2.1	0.2	0.1	0.06	0.06	
12/20/06 19:27:30	37.2	2.1	0.3	0.1	0.06	0.06	
12/20/06 19:27:45	38.5	2.1	0.3	0.1	0.06	0.05	
12/20/06 19:28:00	39.7	2.1	0.3	0.1	0.06	0.04	
12/20/06 19:28:15	42.2	2.1	0.2	0.1	0.06	0.04	
12/20/06 19:28:30	44.3	2.1	0.0	0.1	0.06	0.04	
12/20/06 19:28:45	46.7	1.6	-0.1	0.0	0.06	0.04	
12/20/06 19:29:00	47.0	1.6	-0.1	0.1	0.06	0.04	
12/20/06 19:29:15	46.2	1.6	-0.1	0.1	0.06	0.04	
12/20/06 19:29:30	45.5	1.6	-0.2	0.1	0.06	0.04	
12/20/06 19:29:45	44.8	1.6	-0.2	0.1	0.06	0.04	
12/20/06 19:30:00	44.5	1.6	-0.3	0.1	0.06	0.04	
12/20/06 19:30:15	44.2	1.6	-0.4	0.1	0.05	0.04	
12/20/06 19:30:30	44.1	1.6	-0.4	0.1	0.05	0.04	System Bias
12/20/06 19:30:45	**43.9**	1.6	**-0.4**	0.1	0.05	0.04	43.8 45.0 ppm NO
12/20/06 19:31:00	**43.9**	1.6	**-0.3**	0.1	0.05	0.05	-0.3 Zero SO_2
12/20/06 19:31:15	**43.8**	1.6	**-0.3**	0.1	0.05	0.05	
12/20/06 19:31:30	**43.7**	1.6	**-0.3**	1.4	0.05	0.04	
12/20/06 19:31:45	45.1	23.6	-0.3	4.7	0.05	0.04	
12/20/06 19:32:00	24.3	87.5	-0.1	4.8	0.07	0.15	
12/20/06 19:32:15	14.3	172.4	6.5	4.7	0.82	2.40	
12/20/06 19:32:30	13.6	199.8	25.6	4.7	2.18	5.42	
12/20/06 19:32:45	13.9	207.7	48.5	4.7	2.95	6.89	
12/20/06 19:33:00	14.0	208.5	64.4	4.6	3.18	7.30	
12/20/06 19:33:15	14.0	200.7	72.1	0.6	3.23	7.45	
12/20/06 19:33:30	12.6	146.6	75.8	7.0	3.22	7.45	
12/20/06 19:33:45	83.7	53.8	74.1	13.4	2.93	6.36	
12/20/06 19:34:00	76.9	17.0	58.6	2.1	1.52	2.99	
12/20/06 19:34:15	12.3	2.8	55.3	0.4	0.43	0.73	
12/20/06 19:34:30	7.9	1.7	80.0	0.3	0.13	0.19	
12/20/06 19:34:45	5.5	1.6	103.2	0.3	0.08	0.11	
12/20/06 19:35:00	4.7	1.6	116.1	0.3	0.06	0.08	
12/20/06 19:35:15	3.9	1.6	122.1	0.2	0.06	0.07	
12/20/06 19:35:30	3.6	1.6	124.9	0.2	0.06	0.07	
12/20/06 19:35:45	3.2	1.6	126.3	0.2	0.05	0.06	
12/20/06 19:36:00	2.9	1.2	127.4	0.2	0.05	0.06	
12/20/06 19:36:15	2.6	1.6	128.1	0.2	0.05	0.06	
12/20/06 19:36:30	2.5	1.6	128.6	0.2	0.05	0.06	
12/20/06 19:36:45	2.4	1.3	129.0	0.2	0.05	0.05	
12/20/06 19:37:00	2.3	1.6	129.3	0.2	0.05	0.05	
12/20/06 19:37:15	2.2	1.1	129.7	0.2	0.05	0.05	
12/20/06 19:37:30	2.1	1.5	130.0	0.2	0.05	0.05	
12/20/06 19:37:45	2.0	1.3	130.4	0.1	0.05	0.05	
12/20/06 19:38:00	2.0	1.6	130.7	0.2	0.05	0.05	
12/20/06 19:38:15	1.9	1.6	131.0	0.2	0.05	0.05	
12/20/06 19:38:30	1.8	1.2	131.0	0.2	0.05	0.05	
12/20/06 19:38:45	1.7	1.3	131.3	0.2	0.05	0.04	
12/20/06 19:39:00	1.7	1.5	131.5	0.2	0.05	0.04	System Bias
12/20/06 19:39:15	**1.6**	**1.6**	**131.7**	**0.2**	**0.05**	**0.04**	131.8 135.0 ppm SO_2
12/20/06 19:39:30	**1.6**	**1.6**	**131.7**	**0.2**	**0.05**	**0.04**	1.6 Zero NO_x

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 19:39:45	1.6	1.1	131.8	0.1	0.05	0.04	1.4 Zero CO
12/20/06 19:40:00	1.5	1.5	132.0	0.1	0.05	0.04	0.2 Zero C_3H_8
12/20/06 19:40:15	1.5	6.1	131.9	2.5	0.05	0.04	0.05 Zero O_2
12/20/06 19:40:30	1.4	34.2	132.0	4.7	0.05	0.04	0.04 Zero CO_2
12/20/06 19:40:45	5.0	40.6	131.1	43.1	0.23	0.72	
12/20/06 19:41:00	4.5	22.8	126.2	48.4	0.86	1.93	
12/20/06 19:41:15	1.2	5.3	103.3	48.7	0.51	0.87	
12/20/06 19:41:30	0.6	2.0	62.0	49.0	0.14	0.20	
12/20/06 19:41:45	0.5	1.6	31.6	49.1	0.07	0.07	
12/20/06 19:42:00	0.5	1.6	16.7	49.2	0.06	0.05	
12/20/06 19:42:15	0.5	1.1	10.1	48.5	0.05	0.05	Calibration
12/20/06 19:42:30	0.6	1.5	6.8	48.1	0.05	0.04	48.2 50.0 ppm C_3H_8/N_2
12/20/06 19:42:45	0.6	1.6	5.0	48.2	0.05	0.04	
12/20/06 19:43:00	0.6	1.6	3.8	48.2	0.05	0.04	
12/20/06 19:43:15	0.6	1.1	2.9	48.2	0.05	0.04	
12/20/06 19:43:30	0.6	1.8	2.3	11.9	0.04	0.04	
12/20/06 19:43:45	0.5	59.0	1.9	5.5	0.04	0.04	
12/20/06 19:44:00	4.9	131.2	4.9	5.3	0.28	0.92	
12/20/06 19:44:15	12.8	193.7	24.9	5.5	1.67	4.13	
12/20/06 19:44:30	13.2	210.7	55.6	5.3	2.84	6.38	
12/20/06 19:44:45	13.4	214.7	79.7	5.2	3.29	7.14	
12/20/06 19:45:00	13.5	212.9	90.2	5.2	3.36	7.22	
12/20/06 19:45:15	13.5	211.4	93.0	5.3	3.38	7.18	
12/20/06 19:45:30	13.7	212.9	93.7	5.2	3.39	7.21	
12/20/06 19:45:45	13.8	214.7	93.9	5.4	3.40	7.29	
12/20/06 19:46:00	13.9	214.5	92.8	5.2	3.41	7.32	
12/20/06 19:46:15	14.1	212.2	90.7	5.1	3.40	7.26	
12/20/06 19:46:30	13.8	210.7	89.4	5.2	3.40	7.21	
12/20/06 19:46:45	13.8	210.2	88.8	5.4	3.41	7.25	
12/20/06 19:47:00	13.8	211.5	88.1	5.3	3.41	7.33	
12/20/06 19:47:15	13.6	215.7	86.5	5.1	3.42	7.35	
12/20/06 19:47:30	13.5	213.7	85.0	5.1	3.41	7.28	
12/20/06 19:47:45	13.6	208.9	86.5	5.0	3.40	7.22	Begin Run No. 3-3
12/20/06 19:48:00	13.7	207.9	87.1	5.0	3.42	7.25	Point #1
12/20/06 19:48:15	13.6	208.2	85.2	5.0	3.44	7.32	
12/20/06 19:48:30	13.5	206.4	82.5	4.9	3.43	7.33	
12/20/06 19:48:45	13.5	203.2	79.8	5.2	3.41	7.27	
12/20/06 19:49:00	13.5	202.8	77.5	5.2	3.41	7.21	
12/20/06 19:49:15	13.5	205.2	75.9	5.1	3.42	7.24	
12/20/06 19:49:30	13.4	205.2	74.8	4.8	3.44	7.29	
12/20/06 19:49:45	13.5	200.7	73.5	4.8	3.43	7.31	
12/20/06 19:50:00	13.6	197.4	72.1	4.9	3.43	7.24	
12/20/06 19:50:15	13.6	198.2	71.4	5.0	3.43	7.18	
12/20/06 19:50:30	13.7	199.7	71.8	5.1	3.44	7.21	
12/20/06 19:50:45	13.6	200.7	72.0	4.9	3.43	7.28	
12/20/06 19:51:00	13.5	200.4	71.6	4.9	3.43	7.27	
12/20/06 19:51:15	13.5	199.2	70.7	4.7	3.42	7.20	
12/20/06 19:51:30	13.7	198.6	69.9	4.7	3.44	7.17	
12/20/06 19:51:45	13.8	198.2	69.7	4.8	3.46	7.24	
12/20/06 19:52:00	13.8	197.6	69.5	4.7	3.46	7.29	
12/20/06 19:52:15	13.7	196.4	69.1	4.7	3.46	7.24	
12/20/06 19:52:30	13.7	195.3	69.6	4.9	3.45	7.17	
12/20/06 19:52:45	13.7	195.7	70.2	4.9	3.45	7.18	
12/20/06 19:53:00	13.7	197.6	70.1	4.8	3.46	7.23	
12/20/06 19:53:15	13.6	198.9	70.1	4.7	3.46	7.27	
12/20/06 19:53:30	13.6	197.4	70.0	4.8	3.46	7.22	
12/20/06 19:53:45	13.7	196.7	69.3	4.8	3.45	7.16	
12/20/06 19:54:00	13.8	198.4	68.4	4.9	3.47	7.18	
12/20/06 19:54:15	13.6	200.4	67.5	4.9	3.47	7.26	
12/20/06 19:54:30	13.5	199.7	67.3	4.9	3.44	7.27	
12/20/06 19:54:45	13.6	197.9	67.8	4.8	3.42	7.20	
12/20/06 19:55:00	13.7	197.4	67.5	5.0	3.44	7.17	
12/20/06 19:55:15	13.6	200.2	66.6	4.9	3.46	7.22	
12/20/06 19:55:30	13.5	203.4	66.4	4.9	3.45	7.29	
12/20/06 19:55:45	13.5	202.2	66.9	4.9	3.42	7.26	
12/20/06 19:56:00	13.6	199.4	67.9	4.9	3.42	7.20	
12/20/06 19:56:15	13.6	200.2	69.0	5.0	3.43	7.21	
12/20/06 19:56:30	13.5	202.0	68.6	4.8	3.44	7.28	
12/20/06 19:56:45	13.5	201.9	67.4	4.9	3.43	7.30	
12/20/06 19:57:00	13.6	200.3	66.5	4.9	3.42	7.23	
12/20/06 19:57:15	13.6	200.7	65.9	5.1	3.43	7.19	
12/20/06 19:57:30	13.5	201.3	65.2	5.0	3.44	7.25	
12/20/06 19:57:45	13.5	200.4	64.5	5.0	3.44	7.32	
12/20/06 19:58:00	13.6	198.3	63.7	5.1	3.43	7.27	
12/20/06 19:58:15	13.7	196.4	63.3	5.3	3.44	7.20	
12/20/06 19:58:30	13.6	198.4	63.2	5.4	3.46	7.22	
12/20/06 19:58:45	13.5	200.9	63.4	5.0	3.46	7.28	
12/20/06 19:59:00	13.5	201.1	63.5	5.3	3.43	7.29	
12/20/06 19:59:15	13.5	199.4	63.2	5.2	3.42	7.23	
12/20/06 19:59:30	13.6	197.3	62.9	5.2	3.43	7.19	
12/20/06 19:59:45	13.6	196.2	62.8	5.2	3.46	7.23	
12/20/06 20:00:00	13.5	195.6	62.6	5.0	3.46	7.30	
12/20/06 20:00:15	13.5	192.9	62.2	4.8	3.45	7.28	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 20:00:30	13.5	190.8	61.8	5.0	3.46	7.20	
12/20/06 20:00:45	13.6	191.7	61.8	5.3	3.46	7.18	
12/20/06 20:01:00	13.5	193.2	61.9	5.0	3.47	7.24	
12/20/06 20:01:15	13.5	193.7	62.1	4.9	3.45	7.30	
12/20/06 20:01:30	13.5	192.6	62.0	5.1	3.45	7.26	
12/20/06 20:01:45	13.5	191.4	61.8	5.1	3.45	7.19	
12/20/06 20:02:00	13.5	191.8	62.0	5.1	3.44	7.19	
12/20/06 20:02:15	13.5	190.9	62.2	5.0	3.45	7.24	
12/20/06 20:02:30	13.5	188.8	61.8	5.0	3.45	7.25	
12/20/06 20:02:45	13.6	187.7	61.4	5.5	3.46	7.20	
12/20/06 20:03:00	13.6	189.0	61.4	5.4	3.47	7.14	
12/20/06 20:03:15	13.5	191.9	61.3	5.3	3.47	7.18	
12/20/06 20:03:30	13.5	191.6	61.4	5.0	3.46	7.24	
12/20/06 20:03:45	13.7	187.9	61.7	5.2	3.46	7.24	
12/20/06 20:04:00	13.8	187.5	61.7	5.3	3.48	7.17	
12/20/06 20:04:15	13.7	191.2	61.7	5.0	3.49	7.16	
12/20/06 20:04:30	13.7	193.4	61.7	5.1	3.48	7.22	
12/20/06 20:04:45	14.0	194.9	62.0	5.1	3.46	7.24	
12/20/06 20:05:00	13.9	187.1	63.5	5.1	3.45	7.17	
12/20/06 20:05:15	13.6	199.2	65.2	5.1	3.45	7.15	
12/20/06 20:05:30	13.6	199.3	64.8	4.9	3.44	7.24	
12/20/06 20:05:45	13.6	196.9	63.3	5.0	3.42	7.25	
12/20/06 20:06:00	13.6	196.6	62.4	5.1	3.43	7.18	
12/20/06 20:06:15	13.6	200.2	62.2	5.1	3.45	7.17	
12/20/06 20:06:30	13.6	201.4	62.3	5.4	3.44	7.24	
12/20/06 20:06:45	13.6	198.9	62.1	5.2	3.43	7.25	
12/20/06 20:07:00	13.7	197.4	61.8	5.2	3.43	7.19	
12/20/06 20:07:15	13.6	197.4	61.7	5.1	3.46	7.20	
12/20/06 20:07:30	13.7	197.4	61.7	5.3	3.46	7.25	
12/20/06 20:07:45	13.6	196.9	61.5	5.3	3.45	7.25	
12/20/06 20:08:00	13.6	197.1	61.7	5.3	3.45	7.20	Point #2
12/20/06 20:08:15	13.6	197.7	62.7	5.2	3.46	7.18	
12/20/06 20:08:30	13.6	197.8	63.6	5.1	3.46	7.23	
12/20/06 20:08:45	13.6	196.7	63.5	4.9	3.45	7.28	
12/20/06 20:09:00	13.7	194.2	62.8	5.0	3.44	7.25	
12/20/06 20:09:15	13.7	192.9	62.2	4.9	3.45	7.19	
12/20/06 20:09:30	13.7	194.6	62.0	5.1	3.47	7.21	
12/20/06 20:09:45	13.6	197.4	61.7	5.1	3.46	7.27	
12/20/06 20:10:00	13.5	199.6	61.7	5.0	3.45	7.27	
12/20/06 20:10:15	13.5	198.9	61.8	5.2	3.44	7.21	
12/20/06 20:10:30	13.6	196.6	61.6	5.4	3.43	7.17	
12/20/06 20:10:45	13.7	195.2	61.4	5.1	3.45	7.22	
12/20/06 20:11:00	13.6	195.1	61.4	5.2	3.46	7.28	
12/20/06 20:11:15	13.6	195.4	61.5	5.1	3.46	7.27	
12/20/06 20:11:30	13.6	194.8	61.5	5.2	3.46	7.21	
12/20/06 20:11:45	13.7	193.9	61.2	5.1	3.46	7.18	
12/20/06 20:12:00	13.8	194.8	61.3	5.2	3.46	7.23	
12/20/06 20:12:15	13.7	195.4	61.8	5.4	3.46	7.29	
12/20/06 20:12:30	13.6	195.1	61.9	5.4	3.46	7.29	
12/20/06 20:12:45	13.6	194.7	61.3	5.3	3.46	7.23	
12/20/06 20:13:00	13.7	193.7	60.8	5.4	3.47	7.19	
12/20/06 20:13:15	13.7	194.2	60.8	5.3	3.47	7.23	
12/20/06 20:13:30	13.6	196.6	60.9	5.1	3.47	7.30	
12/20/06 20:13:45	13.4	197.2	60.9	5.1	3.46	7.31	
12/20/06 20:14:00	13.6	194.1	60.8	5.2	3.44	7.25	
12/20/06 20:14:15	13.7	192.7	61.1	5.2	3.45	7.22	
12/20/06 20:14:30	13.7	193.3	61.5	5.4	3.47	7.26	
12/20/06 20:14:45	13.7	194.2	61.6	5.3	3.48	7.33	
12/20/06 20:15:00	13.6	194.9	61.4	5.1	3.47	7.30	
12/20/06 20:15:15	13.5	193.4	61.1	5.4	3.46	7.23	
12/20/06 20:15:30	13.6	193.7	60.8	5.5	3.46	7.23	
12/20/06 20:15:45	13.6	195.4	60.8	5.3	3.47	7.31	
12/20/06 20:16:00	13.5	194.3	61.0	5.4	3.46	7.37	
12/20/06 20:16:15	13.5	191.4	60.7	5.6	3.44	7.31	
12/20/06 20:16:30	13.7	189.8	60.3	5.4	3.44	7.24	
12/20/06 20:16:45	13.7	190.7	60.4	5.4	3.47	7.25	
12/20/06 20:17:00	13.7	192.8	60.7	5.3	3.49	7.33	
12/20/06 20:17:15	13.6	195.4	60.7	5.1	3.48	7.36	
12/20/06 20:17:30	13.5	195.9	60.5	5.0	3.45	7.30	
12/20/06 20:17:45	13.5	194.2	60.5	5.3	3.43	7.25	
12/20/06 20:18:00	13.5	193.6	60.9	5.3	3.44	7.28	
12/20/06 20:18:15	13.5	195.2	61.1	5.1	3.46	7.36	
12/20/06 20:18:30	13.5	195.2	61.2	4.0	3.46	7.36	
12/20/06 20:18:45	13.5	193.4	61.0	5.3	3.48	7.27	
12/20/06 20:19:00	13.6	192.1	60.7	5.2	3.46	7.23	
12/20/06 20:19:15	13.6	192.7	60.9	5.4	3.47	7.28	
12/20/06 20:19:30	13.5	195.1	61.1	5.0	3.48	7.32	
12/20/06 20:19:45	13.4	195.7	61.0	5.1	3.46	7.30	
12/20/06 20:20:00	13.5	194.8	60.8	5.2	3.44	7.24	
12/20/06 20:20:15	13.5	195.4	60.8	5.3	3.45	7.23	
12/20/06 20:20:30	13.4	196.2	61.4	5.2	3.46	7.29	
12/20/06 20:20:45	13.4	195.4	61.9	5.2	3.46	7.35	
12/20/06 20:21:00	13.5	193.8	61.7	5.4	3.44	7.29	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 20:21:15	13.5	192.2	61.3	5.5	3.45	7.23	
12/20/06 20:21:30	13.6	193.9	60.8	5.4	3.47	7.24	
12/20/06 20:21:45	13.4	198.4	60.8	5.2	3.47	7.32	
12/20/06 20:22:00	13.3	199.6	61.1	5.2	3.45	7.36	
12/20/06 20:22:15	13.3	196.2	60.8	5.2	3.43	7.29	
12/20/06 20:22:30	13.5	193.8	60.7	5.2	3.45	7.23	
12/20/06 20:22:45	13.5	193.4	60.2	5.2	3.47	7.27	
12/20/06 20:23:00	13.5	193.3	60.0	5.0	3.47	7.34	
12/20/06 20:23:15	13.4	190.7	59.9	5.4	3.46	7.31	
12/20/06 20:23:30	13.4	188.8	59.6	5.5	3.46	7.25	
12/20/06 20:23:45	13.5	190.4	59.6	5.4	3.48	7.24	
12/20/06 20:24:00	13.3	193.8	60.0	5.5	3.50	7.31	
12/20/06 20:24:15	13.2	195.4	60.1	5.4	3.47	7.36	
12/20/06 20:24:30	13.3	194.6	59.8	5.4	3.46	7.28	
12/20/06 20:24:45	13.4	193.4	59.6	5.5	3.46	7.22	
12/20/06 20:25:00	13.4	192.9	59.9	5.2	3.47	7.26	
12/20/06 20:25:15	13.4	192.2	60.3	5.1	3.48	7.32	
12/20/06 20:25:30	13.4	189.2	60.1	5.2	3.48	7.30	
12/20/06 20:25:45	13.4	188.2	59.7	5.3	3.49	7.24	
12/20/06 20:26:00	13.4	191.1	59.4	5.4	3.50	7.23	
12/20/06 20:26:15	13.2	193.7	59.4	5.2	3.50	7.29	
12/20/06 20:26:30	13.2	192.9	59.5	5.1	3.48	7.34	
12/20/06 20:26:45	13.2	191.7	59.3	5.2	3.47	7.28	
12/20/06 20:27:00	13.3	192.4	59.1	5.3	3.46	7.23	
12/20/06 20:27:15	13.3	193.7	59.0	5.3	3.47	7.25	
12/20/06 20:27:30	13.4	193.3	59.1	5.5	3.48	7.33	
12/20/06 20:27:45	13.2	192.4	59.0	5.3	3.48	7.32	
12/20/06 20:28:00	13.2	192.8	59.0	5.3	3.48	7.24	Point #3
12/20/06 20:28:15	13.2	192.9	58.9	5.3	3.48	7.21	
12/20/06 20:28:30	13.3	193.7	58.9	5.3	3.48	7.27	
12/20/06 20:28:45	13.2	195.4	59.0	5.2	3.48	7.33	
12/20/06 20:29:00	13.2	194.7	58.9	5.1	3.47	7.30	
12/20/06 20:29:15	13.2	192.2	58.7	5.1	3.46	7.24	
12/20/06 20:29:30	13.3	191.3	58.8	5.2	3.48	7.21	
12/20/06 20:29:45	13.3	192.7	58.7	5.1	3.49	7.27	
12/20/06 20:30:00	13.2	193.1	58.6	5.4	3.49	7.34	
12/20/06 20:30:15	13.1	191.4	58.4	5.5	3.47	7.29	
12/20/06 20:30:30	13.2	191.2	58.2	5.4	3.47	7.22	
12/20/06 20:30:45	13.2	192.7	58.2	5.3	3.48	7.21	
12/20/06 20:31:00	13.2	194.7	58.5	5.2	3.49	7.30	
12/20/06 20:31:15	13.1	195.4	58.6	5.0	3.47	7.33	
12/20/06 20:31:30	13.1	193.7	58.5	5.1	3.46	7.26	
12/20/06 20:31:45	13.2	192.7	58.5	5.3	3.46	7.20	
12/20/06 20:32:00	13.3	195.2	58.7	5.2	3.47	7.24	
12/20/06 20:32:15	13.2	198.2	59.0	5.0	3.46	7.32	
12/20/06 20:32:30	13.2	198.2	59.0	5.3	3.44	7.32	
12/20/06 20:32:45	13.2	197.2	58.8	5.4	3.44	7.24	
12/20/06 20:33:00	13.3	197.3	59.1	5.4	3.45	7.21	
12/20/06 20:33:15	13.3	199.9	59.7	5.4	3.44	7.29	
12/20/06 20:33:30	13.1	202.7	60.5	5.1	3.42	7.35	
12/20/06 20:33:45	13.0	201.7	61.0	5.1	3.41	7.30	
12/20/06 20:34:00	13.1	200.4	60.5	5.2	3.40	7.23	
12/20/06 20:34:15	13.1	201.9	60.2	5.4	3.42	7.24	
12/20/06 20:34:30	13.1	202.8	60.2	5.4	3.43	7.32	
12/20/06 20:34:45	13.1	201.7	60.0	5.2	3.42	7.34	
12/20/06 20:35:00	13.1	200.6	59.6	5.2	3.42	7.26	
12/20/06 20:35:15	13.2	200.9	59.4	5.3	3.42	7.23	
12/20/06 20:35:30	13.1	202.4	59.5	5.2	3.43	7.27	
12/20/06 20:35:45	13.1	202.4	59.6	5.1	3.42	7.34	
12/20/06 20:36:00	13.2	201.8	59.3	5.1	3.43	7.30	
12/20/06 20:36:15	13.2	200.9	59.0	5.1	3.44	7.22	
12/20/06 20:36:30	13.2	199.2	59.0	5.2	3.45	7.22	
12/20/06 20:36:45	13.2	198.4	59.2	5.2	3.46	7.29	
12/20/06 20:37:00	13.2	199.9	59.3	5.2	3.46	7.32	
12/20/06 20:37:15	13.2	200.7	59.3	5.5	3.45	7.25	
12/20/06 20:37:30	13.2	200.6	59.3	5.5	3.45	7.19	
12/20/06 20:37:45	13.2	202.2	59.5	5.6	3.46	7.21	
12/20/06 20:38:00	13.1	205.9	59.5	5.5	3.48	7.28	
12/20/06 20:38:15	13.1	206.7	59.8	5.1	3.48	7.29	
12/20/06 20:38:30	13.2	202.4	63.1	5.4	3.47	7.22	
12/20/06 20:38:45	13.2	198.2	64.8	5.7	3.49	7.17	
12/20/06 20:39:00	13.3	198.1	62.4	5.6	3.52	7.20	
12/20/06 20:39:15	13.2	199.7	60.3	5.7	3.54	7.26	
12/20/06 20:39:30	13.1	201.1	59.3	5.7	3.54	7.25	
12/20/06 20:39:45	13.1	201.9	58.7	5.6	3.54	7.18	
12/20/06 20:40:00	13.1	202.6	58.7	5.8	3.54	7.16	
12/20/06 20:40:15	13.1	204.4	58.9	5.9	3.54	7.21	
12/20/06 20:40:30	13.0	207.3	59.2	5.7	3.55	7.27	
12/20/06 20:40:45	12.9	209.2	59.0	5.7	3.54	7.24	
12/20/06 20:41:00	13.0	208.4	58.7	5.8	3.52	7.17	
12/20/06 20:41:15	13.0	207.7	58.5	5.7	3.52	7.16	
12/20/06 20:41:30	13.0	208.5	58.3	5.6	3.54	7.22	
12/20/06 20:41:45	13.0	208.7	58.0	5.5	3.54	7.27	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 20:42:00	13.0	205.3	57.7	5.7	3.53	7.23	
12/20/06 20:42:15	13.0	203.9	57.6	5.7	3.52	7.17	
12/20/06 20:42:30	13.0	207.0	57.9	5.7	3.54	7.17	
12/20/06 20:42:45	12.9	210.7	58.2	5.7	3.54	7.23	
12/20/06 20:43:00	12.9	212.2	58.4	5.6	3.51	7.26	
12/20/06 20:43:15	13.0	212.7	58.6	5.6	3.50	7.22	
12/20/06 20:43:30	13.0	215.5	59.0	5.5	3.50	7.17	
12/20/06 20:43:45	12.8	219.2	59.3	5.3	3.51	7.19	
12/20/06 20:44:00	12.9	217.9	59.2	5.4	3.50	7.25	
12/20/06 20:44:15	12.9	213.9	59.0	5.7	3.49	7.22	
12/20/06 20:44:30	13.0	214.8	59.1	6.0	3.50	7.15	
12/20/06 20:44:45	12.8	217.9	59.1	5.6	3.52	7.17	
12/20/06 20:45:00	12.8	218.9	58.9	5.8	3.50	7.22	
12/20/06 20:45:15	12.8	218.9	58.7	5.6	3.49	7.19	
12/20/06 20:45:30	12.8	218.6	58.7	5.7	3.49	7.15	
12/20/06 20:45:45	12.8	219.9	58.9	5.7	3.50	7.17	
12/20/06 20:46:00	12.8	221.9	58.7	5.6	3.51	7.22	
12/20/06 20:46:15	12.7	221.2	58.5	5.8	3.48	7.21	
12/20/06 20:46:30	12.9	219.5	58.4	5.8	3.47	7.16	
12/20/06 20:46:45	12.9	220.7	58.4	5.7	3.49	7.18	
12/20/06 20:47:00	12.8	223.3	58.6	5.7	3.51	7.21	
12/20/06 20:47:15	12.7	224.4	58.5	5.5	3.50	7.23	
12/20/06 20:47:30	12.7	222.8	58.4	5.6	3.47	7.18	
12/20/06 20:47:45	12.7	220.2	58.4	5.5	3.47	7.15	
12/20/06 20:48:00	12.8	218.8	58.5	5.6	3.48	7.19	End Run No. 3-3
12/20/06 20:48:15	12.8	218.7	58.6	46.6	3.50	7.25	
12/20/06 20:48:30	12.7	175.8	58.8	15.0	3.50	7.24	
12/20/06 20:48:45	12.6	104.0	58.2	1.3	3.46	6.95	
12/20/06 20:49:00	7.8	28.7	50.8	0.9	2.77	4.30	
12/20/06 20:49:15	4.4	8.3	35.1	0.8	2.45	1.35	
12/20/06 20:49:30	1.7	1.5	20.5	0.4	3.82	0.30	
12/20/06 20:49:45	1.1	0.8	13.5	0.7	4.42	0.13	
12/20/06 20:50:00	0.8	0.6	11.3	0.8	4.53	0.10	
12/20/06 20:50:15	0.6	0.6	9.5	0.6	4.54	0.08	
12/20/06 20:50:30	0.6	0.6	6.9	0.6	4.55	0.07	
12/20/06 20:50:45	0.5	0.6	4.4	0.5	4.55	0.07	
12/20/06 20:51:00	0.4	0.6	2.8	0.5	4.56	0.06	
12/20/06 20:51:15	0.4	0.6	1.8	0.5	4.57	0.05	
12/20/06 20:51:30	0.3	0.2	1.0	0.5	4.58	0.05	
12/20/06 20:51:45	0.3	0.6	0.7	0.5	4.60	0.05	
12/20/06 20:52:00	0.3	0.6	0.5	0.4	4.60	0.05	System Bias
12/20/06 20:52:15	0.3	0.6	0.2	0.4	4.61	0.05	4.61 4.50% O_2
12/20/06 20:52:30	0.2	0.6	0.1	0.4	4.61	0.05	
12/20/06 20:52:45	0.2	2.8	-0.1	2.2	4.61	0.05	
12/20/06 20:53:00	0.8	16.2	-0.3	0.6	4.61	0.05	
12/20/06 20:53:15	1.2	14.3	-0.1	0.5	4.58	0.38	
12/20/06 20:53:30	1.1	4.2	0.7	0.5	4.08	1.35	
12/20/06 20:53:45	0.4	0.8	1.1	0.5	1.89	3.01	
12/20/06 20:54:00	0.2	-0.4	0.7	0.6	0.46	3.92	
12/20/06 20:54:15	0.2	-0.4	0.2	0.5	0.13	4.09	
12/20/06 20:54:30	0.2	-0.4	-0.2	0.5	0.07	4.10	
12/20/06 20:54:45	0.2	-0.4	-0.4	0.5	0.06	4.11	
12/20/06 20:55:00	0.1	-0.4	-0.5	0.5	0.05	4.19	
12/20/06 20:55:15	0.1	-0.4	-0.6	0.6	0.04	4.27	
12/20/06 20:55:30	0.1	-0.4	-0.7	0.6	0.04	4.31	
12/20/06 20:55:45	0.1	-0.4	-0.8	0.5	0.04	4.33	
12/20/06 20:56:00	0.1	-0.4	-0.8	0.6	0.04	4.34	
12/20/06 20:56:15	0.1	-0.4	-0.8	0.5	0.03	4.34	System Bias
12/20/06 20:56:30	0.1	-0.4	-0.8	0.5	0.03	4.35	4.35 4.50% CO_2
12/20/06 20:56:45	0.1	-0.4	-0.8	0.5	0.03	4.35	
12/20/06 20:57:00	0.1	0.2	-0.7	2.3	0.03	4.35	
12/20/06 20:57:15	0.1	15.8	-0.9	1.7	0.03	4.35	
12/20/06 20:57:30	0.1	59.5	-0.8	0.6	0.05	4.40	
12/20/06 20:57:45	0.8	120.0	0.6	0.5	0.57	4.85	
12/20/06 20:58:00	0.7	190.7	3.5	0.5	0.69	3.33	
12/20/06 20:58:15	0.4	212.2	3.4	0.5	0.27	1.01	
12/20/06 20:58:30	0.2	218.7	1.6	0.5	0.09	0.26	
12/20/06 20:58:45	0.2	219.4	0.5	0.5	0.05	0.12	
12/20/06 20:59:00	0.2	219.9	-0.1	0.5	0.04	0.09	
12/20/06 20:59:15	0.2	219.9	-0.4	0.5	0.04	0.07	
12/20/06 20:59:30	0.2	220.0	-0.5	0.5	0.04	0.07	
12/20/06 20:59:45	0.2	220.4	-0.6	0.5	0.04	0.06	System Bias
12/20/06 21:00:00	0.2	220.4	-0.7	0.5	0.04	0.06	220.3 225.0 ppm CO
12/20/06 21:00:15	0.2	220.2	-0.8	0.5	0.04	0.06	
12/20/06 21:00:30	0.2	220.4	-0.8	0.5	0.04	0.05	
12/20/06 21:00:45	0.1	220.4	-0.7	3.2	0.04	0.05	
12/20/06 21:01:00	0.9	214.8	-0.9	6.0	0.04	0.05	
12/20/06 21:01:15	1.1	168.5	0.0	1.1	0.33	0.93	
12/20/06 21:01:30	0.8	77.4	4.1	0.6	1.00	1.96	
12/20/06 21:01:45	1.1	35.8	6.3	0.6	0.54	0.81	
12/20/06 21:02:00	16.1	11.0	4.1	0.5	0.19	0.19	
12/20/06 21:02:15	25.2	4.8	1.9	0.4	0.11	0.07	
12/20/06 21:02:30	25.5	2.6	1.1	0.4	0.07	0.05	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 21:02:45	26.8	2.1	0.5	0.5	0.05	0.05	
12/20/06 21:03:00	29.1	2.1	0.2	0.4	0.05	0.04	
12/20/06 21:03:15	31.3	2.1	0.0	0.4	0.05	0.04	
12/20/06 21:03:30	33.2	1.5	-0.1	0.4	0.05	0.04	
12/20/06 21:03:45	34.6	1.3	-0.1	0.4	0.04	0.04	
12/20/06 21:04:00	35.8	1.5	-0.2	0.4	0.04	0.04	
12/20/06 21:04:15	36.7	1.1	-0.2	0.4	0.04	0.04	
12/20/06 21:04:30	37.2	1.1	-0.1	0.4	0.04	0.04	
12/20/06 21:04:45	38.0	1.1	-0.2	0.4	0.04	0.04	
12/20/06 21:05:00	39.8	1.1	-0.4	0.4	0.04	0.04	
12/20/06 21:05:15	42.2	0.8	-0.5	0.4	0.04	0.04	
12/20/06 21:05:30	44.8	1.0	-0.6	0.4	0.04	0.04	
12/20/06 21:05:45	44.8	0.6	-0.6	0.4	0.04	0.04	
12/20/06 21:06:00	43.9	0.6	-0.6	0.4	0.04	0.04	
12/20/06 21:06:15	43.1	0.6	-0.8	0.4	0.04	0.04	
12/20/06 21:06:30	42.5	0.6	-0.8	0.4	0.04	0.04	
12/20/06 21:06:45	42.2	0.6	-0.8	0.4	0.03	0.04	
12/20/06 21:07:00	42.0	0.6	-0.8	0.4	0.04	0.04	
12/20/06 21:07:15	41.8	0.6	-0.8	0.4	0.03	0.04	
12/20/06 21:07:30	41.7	0.6	-0.8	0.4	0.03	0.04	
12/20/06 21:07:45	41.6	0.6	-0.8	0.4	0.03	0.04	System Bias
12/20/06 21:08:00	**41.6**	0.6	**-0.9**	0.4	0.03	0.04	**41.5 45.0 ppm NO**
12/20/06 21:08:15	**41.5**	0.3	**-0.9**	0.4	0.03	0.04	**-0.9 Zero SO_2**
12/20/06 21:08:30	**41.4**	0.1	**-1.0**	0.5	0.03	0.04	
12/20/06 21:08:45	**41.4**	3.3	**-0.9**	3.3	0.03	0.04	
12/20/06 21:09:00	40.1	43.9	-0.9	2.1	0.03	0.04	
12/20/06 21:09:15	64.7	44.8	0.4	15.5	0.30	0.85	
12/20/06 21:09:30	89.6	17.7	6.2	12.1	0.97	1.93	
12/20/06 21:09:45	26.1	4.8	15.6	1.0	0.51	0.79	
12/20/06 21:10:00	11.1	0.6	46.8	0.7	0.13	0.18	
12/20/06 21:10:15	6.4	0.6	83.4	0.7	0.06	0.06	
12/20/06 21:10:30	5.0	0.6	106.1	0.6	0.04	0.04	
12/20/06 21:10:45	4.2	0.3	117.0	0.6	0.04	0.04	
12/20/06 21:11:00	3.7	0.6	122.0	0.6	0.03	0.04	
12/20/06 21:11:15	3.2	0.6	124.3	0.6	0.03	0.04	
12/20/06 21:11:30	2.9	0.5	125.5	0.6	0.03	0.04	
12/20/06 21:11:45	2.7	0.3	126.3	0.5	0.03	0.04	
12/20/06 21:12:00	2.5	0.6	127.0	0.5	0.03	0.03	
12/20/06 21:12:15	2.4	0.3	127.6	0.5	0.03	0.03	
12/20/06 21:12:30	2.2	0.6	128.1	0.5	0.03	0.04	
12/20/06 21:12:45	2.1	0.6	128.5	0.5	0.03	0.04	
12/20/06 21:13:00	2.0	0.6	128.8	0.5	0.03	0.04	
12/20/06 21:13:15	2.0	0.6	129.0	0.5	0.03	0.04	
12/20/06 21:13:30	1.9	0.5	129.3	0.5	0.03	0.03	
12/20/06 21:13:45	1.8	0.3	129.5	0.5	0.03	0.03	
12/20/06 21:14:00	1.7	0.6	129.8	0.5	0.03	0.03	System Bias
12/20/06 21:14:15	**1.7**	**0.6**	**130.0**	**0.5**	**0.03**	**0.03**	**130.2 135.0 ppm SO_2**
12/20/06 21:14:30	**1.6**	**0.5**	**130.1**	**0.5**	**0.03**	**0.03**	**1.6 Zero NO_x**
12/20/06 21:14:45	**1.6**	**0.1**	**130.3**	**0.5**	**0.03**	**0.03**	**0.4 Zero CO**
12/20/06 21:15:00	**1.5**	**0.6**	**130.4**	**0.5**	**0.03**	**0.03**	**0.5 Zero C_3H_8**
12/20/06 21:15:15	1.5	0.6	130.5	1.4	0.03	0.03	**0.03 Zero O_2**
12/20/06 21:15:30	1.5	12.3	130.6	2.1	0.03	0.03	**0.03 Zero CO_2**
12/20/06 21:15:45	1.4	44.8	130.5	16.6	0.04	0.07	
12/20/06 21:16:00	1.6	39.9	127.5	47.9	0.47	1.27	
12/20/06 21:16:15	1.4	18.1	115.8	49.6	0.89	1.73	
12/20/06 21:16:30	0.5	3.0	83.8	49.7	0.35	0.55	
12/20/06 21:16:45	0.4	0.8	44.8	49.9	0.09	0.12	
12/20/06 21:17:00	0.4	0.6	21.8	50.1	0.05	0.05	
12/20/06 21:17:15	0.5	0.6	11.6	49.9	0.04	0.04	
12/20/06 21:17:30	0.5	0.6	7.0	48.4	0.04	0.04	
12/20/06 21:17:45	0.5	0.3	4.7	48.1	0.04	0.03	
12/20/06 21:18:00	0.5	0.6	3.3	48.1	0.04	0.03	
12/20/06 21:18:15	0.5	0.6	2.5	48.0	0.04	0.03	Calibration
12/20/06 21:18:30	0.5	0.6	1.9	**48.1**	0.03	0.04	**48.1 50.0 ppm C_3H_8/N_2**
12/20/06 21:18:45	0.6	0.6	1.4	**48.1**	0.03	0.03	
12/20/06 21:19:00	0.6	0.6	1.0	**48.2**	0.03	0.03	
12/20/06 21:19:15	0.6	0.2	0.8	**48.2**	0.03	0.03	
12/20/06 21:19:30	0.6	0.2	0.6	43.9	0.03	0.03	
12/20/06 21:19:45	0.5	8.1	0.4	6.9	0.03	0.03	
12/20/06 21:20:00	1.8	80.1	0.3	5.9	0.03	0.04	
12/20/06 21:20:15	5.9	160.2	5.0	5.8	0.50	1.53	
12/20/06 21:20:30	12.6	213.3	22.5	5.8	1.96	4.74	
12/20/06 21:20:45	12.8	225.5	43.7	5.6	2.95	6.56	
12/20/06 21:21:00	12.9	225.4	57.8	5.6	3.27	7.00	
12/20/06 21:21:15	13.0	223.2	64.0	5.7	3.33	7.03	
12/20/06 21:21:30	13.0	223.2	66.8	5.8	3.33	7.09	
12/20/06 21:21:45	13.1	225.4	67.9	5.5	3.34	7.17	
12/20/06 21:22:00	13.1	225.4	68.1	5.5	3.35	7.17	
12/20/06 21:22:15	13.2	222.4	67.7	5.6	3.33	7.12	
12/20/06 21:22:30	13.7	223.7	67.2	5.6	3.35	7.08	
12/20/06 21:22:45	13.9	227.8	66.5	5.6	3.37	7.13	
12/20/06 21:23:00	13.6	229.0	65.9	5.3	3.37	7.18	
12/20/06 21:23:15	13.3	226.0	65.3	5.5	3.35	7.16	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 21:23:30	13.3	224.4	64.4	5.5	3.34	7.10	
12/20/06 21:23:45	13.3	224.8	64.1	5.5	3.35	7.11	Begin Run No. 3-4
12/20/06 21:24:00	13.3	226.7	64.2	5.4	3.37	7.17	Point #1
12/20/06 21:24:15	13.6	227.4	64.2	5.3	3.37	7.21	
12/20/06 21:24:30	13.9	225.4	64.4	5.4	3.35	7.15	
12/20/06 21:24:45	13.2	224.3	65.7	5.6	3.33	7.08	
12/20/06 21:25:00	13.0	226.8	66.2	5.6	3.35	7.07	
12/20/06 21:25:15	12.9	231.7	65.6	5.6	3.37	7.14	
12/20/06 21:25:30	12.8	232.8	64.7	5.6	3.36	7.17	
12/20/06 21:25:45	12.8	229.4	64.1	5.7	3.34	7.12	
12/20/06 21:26:00	12.8	229.4	63.8	5.7	3.37	7.06	
12/20/06 21:26:15	12.9	229.4	63.7	5.8	3.40	7.10	
12/20/06 21:26:30	12.9	229.4	63.7	5.6	3.40	7.14	
12/20/06 21:26:45	13.1	226.0	63.4	5.7	3.42	7.10	
12/20/06 21:27:00	13.0	224.5	63.2	5.8	3.45	7.03	
12/20/06 21:27:15	13.0	226.4	63.6	5.8	3.46	7.04	
12/20/06 21:27:30	12.9	229.0	63.8	5.9	3.45	7.11	
12/20/06 21:27:45	12.9	228.3	63.2	5.9	3.45	7.12	
12/20/06 21:28:00	12.9	228.0	62.6	6.0	3.47	7.05	
12/20/06 21:28:15	12.9	229.5	62.2	5.7	3.49	7.03	
12/20/06 21:28:30	12.9	229.4	61.8	5.8	3.50	7.07	
12/20/06 21:28:45	12.8	229.0	61.7	5.6	3.49	7.10	
12/20/06 21:29:00	12.8	228.7	61.7	5.7	3.48	7.05	
12/20/06 21:29:15	12.8	230.5	61.6	5.9	3.48	7.00	
12/20/06 21:29:30	12.7	233.4	61.5	5.9	3.48	7.04	
12/20/06 21:29:45	12.7	234.9	61.7	5.8	3.48	7.09	
12/20/06 21:30:00	12.7	233.8	61.7	5.8	3.49	7.09	
12/20/06 21:30:15	12.8	229.7	61.3	5.8	3.48	7.03	
12/20/06 21:30:30	12.7	228.7	61.0	5.9	3.48	7.01	
12/20/06 21:30:45	12.7	231.3	60.8	6.0	3.49	7.07	
12/20/06 21:31:00	12.7	234.8	60.7	5.9	3.49	7.12	
12/20/06 21:31:15	12.8	236.3	60.7	5.7	3.47	7.09	
12/20/06 21:31:30	12.7	236.2	60.9	5.9	3.46	7.04	
12/20/06 21:31:45	12.7	237.7	61.3	6.0	3.46	7.05	
12/20/06 21:32:00	12.6	238.5	61.5	5.8	3.46	7.12	
12/20/06 21:32:15	12.6	237.8	61.4	5.7	3.46	7.14	
12/20/06 21:32:30	12.6	235.5	61.2	5.8	3.45	7.09	
12/20/06 21:32:45	12.6	234.4	61.2	5.7	3.44	7.04	
12/20/06 21:33:00	12.5	236.7	61.2	5.9	3.43	7.06	
12/20/06 21:33:15	12.6	240.0	61.6	6.0	3.43	7.14	
12/20/06 21:33:30	12.7	240.8	62.0	5.9	3.43	7.17	
12/20/06 21:33:45	13.0	239.7	61.9	5.8	3.43	7.12	
12/20/06 21:34:00	12.8	237.3	62.7	5.8	3.42	7.06	
12/20/06 21:34:15	12.7	238.4	63.7	5.8	3.42	7.05	
12/20/06 21:34:30	12.7	241.6	63.3	5.8	3.43	7.10	
12/20/06 21:34:45	12.6	246.2	63.0	5.9	3.43	7.14	
12/20/06 21:35:00	12.5	246.9	62.9	5.6	3.42	7.12	
12/20/06 21:35:15	12.5	243.2	62.7	5.7	3.40	7.06	
12/20/06 21:35:30	12.5	241.8	62.7	5.8	3.40	7.03	
12/20/06 21:35:45	12.7	244.0	62.8	5.8	3.41	7.08	
12/20/06 21:36:00	12.5	246.3	63.2	5.7	3.43	7.14	
12/20/06 21:36:15	12.5	247.4	63.4	5.7	3.41	7.14	
12/20/06 21:36:30	12.5	243.3	63.6	5.9	3.39	7.10	
12/20/06 21:36:45	12.7	240.7	63.9	6.0	3.39	7.07	
12/20/06 21:37:00	12.6	244.4	64.4	6.0	3.42	7.10	
12/20/06 21:37:15	12.5	249.3	64.8	5.8	3.42	7.15	
12/20/06 21:37:30	12.4	248.3	64.8	5.6	3.39	7.13	
12/20/06 21:37:45	12.6	245.3	64.3	5.7	3.37	7.07	
12/20/06 21:38:00	12.7	245.9	64.4	5.7	3.39	7.08	
12/20/06 21:38:15	12.8	251.5	64.7	5.6	3.39	7.16	
12/20/06 21:38:30	12.8	253.4	65.0	5.3	3.37	7.19	
12/20/06 21:38:45	12.7	248.5	65.3	5.1	3.33	7.14	
12/20/06 21:39:00	12.8	243.5	65.6	5.3	3.30	7.10	
12/20/06 21:39:15	12.8	242.0	65.5	5.4	3.29	7.15	
12/20/06 21:39:30	12.7	243.1	65.4	5.4	3.28	7.22	
12/20/06 21:39:45	12.7	243.9	65.4	5.4	3.26	7.25	
12/20/06 21:40:00	12.7	242.4	65.2	5.5	3.25	7.19	
12/20/06 21:40:15	12.7	240.9	65.2	5.3	3.24	7.14	
12/20/06 21:40:30	12.8	240.0	65.4	5.4	3.24	7.17	
12/20/06 21:40:45	12.8	241.5	65.9	5.1	3.25	7.24	
12/20/06 21:41:00	12.7	244.3	66.3	5.0	3.26	7.26	
12/20/06 21:41:15	12.7	243.5	66.3	5.1	3.23	7.21	
12/20/06 21:41:30	12.7	241.4	66.4	5.4	3.22	7.17	
12/20/06 21:41:45	12.7	242.1	66.9	5.3	3.22	7.19	
12/20/06 21:42:00	12.6	244.9	67.2	5.3	3.23	7.26	
12/20/06 21:42:15	12.6	244.9	67.2	5.3	3.23	7.27	
12/20/06 21:42:30	12.6	244.2	67.0	5.2	3.22	7.21	
12/20/06 21:42:45	12.7	242.3	67.2	5.4	3.21	7.17	
12/20/06 21:43:00	12.7	243.4	67.5	5.2	3.22	7.23	
12/20/06 21:43:15	12.7	246.0	68.0	5.3	3.24	7.29	
12/20/06 21:43:30	12.6	246.5	68.4	5.0	3.23	7.27	
12/20/06 21:43:45	12.6	244.3	68.5	5.3	3.22	7.18	
12/20/06 21:44:00	12.6	243.4	68.8	5.3	3.21	7.14	Point #2

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 21:44:15	12.6	246.0	69.2	5.4	3.21	7.18	
12/20/06 21:44:30	12.6	247.7	69.6	5.3	3.22	7.25	
12/20/06 21:44:45	12.6	250.3	69.8	5.2	3.24	7.26	
12/20/06 21:45:00	12.4	251.2	69.8	5.1	3.23	7.19	
12/20/06 21:45:15	12.4	249.7	69.7	5.3	3.21	7.15	
12/20/06 21:45:30	12.5	249.5	70.1	5.6	3.20	7.18	
12/20/06 21:45:45	12.5	250.7	70.7	5.6	3.21	7.26	
12/20/06 21:46:00	12.4	251.4	71.2	5.5	3.22	7.27	
12/20/06 21:46:15	12.5	249.9	71.5	5.4	3.22	7.21	
12/20/06 21:46:30	12.5	248.2	71.5	5.5	3.21	7.16	
12/20/06 21:46:45	12.6	249.3	71.8	5.4	3.21	7.18	
12/20/06 21:47:00	12.6	252.2	72.3	5.3	3.22	7.26	
12/20/06 21:47:15	12.6	252.9	72.8	5.2	3.23	7.28	
12/20/06 21:47:30	12.4	248.7	73.0	5.2	3.20	7.23	
12/20/06 21:47:45	12.6	245.3	73.2	5.4	3.18	7.16	
12/20/06 21:48:00	12.6	246.5	73.2	5.3	3.19	7.17	
12/20/06 21:48:15	12.5	250.3	73.5	5.5	3.21	7.23	
12/20/06 21:48:30	12.4	251.9	73.4	5.3	3.21	7.26	
12/20/06 21:48:45	12.5	251.2	73.4	5.3	3.20	7.20	
12/20/06 21:49:00	12.4	249.7	73.5	5.4	3.20	7.14	
12/20/06 21:49:15	12.5	248.5	73.6	5.7	3.21	7.15	
12/20/06 21:49:30	12.6	248.3	74.0	5.7	3.23	7.21	
12/20/06 21:49:45	12.5	246.4	74.0	5.5	3.25	7.23	
12/20/06 21:50:00	12.5	242.1	73.8	5.4	3.25	7.16	
12/20/06 21:50:15	12.6	238.4	73.8	5.3	3.24	7.10	
12/20/06 21:50:30	12.6	237.3	73.9	5.4	3.24	7.11	
12/20/06 21:50:45	12.7	237.3	74.1	5.8	3.26	7.18	
12/20/06 21:51:00	12.6	238.9	74.2	5.3	3.28	7.20	
12/20/06 21:51:15	12.6	240.8	74.3	5.2	3.29	7.14	
12/20/06 21:51:30	12.6	237.8	74.4	5.3	3.28	7.07	
12/20/06 21:51:45	12.7	235.9	74.4	5.4	3.26	7.08	
12/20/06 21:52:00	12.7	236.4	74.4	5.5	3.27	7.15	
12/20/06 21:52:15	12.7	234.5	74.5	5.4	3.28	7.19	
12/20/06 21:52:30	12.7	229.7	74.4	5.4	3.28	7.14	
12/20/06 21:52:45	12.9	225.9	74.2	5.5	3.29	7.07	
12/20/06 21:53:00	12.9	225.8	74.0	5.5	3.30	7.05	
12/20/06 21:53:15	13.0	228.0	74.1	5.8	3.32	7.12	
12/20/06 21:53:30	12.9	230.0	74.2	5.6	3.31	7.16	
12/20/06 21:53:45	12.9	229.3	74.0	5.5	3.31	7.09	
12/20/06 21:54:00	12.9	228.4	73.7	5.6	3.31	7.01	
12/20/06 21:54:15	13.0	229.5	73.5	5.7	3.31	7.02	
12/20/06 21:54:30	12.9	233.3	73.4	5.9	3.31	7.10	
12/20/06 21:54:45	12.8	234.3	72.6	5.9	3.32	7.13	
12/20/06 21:55:00	12.7	234.4	71.7	5.9	3.33	7.07	
12/20/06 21:55:15	12.7	234.0	70.9	5.9	3.35	6.99	
12/20/06 21:55:30	12.8	234.2	70.2	6.1	3.37	7.00	
12/20/06 21:55:45	13.0	235.9	69.6	6.0	3.39	7.08	
12/20/06 21:56:00	13.0	238.2	69.3	5.9	3.38	7.11	
12/20/06 21:56:15	13.0	238.5	68.7	6.0	3.35	7.07	
12/20/06 21:56:30	13.0	235.9	68.1	6.0	3.34	7.00	
12/20/06 21:56:45	13.2	235.0	67.7	6.1	3.34	7.00	
12/20/06 21:57:00	13.2	236.4	67.4	6.5	3.37	7.07	
12/20/06 21:57:15	13.1	237.3	67.2	6.1	3.38	7.10	
12/20/06 21:57:30	13.0	235.9	66.9	5.9	3.38	7.06	
12/20/06 21:57:45	13.2	233.8	66.4	6.1	3.38	6.99	
12/20/06 21:58:00	13.2	233.9	66.2	6.2	3.38	6.99	
12/20/06 21:58:15	13.2	235.8	66.3	6.4	3.40	7.06	
12/20/06 21:58:30	13.1	237.7	66.3	6.0	3.40	7.09	
12/20/06 21:58:45	13.1	237.9	66.2	6.0	3.38	7.04	
12/20/06 21:59:00	13.1	236.9	66.1	6.3	3.36	6.98	
12/20/06 21:59:15	13.1	238.4	66.0	6.2	3.37	7.00	
12/20/06 21:59:30	13.1	242.4	65.8	6.2	3.39	7.07	
12/20/06 21:59:45	13.0	243.0	65.5	6.0	3.38	7.08	
12/20/06 22:00:00	13.0	238.2	65.1	6.1	3.36	7.02	
12/20/06 22:00:15	13.1	236.5	64.6	6.2	3.36	6.97	
12/20/06 22:00:30	13.1	239.2	64.6	6.1	3.38	7.01	
12/20/06 22:00:45	13.1	239.9	64.6	5.9	3.38	7.07	
12/20/06 22:01:00	13.1	236.4	64.6	5.9	3.36	7.06	
12/20/06 22:01:15	13.1	234.2	64.2	6.1	3.36	6.99	
12/20/06 22:01:30	13.2	234.7	63.8	5.9	3.39	6.97	
12/20/06 22:01:45	13.2	236.2	63.7	5.9	3.40	7.03	
12/20/06 22:02:00	13.2	235.2	63.7	6.0	3.38	7.07	
12/20/06 22:02:15	13.2	233.7	63.4	5.9	3.37	7.04	
12/20/06 22:02:30	13.3	233.2	63.1	5.8	3.36	6.98	
12/20/06 22:02:45	13.2	234.5	62.9	5.9	3.35	7.00	
12/20/06 22:03:00	13.2	237.7	63.0	6.0	3.35	7.07	
12/20/06 22:03:15	13.1	238.0	63.1	5.9	3.34	7.09	
12/20/06 22:03:30	13.1	234.9	63.0	5.9	3.33	7.03	
12/20/06 22:03:45	13.2	233.5	62.6	5.9	3.34	6.98	
12/20/06 22:04:00	13.2	234.7	62.6	5.8	3.36	7.00	Point #3
12/20/06 22:04:15	13.2	236.2	62.8	5.8	3.38	7.06	
12/20/06 22:04:30	13.1	234.9	62.6	5.9	3.39	7.05	
12/20/06 22:04:45	13.1	231.2	62.1	5.9	3.39	6.99	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 22:05:00	13.2	229.7	61.9	5.9	3.40	6.98	
12/20/06 22:05:15	13.2	231.0	62.0	5.9	3.41	7.04	
12/20/06 22:05:30	13.1	232.4	61.9	5.7	3.41	7.08	
12/20/06 22:05:45	13.0	231.3	61.7	5.8	3.40	7.04	
12/20/06 22:06:00	13.1	229.9	61.4	5.7	3.39	6.96	
12/20/06 22:06:15	13.1	231.0	61.4	6.0	3.40	6.98	
12/20/06 22:06:30	13.0	234.2	61.7	6.1	3.41	7.05	
12/20/06 22:06:45	13.0	234.9	61.8	5.9	3.40	7.07	
12/20/06 22:07:00	13.0	233.7	61.9	5.9	3.39	7.02	
12/20/06 22:07:15	13.0	233.8	61.6	5.6	3.40	6.97	
12/20/06 22:07:30	12.9	237.9	61.6	5.5	3.40	7.01	
12/20/06 22:07:45	12.8	242.0	62.0	5.5	3.40	7.09	
12/20/06 22:08:00	12.8	241.7	62.2	5.6	3.37	7.09	
12/20/06 22:08:15	12.8	236.8	62.0	6.0	3.33	7.03	
12/20/06 22:08:30	12.8	236.2	61.5	6.0	3.34	7.01	
12/20/06 22:08:45	12.8	239.7	61.5	5.9	3.36	7.07	
12/20/06 22:09:00	12.7	242.4	61.6	6.1	3.34	7.12	
12/20/06 22:09:15	12.8	240.2	61.6	6.3	3.33	7.09	
12/20/06 22:09:30	12.9	237.7	61.5	6.1	3.31	7.04	
12/20/06 22:09:45	12.9	238.2	61.4	5.8	3.34	7.04	
12/20/06 22:10:00	12.8	239.7	61.4	5.6	3.36	7.11	
12/20/06 22:10:15	12.8	237.9	61.3	5.9	3.35	7.14	
12/20/06 22:10:30	12.8	235.7	60.9	5.9	3.34	7.09	
12/20/06 22:10:45	12.9	237.3	61.0	6.1	3.37	7.04	
12/20/06 22:11:00	12.9	240.7	60.8	6.0	3.38	7.08	
12/20/06 22:11:15	12.9	239.4	60.7	5.8	3.37	7.12	
12/20/06 22:11:30	12.9	232.4	60.5	8.2	3.36	7.10	
12/20/06 22:11:45	13.0	229.3	60.7	6.3	3.35	7.05	
12/20/06 22:12:00	12.9	231.4	61.1	6.1	3.37	7.08	
12/20/06 22:12:15	12.8	234.8	61.4	6.0	3.38	7.15	
12/20/06 22:12:30	12.8	234.4	61.4	6.0	3.36	7.14	
12/20/06 22:12:45	12.9	232.8	61.4	6.2	3.34	7.09	
12/20/06 22:13:00	12.9	234.2	61.4	6.2	3.37	7.08	
12/20/06 22:13:15	12.9	236.5	61.3	6.2	3.39	7.13	
12/20/06 22:13:30	12.9	235.4	61.1	6.0	3.40	7.14	
12/20/06 22:13:45	13.0	232.5	61.0	6.2	3.38	7.09	
12/20/06 22:14:00	13.0	229.9	61.2	6.1	3.38	7.06	
12/20/06 22:14:15	13.0	232.7	62.1	6.5	3.40	7.10	
12/20/06 22:14:30	13.0	238.2	62.4	6.4	3.40	7.16	
12/20/06 22:14:45	12.9	239.3	61.9	6.0	3.37	7.15	
12/20/06 22:15:00	13.0	237.9	61.5	5.9	3.35	7.09	
12/20/06 22:15:15	13.1	238.3	61.3	5.6	3.35	7.08	
12/20/06 22:15:30	13.1	240.2	61.4	5.5	3.35	7.16	
12/20/06 22:15:45	13.1	237.5	61.5	5.3	3.30	7.23	
12/20/06 22:16:00	13.2	231.2	61.5	5.5	3.25	7.21	
12/20/06 22:16:15	13.2	229.9	61.6	5.7	3.23	7.17	
12/20/06 22:16:30	13.2	233.2	61.6	5.5	3.23	7.19	
12/20/06 22:16:45	13.2	235.7	61.7	5.5	3.23	7.26	
12/20/06 22:17:00	13.2	234.4	61.8	5.5	3.22	7.27	
12/20/06 22:17:15	13.2	231.4	61.8	5.6	3.21	7.20	
12/20/06 22:17:30	13.3	231.4	62.2	5.7	3.23	7.18	
12/20/06 22:17:45	13.3	235.4	62.6	4.7	3.24	7.23	
12/20/06 22:18:00	13.1	234.9	62.7	5.0	3.24	7.27	
12/20/06 22:18:15	13.2	230.0	62.7	5.7	3.23	7.24	
12/20/06 22:18:30	13.3	226.4	62.4	5.2	3.23	7.16	
12/20/06 22:18:45	13.2	228.4	62.2	4.2	3.25	7.16	
12/20/06 22:19:00	13.2	230.9	62.1	5.6	3.24	7.23	
12/20/06 22:19:15	13.2	228.9	61.9	5.6	3.24	7.26	
12/20/06 22:19:30	13.2	227.7	61.6	5.6	3.24	7.22	
12/20/06 22:19:45	13.2	228.2	61.5	5.5	3.25	7.18	
12/20/06 22:20:00	13.2	228.2	62.1	5.5	3.24	7.22	
12/20/06 22:20:15	13.3	225.0	62.6	5.7	3.24	7.26	
12/20/06 22:20:30	13.3	222.9	63.2	5.8	3.24	7.20	
12/20/06 22:20:45	13.2	223.7	63.6	5.6	3.27	7.14	
12/20/06 22:21:00	13.2	222.2	63.4	5.5	3.28	7.18	
12/20/06 22:21:15	13.3	219.5	62.9	5.7	3.27	7.22	
12/20/06 22:21:30	13.4	218.2	62.4	5.6	3.27	7.18	
12/20/06 22:21:45	13.4	220.3	62.3	5.6	3.30	7.14	
12/20/06 22:22:00	13.3	223.2	62.4	5.4	3.31	7.18	
12/20/06 22:22:15	13.4	220.7	62.6	5.5	3.30	7.22	
12/20/06 22:22:30	13.4	216.4	62.9	5.5	3.29	7.18	
12/20/06 22:22:45	13.4	216.3	62.9	5.7	3.31	7.13	
12/20/06 22:23:00	13.3	218.7	62.2	5.3	3.32	7.17	
12/20/06 22:23:15	13.3	217.8	61.4	5.5	3.31	7.21	
12/20/06 22:23:30	13.3	215.4	60.8	5.4	3.30	7.18	
12/20/06 22:23:45	13.4	216.4	30.5	5.5	3.31	7.13	
12/20/06 22:24:00	13.4	219.2	60.5	5.7	3.32	7.17	End Run No. 3-4
12/20/06 22:24:15	13.3	217.2	60.5	53.5	3.32	7.22	
12/20/06 22:24:30	12.8	149.2	60.4	9.7	3.30	7.19	
12/20/06 22:24:45	10.8	78.6	58.4	1.1	3.21	6.36	
12/20/06 22:25:00	7.0	19.1	47.5	0.9	2.36	3.13	
12/20/06 22:25:15	3.9	4.3	30.4	0.7	2.88	0.78	
12/20/06 22:25:30	1.8	0.3	17.1	0.6	4.11	0.21	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 22:25:45	1.1	0.1	10.7	0.5	4.47	0.11	
12/20/06 22:26:00	0.8	0.1	8.2	0.5	4.53	0.08	
12/20/06 22:26:15	0.7	0.1	6.3	0.4	4.54	0.07	
12/20/06 22:26:30	0.6	0.1	4.4	0.4	4.54	0.06	
12/20/06 22:26:45	0.5	0.1	2.9	0.4	4.54	0.06	System Bias
12/20/06 22:27:00	0.5	-0.2	2.1	0.3	**4.55**	0.05	**4.57 4.50% O_2**
12/20/06 22:27:15	0.5	0.0	1.6	0.3	**4.56**	0.05	
12/20/06 22:27:30	0.4	1.6	1.4	1.9	**4.58**	0.05	
12/20/06 22:27:45	0.9	16.3	1.4	0.9	**4.59**	0.05	
12/20/06 22:28:00	4.0	21.3	1.4	0.3	4.57	0.30	
12/20/06 22:28:15	3.3	10.7	2.3	0.3	4.31	1.27	
12/20/06 22:28:30	1.1	0.8	3.2	0.3	2.59	2.63	
12/20/06 22:28:45	0.3	-0.8	2.5	0.3	0.71	3.78	
12/20/06 22:29:00	0.2	-0.9	1.4	0.3	0.18	4.05	
12/20/06 22:29:15	0.2	-0.9	0.6	0.3	0.08	4.07	
12/20/06 22:29:30	0.2	-0.9	0.2	0.3	0.08	4.07	
12/20/06 22:29:45	0.2	-0.9	-0.1	0.3	0.05	4.12	
12/20/06 22:30:00	0.2	-0.9	-0.2	0.3	0.04	4.22	
12/20/06 22:30:15	0.2	-0.9	-0.4	0.3	0.04	4.28	
12/20/06 22:30:30	0.1	-0.9	-0.6	0.3	0.04	4.31	
12/20/06 22:30:45	0.1	-1.0	-0.6	0.2	0.03	4.32	
12/20/06 22:31:00	0.1	-1.2	-0.6	0.3	0.03	4.33	
12/20/06 22:31:15	0.1	-0.9	-0.7	0.3	0.03	4.34	System Bias
12/20/06 22:31:30	0.1	-0.9	-0.6	0.2	0.03	**4.34**	**4.34 4.50% CO_2**
12/20/06 22:31:45	0.1	-0.9	-0.7	0.3	0.03	**4.34**	
12/20/06 22:32:00	0.1	-0.9	-0.7	0.3	0.03	**4.34**	
12/20/06 22:32:15	0.1	5.1	-0.8	3.6	0.03	**4.35**	
12/20/06 22:32:30	1.8	29.3	-0.7	0.8	0.03	4.35	
12/20/06 22:32:45	6.1	87.1	-0.5	0.3	0.19	4.57	
12/20/06 22:33:00	2.2	159.5	1.6	0.2	0.68	4.30	
12/20/06 22:33:15	0.6	201.6	2.9	0.2	0.40	1.86	
12/20/06 22:33:30	0.4	215.4	1.9	0.2	0.14	0.44	
12/20/06 22:33:45	0.3	217.3	0.8	0.2	0.06	0.15	
12/20/06 22:34:00	0.2	217.9	0.1	0.2	0.05	0.09	
12/20/06 22:34:15	0.2	218.3	-0.3	0.2	0.05	0.07	System Bias
12/20/06 22:34:30	0.2	**218.7**	-0.4	0.2	0.04	0.06	**218.8 225.0 ppm CO**
12/20/06 22:34:45	0.2	**218.8**	-0.5	0.2	0.04	0.06	
12/20/06 22:35:00	0.2	**218.7**	-0.6	0.2	0.04	0.05	
12/20/06 22:35:15	0.2	**218.9**	-0.7	0.1	0.04	0.05	
12/20/06 22:35:30	0.2	218.4	-0.7	4.9	0.04	0.05	
12/20/06 22:35:45	1.6	212.4	-0.8	6.1	0.04	0.05	
12/20/06 22:36:00	10.2	180.7	0.4	3.9	0.31	0.92	
12/20/06 22:36:15	6.0	106.9	6.9	0.5	1.34	2.81	
12/20/06 22:36:30	2.5	46.8	12.2	0.3	1.02	1.69	
12/20/06 22:36:45	6.8	18.6	8.8	0.2	0.31	0.40	
12/20/06 22:37:00	23.5	6.3	4.3	0.2	0.14	0.11	
12/20/06 22:37:15	27.1	2.8	2.3	0.1	0.09	0.06	
12/20/06 22:37:30	27.5	2.1	1.4	0.1	0.07	0.05	
12/20/06 22:37:45	30.3	1.5	0.8	0.1	0.06	0.04	
12/20/06 22:38:00	33.2	1.6	0.5	0.1	0.06	0.04	
12/20/06 22:38:15	35.8	1.2	0.3	0.0	0.06	0.04	
12/20/06 22:38:30	37.6	0.8	0.2	0.0	0.06	0.04	
12/20/06 22:38:45	39.0	0.7	0.1	0.1	0.06	0.04	
12/20/06 22:39:00	39.2	0.3	-0.1	0.0	0.06	0.04	
12/20/06 22:39:15	39.5	0.6	-0.1	0.0	0.06	0.04	
12/20/06 22:39:30	40.5	0.6	-0.3	0.1	0.06	0.04	
12/20/06 22:39:45	43.0	0.5	-0.3	0.0	0.06	0.04	
12/20/06 22:40:00	46.5	0.1	-0.4	0.0	0.05	0.04	
12/20/06 22:40:15	46.8	0.2	-0.5	0.0	0.06	0.04	
12/20/06 22:40:30	46.2	0.6	-0.6	0.0	0.05	0.04	
12/20/06 22:40:45	45.3	0.6	-0.7	0.0	0.05	0.04	
12/20/06 22:41:00	44.7	0.6	-0.6	0.0	0.05	0.04	
12/20/06 22:41:15	44.3	0.2	-0.7	0.0	0.05	0.04	
12/20/06 22:41:30	44.0	0.3	-0.7	0.0	0.06	0.04	
12/20/06 22:41:45	44.0	0.3	-0.6	0.0	0.05	0.04	
12/20/06 22:42:00	43.8	0.3	-0.8	0.0	0.06	0.04	
12/20/06 22:42:15	43.7	0.3	-0.7	0.0	0.05	0.04	
12/20/06 22:42:30	43.6	0.1	-0.6	0.0	0.05	0.04	
12/20/06 22:42:45	43.6	0.5	-0.8	0.0	0.06	0.04	System Bias
12/20/06 22:43:00	**43.4**	0.6	**-0.7**	0.0	0.06	0.04	**43.3 45.0 ppm NO**
12/20/06 22:43:15	**43.3**	0.6	**-0.8**	0.0	0.06	0.05	**-0.8 Zero SO_2**
12/20/06 22:43:30	**43.3**	0.6	**-0.8**	0.0	0.06	0.04	
12/20/06 22:43:45	**43.2**	0.3	**-0.8**	0.0	0.06	0.04	
12/20/06 22:44:00	43.0	0.6	-0.8	3.1	0.06	0.03	
12/20/06 22:44:15	43.3	22.8	-0.8	0.8	0.06	0.03	
12/20/06 22:44:30	40.6	47.8	-0.5	8.1	0.11	0.28	
12/20/06 22:44:45	28.2	31.6	3.5	19.6	0.93	1.97	
12/20/06 22:45:00	41.9	9.1	9.9	3.1	1.04	1.68	
12/20/06 22:45:15	25.6	1.7	26.7	0.4	0.33	0.44	
12/20/06 22:45:30	8.3	0.6	64.2	0.3	0.11	0.11	
12/20/06 22:45:45	5.9	0.6	95.0	0.2	0.07	0.06	
12/20/06 22:46:00	5.0	0.3	111.4	0.2	0.06	0.05	
12/20/06 22:46:15	4.2	0.2	118.7	0.2	0.06	0.04	

Total Petrochemicals USA, Inc.: Port Arthur, Texas
SRU Incinerator Stack
ARI Reference Method Monitoring Data

Date/Time	NO_x ppmv db	CO ppmv db	SO_2 ppmv db	VOC ppmv wb	O_2 % vol. db	CO_2 % vol. db	Comments
12/20/06 22:46:30	3.8	0.6	122.1	0.2	0.06	0.04	
12/20/06 22:46:45	3.3	0.6	123.9	0.2	0.06	0.04	
12/20/06 22:47:00	3.1	0.6	125.1	0.2	0.06	0.04	
12/20/06 22:47:15	2.8	0.2	125.8	0.2	0.06	0.04	
12/20/06 22:47:30	2.6	0.3	126.3	0.1	0.05	0.04	
12/20/06 22:47:45	2.5	0.6	126.7	0.1	0.06	0.04	
12/20/06 22:48:00	2.3	0.6	127.2	0.1	0.05	0.04	
12/20/06 22:48:15	2.2	0.6	127.5	0.1	0.06	0.04	
12/20/06 22:48:30	2.1	0.6	127.7	0.1	0.06	0.04	
12/20/06 22:48:45	2.0	0.3	128.0	0.1	0.06	0.04	
12/20/06 22:49:00	2.0	0.6	128.3	0.1	0.05	0.04	
12/20/06 22:49:15	1.8	0.6	128.6	0.1	0.06	0.04	
12/20/06 22:49:30	1.8	0.6	128.8	0.1	0.06	0.04	
12/20/06 22:49:45	1.7	0.2	129.0	0.1	0.06	0.04	
12/20/06 22:50:00	1.7	0.3	129.3	0.1	0.06	0.04	
12/20/06 22:50:15	1.6	0.2	129.5	0.1	0.06	0.05	
12/20/06 22:50:30	1.6	0.3	129.7	0.1	0.06	0.05	System Bias
12/20/06 22:50:45	**1.5**	**0.6**	**129.9**	**0.1**	**0.05**	**0.05**	**130.0 135.0 ppm SO_2**
12/20/06 22:51:00	**1.5**	**0.3**	**130.0**	**0.1**	**0.05**	**0.05**	**1.5 Zero NO_x**
12/20/06 22:51:15	**1.4**	**0.5**	**130.0**	**0.1**	**0.06**	**0.05**	**0.5 Zero CO**
12/20/06 22:51:30	**1.4**	**0.6**	**130.0**	**0.1**	**0.05**	**0.05**	**0.1 Zero C_3H_8**
12/20/06 22:51:45	1.4	3.3	130.1	2.5	0.06	0.05	**0.05 Zero O_2**
12/20/06 22:52:00	1.3	21.6	130.2	3.4	0.06	0.05	**0.05 Zero CO_2**
12/20/06 22:52:15	4.3	29.8	128.8	42.1	0.17	0.42	
12/20/06 22:52:30	5.0	17.6	120.7	48.6	0.81	1.53	
12/20/06 22:52:45	1.1	5.3	97.1	49.3	0.56	0.79	
12/20/06 22:53:00	0.5	1.3	57.6	49.6	0.16	0.19	
12/20/06 22:53:15	0.4	0.7	28.5	49.8	0.08	0.07	
12/20/06 22:53:30	0.4	0.6	14.5	49.8	0.07	0.05	
12/20/06 22:53:45	0.4	0.6	8.5	48.7	0.06	0.04	
12/20/06 22:54:00	0.4	0.6	5.6	48.1	0.06	0.04	Calibration
12/20/06 22:54:15	0.4	0.6	3.8	**48.1**	0.06	0.04	**48.2 50.0 ppm C_3H_8/N_2**
12/20/06 22:54:30	0.4	0.6	2.8	**48.2**	0.06	0.04	
12/20/06 22:54:45	0.4	0.6	2.0	**48.2**	0.06	0.04	
12/20/06 22:55:00	0.5	0.6	1.5	**48.2**	0.06	0.04	
12/20/06 22:55:15	0.5	0.6	1.3	37.1	0.05	0.04	
12/20/06 22:55:30	0.6	0.6	0.9	22.1	0.05	0.04	
12/20/06 22:55:45	0.6	0.6	0.7	1.1	0.10	0.04	
12/20/06 22:56:00	0.5	0.6	0.7	0.6	1.77	0.05	
12/20/06 22:56:15	0.2	0.6	0.6	0.4	1.98	0.05	
12/20/06 22:56:30	0.1	0.6	0.5	0.4	0.50	0.04	
12/20/06 22:56:45	0.1	0.6	0.3	0.3	0.12	0.04	
12/20/06 22:57:00	0.1	0.6	0.1	0.3	0.06	0.04	
12/20/06 22:57:15	0.1	0.6	-0.1	0.3	0.05	0.04	
12/20/06 22:57:30	0.1	0.6	-0.1	0.3	0.05	0.04	
12/20/06 22:57:45	0.1	0.7	-0.3	0.2	0.05	0.04	
12/20/06 22:58:00	0.1	0.8	-0.4	0.2	0.05	0.04	
12/20/06 22:58:15	0.1	0.6	-0.4	0.2	0.05	0.04	
12/20/06 22:58:30	0.1	0.6	-0.5	0.2	0.05	0.05	
12/20/06 22:58:45	0.1	0.6	-0.6	0.2	0.05	0.05	
12/20/06 22:59:00	0.1	0.6	-0.6	0.2	0.05	0.05	
12/20/06 22:59:15	0.1	0.3	-0.5	0.2	0.05	0.04	
12/20/06 22:59:30							
12/20/06 22:59:45							
12/20/06 23:00:00							
12/20/06 23:00:15							
12/20/06 23:00:30							
12/20/06 23:00:45							
12/20/06 23:01:00							
12/20/06 23:01:15							
12/20/06 23:01:30							
12/20/06 23:01:45							
12/20/06 23:02:00							
12/20/06 23:02:15							
12/20/06 23:02:30							
12/20/06 23:02:45							
12/20/06 23:03:00							
12/20/06 23:03:15							
12/20/06 23:03:30							
12/20/06 23:03:45							
12/20/06 23:04:00							
12/20/06 23:04:15							
12/20/06 23:04:30							
12/20/06 23:04:45							
12/20/06 23:05:00							
12/20/06 23:05:15							
12/20/06 23:05:30							
12/20/06 23:05:45							
12/20/06 23:06:00							
12/20/06 23:06:15							
12/20/06 23:06:30							
12/20/06 23:06:45							
12/20/06 23:07:00							

APPENDIX E

Calibration Data

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/19/2006
Run Number	1-1
Start Time	12:13
Stop Time	13:13

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:16 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 11:10		Posttest: 13:16 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	EB0003475	0.1	0.0	1.6	0.3	0.1	0.0	-0.3	Co=
CO Low		Diluted								**0.85**
CO Mid	225.0	CC93770	221.7	-0.7	219.9	-0.4	218.8	-0.6	-0.2	Cm=
CO High	450.0	1,988 ppm	455.7	1.3						**219.35**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.04	0.2	0.03	0.1	-0.1	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.58	-0.1	4.56	-0.3	-0.2	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.57**
O_2 Zero	0.00	EB0003475	0.00	0.0	0.10	1.1	0.09	1.0	-0.1	Co=
O_2 Low		Diluted								**0.10**
O_2 Mid	4.50	CC59953	4.51	0.1	4.57	0.7	4.55	0.4	-0.2	Cm=
O_2 High	9.00	25.0 %	9.03	0.3						**4.56**
THC Zero	0.0	EB0003475	0.0	0.0	0.2	0.2	0.3	0.3	0.1	Co=
THC Low	25.0	Diluted	25.3	1.2						**0.3**
THC Mid	50.0	CC107341	50.6	1.2	51.3	2.6	51.5	3.0	0.2	Cm=
THC High	85.0	2,095 ppm	86.0	1.2						**51.4**
NO_x Zero	0.0	EB0003475	0.1	0.1	0.1	0.0	0.1	0.0	0.0	Co=
NO_x Low		Diluted								**0.10**
NO_x Mid	45.0	CC9844	44.5	-0.6	42.3	-2.4	43.2	-1.4	1.0	Cm=
NO_x High	90.0	1,940 ppm	90.1	0.1						**42.75**
SO_2 Zero	0.0	EB0003475	-0.4	-0.1	0.1	0.2	1.5	0.7	0.5	Co=
SO_2 Low		Diluted								**0.80**
SO_2 Mid	135.0	CC43398	137.2	0.8	133.7	-1.3	133.1	-1.5	-0.2	Cm=
SO_2 High	270.0	2,063 ppm	270.2	0.1						**133.40**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/19/2006
Run Number	1-2
Start Time	13:59
Stop Time	14:59

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:16 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 13:16		Posttest: 15:03 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	EB0003475	0.1	0.0	0.1	0.0	0.6	0.1	0.1	Co=
CO Low		Diluted								**0.35**
CO Mid	225.0	CC93770	221.7	-0.7	218.8	-0.6	219.1	-0.6	0.1	Cm=
CO High	450.0	1,988 ppm	455.7	1.3						**218.95**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.03	0.1	0.04	0.2	0.1	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.56	-0.3	4.57	-0.2	0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.57**
O_2 Zero	0.00	EB0003475	0.00	0.0	0.09	1.0	0.09	1.0	0.0	Co=
O_2 Low		Diluted								**0.09**
O_2 Mid	4.50	CC59953	4.51	0.1	4.55	0.4	4.53	0.2	-0.2	Cm=
O_2 High	9.00	25.0 %	9.03	0.3						**4.54**
THC Zero	0.0	EB0003475	0.0	0.0	0.3	0.3	0.0	0.0	-0.3	Co=
THC Low	25.0	Diluted	25.3	1.2						**0.2**
THC Mid	50.0	CC107341	50.6	1.2	51.5	3.0	51.4	2.8	-0.1	Cm=
THC High	85.0	2,095 ppm	86.0	1.2						**51.5**
NO_x Zero	0.0	EB0003475	0.10	0.1	0.1	0.0	0.1	0.0	0.0	Co=
NO_x Low		Diluted								**0.10**
NO_x Mid	45.0	CC9844	44.5	-0.6	43.2	-1.4	43.5	-1.1	0.3	Cm=
NO_x High	90.0	1,940 ppm	90.1	0.1						**43.35**
SO_2 Zero	0.0	EB0003475	-0.4	-0.1	1.5	0.7	1.7	0.8	0.1	Co=
SO_2 Low		Diluted								**1.60**
SO_2 Mid	135.0	CC43398	137.2	0.8	133.1	-1.5	133.8	-1.3	0.3	Cm=
SO_2 High	270.0	2,063 ppm	270.2	0.1						**133.45**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/19/2006
Run Number	1-3
Start Time	15:43
Stop Time	16:43

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:16 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 15:03		Posttest: 16:48 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	EB0003475	0.1	0.0	0.6	0.1	0.6	0.1	0.0	Co=
CO Low		Diluted								**0.60**
CO Mid	225.0	CC93770	221.7	-0.7	219.1	-0.6	219.2	-0.6	0.0	Cm=
CO High	450.0	1,988 ppm	455.7	1.3						**219.15**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.04	0.2	0.04	0.2	0.0	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.57	-0.2	4.56	-0.3	-0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.57**
O_2 Zero	0.00	EB0003475	0.00	0.0	0.09	1.0	0.07	0.8	-0.2	Co=
O_2 Low		Diluted								**0.08**
O_2 Mid	4.50	CC59953	4.51	0.1	4.53	0.2	4.54	0.3	0.1	Cm=
O_2 High	9.00	25.0 %	9.03	0.3						**4.54**
THC Zero	0.0	EB0003475	0.0	0.0	0.0	0.0	0.3	0.3	0.3	Co=
THC Low	25.0	Diluted	25.3	1.2						**0.2**
THC Mid	50.0	CC107341	50.6	1.2	51.4	2.8	50.7	1.4	-0.7	Cm=
THC High	85.0	2,095 ppm	86.0	1.2						**51.1**
NO_x Zero	0.0	EB0003475	0.10	0.1	0.1	0.0	0.1	0.0	0.0	Co=
NO_x Low		Diluted								**0.10**
NO_x Mid	45.0	CC9844	44.5	-0.6	43.5	-1.1	41.1	-3.8	-2.7	Cm=
NO_x High	90.0	1,940 ppm	90.1	0.1						**42.30**
SO_2 Zero	0.0	EB0003475	-0.4	-0.1	1.7	0.8	1.3	0.6	-0.1	Co=
SO_2 Low		Diluted								**1.50**
SO_2 Mid	135.0	CC43398	137.2	0.8	133.8	-1.3	133.5	-1.4	-0.1	Cm=
SO_2 High	270.0	2,063 ppm	270.2	0.1						**133.65**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/19/2006
Run Number	1-4
Start Time	17:26
Stop Time	18:26

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:16 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 16:48		Posttest: 18:32 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	EB0003475	0.1	0.0	0.6	0.1	0.6	0.1	0.0	Co=
CO Low		Diluted								**0.60**
CO Mid	225.0	CC93770	221.7	-0.7	219.2	-0.6	219.6	-0.5	0.1	Cm=
CO High	450.0	1,988 ppm	455.7	1.3						**219.40**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.04	0.2	0.04	0.2	0.0	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.56	-0.3	4.57	-0.2	0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.57**
O_2 Zero	0.00	EB0003475	0.00	0.0	0.07	0.8	0.08	0.9	0.1	Co=
O_2 Low		Diluted								**0.08**
O_2 Mid	4.50	CC59953	4.51	0.1	4.54	0.3	4.51	0.0	-0.3	Cm=
O_2 High	9.00	25.0 %	9.03	0.3						**4.53**
THC Zero	0.0	EB0003475	0.0	0.0	0.3	0.3	0.2	0.2	-0.1	Co=
THC Low	25.0	Diluted	25.3	1.2						**0.3**
THC Mid	50.0	CC107341	50.6	1.2	50.7	1.4	51.2	2.4	0.5	Cm=
THC High	85.0	2,095 ppm	86.0	1.2						**51.0**
NO_x Zero	0.0	EB0003475	0.10	0.1	0.1	0.0	0.1	0.0	0.0	Co=
NO_x Low		Diluted								**0.10**
NO_x Mid	45.0	CC9844	44.5	-0.6	41.1	-3.8	41.6	-3.2	0.6	Cm=
NO_x High	90.0	1,940 ppm	90.1	0.1						**41.35**
SO_2 Zero	0.0	EB0003475	-0.4	-4.4	1.3	18.9	1.1	0.6	-0.1	Co=
SO_2 Low		Diluted								**1.20**
SO_2 Mid	135.0	CC43398	137.2	0.8	133.5	-1.4	134.7	-0.9	0.4	Cm=
SO_2 High	270.0	2,063 ppm	270.2	0.1						**134.10**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	2-1
Start Time	10:05
Stop Time	11:05

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 9:26		Posttest: 11:07 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	EB0003475	-0.6	-0.1	0.2	0.2	0.1	0.2	0.0	Co=
CO Low		Diluted								**0.15**
CO Mid	225.0	CC93770	220.9	-0.9	219.6	-0.3	219.4	-0.3	0.0	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**219.50**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.02	0.0	0.03	0.1	0.1	Co=
CO_2 Low		Diluted								**0.03**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.58	-0.1	4.59	0.0	0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.59**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.09	0.6	0.06	0.2	-0.3	Co=
O_2 Low		Diluted								**0.08**
O_2 Mid	4.50	CC59953	4.55	0.6	4.60	0.6	4.62	0.8	0.2	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.61**
THC Zero	0.0	EB0003475	0.4	0.4	0.4	0.4	0.0	0.0	-0.4	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.2**
THC Mid	50.0	CC107341	50.3	0.6	50.3	0.6	50.6	1.2	0.3	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**50.5**
NO_x Zero	0.0	EB0003475	0.1	0.1	0.0	-0.1	0.4	0.3	0.4	Co=
NO_x Low		Diluted								**0.20**
NO_x Mid	45.0	CC9844	43.9	-1.2	42.2	-1.9	44.3	0.4	2.3	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**43.25**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	0.4	0.3	-1.1	-0.3	-0.6	Co=
SO_2 Low		Diluted								**-0.35**
SO_2 Mid	135.0	CC43398	138.2	1.2	131.7	-2.4	130.0	-3.0	-0.6	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**130.85**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	2-2
Start Time	11:47
Stop Time	12:47

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 11:07		Posttest: 12:54 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	EB0003475	-0.6	-0.1	0.1	0.2	0.7	0.3	0.1	Co=
CO Low		Diluted								**0.40**
CO Mid	225.0	CC93770	220.9	-0.9	219.4	-0.3	220.1	-0.2	0.2	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**219.75**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.03	0.1	0.04	0.2	0.1	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.59	0.0	4.58	-0.1	-0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.59**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.06	0.2	0.07	0.3	0.1	Co=
O_2 Low		Diluted								**0.07**
O_2 Mid	4.50	CC59953	4.55	0.6	4.62	0.8	4.63	0.9	0.1	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.63**
THC Zero	0.0	EB0003475	0.4	0.4	0.0	0.0	0.1	0.1	0.1	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.1**
THC Mid	50.0	CC107341	50.3	0.6	50.6	1.2	51.6	3.2	1.0	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**51.1**
NO_x Zero	0.0	EB0003475	0.1	0.1	0.4	0.3	0.6	0.6	0.2	Co=
NO_x Low		Diluted								**0.50**
NO_x Mid	45.0	CC9844	43.9	-1.2	44.3	0.4	45.4	1.7	1.2	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**44.85**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-1.1	-0.3	-0.6	-0.1	0.2	Co=
SO_2 Low		Diluted								**-0.85**
SO_2 Mid	135.0	CC43398	138.2	1.2	130.0	-3.0	127.0	-4.1	-1.1	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**128.50**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	2-3
Start Time	13:25
Stop Time	14:25

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 12:54		Posttest: 14:27 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	EB0003475	-0.6	-0.1	0.7	0.3	1.4	0.4	0.2	Co=
CO Low		Diluted								**1.05**
CO Mid	225.0	CC93770	220.9	-0.9	220.1	-0.2	220.9	0.0	0.2	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**220.50**
CO_2 Zero	0.00	EB0003475	0.0	0.2	0.04	0.2	0.04	0.2	0.0	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.58	-0.1	4.61	0.2	0.3	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.60**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.07	0.3	0.06	0.2	-0.1	Co=
O_2 Low		Diluted								**0.07**
O_2 Mid	4.50	CC59953	4.55	0.6	4.63	0.9	4.63	0.9	0.0	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.63**
THC Zero	0.0	EB0003475	0.4	0.4	0.1	0.1	0.2	0.2	0.1	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.2**
THC Mid	50.0	CC107341	50.3	0.6	51.6	3.2	48.9	-2.2	-2.7	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**50.3**
NO_x Zero	0.0	EB0003475	0.1	0.1	0.6	0.6	1.4	1.4	0.9	Co=
NO_x Low		Diluted								**1.00**
NO_x Mid	45.0	CC9844	43.9	-1.2	45.4	1.7	44.9	1.1	-0.6	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**45.15**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-0.6	-3.3	-0.4	0.0	0.1	Co=
SO_2 Low		Diluted								**-0.50**
SO_2 Mid	135.0	CC43398	138.2	1.2	127.0	-4.1	130.9	-2.7	1.4	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**128.95**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	2-4
Start Time	15:03
Stop Time	16:03

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 14:27		Posttest: 16:07 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	EB0003475	-0.6	-0.1	1.4	0.4	1.3	0.4	0.0	Co=
CO Low		Diluted								**1.35**
CO Mid	225.0	CC93770	220.9	-0.9	220.9	0.0	221.2	0.1	0.1	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**221.05**
CO_2 Zero	0.00	EB0003475	0.0	0.2	0.04	0.2	0.04	0.2	0.0	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.61	0.2	4.59	0.0	-0.2	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.60**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.06	0.2	0.06	0.2	0.0	Co=
O_2 Low		Diluted								**0.06**
O_2 Mid	4.50	CC59953	4.55	0.6	4.63	0.9	4.59	0.4	-0.4	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.61**
THC Zero	0.0	EB0003475	0.4	0.4	0.2	0.2	0.9	0.9	0.7	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.6**
THC Mid	50.0	CC107341	50.3	0.6	48.9	-2.2	47.7	-4.6	-1.2	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**48.3**
NO_x Zero	0.0	EB0003475	0.1	0.1	1.4	1.4	1.4	1.4	0.0	Co=
NO_x Low		Diluted								**1.40**
NO_x Mid	45.0	CC9844	43.9	-1.2	44.9	1.1	44.5	0.7	-0.4	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**44.70**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-0.4	0.0	-0.3	0.0	0.0	Co=
SO_2 Low		Diluted								**-0.35**
SO_2 Mid	135.0	CC43398	138.2	1.2	130.9	-2.7	132.1	-2.3	0.4	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**131.50**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	3-1
Start Time	16:38
Stop Time	17:38

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 16:07		Posttest: 17:41 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	EB0003475	-0.6	-0.1	1.3	0.4	1.3	0.4	0.0	Co=
CO Low		Diluted								**1.30**
CO Mid	225.0	CC93770	220.9	-0.9	221.2	0.1	221.4	0.1	0.0	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**221.30**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.04	0.2	0.04	0.2	0.0	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.59	0.0	4.61	0.2	0.2	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.60**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.06	0.2	0.05	0.1	-0.1	Co=
O_2 Low		Diluted								**0.06**
O_2 Mid	4.50	CC59953	4.55	0.6	4.59	0.4	4.61	0.7	0.2	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.60**
THC Zero	0.0	EB0003475	0.4	0.4	0.9	0.9	0.3	0.3	-0.6	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.6**
THC Mid	50.0	CC107341	50.3	0.6	47.7	-4.6	49.0	-2.0	1.3	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**48.4**
NO_x Zero	0.0	EB0003475	0.1	0.1	1.4	1.4	1.4	1.4	0.0	Co=
NO_x Low		Diluted								**1.40**
NO_x Mid	45.0	CC9844	43.9	-1.2	44.5	0.7	43.0	-1.0	-1.7	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**43.75**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-0.3	0.0	-0.4	0.0	0.0	Co=
SO_2 Low		Diluted								**-0.35**
SO_2 Mid	135.0	CC43398	138.2	1.2	132.1	-2.3	131.9	-2.3	-0.1	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**132.00**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	3-2
Start Time	18:11
Stop Time	19:11

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)		
CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 17:41		Posttest: 19:15 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	EB0003475	-0.6	-0.1	1.3	0.4	1.4	0.4	0.0	Co=
CO Low		Diluted								**1.35**
CO Mid	225.0	CC93770	220.9	-0.9	221.4	0.1	221.3	0.1	0.0	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**221.35**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.04	0.2	0.04	0.2	0.0	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.61	0.2	4.36	-2.6	-2.8	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.49**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.05	0.1	0.05	0.1	0.0	Co=
O_2 Low		Diluted								**0.05**
O_2 Mid	4.50	CC59953	4.55	0.6	4.61	0.7	4.62	0.8	0.1	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.62**
THC Zero	0.0	EB0003475	0.4	0.4	0.3	0.3	0.2	0.2	-0.1	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.3**
THC Mid	50.0	CC107341	50.3	0.6	49.0	-2.0	48.2	-3.6	-0.8	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**48.6**
NO_x Zero	0.0	EB0003475	0.1	0.1	1.4	1.4	1.6	1.7	0.2	Co=
NO_x Low		Diluted								**1.50**
NO_x Mid	45.0	CC9844	43.9	-1.2	43.0	-1.0	43.8	-0.1	0.9	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**43.40**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-0.4	-1.1	-0.3	0.0	0.0	Co=
SO_2 Low		Diluted								**-0.35**
SO_2 Mid	135.0	CC43398	138.2	1.2	131.9	-2.3	131.8	-2.4	0.0	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**131.85**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	3-3
Start Time	19:48
Stop Time	20:48

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration Correction Factors
					Pretest: 19:15		Posttest: 20:52 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	EB0003475	-0.6	-0.1	1.4	0.4	0.4	0.2	-0.2	Co=
CO Low		Diluted								**0.90**
CO Mid	225.0	CC93770	220.9	-0.9	221.3	0.1	220.3	-0.1	-0.2	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**220.80**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.04	0.2	0.03	0.1	-0.1	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.36	-2.6	4.35	-2.7	-0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.36**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.05	0.1	0.30	2.9	2.8	Co=
O_2 Low		Diluted								**0.18**
O_2 Mid	4.50	CC59953	4.55	0.6	4.62	0.8	4.61	0.7	-0.1	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.62**
THC Zero	0.0	EB0003475	0.4	0.4	0.2	0.2	0.5	0.5	0.3	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.4**
THC Mid	50.0	CC107341	50.3	0.6	48.2	-3.6	48.1	-3.8	-0.1	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**48.2**
NO_x Zero	0.0	EB0003475	0.1	0.1	1.6	1.7	1.6	1.7	0.0	Co=
NO_x Low		Diluted								**1.60**
NO_x Mid	45.0	CC9844	43.9	-1.2	43.8	-0.1	41.5	-2.7	-2.6	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**42.65**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-0.3	0.0	-0.9	-0.2	-0.2	Co=
SO_2 Low		Diluted								**-0.60**
SO_2 Mid	135.0	CC43398	138.2	1.2	131.8	-2.4	130.2	-3.0	-0.6	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**131.00**

CEMS CALIBRATION DATA

Plant	Total Petrochemicals
Location	Port Arthur, Texas
Source	SRU Incinerator Stack
Date	12/20/2006
Run Number	3-4
Start Time	21:24
Stop Time	22:24

Plant Rep.	Casey Stark
Team Leader	Dan Fitzgerald
CEM Operator	Dan Fitzgerald

Analyzer Span Values (% or ppm)

CO	450.0	ppm
CO2	9.00	%
O2	9.00	%
THC	100.0	ppm
NOx	90.0	ppm
SO2	270.0	ppm

	CALIBRATION ERROR - 6:42 hrs				SYSTEM BIAS CHECK					Calibration
					Pretest: 20:52		Posttest: 22:27 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	EB0003475	-0.6	-0.1	0.4	0.2	0.5	0.2	0.0	Co=
CO Low		Diluted								**0.45**
CO Mid	225.0	CC93770	220.9	-0.9	220.3	-0.1	218.8	-0.5	-0.3	Cm=
CO High	450.0	1,988 ppm	454.6	1.0						**219.55**
CO_2 Zero	0.00	EB0003475	0.02	0.2	0.03	0.1	0.05	0.3	0.2	Co=
CO_2 Low		Diluted								**0.04**
CO_2 Mid	4.50	CC163330	4.59	1.0	4.35	-2.7	4.34	-2.8	-0.1	Cm=
CO_2 High	9.00	25.2 %	8.97	-0.3						**4.35**
O_2 Zero	0.00	EB0003475	0.04	0.4	0.30	2.9	0.05	0.1	-2.8	Co=
O_2 Low		Diluted								**0.18**
O_2 Mid	4.50	CC59953	4.55	0.6	4.61	0.7	4.57	0.2	-0.4	Cm=
O_2 High	9.00	25.0 %	9.02	0.2						**4.59**
THC Zero	0.0	EB0003475	0.4	0.4	0.5	0.5	0.1	0.1	-0.4	Co=
THC Low	25.0	Diluted	25.2	0.8						**0.3**
THC Mid	50.0	CC107341	50.3	0.6	48.1	-3.8	48.2	-3.6	0.1	Cm=
THC High	85.0	2,095 ppm	85.3	0.4						**48.2**
NO_x Zero	0.0	EB0003475	0.1	0.1	1.6	1.7	1.5	1.6	-0.1	Co=
NO_x Low		Diluted								**1.55**
NO_x Mid	45.0	CC9844	43.9	-1.2	41.5	-2.7	43.3	-0.7	2.0	Cm=
NO_x High	90.0	1,940 ppm	89.8	-0.2						**42.40**
SO_2 Zero	0.0	EB0003475	-0.3	-0.1	-0.9	-0.2	-0.8	-0.2	0.0	Co=
SO_2 Low		Diluted								**-0.85**
SO_2 Mid	135.0	CC43398	138.2	1.2	130.2	-3.0	130.0	-3.0	-0.1	Cm=
SO_2 High	270.0	2,063 ppm	273.1	1.1						**130.10**

ARI REFERENCE METHOD CEMS DATA
USEPA METHOD 205
DILUTION SYSTEM VERIFICATION

Company: Total Petrochemicals USA
Location: Port Arthur, Texas
Dilution System ID: 2635
Dilution Flow Rate: 5.0 Lpm
Verification date: 12/18/2006

Analyzer Info

Monitor type: Servomex 1440 CO_2
Monitor span: 18.00 %
Monitor Serial No.: X1440D1/46

Initial Calibration Data

Calibration Concentration		Calibration results		% Difference	
Zero:	0.00	Zero:	0.01	Zero:	0.06
Low:		Low:		Low:	
Mid:	9.00	Mid:	8.92	Mid:	0.44
High:	18.00	High:	18.30	High:	1.67

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: 25.20
High level tank serial #: CC163330
Target concentration No. 1: 5.00
Target concentration No. 2: 13.00

Dilution System Results

Target Concentration No. 1			Target Concentration No. 2		
	Instrument Response	% difference from average*		Instrument Response	% difference from average*
Trial No. 1:	5.05	0.13	Trial No. 1:	13.01	0.05
Trial No. 2:	5.04	0.07	Trial No. 2:	13.02	0.03
Trial No. 3:	5.04	0.07	Trial No. 3:	13.02	0.03
Average:	5.043		Average:	13.017	

% Difference from target concentration: 0.87%

% Difference from target concentration: 0.13%

Mid Level Calibration Gas Results

	Instrument Response
Trial No. 1:	7.41
Trial No. 2:	7.42
Trial No. 3:	7.40

Mid Level calibration gas concentration: 7.49%
Average analyzer response: 7.41
Percent difference: 1.07 *

* Must be less than 2 %

Instrument: 2635 MFC: 1

MAX Flow: 5,000.00 CCM
Cal Date: 03/14/2006 , 12:45:11
Reference Gas: NITROGEN
Description: Factory MFC #1 Calibration Table

- Table is selected

Set Flow	True Flow
250.00	258.30
500.00	526.75
1,000.00	1,073.86
1,500.00	1,601.14
2,000.00	2,111.65
2,500.00	2,629.01
3,000.00	3,119.34
3,500.00	3,619.18
4,000.00	4,125.51
4,500.00	4,588.84
5,000.00	5,093.03

Instrument: 2635 MFC: 2

MAX Flow: 5,000.00 CCM
Cal Date: 03/14/2006 , 12:31:10
Reference Gas: NITROGEN
Description: Factory MFC #2 Calibration Table

- Table is selected

Set Flow	True Flow
250.00	271.61
500.00	551.73
1,000.00	1,093.10
1,500.00	1,622.82
2,000.00	2,129.96
2,500.00	2,624.52
3,000.00	3,130.94
3,500.00	3,605.16
4,000.00	4,115.40
4,500.00	4,619.66
5,000.00	5,118.00

Instrument: 2635 MFC: 3

MAX Flow: 500.00 CCM
Cal Date: 03/14/2006 , 11:51:13
Reference Gas: NITROGEN
Description: Factory MFC #3 Calibration Table

- Table is selected

Set Flow	True Flow
25.00	23.13
50.00	49.50

100.00	102.23
150.00	154.28
200.00	206.25
250.00	257.39
300.00	308.35
350.00	357.29
400.00	407.80
450.00	457.93
500.00	507.44

Instrument: 2635 **MFC: 4**

MAX Flow: 50.00 CCM
Cal Date: 03/14/2006 , 09:54:57
Reference Gas: NITROGEN
Description: Factory MFC #4 Calibration Table

Set Flow	True Flow - Table is selected
2.50	2.28
5.00	4.58
10.00	9.14
15.00	13.67
20.00	18.21
25.00	22.78
30.00	27.55
35.00	32.60
40.00	37.99
45.00	44.59
50.00	52.05

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

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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: CC178400

Customer:	ARI ENVIRONMEMTAL	Shipping Order #:	17498354
P.O. Number:	03-091-05	Transfer #:	17498354
Item Number:		LOT #:	LPX124513
Notes:		Valve	CGA580
		Cyl. Pressure:*	1900psig

*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 17-Aug-05 Expiration Date: 16-Aug-08

Component	Requested Concentration	Assay Concentration
Carbon Dioxide	7.5 %	7.49 ±0.05 %
Nitrogen	Balance	Balance

Reference Standard(s) Employed For Analysis:

Std name	Std #	Conc.	Units	Std. Error	Comp.	Balance	Cyl. No.	Exp. Date	Sample No.
GMIS268	GMIS268	14.0	%	0.04	CO2	N2	CC120983	4/6/2006	N.A.

Analysis Information:

Component 1:	Carbon Dioxide
Analyzer Information	
Manufacturer:	KVB/Analect
Model Number:	EN3024
Serial Number:	3024
Analytical Principle:	FTIR
MPC Calibrated:	07/21/05

	First Triad Analysis On: 8/17/2005			
	Trial 1	Trial 2	Trial 3	Units
Zero	0.25	0.24	0.22	
Reference	13.44	13.36	13.47	
Candidate	7.32	7.30	7.26	
Result	7.52	7.50	7.46	%
		Mean Result:	7.49	%

	Second Triad Analysis On:			
	Trial 1	Trial 2	Trial 3	Units
Zero				
Reference				
Candidate				
Result				
		Mean Result:		

Analyst Signature: Bryan Leger

Calculated by: M. Adnane

Mix Assayed At: Air Liquide America 11426 Fairmont Pkwy, La Porte, TX, 77571 Phone:(281)474-8400 Fax:(281)474-8419

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: 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

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: 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	6/6/2006	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

Mix Assayed At: Air Liquide America 11426 Fairmont Pkwy, La Porte, TX, 77571 Phone:(281)474-8400 Fax:(281)474-8419

PRAXAIR

Praxair
5700 South Alameda Street
Los Angeles, CA 90058
Telephone: (323) 585-2154
Facsimile: (714) 542-6689

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER COASTAL WELDING **P.O NUMBER** REF# 03-075-06

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
NITRIC OXIDE	vsSRM1683b	CC 131868	49.8 ppm

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

1. **COMPONENT** NITROGEN DIOXIDE (AS NOx) **ANALYZER MAKE-MODEL-S/N** Thermo Env. 42H S/N 42H-44979-273

ANALYTICAL PRINCIPLE CHEMILUMINESCENCE **LAST CALIBRATION DATE** 07/03/06

FIRST ANALYSIS DATE 07/03/06 **SECOND ANALYSIS DATE** 07/10/06

Z 0	R 45.86	C 46.57	CONC. 50.3	Z 0	R 46.32	C 46.56	CONC. 49.8
R 45.69	Z 0	C 46.44	CONC. 50.3	R 46.22	Z 0	C 46.63	CONC. 49.9
Z 0	C 46.49	R 45.93	CONC. 50.1	Z 0	C 46.70	R 46.49	CONC. 49.7
U/M ppm		MEAN TEST ASSAY	50.2	U/M ppm		MEAN TEST ASSAY	49.8

NO=1.4 ppm (for reference only).
Values not valid below 150 psig.

THIS CYLINDER NO. CC 198389
HAS BEEN CERTIFIED ACCORDING TO SECTION EPA-600/R97/121
OF TRACEABILITY PROTOCOL NO. REV.9/97
PROCEDURE G1
CERTIFIED ACCURACY ± 1 **% NIST TRACEABLE**
CYLINDER PRESSURE 2000 **PSIG**
CERTIFICATION DATE 07/10/06
EXPIRATION DATE 01/10/07 **TERM** 6 MONTHS

CERTIFIED CONCENTRATION

NITROGEN DIOXIDE (AS NOx)	50.0 ppm
NITROGEN	BALANCE

ANALYZED BY Jack Fu ***CERTIFIED BY*** Phu Tien Nguyen

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

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

*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 9-Dec-05 **Expiration Date: 9-Dec-07**

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

Mix Assayed At: Air Liquide America 11426 Fairmont Pkwy, La Porte, TX, 77571 Phone:(281)474-8400 Fax:(281)474-8419

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: 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: Mohammed Adnane M. Adnane **Calculated by:** Mohammed Adnane M. Adnane

Mix Assayed At: Air Liquide America 11426 Fairmont Pkwy, La Porte, TX, 77571 Phone:(281)474-8400 Fax:(281)474-8419

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 2.3 Procedure: G-2

Cyl. Number: CC107341

Customer:	ARI	**Shipping Order #:**	19339043
P.O. Number:	03-005-06	**Transfer #:**	19339043
Item Number:	ARI 013	**LOT #:**	LPX136433
Notes:		**Valve**	CGA350
		Cyl. Pressure:*	1900psig

*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 6-Feb-06 **Expiration Date: 5-Feb-09**

Component	Requested Concentration	Assay Concentration
Propane	**2000 ppm**	**2095 ±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.
GMIS294	GMIS294	101.0	ppm	0.377	C3H8	N2	CC113326	4/14/2006	N.A.

Analysis Information:

Component 1:	Propane										
Analyzer Information			First Triad Analysis On:		2/6/2006			Second Triad Analysis On:			
Manufacturer:	HP		Trial 1	Trial 2	Trial 3	Units		Trial 1	Trial 2	Trial 3	Units
Model Number:	6890	Zero	0.00	0.00	0.00		Zero				
Serial Number:	8295	Reference	93.71	93.98	93.92		Reference				
Analytical Principle:	GC-FID	Candidate	193.28	195.22	195.62		Candidate				
MPC Calibrated:	01/06/06	Result	207.96	210.05	210.48	ppm	Result				
				Mean Result:	209.50	ppm			Mean Result:		

Propane was analyzed by dilution. The dilution ratio was 2000 / 200, to bring the analyte concentration into the range of the well-characterized multi-point curve.

Analyst Signature: Warren Pereira **Calculated by:** Warren Pereira

Mix Assayed At: Air Liquide America 11426 Fairmont Pkwy, La Porte, TX, 77571 Phone:(281)474-8400 Fax:(281)474-8419

ARI Environmental, Inc.
EPA METHOD 5
Initial Meter Box Calibration

Model No: Apex 522
Serial No. 50280

Operator: Z. Lillie
Date: 2/1/2006

Pre-Test, Orifice Method
English Units

Barometric Pressure: 29.78 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.
0.51	23	54	479.400	489.800	10.400	76 73	70 71	AJ47	0.3234	20.0	71	69	70.0
0.95	19	49	490.600	502.300	11.700	74 75	71 71	AJ55	0.4400	18.0	69	69	69.0
1.60	14	21	518.400	529.300	10.900	75 76	71 71	AJ63	0.5720	18.0	69	69	69.0
3.00	13	10	503.800	517.500	13.700	77 76	71 72	AJ73	0.7781	14.0	69	68	68.5
4.40	10	37	530.000	543.200	13.200	75 76	72 71	AJ81	0.9528	13.0	69	70	69.5

METER FLOW (cubic feet)	ORIFICE FLOW (cubic feet)	METER CALIBRATION FACTOR, Yc[3]	DH @[4]
10.277	9.998	0.9729	1.623
11.568	11.290	0.9759	1.633
10.785	10.628	0.9855	1.631
13.583	13.271	0.9771	1.660
13.144	13.091	0.9960	1.640

AVG. PRETEST METER CALIBRATION FACTOR: Y[5] = 0.981 ΔH@[6] = 1.64

ARI ENVIRONMENTAL, INC.
EPA METHOD 5
THERMOCOUPLE DIGITIAL INDICATOR CALIBRATION DATA SHEET

Operator: Z. Lillie
Date: 2/1/2006

Meterbox No.: 50280
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	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
200	200	0.00	200	0.00	200	0.00	200	0.00	200	0.00
400	396	0.47	396	0.47	397	0.35	396	0.47	396	0.47
600	599	0.09	599	0.09	599	0.09	599	0.09	599	0.09
800	801	0.08	798	0.16	801	0.08	801	0.08	801	0.08
1000	1001	0.07	1000	0.00	1001	0.07	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	1600	0.00	1600	0.00	1601	0.05	1600	0.00	1600	0.00
1800	1798	0.09	1798	0.09	1798	0.09	1799	0.04	1798	0.09

Actual Maximum Difference = 0.47 %
Allowable Maximum Difference = 1.50 %

ARI Environmental, Inc.
EPA METHOD 5
Post-test Meter Box Calibration

Model #: Apex 522
Serial #: 50280
Pretest Y: 0.977
Pretest ΔH@: 1.59

Operator: Z. 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.
1.60	13	30	631.000	641.400	10.400	63 65	53 55	AJ63	0.5720	21.0	52	52	52.0
1.60	11	53	642.100	651.300	9.200	65 67	55 56	AJ63	0.5720	21.0	52	52	52.0
1.60	10	27	651.900	660.000	8.100	67 68	56 57	AJ63	0.5720	21.0	52	53	52.5

METER FLOW (cubic feet)	ORIFICE FLOW (cubic feet)	METER CALIBRATION FACTOR, Yc[3]	DH @[4]
10.608	10.197	0.9613	1.617
9.352	8.976	0.9598	1.611
8.214	7.889	0.9604	1.609

AVG. POST-TEST METER CALIBRATION FACTOR = 0.960 1.61

ABSOLUTE DIFFERENCE FROM PRETEST Y= 1.69
MAXIMUM ALLOWABLE DIFFERENCE= 5.00

ARI ENVIRONMENTAL, INC.
EPA METHOD 5
THERMOCOUPLE DIGITIAL INDICATOR CALIBRATION DATA SHEET

Operator: Z. Lillie
Date: 2/2/2007

Meterbox No.: 50280
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	0.00	2	0.43	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	394	0.70	394	0.70	394	0.70	394	0.70	394	0.70
600	597	0.28	597	0.28	597	0.28	597	0.28	597	0.28
800	798	0.16	799	0.08	798	0.16	798	0.16	798	0.16
1000	998	0.14	998	0.14	998	0.14	998	0.14	998	0.14
1200	1195	0.30	1195	0.30	1195	0.30	1195	0.30	1195	0.30
1400	1394	0.32	1394	0.32	1393	0.38	1393	0.38	1393	0.38
1600	1597	0.15	1597	0.15	1597	0.15	1597	0.15	1597	0.15
1800	1795	0.22	1796	0.18	1794	0.27	1795	0.22	1795	0.22

Actual Maximum Difference = 0.70 %
Allowable Maximum Difference = 1.50 %

Pitot Tube Calibration Data

Pitot Tube No.: HP43
Date: 1/6/2007
Calibrator: CW

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	67	527	68	528	0.19
212	390	(water) 212					
390	760	(oil) 400	392	852	394	854	0.23

Percent difference must not exceed 1.5% at any point.

α_1	α_2	β_1	β_2
2	***2***	***1***	***1***
< 10°	**< 10°**	**< 5°**	**< 5°**
D_t Inches	**P Inches**	**1.05 D_t Inches**	**1.50 D_t Inches**
0.375	***1.016***	***0.394***	***0.563***
$0.185 \leq Dt < 0.380$			
γ Degrees	**χ Degrees**	**$P_{sin}(\gamma)$ Inches**	**$P_{sin}(\phi)$ Inches**
0	***0***	***0.00000***	***0.00000***
		< 0.125	< 0.03125
P_1 Inches	P_2 Inches	(P_1-P_2) Inches	Meets Specifications
0.506	***0.509***	***-0.003***	
$1.05\ D_t < P_1 < 1.50\ D_t$	$1.05\ D_t < P_1 < 1.50\ D_t$		yes

Pitot Tube Calibration Data

Pitot Tube No.: HP43
Date: 9/9/2005
Calibrator: JD

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	94	554	95	555	0.18
212	390	(water) 212					
390	760	(oil) 400					

Percent difference must not exceed 1.5% at any point.

α_1	α_2	β_1	β_2
0	***2***	***1***	***1***
< 10°	**< 10°**	**< 5°**	**< 5°**
D_t Inches	**P Inches**	**1.05 D_t Inches**	**1.50 D_t Inches**
0.374	***1.016***	***0.393***	***0.561***
0.185≤Dt<0.380			
γ Degrees	**$\measuredangle$ Degrees**	**P_{sin} (γ) Inches**	**P_{sin} (ϕ) Inches**
0	***0***	***0.00000***	***0.00000***
		< 0.125	< 0.03125
P_1 Inches	P_2 Inches	(P_1-P_2) Inches	Meets Specifications
0.508	***0.508***	***0***	
1.05 D_t< P_1<1.50 D_t	1.05 D_t<P_1< 1.50 D_t		yes

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.**

APPENDIX F

Process Data

SRU-1 and SRU-II Report

SRUI & SRUII Sulfur Pit Level & Production

Hour Ending	Sulfur Product. HCOM0001.EQ ST/D	Sulfur Product. LI1141W.E ST/D	SUM ST/D
19-Dec 01:00	75.2	142.9	218.1
19-Dec 02:00	76.4	137.9	214.4
19-Dec 03:00	77.0	140.9	217.9
19-Dec 04:00	77.5	144.4	221.9
19-Dec 05:00	77.7	146.6	224.3
19-Dec 06:00	78.0	146.2	224.3
19-Dec 07:00	76.9	144.1	221.0
19-Dec 08:00	76.5	142.1	218.7
19-Dec 09:00	76.9	141.3	218.1
19-Dec 10:00	76.8	142.5	219.4
19-Dec 11:00	75.7	141.5	217.3
19-Dec 12:00	76.8	142.0	218.9
19-Dec 13:00	73.0	141.5	214.5
19-Dec 14:00	71.7	141.3	213.0
19-Dec 15:00	77.0	138.9	215.9
19-Dec 16:00	73.8	136.2	210.0
19-Dec 17:00	74.5	132.6	207.1
19-Dec 18:00	74.8	132.6	207.4
19-Dec 19:00	75.5	131.9	207.4
19-Dec 20:00	78.7	131.0	209.7
19-Dec 21:00	75.4	129.6	205.0
19-Dec 22:00	70.8	129.8	200.6
19-Dec 23:00	72.4	135.3	207.7
20-Dec 00:00	72.6	138.3	210.9
Daily Average	**75.5**	**138.8**	**214.3**
Limit	**Max. Sum is 398 ST/D**		

APPENDIX G

ARI Project Participants

Daniel Fitzgerald

Mr. Fitzgerald is the Division Manager of ARI's Source Testing Division with offices located in Wauconda, Illinois and Houston, Texas. With over 28 years experience in process evaluation, emission compliance and control equipment efficiency test programs, Mr. Fitzgerald specializes in the technical planning, coordination and performance of environmental test programs. Mr. Fitzgerald has an extensive background in EPA sampling and analysis applications, incinerator design and optimization, VOC sampling and analysis, RCRA trial burn testing, sampling equipment design and fabrication, implementation of innovative sampling and analysis techniques, methods validation and R&D.

His source sampling experience includes conducting over 1000 separate test programs involving emissions testing at municipal waste incinerator, steel mills, coke calcining plants, refineries, printing operations, food processing, chemical plants, fume incineration systems, hazardous waste incinerators, bulk gasoline terminals and power plants.

Steven Yuchs, Ph.D.

Dr. Yuchs has 16 years experience in environmental analysis and research and development. His experience includes industrial, academic and governmental laboratory management, with an emphasis in the environmental remediation sector. He is currently the Analytical Services section manager, and is responsible for all laboratory activities for ARI. He is also responsible for coordinating and developing laboratory analysis procedures, laboratory quality assurance, new methods of laboratory analysis, and laboratory data reduction.

James Wedemeier

Mr. Wedemeier is a Project Manager with ARI. 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. He is well versed in the operation of manual source sampling equipment and USEPA instrumental analyzer procedures. Mr. Wedemeier has over 5 years experience in conducting on-site emissions testing.

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.

Mr. Russell's responsibilities include field sampling, sample analysis, data reduction and interpretation, and maintenance and calibration of continuous and manual source sampling equipment.