AP-42 Test Data - Submission Checklist

FACILITY INFORMATION

Landfill Name:
Keller Canyon Landfill

Location:
901 Bailey Road, Pittsburg, CA

Owner:	LFG Operator:	
Contact Person: Michael O'Connor	Address: 3843 Brickway Blvd, Ste, 208, Santa Rosa, CA	
Email: moconnor@scsengineers.com	Phone: 707-546-9461	Fax:
Year Opened:	Year Gas Collection Started:	

Gas Collection Control Device Description:
LFG Flare

Co disposal: ☐ Yes ☐ No ☒ Unknown

ADMINISTRATIVE INFORMATION
Complete test reports must be submitted (see footnote[1]))

Sampling Date:	Analysis Date:
10/30/07	11/1/07

Description of sampling site:
LFG Flare

Description of sampling method:
Continuous emissions monitoring

QA/QC data included: ☒ Yes ☐ No

Chain of Custody included: ☒ Yes ☐ No

DATA SUMMARY

Type of Data:
- ☐ Header Draw
- ☐ Punch Probe (this data does not presently meet EPA requirements)
- ☒ Stack Test
- ☐ Other:

Header Draw data:

NMOC data:
- ☐ Yes
- ☐ No

NMOC (ppm as hexane):

Raw LFG Constituent data:
- ☐ Yes
- ☐ No

Sulfur Compound data:
- ☐ Yes
- ☐ No

NMOC Test Method:	LFG Test Methods:

Stack Testing data:
Device Tested (Flare, IC Engine, Turbine, Boiler):
Concentration (ppm)

NOx: 7.8 @ 15% O2	SOx:
CO: 0.8 @15% O2	Dioxin/furans: NS
PM: NS	Aldehydes/metals: NS

Was sampling conducted after the control device? (Y/N): Y

Test Methods:BAAQMD ST-6, 13A, and ASTM D-5504

[1] According to USEPA, complete test reports should contain, at a minimum: Landfill name; physical description of the landfill, gas collection system and control device; description of sampling site and methods used to take samples; a sample matrix showing date of test and methods used for analysis; data results tables and discussion of results, identifying any data qualifiers or unusual circumstances affecting results; and QA/QC items such as field notes, laboratory notes, and a test QAPP or documentation of field and laboratory QA/QC procedures, including equipment calibrations and blank or spiked sample results.

Compliance Source Emissions Test Report

REPORT # 07115

Performed for

Allied Waste Industries, Inc.
(Keller Canyon Landfill)
901 Bailey Road
Pittsburg, CA
Facility #A4618

Source(s)

Flare (A-1)
NMOC, NO_x, CO, CO_2 & O_2
LFG- Sulfurs & Organics

Conducted on

Test Date(s) October 30th, 2007
Report Date: December 8th, 2007

For submission to

BAAQMD
Compliance & Enforcement Division
939 Ellis Street
San Francisco, CA 94109

Prepared by

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December 8th, 2007

Allied Waste
Keller Canyon Landfill
901 Bailey Road
Pittsburg, CA 94565

Attn: Lochlin Caffey

Subject: Source test emission report for one Calledus flare (A-1) located at Keller Canyon Landfill (Allied Waste Industries) 901 Bailey Road, Pittsburg, BAAQMD Plant #4618. Re; Permit Condition 17309 & Reg 8 Rule 34.

Test Date(s): October 30th, 2007.

Sampling Location: The flare is equipped with four 4" flange ports, accessible by 40' boom lift. Sampling was conducted using a stainless steel probe that was placed near the center of the flare using the available port.

Sampling Personnel: Sampling was performed by Guy Worthington of Blue Sky Environmental, LLC.

Observing Personnel: The BAAQMD were notified but no representatives from the BAAQMD present during the test program. Lochlin Caffey of Allied Waste was onsite for part of the time to coordinate testing.

Process Description: The flare is used to continuously burn landfill gas generated in the active landfill. The flare is maintained at 1650°F, which is above the permitted minimum of 1450°F. The landfill gas fuel flow was maintained at 1165 SCFM. The fuel flow and flare temperature are continuously recorded.

Test Program: The test program objective was to comply with the prevailing Permit requirements for NOx, CO, THC Destruction and Removal Efficiency (DRE), Calderon and Sulfur compounds and Regulation 8 Rule 34 limits that came into effect on July 1, 2002.

Three 30-minute compliance tests were performed on the flare. The continuous emission monitoring system was checked for leaks before testing, and was calibrated before and after each run with EPA protocol calibration gas standards.

One landfill gas sample was collected and analyzed to determine the Calderon Compounds (TO-15 analysis), $\%CH_4$, BTU and F-Factors. A separate sample was collected and analyzed for sulfur species by ASTM D-5504. The LFG flowrate, BTU and F-Factor was used along with the Flare exhaust $\%O_2$ to determine the emission flowrate using EPA Method 19.

Readings of the flare temperature and LFG flowrate were made during each test run.

Sampling and Analysis Methods: The following EPA and BAAQMD 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
EPA 19	Flare exhaust flowrate by calculation, DSCFM
ASTM 1945/3588	Gas analysis for BTU and F-Factor
EPA TO-15/Calderon	Fuel Analysis for VOC's
ASTM D-5504	Fuel Analysis for Sulfurs

Stack gases were sampled continuously via a stainless steel probe, $^3/_8$ inch Teflon sampling line, glass impinger moisture condensers to dry the sample, a particulate filter, and a diaphragm pump. The sample is pumped under pressure (5 PSI) to a manifold where it is distributed to individual analyzers, controlled by rotameters. Calibration gas was introduced to the sample manifold at the same flow rate as the sample, for internal calibrations performed with every run

Instrumentation: The following continuous emissions analyzers were used:

Instrument	Analyte	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

Test Results: The emission results are presented in Table 1 on the following page. Toxic Air Contaminants found in the landfill gas are presented in Table 2. Concentrations and emissions from the flare were below the permit limits.

	Flare (A-1) Avg	Permit Limit
NOx ppm @ 15% O_2	**7.8**	**14**
CO ppm @ 15% O_2	**<1.3**	**114**
NMOC ppm as CH_4 @ 3% O_2	**<1.9**	**30**
THC (TOC) Destruction or Removal Efficiency (DRE)	**99.993%**	**98%**
TRS in Landfill Gas	**88.7**	**300**

The appendices are organized as follows:

Calculations
: All the calculations performed on the continuous emissions monitoring (CEM) data and flow rate calculations are presented in this section.

Laboratory Reports
: All laboratory reports and chain of custody.

Field Data Sheets
: All the CEMS data, any transcribed data from the strip charts.

Strip Chart Records
: The strip chart records of all the CEM data.

Calibration Gas Certifications
: Certifications for the calibration gas standards.

Stack Diagram
: Sketch or photograph of the stack.

Sample System Diagram
: Schematic of the sampling system configuration

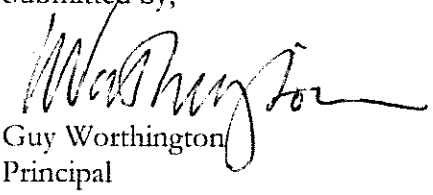
Permit to Operate / ATC
: Permit to Operate / Authority to Construct

Source Test Plan
: Sampling protocols submitted to the AQMD/APCD prior to testing

Comments: The details and results contained within this report are to the best of Blue Sky Environmental, LLC's knowledge an authentic and accurate representation of the test program. If this report is submitted for Compliance purposes, it should be only reproduced in its entirety.

If there are any questions concerning this report, please contact Guy Worthington at 510 525 1261.

Submitted by,



Guy Worthington
Principal

TABLE #1

AW-Keller Canyon
Flare A-1
1650°F

RUN	1	2	3	AVERAGE	LIMITS
Test Date	10/30/07	10/30/07	10/30/07		
Test Time	1240-1310	1320-1350	1400-1430		
Standard Temp., °F	70	70	70		
Flare Temp., °F	1,650	1,633	1,634	1,639	
Fuel Flow Rate, DSCFM	1,168	1,165	1,163	1,165	
Exhaust Flow Rate, DSCFM (Method 19)	12,841	12,664	12,672	12,726	
Oxygen, O_2, %	11.3	11.2	11.2	11.2	
Carbon Dioxide, CO_2, %	8.8	8.9	8.8	8.8	
NOx, ppm	12.9	12.6	12.9	12.8	
NOx, ppm @ 15% O_2	7.9	7.6	7.9	**7.8**	**14**
NOx, lbs/hr	1.18	1.14	1.17	1.16	
NOx, lbs/day	28.33	27.26	28.03	27.88	
CO, ppm	1.5	1.3	1.0	1.3	
CO, ppm @ 15% O_2	0.9	0.8	0.6	**0.8**	**114**
CO, lbs/hr	0.1	0.1	0.1	0.1	
CO, lbs/day	2.0	1.7	1.3	1.7	
THC, ppm	<3.4	<3.7	<3.3	<3.5	
THC, lbs/hr as CH_4	<0.1	<0.1	<0.1	<0.1	
CH_4, ppm	<3.4	<3.7	<3.3	<3.5	
NMHC, ppm as CH_4	<1.0	<1.0	<1.0	<1.0	
NMHC, lbs/hr as CH_4	<0.03	<0.03	<0.03	<0.03	
NMHC, ppm @ 3% O_2 as CH_4	<1.9	<1.8	<1.8	**<1.9**	**30**
INLET CH_4, ppm	533,000	533,000	533,000	533,000	
INLET NMHC ppm as CH_4	3,184	3,184	3,184	3,184	
INLET NMHC lbs/hr as CH_4	9.2	9.2	9.2	9.2	
NMHC Removal Efficiency	>99.7%	>99.7%	>99.7%	**>99.7%**	**98**
INLET THC (TOC) ppm as CH_4	536,184	536,184	536,184	536,184	
INLET THC (TOC) lbs/hr as CH_4	1,555	1,551	1,548	1,551	
THC (TOC) Removal Efficiency	99.993%	99.992%	99.993%	**99.993%**	**98**

WHERE,

ppm = Parts Per Million Concentration
Lbs/hr = Pound Per Hour 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, NMHC+CH_4 (MW = 16)
THC = Total Hydrocarbons as Methane (MW = 16)
NMHC = Total Non-Methane Hydrocarbons as Methane (MW = 16)

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 / 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

TABLE # 2

AW-Keller Canyon

Toxic Air Contaminants

RUN	synonyms		LandfillGas			TAC limits	
Test Date			10/30/07				
Standard Temp., °F			70				
Fuel Flow Rate, DSCFM			1,165				
Acrylonitrile		ppb	<100			500	
Benzene		ppb	1,430			10,000	
Carbon Tetrachloride		ppb	<100			100	
Chloroform		ppb	<100			100	
Ethylene Dibromide	1,2 Dibromoethane	ppb	<100			100	
Ethylene Dichloride	1,2-Dichloroethane	ppb	<100			400	
Methylene Chloride		ppb	448			27,600	
Perchloroethylene	Tetrachloroethylene	ppb	935			3,600	
Trichloroethylene	Trichloroethene	ppb	495			2,300	
Vinyl Chloride		ppb	471			1,600	
Carbon Disulfide		ppm	0.08				
Carbonyl Sulfide		ppm	<0.01				
Dimethyl Sulfide		ppm	2.49				
Ethyl Sulfide		ppm	<0.01				
Ethyl Mercaptan		ppm	0.06				
Hydrogen Sulfide		ppm	73.89				
Methyl Mercaptan		ppm	1.95				
TRS (as H2S)		ppm	80.4			300	
TRS (H2S * 1.2)		ppm	88.7			300	

Additional compounds are listed in the Laboratory Analysis Report found in the appendices

APPENDICES

Calculations

Laboratory Reports

Field Data Sheets

Strip Chart Records

QC Calibration Gas Certifications

Stack Diagram

Sample System Diagram

Permit/Authority to Construct

Source Test Plan

CEM BIAS CORRECTION SUMMARY

Facility:	AW-Keller Canyon	Barometric:	
Unit:	Flare A-1	Leak Check:	OK
Condition:	1650°F	Strat. Check:	
Date:	10-30-07	Personnel:	gw

	O_2	CO_2	NOx	CO	THC	CH4			
Analyzer	755R	PIR 2000	42i	48C	RS-55	RS-55			
Range	25	15	50	50	100	100			r
Units, ppm or %	%	%	ppm	ppm	ppm	ppm			
Span Gas Value	20.42	12.60	45.2	45.2	45.0	45.0			Ccal
Run 1	0.00	0.00	0.0	0.0	-0.5	-0.5			zero (initial), Cib
Test Time:	20.38	12.60	45.2	45.2	45.0	45.0			cal (initial), Cib
1240-1310	11.25	8.70	12.8	1.3	<2.0	<2.0			TEST AVG, Cavg
	0.00	0.00	-0.3	-0.5	-2.5	-2.5			zero (final), Cfb
	20.25	12.38	44.9	44.3	44.0	44.0			cal (final), Cfb
	0%	*0%*	*-1%*	*-1%*	*-2%*	*-2%*			% zero drift
	-1%	*-1%*	*-1%*	*-2%*	*-1%*	*-1%*			% cal drift
	11.31	**8.78**	**12.9**	**1.5**	**<3.4**	**<3.4**			**Cgas**
Run 2	0.00	0.00	-0.3	-0.5	-2.5	-2.5			zero (initial), Cib
Test Time:	20.25	12.38	44.9	44.3	44.0	44.0			cal (initial), Cib
1320-1350	11.13	8.63	12.3	0.8	<2.0	<2.0			TEST AVG, Cavg
	0.00	0.00	-0.3	-0.5	-1.3	-1.3			zero (final), Cfb
	20.34	12.19	44.5	44.5	45.5	45.5			cal (final), Cfb
	0%	*0%*	*0%*	*0%*	*1%*	*1%*			% zero drift
	0%	*-1%*	*-1%*	*1%*	*2%*	*2%*			% cal drift
	11.20	**8.85**	**12.6**	**1.3**	**<3.7**	**<3.7**			**Cgas**
Run 3	0.00	0.00	-0.3	-0.5	-1.3	-1.3			zero (initial), Cib
Test Time:	20.34	12.19	44.5	44.5	45.5	45.5			cal (initial), Cib
1400-1430	11.12	8.48	12.5	0.5	<2.0	<2.0			TEST AVG, Cavg
	0.00	0.00	-0.3	-0.5	-1.6	-1.6			zero (final), Cfb
	20.13	12.00	44.3	44.0	45.5	45.5			cal (final), Cfb
	0%	*0%*	*0%*	*0%*	*0%*	*0%*			% zero drift
	-1%	*-1%*	*-1%*	*-1%*	*0%*	*0%*			% cal drift
	11.22	**8.83**	**12.9**	**1.0**	**<3.3**	**<3.3**			**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 = (Cib + Cfb) / 2 for cal gas

STACK GAS FLOW RATE DETERMINATION -- Method 19

Facility: AW-Keller Canyon
Unit: Flare A-1
Condition: 1650°F
Date: 10/30/07

		Time:	1240-1310	1320-1350	1400-1430	
		Run:	1	2	3	
# cubic feet/rev	scfm		1,168	1165	1163	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			542.3	542.3	542.3	Btu / ft³
Stack Oxygen			11.3	11.2	11.2	%
Gas Fd-Factor @ 60°F			9,305	9,305	9,305	DSCF/MMBtu
Gas Temperature (°F)			70	70	70	°F
Standard Temperature (°F) tstd			70	70	70	°F
Realtime Fuel Rate (CFM)			1168.0	1165.0	1163.0	CFM
Corrected Fuel Rate (SCFM) @ Tstd			1168.0	1165.0	1163.0	SCFM
Fuel Flowrate (SCFH)			70,080	69,900	69,780	SCFH
Million Btu per minute			0.621	0.620	0.619	MMBtu/min
Heat Input (MMBtu/hour)			37.3	37.2	37.1	MMBtu/Hr
Stack Gas Flow Rate @Tstd			**12,841**	**12,664**	**12,672**	**DSCFM**

WHERE:

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

CALCULATIONS:

SCFM = CFM * (PSIA / 14.7)*(460 + tstd)/(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 * MMBtu/min * 20.9/ (20.9 - O_2% a) * (tstd+460)/520

Fd-FACTOR CALCULATION

Landfill Gas

Sample ID: AW-Keller Canyon
Date: 10/30/2007

	ppm	Molecular Weight	Ideal Gas Specific Gravity, Gi	Ideal Gas Total Calorific Value, Hi	Compressibility Summation Factor, Fbi	Specific Volume, ft³/lb	Component Mole Fraction, x	Specific Gravity Fraction, xGi	Calorific Value Fraction, xHi	Compressibility Fraction, xFbi	xMW	Weight Fraction, xMW / ΣxiMW	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume, ft³/lb
Helium‡		4.00	0.1382	0.0	0.0170		0.0000	0.0000	0.0	0.0000	0.0000	0.0000							
Hydrogen (H_2) ‡		2.02	0.0695	324.9		187.723	0.0000	0.0000	0.0	0.0000	0.0000							0.0000	
Nitrogen		28.01	0.9672	0.0	0.0164	13.413	0.0800	0.0774	0.0	0.0013	2.2408	0.0806				0.0806		0.0806	1.0837
Oxygen		32.00	1.1053	0.0		11.619	0.0060	0.0066	0.0	0.0000	0.1920	0.0069			0.0069			0.0069	0.0816
Carbon Monoxide		28.01	0.9671	321.3	0.0215	13.506	0.0000	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000
Carbon Dioxide‡		44.01	1.5194	0.0	0.0640	8.548	0.3810	0.5789	0.0	0.0241	16.7678	0.6033	0.1646	0.0000	0.4386			0.6033	9.1366
Methane		16.04	0.5539	1012.0	0.0436	23.366	0.5330	0.2952	539.4	0.0232	8.5493	0.3076	0.2303	0.0773				0.3076	7.2480
Ethane (C_2)		30.01	1.0362	1772.9	0.0917	12.455	0.0000	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Propane (C_3)	33.6	44.09	1.5221	2523.0	0.1342	8.365	0.0000	0.0001	0.1	0.0000	0.0015	0.0001	0.0000	0.0000				0.0001	0.0011
Isobutane (C_4)	22.1	58.12	2.0067	3260.1	0.1744	6.321	0.0000	0.0000	0.1	0.0000	0.0013	0.0001	0.0001	0.0000				0.0001	0.0013
n-Butane		58.12	2.0067	3269.6	0.1835	6.321	0.0000	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isopentane (C_5)	6.9	72.14	2.4910	4009.4	0.2276	5.252	0.0001	0.0002	0.3	0.0000	0.0050	0.0002	0.0001	0.0001				0.0002	0.0039
n-Pentane		72.14	2.4910	4018.5	0.2377	5.252	0.0000	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Hexanes (C_{6+})	44.6	86.17	2.9753	4756.0	0.2850	4.396	0.0004	0.0013	2.1	0.0001	0.0151	0.0014	0.0011	0.0001				0.0013	0.0060
Total	**383.8**	28.014					1.0006	**0.960**	**541.9**	0.0247	27.7957	1.0000	0.3963	0.0776	0.4355	0.0806	0.0000	1.0902	**13.58**
								SG	**Btu/ft³**	**$\Sigma x_i Fb_i$**	**$\Sigma x_i MW$**		**39.62%**	**7.78%**	**44.54%**	**8.06%**	**0.00%**		**ft³/lb**

‡ Obtained from Compressibility Factor Calculations

Calculated Specific Gravity (SG) *calculated from Compressibility Factor Calculations*	**0.960**	
Compressibility Factor (Z) $Z = 1 - \sum x_i Fb_i \times 10^{-4}$	**0.9994**	
Specific Gravity (corrected)	**0.960**	
Specific Volume, (SV) ft³/lb	**13.58**	ft³/lb
Gross Calorific Value (GCV) @ 60°F	**542.3**	Btu/ft³ Gross
Gross Calorific Value (GCV) @ 68°F	**534.0**	Btu/ft³ Gross
Gross Calorific Value (GCV) *Btu/lb = Btu/ft³ * ft³/lb*	**7,363**	Btu/lb
Gas Fd-Factor @ 68°F *DSCF/MMBtu = 10⁶ * 0.3642 * (1 - xH2O - xCO2 - xO2 - xN2 - xCO - xH2 - 2xCH4 - 3xC2H6 - 4xC3H8 - 5xC4H10 - 6xC5H12 - 7xC6+) / Btu/ft³*	**9,448**	DSCF/MMBtu
Gas Fd-Factor @ 60°F	**9,305**	DSCF/MMBtu

BLUE SKY ENVIRONMENTAL, LLC

CONTINUOUS EMISSION MONITORING SUMMARY DATA SHEET

Facility: Allied Waste - Keller Canyon Test #: 1, 2, 3 Date: 10/30/07

Location: Flare A-1 Personnel: GW 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-1 Flare
Range		25	15	50	50	50					Operating Conditions:
Span Value(s)		20.42	12.6	44.8	45.3	45					1650 SP
Span Value(s)											Fuel: LFG
Span Value(s)											
	⊖	⊖	⊖	⊖	⊖	-0.5					NOTES:
	CAL	20.38	12.6	45.2	45.2	45.0					
1	1240	11.25	8.70	12.75	1.25	<2					1650°F
	+ 5min	11.25	8.70	12.75	1.25	<2					1168 scfm
	↓	11.25	8.70	12.75	1.25	<2					
	↓	11.25	8.70	12.75	1.25	<2					
	↓	11.25	8.70	12.75	1.25	<2					
	1310 ↓	11.25	8.70	12.75	1.25	<2					
	AVG	11.25	8.70	12.75	1.25	<2					
	⊖	⊖	⊖	-0.25	-0.50	-2.5					
2	CAL	20.25	12.38	44.9	44.25	44.0					
						45	recal				
	1320	11.13	8.63	12.25	0.75	<2					1633°F
	↓	11.13	8.63	12.25	0.75	<2					1165 scfm
	↓	11.13	8.63	12.25	0.75	<2					
	↓	11.13	8.63	12.25	0.75	<2					
	↓	11.13	8.63	12.25	0.75	<2					
	1350 ↓	11.13	8.63	12.25	0.75	<2					
	AVG	11.13	8.63	12.25	0.75	<2					
	⊖	⊖	⊖	-0.25	-.50	-1.25					
	CAL	20.34	12.19	44.5	44.5	45.5					
3	1400	11.12	8.48	12.5	0.50	<2					1634°F
	↓	11.12	8.48	12.5	0.50	<2					1155-1172 scfm
	↓	11.12	8.48	12.5	0.50	<2					Avg 1163
	↓	11.12	8.48	12.5	0.50	<2					
	↓	11.12	8.48	12.5	0.50	<2					
	1430 ↓	11.12	8.48	12.5	0.50	<2					
	AVG	11.12	8.48	12.5	0.50	<2					
	⊖	⊖	⊖	-0.25	-0.50	-1.6					
	CAL	20.13	12.00	44.25	44.0	45.5					

Laboratory Reports

Atmospheric Analysis & Consulting, Inc.

CLIENT : Blue Sky Environmental, LLC
PROJECT NAME : AW-Keller-A-1
AAC PROJECT NO. : 071199
REPORT DATE : 11/06/2007

On October 31, 2007, Atmospheric Analysis & Consulting, Inc. received one (1) Tedlar Bags for Total Reduced Sulfur analysis by ASTM D-5504, Fixed Gases analysis by EPA 3C and hydrocarbon analysis by EPA 18. Upon receipt the sample was assigned unique Laboratory ID numbers as follows:

Client ID	Lab No.
AW-KELLER-A-1	071199-30071

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 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 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 11 pages.

ACCREDITED IN ACCORDANCE WITH nelac Certificate #E87837

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**	**Sampling Date**	**10/30/2007**
Project No.	**071199**	**Receiving Date**	**10/31/2007**
Matrix	**Air**	**Analysis Date**	**11/01/2007**
Units	**%**	**Report Date**	**11/06/2007**

EPA Method 3C

Detection Limit: 0.1 %			Analyte				
Client ID	**AAC ID**	**Hydrogen**	**Oxygen**	**Nitrogen**	**CO**	**Methane**	**CO2**
AW-KELLER-A-1	071199-30023	<PQL	0.6	8.0	<PQL	53.3	38.1

Dr. Sucha Parmar
Technical Director

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Atmospheric Analysis & Consulting, Inc.

LABORATORY ANALYSIS REPORT

Client	**Blue Sky Environmental**	**SAMPLING DATE**	**10/30/2007**
Project No.	**071199**	**RECEIVING DATE**	**10/31/2007**
Matrix	**Matrix**	**ANALYSIS DATE**	**11/01/2007**
Units	**ppmV**	**REPORT DATE**	**11/06/2007**

Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID.	**AW-KELLER-A-1**	**MDL**
AAC ID	**071199-30023**	
Analysis Dilution Factor	**1**	
Can Dilution Factor	**1.0**	
H_2S	73.89	0.01
Carbonyl Sulfide	<PQL	0.01
SO2	<PQL	0.01
Methyl Mercaptan	1.95	0.01
Ethyl Mercaptan	0.06	0.01
Dimethyl Sulfide	2.49	0.01
n-Butyl mercaptan	0.10	0.01
Carbon Disulfide	0.08	0.01
Allyl Sulfide	<PQL	0.01
Propyl Sulfide	<PQL	0.01
Allyl disulfide	<PQL	0.01
Isopropyl Mercaptan	0.81	0.01
t-Butyl mercaptan	<PQL	0.01
Propyl Mercaptan	<PQL	0.01
Butyl Sulfide	<PQL	0.01
Ethyl methyl sulfide	<PQL	0.01
Thiophene	<PQL	0.01
Isobutyl mercaptan	<PQL	0.01
Dimethyl disulfide	<PQL	0.01
Allyl mercaptan	<PQL	0.01
3-Methylthiophene	<PQL	0.01
Tetrahydrothiophene	<PQL	0.01
Diethyl sulfide	<PQL	0.01
2-Ethylthiophene	<PQL	0.01
2,5-Dimethylthiophene	<PQL	0.01
Diethyl disulfide	<PQL	0.01
Total Unidentified Sulfurs as H_2S	1.02	0.01
Total Sulfurs as H_2S	80.40	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

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT:	**Blue Sky Environmental**	**Sampling Date**	**10/30/2007**
PROJECT NO.	**071199**	**Receiving Date**	**10/31/2007**
MATRIX	**AIR**	**Analysis Date**	**11/01/2007**
UNITS	**ppmV**	**Report Date**	**11/06/2007**

C1 to C6+ Hydrocarbons by EPA Method 18

Client ID	AAC ID	*ANALYSIS METHOD*		*EPA Method 18*				
		Detection Limit		*0.3 ppmv*				
		C1 *	C2 **	C3	C4	C5	C6	C6+
AW-KELLER-A-1	071199-30023	<PQL	<50	33.6	22.1	69.0	85.6	356.0

** 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

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Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 11/1/2007
Analyst: MH/EV

Instrument ID: TCD#1
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	19.3	98	97	1.4
	Nitrogen	20.0	20.5	20.5	103	103	0.0
	CO	20.0	18.6	18.6	93	93	0.3
	Methane	20.0	19.5	19.5	97	98	0.2
	CO2	20.0	19.5	19.6	98	98	0.2

III - Duplicate Analysis - EPA Method 3C

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
071202-30087	Hydrogen	0.00	0.00	0.0	0.0
	Oxygen	20.21	20.25	20.2	0.2
	Nitrogen	70.84	70.45	70.6	0.5
	CO	0.01	0.01	0.0	15.4
	Methane	0.00	0.00	0.0	0.0
	CO2	1.37	1.37	1.4	0.2

IV-Matrix Spike & Duplicate- EPA Method 3C

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
071202-30087	Hydrogen	0.00	10.0	10.1	9.4	101	94	7.1
	Nitrogen	35.32	10.0	47.3	44.8	120	95	23.6
	CO	0.01	10.0	10.6	9.8	106	98	7.6
	Methane	0.00	10.0	11.1	10.3	111	103	7.6
	CO2	0.68	10.0	11.7	10.8	110	101	8.3

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

Dr. Sucha Parmar
Technical Director

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Quality Control/Quality Assurance Report

Date Analyzed: 11/1/2007 **Instrument ID: TCD#1**
Analyst: MH/EV **Calibration Date: 08/21/07**

Opening Calibration Verification Standard

Analyte	xLR**	LR	%RPD*
Hydrogen	2127	2098	**1.4**
Oxygen* **	56490	51782	**8.7**
Nitrogen	59782	61528	**2.9**
Carbon Monoxide	65600	61126	**7.1**
Methane	53998	52869	**2.1**
Carbon Dioxide	88017	86488	**1.8**

Closing Calibration Verification Standard

Analyte	xLR**	LR	%RPD*
Hydrogen	2127	2091	**1.7**
Nitrogen	59782	62053	**3.7**
Carbon Monoxide	65600	61506	**6.4**
Methane	53998	53159	**1.6**
Carbon Dioxide	88017	86413	**1.8**

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

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Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 11/01/07 **Instrument ID: SCD#2**
Analyst: MH/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	0.053	0.052	106	104	1.9

III-Matrix Spike & Duplicate- ASTM D-5504 **Sample ID 071199-30071 x2000**

Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
H2S	0.018	0.025	0.046	0.044	108	102	3.4

IV - Duplicate Analysis - ASTM D-5504 **Sample ID 071199-30071 x2000**

Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
H2S	72.062	75.000	73.531	4.0

** Must be 90-110%*

*** Must be 85-115%*

**** Must be < 10%*

Dr. Sucha Parmar
Technical Director

Quality Control/Quality Assurance Report

Date Analyzed: 11/1/2007
Analyst: MH/EV
Calibration Date: 10/25/2007

Instrument ID: SCD#2
Units: PPMV

Opening Calibration Verification Standards

Analyte	Std. Conc.	Result	%Recovery*
H2S	0.050	0.052	**104**

Closing Calibration Verification Standard

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

* Must be 90-110%

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Quality Control/Quality Assurance Report

Date Analyzed: 11/1/2007
Analyst: MH/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	96.7	99.0	96.4	98.6	2.3
	Ethane	100.2	98.3	100.5	98.1	100.3	2.3
	Propane	100.2	93.7	98.6	93.5	98.4	5.1
	Butane	100.4	92.5	97.2	92.1	96.8	5.0
	Pentane	100.0	92.4	97.7	92.4	97.7	5.6
	Hexane	99.4	93.6	99.0	94.2	99.6	5.6

III - Duplicate Analysis - EPA Method 18

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
071203-30092	Methane	1.5	1.4	1.4	6.2
	Ethane	0.0	0.0	0.0	0.0
	Propane	0.0	0.0	0.0	0.0
	Butane	0.0	0.0	0.0	0.0
	Pentane	0.0	0.0	0.0	0.0
	Hexane	0.0	0.0	0.0	0.0

IV-Matrix Spike & Duplicate- EPA Method 18

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
071203-30092	Methane	0.7	50.0	49.2	49.0	97	96	0.6
	Ethane	0.0	50.0	49.1	48.7	98	97	0.7
	Propane	0.0	50.0	46.3	46.2	93	92	0.2
	Butane	0.0	50.0	46.1	46.7	92	93	1.4
	Pentane	0.0	50.0	46.1	46.9	92	94	1.7
	Hexane	0.0	50.0	47.0	48.2	94	96	2.6

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

Dr. Sucha Parmar
Technical Director

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Quality Control/Quality Assurance Report

Date Analyzed: 11/1/2007 **Instrument ID: FID#3**
Analyst: MH/EV **Calibration Date: 09/10/07**

Opening Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
C1	716	697	**2.6**
C2	1415	1391	**1.7**
C3	2205	2085	**5.6**
C4	2997	2782	**7.4**
C5	3655	3453	**5.7**
C6	4191	4150	**1.0**

Closing Calibration Verification Standard

Analyte	**xCF****	**CF**	**%RPD***
C1	716	676	**5.8**
C2	1415	1322	**6.8**
C3	2205	2027	**8.4**
C4	2997	2746	**8.7**
C5	3655	3407	**7.0**
C6	4191	4135	**1.3**

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

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BLUE SKY ENVIRONMENTAL, LLC
624 San Gabriel Avenue
Albany, CA 94706
510.525.1261 ph/fax
Contact: Guy Worthington

LAB: AAC
ADDRESS:

ph/fax
Contact

071901

CHAIN OF CUSTODY RECORD

Project Name: AW-KELLER-A-1

Project #:

SAMPLE Date	SAMPLE Time	grab or comp	Sample ID (Method-Run-Fraction)	Type/Size of container	Analysis Requested: 1945	70-15	5504
10/30	1330		AW-KELLER-A-1	Tedlar 5L	✓	✓	✓

30071

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:

X Detection Limit Acrylonitrile < 500 ppb see 060834.
Carbon Tetrachloride < 100 ppb 1,2 Dichloroethane < 400 ppb
Chloroform < 100 ppb Vinyl Chloride < 1600 ppb
1,2 Dibromoethane < 100 ppb

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	10/30/07	5:00	[signature]		
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			[signature]	10/31/07	8:15
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Please do not put in SUMMA & call if you can't detect

Atmospheric Analysis & Consulting, Inc.

CLIENT	: Blue Sky Environmental, LLC
PROJECT NAME	: AW-KELLER-A-1
AAC PROJECT NO.	: 071199
REPORT DATE	: 11/02/2007

On October 31, 2007, Atmospheric Analysis & Consulting, Inc. received one (1) Tedlar Bag for Volatile Organic Compounds analysis by EPA method TO-15. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab ID
AW-KELLER-A-1	071199-30071

TO-15 Analysis - Up to a 500 ml aliquot of sample is concentrated, put through a water and CO2 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 pages.

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Laboratory Analysis Report

CLIENT	: Blue Sky Environmental	DATE RECEIVED	: 10/31/2007
PROJECT NO	: 071199	DATE REPORTED	: 11/02/2007
MATRIX	: AIR		
UNITS	: PPB (v/v)		

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	AW-KELLER-A-1			Sample Reporting Limit (RLxDF's)	Method Reporting Limit
AAC ID	071199-30071				
Date Sampled	10/30/2007				
Date Analyzed	11/1/2007				
Can Dilution Factor	1.00				
	Result	Qualifier	Dil. Fac.		
Chlorodifluoromethane	1830		100	100	1.0
Propylene	13100		2500	2500	1.0
Dichlorodifluoromethane	2290		100	100	1.0
Chloromethane	ND	U	100	100	1.0
1,2-Dichloro-1,1,2,2-Tetrafluoroethane	158		100	100	1.0
Vinyl Chloride	471		100	100	1.0
Methanol	42000		2500	12500	5.0
1,3-Butadiene	ND	U	100	100	1.0
Bromomethane	ND	U	100	100	1.0
Chloroethane	132		100	100	1.0
Dichlorofluoromethane	443		100	100	1.0
Ethanol	133000	E	2500	5000	2.0
Vinyl Bromide	ND	U	100	100	1.0
Acetone	21300		2500	5000	2.0
Trichlorofluoromethane	153		100	100	1.0
Isopropyl Alcohol	32600		2500	5000	2.0
Acrylonitrile	ND	U	100	100	1.0
1,1-Dichloroethylene	ND	U	100	100	1.0
Methylene Chloride	448		100	100	1.0
Allyl Chloride (Chloroprene)	ND	U	100	100	1.0
Carbon Disulfide	258		100	100	1.0
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	U	100	100	1.0
t-1,2-Dichloroethylene	ND	U	100	100	1.0
1,1-Dichloroethane	198		100	100	1.0
MTBE	695		100	100	1.0
Vinyl Acetate	ND	U	100	100	1.0
2-Butanone (MEK)	40500		2500	2500	1.0
cis-1,2- Dichloroethene	595		100	100	1.0
Hexane	1820		100	100	1.0
Chloroform	ND	U	100	100	1.0
Ethyl Acetate	6890		2500	2500	1.0
Tetrahydrofuran	9570		2500	2500	1.0
1,2-Dichloroethane	ND	U	100	100	1.0
1,1,1-Trichloroethane	ND	U	100	100	1.0

Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT	: Blue Sky Environmental	DATE RECEIVED	: 10/31/2007
PROJECT NO	: 071199	DATE REPORTED	: 11/02/2007
MATRIX	: AIR		
UNITS	: PPB (v/v)		

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	AW-KELLER-A-1			Sample Reporting Limit (RLxDF's)	Method Reporting Limit
AAC ID	071199-30071				
Date Sampled	10/30/2007				
Date Analyzed	11/1/2007				
Can Dilution Factor	1.00				
	Result	Qualifier	Dil. Fac.		
Benzene	1430		100	100	1.0
Carbon Tetrachloride	ND	U	100	100	1.0
Cyclohexane	1640		100	100	1.0
1,2-Dichloropropane	ND	U	100	100	1.0
Bromodichloromethane	ND	U	100	100	1.0
1,4-Dioxane	ND	U	100	100	1.0
Trichloroethene	495		100	100	1.0
2,2,4-Trimethylpentane	764		100	100	1.0
Heptane	2940		100	100	1.0
cis-1,3-Dichloropropene	ND	U	100	100	1.0
4-Methyl-2-Pentanone (MiBK)	1880		100	100	1.0
t-1,3-Dichloropropene	ND	U	100	100	1.0
1,1,2-Trichloroethane	ND	U	100	100	1.0
Toluene	22500		2500	2500	1.0
2-Hexanone	ND	U	100	100	1.0
Dibromochloromethane	ND	U	100	100	1.0
1,2-Dibromoethane	ND	U	100	100	1.0
Tetrachloroethylene	935		100	100	1.0
Chlorobenzene	ND	U	100	100	1.0
Ethylbenzene	5730		2500	2500	1.0
m- & p-Xylenes	12500		2500	5000	2.0
Bromoform	ND	U	100	300	3.0
Styrene	817		100	100	1.0
1,1,2,2-Tetrachloroethane	ND	U	100	100	1.0
o-Xylene	3270		100	100	1.0
4-Ethyltoluene	495		100	100	1.0
1,3,5-Trimethylbenzene	665		100	100	1.0
1,2,4-Trimethylbenzene	1400		100	100	1.0
Benzyl Chloride	ND	U	100	500	5.0
1,3-Dichlorobenzene	ND	U	100	100	1.0
1,4-Dichlorobenzene	537		100	100	1.0
1,2-Dichlorobenzene	ND	U	100	100	1.0
1,2,4-Trichlorobenzene	ND	U	100	100	1.0
Hexachlorobutadiene	ND	U	100	100	1.0
BFB-Surrogate Std. % Recovery	103%				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.
!! - Estimated

Sucha S. Parmar, PhD
Technical Director

ANALYSIS DATE : 11/01/07
ANALYST : JJG / KP
INSTRUMENT ID : GC/MS-03
STD ID : PS092607-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 10/09/07 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC*
4-BFB (surrogate standard)***	10	9.56	96
Chlorodifluoromethane*	10	10.72	107
Propylene*	10	11.90	119
DiClDIFMethane*	10	9.81	98
CHLOROMETHANE*	10	12.59	126
1,2 DiCl-1,1,2,2-TetraFEthane*	10	10.00	100
VINYL CHLORIDE*	10	11.65	117
Methanol*	10	11.44	114
1,3-Butadiene*	10	12.26	123
BROMOMETHANE*	10	8.25	83
CHLOROETHANE*	10	9.56	96
Dichlorofluoromethane*	10	8.75	88
Ethanol*	10	10.22	102
Vinyl Bromide*	10	9.63	96
Acetone*	10	11.09	111
TRICHLOROFLUOROMETHANE*	10	8.90	89
Isopropanol*	10	12.17	122
Acrylonitrile*	10	12.56	126
1,1 DICHLOROETHENE*	10	10.42	104
METHYLENE CHLORIDE*	10	11.24	112
Allyl CHLORIDE*	10	11.94	119
Carbon disulfide*	10	10.26	103
1,1,2-TRICHLORO-1,2,2-TRIFLUO	10	9.73	97
trans-1,2- DICHLOROETHYLENE*	10	11.11	111
1,1- DICHLOROETHANE*	10	10.91	109
MTBE*	10	10.70	107
Vinyl Acetate*	10	10.64	106
MEK*	10	12.21	122
cis-1,2- DICHLOROETHYLENE*	10	10.91	109
Hexane*	10	10.56	106
CHLOROFORM*	10	10.11	101
Ethyl Acetate*	10	11.00	110
Tetrahydrofuran*	10	12.16	122
1,2-DICHLOROETHANE*	10	10.10	101
1,1,1-TRICHLOROETHANE*	10	9.96	100

ANALYSIS DATE : 11/01/07
ANALYST : JJG / KP
INSTRUMENT ID : GC/MS-03
STD ID : PS092607-01

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 10/09/07 Calibration

Compounds	*Conc*	*Daily Conc*	*%REC*
BENZENE**	10	10.46	105
CARBON TETRACHLORIDE**	10	9.42	94
Cyclohexane**	10	9.90	99
1,2-DICHLOROPROPANE**	10	10.63	106
Bromodichloromethane**	10	8.75	88
1,4-Dioxane**	10	9.60	96
TRICHLOROETHENE**	10	8.95	90
2,2,4-Trimethylpentane**	10	9.74	97
Heptane**	10	10.88	109
cis- 1,3 DICHLOROPROPENE**	10	9.89	99
MiBK**	10	10.20	102
trans 1,3 DICHLOROPROPENE**	10	10.36	104
1,1,2-TRICHLOROETHANE**	10	10.11	101
TOLUENE**	10	10.10	101
2-Hexanone**	10	10.57	106
Dibromochloromethane**	10	9.60	96
1,2 DIBROMOETHANE**	10	9.88	99
TETRACHLOROETHYLENE**	10	9.84	98
CHLOROBENZENE***	10	9.99	100
ETHYLBENZENE***	10	9.73	97
m-, & p- XYLENES***	20	19.03	95
Bromoform***	10	9.40	94
STYRENE***	10	9.99	100
1,1, 2,2- TETRACHLORETHANE**	10	8.98	90
o- XYLENE***	10	9.11	91
Ethyltoluene***	10	9.77	98
1,3,5- TRIMETHYLBENZENE***	10	9.55	96
1,2,4- TRIMETHYLBENZENE***	10	9.67	97
Benzyl Chloride***	10	9.08	91
1,3- DICHLOROBENZENE***	10	9.61	96
1,4- DICHLOROBENZENE***	10	9.31	93
1,2-DICHLOROBENZENE***	10	9.53	95
1,2,4-TRICHLOROBENZENE***	10	9.79	98
HEXACHLOROBUTADIENE***	10	9.39	94

* 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**	: 11/01/07
AAC ID	: LCS/LCSD	**DATE REPORTED**	: 11/01/07
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	10.42	10.35	104	103	0.7
METHYLENE CHLORIDE	0.0	10.00	11.24	11.17	112	112	0.6
BENZENE	0.0	10.00	10.46	10.37	105	104	0.9
TRICHLOROETHENE	0.0	10.00	8.95	8.95	89	89	0.0
TOLUENE	0.0	10.00	10.10	10.04	101	100	0.6
TETRACHLOROETHYLENE	0.0	10.00	9.84	9.74	98	97	1.0
CHLOROBENZENE	0.0	10.00	9.99	9.89	100	99	1.0
ETHYLBENZENE	0.0	10.00	9.73	9.73	97	97	0.0
m-, & p- XYLENES	0.0	20.00	19.03	18.92	95	95	0.6
o- XYLENE	0.0	10.00	9.11	9.08	91	91	0.3

* 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**	**: 11/01/07**
UNITS	**: ppbv**	**REPORT DATE**	**: 11/01/07**

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 110107	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	: 11/01/07
UNITS	: ppbv	REPORT DATE	: 11/01/07

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID / *AAC ID*	Method Blank MB 110107	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	97%	--

RL - Reporting Limit

Sucha S. Parmar, PhD
Technical Director

Quality Control/Quality Assurance Report

AAC ID	: 071203-30089	DATE ANALYZED	: 11/01/07
MATRIX	: Air	DATE REPORTED	: 11/02/07
		UNITS	: ppbv

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Chlorodifluoromethane*	<RL	<RL	0.0
Propylene*	4700	4840	2.9
DiClDIFMethane*	<RL	<RL	0.0
CHLOROMETHANE*	<RL	<RL	0.0
1,2 DiCl-1,1,2,2-TetraFEthane*	<RL	<RL	0.0
VINYL CHLORIDE*	28600	29000	1.4
Methanol*	<RL	<RL	0.0
1,3-Butadiene*	<RL	<RL	0.0
BROMOMETHANE*	<RL	<RL	0.0
CHLOROETHANE*	<RL	<RL	0.0
Dichlorofluoromethane	<RL	<RL	0.0
Ethanol*	<RL	<RL	0.0
Vinyl Bromide*	<RL	<RL	0.0
Acetone*	4260	4310	1.2
TRICHLOROFLUOROMETHANE*	<RL	<RL	0.0
Isopropyl Alcohol*	<RL	<RL	0.0
Acrylonitrile*	<RL	<RL	0.0
1,1 DICHLOROETHENE*	1160	1190	2.6
METHYLENE CHLORIDE*	7650	7840	2.5
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*	2020	1990	1.5
MTBE*	<RL	<RL	0.0
Vinyl Acetate*	<RL	<RL	0.0
MEK*	4990	4890	2.0
cis-1,2- DICHLOROETHYLENE*	2540	2520	0.8
Hexane*	4520	4500	0.4
CHLOROFORM*	<RL	<RL	0.0
Ethyl Acetate*	<RL	<RL	0.0
Tetrahydrofuran*	<RL	<RL	0.0
1,2-DICHLOROETHANE*	1050	1040	1.0
1,1,1-TRICHLOROETHANE*	<RL	<RL	0.0
BENZENE**	7350	7330	0.3
CARBON TETRACHLORIDE**	<RL	<RL	0.0

Quality Control/Quality Assurance Report

AAC ID	: 071203-30089	DATE ANALYZED	: 11/01/07
MATRIX	: Air	DATE REPORTED	: 11/02/07
		UNITS	: ppbv

TO-15 Duplicate Analysis

Compound	Sample Conc	Duplicate Conc	% RPD
Cyclohexane**	2570	2830	9.6
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**	1040	1060	1.9
Heptane**	5910	6020	1.8
cis- 1,3 DICHLOROPROPENE**	<RL	<RL	0.0
MiBK**	<RL	<RL	0.0
trans 1,3 DICHLOROPROPENE**	<RL	<RL	0.0
1,1,2-TRICHLOROETHANE**	<RL	<RL	0.0
TOLUENE**	7040	7000	0.6
2-Hexanone**	<RL	<RL	0.0
Dibromochloromethane**	<RL	<RL	0.0
1,2 DIBROMOETHANE**	<RL	<RL	0.0
TETRACHLOROETHYLENE**	<RL	<RL	0.0
CHLOROBENZENE***	11400	11300	0.9
ETHYLBENZENE***	3920	3910	0.3
m-, & p- XYLENES***	5140	5160	0.4
Bromoform***	<RL	<RL	0.0
STYRENE***	<RL	<RL	0.0
1,1,2,2-TETRACHLORETHANE***	<RL	<RL	0.0
o- XYLENE***	1440	1430	0.7
Ethyltoluene***	<RL	<RL	0.0
1,3,5- TRIMETHYLBENZENE***	<RL	<RL	0.0
1,2,4- TRIMETHYLBENZENE***	<RL	<RL	0.0
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	99%	99%	0.0

RL - Reporting Limit

Sucha S. Parmar, PhD
Technical Director

Field Data Sheets

BLUE SKY ENVIRONMENTAL, LLC
624 San Gabriel Avenue
Albany, CA 94706
510.525.1261 ph/fax
Contact *Guy Worthington*

LAB: AAC
ADDRESS:

ph/fax
Contact

Page __ of __

071191

CHAIN OF CUSTODY RECORD

Project Name: AN-KELLER-A-1

Project #:

SAMPLE Date	SAMPLE Time	grab or comp	Sample ID (Method-Run-Fraction)	Type/Size of container	Analysis Requested: 1945	TO-15	GC/MS					
10/30	1330		AN-KELLER-A-1	Tedlar 5L	✓	✓	✓					30071

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.

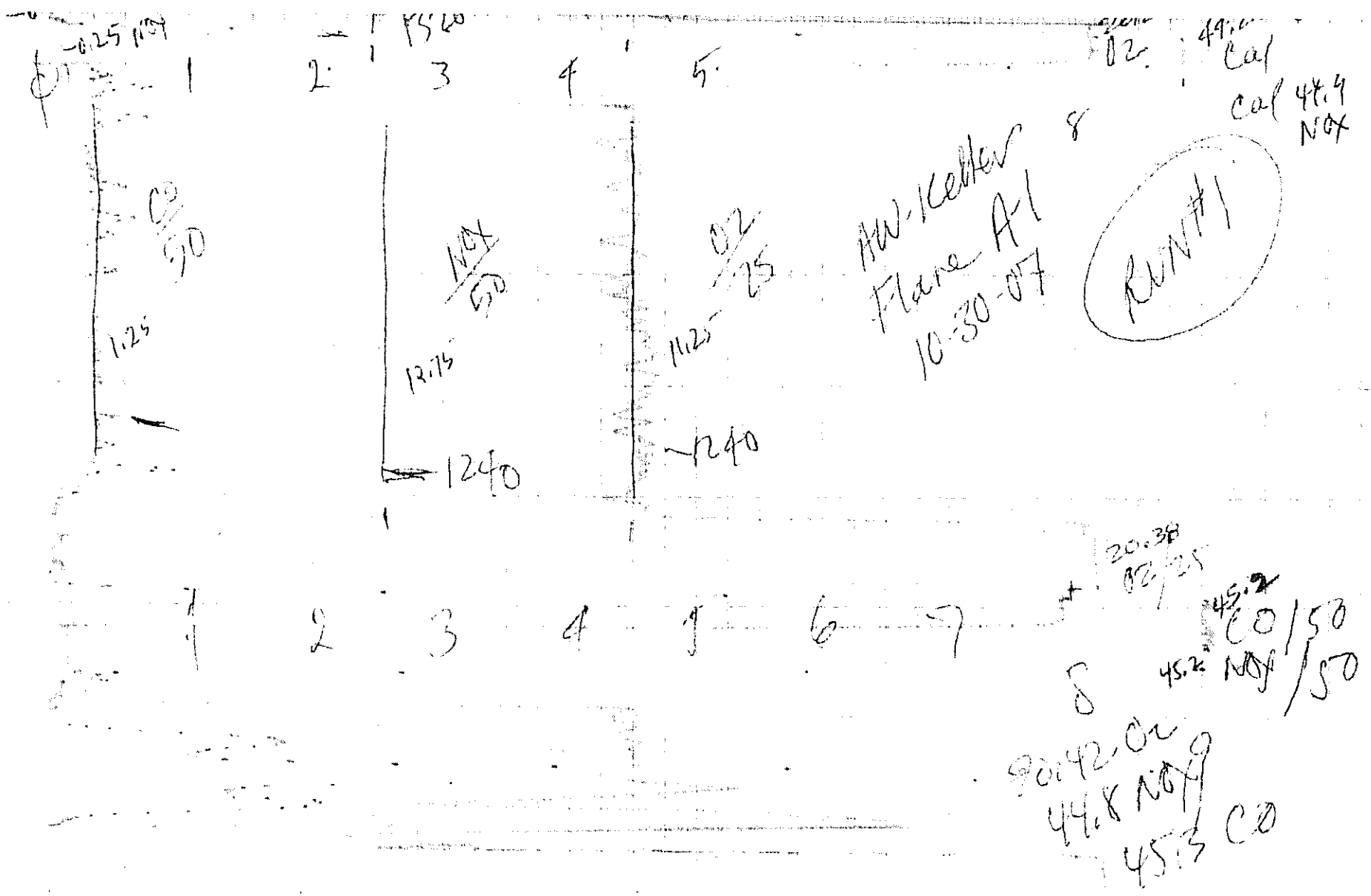
COMMENTS:

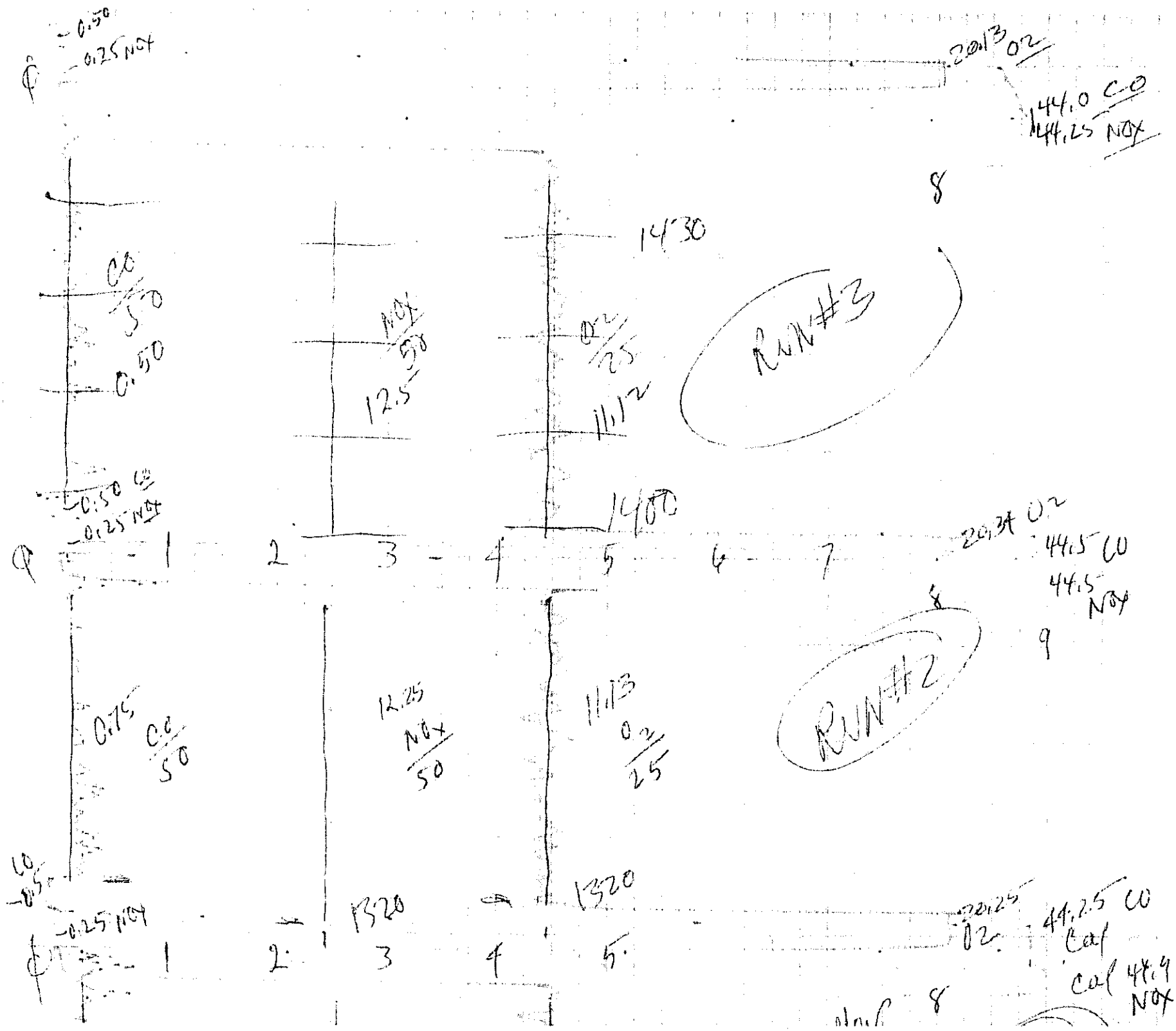
X Detection Limit Acrylonitrile < 500 ppb see 060834.
Carbon Tetrachloride < 100 ppb 1,2 Dichloroethane < 400 ppb
Chloroform < 100 ppb Vinyl Chloride < 1600 ppb
1,2 Dibromoethane < 100 ppb

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[illegible]	10/30/07	5:00	GSO		
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			[signature]	10/31/07	8:15
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Please do not put in Summit & call if you can't collect at detection limits listed.

Strip Chart Records


CO/50
1.25
NOX/50
12.75
O2/25
11.25
1240
HW-Keller
Flare A-1
10-30-07
RUN #1
cal 44.4
NOX
45.2
CO/50
45.2
NOX/50
20.38
O2/25
20.42 O2
44.8 NOX
45.3 CO


0.50
0.25 NOx
20.13 O2
144.0 CO
144.25 NOx
8
1430
CO
50
0.50
NOx
50
12.5
O2
25
11.12
1400
RUN #3
0.50 CO
0.25 NOx
1
2
3
4
5
6
7
20.34 O2
44.5 CO
44.5 NOx
8
9
RUN #2
0.75
CO
50
12.25
NOx
50
11.13
O2
25
1520
1520
20.25
O2
44.25 CO
Cal
Cal 44.9
NOx
8

1320
2.5 rezero THC

1320

450 adj THC cal 44.0

12.38 CO2

8 9

AW-Keller Flare #1 Run #1

8.70 CO2

-0.5 1240

1240

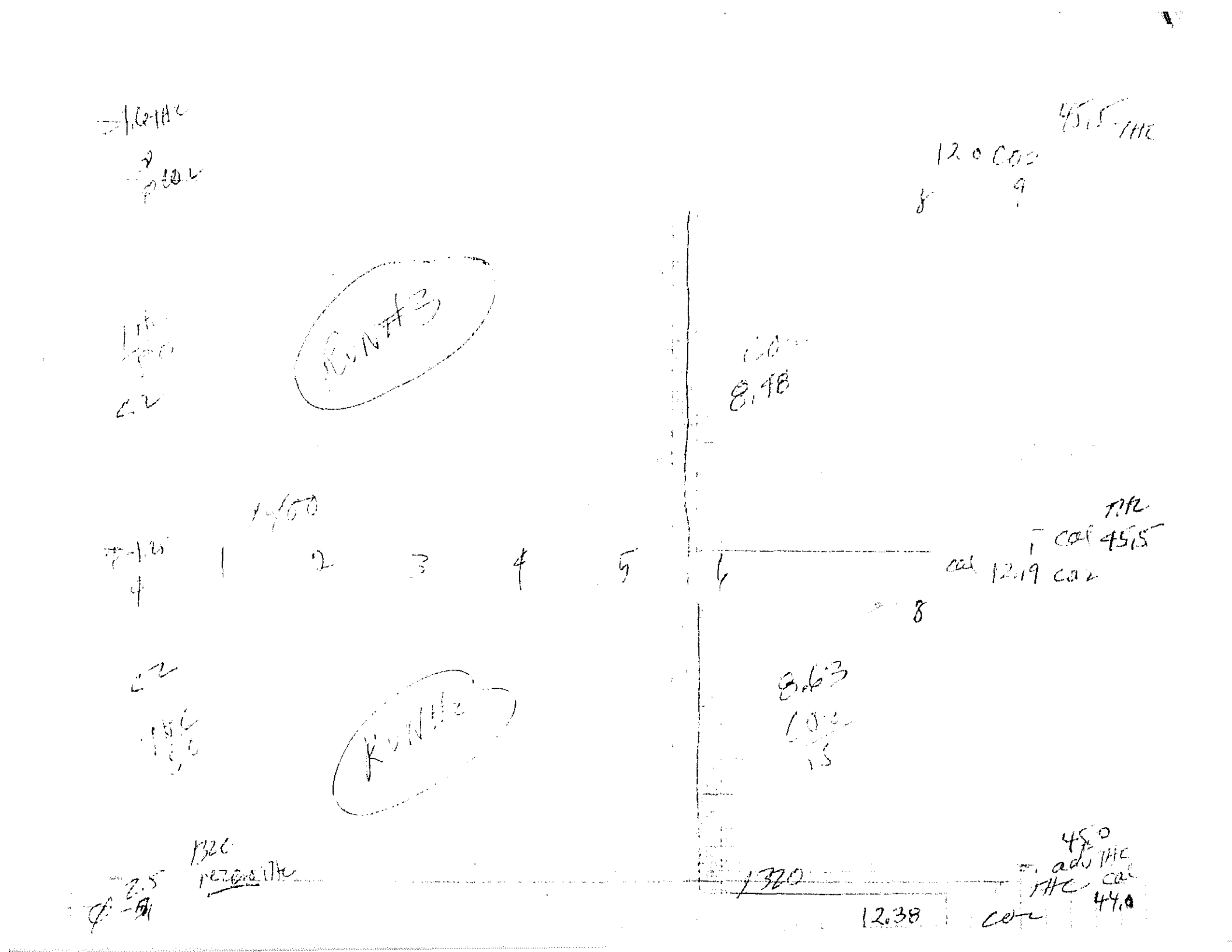
cal 45 50 THC

AW-Keller 10/30/07

12.6 CO2 cal / 15

12.6

0 1 2 3 4 5 6 7 8 9 10


RUNOFF
RUNOFF
1450
1320
12.38
8.48
8.63
12.19
45.15
44.0
1 2 3 4 5 6 7 8 9

QC Calibration Gas Certifications

Praxair
5700 South Alameda Street
Los Angeles, CA 90058
Telephone: (323) 585-2154
Facsimile: (714) 542-6689

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*

1. **COMPONENT** PROPANE GMIS **ANALYZER MAKE-MODEL-S/N** HORIBA, FID-510, 861135122

ANALYTICAL PRINCIPLE Flame Ionization Detector **LAST CALIBRATION DATE** 06/02/07

FIRST ANALYSIS DATE 06/19/07 **SECOND ANALYSIS DATE**

Z 0.00	R 27.16	C 40.30	CONC. 15.0	Z	R	C	CONC.
R 27.11	Z 0.00	C 40.22	CONC. 15.0	R	Z	C	CONC.
Z 0.00	C 40.33	R 27.18	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 238669
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 06/19/07
EXPIRATION DATE 06/19/10 **TERM** 36 MONTHS

CERTIFIED CONCENTRATION

PROPANE	15.0 ppm
AIR	BALANCE

45.0

ANALYZED BY ERIC YOUNG ***CERTIFIED BY*** PABLO REYES

Praxair
5700 South Alameda Street
Los Angeles, CA 90058
Telephone: (323) 585-2154
Facsimile: (714) 542-6689

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 SRM#1678	SA 9499	52.4 ppm
NITRIC OXIDE GMIS	vs SRM#1683	CC 120399	50.7 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 576876010
   ANALYTICAL PRINCIPLE NDIR **LAST CALIBRATION DATE** 06/02/07
   FIRST ANALYSIS DATE 05/31/07 **SECOND ANALYSIS DATE** 06/07/07

Z 0.0	R 52.4	C 45.3	CONC. 45.3	Z 0.0	R 52.4	C 45.3	CONC. 45.3
R 52.4	Z 0.0	C 45.3	CONC. 45.3	R 52.4	Z 0.0	C 45.3	CONC. 45.3
Z 0.0	C 45.4	R 52.4	CONC. 45.4	Z 0.0	C 45.4	R 52.4	CONC. 45.4
U/M ppm		MEAN TEST ASSAY 45.3		U/M ppm		MEAN TEST ASSAY 45.3	

2. **COMPONENT** NITRIC OXIDE GMIS **ANALYZER MAKE-MODEL-S/N** Thermo Env. 42C S/N 0516112467
   ANALYTICAL PRINCIPLE Chemiluminescence **LAST CALIBRATION DATE** 06/02/07
   FIRST ANALYSIS DATE 05/31/07 **SECOND ANALYSIS DATE** 06/07/07

Z 0.0	R 50.3	C 44.4	CONC. 44.6	Z 0.0	R 49.9	C 43.9	CONC. 44.6
R 50.3	Z 0.0	C 44.4	CONC. 44.6	R 49.9	Z 0.0	C 43.9	CONC. 44.6
Z 0.0	C 44.4	R 50.3	CONC. 44.6	Z 0.0	C 43.9	R 49.9	CONC. 44.6
U/M ppm		MEAN TEST ASSAY 44.6		U/M ppm		MEAN TEST ASSAY 44.6	

Values not valid below 150 psig
NOx value for reference only

THIS CYLINDER NO. SA 15818
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 06/07/07
EXPIRATION DATE 06/07/09 **TERM** 24 MONTHS

CERTIFIED CONCENTRATION

CARBON MONOXIDE	45.3 ppm
NITRIC OXIDE	44.7 ppm
NITROGEN	BALANCE
NOx	44.6 ppm

ANALYZED BY HENRY YOUNG ***CERTIFIED BY*** JACK FU

PRAXAIR

Vlm 07

Praxair
5700 South Alameda Street
Los Angeles, CA 90058
Telephone: (323) 585-2154
Facsimile: (714) 542-6689

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER BLUE SKY ENVIROMENTAL **P.O NUMBER**

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
CARBON DIOXIDE GMIS	vs.SRM#2745	SA 18273	15.04 %
OXYGEN GMIS	vsSRM#2659a	CC 76878	20.98 %

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 A12-730
   ANALYTICAL PRINCIPLE NDIR **LAST CALIBRATION DATE** 06/02/07
   FIRST ANALYSIS DATE 06/08/08 **SECOND ANALYSIS DATE**

Z 0.00	R 15.04	C 12.60	CONC. 12.60	Z	R	C	CONC.
R 15.04	Z 0.00	C 12.60	CONC. 12.60	R	Z	C	CONC.
Z 0.00	C 12.60	R 15.04	CONC. 12.60	Z	C	R	CONC.
U/M %		MEAN TEST ASSAY 12.60		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** 06/02/07
   FIRST ANALYSIS DATE 06/08/08 **SECOND ANALYSIS DATE**

Z 0.00	R 20.98	C 20.42	CONC. 20.42	Z	R	C	CONC.
R 20.98	Z 0.00	C 20.42	CONC. 20.42	R	Z	C	CONC.
Z 0.00	C 20.42	R 20.98	CONC. 20.42	Z	C	R	CONC.
U/M %		MEAN TEST ASSAY 20.42		U/M %		MEAN TEST ASSAY	

Values not valid below 150 psig
O2 concentration is corrected for CO2 interference.

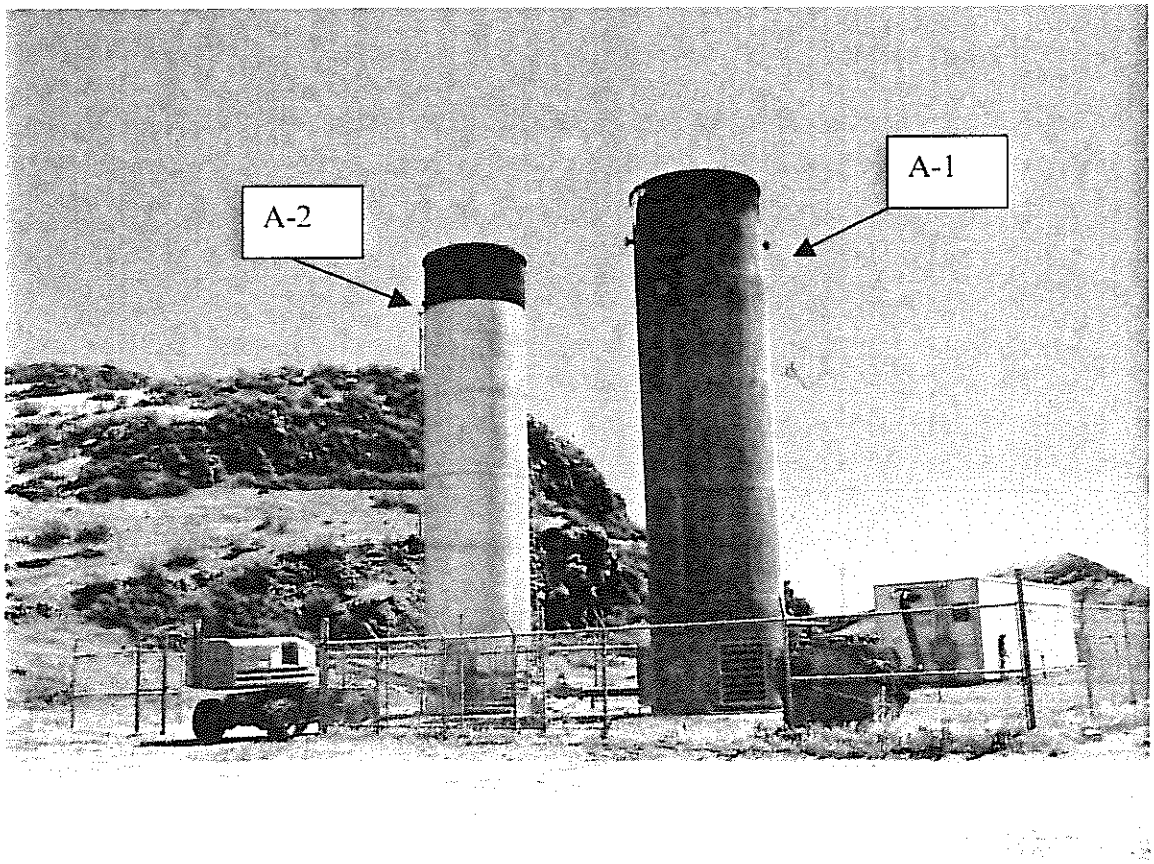
THIS CYLINDER NO. CC 246150
HAS BEEN CERTIFIED ACCORDING TO SECTION EPA-600/R97/121
OF TRACEABILITY PROTOCOL NO. Rev. 9/97
PROCEDURE G1
CERTIFIED ACCURACY ± 1 **% NIST TRACEABLE**
CYLINDER PRESSURE 2000 **PSIG**
CERTIFICATION DATE 06/08/08
EXPIRATION DATE 06/08/11 **TERM** 36 MONTHS

CERTIFIED CONCENTRATION

CARBON DIOXIDE	12.60 %
OXYGEN	20.42 %
NITROGEN	BALANCE

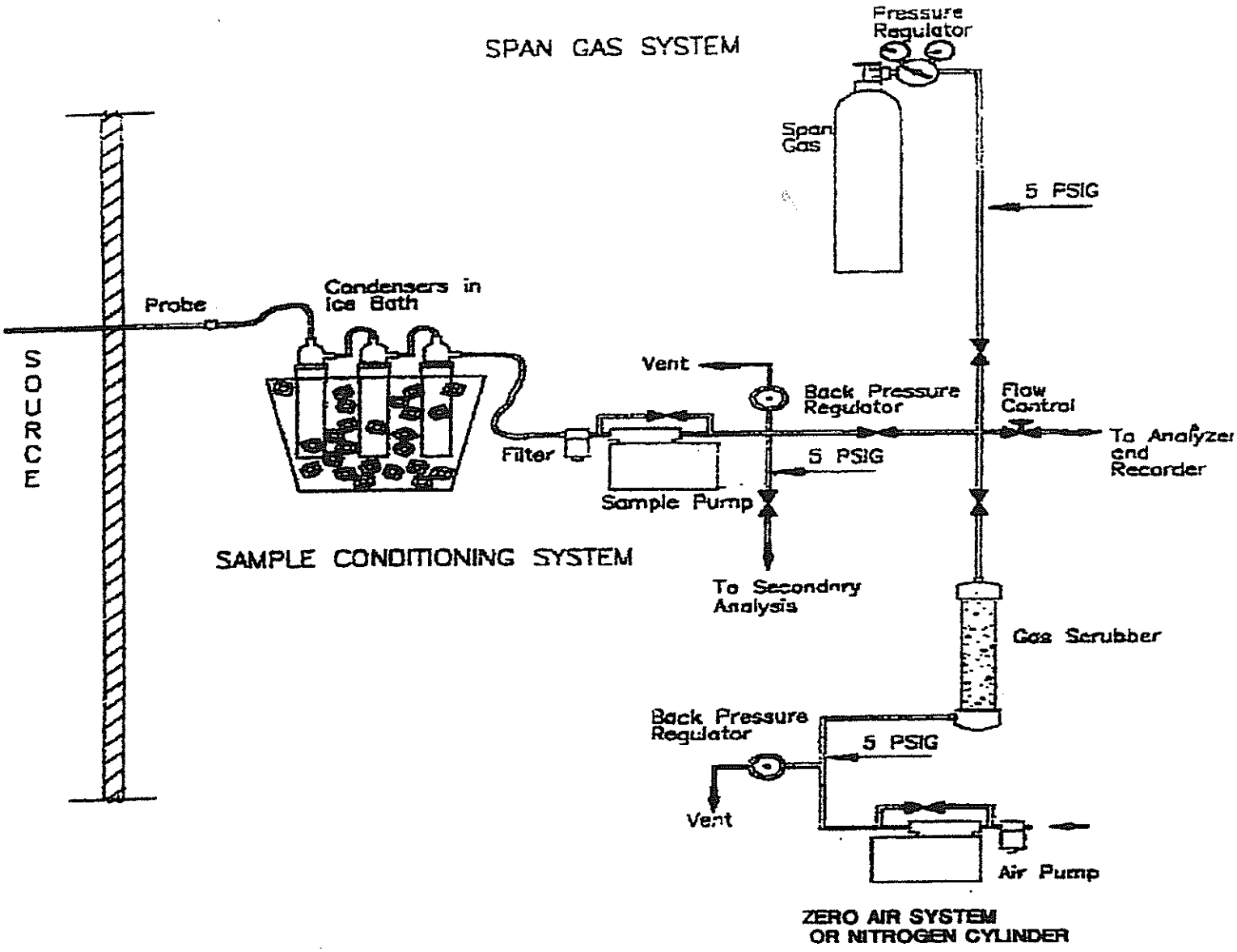
ANALYZED BY PABLO REYES ***CERTIFIED BY*** ERIC YOUNG

Stack Diagram



BFI-Keller Landfill Flare

Sample System Diagram



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)

Permit/Authority to Construct

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

Final

MAJOR FACILITY REVIEW PERMIT

Issued To:
Keller Canyon Landfill Company
Facility #A4618

Facility Address:
901 Bailey Road
Pittsburg, CA 94565

Mailing Address:
901 Bailey Road
Pittsburg, CA 94565

Responsible Official	**Facility Contact**
Kevin Chiapello, General Manager	Kevin Chiapello, General Manager
925-458-9800	925-458-9800

Type of Facility:	Municipal Solid Waste Landfill	BAAQMD Permit Division Contact:
Primary SIC:	4953	Carol S. Allen
Product:	Class II Solid Waste Disposal	

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Signed by Jack P. Broadbent — March 2, 2007
Jack P. Broadbent, Executive Officer/Air Pollution Control Officer — Date

VI. Permit Conditions

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

21. Each flare shall be operated continuously during any time that landfill gas is being vented to the flare. (Basis: Regulation 8-34-301, 40 CFR 60.752(b)(2)(iii), 60.753(e), and 60.755(e))

22. A temperature monitor with readout display and continuous recorder shall be installed and maintained on each flare. One or more thermocouples shall be placed in the primary combustion zone of the flare and shall accurately indicate flue gas temperature at all times. Temperature charts shall be retained for five years and made readily available to District Staff upon request. (Basis: Regulations 8-34-501 and 2-6-501 and 40 CFR 60.756(b))

23. The combustion zone temperature of the A-1 Flare shall be maintained at a minimum temperature of 1504 degrees F, averaged over any 3-hour period. The combustion zone temperature of the A-2 Flare shall be maintained at a minimum temperature of 1400 degrees F, averaged over any 3-hour period. If a source test demonstrates compliance with all applicable requirements at a different temperature, the APCO may revise these minimum temperature requirements in accordance with the procedures identified in Regulation 2-6-414 or 2-6-415 and the following criteria. The minimum combustion zone temperature for the flare shall be equal to the average combustion zone temperature determined during the most recent complying source test minus 50 degrees F, provided that the minimum combustion zone temperature is not less than 1400 degrees F. (Basis: Regulations 2-5-301 and 8-34-301, RACT, and 40 CFR 60.758(c)(1)(i))

24. NOx emissions from either the A-1 Flare or the A-2 Flare shall not exceed 15 ppmv of NO_x, expressed as NO_2 at 15% oxygen on a dry basis. (Basis: RACT)

25. CO emissions from the A-1 Flare shall not exceed 114 ppmv of CO at 15% oxygen on a dry basis. CO emissions from the A-2 Flare shall not exceed 81 ppmv of CO at 15% oxygen on a dry basis. (Basis: RACT)

26. [deleted]

27. A flow meter to measure gas flow into each flare shall be installed prior to operation and maintained in good working condition. (Basis: Regulation 8-34-508 and 40 CFR 60.756(b))

VI. Permit Conditions

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

28. Each flare shall be equipped with both local and remote alarms, automatic combustion air control, and automatic start/restart system. (Basis: Regulation 8-34-301)

29. [deleted]

30. In order to demonstrate compliance with Parts 24 and 25 above, Regulations 8-34-301.3 and 8-34-412, 40 CFR 60.8, and 40 CFR 60.752(b)(2)(iii)(B), the owner/operator shall conduct a source test at each flare once every year. The source tests shall be conducted no sooner than 9 months and no later than 12 months after the previous source test. The first source test for A-2 shall be conducted within 60 days of initial start-up of A-2. 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 advance of each source test. The source test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 60 days of the test date. Each annual source test shall determine the following:
    a. landfill gas flow rate to the flare (dry basis);
    b. concentrations (dry basis) of carbon dioxide (CO_2), nitrogen (N_2), oxygen (O_2), methane (CH_4), 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 NO_x, CO, NMOC, and O_2 in the flare stack gas;
    e. NMOC destruction efficiency achieved by the flare;
    f. NO_x and CO emission rates from the flare in units of pounds per MM BTU,
    g. average combustion zone temperature in the flare during the test period.
    (Basis: Regulation 8-34-301.3, RACT, 40 CFR 60.752(b)(2)(iii))

VI. Permit Conditions

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

31. The Permit Holder shall conduct a characterization of the landfill gas concurrent with the annual source test required by Part 30 above. The landfill gas sample shall be drawn from the main landfill gas header. In addition to the compounds listed in Part 30b, the landfill gas shall be analyzed for the organic and sulfur compounds listed below. All concentrations shall be reported on a dry basis. The sulfur compound data collected pursuant to this part may be used to determine the total reduced sulfur compound concentration expressed as H2S (TRS) and the ratio (R) of total reduced sulfur content versus hydrogen sulfide content, where R=TRS/H2S. This ratio (R) may be used in Part 34 below (in place of the default value of R=1.2) to calculate TRS based on H2S measured by the Draeger tube method. The test report shall be submitted to the Compliance and Enforcement Division and the Source Test Section within 60 days of the test date. (Basis: Air Toxics Hot Spots Act, Regulations 2-5-501, 8-34-301, and 9-1-302, and NSPS)

Organic Compounds	Sulfur Compounds
Acrylonitrile	Carbon Disulfide
Benzene	Carbonyl Sulfide
Carbon Tetrachloride	Dimethyl Sulfide
Chloroform	Ethyl Mercaptan
Ethylene Dibromide	Hydrogen Sulfide
Ethylene Dichloride	Methyl Mercaptan
Methylene Chloride	
Perchloroethylene	
Trichloroethylene	
Vinyl Chloride	

*32. If concentrations of toxic air contaminants (TACs) are above the levels listed below, an additional risk screen run at actual concentrations will be required. Depending on the results of such screen, additional permit conditions may be required if health risks are deemed unacceptable. (Basis: Air Toxics Hot Spots Act and Regulation 2-5-302)

VI. Permit Conditions

Condition # 17309

For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

Compound	Concentration (ppbv)
Acrylonitrile	500
Benzene	20,000
Carbon Tetrachloride	100
Chloroform	100
Ethylene Dibromide	100
Ethylene Dichloride	400
Methylene Chloride	16,000
Perchloroethylene	3,300
Trichloroethylene	1,500
Vinyl Chloride	1,700

33. The fugitive emissions of Precursor Organic Compounds (POC) from the S-1 Landfill shall not exceed 40.059 tons per year (expressed as methane). Fugitive POC emissions from the landfill shall be determined using the procedures and assumptions described in Parts 33a-f below. POC emissions from the landfill shall be calculated at least once every five years or whenever the capacity of the landfill gas emissions control system, A-1 and A-2 Flares, is expanded, whichever is sooner. (Basis: Offsets)
    a. The current methane generation rate and uncontrolled POC emissions from the S-1 Landfill shall be calculated using the equations described in the most recent revision of AP-42 Chapter 2.4.
    b. The methane generation rate shall be based on the total amount of waste accepted at the landfill to date. The Permit Holder may use either average annual or year-to-year waste acceptance rates.
    c. The Permit Holder shall use the AP-42 recommended default values for the methane generation potential and methane generation rate constant. As of April 1, 2005, these default values were:
    Lo = 100 m3 CH4/Mg and k = 0.02 year^-1.
    d. When calculating uncontrolled POC emissions (UEPOC, pounds/year of POC), the Permit Holder shall use site specific NMOC, NPOC, and methane concentrations (after correcting for air infiltration) and the site specific landfill gas temperature. The site specific values shall be the average of at least three previous years of data collected pursuant to Part 31 above.

VI. Permit Conditions

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

e. Total non-methane organic compounds (NMOC) measured in the landfill gas pursuant to Part 31 may be assumed to be 100% POC, or a site specific POC concentration (CPOC) can be calculated using data from Part 33d above, where CPOC = NMOC - NPOC (all concentrations expressed as methane).

f. The fugitive POC emissions from the landfill (FEPOC, pounds/year of POC) shall be calculated using the equation below:
FEPOC = 0.25 * UEPOC

34. Total reduced sulfur (TRS) compounds in the collected landfill gas shall be monitored as a surrogate for monitoring sulfur dioxide in control systems exhaust. The concentration of total reduced sulfur compounds in the collected landfill gas shall not exceed 300 ppmv (dry). In order to demonstrate compliance with this part, the Permit Holder shall measure the hydrogen sulfide (H2S) content in collected landfill gas on a quarterly basis using the Draeger tube method. The TRS content of the landfill gas shall be calculated according to the following equation: TRS = R * H2S measured by Draeger tube method, where R is either (a) the ratio of TRS/H2S that is determined from the sulfur compound data collected pursuant to Part 31 or (b) a default value of 1.2. The annual laboratory analysis for reduced sulfur compounds, which is required by Part 31 above, may be substituted for one quarterly Draeger tube analysis per year. The landfill gas sample shall be taken from the main landfill gas header. The Permit Holder shall follow the manufacturer's recommended procedures for using the Draeger tube and interpreting the results. (Basis: Cumulative Increase and Regulations 9-1-302 and 2-6-503)

35. The heat input to the flares shall not exceed the following limits: (a) 1744.8 million BTU per day and 636,852 million BTU per year for A-1 and (b) 1824 million BTU per day and 665,760 million BTU per year for A-2. In order to demonstrate compliance with this part, the Permit Holder shall calculate and record on a monthly basis the maximum daily and total monthly heat input to each flare based on the landfill gas flow rate recorded pursuant to Part 27, the average methane concentration in the landfill gas based on the most recent source test, and a high heating value for methane of 1013 BTU/scf. The records shall be retained for five years and shall be made available to the District staff upon request. (Basis: Offsets, Cumulative Increase, and Regulation 2-1-301)

VI. Permit Conditions

Condition # 17309
For S-1 KELLER CANYON LANDFILL, A-1 LANDFILL GAS FLARE, AND A-2 LANDFILL GAS FLARE:

36. The Permit Holder shall limit the quantity of VOC soil handled per day so that no more than 15 pounds of total carbon could be emitted to the atmosphere per day. VOC soil is any soil that contains volatile organic compounds, as defined in Regulation 8-40-213, at a concentration of 50 ppmw or less. Soil containing more than 50 ppmw of VOC is considered to be "contaminated soil" and is subject to Part 37 instead of Part 36. Soil containing only non-volatile hydrocarbons and meeting the requirements of Regulation 8-40-113 is not subject to Part 36. In order to demonstrate compliance with this condition, the Permit Holder shall maintain the following records in a District approved log.
    a. Record on a daily basis the amount of VOC soil handled at the landfill. This total amount (in units of pounds per day) is Q in the equation in subpart c below.
    b. Record on a daily basis the VOC content of all soils handled at the landfill. This VOC Content (C in the equation below) should be expressed as parts per million by weight as total carbon (or C_1).
    c. Calculate and record on a daily basis the VOC Emission Rate (E) using the following equation:
    $E = Q * C / 10^6$
    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. (Basis: Regulation 8-2-301)

*37. Handling Procedures for Soil Containing Volatile Organic Compounds (Basis: Regulations 2-1-403, 8-40-301, 8-40-304 and 8-40-305)
    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 Permit Holder 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 205, 207, and 211). The handling of soil containing VOCs in concentrations below the "contaminated" level is subject to Part 36 above.
        ii. The Permit Holder 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.

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 KELLER CANYON LANDFILL;
A-1 LANDFILL GAS FLARE; AND A-2 LANDFILL GAS FLARE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
TOC	40 CFR 60.753(d)	Y		Surface Leak Limit: ≤ 500 ppmv as methane at 5-10 cm from surface	40 CFR 60.755(c)(1), (4) and (5), 60.756(f), and 60.758(c) and (e)	P/M, Q and E	Monthly Visual Inspection of Cover, Quarterly Inspection with OVA of Surface, Various Reinspection Times for Leaking Areas, and Records
Non-Methane Organic Compounds (NMOC)	BAAQMD 8-34-301.3	Y		≥ 98% removal by weight OR ≤ 30 ppmvd @ 3% O_2, expressed as methane	BAAQMD 8-34-412 and 8-34-501.4 and BAAQMD Condition # 17309, Parts 30 and 31	P/A	Initial and Annual Source Tests
NMOC	40 CFR 60.752(b)(2)(iii)(B)	Y		≥ 98% removal by weight OR ≤ 20 ppmvd @ 3% O_2, expressed as hexane	40 CFR 60.8 and 60.752(b)(2)(iii)(B) and 60.758 (b)(2)(ii)	P/E	Initial Source Test and Records
Temperature of Combustion Zone (CT)	BAAQMD Condition # 17309, Part 23	Y		For A-1 Flare: CT ≥ 1504 °F (3-hour average) For A-2 Flare: CT ≥ 1400 °F (3-hour average)	BAAQMD 8-34-501.3 and 507, and BAAQMD Condition # 17309, Part 22	C	Temperature Sensor and Recorder (continuous)

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 KELLER CANYON LANDFILL; A-1 LANDFILL GAS FLARE; AND A-2 LANDFILL GAS FLARE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Temperature of Combustion Zone (CT)	40 CFR 60.758 (c)(1)(i)	Y		For A-1 Flare: CT ≥ 1504 °F (3-hour average) from (CT ≥ CT_{PF} – 28 °C). where CT_{PF} is the average combustion temperature during the most recent complying performance test. CT_{PF} was 1554 °F during 10/13/04 test For A-2 Flare: CT will be determined during initial performance test	40 CFR 60.756(b)(1) and 60.758 (b)(2)(i)	C	Temperature Sensor and Recorder (measured every 15 minutes and averaged over performance test time period and 3-hours)
POC	BAAQMD Condition # 17309, Part 33	Y		≤ 40.059 tons per year (fugitive POC from all landfill operations)	BAAQMD Condition # 17309, Part 33	P/E	Calculation Procedure (once every 5 years)
Total Carbon	BAAQMD 8-2-301	Y		≤ 15 pounds/day or ≤ 300 ppm, dry basis only for aeration of or use as cover soil of soil containing ≤ 50 ppmw of volatile organic compounds	BAAQMD Condition # 17309, Part 36a-c	P/E	Records
Amount of Contaminated Soil Aerated or Used as Cover	BAAQMD 8-40-116.1	Y		< 1 cubic yard per project	BAAQMD Condition # 17309, Parts 36a-c and 37m	P/E	Records

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 KELLER CANYON LANDFILL; A-1 LANDFILL GAS FLARE; AND A-2 LANDFILL GAS FLARE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
SO_2	BAAQMD 9-1-301	Y		Property Line Ground Level Limits: ≤ 0.5 ppm for 3 minutes, ≤ 0.25 ppm for 60 minutes, and ≤0.05 ppm for 24 hours	None	N	NA
SO_2	BAAQMD 9-1-302	Y		For Flares: ≤ 300 ppm (dry)	BAAQMD Condition # 17309, Parts 31 and 34	P/Q	Sulfur Analysis of Landfill Gas
H_2S	BAAQMD 9-2-301	N		Property Line Ground Level Limits: ≤ 0.06 ppm averaged over 3 minutes and ≤ 0.03 ppm averaged over 60 minutes	None	N	NA
Total Reduced Sulfur (TRS) Com-pounds	BAAQMD Condition # 17309, Part 34	Y		Concentration in Landfill Gas: ≤ 300 ppmv (dry)	BAAQMD Condition # 17309, Parts 31 and 34	P/Q	Sulfur Analysis of Landfill Gas
Opacity	BAAQMD 6-301	Y		For Landfill Operations: ≤ Ringelmann No. 1 for 3 minutes in any hour	BAAQMD Condition # 17309, Part 16j-1	P/D	Records of Water and Dust Suppressant Application

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 KELLER CANYON LANDFILL; A-1 LANDFILL GAS FLARE; AND A-2 LANDFILL GAS FLARE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NO_x	BAAQMD Condition # 17309, Part 24	Y		For both A-1 Flare and A-2 Flare: ≤ 15 ppmv of NO_x, expressed as NO_2 at 15% O_2, dry	BAAQMD Condition # 17309, Part 30	P/A	Annual Source Test
CO	BAAQMD Condition # 17309, Part 25	Y		For A-1 Flare: ≤ 114 ppmv of CO at 15% O_2, dry For A-2 Flare: ≤ 81 ppmv of CO at 15% O_2, dry	BAAQMD Condition # 17309, Part 30	P/A	Annual Source Test
Acrylo-nitrile	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 500 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Benzene	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 20,000 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Carbon Tetra-chloride	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 100 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Chloro-form	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 100 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Ethylene Di-bromide	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 100 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Ethylene Di-chloride	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 400 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis

VII. Applicable Limits and Compliance Monitoring Requirements

Table VII – A
Applicable Limits and Compliance Monitoring Requirements
S-1 KELLER CANYON LANDFILL; A-1 LANDFILL GAS FLARE; AND A-2 LANDFILL GAS FLARE

Type of Limit	Citation of Limit	FE Y/N	Future Effective Date	Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Methyl-ene Chloride	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 16,000 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Perchloro-ethylene	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 3,300 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Trichloro-ethylene	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 1,500 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Vinyl Chloride	BAAQMD Condition # 17309, Part 32	N		Concentration in Landfill Gas: ≤ 1,700 ppbv	BAAQMD Condition # 17309, Part 31	P/A	Annual Laboratory Analysis
Heat Input	BAAQMD Condition # 17309, Part 35	Y		For A-1 Flare: ≤ 1744.8 MM BTU per day and ≤ 636,852 MM BTU per year For A-2 Flare: ≤ 1824 MM BTU per day and ≤ 665,760 MM BTU per year	BAAQMD Condition # 17309, Part 35	P/M	Records

Source Test Plan

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

October 5, 2007

Attn.: Ken Kunaniec
Bay Area Air Quality Management District
Compliance and Enforcement Division
939 Ellis Street
San Francisco, CA 94109

Re: Source Test Plan (STP) for compliance emissions testing of the Calledus Flare at Allied Waste (AWIN's) Keller Canyon Landfill, Plant #4618, Source A-1, located at 901 Bailey Road, Pittsburg, California.

Dear Mr. Kunaniec,

Blue Sky Environmental, LLC is pleased to present this Source Test Plan for the above referenced sampling project. Testing will include the following:

- At the flare exhaust, triplicate thirty-minute tests will be performed, using BAAQMD methods, for THC and NMOC's (POC) (ST-7-FID), NOx (ST-13A), CO (ST-6), CO_2 (ST-5) and O_2 (ST-14). Testing is designed to determine compliance with the following BAAQMD Permit conditions;
- The NOx limit is 14 ppm @ 15% O_2, and the CO limit is 114 ppm CO @ 15% O_2. The THC Destruction Efficiency must be >98% and Reg 8 Rule 34 requires that the flare must achieve a 98% Destruction Efficiency of NMOC or be <30 ppm as CH_4 @3% O_2.
- If emissions of NMOC are greater than 30 ppm @ 3% O_2, then three integrated bag samples will be collected of the landfill gas for Non-Methane Organic Compounds (NMOCs) using EPA Method 25C, to determine destruction efficiency.
- One LFG sample will be collected and analyzed for Calderon specified air contaminants, and TAC's (acrylonitrile, benzene, carbon tetrachloride, chloroform, ethylene dibromide, methylene dichloride, methylene chloride, perchloroethylene, trichloroethylene and vinyl chloride. Also, a single integrated sample of landfill gas will be collected and analyzed for CH_4 and BTU & F-factor by ASTM D-3588/D-1945. The fuel analysis (BTU & Fd Factor) will be used to calculate outlet volumetric flow rate using EPA Method 19.
- Flare temperature and fuel flow rate will be recorded using the facility monitors. Independent fuel measurement will be made if accessible ports are available.
- Three copies of the compliance test report will be submitted to the client within four weeks of completion of the test program. 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.

Testing is scheduled for October 30th, with a 12:30 pm arrival time. The facility contact is Lochlin Caffey who may be reached at 925/458-9800. If you have any questions, please contact Guy Worthington at 510 525 1261, or 510 508 3469.

Sincerely,

Guy Worthington
Principal

BAAQMD FAX **415/749-4922**
Lochlin Caffey **925/458-9891**