Kirby Canyon Recycling and Disposal Facility

BAAQMD Facility # 1812

Annual Compliance Emissions Test Report #08004
Initial Source Test for Landfill Gas Flare- Source A-12

Located at:

910 Coyote Creek Golf Drive
San Jose, CA 95198

Performed and Reported by:

Blue Sky Environmental, LLC
624 San Gabriel Avenue
Albany, CA 94706

Prepared For:

Cornerstone Environmental Group, LLC
7600 Dublin Boulevard, Suite 285
Dublin, CA 94568

For Submittal To:

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Testing Performed On:
January 23rd, 2008

Final Report Submitted On:
March 17th, 2008

REVIEW AND CERTIFICATION

Team Leader:

The work performed herein was conducted under my supervision, and I certify that: a) the details and results contained within this report are to the best of my knowledge an authentic and accurate representation of the test program; b) that the sampling and analytical procedures and data presented in the report is authentic and accurate: c) that all testing details and conclusions are accurate and valid, and: d) that the production rate and/or heat input rate during the source test are reported accurately.

If this report is submitted for Compliance purposes it should only be reproduced in its entirety. If there are any questions concerning this report, please contact me at (510) 525 1261.

Guy Worthington
Principal Project Manager

TABLE of CONTENTS

SECTION 1. INTRODUCTION

1.1. Summary

Blue Sky Environmental, LLC was contracted to perform the initial emissions testing on the newly installed A-12 Landfill Gas Flare at Kirby Canyon Recycling and Disposal Facility, 910 Coyote Creek Golf Drive, San Jose, California. Construction of the A-12 flare began in Fall 2007, and per ATC 15617 a source test was performed within 90 days of start-up. This report presents the results of the test program. Table 1 summarizes the source test information. Table 2 summarizes the results compared to the emission limits. The flare met all compliance emission criteria.

Table 1. Source Test Information

Test Location:	Kirby Canyon Recycling and Disposal Facility, 910 Coyote Creek Golf Drive, San Jose, CA 95198
Source Contact:	Joe Morse (408) 779-2206
Source Tested:	Enclosed Landfill Gas Flare (A-12)
Source Test Date:	January 23rd, 2008
Test Objective:	Determine Compliance with Regulation 8, Rule 34 and ATC 15617 Condition 1437, Part 10, 11, 12 and 13
Test Performed By:	Blue Sky Environmental, LLC 624 San Gabriel Ave., Albany, CA 94706 Guy Worthington (510) 508 3469
Test Parameters:	**Landfill Gas** O_2, N_2, CO_2, BTU, THC, CH_4, NMOC, HHV, F-Factor, Sulfur & VOC Species, Volumetric Flow Rate **Flare Emissions** THC, CH_4, NMOC, NOx, CO, O_2, SO_2, Volumetric Flow Rate.

Table 2. Compliance Summary

A Condensate Off	Average Test Result	Permit Limit	Compliance Status
NOx, lbs/MMBTU	0.04	0.05	In Compliance
CO, lbs/MMBTU	<0.002	0.3	In Compliance
SO_2, ppmvd	15.3	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	7.7	30	In Compliance
B Condensate On			
NOx, lbs/MMBTU	0.04	0.05	In Compliance
CO, lbs/MMBTU	<0.002	0.3	In Compliance
SO_2, ppmvd	14.9	300	In Compliance
NMOC, (ppmvd @ 3% O_2 as CH_4)	8.8	30	In Compliance

SECTION 2. SOURCE TEST PROGRAM

2.1. Overview

This initial performance test was performed within 90 days of start-up and was conducted to demonstrate that the A-12 landfill gas flare is operating in accordance with the Bay Area Air Quality Management District (BAAQMD) ATC 15617 and Regulation 8 Rule 34.

2.2. Pollutants Tested

The following BAAQMD, EPA and ASTM sampling and analytical methods were used:

BAAQMD ST-5	CO_2
BAAQMD ST-6	CO
BAAQMD ST-7	NMOC
BAAQMD ST-13A	NOx
BAAQMD ST-14	O_2
BAAQMD ST-19A (calculated from TRS)	SO_2 calculated from TRS
EPA 19	Flow Rate Calculation, DSCFM
EPA 25C	LFG Gas analysis for NMOC by GC
EPA TO-15	AP-42 Table 2.4-1 VOC Species
ASTM 1945/3588	LFG Gas analysis for BTU and F-Factor
ASTM D-5504	Sulfur Species, H_2S and TRS

2.3. Test Date(s)

Testing was conducted on January 23rd, 2008.

2.4. Sampling and Observing Personnel

Guy Worthington and Jeff Mesloh representing Blue Sky Environmental, LLC, performed testing.

Lonnie Beehler of Shaw, Karen Grentz and Mark McKeever of Cornerstone Environmental Group, LLC were present to operate and oversee the Flare operation and assist in coordinating testing and the collection of process data during testing.

The BAAQMD was notified of the test in a plan submitted by Waste Management on January 8, 2008. A Source Test Protocol acknowledgement was requested and received by Blue Sky Environmental (NST # 1294), but no agency observers were present to witness the testing. Copies of the source test protocol can be found in Appendix I.

2.5. Source/Process Description

The enclosed landfill gas flare consists of a 149 million British Thermal Units per hour (MMBtu/hr) multiple nozzle burner manufactured by LFG Specialties, Inc. The flare shell is approximately 50 feet high and approximately 12.5 feet in diameter. The inside diameter is 11 feet 6 inches.

During the initial start-up period the flare has operated at about ~1500 ±100 scfm. The flare setpoint was established at 1500°F. Methane quality is typically about 50%, and the Oxygen content typically less than 1%. Landfill gas condensate is collected and periodically injected into the flare via one vertical nozzle positioned near the burner.

2.6. Source Operating Conditions

The flare operating temperature and the landfill gas flow rate records are contained in Appendix-F. The condensate injection rate was recorded in the field at approximately 1.0 gallon per minute.

The flare was operated between 1497 and 1507 °F avg. The average landfill gas flow rate ranged between 1441 and 1453 scfm.

The landfill gas methane content ranged between 45.1 and 48.0%.

SECTION 3. SAMPLING AND ANALYSIS PROCEDURES

3.1. Port location

The A-12 Flare sampling was conducted in the 11.5 feet diameter ID stack, via ports approximately 45' above grade, accessed by a 60' boom-lift. Two of the four, 4-inch flange ports are available ~4 stack diameters downstream from the burners and ~1 stack diameters upstream from the exit.

3.2. Point description/Labeling – ports/stack

Blue Sky Environmental conducted two perpendicular 8 pt traverses and found O_2 stratification about 10%, therefore subsequent CEM sampling was conducted at a representative average point in the stack.

3.3. Sample train description

Sampling system diagrams are included in the appendix H. Additional descriptive information is included in the following section.

3.4. Sampling procedure description

Three, 30-minute test runs were performed with the Condensate Injection Off, and repeated with the Condensate Injection On.

Continuous Emission Monitoring by BAAQMD Methods ST-5, 6, 7, 13A and 14. These methods are all continuous monitoring techniques using instrumental analyzers to measure carbon dioxide (CO_2), carbon monoxide (CO), total non-methane hydrocarbons (THC & CH_4), nitrogen oxides (NO_X) and oxygen (O_2), respectively. Sampling is performed by extracting exhaust flue gas from the stack, conditioning the sample and analyzing it by continuous monitoring gas analyzers in a CEM test van. The sampling system consists of a stainless steel sample probe, Teflon sample line, glass-fiber particulate filter, glass moisture-knockout condensers in ice, Teflon sample transfer tubing, diaphragm pump and a stainless steel/Teflon manifold and flow control/delivery system. A constant sample and calibration gas supply pressure of 5 PSI was provided to each analyzer to avoid pressure variable response differences. The entire sampling system was leak checked prior to and at the end of the sampling program.

Methane in the exhaust was determined per BAAQMD Methods, using a charcoal scrubber to remove the non-methane organics, and determining the difference between the total hydrocarbon and non-methane hydrocarbon concentrations.

The sampling and analytical system (per BAAQMD Methods) was calibrated at the beginning and end of each test run. The calibration gases were selected to fall approximately within 80 to 90 percent of the instrument range. Zero and calibration drift values were determined for each test. All calibration gases are EPA Protocol #1. The analyzer data recording system consists of Omega 3 channel strip chart recorders.

System Performance Criteria

Instrument Linearity	≤2% Full Scale (checked routinely)
Instrument Bias	≤5% Full Scale (checked routinely)
System Response Time	≤± 2 minutes (checked routinely)
NOx Converter Efficiency (EPA 20)	≥ 90% (checked routinely)
Instrument Zero Drift	≤± 3% Full Scale (complied)
Instrument Span Drift	≤± 3% Full Scale (complied)

Concurrent with the exhaust sampling, Blue Sky collected a total of six integrated 1-liter Tedlar Bag samples of the LFG for analysis. The samples were collected using Teflon tubing connections, and the tubing and the Tedlar bag were filled and purged prior to sampling. The gas sample was controlled with a rotameter to collect a 30-minute integrated sample. All the samples were analyzed for NMOC, HHV, F-Factor, Fixed Gases, Sulfur Species (incl. H_2S and TRS). One sample was analyzed for EPA AP-42 Table 2.4-1 Compounds.

The inlet volumetric flow rate was continuously measured and recorded by the LFG Flowmeter.

3.5. Instrumentation and Analytical procedures

The following continuous emissions analyzers were used:

Instrumentation	Parameter	Principle
TECO 42i	NO_x	Chemiluminescence
TECO 48C	CO	GFC/IR
Ratfisch, RS-55	THC	FID
Horiba PIR 2000	CO_2	IR
Rosemount 755R	O_2	Paramagnetic

All calibration gases are EPA Protocol #1. The analyzer data recording system consists of Omega 3 channel strip chart recorders, which can be supported by a Data Acquisition System (DAS).

The instrument response was recorded on strip charts and manually reduced. The averages were corrected for drift using BAAQMD & EPA Method 6C equations.

3.6. Comments: Limitations and Data Qualifications

Blue Sky Environmental has reviewed this report for accuracy, and concluded that the test procedures were followed and accurately described and documented. The review included the following items:

Review of the general text
Review of calculations
Review of CEMS data
Review of supporting documentation

The services described in this report were performed in a manner consistent with the generally accepted professional testing principles and practices. No other warranty, expressed or implied, is made. These services were performed in a manner consistent with our agreement with our client. The report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions contained in this report pertain to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and operating parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations, subsequent to this, and do not warranty the accuracy of information supplied by others.

SECTION 4. APPENDICES

A.	Tabulated Results
B.	Calculations
C.	Laboratory Reports
D.	Field Data Sheets
E.	Strip Charts
F.	Process Information
G.	Calibration Certifications and Quality Assurance Records
H.	Sample Train Configuration and Stack Diagrams
I.	Related Correspondence (Source Test Plan)
J.	BAAQMD ATC

A
Tabulated Results

TABLE #1

Kirby Canyon Recycling & Disposal Facility
Flare A-12
1500°F - Condensate Off

RUN	1A	2A	3A	AVERAGE	LIMITS
Test Date	01/23/08	01/23/08	01/23/08		
Test Time	0905-0953	1003-1033	1043-1113		
Standard Temp., °F	70	70	70		
Flare Temperature, °F	1,502	1,502	1,502	1,502	
Condensate Injection, gpm	0.0	0.0	0.0	0.0	
Fuel Flow Rate, DSCFM	1,450	1,441	1,442	1,444	
Fuel Heat Input, MMBTU/Hr	39.0	40.7	41.0	40.2	
Exhaust Flow Rate, DSCFM (Method 19)	16,630	17,836	18,054	17,507	
Oxygen, O_2, %	13.0	13.2	13.2	13.1	
Carbon Dioxide, CO_2, %	7.5	7.2	7.1	7.3	
NOx, ppm	12.2	12.1	12.3	12.2	
NOx, ppm @ 15% O_2	9.1	9.3	9.5	9.3	
NOx, lbs/hr	1.45	1.54	1.59	1.53	
NOx, lbs/MMBTU	0.04	0.04	0.04	0.04	**0.05**
CO, ppm	<1.0	<1.0	<1.0	<1.0	
CO, ppm @ 15% O_2	<0.7	<0.8	<0.8	<0.8	
CO, lbs/hr	<0.1	<0.1	<0.1	<0.1	
CO, lbs/MMBTU	<0.002	<0.002	<0.002	<0.002	**0.3**
Total Sulfurs as H_2S in fuel, ppm	203.4	161.0	189.7	184.7	
SO_2, ppm calculated emission	**17.7**	**13.0**	**15.2**	**15.3**	**300**
THC, ppm	2.7	3.8	3.5	3.3	
THC, lbs/hr as CH_4	0.11	0.17	0.16	0.15	
CH_4, ppm	<1.0	<1.0	<1.0	<1.0	
NMHC, ppm as CH_4	2.7	3.8	3.5	3.3	
NMHC, lbs/hr as CH_4	0.11	0.17	0.16	0.15	
NMHC, ppm @ 3% O_2 as CH_4	6.1	8.9	8.3	7.7	**30**
INLET NMHC ppm as CH_4	3,148	3,385	2,685	3,073	
INLET NMHC lbs/hr as CH_4	11.3	12.1	9.6	11.0	
NMHC Removal Efficiency	>99.0%	>98.6%	>98.3%	>98.7%	**98**
INLET CH_4	451,000	473,000	476,000	466,667	
INLET THC (TOC) ppm as CH_4	454,148	476,385	478,685	469,739	
INLET THC (TOC) lbs/hr as CH_4	1,635	1,704	1,714	1,684	
THC (TOC) Removal Efficiency	99.993%	99.990%	99.991%	99.991%	**98**

WHERE,

ppm = Parts Per Million Concentration
Lbs/hr = Hourly Pollutant Emission Rate
Tstd = Standard Temp. (°R = °F + 460)
MW = Molecular Weight
DSCFM = Dry Standard Cubic Feet Per Minute
NOx = Oxides of Nitrogen as NO_2 (MW = 46)
CO = Carbon Monoxide (MW = 28)
TOC = THC = Total Organic Carbon as Methane including CH_4 (MW = 16)
THC = Total Hydrocarbons as Methane (MW = 16)
NMHC = Total Non-Methane Hydrocarbons as Methane (MW = 16)
SO2 = Sulfur Dioxide as SO_2 (MW = 64.1)

CALCULATIONS,

PPM @ 15% O_2 = ppm * 5.9 / (20.9 - %O_2)
PPM @ 3% O_2 = ppm * 17.9 / (20.9 - %O_2)
Lbs/hr = ppm x 8.52E-05 x DSCFM x MW / Tstd °R
Lbs/day = Lbs/hr * 24
THC (TOC) Removal Efficiency = (inlet lbs/hr - outlet lbs/hr) / inlet lbs/hr
NMHC Removal Efficiency = (inlet lbs/hr - outlet lbs/hr) / inlet lbs/hr
SO2 emission ppm = 1128 in fuel * Fuel Flow/Stack Gas Flow

TABLE #2

Kirby Canyon Recycling & Disposal Facility
Flare A-12
1500°F - Condensate On

RUN	1B	2B	3B	AVERAGE	LIMITS
Test Date	01/23/08	01/23/08	01/23/08		
Test Time	1130-1216	1233-1303	1316-1346		
Standard Temp., °F	70	70	70		
Flare Temperature, °F	1,502	1,502	1,502	1,502	
Condensate Injection, gpm	1.0	1.0	1.0	1.0	
Fuel Flow Rate, DSCFM	1,450	1,451	1,453	1,451	
Fuel Heat Input, MMBTU/Hr	41.1	40.5	41.6	41.1	
Exhaust Flow Rate, DSCFM (Method 19)	17,073	18,615	18,143	17,944	
Oxygen, O_2, %	12.8	13.6	13.2	13.2	
Carbon Dioxide, CO_2, %	7.1	6.7	7.1	7.0	
NOx, ppm	8.9	11.8	13.1	11.3	
NOx, ppm @ 15% O_2	6.5	9.5	10.0	8.6	
NOx, lbs/hr	1.09	1.56	1.69	1.45	
NOx, lbs/MMBTU	0.03	0.04	0.04	0.04	0.05
CO, ppm	<1.0	<1.0	<1.0	<1.0	
CO, ppm @ 15% O_2	<0.7	<0.8	<0.8	<0.8	
CO, lbs/hr	<0.07	<0.08	<0.08	<0.08	
CO, lbs/MMBTU	<0.002	<0.002	<0.002	<0.002	0.3
Total Sulfurs as H_2S in fuel, ppm	190	171	190	184	
SO_2 calculated emission, ppm	**16.1**	**13.3**	**15.2**	**14.9**	300
THC, ppm	4.1	3.6	3.8	3.8	
THC, lbs/hr as CH_4	0.17	0.17	0.17	0.17	
CH_4, ppm	<1.0	<1.0	<1.0	<1.0	
NMHC, ppm as CH_4	4.1	3.6	3.8	3.8	
NMHC, lbs/hr as CH_4	0.17	0.17	0.17	0.17	
NMHC, ppm @ 3% O_2 as CH_4	9.0	8.8	8.7	8.8	30
INLET NMHC ppm as CH_4	3,634	3,711	3,830	3,725	
INLET NMHC lbs/hr as CH_4	13.1	13.4	13.8	13.4	
NMHC Removal Efficiency	>98.7%	>98.8%	>98.8%	>98.7%	98
INLET CH_4	475,000	468,000	480,000	474,333	
INLET THC (TOC) ppm as CH_4	478,634	471,711	483,830	478,058	
INLET THC (TOC) lbs/hr as CH_4	1,723	1,699	1,745	1,722	
THC (TOC) Removal Efficiency	99.99%	99.99%	99.99%	99.99%	98

WHERE,

ppm = Parts Per Million Concentration
Lbs/Hr = Pound Per Hour Emission Rate
Std. = Standard Temp. °R = °F + 460
MW = Molecular Weight
DSCFM = Dry Standard Cubic Feet Per Minute
NOx = Oxides of Nitrogen as NO_2 (MW = 46)
CO = Carbon Monoxide (MW = 28)
TOC = THC = Total Organic Carbon as Methane including CH_4 MW = 16)
THC = Total Hydrocarbons as Methane (MW = 16)
NMHC = Total Non-Methane Hydrocarbons as Methane (MW = 16)
SO2 = Sulfur Dioxide as SO_2 (MW = 64.1)

CALCULATIONS,

PPM @ 15% O_2 = ppm * 5.9 / (20.9 - %O_2)
PPM @ 3% O_2 = ppm * 17.9 / (20.9 - %O_2)
Lbs/hr = ppm x 8.223 E-05 x DSCFM x MW / (Std. °R)
Lbs/day = Lbs/hr * 24
THC (TOC) Removal Efficiency = (inlet lbs/hr - outlet lbs/hr) / inlet lbs/hr
NMHC Removal Efficiency = (inlet lbs/hr - outlet lbs/hr) / inlet lbs/hr
SO2 emission ppmv = H2S in fuel * Fuel Flow/Stack Gas Flow

TABLE # 3

Kirby Canyon Recycling & Disposal Facility
Flare A-12
AP42 2.4-1
Full List

Constituent	Method	Units	Detection Limit MDL/PQL	Landfill Gas Samples 01/23/08 **AP42 Table 2.4-1 3A**
1,1,1-Trichloroethane	EPA TO-15	ppb	1.0/100	ND
1,1,2,2-Tetrachloroethane	EPA TO-15	ppb	1.0/100	ND
1,1-Dichloroethane	EPA TO-15	ppb	1.0/100	ND
1,1-Dichloroethene	EPA TO-15	ppb	1.0/100	ND
1,2-Dichloroethane	EPA TO-15	ppb	1.0/100	ND
1,2-Dichloropropane	EPA TO-15	ppb	1.0/100	ND
2-Propanol	EPA TO-15	ppb	1.0/100	26700
Acrylonitrile	EPA TO-15	ppb	1.0/100	ND
Bromodichloromethane	EPA TO-15	ppb	1.0/100	ND
Butane (C4)	EPA 18/ASTM 1945	ppm	0.3	18.2
Carbon Disulfide	EPA TO-15	ppb	1.0/100	221
Carbon Monoxide	ASTM 1945	%	NA	NA
Carbon Tetrachloride	EPA TO-15	ppb	1.0/100	ND
Carbonyl sulfide	ASTM D-5504	ppm	0.01	ND
Chlorobenzene	EPA TO-15	ppb	0.5/5	257
Chlorodifluoromethane	EPA TO-15	ppb	1.0/100	928
Chloroethane	EPA TO-15	ppb	1.0/100	ND
Chloroform	EPA TO-15	ppb	1.0/100	ND
Chloromethane	EPA TO-15	ppb	1.0/100	ND
1,3-Dichlorobenzene	EPA TO-15	ppb	1.0/100	ND
1,4-Dichlorobenzene	EPA TO-15	ppb	1.0/100	741
1,2-Dichlorobenzene	EPA TO-15	ppb	1.0/100	ND
Dichlorodifluoromethane	EPA TO-15	ppb	1.0/100	816
Dichlorofluoromethane	EPA TO-15	ppb	1.0/100	383
Dichloromethane (Methylene Chloride)	EPA TO-15	ppb	1.0/100	241
Dimethyl sulfide	ASTM D-5504	ppm	0.01	3.9
Ethane (C2)	EPA 18/ASTM 1945	ppm	30	ND
Ethanol	EPA TO-15	ppb	1.0/100	120000
Ethyl Mercaptan	ASTM D-5504	ppm	0.01	ND
Ethyl Benzene	EPA TO-15	ppb	1.0/100	7980
1,2 Dibromethane (Ethylene Dibromide)	EPA TO-15	ppb	1.0/100	ND
Dichlorotetrafluoromethane	EPA TO-15	ppb	1.0/100	179
Hexane	EPA TO-15	ppb	1.0/100	980
Hydrogen sulfide	ASTM D-5504	ppm	0.01	181.08
Mercury	NIOSH 6009	ug/m3	NA	NA
2-Butanone (MEK)	EPA TO-15	ppb	1.0/100	32700
Methyl isoButyl Ketone (MiBK)	EPA TO-15	ppb	1.0/100	2130
Pentane (C5)	EPA 18/ASTM 1945	ppm	0.3	62.9
Tetrachloroethylene (Perchloroethylene)	EPA TO-15	ppb	1.0/100	27400
Propane (C3)	EPA 18/ASTM 1945	ppm	0.3	23.3
trans-1,2-Dichloroethene	EPA TO-15	ppb	1.0/100	ND
Trichloroethylene	EPA TO-15	ppb	1.0/100	192
Vinyl Chloride	EPA TO-15	ppb	1.0/100	102
m,p-Xylene	EPA TO-15	ppb	1.0/100	14900
o-Xylene	EPA TO-15	ppb	1.0/100	3790
Benzene	EPA TO-15	ppb	1.0/100	876
Toluene	EPA TO-15	ppb	1.0/100	20200

ND = not detected
pql = not detected (practical quantitation limit)

B
Calculations

BLUE SKY ENVIRONMENTAL, LLC

CEM BIAS CORRECTION SUMMARY

Facility:	Kirby Canyon Recycling & Disposal Facility	Barometric:	
Unit:	Flare A-12	Leak Check:	OK
Condition:	1500°F - Condensate On	Strat. Check:	OK
Date:	01-25-08	Personnel:	gw, jm

	O_2	CO_2	NOx	CO	THC	CH4	SO_2		
Analyzer	755R	PIR 2000	42i	48C	RS-55	RS-55	721AT		
Range	25	10	25	100	50	50	100		r
Units, ppm or %	%	%	ppm	ppm	ppm	ppm	ppm		
Span Gas Value	20.43	12.62	22.5	85.2	45.0	45.0			Ccal
Run 1B	0.00	0.00	0.0	0.0	0.0	0.0			zero (initial), Cib
Test Time:	20.38	12.60	45.3	88.2	45.5	45.5			cal (initial), Cib
1130-1216	12.70	6.82	13.3	<1	5.4	<1			TEST AVG, Cavg
	0.30	0.00	-0.3	0.0	2.7	2.7			zero (final), Cfb
	20.00	11.70	22.3	84.0	46.5	46.5			cal (final), Cfb
	1%	0%	-1%	0%	5%	5%			% zero drift
	-2%	-0%	-92%	-4%	2%	2%			% cal drift
	12.79	**7.08**	**8.9**	**<1**	**4.1**	**<1.0**			**Cgas**
Run 2B	0.30	0.00	0.3	0.0	2.7	2.7			zero (initial), Cib
Test Time:	20.00	12.66	22.3	84.0	46.5	46.5			cal (initial), Cib
1233-1303	13.38	6.68	11.5	<1	6.2	<1			TEST AVG, Cavg
	0.30	0.00	-0.3	0.0	2.7	2.7			zero (final), Cfb
	20.00	12.44	22.2	84.0	46.3	46.3			cal (final), Cfb
	0%	0%	0%	0%	0%	0%			% zero drift
	0%	-2%	0%	0%	0%	0%			% cal drift
	13.56	**6.73**	**11.8**	**<1**	**3.6**	**<1.0**			**Cgas**
Run 3B	0.30	0.00	0.3	0.0	2.7	2.7			zero (initial), Cib
Test Time:	20.00	12.44	22.2	84.0	46.3	46.3			cal (initial), Cib
1516-1546	13.00	6.98	12.8	<1	6.5	<1			TEST AVG, Cavg
	0.30	0.00	-0.3	0.0	3.0	3.0			zero (final), Cfb
	20.00	12.22	22.1	83.8	46.8	46.8			cal (final), Cfb
	0%	0%	0%	0%	1%	1%			% zero drift
	0%	-2%	0%	0%	1%	1%			% cal drift
	13.17	**7.14**	**13.1**	**<1**	**3.8**	**<1.0**			**Cgas**

Pollutant Concentration (Cgas) = (Cavg - Co) x Ccal / (Cbcal - Co)
Zero and Calibration Drift = 100 x (Cfb - Cib) / r

Co = (Cib + Cfb) / 2 for zero gas
Cbcal = (Cif + Cfb) / 2 for cal gas

STACK GAS FLOW RATE DETERMINATION -- Method 19

Facility: Kirby Canyon Recycling & Disposal Facility
Unit: Flare A-12
Condition: 1500°F - Condensate On
Date: 01/23/08

		Time:	1130-1216	1233-1303	1316-1346	
		Run:	Run 1B	Run 2B	Run 3B	
# cubic feet/rev			1.450	1.451	1.453	ft³
# of seconds/rev			60	60	60	seconds
Gas Line Pressure (PSIG)			0.0	0.0	0.0	PSI Gauge
Gas Line Pressure (PSIA)			14.7	14.7	14.7	PSI Absolute
Gross Calorific Value @ 60°F		avg	481.6	474.5	486.7	Btu / ft³
Stack Oxygen			12.8	13.6	13.2	%
Gas Fd-Factor @ 60°F		avg	9,482.1	9,489.1	9,488.6	DSCF/MMBtu
Gas Temperature (°F)			70	70	70	°F
Standard Temperature (°F) Tstd			70	70	70	°F
Realtime Fuel Rate (CFM)			1450.0	1451.0	1453.0	CFM
Corrected Fuel Rate (SCFM) @ Tstd			1450.0	1451.0	1453.0	SCFM
Fuel Flowrate (SCFH)			87,000	87,060	87,180	SCFH
Million Btu per minute			0.685	0.676	0.694	MMBtu/min
Heat Input (MMBtu/hour)			41.1	40.5	41.6	MMBtu/Hr
Stack Gas Flow Rate @ Tstd			**17,073**	**18,615**	**18,143**	**DSCFM**

WHERE:

Gas Fd-Factor = Fuel conversion factor (ratio of combustion gas volumes to heat inputs)
MMBtu = Million Btu

CALCULATIONS:

SCFM = CFM * (460+Tstd) * (PSIA) / (14.7 * (460+Gas°F))
SCFH = SCFM * 60
MMBtu/min = SCFM * (Btu/ft³) * (520/(460+Tstd)) / 1,000,000
MMBtu/hr Heat Input = MMBtu/min * 60
DSCFM = Gas Fd-Factor * ((460+Tstd)/520) * MMBtu/min * 20.9/(20.9 - O2(%))

Fd-FACTOR CALCULATION

	Landfill Gas - Run 1B
Sample ID.	Kirby Canyon Recycling & Disposal Facility
Date.	1/23/2008

	Molecular Weight	Ideal Gas Specific Gravity	Ideal Gas Gross Calorific Value	Compressibility Summation Factor	Specific Volume ft³/lb	Component Mole Fraction x	Specific Gravity Fraction	Calorific Value Fraction	Compressibility Fraction	xiMW	Weight Fraction	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Sp.Vol. Volume ft³/lb
Helium‡	[illegible]	0.1382	0.0	[illegible]		0.0000	[illegible]	0.0	[illegible]	0.0000	0.0000							
Hydrogen (H_2)‡	2.02	[illegible]	324.9		187.723	0.0020	[illegible]	0.6	[illegible]	[illegible]							[illegible]	
Nitrogen	28.01	0.9672	0.0	0.0164	13.443	0.1340	[illegible]	0.0	[illegible]	3.7533	0.1321				0.1321		0.1321	[illegible]
Oxygen	32.00	1.1053	0.0		11.819	0.0100	[illegible]	0.0	[illegible]	[illegible]	0.0113			0.0113			0.0113	[illegible]
Carbon Monoxide	28.01	0.9671	321.8	0.0217	[illegible]	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Carbon Dioxide‡	44.01	1.5391	0.0	[illegible]	8.548	0.3800	[illegible]	0.0	[illegible]	16.7238	0.5884	[illegible]	[illegible]	0.4279			[illegible]	[illegible]
Methane	16.04	0.5539	1012.6	0.0136	23.565	0.4750	[illegible]	480.7	[illegible]	[illegible]	0.2681	[illegible]	[illegible]				[illegible]	[illegible]
Ethane	30.07	1.0382	1772.9	[illegible]	[illegible]	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Propane	[illegible]	1.5225	2523.0	[illegible]	8.365	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
isobutane	58.12	[illegible]	[illegible]	0.4734	[illegible]	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Butane	58.12	2.0067	3269.6	0.1825	6.321	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isopentane	72.14	2.4910	[illegible]	0.2276	5.252	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Pentane	72.14	[illegible]	[illegible]	0.2377	5.353	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Hexanes	86.17	[illegible]	4758.0	0.2850	6.358	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Total						1.0010	0.981	481.3	[illegible]	38.4202	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.26
							SG	Btu/ft³	$\sum x_i \sqrt{b_i}$	ΣxiMW		36.14%	6.74%	43.92%	13.21%	0.00%		ft³/lb

‡ Omitted from Compressibility Factor Calculation

Calculated Specific Gravity (SG) *[illegible]*	0.981	
Compressibility Factor (Z)	0.9995	
Z = 1 - ([illegible])		
Specific Gravity (corrected)	0.982	
Specific Volume, (SV) ft³/lb	13.26	ft³/lb
Gross Calorific Value (GCV) @ 60°F	481.6	Btu/ft³ Gross
Gross Calorific Value (GCV) @ 68°F	474.3	Btu/ft³ Gross
Gross Calorific Value (GCV)	6,384	Btu/lb
*Btu/lb = Btu/ft³ * SV [illegible]*		
Gas Fd-Factor @ 68°F	9,628	DSCF/MMBtu
[illegible]		
Gas Fd-Factor @ 60°F	9,482	DSCF/MMBtu

Fd-FACTOR CALCULATION

Landfill Gas - Run 2B

Sample ID: Kirby Canyon Recycling & Disposal Facility
Date: 1/23/2008

	Molecular Weight	[illegible]	[illegible]	[illegible]	[illegible]	Component Mole Fraction	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHECK SUM	Specific Volume, ft³/lb
Helium‡	[illegible]	0.1382	0.0	[illegible]		0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							
Hydrogen (H₂)‡	2.02	0.0696	[illegible]		[illegible]	0.0020	[illegible]	[illegible]	[illegible]	[illegible]							[illegible]	
Nitrogen	28.01	[illegible]	0.0	[illegible]	[illegible]	0.1440	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]	[illegible]
Oxygen	[illegible]	1.1053	0.0		[illegible]	0.0130	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]
Carbon Monoxide	28.01	0.9671	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Carbon Dioxide‡	44.01	[illegible]	0.0	[illegible]	8.518	0.3730	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Methane	16.04	0.5539	[illegible]	[illegible]	[illegible]	0.4660	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Ethane	30.07	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Propane	44.10	1.5224	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isobutane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Butane	58.12	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isopentane	72.15	[illegible]	[illegible]	0.2276	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Pentane	72.15	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Hexanes	[illegible]	[illegible]	[illegible]	0.2830	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Total						[illegible]	0.980	474.3	[illegible]	[illegible]	[illegible]	[illegible]	0.0665	[illegible]	[illegible]	[illegible]	[illegible]	13.26
							SG	Btu/ft³	$\Sigma x_i \sqrt{b_i}$	ΣxiMW		35.60%	6.65%	43.53%	14.22%	0.00%		ft³/lb

‡ [illegible]

Calculated Specific Gravity (SG) [illegible]	0.980	
Compressibility Factor (Z)	0.9995	
[illegible]		
Specific Gravity (corrected)	0.980	
Specific Volume, (SV) ft³/lb	13.26	ft³/lb
Gross Calorific Value (GCV) @ 60°F	474.5	Btu/ft³ Gross
Gross Calorific Value (GCV) @ 68°F	467.3	Btu/ft³ Gross
Gross Calorific Value (GCV)	6,294	Btu/lb
[illegible]		
Gas Fd-Factor @ 68°F	9,635	DSCF/MMBtu
[illegible]		
Gas Fd-Factor @ 60°F	9,489	DSCF/MMBtu

Fd-FACTOR CALCULATION

Landfill Gas - Run 3B

Sample ID: Kirby Canyon Recycling & Disposal Facility
Date: 1/23, 2008

	Molecular Weight	Ideal Gas Specific Gravity	Ideal Gas Heating Value	Compressibility Summation Factor	Specific Volume ft³/lb	Composition Mole Fraction	Specific Gravity Fraction	Calorific Value Fraction	Compressibility Fraction	xMW	Weight Fraction	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	Fraction SV	Specific Volume ft³/lb
Helium‡	4.00	0.1382	0.0	[illegible]		0.0000	0.0000	0.0	0.0000	0.0000	0.0000							
Hydrogen (H₂) ‡	2.02	0.0696	[illegible]		[illegible]	0.0020	0.0001	[illegible]	0.0000	[illegible]							[illegible]	
Nitrogen	28.01	[illegible]	0.0	0.0161	13.443	0.1270	[illegible]	0.0	0.0021	3.5573	0.1254				0.1254		[illegible]	[illegible]
Oxygen	32.00	1.1053	0.0		11.819	0.0080	[illegible]	0.0	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]
Carbon Monoxide	28.01	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Carbon Dioxide‡	44.01	[illegible]	0.0	[illegible]	[illegible]	0.3830	[illegible]	0.0	[illegible]	16.8558	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Methane	16.04	[illegible]	[illegible]	[illegible]	[illegible]	0.4800	[illegible]	484.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Ethane	30.07	1.0382	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Propane	44.10	1.5227	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isobutane	58.12	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Butane	58.12	[illegible]	[illegible]	0.1825	6.321	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isopentane	72.15	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Pentane	72.15	[illegible]	4018.5	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Hexanes	86.17	2.9753	[illegible]	[illegible]	4.398	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Total						[illegible]	0.980	486.4	[illegible]	28.3725	[illegible]	0.3653	0.0682	[illegible]	[illegible]	[illegible]	[illegible]	13.27
							SG	Btu/ft³	$\sum x_i \sqrt{b_i}$	$\sum$xiMW		36.53%	6.82%	44.10%	12.54%	0.00%		ft³/lb

‡ Omitted from Compressibility Factor Calculation

Calculated Specific Gravity (SG) *(Air = 1.000 @ 76mm Hg, 60°F)* 0.980

Compressibility Factor (Z) 0.9995

[illegible]

Specific Gravity (corrected) 0.980

Specific Volume, (SV) ft³/lb 13.27 ft³/lb

Gross Calorific Value (GCV) @ 60°F 486.7 Btu/ft³ Gross

Gross Calorific Value (GCV) @ 68°F 479.3 Btu/ft³ Gross

Gross Calorific Value (GCV) 6,456 Btu/lb

[illegible]

Gas Fd-Factor @ 68°F 9,635 DSCF/MMBtu

[illegible]

Gas Fd-Factor @ 60°F 9,489 DSCF/MMBtu

BLUE SKY ENVIRONMENTAL, LLC

CEM BIAS CORRECTION SUMMARY

Facility:	Kirby Canyon Recycling & Disposal Facility	Barometric:	
Unit:	Flare A-12	Leak Check:	OK
Condition:	1500°F - Condensate Off	Strat. Check:	OK
Date:	01-25-08	Personnel:	gw, am

	O_2	CO_2	NOx	CO	THC	CH4	SO_2		
Analyzer	755R	PIR 2000	42i	48C	RS-55	RS-55	721AT		
Range	25	15	25	100	50	50	100		r
Units, ppm or %	%	%	ppm	ppm	ppm	ppm	ppm		
Span Gas Value	20.43	12.62	22.5	85.2	45.0	45.0			Ccal
Run 1 A	0.00	0.00	0.00	0.0	0.0	0.0			zero (initial), Cib
Test Time:	20.40	12.60	22.5	85.2	45.0	45.0			cal (initial), Cib
0935-0953	12.97	7.48	12.1	0.0	2.9	0.0			TEST AVG, Cavg
	0.25	0.00	-0.2	0.0	0.5	0.5			zero (final), Cfb
	20.25	12.52	22.2	85.2	45.0	45.0			cal (final), Cfb
	1%	*0%*	*-1%*	*0%*	*1%*	*1%*			% zero drift
	1%	*-1%*	*-1%*	*0%*	*0%*	*0%*			% cal drift
	12.99	**7.52**	**12.2**	**<1.0**	**2.7**	**<1.0**			**Cgas**
Run 2A	0.25	0.00	-0.2	0.0	0.5	0.5			zero (initial), Cib
Test Time:	20.25	12.52	22.2	85.2	45.0	45.0			cal (initial), Cib
1003-1033	13.10	7.05	11.9	0.0	4.6	0.0			TEST AVG, Cavg
	0.25	0.00	-0.2	0.0	1.1	1.1			zero (final), Cfb
	20.00	12.34	22.3	84.8	45.3	45.3			cal (final), Cfb
	0%	*0%*	*0%*	*0%*	*1%*	*1%*			% zero drift
	-1%	*-1%*	*0%*	*0%*	*1%*	*1%*			% cal drift
	13.21	**7.16**	**12.1**	**<1.0**	**3.8**	**<1.0**			**Cgas**
Run 3 A	0.25	0.00	-0.2	0.0	1.1	1.1			zero (initial), Cib
Test Time:	20.00	12.34	22.3	84.8	45.3	45.3			cal (initial), Cib
1043-1113	13.10	6.90	12.1	0.0	5.2	0.0			TEST AVG, Cavg
	0.25	0.00	-0.2	0.0	2.5	2.5			zero (final), Cfb
	20.15	12.08	22.3	84.5	45.3	45.3			cal (final), Cfb
	0%	*0%*	*0%*	*0%*	*3%*	*3%*			% zero drift
	1%	*-2%*	*0%*	*0%*	*0%*	*0%*			% cal drift
	13.24	**7.13**	**12.3**	**<1.0**	**3.5**	**<1.0**			**Cgas**

Pollutant Concentration (Cgas) = (Cavg - Co) x Ccal / (Cbcal - Co)
Zero and Calibration Drift = 100 x (Cfb - Cib) / r

Co = (Cib + Cfb) / 2 for zero gas
Cbcal = (Cif + Cfb) / 2 for cal gas

STACK GAS FLOW RATE DETERMINATION -- Method 19

Facility: Kirby Canyon Recycling & Disposal Facility
Unit: Flare A-12
Condition: 1500°F - Condensate Off
Date: 01/23/08

		Time:	0905-0953	1003-1033	1043-1113	
		Run:	1	2	3	
# cubic feet/rev			1.450	1.441	1.442	ft³
# of seconds/rev			60	60	60	seconds
Gas Line Pressure (PSIG)			0.0	0.0	0.0	PSI Gauge
Gas Line Pressure (PSIA)			14.7	14.7	14.7	PSI Absolute
Gross Calorific Value @ 60°F		avg	457.3	479.6	482.6	Btu / ft³
Stack Oxygen			13.0	13.2	13.2	%
Gas Fd-Factor @ 60°F		avg	9,490.4	9,498.0	9,505.4	DSCF/MMBtu
Gas Temperature (°F)			70	70	70	°F
Standard Temperature (°F) Tstd			70	70	70	°F
Realtime Fuel Rate (CFM)			1450.0	1441.0	1442.0	CFM
Corrected Fuel Rate (SCFM) @ Tstd			1450.0	1441.0	1442.0	SCFM
Fuel Flowrate (SCFH)			87,000	86,460	86,520	SCFH
Million Btu per minute			0.651	0.678	0.683	MMBtu/min
Heat Input (MMBtu/hour)			39.0	40.7	41.0	MMBtu/Hr
Stack Gas Flow Rate @ Tstd			**16,630**	**17,836**	**18,054**	**DSCFM**

WHERE:

Gas Fd-Factor = Fuel conversion factor (ratio of combustion gas volumes to heat inputs)
MMBtu = Million Btu

CALCULATIONS:

SCFM = CFM * (460+Tstd) * (PSIA) / 14.7 / (460+Gas°F);
SCFH = SCFM * 60
MMBtu/min = SCFM * (Btu/ft³) * (520/(460+Tstd)) * 1/1,000,000
MMBtu/hr Heat Input = MMBtu/min * 60
DSCFM = Gas Fd-Factor * ((460+Tstd)/520) * MMBtu/min * 20.9 / (20.9 - O_2%)

Fd-FACTOR CALCULATION

Landfill Gas - Run 1A

Sample ID: Kirby Canyon Recycling & Disposal Facility

Date: 1/23/2008

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume [illegible]
Helium‡	[illegible]	[illegible]	[illegible]	[illegible]		0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							
Hydrogen (H₂) ‡	[illegible]	[illegible]	[illegible]		[illegible]	0.0020	[illegible]	[illegible]	[illegible]	[illegible]							[illegible]	
Nitrogen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.1660	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]	[illegible]
Oxygen	[illegible]	[illegible]	[illegible]		[illegible]	0.0260	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]
Carbon Monoxide	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Carbon Dioxide‡	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.3610	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Methane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.4510	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Ethane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Propane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isobutane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Butane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isopentane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Pentane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Hexanes	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Total						[illegible]	0.981	457.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15.24
							SG	Btu/ft³	$\sum x_i\sqrt{b_i}$	$\sum x_i MW$		34.32%	6.40%	42.91%	16.37%	0.00%		ft³/lb

‡ [illegible]

Calculated Specific Gravity (SG) [illegible] — 0.981

Compressibility Factor (Z) — 0.9995

[illegible]

Specific Gravity (corrected) — 0.982

Specific Volume, (SV) ft³/lb — 13.24 ft³/lb

Gross Calorific Value (GCV) @ 60°F — 457.3 Btu/ft³ Gross

Gross Calorific Value (GCV) @ 68°F — 450.4 Btu/ft³ Gross

Gross Calorific Value (GCV) — 6,057 Btu/lb

[illegible]

Gas Fd-Factor @ 68°F — 9,636 DSCF/MMBtu

[illegible]

Gas Fd-Factor @ 60°F — 9,490 DSCF/MMBtu

Fd-FACTOR CALCULATION

	Landfill Gas - Run 2A
Sample ID.	Kirby Canyon Recycling & Disposal Facility
Date	1/23/2008

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	[illegible]
Helium‡	4.00	[illegible]	[illegible]	[illegible]		0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							
Hydrogen (H₂)‡	2.02	[illegible]	[illegible]		[illegible]	0.0020	[illegible]	[illegible]	[illegible]	[illegible]							[illegible]	
Nitrogen	28.01	[illegible]	[illegible]	[illegible]	[illegible]	0.1360	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]	[illegible]
Oxygen	[illegible]	[illegible]	[illegible]		[illegible]	0.0008	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]
Carbon Monoxide	28.01	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Carbon Dioxide‡	44.01	[illegible]	[illegible]	[illegible]	[illegible]	0.3790	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Methane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.47[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Ethane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Propane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isobutane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Butane	58.12	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isopentane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Pentane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Hexanes	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Total						[illegible]	0.981	479.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.25
							SG	Btu/ft³	$\sum x_i\sqrt{b_i}$	$\sum x_i MW$		36.03%	6.72%	43.84%	13.41%	0.00%		ft³/lb

‡ [illegible]

Calculated Specific Gravity (SG) [illegible]	0.981	
Compressibility Factor (Z)	0.9995	
[illegible]		
Specific Gravity (corrected)	0.981	
Specific Volume, (SV) ft³/lb	13.25	ft³/lb
Gross Calorific Value (GCV) @ 60°F	479.6	Btu/ft³ Gross
Gross Calorific Value (GCV) @ 68°F	472.3	Btu/ft³ Gross
Gross Calorific Value (GCV)	6,355	Btu/lb
Gas Fd-Factor @ 68°F	9,644	DSCF/MMBtu
[illegible]		
Gas Fd-Factor @ 60°F	9,498	DSCF/MMBtu

Fd-FACTOR CALCULATION

Landfill Gas - Run 3 A

Sample ID. Kirby Canyon Recycling & Disposal Facility

Date 1/23/2008

	Molecular Weight	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	MW	[illegible]	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume
Helium‡	[illegible]	[illegible]	[illegible]	[illegible]		0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]							
Hydrogen (H_2) ‡	[illegible]	[illegible]	[illegible]		[illegible]	0.0020	[illegible]	[illegible]	[illegible]	[illegible]							[illegible]	
Nitrogen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.1320	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]		[illegible]	[illegible]
Oxygen	[illegible]	[illegible]	[illegible]		[illegible]	0.0080	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]
Carbon Monoxide	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Carbon Dioxide‡	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.3820	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
Methane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.4760	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Ethane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Propane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isobutane	58.12	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Butane	58.12	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Isopentane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
n-Pentane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Hexanes	[illegible]	[illegible]	[illegible]	0.2850	[illegible]	0.0000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
Total						[illegible]	0.981	482.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	13.25
							SG	Btu/ft³	$\Sigma x_i \sqrt{b_i}$	ΣxiMW		36.28%	6.76%	43.94%	13.02%	0.00%		ft³/lb

‡ [illegible]

Calculated Specific Gravity (SG) [illegible] 0.981

Compressibility Factor (Z) 0.9995

[illegible]

Specific Gravity (corrected) 0.981

Specific Volume, (SV) ft³/lb 13.25 ft³/lb

Gross Calorific Value (GCV) @ 60°F 482.6 Btu/ft³ Gross

Gross Calorific Value (GCV) @ 68°F 475.3 Btu/ft³ Gross

Gross Calorific Value (GCV) 6,395 Btu/lb

[illegible]

Gas Fd-Factor @ 68°F 9,652 DSCF/MMBtu

[illegible]

Gas Fd-Factor @ 60°F 9,505 DSCF/MMBtu

C
Laboratory Reports

Atmospheric Analysis & Consulting, Inc.

CLIENT : Blue Sky Environmental, LLC
PROJECT NAME : KIRBY
AAC PROJECT NO. : 080037
REPORT DATE : 1/24/2008

On January 24, 2008, Atmospheric Analysis & Consulting, Inc. received six (6) Tedlar Bags for Total Reduced Sulfur analysis by ASTM D-5504, non-methane organic compounds analysis by EPA 25C, Fixed Gases analysis by EPA 3C and hydrocarbon analysis by EPA 18. Upon receipt the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab No.
KIRBY-A12 1A	080037-31201
KIRBY-A12 2A	080037-31202
KIRBY-A12 3A	080037-31203
KIRBY-A12 1B	080037-31204
KIRBY-A12 2B	080037-31205
KIRBY-A12 3B	080037-31206

EPA 3C - An aliquot of the gaseous sample is injected into the GC/TCD for analysis following EPA 3C as specified in the SOW.

EPA 25C Analysis - Up to a 1 mL aliquot of samples is injected into the GC/FID/TCA for analysis following EPA 25C as specified in the SOW.

EPA 18 Analysis - Up to a 1 ml aliquot of samples is injected into the GC/FID for analysis following EPA 18 as specified in the SOW.

ASTM D-5504 – Up to a 1mL aliquot of sample is injected into the GC/SCD for analysis following ASTM D-5504 as specified in the SOW.

No problems were encountered during receiving, preparation, and/ or analysis of this sample. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI- EPA 25C, EPA 3C, EPA 18, and ASTM D-5504.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Release of the data contained in this hardcopy data package and its electronic data deliverable submitted on diskette has been authorized by the Laboratory Director or his designee, as verified by the following signature.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha S. Parmar, PhD
Technical Director

This report consists of 14 pages.

ACCREDITED IN ACCORDANCE WITH THE nelac Certificate #EA7037

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Laboratory Analysis Report

Client	Blue Sky Environmental Inc	Sampling Date	01/23/2008
Project No.	080037	Receiving Date	01/24/2008
Matrix	Air	Analysis Date	01/24/2008
Units	%	Report Date	01/24/2008

EPA Method 3C

Detection Limit: 0.1 %			Analyte				
Client ID	AAC ID	Hydrogen	Oxygen	Nitrogen	CO	Methane	CO2
KIRBY-A12 1A	080037-31201	0.2	2.0	16.6	<PQL	45.1	36.1
KIRBY-A12 2A	080037-31202	0.2	1.0	13.6	<PQL	47.3	37.9
KIRBY-A12 3A	080037-31203	0.2	0.8	13.2	<PQL	47.6	38.2
KIRBY-A12 1B	080037-31204	0.2	1.0	13.4	<PQL	47.5	38.0
KIRBY-A12 2B	080037-31205	0.2	1.3	14.4	<PQL	46.8	37.3
KIRBY-A12 3B	080037-31206	0.2	0.8	12.7	<PQL	48.0	38.3

Dr. Sucha Parmar
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

Client	**Blue Sky Environmental Inc**	**SAMPLING DATE**	**01/23/2008**
Project No.	**080037**	**RECEIVING DATE**	**01/24/2008**
Matrix	**Air**	**ANALYSIS DATE**	**01/24/2008**
Units	**ppmV**	**REPORT DATE**	**01/24/2008**

Client ID.	**KIRBY-A12 1A**	**KIRBY-A12 2A**	**KIRBY-A12 3A**	**MDL**
AAC ID	**080037-31201**	**080037-31202**	**080037-31203**	
Analysis Dilution Factor	**100, 10000**	**100, 2000**	**100, 2000**	
Can Dilution Factor	**1.0**	**1.0**	**1.0**	
H_2S	195.51	150.38	181.08	0.01
Carbonyl Sulfide	<PQL	<PQL	<PQL	0.01
SO2	<PQL	<PQL	<PQL	0.01
Methyl Mercaptan	1.75	3.74	2.85	0.01
Ethyl Mercaptan	<PQL	<PQL	<PQL	0.01
Dimethyl Sulfide	4.29	4.89	3.90	0.01
n-Butyl mercaptan	<PQL	<PQL	<PQL	0.01
Carbon Disulfide	<PQL	<PQL	<PQL	0.01
Allyl Sulfide	<PQL	<PQL	<PQL	0.01
Propyl Sulfide	<PQL	<PQL	<PQL	0.01
Allyl disulfide	<PQL	<PQL	<PQL	0.01
Isopropyl Mercaptan	0.69	0.71	0.78	0.01
t-Butyl mercaptan	<PQL	<PQL	<PQL	0.01
Propyl Mercaptan	<PQL	<PQL	<PQL	0.01
Butyl Sulfide	<PQL	<PQL	<PQL	0.01
Ethyl methyl sulfide	<PQL	<PQL	<PQL	0.01
Thiophene	<PQL	<PQL	<PQL	0.01
Isobutyl mercaptan	<PQL	<PQL	<PQL	0.01
Dimethyl disulfide	<PQL	<PQL	<PQL	0.01
Allyl mercaptan	<PQL	<PQL	<PQL	0.01
3-Methylthiophene	<PQL	<PQL	<PQL	0.01
Tetrahydrothiophene	<PQL	<PQL	<PQL	0.01
Diethyl sulfide	<PQL	<PQL	<PQL	0.01
2-Ethylthiophene	<PQL	<PQL	<PQL	0.01
2,5-Dimethylthiophene	<PQL	<PQL	<PQL	0.01
Diethyl disulfide	<PQL	<PQL	<PQL	0.01
Total Unidentified Sulfurs as H_2S	1.19	1.25	1.08	0.01
Total Sulfurs as H_2S	203.42	160.96	189.69	0.01

PQL = Practical Quantitation Limit (MDL x Analysis Dilution factor)
All compounds concentrations expressed in terms of H_2S

Dr. Sucha Parmar
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

Client	**Blue Sky Environmental Inc**	**SAMPLING DATE**	**01/23/2008**
Project No.	**080037**	**RECEIVING DATE**	**01/24/2008**
Matrix	**Air**	**ANALYSIS DATE**	**01/24/2008**
Units	**ppmV**	**REPORT DATE**	**01/24/2008**

Client ID.	**KIRBY-A12 1B**	**KIRBY-A12 2B**	**KIRBY-A12 3B**	**MDL**
AAC ID	**080037-31204**	**080037-31205**	**080037-31206**	
Analysis Dilution Factor	**100, 2000**	**100, 2000**	**100, 2000**	
Can Dilution Factor	**1.0**	**1.0**	**1.0**	
H_2S	180.81	163.05	181.63	0.01
Carbonyl Sulfide	<PQL	<PQL	<PQL	0.01
SO2	<PQL	<PQL	<PQL	0.01
Methyl Mercaptan	3.25	2.90	2.89	0.01
Ethyl Mercaptan	<PQL	<PQL	<PQL	0.01
Dimethyl Sulfide	3.83	3.73	3.85	0.01
n-Butyl mercaptan	<PQL	<PQL	<PQL	0.01
Carbon Disulfide	<PQL	<PQL	<PQL	0.01
Allyl Sulfide	<PQL	<PQL	<PQL	0.01
Propyl Sulfide	<PQL	<PQL	<PQL	0.01
Allyl disulfide	<PQL	<PQL	<PQL	0.01
Isopropyl Mercaptan	0.64	<PQL	0.54	0.01
t-Butyl mercaptan	<PQL	<PQL	<PQL	0.01
Propyl Mercaptan	<PQL	<PQL	<PQL	0.01
Butyl Sulfide	<PQL	<PQL	<PQL	0.01
Ethyl methyl sulfide	<PQL	<PQL	<PQL	0.01
Thiophene	<PQL	<PQL	<PQL	0.01
Isobutyl mercaptan	<PQL	0.61	<PQL	0.01
Dimethyl disulfide	<PQL	<PQL	<PQL	0.01
Allyl mercaptan	<PQL	<PQL	<PQL	0.01
3-Methylthiophene	<PQL	<PQL	<PQL	0.01
Tetrahydrothiophene	<PQL	<PQL	<PQL	0.01
Diethyl sulfide	<PQL	<PQL	<PQL	0.01
2-Ethylthiophene	<PQL	<PQL	<PQL	0.01
2,5-Dimethylthiophene	<PQL	<PQL	<PQL	0.01
Diethyl disulfide	<PQL	<PQL	<PQL	0.01
Total Unidentified Sulfurs as H_2S	1.02	0.91	0.99	0.01
Total Sulfurs as H_2S	189.55	171.20	189.91	0.01

PQL = Practical Quantitation Limit (MDL x Analysis Dilution factor)
All compounds concentrations expressed in terms of H_2S.

Dr. Sucha Parmar
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT:	Blue Sky Environmental Inc	Sampling Date	01/23/2008
PROJECT NO.	080037	Receiving Date	01/24/2008
MATRIX	Air	Analysis Date	01/24/2008
UNITS	ppmv	Report Date	01/24/2008

Client ID	AAC ID	*ANALYSIS METHOD*		*EPA Method 18*				
		Detection Limit		*0.3 ppmv*				
		C1*	C2**	C3	C4	C5	C6	C6+
KIRBY-A12 1A	080037-31201	NA	<30	25.1	17.4	57.6	63.6	347
KIRBY-A12 2A	080037-31202	NA	<30	24.9	18.0	61.7	67.7	317
KIRBY-A12 3A	080037-31203	NA	<30	23.3	18.2	62.9	67.5	327
KIRBY-A12 1B	080037-31204	NA	<30	23.8	18.9	66.7	74.4	391
KIRBY-A12 2B	080037-31205	NA	<30	21.5	17.9	64.6	71.1	389
KIRBY-A12 3B	080037-31206	NA	<30	23.2	18.8	66.9	73.3	402

***C1 reported off of the EPA 3C report**

**** Due to the extremely high C1 concentration, the C2 concentration could not be measured below this PQL due to matrix interference.**

Dr. Sucha Parmar
Technical Director

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

Client	**Blue Sky Environmental Inc**	**Sampling Date**	**01/23/2008**
Project No.	**080037**	**Receiving Date**	**01/24/2008**
Matrix	**Air**	**Analysis Date**	**01/24/2008**
Units	**ppmv**	**Report Date**	**01/24/2008**

EPA Method 25C

Detection Limit:		1.0 ppmv
Client Sample ID	**AAC ID**	**NMHC****
KIRBY-A12 1A	**080037-31201**	3148
KIRBY-A12 2A	**080037-31202**	3385
KIRBY-A12 3A	**080037-31203**	2685
KIRBY-A12 1B	**080037-31204**	3634
KIRBY-A12 2B	**080037-31205**	3711
KIRBY-A12 1A	**080037-31206**	3830

****Non-Methane Hydrocarbons as Methane**

Dr. Sucha Parmar
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Quality Control/Quality Assurance Report

Date Analyzed: 1/24/2008 **Instrument ID:** TCD#1
Analyst: EV **Units:** %

I - Method Blank-EPA Method 3C

AAC ID	Analyte	MB Concentration
Method Blank	Hydrogen	ND
	Oxygen	ND
	Nitrogen	ND
	CO	ND
	Methane	ND
	CO2	ND

II-Laboratory Control Spike & Duplicate - EPA Method 3C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec *	LCSD % Rec *	% RPD***
Lab Control Standards	Hydrogen	20.0	19.6	19.6	98	98	0.0
	Nitrogen	20.0	20.4	20.4	102	102	0.2
	CO	20.0	18.7	18.6	94	93	0.3
	Methane	20.0	19.4	19.4	97	97	0.2
	CO2	20.0	19.3	19.2	96	96	0.2

III - Duplicate Analysis - EPA Method 3C

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
080037-31201	Hydrogen	0.19	0.19	0.2	0.5
	Oxygen	1.77	1.99	1.9	12.0
	Nitrogen	15.53	16.31	15.9	4.9
	CO	0.00	0.00	0.0	0.0
	Methane	43.27	42.95	43.1	0.7
	CO2	34.67	34.38	34.5	0.8

IV-Matrix Spike & Duplicate- EPA Method 3C

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
080037-31201	Hydrogen	0.09	10.0	9.2	9.3	91	92	1.2
	Nitrogen	7.96	10.0	17.4	17.4	95	94	0.1
	CO	0.00	10.0	9.5	9.6	95	96	0.8
	Methane	21.56	10.0	32.2	32.0	107	105	2.0
	CO2	17.26	10.0	27.6	27.5	104	102	1.7

** Must be 85-115%*
*** Must be 75-125%*
**** Must be < 25%*

Sucha Parmar, Ph.D.
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Quality Control/Quality Assurance Report

Date Analyzed: 1/24/2008 **Instrument ID: TCD#1**
Analyst: EV **Calibration Date: 08/21/07**

Opening Calibration Verification Standard

Analyte	xLR**	LR	%RPD*
Hydrogen	2127	2133	**0.3**
Oxygen* **	56490	54265	**4.0**
Nitrogen	59782	61719	**3.2**
Carbon Monoxide	65600	61832	**5.9**
Methane	53998	52793	**2.3**
Carbon Dioxide	88017	85454	**3.0**

Closing Calibration Verification Standard

Analyte	xLR**	LR	%RPD*
Hydrogen	2127	2142	**0.7**
Nitrogen	59782	62607	**4.6**
Carbon Monoxide	65600	62682	**4.5**
Methane	53998	53338	**1.2**
Carbon Dioxide	88017	86743	**1.5**

* Must be <15%
** Linear Response Factor from Initial Calibration Curve
*** Oxygen from Lab Air

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 01/24/08 **Instrument ID: SCD#2**
Analyst: EV **Units: PPMV**

I - Method Blank - ASTM D-5504

AAC ID	Analyte	MB Conc.
Method Blank	H2S	ND

II-Laboratory Control Spike & Duplicate - ASTM D-5504

Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec *	LCSD % Rec *	% RPD***
H2S	0.050	0.054	0.050	108	100	7.7

III-Matrix Spike & Duplicate- ASTM D-5504 Sample ID 080037-31203 x2000

Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
H2S	0.045	0.050	0.092	0.095	93	99	3.2

IV - Duplicate Analysis - ASTM D-5504 Sample ID 080037-31203 x2000

Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
H2S	180.677	181.480	181.079	0.4

** Must be 90-110%*

*** Must be 85-115%*

**** Must be < 10%*

Dr. Sucha Parmar
Technical Director

Quality Control/Quality Assurance Report

Date Analyzed: 1/24/2008
Analyst: EV
Calibration Date: 1/15/2008

Instrument ID: SCD#2
Units: PPMV

Opening Calibration Verification Standards

Analyte	Std. Conc.	Result	%Recovery*
H2S	0.050	0.050	**100**

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	%Recovery*
H2S	0.050	0.045	**90**

* Must be 90-110%

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 1/24/2008
Analyst: EV
Instrument ID: FID#3
Units: PPMV

I - Method Blank-EPA Method 18

AAC ID	Analyte	MB Concentration
Method Blank	Methane	ND
	Ethane	ND
	Propane	ND
	Butane	ND
	Pentane	ND
	Hexane	ND

II-Laboratory Control Spike & Duplicate - EPA Method 18

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec *	LCSD % Rec *	% RPD***
Lab Control Standards	Methane	100.4	101.3	103.8	100.9	103.4	2.5
	Ethane	100.2	102.2	104.9	102.0	104.7	2.6
	Propane	100.2	98.1	102.2	97.9	102.0	4.2
	Butane	100.4	95.3	100.4	94.9	100.0	5.2
	Pentane	100.0	94.5	100.9	94.5	100.9	6.5
	Hexane	99.4	95.9	103.7	96.5	104.4	7.8

III - Duplicate Analysis - EPA Method 18

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	%RPD***
080037-31201	Methane	NA	NA	NA	NA
	Ethane	NA	NA	NA	NA
	Propane	19.55	17.43	18.5	11.5
	Butane	7.56	7.48	7.5	1.0
	Pentane	6.07	6.59	6.3	8.1
	Hexane	3.79	3.58	3.7	5.9

IV-Matrix Spike & Duplicate- EPA Method 18

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
080037-31201	Methane	NA	NA	NA	NA	NA	NA	NA
	Ethane	NA	NA	NA	NA	NA	NA	NA
	Propane	9.2	50.0	54.5	54.2	91	90	0.9
	Butane	3.8	50.0	51.4	51.7	95	96	0.8
	Pentane	3.2	50.0	50.8	53.2	95	100	5.0
	Hexane	1.8	50.0	50.4	49.8	97	96	1.2

** Must be 85-115%*
*** Must be 75-125%*
**** Must be < 25%*

Dr. Sucha Parmar
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Quality Control/Quality Assurance Report

Date Analyzed: 1/24/2008 **Instrument ID: FID#3**
Analyst: EV **Calibration Date: 09/10/07**

Opening Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
C1	716	690	3.7
C2	1415	1376	2.8
C3	2205	2069	6.4
C4	2997	2745	8.8
C5	3655	3403	7.1
C6	4191	4123	1.6

Closing Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
C1	716	734	2.5
C2	1415	1441	1.8
C3	2205	2155	2.3
C4	2997	2861	4.6
C5	3655	3550	2.9
C6	4191	4241	1.2

* Must be <15%
** Average Calibration Factor from Initial Calibration Curve

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Analysis Date:	1/24/2008	**Instrument ID:**	FID#9
Analyst:	EV	**Calibration Date:**	1/18/2008
Units:	ppmv		

I - Opening Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	11528	1.6
CH4	11996	12264	2.2
CO2	11842	11877	0.3
Propane	33025	32994	0.1

II - Method Blank - Method 25C

AAC ID	Analyte	Sample Result
MB	NMEHC	ND

III - Laboratory Control Spike & Duplicate - Method 25C

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec **	LCSD % Rec **	% RPD***
LCS/LCSD	NMEHC	50.0	49.2	51.4	98.3	102.7	4.4

IV - Closing Calibration Verification Standard - Method 25C

Analyte	xCF	dCF	%RPD*
CO	11713	10764	8.4
CH4	11996	12361	3.0
CO2	11842	11456	3.3
Propane	33025	32701	1.0

xCF - Average Calibration Factor from Initial Calibration Curve

dCF - Daily Calibration Factor

* Must be <15%

** Must be 90-110 %

*** Must be <20%

Dr. Sucha Parmar,
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

624 San Gabriel Avenue
Albany, CA 94706
510.525.1261 ph/fax
Contact: Guy Worthington 510 525 5304
E-Mail bluskyenvironmental@yahoo.com

ph/fax
Contact:

CHAIN OF CUSTODY RECORD

Project Name: KIRBY A-12

Project #:

SAMPLE Date	SAMPLE Time	Sample ID (Method-Run-Fraction)	Type/Size of container	25C	16US (4-8)	55C4	70... [illegible]		
1/23/08		KIRBY A-12 1A	Tedlar 5L	✓	✓	✓			
↓		KIRBY A-12 2A	↓	✓	✓	✓			
		KIRBY A-12 3A		✓	✓	✓	✓		
		KIRBY A-12 1B		✓	✓	✓			
		KIRBY A-12 2B		✓	✓	✓			
		KIRBY A-12 3B		✓	✓	✓			

All samples submitted to laboratories for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the sample. Samples should be held for 90+ days. The laboratory reserves the right to return unused sample portions.

COMMENTS:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	1/23/08	[illegible]	[signature]	1/23/08	[illegible]
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Atmospheric Analysis & Consulting, Inc.

CLIENT : Blue Sky Environmental, LLC
PROJECT NAME : Kirby A-12
AAC PROJECT NO. : 080037
REPORT DATE : 01/25/2008

On January 24, 2008, Atmospheric Analysis & Consulting, Inc. received one (1) Tedlar Bag for Volatile Organic Compounds analysis by EPA Method TO-15 for AP-42 list compounds. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab ID
Kirby-A12 3A	080037-31203

TO-15 Analysis - Up to a 500 ml aliquot of sample is concentrated, put through a water and CO_2 management system, cryofocused and injected into the GC/MS (full scan mode) for analysis following EPA Method TO-15 as specified in the SOW.

No problems were encountered during receiving, preparation and/ or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# AACI-TO-15. Estimated uncertainty of the test results will be provided upon request.

I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized the release of the data contained in this hardcopy data package.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha S. Parmar, PhD
Technical Director

This report consists of 10 pages.

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT	: Blue Sky Environmental, LLC	DATE RECEIVED	: 01/24/2008
PROJECT NO	: 080037	DATE REPORTED	: 01/25/2008
MATRIX	: AIR		
UNITS	: PPB (v/v)		

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Kirby-A12 3A			Sample Reporting Limit (RL*DF's)	Method Reporting Limit
AAC ID	080037-31203				
Date Sampled	1/23/2008				
Date Analyzed	1/24/2008				
Can Dilution Factor	1.00				
	Result	Qualifier	Dil. Fac.		
Chlorodifluoromethane	928		100	100	1.0
Dichlorodifluoromethane	816		100	100	1.0
Chloromethane	ND	U	100	100	1.0
Vinyl Chloride	102		100	100	1.0
Chloroethane	ND	U	100	100	1.0
Dichlorofluoromethane	383		100	100	1.0
Ethanol	120000		2500	5000	2.0
Acetone	24800		1000	2000	2.0
Trichlorofluoromethane	179		100	100	1.0
Isopropyl Alcohol	26700		1000	2000	2.0
Acrylonitrile	ND	U	100	100	1.0
1,1-Dichloroethylene	ND	U	100	100	1.0
Methylene Chloride	241		100	100	1.0
Carbon Disulfide	221		100	100	1.0
t-1,2-Dichloroethylene	ND	U	100	100	1.0
1,1-Dichloroethane	ND	U	100	100	1.0
2-Butanone (MEK)	32700		1000	1000	1.0
Hexane	980		100	100	1.0
Chloroform	ND	U	100	100	1.0
1,2-Dichloroethane	ND	U	100	100	1.0
1,1,1-Trichloroethane	ND	U	100	100	1.0
Benzene	876		100	100	1.0
Carbon Tetrachloride	ND	U	100	100	1.0
1,2-Dichloropropane	ND	U	100	100	1.0
Bromodichloromethane	ND	U	100	100	1.0
Trichloroethene	192		100	100	1.0
4-Methyl-2-Pentanone (MIBK)	2130		100	100	1.0
Toluene	20200		1000	1000	1.0
1,2-Dibromoethane	ND	U	100	100	1.0
Tetrachloroethylene	27400		1000	1000	1.0
Chlorobenzene	257		100	100	1.0
Ethylbenzene	7980		1000	1000	1.0
m- & p-Xylenes	14900		1000	2000	2.0
1,1,2,2-Tetrachloroethane	ND	U	100	100	1.0
o-Xylene	3790		100	100	1.0
1,3-Dichlorobenzene	ND	U	100	100	1.0
1,4-Dichlorobenzene	741		100	100	1.0
1,2-Dichlorobenzene	ND	U	100	100	1.0
BFB-Surrogate Std. % Recovery	99%				70-130%

J - Analyte was detected. However the analyte concentration is an estimated value, which is between the Method Detection Limit (MDL) and the Reporting Limit (RL).
E - Estimated value, result outside linear range of instrument.
U - Compound was analyzed for, but was not detected.
H - Estimated

Sucha S. Parmar, PhD
Technical Director

ANALYSIS DATE : 01/24/08 INSTRUMENT ID : GC/MS-03
ANALYST : JJG / KP STD ID : PS011408-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15
Continuing Calibration Verification of the 01/16/08 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC*
4-BFB (surrogate standard)***	10	9.96	100
Chlorodifluoromethane*	10	9.34	93
Propylene*	10	8.84	88
DiCIDIFMethane*	10	10.03	100
CHLOROMETHANE*	10	8.56	86
1,2 DiCl-1,1,2,2-TetrafEthane*	10	10.09	101
VINYL CHLORIDE*	10	10.23	102
Methanol*	10	10.21	102
1,3-Butadiene*	10	10.47	105
BROMOMETHANE*	10	10.22	102
CHLOROETHANE*	10	11.02	110
Dichlorofluoromethane*	10	10.46	105
Ethanol*	10	9.22	92
Vinyl Bromide*	10	10.69	107
Acetone*	10	9.88	99
TRICHLOROFLUOROMETHANE*	10	10.98	110
Isopropanol*	10	9.97	100
Acrylonitrile*	10	10.06	101
1,1 DICHLOROETHENE*	10	10.20	102
METHYLENE CHLORIDE*	10	9.19	92
Allyl CHLORIDE*	10	10.60	106
Carbon disulfide*	10	9.96	100
1,1,2-TRICHLORO-1,2,2-TRIFLUO	10	10.26	103
trans-1,2- DICHLOROETHYLENE*	10	10.31	103
1,1- DICHLOROETHANE*	10	10.05	101
MTBE*	10	10.16	102
Vinyl Acetate*	10	8.85	89
MEK*	10	9.66	97
cis-1,2- DICHLOROETHYLENE*	10	10.04	100
Hexane*	10	9.76	98
CHLOROFORM*	10	10.14	101
Ethyl Acetate*	10	10.58	106
Tetrahydrofuran*	10	9.51	95
1,2-DICHLOROETHANE*	10	10.54	105
1,1,1-TRICHLOROETHANE*	10	10.64	106

ANALYSIS DATE : 01/24/08 INSTRUMENT ID : GC/MS-03
ANALYST : JJG / KP STD ID : PS011408-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15
Continuing Calibration Verification of the 01/16/08 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC*
BENZENE**	10	9.18	92
CARBON TETRACHLORIDE**	10	9.91	99
Cyclohexane**	10	9.13	91
1,2-DICHLOROPROPANE**	10	9.19	92
Bromodichloromethane**	10	9.57	96
1,4-Dioxane**	10	9.12	91
TRICHLOROETHENE**	10	9.27	93
2,2,4-Trimethylpentane**	10	9.78	98
Heptane**	10	8.94	89
cis- 1,3 DICHLOROPROPENE**	10	9.58	96
MiBK**	10	9.15	92
trans 1,3 DICHLOROPROPENE**	10	10.15	102
1,1,2-TRICHLOROETHANE**	10	9.27	93
TOLUENE**	10	9.29	93
2-Hexanone**	10	9.61	96
Dibromochloromethane**	10	9.85	99
1,2 DIBROMOETHANE**	10	9.60	96
TETRACHLOROETHYLENE**	10	9.81	98
CHLOROBENZENE***	10	9.47	95
ETHYLBENZENE***	10	9.50	95
m-, & p- XYLENES***	20	19.52	98
Bromoform***	10	9.96	100
STYRENE***	10	9.83	98
1,1, 2,2- TETRACHLORETHANE**	10	9.09	91
o- XYLENE***	10	9.42	94
Ethyltoluene***	10	9.93	99
1,3,5- TRIMETHYLBENZENE***	10	9.34	93
1,2,4- TRIMETHYLBENZENE***	10	9.54	95
Benzyl Chloride***	10	10.49	105
1,3- DICHLOROBENZENE***	10	9.88	99
1,4- DICHLOROBENZENE***	10	9.72	97
1,2-DICHLOROBENZENE***	10	9.83	98
1,2,4-TRICHLOROBENZENE***	10	9.29	93
HEXACHLOROBUTADIENE***	10	9.52	95

* Internal std calculation IS1 : Bromochloromethane
** Internal std calculation IS2 : 1,4-Difluorobenzene
*** Internal std calculation IS3 : Chlorobenzene-d5
%REC should be 70-130%
%Compound failed criteria and results should be considered estimated.

Sucha S. Parmar, PhD
Technical Director

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

CLIENT ID	: Laboratory Control Spike	DATE ANALYZED	: 01/24/08
AAC ID	: LCS/LCSD	DATE REPORTED	: 01/24/08
MEDIA	: Air	UNITS	: ppbv

TO-15 Laboratory Control Spike Recovery

Compound	Sample Conc.	Spike Added	Spike Res	Dup Spike Res	Spike % Rec *	Spike Dup % Rec *	RPD** %
1,1-DICHLOROETHYLENE	0.0	10.00	10.20	9.97	102	100	2.3
METHYLENE CHLORIDE	0.0	10.00	9.19	8.98	92	90	2.3
BENZENE	0.0	10.00	9.18	9.04	92	90	1.5
TRICHLOROETHENE	0.0	10.00	9.27	9.20	93	92	0.8
TOLUENE	0.0	10.00	9.29	9.35	93	93	0.6
TETRACHLOROETHYLENE	0.0	10.00	9.81	9.81	98	98	0.0
CHLOROBENZENE	0.0	10.00	9.47	9.45	95	94	0.2
ETHYLBENZENE	0.0	10.00	9.50	9.52	95	95	0.2
m-, & p- XYLENES	0.0	20.00	19.52	19.43	98	97	0.5
o- XYLENE	0.0	10.00	9.42	9.36	94	94	0.6

* Must be 70-130%

** Must be < 25%

Sucha S. Parmar, PhD
Technical Director

1534 Eastman Avenue • Suite A • Ventura, California 93003 (805) 650-1642 • FAX (805) 650-1644

Method Blank Analysis Report

MATRIX	**: AIR**	**ANALYSIS DATE**	**: 01/24/08**
UNITS	**: ppbv**	**REPORT DATE**	**: 01/24/08**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 012408	RL
Chlorodifluoromethane*	<RL	1.0
Propylene*	<RL	1.0
DiClDIFMethane*	<RL	1.0
CHLOROMETHANE*	<RL	1.0
1,2 DiCl-1,1,2,2-TetraFEthane*	<RL	1.0
VINYL CHLORIDE*	<RL	1.0
Methanol*	<RL	5.0
1,3-Butadiene*	<RL	1.0
BROMOMETHANE*	<RL	1.0
CHLOROETHANE*	<RL	1.0
Dichlorofluoromethane	<RL	1.0
Ethanol*	<RL	2.0
Vinyl Bromide*	<RL	1.0
Acetone*	<RL	2.0
TRICHLOROFLUOROMETHANE*	<RL	1.0
Isopropyl Alcohol*	<RL	2.0
Acrylonitrile*	<RL	1.0
1,1 DICHLOROETHENE*	<RL	1.0
METHYLENE CHLORIDE*	<RL	1.0
Allyl CHLORIDE*	<RL	1.0
Carbon disulfide*	<RL	1.0
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE*	<RL	1.0
trans-1,2- DICHLOROETHYLENE*	<RL	1.0
1,1- DICHLOROETHANE*	<RL	1.0
MTBE*	<RL	1.0
Vinyl Acetate*	<RL	1.0
MEK*	<RL	1.0
cis-1,2- DICHLOROETHYLENE*	<RL	1.0
Hexane*	<RL	1.0
CHLOROFORM*	<RL	1.0
Ethyl Acetate*	<RL	1.0
Tetrahydrofuran*	<RL	1.0
1,2-DICHLOROETHANE*	<RL	1.0
1,1,1-TRICHLOROETHANE*	<RL	1.0
BENZENE**	<RL	1.0
CARBON TETRACHLORIDE**	<RL	1.0
Cyclohexane**	<RL	1.0
1,2-DICHLOROPROPANE**	<RL	1.0
Bromodichloromethane**	<RL	1.0
1,4-Dioxane**	<RL	1.0
TRICHLOROETHENE**	<RL	1.0
2,2,4-Trimethylpentane**	<RL	1.0
Heptane**	<RL	1.0

Method Blank Analysis Report

MATRIX	: AIR	ANALYSIS DATE	: 01/24/08
UNITS	: ppbv	REPORT DATE	: 01/24/08

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 012408	RL
cis- 1,3 DICHLOROPROPENE**	<RL	1.0
MiBK**	<RL	1.0
trans 1,3 DICHLOROPROPENE**	<RL	1.0
1,1,2-TRICHLOROETHANE**	<RL	1.0
TOLUENE**	<RL	1.0
2-Hexanone**	<RL	1.0
Dibromochloromethane**	<RL	1.0
1,2 DIBROMOETHANE**	<RL	1.0
TETRACHLOROETHYLENE**	<RL	1.0
CHLOROBENZENE***	<RL	1.0
ETHYLBENZENE***	<RL	1.0
m-, & p- XYLENES***	<RL	2.0
Bromoform***	<RL	3.0
STYRENE***	<RL	1.0
1,1, 2,2- TETRACHLORETHANE***	<RL	1.0
o- XYLENE***	<RL	1.0
Ethyltoluene***	<RL	1.0
1,3,5- TRIMETHYLBENZENE***	<RL	1.0
1,2,4- TRIMETHYLBENZENE***	<RL	1.0
Benzyl Chloride***	<RL	5.0
1,3- DICHLOROBENZENE***	<RL	1.0
1,4- DICHLOROBENZENE***	<RL	1.0
1,2-DICHLOROBENZENE***	<RL	1.0
1,2,4 TRICHLOROBENZENE***	<RL	1.0
HEXACHLOROBUTADIENE***	<RL	1.0
System Monitoring Compounds		
BFB-Surrogate Std. % Recovery	96%	--

RL - Reporting Limit

Sucha S. Parmar, PhD
Technical Director

Quality Control/Quality Assurance Report

AAC ID	: 080037-31203	DATE ANALYZED	: 01/24/08
MATRIX	: Air	DATE REPORTED	: 01/25/08
		UNITS	: ppbv

TO-15 Duplicate Analysis

Compound		Sample Conc	Duplicate Conc	% RPD
Chlorodifluoromethane*	"J"	1000	978	2.2
Propylene*		8750	9480	8.0
DiCHDIFMethane*		<RL	<RL	0.0
CHLOROMETHANE*		<RL	<RL	0.0
1,2 DiCl-1,1,2,2-TetraFEthane*		<RL	<RL	0.0
VINYL CHLORIDE*		<RL	<RL	0.0
Methanol*		28000	27300	2.5
1,3-Butadiene*		<RL	<RL	0.0
BROMOMETHANE*		<RL	<RL	0.0
CHLOROETHANE*		<RL	<RL	0.0
Dichlorofluoromethane		<RL	<RL	0.0
Ethanol*	"E"	94500	95000	0.5
Vinyl Bromide*		<RL	<RL	0.0
Acetone*		24800	25600	3.2
TRICHLOROFLUOROMETHANE*		<RL	<RL	0.0
Isopropyl Alcohol*		26700	27000	1.1
Acrylonitrile*		<RL	<RL	0.0
1,1 DICHLOROETHENE*		<RL	<RL	0.0
METHYLENE CHLORIDE*		<RL	<RL	0.0
Allyl CHLORIDE*		<RL	<RL	0.0
Carbon disulfide*		<RL	<RL	0.0
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE*		<RL	<RL	0.0
trans-1,2- DICHLOROETHYLENE*		<RL	<RL	0.0
1,1- DICHLOROETHANE*		<RL	<RL	0.0
MTBE*		<RL	<RL	0.0
Vinyl Acetate*		<RL	<RL	0.0
MEK*		32700	32900	0.6
cis-1,2- DICHLOROETHYLENE*		<RL	<RL	0.0
Hexane*		1080	1090	0.9
CHLOROFORM*		<RL	<RL	0.0
Ethyl Acetate*		10900	11200	2.7
Tetrahydrofuran*		6950	6990	0.6
1,2-DICHLOROETHANE*		<RL	<RL	0.0
1,1,1-TRICHLOROETHANE*		<RL	<RL	0.0
BENZENE**		1440	1390	3.5
CARBON TETRACHLORIDE**		<RL	<RL	0.0

Quality Control/Quality Assurance Report

AAC ID	: 080037-31203	DATE ANALYZED	: 01/24/08
MATRIX	: Air	DATE REPORTED	: 01/25/08
		UNITS	: ppbv

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Cyclohexane**	1310	1290	1.5
1,2-DICHLOROPROPANE**	<RL	<RL	0.0
Bromodichloromethane**	<RL	<RL	0.0
1,4-Dioxane**	<RL	<RL	0.0
TRICHLOROETHENE**	<RL	<RL	0.0
2,2,4-Trimethylpentane**	<RL	<RL	0.0
Heptane**	2540	2520	0.8
cis- 1,3 DICHLOROPROPENE**	<RL	<RL	0.0
MiBK**	2300	2260	1.8
trans 1,3 DICHLOROPROPENE**	<RL	<RL	0.0
1,1,2-TRICHLOROETHANE**	<RL	<RL	0.0
TOLUENE**	20200	20200	0.0
2-Hexanone**	<RL	<RL	0.0
Dibromochloromethane**	<RL	<RL	0.0
1,2 DIBROMOETHANE**	<RL	<RL	0.0
TETRACHLOROETHYLENE**	27400	27400	0.0
CHLOROBENZENE***	<RL	<RL	0.0
ETHYLBENZENE***	7980	7990	0.1
m-, & p- XYLENES***	14900	14900	0.0
Bromoform***	<RL	<RL	0.0
STYRENE***	<RL	<RL	0.0
1,1,2,2-TETRACHLOROETHANE***	<RL	<RL	0.0
o- XYLENE***	4480	4460	0.4
Ethyltoluene***	<RL	<RL	0.0
1,3,5- TRIMETHYLBENZENE***	1030	1030	0.0
1,2,4- TRIMETHYLBENZENE***	2380	2390	0.4
Benzyl Chloride***	<RL	<RL	0.0
1,3- DICHLOROBENZENE***	<RL	<RL	0.0
1,4- DICHLOROBENZENE***	<RL	<RL	0.0
1,2-DICHLOROBENZENE***	<RL	<RL	0.0
1,2,4 TRICHLOROBENZENE***	<RL	<RL	0.0
Hexachlorobutadiene***	<RL	<RL	0.0
System Monitoring Compounds			
BFB-Surrogate Std. % Recovery	97%	96%	1.3

RL - Reporting Limit
"E" - Estimated value for duplicate purposes only
"J" - Value between method detection limit and reporting limit. Reported for duplicate purposes only.

Sucha S. Parmar, PhD
Technical Director

BLUE SKY ENVIRONMENTAL, LLC.
624 San Gabriel Avenue
Albany, CA 94706
510.525.1261 ph/fax
Contact: Guy Worthington 510 508 3469
E-Mail: blueskyenvironmental@yahoo.com

LAP:
ADDRESS:

ph/fax
Contact:

Page __ of __

CHAIN OF CUSTODY RECORD

Project Name:

Project #:

SAMPLE Date	SAMPLE Time	Sample ID (Method-Run-Fraction)	Type/Size of container	Analysis Requested	
1/3/12		KIRBY A 1D 1B	VOA		31201
		KIRBY A 1E 2B			31202
		KIRBY A 1D 3B			31203
		KIRBY A 2D 1B			31204
		KIRBY A 2E 2B			31205
V		KIRBY A 2D 3B	V		31206

All samples submitted to laboratories for analysis are accepted on a custodial basis only. Ownership of the material remains with the client submitting the sample. Samples should be held for 90+ days. The laboratory reserves the right to return unused sample portions.

COMMENTS:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

D
Field Data Sheets

BLUE SKY ENVIRONMENTAL, LLC

CONTINUOUS EMISSION MONITORING SUMMARY DATA SHEET

Facility: KIRBY CANYON | Test #: 1, 2, 3 (A) | Date: 1/23/08
Location: A-12 FLARE | Personnel: gw, jm | Leak Check: ✓
Stratification Check: ✓

Parameter		O_2	CO_2	NOx	CO	THC	CH_4	SO_2			Unit Description/Serial #:
Analyzer		755R	PIR 2000	42	48C	RS-55	RS-55				A-12
Range		25	15	25	100	50					Operating Conditions:
Span Value(s)		20.43	12.62	22.5	85.2	45.0					CONDENSATE OFF
Span Value(s)											Fuel:
Span Value(s)											LFG
	⊖	⊖	⊖	⊖	⊖	⊖					NOTES:
	CAL	20.4	12.6	22.5	85.2	45.0					
(1)											
PT-1	0905	13.75	6.38	10.25	<1	2.25					Traverse port right
2		13.8	6.38	10.0	<1	2.25					
3		13.7	6.38	10.38	<1	2.25					
4		11.12	9.38	15.0	<1	2.75	⊖				3 min x 12 pts
5		10.88	9.38	15.75	<1	2.75					
6		10.75	9.38	15.75	<1	2.75					Traverse
1		13.38	7.35	11.88	<1	2.75					incl. port Δ
2		13.35	7.35	11.75	<1	3.25					
3		13.13	7.35	12.63	<1	—	⊖				
4		13.5	7.42	11.50	<1	3.25					Traverse
5		14.0	7.05	10.25	<1	4.0					port left
6	0953	14.25	6.10	9.75	<1	4.0					
	⊖	0.25	⊖	-0.2	⊖	0.5					
	CAL	20.25	12.52	22.24	85.2	45.2					
	AVG	(12.97)	(7.46)	(12.07)	(<1)	(2.93)					
(2)	1003	13.1	7.05	11.88	<1	3.4					
		13.1	7.05	11.88	<1	4.15					
		13.1	7.05	11.88	<1	4.5					
		13.1	7.05	11.88	<1	—	⊖				
		13.1	7.05	11.88	<1	5.0					
	1033	13.1	7.05	11.88	<1	5.7					
	⊖	0.25	⊖	-0.2	⊖	1.1					
	CAL	20.0	12.34	22.25	84.8	45.3					
	AVG	(13.1)	(7.05)	(11.88)	(<1)	(4.55)					
(3)	1043	13.1	6.9	12.1	<1	4.8					
		13.1	6.9	12.1	<1	5.2					
		13.1	6.9	12.1	<1	5.25					
		13.1	6.9	12.1	<1	5.3					
		13.1	6.9	12.1	<1	—	⊖				
	1113	13.1	6.9	12.1	<1	5.6					
	⊖	0.25	⊖	-.2	⊖	2.5					
	CAL	20.15	12.08	22.25	84.5	45.3					
	AVG	(13.1)	(6.9)	(12.1)	(<1)	(5.23)					

BLUE SKY ENVIRONMENTAL, LLC

CONTINUOUS EMISSION MONITORING SUMMARY DATA SHEET

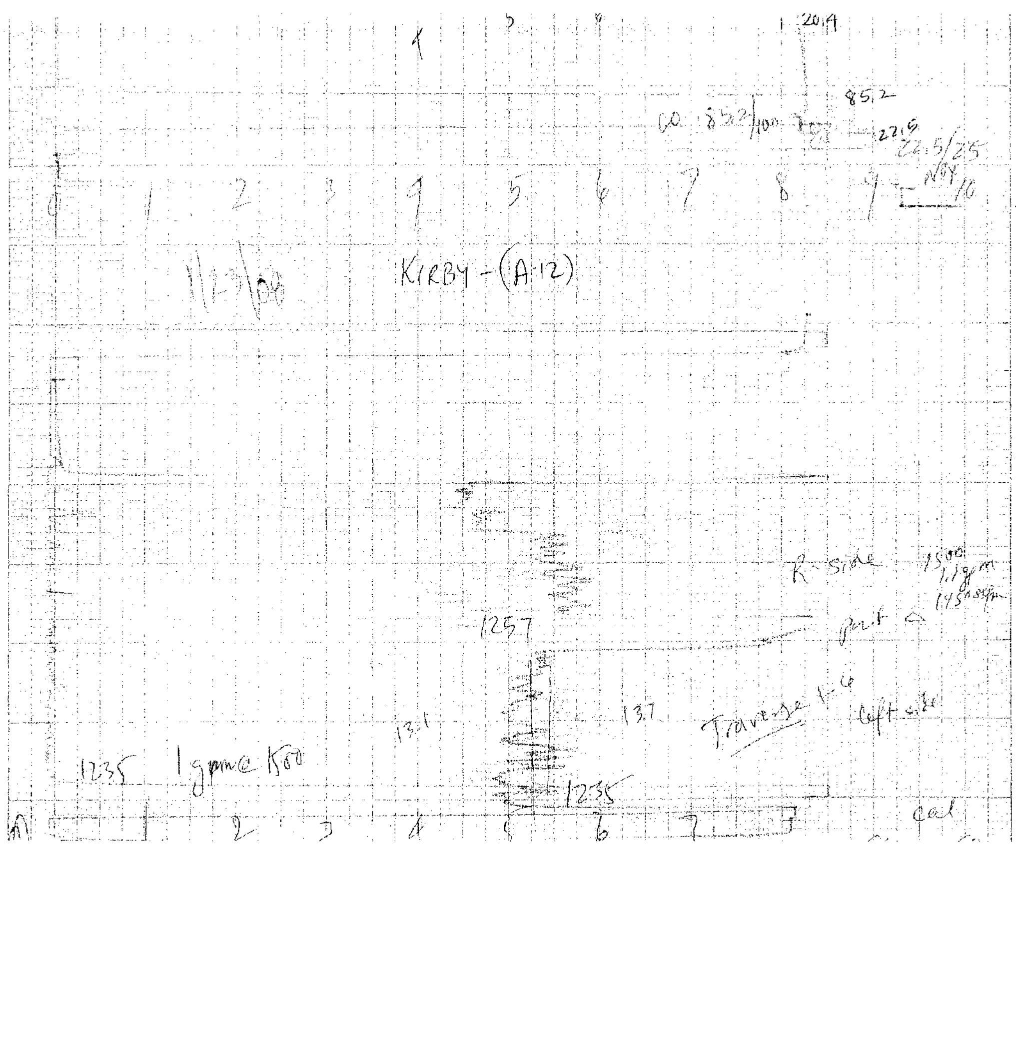
Facility: KIRBY CANYON Test #: 1, 2, 3 (B) Date: 1/23/08

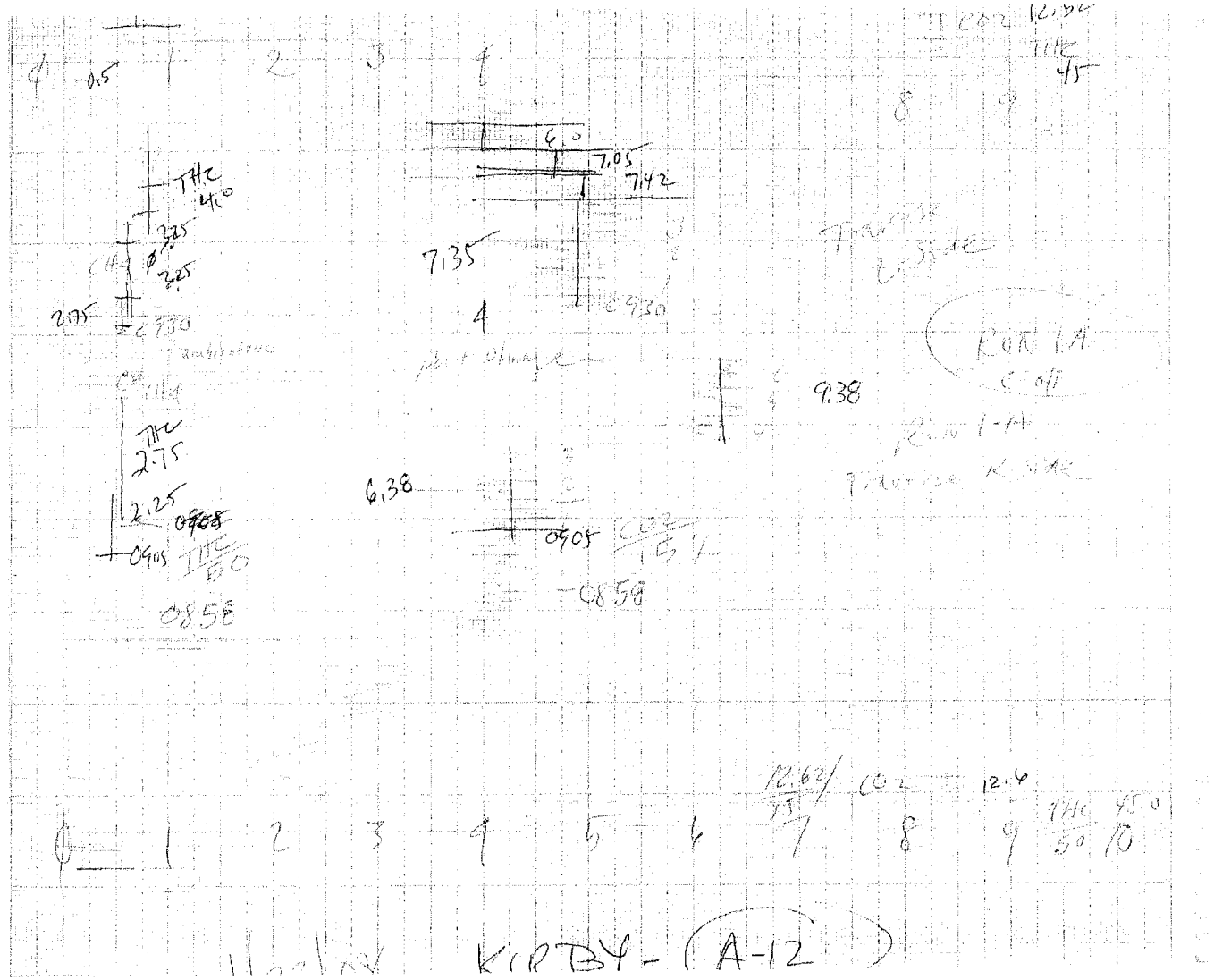
Location: A-12 FLARE Personnel: GW JM Leak Check:

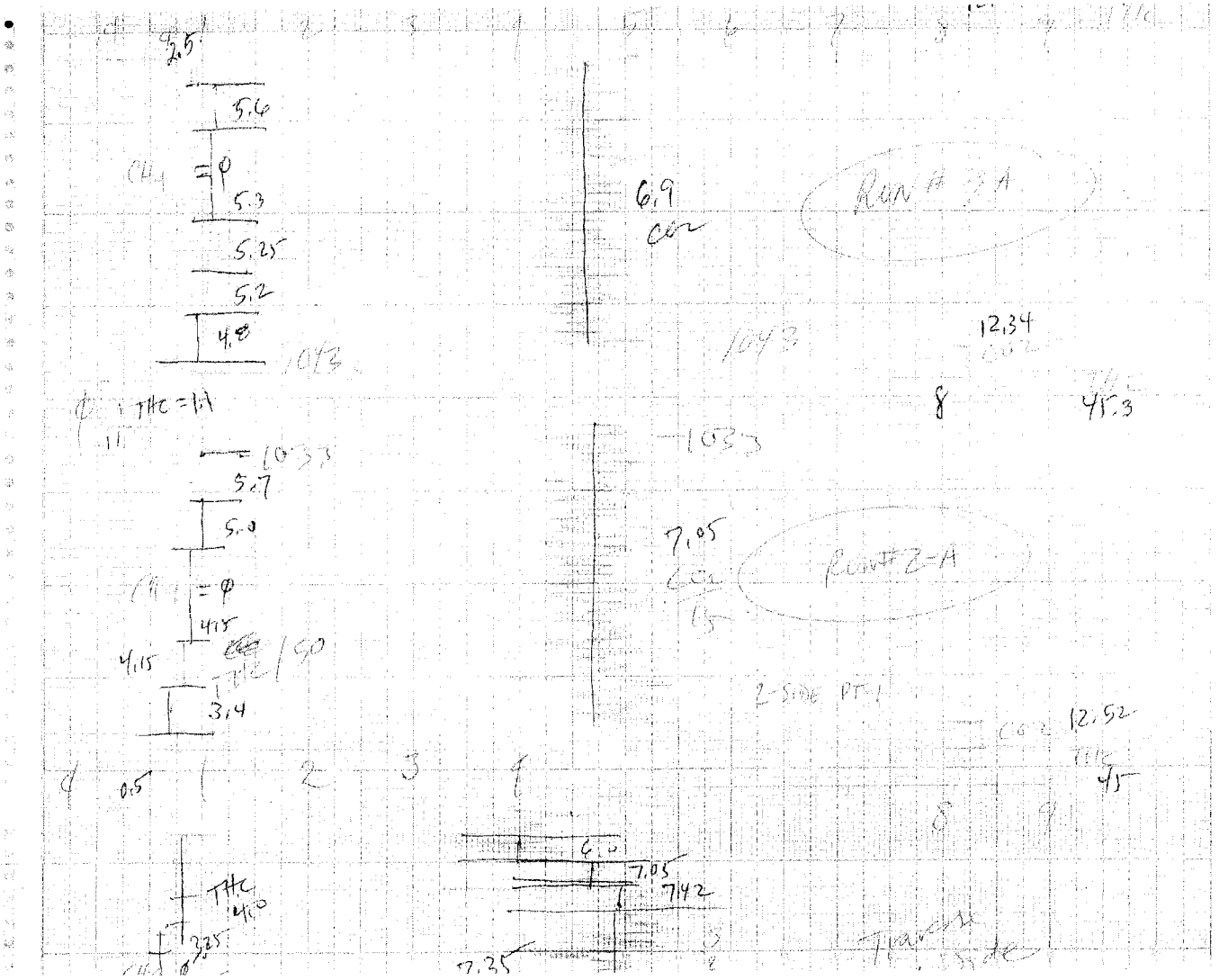
Stratification Check: ✓

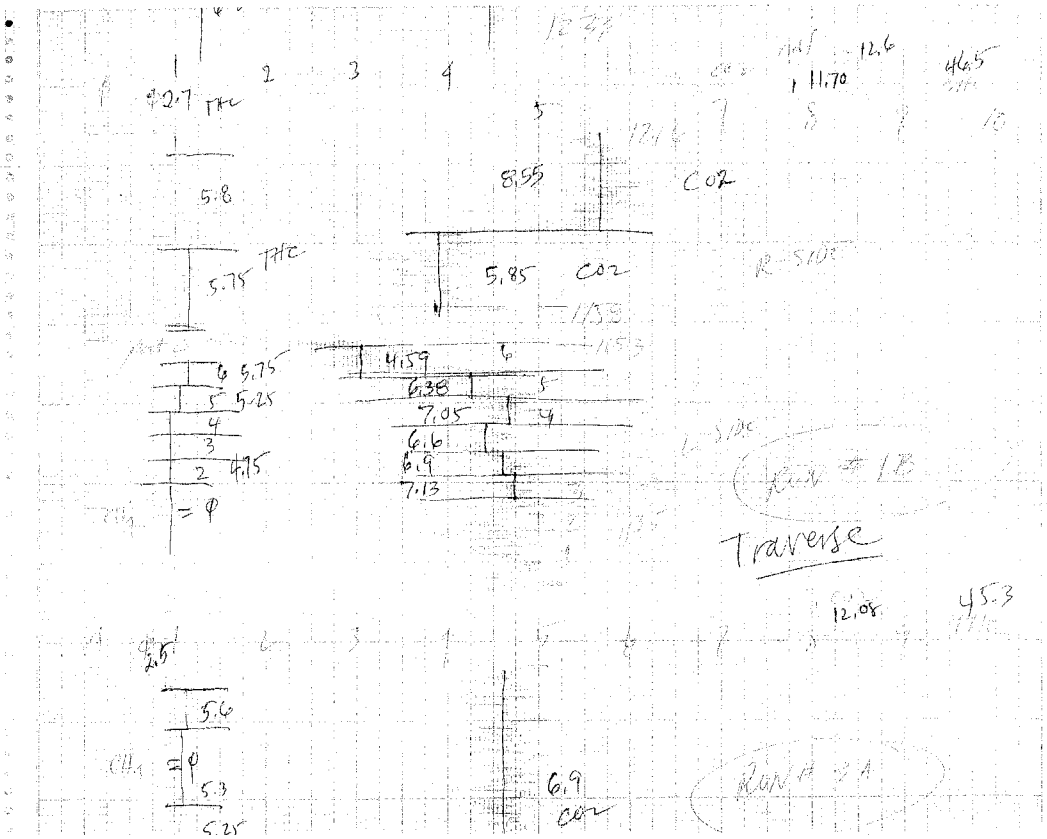
Parameter		O_2	CO_2	NOx	CO	THC	CH_4	SO_2			Unit Description/Serial #:
Analyzer		755R	PIR 2000	42	48C	RS-55	RS-55				A-12
Range		25	15	25	100	50					Operating Conditions:
Span Value(s)		20.43	12.62	22.5	85.2	45					CONDENSATE ON
Span Value(s)											Fuel: LFG
Span Value(s)											
	⊖	⊖	⊖	⊖	⊖	⊖					NOTES:
(1)	CAL	20.15	12.08	22.95	84	45.3					
Pt	1130	12.75	7.13	13.0	<1	4.75					
2	↓	12.75	6.9	13.0	<1	—	⊖				
3		12.75	6.6	12.0	<1	4.75					Traverse
4		13.25	7.05	12.1	<1	4.75					port Left
5	↓	12.95	6.38	13.75	<1	5.25					
6	1148	13.1	4.59	12.5	<1	5.25					Port change
1	1158	13.75	5.85	11.50	<1	5.75					
2	↓	14.0	5.85	10.88	<1	5.75					Traverse
3		13.63	5.85	11.88	<1	5.75					
4		11.25	8.55	16.38	<1	5.8					Port Right
5	↓	11.0	8.55	16.25	<1	5.8					
6	1216	11.25	8.55	16.25	<1	5.8					
	⊖	0.30	⊖	-0.25	⊖	2.7					
	CAL	20.0	11.7	22.25	84	46.5					
	AVG	12.70	6.82	13.29	<1	5.4					
			Adj 12.6								
(2)	1233	13.38	6.68	11.5	<1	6.25					
	↓	1338	6.68	11.5	<1	6.25					
		1338	6.68	11.5	<1	6.25					
		1338	6.68	11.5	<1	6.25					
	↓	1338	6.68	11.5	<1	—	⊖				
	1303	1338	6.68	11.5	<1	6.0					
	⊖	0.3	⊖	-0.25	⊖	2.7					
	CAL	20.0	12.44	22.15	84	46.3					
	AVG	13.38	6.68	11.5	<1	6.2					
(3)	1316	13.0	6.98	12.75	<1	6.5					
	↓	13.0	6.98	12.75	<1	6.5					
		13.0	6.98	12.75	<1	6.5					
		13.0	6.98	12.75	<1	6.5	⊖				
	↓	13.0	6.98	12.75	<1	6.5					
	1346	13.0	6.98	12.75	<1	6.5					
	⊖	0.3	⊖	-0.25	⊖	3.0					
	CAL	20.0	12.22	22.13	83.8	46.8					
	AVG	13.0	6.98	12.75	<1	6.5					

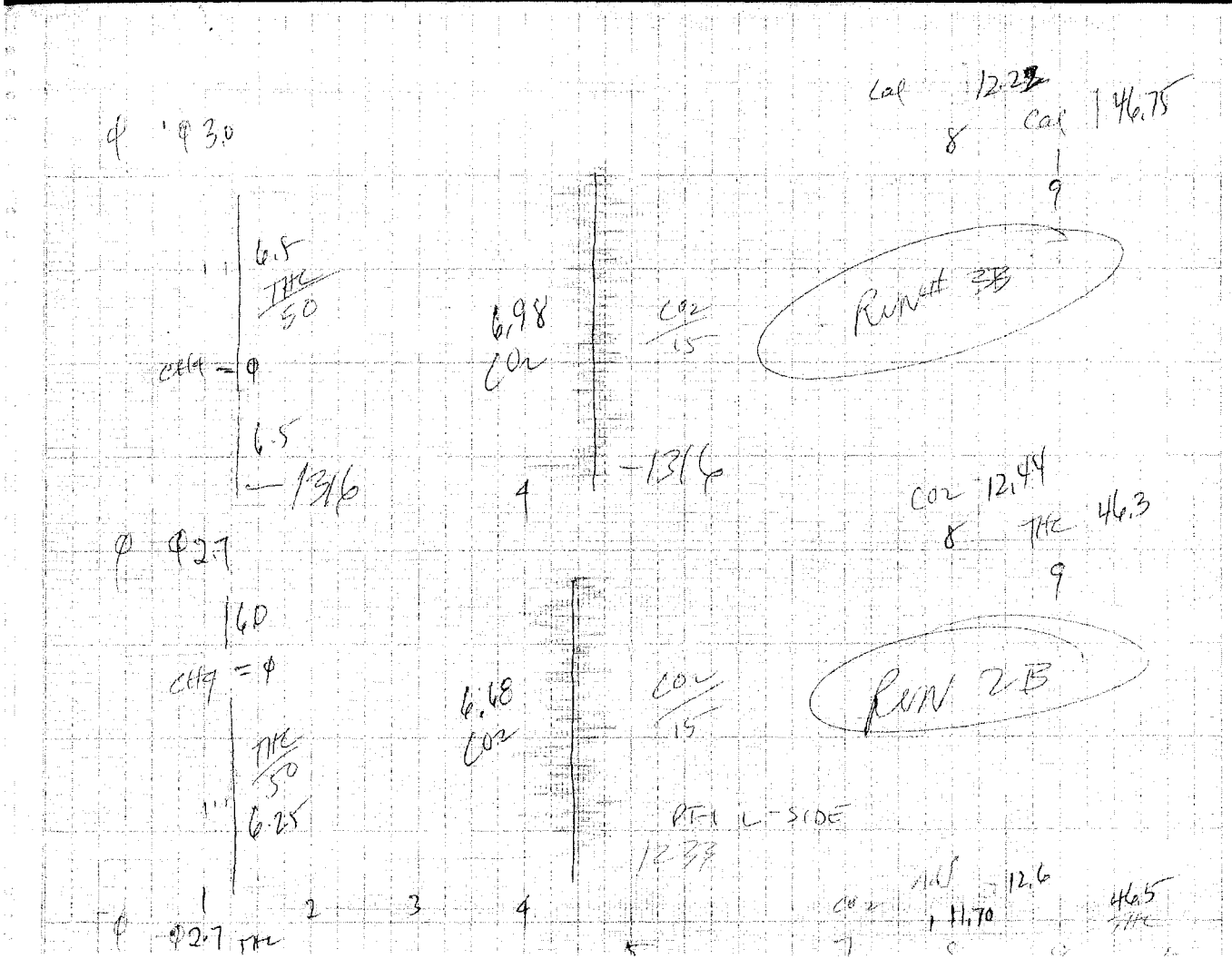
E
Strip Charts

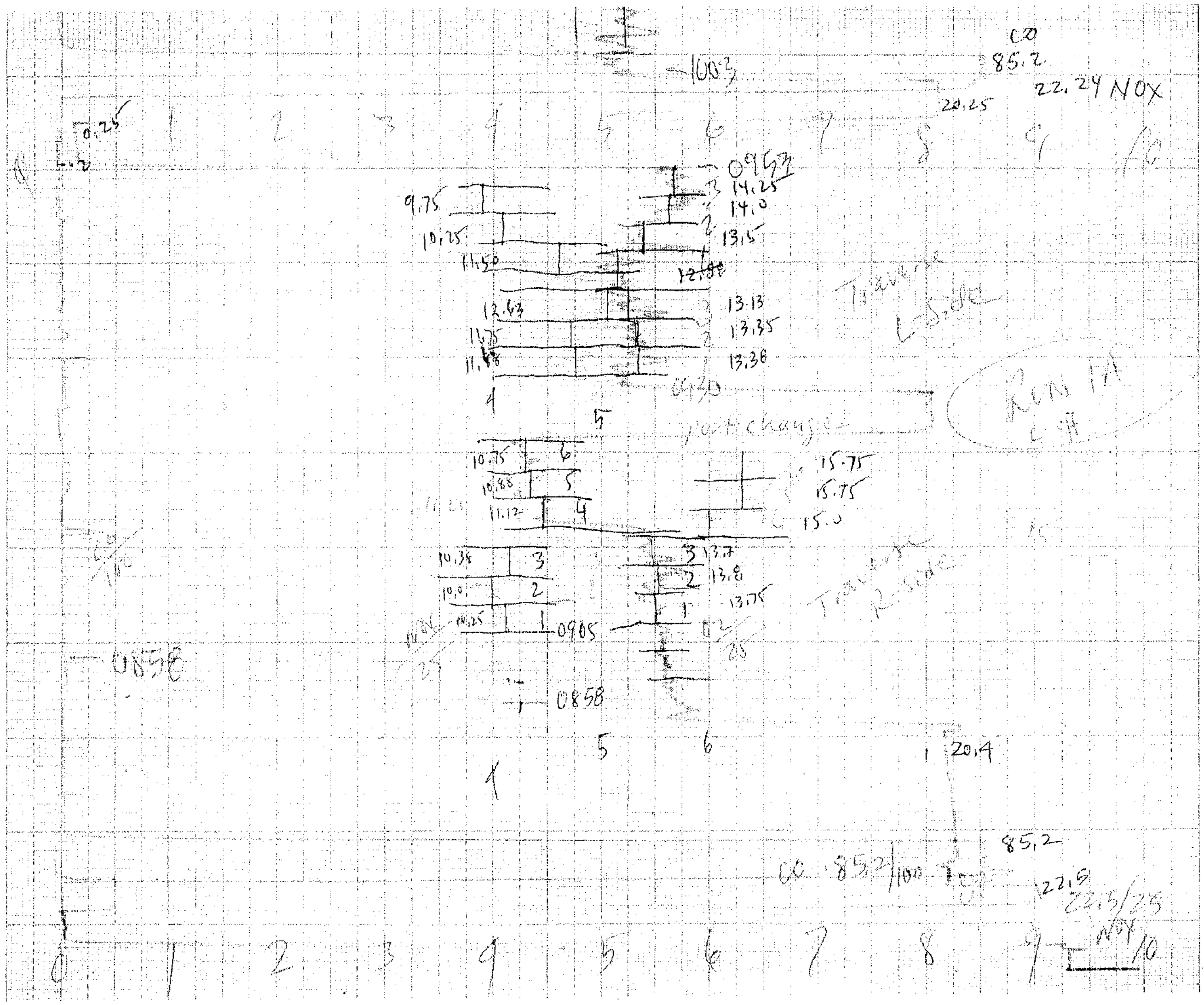

KIRBY - (A12)
1/23/08
1235 1 gpm @ 1500
1235
13.1
13.7
1257
Traverse L-R
Left side
R-side 1500
1.1 gpm
part
cal
CO 85.2/100 ppm
85.2
22.5
22.5/25
NO_x/10
20.4


0
0.5
1
2
3
4
5
6
7
8
9
10
6.0
7.05
7.42
7.35
THC
4.0
3.25
2.75
2.25
0858
6.38
9.38
12.62
12.6
45°
30°
KIRBY - (A-12)

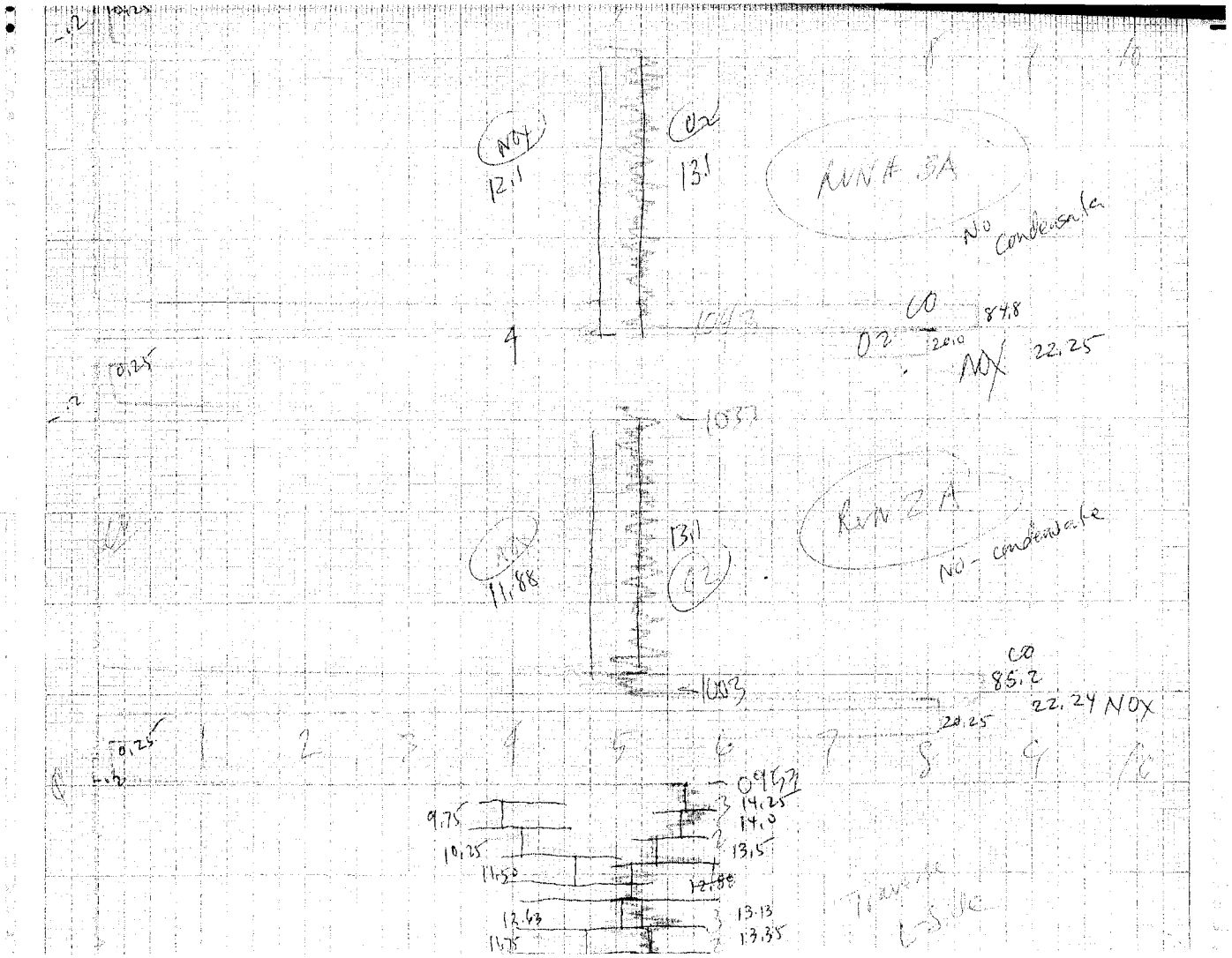

2.5
5.6
5.3
5.25
5.2
4.8
1043
THC = 1.1
1033
5.7
5.0
4.15
4.15
3.4
0.5
THC
4.0
3.25
6.9
CO2
Run # 24
1043
12,34
8
45.3
1033
7.05
CO2
Point 2-A
2-SIDE PT 1
12.52
45
6.0
7.05
7.42
7.35
Transect

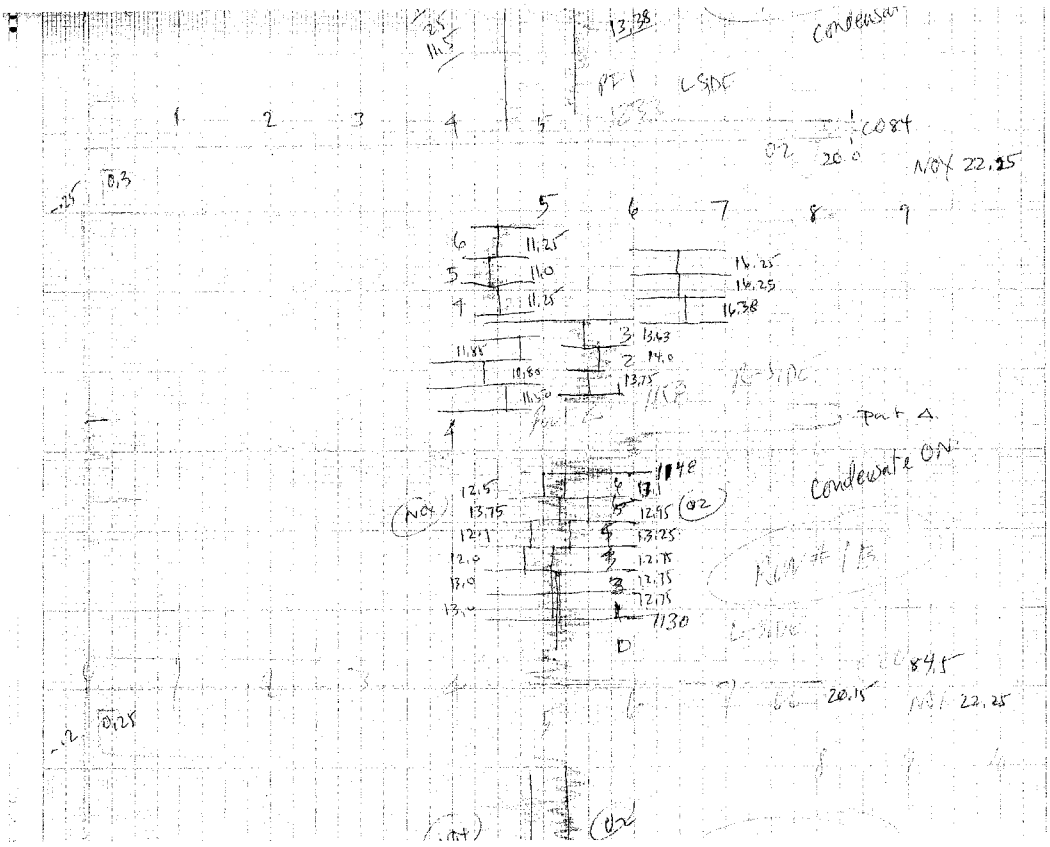

1
2
3
4
5
42.7 THC
5.8
5.75 THC
5.85 CO2
8.55
CO2
4.59
6.38
7.05
6.6
6.9
7.13
5.75
5.25
4.15
= 0
11.70
12.6
46.5
Traverse
12.08
45.3
5.6
5.3
5.25
6.9
CO2

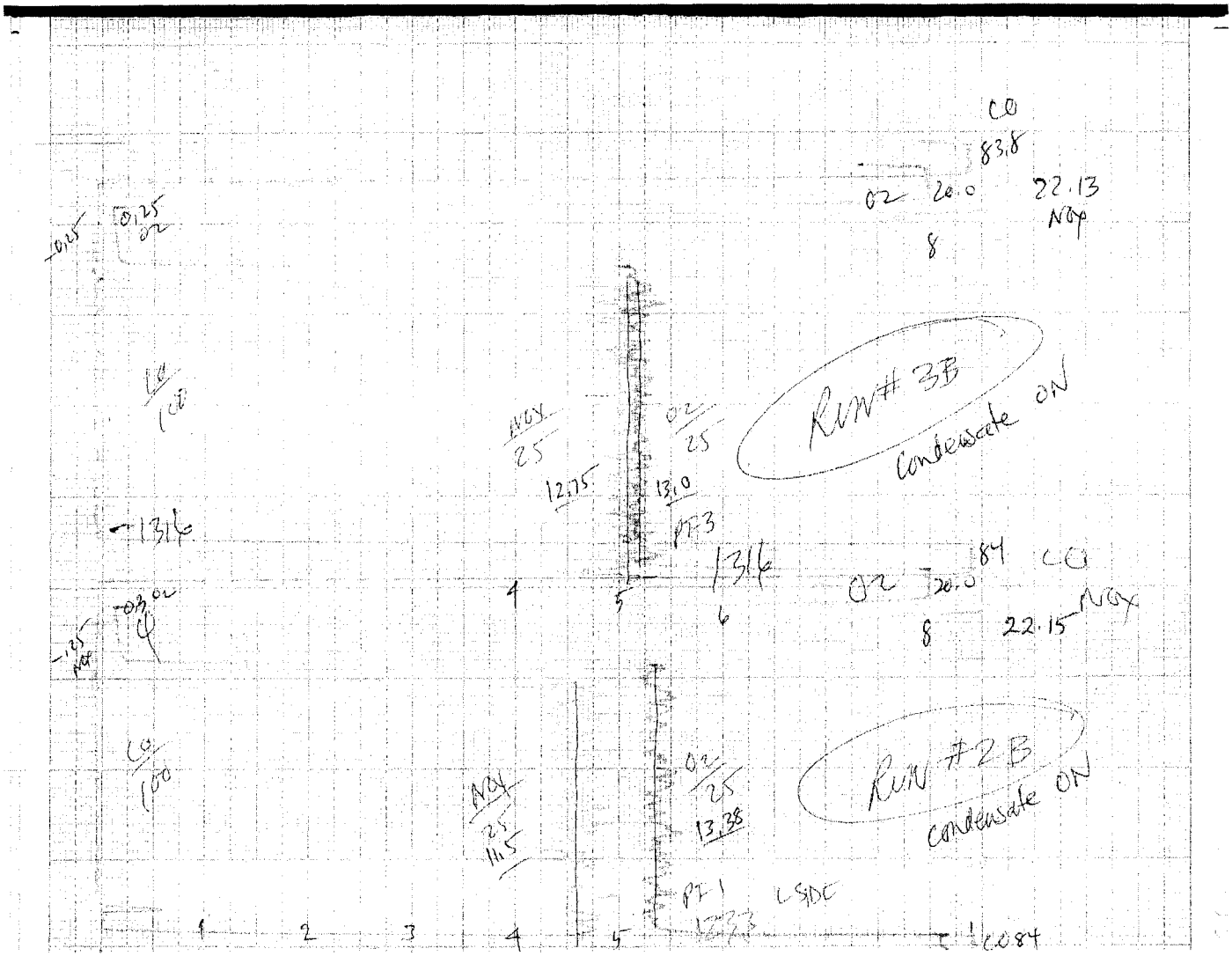

φ 930
6.5
THC
50
CH4 = φ
6.5
1316
6.98
CO2
CO2
15
1316
4
Run #3B
Cal 12.2
8
Cal 46.75
9
φ 927
6.0
CH4 = φ
THC
50
1" 6.25
6.48
CO2
CO2
15
RT-1 L-SIDE
1233
Run 2B
CO2 12.44
8
THC 46.3
9
1
2
3
4
φ 927 THC
CO2 11.70
12.6
46.5
THC



CO
85.2
22.24 NOX
20.25
0.25
0957
14.25
14.0
13.15
12.98
13.13
13.35
13.38
9.75
10.25
11.50
12.63
11.75
0930
port change
Traverse L-side
Run 1A
15.75
15.75
15.0
10.75
10.88
11.12
10.38
10.00
10.25
13.7
13.8
13.75
0905
Traverse R-side
0858
0858
20.4
85.2
CO .852/100
22.5
22.5/25
NOX


NOx
12.1
CO2
13.1
RUN # 5A
NO condensate
CO
84.8
O2
20.10
NOX
22.25
10.57
13.1
11.88
RUN 2A
NO - condensate
CO
85.2
22.24 NOX
20.25
0.25
9.75
10.25
11.50
12.63
14.75
14.25
14.0
13.15
13.13
13.35


condenser
LSDF
CO84
NOX 22.25
Part A
Condensate ON
NOX
O2
D


CO
83.8
O2 20.0
22.13
NOx
8
Run #3B
Condensate ON
NOx
25
12.75
O2
25
13.0
PT-3
1316
4
5
6
1316
O2 20.0
84
CO
8
22.15
NOx
Run #2B
Condensate ON
NOx
25
11.5
O2
25
13.38
PT-1
LSDC
1
2
3
4
5
1.084

F
Process Information

Date	Time	CH01 Flare F MIN	MAX	CH02 Flare SCFM MIN	MAX	CH04 Condensate GPM MIN	MAX
Condensate Off-Run 1							
2008/01/23	09:04:00	1499	1504	1451	1471	0.00	0.00
2008/01/23	09:06:00	1501	1505	1452	1467	0.00	0.00
2008/01/23	09:08:00	1501	1504	1449	1469	0.00	0.00
2008/01/23	09:10:00	1496	1504	1448	1468	0.00	0.00
2008/01/23	09:12:00	1500	1505	1444	1468	0.00	0.00
2008/01/23	09:14:00	1497	1509	1444	1460	0.00	0.00
2008/01/23	09:16:00	1497	1507	1440	1458	0.00	0.00
2008/01/23	09:18:00	1497	1503	1439	1463	0.00	0.00
2008/01/23	09:20:00	1498	1509	1446	1464	0.00	0.00
2008/01/23	09:22:00	1498	1504	1435	1467	0.00	0.00
2008/01/23	09:24:00	1496	1506	1445	1463	0.00	0.00
2008/01/23	09:26:00	1498	1504	1438	1459	0.00	0.00
2008/01/23	09:28:00	1500	1506	1441	1459	0.00	0.00
2008/01/23	09:30:00	1493	1507	1438	1462	0.00	0.00
2008/01/23	09:32:00	1496	1505	1436	1458	0.00	0.00
2008/01/23	09:34:00	1495	1506	1434	1458	0.00	0.00
2008/01/23	09:36:00	1498	1509	1437	1454	0.00	0.00
2008/01/23	09:38:00	1498	1510	1432	1458	0.00	0.00
2008/01/23	09:40:00	1495	1509	1437	1458	0.00	0.00
2008/01/23	09:42:00	1496	1508	1433	1451	0.00	0.00
2008/01/23	09:44:00	1498	1505	1430	1457	0.00	0.00
2008/01/23	09:46:00	1497	1508	1436	1450	0.00	0.00
2008/01/23	09:48:00	1495	1509	1436	1453	0.00	0.00
2008/01/23	09:50:00	1498	1506	1436	1453	0.00	0.00
2008/01/23	09:52:00	1493	1506	1435	1457	0.00	0.00
2008/01/23	09:54:00	1497	1506	1432	1449	0.00	0.00
		1497	**1506**	**1439**	**1460**	**0**	**0**
Condensate Off- Run 2							
2008/01/23	10:02:00	1501	1505	1424	1449	0.00	0.00
2008/01/23	10:04:00	1495	1505	1431	1450	0.00	0.00
2008/01/23	10:06:00	1498	1506	1421	1449	0.00	0.00
2008/01/23	10:08:00	1495	1508	1430	1448	0.00	0.00
2008/01/23	10:10:00	1493	1512	1431	1455	0.00	0.00
2008/01/23	10:12:00	1494	1508	1430	1448	0.00	0.00
2008/01/23	10:14:00	1497	1508	1431	1448	0.00	0.00
2008/01/23	10:16:00	1500	1504	1430	1451	0.00	0.00
2008/01/23	10:18:00	1497	1510	1434	1455	0.00	0.00
2008/01/23	10:20:00	1497	1508	1431	1451	0.00	0.00
2008/01/23	10:22:00	1501	1504	1427	1451	0.00	0.00
2008/01/23	10:24:00	1498	1512	1431	1451	0.00	0.00
2008/01/23	10:26:00	1497	1512	1434	1451	0.00	0.00
2008/01/23	10:28:00	1499	1503	1429	1455	0.00	0.00
2008/01/23	10:30:00	1497	1506	1431	1448	0.00	0.00
2008/01/23	10:32:00	1497	1506	1434	1448	0.00	0.00
2008/01/23	10:34:00	1498	1508	1431	1455	0.00	0.00
		1497	**1507**	**1431**	**1452**	**0**	**0**

Date	Time	CH01 Flare F MIN	MAX	CH02 Flare SCFM MIN	MAX	CH04 Condensate GPM MIN	MAX
Condensate Off- Run 3							
2008/01/23	10:42:00	1497	1506	1435	1448	0.00	0.00
2008/01/23	10:44:00	1498	1510	1437	1449	0.00	0.00
2008/01/23	10:46:00	1496	1508	1434	1458	0.00	0.00
2008/01/23	10:48:00	1502	1506	1431	1451	0.00	0.00
2008/01/23	10:50:00	1497	1503	1430	1454	0.00	0.00
2008/01/23	10:52:00	1497	1506	1432	1448	0.00	0.00
2008/01/23	10:54:00	1499	1506	1430	1450	0.00	0.00
2008/01/23	10:56:00	1498	1506	1427	1450	0.00	0.00
2008/01/23	10:58:00	1500	1505	1427	1458	0.00	0.00
2008/01/23	11:00:00	1498	1503	1430	1454	0.00	0.00
2008/01/23	11:02:00	1498	1510	1429	1454	0.00	0.00
2008/01/23	11:04:00	1500	1508	1433	1455	0.00	0.00
2008/01/23	11:06:00	1498	1508	1429	1451	0.00	0.00
2008/01/23	11:08:00	1500	1503	1438	1457	0.00	0.00
2008/01/23	11:10:00	1497	1507	1435	1453	0.00	0.00
2008/01/23	11:12:00	1495	1510	1436	1455	0.00	0.00
2008/01/23	11:14:00	1499	1503	1435	1456	0.00	0.00
		1498	**1507**	**1432**	**1452**	**0**	**0**
Condensate On- Run 1							
2008/01/23	11:34:00	1494	1508	1436	1460	1.07	1.10
2008/01/23	11:36:00	1496	1510	1439	1457	1.07	1.09
2008/01/23	11:38:00	1495	1508	1432	1456	1.06	1.09
2008/01/23	11:40:00	1494	1507	1432	1456	1.05	1.08
2008/01/23	11:42:00	1494	1504	1435	1453	1.06	1.09
2008/01/23	11:44:00	1501	1504	1439	1455	1.05	1.08
2008/01/23	11:46:00	1498	1504	1438	1459	1.05	1.08
2008/01/23	11:48:00	1499	1507	1444	1458	1.05	1.07
2008/01/23	11:50:00	1498	1505	1444	1458	1.05	1.08
2008/01/23	11:52:00	1499	1504	1437	1461	1.04	1.07
2008/01/23	11:54:00	1497	1510	1443	1461	1.04	1.07
2008/01/23	11:56:00	1496	1509	1442	1463	1.03	1.06
2008/01/23	11:58:00	1493	1508	1443	1460	1.03	1.06
2008/01/23	12:00:00	1493	1510	1440	1457	1.03	1.05
2008/01/23	12:02:00	1500	1513	1437	1462	1.03	1.06
2008/01/23	12:04:00	1500	1504	1436	1460	1.02	1.06
2008/01/23	12:06:00	1503	1505	1441	1464	1.03	1.06
2008/01/23	12:08:00	1493	1504	1439	1456	1.03	1.05
2008/01/23	12:10:00	1492	1504	1435	1462	1.03	1.05
2008/01/23	12:12:00	1498	1504	1439	1463	1.03	1.05
2008/01/23	12:14:00	1502	1507	1439	1473	1.02	1.04
2008/01/23	12:16:00	1495	1508	1451	1477	1.01	1.04
		1497	**1507**	**1439**	**1460**	**1**	**1**

Date	Time	CH01 Flare F MIN	MAX	CH02 Flare SCFM MIN	MAX	CH04 Condensate GPM MIN	MAX
Condensate On- Run 2							
2008/01/23	12:32:00	1498	1505	1448	1462	1.02	1.04
2008/01/23	12:34:00	1497	1505	1441	1458	1.01	1.04
2008/01/23	12:36:00	1496	1508	1434	1462	1.01	1.03
2008/01/23	12:38:00	1501	1505	1440	1461	1.01	1.03
2008/01/23	12:40:00	1500	1501	1440	1461	1.00	1.03
2008/01/23	12:42:00	1500	1506	1439	1464	1.00	1.03
2008/01/23	12:44:00	1497	1508	1436	1465	1.00	1.04
2008/01/23	12:46:00	1497	1505	1435	1459	1.00	1.03
2008/01/23	12:48:00	1497	1507	1436	1459	1.00	1.03
2008/01/23	12:50:00	1497	1506	1436	1460	1.00	1.03
2008/01/23	12:52:00	1498	1507	1436	1460	1.00	1.03
2008/01/23	12:54:00	1497	1506	1446	1462	1.00	1.03
2008/01/23	12:56:00	1498	1506	1446	1467	1.00	1.02
2008/01/23	12:58:00	1497	1506	1439	1457	1.00	1.03
2008/01/23	13:00:00	1499	1506	1440	1460	1.00	1.02
2008/01/23	13:02:00	1498	1508	1440	1460	1.00	1.03
2008/01/23	13:04:00	1500	1506	1446	1463	1.00	1.03
		1498	**1506**	**1440**	**1462**	**1**	**1**
Condensate On- Run 3							
2008/01/23	13:16:00	1497	1506	1444	1466	0.99	1.02
2008/01/23	13:18:00	1496	1510	1444	1462	0.99	1.02
2008/01/23	13:20:00	1499	1508	1441	1466	0.98	1.02
2008/01/23	13:22:00	1500	1508	1447	1463	0.98	1.02
2008/01/23	13:24:00	1497	1504	1441	1458	0.98	1.02
2008/01/23	13:26:00	1498	1505	1440	1458	0.99	1.02
2008/01/23	13:28:00	1500	1506	1444	1461	0.98	1.03
2008/01/23	13:30:00	1500	1505	1447	1462	0.98	1.01
2008/01/23	13:32:00	1500	1505	1444	1462	0.98	1.01
2008/01/23	13:34:00	1498	1505	1446	1462	0.98	1.02
2008/01/23	13:36:00	1500	1501	1445	1464	0.98	1.02
2008/01/23	13:38:00	1500	1508	1448	1466	0.98	1.01
2008/01/23	13:40:00	1496	1506	1441	1465	0.98	1.00
2008/01/23	13:42:00	1496	1506	1440	1465	0.97	1.01
2008/01/23	13:44:00	1494	1506	1446	1469	0.97	1.02
2008/01/23	13:46:00	1497	1510	1447	1465	0.98	1.02
		1498	**1506**	**1443**	**1463**	**1**	**1**

G
Calibration Certifications & QC Records

11/6/07 IN Service

PRAXAIR

Praxair
5700 South Alameda Stre
Los Angeles, CA 90058
Telephone: (323) 585-215
Facsimile: (714) 542-668

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER BLUE SKY P.O NUMBER

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
CARBON DIOXIDE GMIS	vs SRM2760	SA 18273	15.05 %
OXYGEN GMIS	vs SRM2659	CC 95752	20.97 %

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

1. COMPONENT CARBON DIOXIDE GMIS ANALYZER MAKE-MODEL-S/N Siemens Ultramat 5E S/N A11-730
   ANALYTICAL PRINCIPLE NDIR LAST CALIBRATION DATE 09/04/07
   FIRST ANALYSIS DATE 09/25/07 SECOND ANALYSIS DATE

Z 0.00	R 15.04	C 12.62	CONC. 12.62	Z	R	C	CONC.
R 15.04	Z 0.00	C 12.62	CONC. 12.62	R	Z	C	CONC.
Z 0.00	C 12.62	R 15.04	CONC. 12.62	Z	C	R	CONC.
U/M %	MEAN TEST ASSAY 12.62			U/M %	MEAN TEST ASSAY		

2. COMPONENT OXYGEN GMIS ANALYZER MAKE-MODEL-S/N Siemens Oxymat 5E S/N A12-839
   ANALYTICAL PRINCIPLE Paramagnetic LAST CALIBRATION DATE 09/04/07
   FIRST ANALYSIS DATE 09/25/07 SECOND ANALYSIS DATE

Z 0.00	R 20.98	C 20.44	CONC. 20.43	Z	R	C	CONC.
R 20.98	Z 0.00	C 20.44	CONC. 20.43	R	Z	C	CONC.
Z 0.00	C 20.44	R 20.98	CONC. 20.43	Z	C	R	CONC.
U/M %	MEAN TEST ASSAY 20.43			U/M %	MEAN TEST ASSAY		

Values not valid below 100 psig

THIS CYLINDER NO. CC 95617
HAS BEEN CERTIFIED ACCORDING TO SECTION EPA-600/R97/121
OF TRACEABILITY PROTOCOL NO. Rev. 8/97
PROCEDURE G1
CERTIFIED ACCURACY ± 1 % NIST TRACEABLE
CYLINDER PRESSURE 2000 PSIG
CERTIFICATION DATE 09/25/07
EXPIRATION DATE 09/25/10 TERM 36 MONTHS

CERTIFIED CONCENTRATION	
CARBON DIOXIDE	12.62 %
OXYGEN	20.43 %
NITROGEN	BALANCE

ANALYZED BY EUGENE CHO *CERTIFIED BY* PABLO REYES

Praxair
5700 South Alameda Str
Los Angeles, CA 90058
Telephone: (323) 585-21
Facsimile: (714) 542-668

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER BLUE SKY P.O NUMBER

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
CARBON MONOXIDE GMIS	vs.NRMp3613	SGAL 1090	24.4 ppm
NITRIC OXIDE GMIS	vsSRM#2629a	CC 149417	24.7 ppm

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

1. COMPONENT CARBON MONOXIDE GMIS ANALYZER MAKE-MODEL-S/N HORIBA, VIA-510, S/N 576876015
   ANALYTICAL PRINCIPLE NDIR LAST CALIBRATION DATE 05/02/07
   FIRST ANALYSIS DATE 05/18/07 SECOND ANALYSIS DATE 05/29/07

Z	0.0	R	24.4	C	22.6	CONC.	22.6	Z	0.0	R	24.3	C	22.4	CONC.	22.6
R	24.4	Z	0.0	C	22.6	CONC.	22.6	R	24.3	Z	0.0	C	22.4	CONC.	22.6
Z	0.0	C	22.7	R	24.4	CONC.	22.7	Z	0.0	C	22.4	R	24.3	CONC.	22.8

U/M ppm MEAN TEST ASSAY 22.6 U/M ppm MEAN TEST ASSAY 22.8

2. COMPONENT NITRIC OXIDE GMIS ANALYZER MAKE-MODEL-S/N Thermo Elec. 42C S/N 0518112447
   ANALYTICAL PRINCIPLE Chemiluminescence LAST CALIBRATION DATE 05/02/07
   FIRST ANALYSIS DATE 05/18/07 SECOND ANALYSIS DATE 05/29/07

Z	0.0	R	24.5	C	22.1	CONC.	22.3	Z	0.0	R	24.5	C	22.2	CONC.	22.4
R	24.5	Z	0.0	C	22.1	CONC.	22.3	R	24.5	Z	0.0	C	22.1	CONC.	22.3
Z	0.0	C	22.1	R	24.5	CONC.	22.3	Z	0.0	C	22.1	R	24.5	CONC.	22.3

U/M ppm MEAN TEST ASSAY 22.2 U/M ppm MEAN TEST ASSAY 22.3

Values not valid below 150 psig.
NOx value for reference use only

THIS CYLINDER NO. CC 198454
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 05/29/07
EXPIRATION DATE 05/29/09 TERM 24 MONTHS

CERTIFIED CONCENTRATION

CARBON MONOXIDE	22.7 ppm
NITRIC OXIDE	22.3 ppm
NITROGEN	BALANCE
NOx	22.5 ppm

ANALYZED BY Henry Koung *CERTIFIED BY* PHIL KIM

In Service 11/9/07

PRAXAIR

Praxair
5700 South Alameda Stree
Los Angeles, CA 90058
Telephone: (323) 585-215
Facsimile: (714) 542-668

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER BLUE SKY P.O NUMBER

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
CARBON MONOXIDE CMIS	vs.SRM#1679	CC 31987	103.1 ppm
NITRIC OXIDE CMIS	vs.SRM#1684	CC 134362	99.4 ppm

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

1. COMPONENT CARBON MONOXIDE CMIS ANALYZER MAKE-MODEL-S/N HORIBA, VIA-510, S/N 576870015
   ANALYTICAL PRINCIPLE NDIR LAST CALIBRATION DATE 09/11/07
   FIRST ANALYSIS DATE 10/03/07 SECOND ANALYSIS DATE 10/08/07

Z 0	R 103.3	C 85.1	CONC. 85.1	Z 0	R 103.8	Z 0	C 85.1	CONC. 85.1
R 103.3	Z 0	C 85.2	CONC. 85.2	R 103.4	Z 0	C 85.3	CONC. 85.2
Z 0	C 85.2	R 103.3	CONC. 85.2	Z 0	C 85.4	R 103.4	CONC. 85.1
U/M ppm		MEAN TEST ASSAY 85.2		U/M ppm			MEAN TEST ASSAY 85.2		

2. COMPONENT NITRIC OXIDE CMIS ANALYZER MAKE-MODEL-S/N BECKMAN 951A S/NB0101354
   ANALYTICAL PRINCIPLE CHEMILUMINESCENCE LAST CALIBRATION DATE 09/13/07
   FIRST ANALYSIS DATE 10/01/07 SECOND ANALYSIS DATE 10/08/07

Z 0	R 856	C 721	CONC. 83.7	Z 0	R 788	C 669	CONC. 83.1
R 855	Z 0	C 720	CONC. 83.7	R 791	Z 0	C 669	CONC. 82.8
Z 0	C 721	R 856	CONC. 83.7	Z 0	C 669	R 788	CONC. 83.4
U/M mV		MEAN TEST ASSAY 83.7		U/M mV			MEAN TEST ASSAY 83.2		

VALUES NOT VALID BELOW 100 PSIG
NOX VALUE FOR REFERENCE ONLY

THIS CYLINDER NO. CC 72010
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 10/08/07
EXPIRATION DATE 10/08/09 TERM 24 MONTHS

CERTIFIED CONCENTRATION

CARBON MONOXIDE	85.2 ppm
NITRIC OXIDE	83.0 ppm
NITROGEN	BALANCE
NOX	85.0 ppm

ANALYZED BY VICTOR BOTAN

CERTIFIED BY HASSAN GHASSAY

PRAXAIR

in service 12/1/07

Praxair
5700 South Alameda Stre
Los Angeles, CA 90058
Telephone: (323) 585-215
Facsimile: (714) 542-668

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER BLUE SKY

P.O NUMBER

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
PROPANE GMIS	vs.SRM#1666	SA 9503	10.1 ppm

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

COMPONENT PROPANE GMIS ANALYZER MAKE-MODEL-S/N HORIBA, FID-510, 851135122

ANALYTICAL PRINCIPLE Flame Ionization Detector LAST CALIBRATION DATE 09/04/07

FIRST ANALYSIS DATE 09/25/07 SECOND ANALYSIS DATE

Z	0.00	R	27.56	C	40.83	CONC.	15.0	Z	R	C	CONC.
R	27.59	Z	0.00	C	40.98	CONC.	15.0	R	Z	C	CONC.
Z	0.00	C	41.02	R	27.51	CONC.	15.0	Z	C	R	CONC.
U/M	ppm			MEAN TEST ASSAY			15.0	U/M	ppm		MEAN TEST ASSAY

Values not valid below 150 psig

THIS CYLINDER NO. CC 76681

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 09/25/07

EXPIRATION DATE 09/25/10 TERM 36 MONTHS

CERTIFIED CONCENTRATION

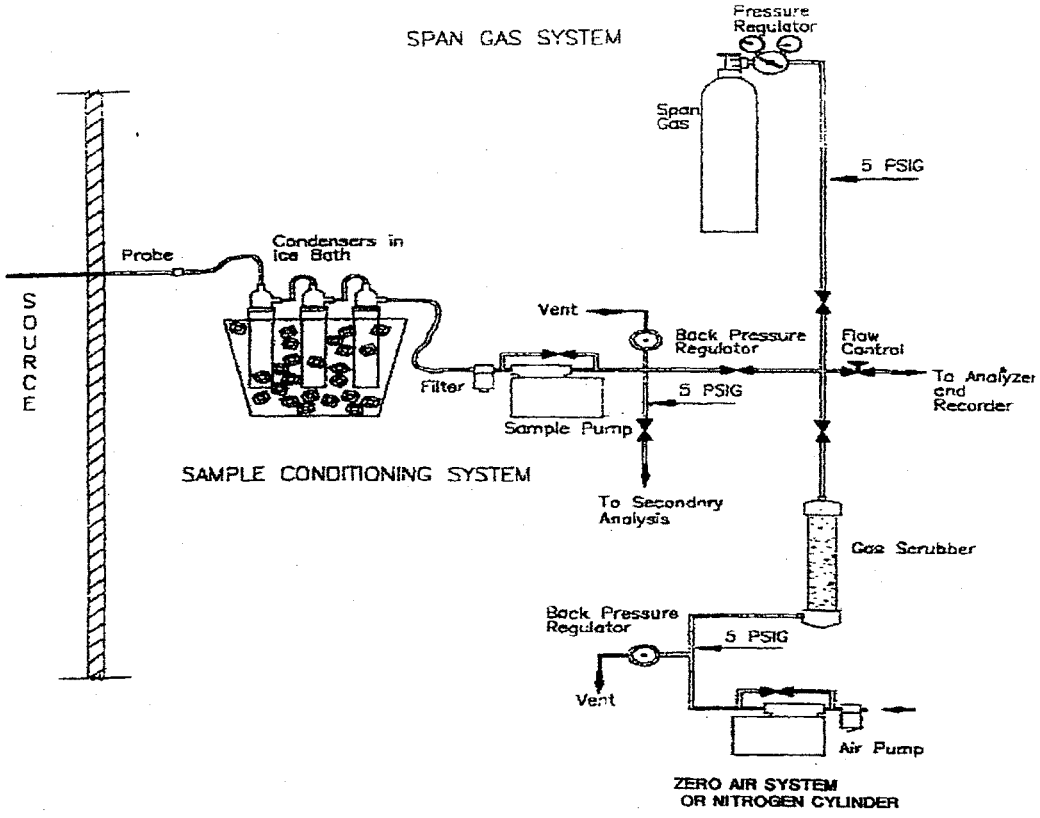
PROPANE	15.0 ppm
AIR	BALANCE

45.0

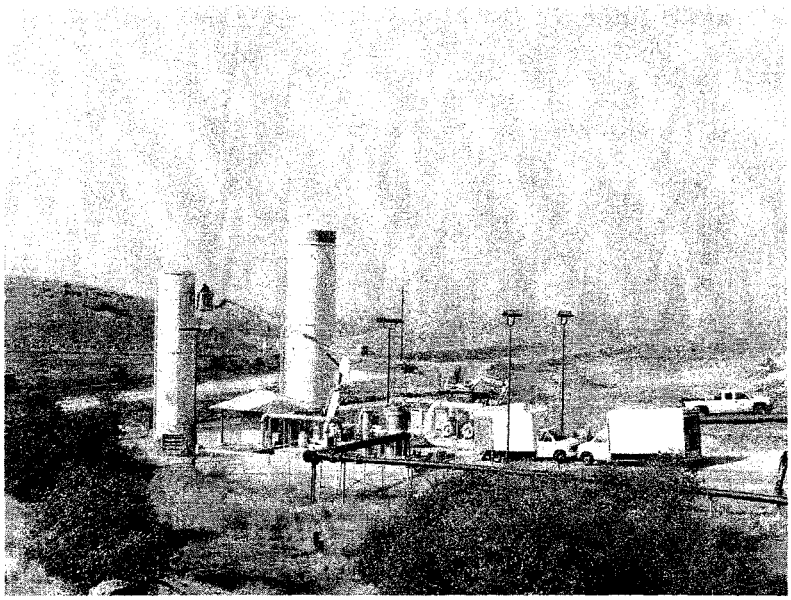
ANALYZED BY PABLO REYES

CERTIFIED BY EUGENE CHO

H
Sample Train Configuration and Stack Diagrams



BAAQMD ST-5 (CO2)
BAAQMD ST-6 (CO)
BAAQMD ST-7 (THC by FID)
BAAQMD ST-13A (NOx)
BAAQMD ST-14 (O2)
BAAQMD ST-19A (SO2)



Kirby Canyon Flare A-12 (right)

I
Related Correspondence (Source Test Plan)

KIRBY CANYON RECYCLING & DISPOSAL FACILITY
A WASTE MANAGEMENT COMPANY

910 Coyote Creek Golf Drive
P.O. Box 1870
Morgan Hill, CA 95037
(408) 779-2206
(408) 779-5169 Fax

VIA FAX (415) 749-4922

January 8, 2008

Tim Underwood
Principal Air Quality Engineer
Source Test Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Subject: Source Test Protocol & Test Notification

Dear Mr. Underwood:

Attached please find the Source Test Protocol for compliance emissions testing of the Enclosed Landfill Gas Flare (A-12) at Kirby Canyon Recycling and Disposal Facility in San Jose, CA. If you have any questions, please contact Guy Worthington from the Source Testing Contractor, Blue Sky Environmental, LLC at (510) 525-1261, or (510) 508-3469.

Sincerely,
Kirby Canyon Recycling & Disposal Facility

Becky Zito
Environmental Protection Manager

Cc: Paul Stout, Cornerstone Environmental Group

Blue Sky Environmental, LLC
624 San Gabriel Avenue
Albany, California 94706
Ph/Fax (510) 525 1261
Cell (510) 508 3469
blueskyenvironmental@yahoo.com

January 8, 2008

Attn.: Tim Underwood
Source Test Division
Bay Area Air Quality Management District
Compliance and Enforcement Division
939 Ellis Street
San Francisco, CA 94109

Re: Source Test Protocol for compliance emissions testing of the Enclosed Landfill Gas Flare (A-12) at Kirby Canyon Recycling and Disposal Facility, located at 910 Coyote Creek Golf Drive, San Jose, California. BAAQMD Facility #A1812.

Dear Mr. Underwood,

Blue Sky Environmental, LLC is pleased to present this Source Test Plan for the Enclosed Landfill Gas Flare (A-12) at the Kirby Canyon Recycling and Disposal Facility in San Jose, California. Blue Sky Environmental, LLC is approved by the California Air Resources Board as an independent contractor to conduct compliance emission testing. This Source Test Protocol will include the following:

BAAQMD Source # A-12 Flare	Test Parameters/Limits
Compliance Test 3xCondensate on 3xCondensate off	Exhaust: THC, CH_4, NMOC, NOx, CO, CO_2, O_2 NOx 0.06 # MMBtu CO 0.3 #/MMBtu SO_2 300 ppm, calculated from TRS analysis of the fuel NMOC 98% DE or 30 ppm as CH_4 @3% O_2 Six LFG samples for HHV, H_2S, CO_2, N_2, O_2, THC, NMOC, CH_4 A single sample of LFG will be analyzed for AP42 Table 4.2-1 compounds excluding mercury, carbon monoxide and acetone.

Testing is currently scheduled for January 23rd, with a 7:00 am arrival time. If you have any questions, please contact Guy Worthington at 510 525 1261, or 510 508 3469.

- At the flare exhaust, triplicate thirty-minute tests will be performed with the Condensate On and will be repeated with the Condensate Off. Testing will use BAAQMD methods for NO_x (ST-13A), CO (ST-6), TNMHC's (ST-7-HD), CO_2 (ST-5) and O_2 (ST-14). Testing is designed to determine compliance with the following BAAQMD Permit and Reg 8 Rule 34 conditions listed in the Table above.

- Integrated Tedlar bag samples of the Landfill Gas (LFG) will be collected during each test run, and will be analyzed for HHV, H_2S, CO_2, N_2, O_2, NMOC and CH_4, using ASTM 1945 (EPA 18 & 3C), EPA 25C and ASTM 5504. A single sample of LFG will be analyzed by EPA TO-15 GCMS for AP42 Table 4.2-1 compounds excluding mercury, carbon monoxide and acetone. The samples will be analyzed within 72 hours.

- Fuel flow may be measured by BAAQMD Methods 17 & 18. The fuel moisture content will be determined by wet-bulb/dry-bulb measurement. The facility fuel flow meter will be recorded and a fuel analysis will be performed to calculate outlet volumetric flow rate using EPA Method

19. The facility is required to have accurate, operating Flare temperature recording and LFG gas flow monitors.

- Three copies of the compliance test report will be submitted to the client upon completion of the test program and will include analytical test results. The report will include a test description and tables presenting concentrations (ppm), emission rates (lbs/hr) for all sampling parameters. All supporting documents (strip charts, field data sheets, calibrations, calculations, etc.) will also be included. The final report is due to the BAAQMD 60 days after testing has been completed.

TRANSMISSION VERIFICATION REPORT

TIME : 01/08/2008 10:45
NAME : CORNERSTONE
FAX : 19255609879
TEL : 19255609859
SER.# : B0BD7J468894

DATE,TIME	01/08 10:46
FAX NO./NAME	14157494922
DURATION	00:00:33
PAGE(S)	03
RESULT	OK
MODE	STANDARD ECM

KIRBY CANYON RECYCLING & DISPOSAL FACILITY
A WASTE MANAGEMENT COMPANY

910 Coyote Creek Golf Drive
P.O. Box 1870
Morgan Hill, CA 95037
(408) 779-2206
(408) 779-5165 Fax

VIA FAX (415) 749-4922

January 8, 2008

Tim Underwood
Principal Air Quality Engineer
Source Test Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Subject: Source Test Protocol & Test Notification

Dear Mr. Underwood:

Attached please find the Source Test Protocol for compliance emissions testing of the Enclosed Landfill Gas Flare (A-12) at Kirby Canyon Recycling and Disposal Facility in San Jose, CA. If you have any questions, please contact Guy Worthington from the Source Testing Contractor, Blue Sky Environmental, LLC at (510) 525-1261, or (510) 508-3469.

J
Authority To Construct

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

May 31, 2007

Kirby Canyon Landfill
P O Box 1870
Morgan Hill, CA 95037

Attention: Joe Morse

Application Number: 15617
Plant Number: 1812
Equipment Location: 910 Coyote Creek Glf Dr
Morgan Hill, CA 95037

Dear Applicant:

This is your Authority to Construct the following:

A-12 Landfill Gas Flare with Condensate Injection System, 5 gallons per minute maximum condensate injection rate, 149 MMBtu/hr

The equipment described above is subject to condition no. 1437.

Notification
Please contact your assigned Permit Engineer. listed in the correspondence section of this letter, in writing, (by letter, fax, or email) at least three days before the initial operation of the equipment so that we may observe the equipment in operation and verify conformance with the Authority to Construct. Operation includes any start-up of the source for testing or other purposes. Operation of equipment without notification to the District may result in enforcement action. **Do not send start-up notifications to the Air Pollution Control Officer.**

Start-up Period
After receipt of the start-up letter required above, this Authority to Construct authorizes operation during the start-up period from the date of initial operation noted in your start-up letter until the Permit to Operate is issued, up to a maximum of 90 days. All conditions (specific or implied) of the Authority to Construct are in effect during the start-up period.

Fees
District Regulation 3 requires a fee for each new Permit to Operate. You will be invoiced upon receipt of your start-up letter. No permits will be issued until all outstanding fees are paid.

Implied Conditions
In the absence of specific permit conditions to the contrary, the throughputs, fuel and material consumption, capacities, and hours of operation described in your permit application will be considered maximum allowable limits. A new permit will be required before any increase in these parameters, or change in raw material handled, may be made.

Expiration
In accordance with Regulation 2-1-407, this Authority to Construct expires two years from the date of issuance unless the authority to construct has been renewed.

Trade Secret
Unless you have already designated specifically identified materials in your permit application as trade secret, under the California Public Records Act, all data in your permit application, the permit itself and all permit conditions will be considered a matter of public record and may be disclosed to a third party. Please contact your permit reviewer immediately if you wish to amend your permit application submittals or to designate certain permit conditions as trade secret. Unless we hear from you within ten (10) calendar days of this letter, except for materials which have been previously designated as trade secret, you shall be deemed to have waived any claim of trade secret with respect to all materials in the District's files relating to this permit application.

Right of Entry
The Air Pollution Control Officer of the Bay Area Air Quality Management District, the Chairman of the California Air Resources Board, the Regional Administrator of the Environmental Protection Agency, and/or their designees, upon presentation of credentials, shall be granted the right of entry to any premises on which an air pollution source is located for the purposes of:

A. The inspection of the source
B. The sampling of materials used at the source
C. The conduct of an emissions source test
D. The inspection of any records required by District rule or permit condition.

Correspondence
Please include you application number with any correspondence with the District. The District's regulations may be viewed online at www.baaqmd.gov If you have any questions on this matter, please call **Tamiko D Endow, Air Quality Engineer II at (415) 749-4939. Startup information may be faxed to the Engineering Division at 415-749-5030.**

Very truly yours,

Jack P. Broadbent
Executive Officer/APCO

by
Engineering Division

SRL:TDE: ny

BAY AREA AIR QUALITY MANAGEMENT DISTRICT SINCE 1955

COND# 1437

Condition #1437
PM1812, Kirby Canyon Landfill
For: S-1, Active Landfill with Landfill Gas Collection System; A-11, Landfill Gas Flare
A-12, Landfill Gas Flare with Condensate Injection System, 5 gallons per minute maximum condensate injection rate, 149 MMBtu/hr

1. The owner/operator shall comply with the following waste acceptance and disposal limits and shall obtain the appropriate New Source Review permit, if one of the following limits is exceeded:
   a. Except for temporary emergency situations approved by the Local Enforcement Agency, the total waste accepted and placed at the landfill shall not exceed 2600 tons in any day. (Basis: Regulation 2-1-301)
   b. The total cumulative amount of all waste placed in the landfill shall not exceed 19.84 million tons. Exceedance of the cumulative tonnage limit is not a violation of the permit and does not trigger the requirement to obtain a New Source review permit, if the operator can, within 30 days of the date of discovery of the exceedance, provide documentation to the District demonstrating, in accordance with BAAQMD Regulation 2-1-234.3, that the limit should be higher. (Basis: Regulation 2-1-234.3)
   c. The maximum design capacity of the landfill (total volume of all wastes placed in the landfill) shall not exceed 36.40 million cubic yards. (Basis: Regulation 2-1-301)

2. Handling Procedures for Soil Containing Volatile Organic Compounds
   a. The procedures listed below in subparts b-l do not apply if the following criteria are satisfied. However, the record keeping requirements in subpart m, below, are applicable.
      i. The owner/operator has appropriate documentation demonstrating that either the organic content of the soil or the organic concentration above the soil is below the "contaminated" level (as defined in Regulation 8, Rule 40, Sections 206, 207, and 211). The handling of soil containing VOCs in concentrations below the "contaminated" level is subject to Part 3 below.
      ii. The owner/operator has no documentation to prove that soil is not contaminated, but source of the soil is known and there is no reason to suspect that the soil might contain organic compounds.
   b. The owner/operator shall provide verbal notification to the Compliance and Enforcement Division of the owner/operator's intention to accept contaminated soil at the facility at least 24 hours in advance of receiving the contaminated soil. The owner/operator shall provide an estimate of the amount of

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

contaminated soil to be received, the degree of contamination (range and average VOC Content), and the type or source of contamination.

c. Any soil received at the facility that is known or suspected to contain volatile organic compounds (VOCs) shall be handled as if the soil were contaminated, unless the owner/operator receives test results proving that the soil is not contaminated. To prove that the soil is not contaminated, the owner/operator shall collect soil samples in accordance with Regulation 8-40-601 within 24 hours of receipt of the soil by the facility. The organic content of the collected soil samples shall be determined in accordance with Regulation 8-40-602.
   i. If these test results indicate that the soil is still contaminated or if the soil was not sampled within 24 hours of receipt by the facility, the owner/operator must continue to handle the soil in accordance with the procedures set forth in subparts e-i, below, until the soil has completed treatment or has been placed in a final disposal location and adequately covered. Storing soil in a temporary stockpile or pit is not considered treatment. Co-mingling, blending, or mixing of soil lots is not considered treatment.
   ii. If these test results indicate that the soil - as received at the facility - has an organic content of 50 ppmw or less, then the soil is no longer contaminated and shall be handled in accordance with the procedures in Part 3 instead of Part 2, subparts e-l.

d. Any contaminated soil received at the facility shall be clearly identified as contaminated soil, shall be handled in accordance with subparts e-l. below, and shall be segregated from non-contaminated soil. Contaminated soil lots may not be co-mingled, blended, or otherwise mixed with non-contaminated soil lots prior to treatment, reuse, or disposal. Mixing soil lots in an attempt to reduce the overall concentration of the contaminated soil or to circumvent any requirements or limits is strictly prohibited.

e. On-site handling of contaminated soil shall be limited to no more than 2 on-site transfers per soil lot. For instance, unloading soil from off-site transport vehicles into a temporary storage pile is 1 transfer. Moving soil from a temporary storage to a staging area is 1 transfer. Moving soil from a temporary storage pile to a final disposal site is 1 transfer. Moving soil from a staging area to a final disposal site is 1 transfer. Therefore, unloading soil from off-site transport into a temporary storage pile and then moving the soil from that temporary storage pile to the final disposal site is allowed. Unloading soil from off-site transport into a staging area and then moving the soil from that staging area to the final disposal site is allowed. However, unloading

939 ELLIS STREET • SAN FRANCISCO CALIFORNIA 94109 • 415.771.6000 • WWW.BAAQMD.GOV

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

soil from off-site transport to a temporary storage pile, moving this soil to a staging area, and then moving the soil again to a final disposal site is 3 on-site transfers and is not allowed.

f. If the contaminated soil has an organic content of less than 500 ppmw, the contaminated soil shall be treated, deposited in a final disposal site, or transported off-site for treatment within 90 days of receipt at the facility.

g. If the contaminated soil has an organic content 500 ppmw or more, the contaminated soil shall be treated, deposited in a final disposal site, or transported off-site for treatment within 45 days of receipt at the facility.

h. All active storage piles shall meet the requirements of Regulation 8-40-304 by using water sprays, vapor suppressants or approved coverings to minimize emissions. The exposed surface area of any active storage pile (including the active face at a landfill) shall be limited to 6000 ft2. The types of storage piles that may become subject to these provisions include (but are not limited to) truck unloading areas, staging areas, temporary stockpiles, soil on conveyors, bulldozers or trucks, the active face of a landfill, or other permanent storage pile at the final disposal location.

i. All inactive storage piles shall meet the requirements of Regulation 8-40-305 including the requirement to cover contaminated soil during periods of inactivity longer than one hour. The types of storage piles that may become subject to these provisions include (but are not limited to) soil on trucks or other on-site equipment, staging areas, temporary stockpiles, and the permanent storage pile at the final disposal location. District approved coverings for inactive storage piles include continuous heavy-duty plastic sheeting (in good condition, joined at the seams, and securely anchored) or encapsulating vapor suppressants (with re-treatment as necessary to prevent emissions).

j. The owner/operator must:
   i. Keep contaminated soil covered with continuous heavy-duty plastic sheeting (in good condition, joined at the seams, and securely anchored) whenever soil is to be stored in temporary stockpiles or during on-site transport in trucks. Soil in trucks shall not be left uncovered for more than 1 hour.
   ii. Establish a tipping area for contaminated soils near the active face that is isolated from the tipping area for other wastes.
   iii. Spray contaminated soil with water or vapor suppressant immediately after dumping the soil from a truck at the tipping area.
   iv. Ensure that all contaminated soil is transferred from the tipping area to the active face immediately after spraying with

939 ELLIS STREET • SAN FRANCISCO CALIFORNIA 94109 • 415.771.6000 • WWW.BAAQMD.GOV

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

water or vapor suppressant.

v. Ensure that contaminated soil in the tipping area is not disturbed by subsequent trucks. Trucks shall not drive over contaminated soil in the tipping area or track contaminated soil out of the tipping area on their wheels.

vi. Spray contaminated soil on the active face with water or vapor suppressant (to keep the soil visibly moist) until the soil can be covered with an approved covering.

vii. Limit the area of exposed soil on the active face to no more than 6000 ft2.

viii. Ensure that contaminated soil spread on the active face is completely covered on all sides with one of the following approved coverings: at least 6 inches of clean compacted soil, at least 12 inches of compacted garbage, or at least 12 inches of compacted green waste.

ix. Ensure that covering of soil on the active face is completed within one hour of the time that the soil was first dumped from a truck at the tipping area.

k. Contaminated soil shall not be used as daily, intermediate, or final cover material for landfill waste operations unless the requirements of Regulation 8, Rule 40, Sections 116 or 117 have been satisfied.

l. Contaminated soil is considered to be a decomposable solid waste pursuant to Regulation 8, Rule 34. All contaminated soil disposed of at a site shall be included in any calculations of the amount of decomposable waste in place that are necessary for annual reporting requirements or for purposes of 8-34-111 or 8-34-304.

m. The owner/operator shall keep the following records for each lot of soil received, in order to demonstrate on-going compliance with the applicable provisions of Regulation 8, Rule 40.

i. For all soil received by the facility (including soil with no known contamination), record the arrival date at the facility, the soil lot number, the amount of soil in the lot, the organic content or organic concentration of the lot (if known), the type of contamination (if any), and keep copies of any test data or other information that documents whether the soil is contaminated (as defined in 8-40-205) or not contaminated, with what, and by how much.

ii. If the soil is tested for organic content after receipt by the facility, record the sampling date, test results, and the date that these results were received.

iii. For all on-site handling of contaminated soil, use a checklist or other approved method to demonstrate that appropriate procedures were followed during all on-site handling activities. One checklist shall be completed for each day and for each soil lot

939 ELLIS STREET • SAN FRANCISCO CALIFORNIA 94109 • 415.771.6000 • WWW.BAAQMD.GOV

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

(if multiple lots are handled per day).

iv. For soil aerated in accordance with 8-40-116 or 117 record the soil lot number, the amount of soil in the lot, the organic content, the final placement date, the final placement location, and describe how the soil was handled or used on-site.

v. For final disposal at a landfill, record on a daily basis the soil lot number, the amount of soil placed in the landfill, the disposal date, and the disposal location.

All records shall be retained for at least 5 years from the date of entry and shall be made available for District inspection upon request. (basis: Regulations 8-40-301, 8-40-304 and 8-40-305)

3. Low VOC soil (soil that contains 50 ppmw or less of VOC) is not considered to be "contaminated soil" and may be used as daily, intermediate, or final cover material for landfill waste operations if the organic concentration above the soil does not exceed 50 ppmv (expressed as methane, C1). To demonstrate compliance with this requirement, each lot of soil to be used as cover material shall be randomly screened for VOC surface emissions (in such a manner as to be representative of the entire lot) using the testing procedures outlined in Regulation 8-40-604. The owner/operator shall keep the following records for each lot of soil subject to this requirement:
   a. The soil lot number as established in part 2m.i. (above).
   b. The time and date of the soil screening.
   c. The name and affiliation of the person performing the monitoring.
   d. The results of the screening and an acknowledgement that the procedures outlined in Regulation 8-40-604 were used.

   Soil presumed to be low VOC soil that is found to have a surface VOC concentration greater than 50 ppmv as described above shall be considered contaminated soil and will be subject to the requirements of part 2 of these conditions. (basis: Regulations 8-40-205, 8-40-604)

4. Water and/or dust suppressants shall be applied to all unpaved roadways, active soil removal, and fill areas as necessary to prevent visible particulate emissions. Paved roadways shall be kept sufficiently clear of dirt and debris to prevent visible particulate emissions from vehicle traffic or wind. (basis: Regulations 2-1-403, 8-301, and 8-305)

5. All collected landfill gas shall be vented to properly operating Landfill Gas Flare (A-11 or A-12). Raw landfill gas shall not be vented to the atmosphere, except for unavoidable landfill gas emissions that occur during collection system installation, maintenance, or repair that is performed in compliance with Regulation 8, Rule 34, Sections 113, 116, 117, or 118 and for component or surface leaks that do not

939 ELLIS STREET • SAN FRANCISCO CALIFORNIA 94109 • 415.771.6000 • WWW.BAAQMD.GOV

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

exceed the limits specified in 8-34-301.2 or 8-34-303. (basis: Regulation 8-34-301)

6. The owner/operator shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described in Parts 6a-b below. Increasing or decreasing the number of wells or collectors, changing the length of collectors, or changing the locations of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.
   a. The owner/operator has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths are as described in detail in Permit Applications #2232 and #7835.

	Current
Total Number of Wells and Collectors:	36
Total Number of Leachate Collection Wells:	4

   b. The owner/operator was issued an Authority to Construct for additional landfill gas collection system components as described in Permit Application #11730. Additional wells installed under this Authority will be added to the Title V permit using the minor permit amendment procedures identified in Regulation 2-6-414.

   (basis: Regulations 2-1-301, 8-34-301.1, 8-34-304, 8-34-305)

7. The landfill gas collection system described in Part 6a shall be operated continuously as defined in Regulation 8-34-219. Wells shall not be shut off, disconnected or removed from operation without written authorization from the APCO, unless the owner/operator complies with all applicable requirements of Regulation 8, Rule 34, Sections 113, 116, 117, and 118. (basis: Regulation 8-34-301.1)

8. The heat input to the A-11 Landfill Gas Flare shall not exceed 1,080 million BTU per day and shall not exceed 394,200 million BTU per year. When A-12 Landfill Gas Flare is started up, the A-11 Landfill Gas Flare Shall be removed from service after a 3 month startup and commissioning period. The owner/operator shall ensure that the heat input to the A-12 Landfill Gas Flare does not exceed 3,576 million Btu/day and does not exceed 1,305,240 million Btu/year. In order to demonstrate compliance with this part, the owner/operator shall calculate and record, on a monthly basis, the maximum daily and total monthly heat input to the flare based on: (a) the landfill gas flow rate recorded pursuant to part 14h, (b) the average methane concentration in the landfill gas measured in most recent source test, and (c) a high heating value for methane of 1013 BTU per cubic foot at 60 degrees F. (basis: Regulation 2-1-301)

9. The minimum combustion zone temperature of the Flare shall be determined by the results of the most recent source test in which compliance with all

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

applicable requirements was demonstrated. The minimum combustion zone temperature shall be the average temperature measured during the complying source test minus 50 degrees F. Once the minimum temperature has been established, it shall be maintained during all periods of flare operation. Compliance with the temperature limit shall be based on a 3-hour averaging period. Under no circumstances shall the minimum flare temperature be less than 1,400 degrees F. Based on the results of required source testing of the flare, the APCO may add an explicit temperature limit to the conditions for the Flare in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415. (Basis: Regulation 8-34-301.3)

10. Emissions of Nitrogen Oxides (NOx) from the Flare A-11 shall not exceed 0.06 pounds per million BTU. The owner/operator shall ensure that emissions of Nitrogen Oxides (NOx) from the Flare A-12 does not exceed 0.05 pounds per million Btu (calculated as NO2). (basis: RACT and Offsets)

11. The owner/operator shall ensure that the emissions of Carbon Monoxide (CO) from the Flares A-11 and A-12 do not exceed 0.3 pounds per million BTU. (basis: RACT and Offsets).

12. To demonstrate compliance with Regulation 8, Rule 34, Sections 301.3 and 412, and the above requirements, the owner/operator shall ensure that a District approved source test is conducted on the Landfill Gas Flare, A-12, within 90 days of startup, followed by annual source testes thereafter. The owner/operator shall obtain prior approval from the District's Source Test Manager for the location of sampling ports and source testing procedures. The owner/operator shall ensure that source tests continue to be performed annually on the Landfill Gas Flare (A-11) until it is removed from service. The startup and annual source test shall determine the following:
    a. landfill gas flow rate to the flare (dry basis);
    b. concentrations (dry basis) of carbon dioxide (CO2), nitrogen (N2), oxygen (O2), total hydrocarbons (THC), methane (CH4), and total non-methane organic compounds (NMOC) in the landfill gas;
    c. stack gas flow rate from the flare (dry basis);
    d. concentrations (dry basis) of nitrogen oxides (NOx), carbon monoxide (CO), THC, CH4, NMOC, SO2, and O2 in the flare stack gas;
    e. the NMOC destruction efficiency achieved by the flare; and
    f. the average combustion temperature in the flare during the test period.

    Annual source tests shall be conducted no earlier than 9 months and no later than 12 months after the previous source test. The Source Test Section of the District shall be contacted to obtain approval of the source test procedures at least 14 days in advance of each source test. The Source Test Section shall be notified of the scheduled test date at least 7 days in

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division and to the Source Test Section within 45 days of the test date. (basis: RACT, Regulations 2-1-301, 8-34-301.3, 8-34-412, and 9-1-302)

13. The owner/operator shall conduct a characterization of the landfill gas concurrent with the annual source test required by part 12 above. The landfill gas sample shall be drawn from the main landfill gas header. In addition to the compounds listed in part 11b, the landfill gas shall be analyzed for all the compounds listed in the most recent version of EPA's AP-42 Table 2.4-1 excluding acetone, carbon monoxide, and mercury. All concentrations shall be reported on a dry basis. The test report shall be submitted to the Compliance and Enforcement Division within 45 days of the test date. After conducting three annual landfill gas characterization tests, the owner/operator may request to remove specific compounds from the list of compounds to be tested for if the compounds have not been detected, have no significant impact on the cancer risk determination for the site, and have no significant impact on the hazard index determination for the site. (basis: Regulation 2-5 and Regulation 8-34-412)

*14. The landfill gas condensate injection rate into the flare shall not exceed 5 gallons per minute. Total landfill gas condensate injection throughput shall not exceed 1,500,000 gallons during any consecutive twelve-month period. The owner/operator may submit a written petition to the District to increase the landfill gas condensate injection rate subject to current District-approved source test results. (basis: Regulation 2-5)

15. To demonstrate compliance with the above conditions, the owner/operator shall maintain the following records in a District approved logbook.
    a. The total amount of municipal solid waste received at S-1 recorded on a daily basis. A summary of the daily waste acceptance records for each calendar month.
    b. For each area or cell that is not controlled by a landfill gas collection system, a record of the date that waste was initially placed in the area or cell. The cumulative amount of waste placed in each uncontrolled area or cell recorded on a monthly basis.
    c. If the owner/operator plans to exclude an uncontrolled area or cell from the collection system requirement, the owner/operator shall also record the types and amounts of all non-decomposable waste placed in the area and the percentage (if any) of decomposable waste placed in the area.
    d. Low VOC soil screening data, pursuant to part 3.
    e. The dates, locations, and frequency per day of all watering activities on unpaved roads or active soil or fill areas. The dates, locations, and type of

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

any dust suppressant applications. The dates and description of all paved roadway cleaning activities. All records shall be summarized monthly.

f. The initial operation date for each new landfill gas well and collector.

g. An accurate map of the landfill that indicates the locations of all refuse boundaries and the locations of all wells and collectors (using unique identifiers) that are required to be operating continuously pursuant to part 6a. Any areas containing only non-decomposable waste shall be clearly identified. This map shall be updated at least once a year to indicate changes in refuse boundaries and to include any newly installed wells and collectors.

h. The operating times and the landfill gas flow rate to the Landfill Gas Flare recorded on a daily basis. A monthly summary of the heat input to the Landfill Gas Flare pursuant to part 8 shall be calculated and recorded.

i. Continuous records of the combustion zone temperature for the Landfill Gas Flare during all hours of operation.

j. Records of all test dates and test results performed to maintain compliance with parts 12 and 13 above or any applicable rule or regulation.

k. Records of landfill gas condensate injection throughput and the duration of the injection recorded daily.

All records shall be maintained on site or shall be made readily available to District staff upon request for at least 5 years from the date of entry. These recordkeeping requirements do not replace the recordkeeping requirements contained in any applicable rules or regulations. (basis: Cumulative Increase, 2-1-301, 2-6-501, 8-301, 8-305, 8-2-301, 8-34-301, 8-34-304, 8-34-501, and 9-1-302)

16. The annual report required by BAAQMD Regulation 8-34-411 shall be submitted in two semi-annual increments. The reporting period for the first increment of the Regulation 8-34-411 annual report that is submitted subsequent to the issuance of the MFR Permit for this site shall be from December 1, 2002 through August 31, 2003. This first increment report shall be submitted by September 30, 2003. The reporting periods and report submittal due dates for all subsequent increments of the Regulation 8-34-411 report shall be synchronized with the reporting periods and report submittal due dates for the semi-annual MFR Permit monitoring reports that are required by Section I.F. of the MFR Permit for this site. (basis: Regulation 8-34-411 and 40 CFR Part 63.1980(a))

17. The gas collection system operating requirements listed below shall replace the well head requirements identified in Regulation 8-34-305.2 through 8-34-305.4 for the specified wells and collectors. All wells and

939 ELLIS STREET • SAN FRANCISCO CALIFORNIA 94109 • 415.771.6000 • WWW.BAAQMD.GOV

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT
SINCE 1955

collectors remain subject to the Regulation 8-34-305.1 requirement to maintain vacuum at each well head.

a. The Regulation 8-34-305.2 temperature limit shall not apply to the Wells 36, 37, 41, 42, 51, and 52, provided that the landfill gas temperature at each of the wells 36, 37, 41, 42, 51, and 52 does not exceed 145 degrees F (63 degrees C).
b. The owner/operator shall demonstrate compliance with the alternative wellhead landfill gas temperature limit in 17(a) above by monitoring the temperature of each wellhead on a monthly basis, in accordance with Regulation 8-34-505.
c. All records to demonstrate compliance with Part 17(a) and all applicable sections of BAAQMD Regulation 8, Rule 34 shall be recorded in a District-approved log and made available to District staff upon request in accordance with Regulation 8-34-501.4, 501.9, and 414.
d. If the temperatures measured at any of the Part 17(a) wells are found to exceed the temperature limit in Part 17(a), the owner/operator shall take all measures necessary to investigate the possibility of subsurface fires, including landfill gas testing for carbon monoxide (CO) on those landfill gas collection wells in Part 17(a) that exceed the operating temperature limit. If a fire is suspected, the owner/operator shall employ all means as appropriate to extinguish the fire, repair the well(s), and bring the well(s) back into service

(basis: Regulation 8-34-301.2, 8-34-303, and 8-34-305, 40 CFR Part 60.755(a) and 60.759)

939 ELLIS STREET • SAN FRANCISCO CALIFORNIA 94109 • 415.771.6000 • WWW.BAAQMD.GOV