COMPLIANCE SOURCE EMISSIONS TEST REPORT

Prepared for

Sunnyvale Waste Water Treatment Plant
BAAQMD Permit # A5905

Flare (A-8)
THC & TNMHC
Destruction Efficiency

Test Date(s): September 1st, 2006
Report Date: October 10th, 2006

REPORT # 06095

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October 10th, 2006

City of Sunnyvale/Public Works
1444 Borregas Avenue
Sunnyvale, CA 94088

Attn.: Bill Theyskens

Subject: Source test emission report for one Flare (A-8) located at the Sunnyvale Water Pollution Control Plant, 1444 Borregas Ave, Sunnyvale, California. BAAQMD Facility #A5905. Re; Permit Condition 11586, & Reg 8 Rule 34.

Test Date(s): September 1st, 2006.

Sampling Location: The 30-40 foot tall rectangular flare required a 40' articulated boom to access the flare sampling ports.

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. Bill Theyskens and Silviana Ruiz of the City of Sunnyvale were present to coordinate testing and record flare operating conditions.

Process Description: The flare is used to continuously burn landfill gas and digester gas generated in the active landfill and the treatment plant. The flare is maintained at 1450°F, which is above the permitted minimum of 1400°F. The landfill and digester gas fuel flow and flare temperature are continuously recorded.

Test Program: The test program objective was to comply with the prevailing Permit requirements and Regulation 8 Rule 34 limits that came into effect on July 1, 2002. The flare is only required to meet hydrocarbon emission and or destruction efficiency limits.

Three 30-minute 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 $\%CH_4$, BTU and F-Factors. 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.

Three landfill gas samples were collected and analyzed by EPA 25C for NMHC and CH_4.

Readings of the flare temperature and LFG flowrate were made during each test run. The facility flow monitor values were used in the calculation of the stack flowrate.

Sampling and Analysis Methods: The following BAAQMD sampling and analytical methods were used:

BAAQMD ST-7	NMOC
BAAQMD ST-14	O_2
EPA 19	Flare exhaust flowrate by calculation, DSCFM
ASTM 1945/3588	Gas analysis for BTU and F-Factor
EPA 25C	NMHC and $\%CH_4$, by GC.

Continuous Emission Monitoring by BAAQMD Methods e.g., ST-5, 6, 7, 13A, 14 and 19A. These methods are all continuous monitoring techniques using instrumental analyzers to measure carbon dioxide (CO_2), carbon monoxide (CO), non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), oxygen (O_2) and sulfur dioxide (SO_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.

The sampling and analytical system (for 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, which can be supported by a PC/laptop based Data Acquisition System (DAS).

Gas samples were collected by gradually collecting an integrated sample in a tedlar bag from the positive pressure in the fuel line. The ASTM 1945 samples were collected on the day of the flare test, from the flare fuel line.

Instrumentation: The following continuous emissions analyzers were used:

Instrument	Analyte	Principle
Ratfisch, RS-55	THC	FID
Rosemount 755R	O_2	Paramagnetic

Test Results: The emission results are presented in Table 1 on the following page. Concentrations and emissions from the flare meet the permit limits. Since the NMHC emissions are less than 30 ppm @ 3% O_2, the NMHC Destruction Efficiency limit is not also required to be satisfied.

	Flare (A-8) Avg	Permit Limit
NMHC ppm as CH_4 @ 3% O_2	**<2.19**	**30**
NMHC Destruction or Removal Efficiency (DRE)	**>97.8%**	**98%**
THC (TOC) Destruction or Removal Efficiency (DRE)	**100.0%**	**98%**

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 BAAQMD 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

Sunnyvale WWTP
Flare
1450°F

RUN	1	2	3	AVERAGE	LIMITS
Test Date	09/01/06	09/01/06	09/01/06		
Test Time	0717-0747	0754-0824	0830-0900		
Standard Temp., °F	70	70	70		
Flare Temp., °F	1,458	1,443	1,456	1,452	
Fuel Flow Rate, DSCFM	555	555	552	554	
Exhaust Flow Rate, DSCFM (Method 19)	6,322	6,043	5,947	6,104	
Oxygen, O_2, %	13.00	12.63	12.54	12.72	
THC, ppm	1.5	1.8	1.4	1.6	
THC, lbs/hr as CH_4	0.023	0.026	0.021	0.024	
CH_4, ppm	1.5	1.8	1.4	1.6	<30 ppm NMHC @ 3%O_2 or >98% THC DRE
NMHC, ppm as CH_4	<1	<1	<1	<1	
NMHC, lbs/hr as CH_4	<0.016	<0.015	<0.015	<0.015	
NMHC, ppm @ 3% O_2 as CH_4	**<2.27**	**<2.16**	**<2.14**	**<2.19**	
INLET NMHC ppm as CH_4	492.0	492.0	492.0	492.0	
INLET NMHC lbs/hr as CH_4	0.68	0.68	0.67	0.68	
NMHC Removal Efficiency	**>97.7%**	**>97.8%**	**>97.8%**	**>97.8%**	**98**
INLET CH_4, ppm	442,000	442,000	442,000	442,000	
INLET THC (TOC) ppm as CH_4	442,492	442,492	442,492	442,492	
INLET THC (TOC) lbs/hr as CH_4	609.6	609.6	606.3	608.5	
THC (TOC) Removal Efficiency	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**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
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)

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

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

Calculations

BLUE SKY ENVIRONMENTAL, LLC

CEM BIAS CORRECTION SUMMARY

Facility:	Sunnyvale WWTP	Barometric:	29.92
Unit:	Flare	Leak Check:	OK
Condition:	1450°F	Strat. Check:	
Date:	09-01-06	Personnel:	gw

	O_2				THC	CH4	NMHC		
Analyzer	755R				RS-55	RS-55			
Range	25				50	50			r
Units, ppm or %	%				ppm	ppm			
Span Gas Value	20.95				45.6	45.6			Ccal
Run 1	0.00				0.0	0.0			zero (initial), Cib
Test Time:	20.95				45.6	45.6			cal (initial), Cib
0717-0747	12.89				<1	<1			TEST AVG, Cavg
	0.38				-1.0	-1.0			zero (final), Cfb
	20.38				45.0	45.0			cal (final), Cfb
	2%				*-2%*	*-2%*			% zero drift
	-2%				*-1%*	*-1%*			% cal drift
	13.00				**<1.5**	**<1.5**	**<1.0**		**Cgas**
Run 2	0.38				-1.0	-1.0			zero (initial), Cib
Test Time:	20.38				45.0	45.0			cal (initial), Cib
0754-0824	12.40				<1	<1			TEST AVG, Cavg
	0.50				-0.5	-0.5			zero (final), Cfb
	20.18				44.0	44.0			cal (final), Cfb
	1%				*1%*	*1%*			% zero drift
	-1%				*-2%*	*-2%*			% cal drift
	12.63				**<1.8**	**<1.8**	**<1.0**		**Cgas**
Run 3	0.50				-0.5	-0.5			zero (initial), Cib
Test Time:	20.18				44.0	44.0			cal (initial), Cib
0830-0900	12.25				<1	<1			TEST AVG, Cavg
	0.60				-0.3	-0.3			zero (final), Cfb
	20.00				42.7	42.7			cal (final), Cfb
	0%				*1%*	*1%*			% zero drift
	-1%				*-3%*	*-3%*			% cal drift
	12.54				**<1.4**	**<1.4**	**<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: Sunnyvale WWTP
Unit: Flare
Condition: 1450°F
Date: 09/01/06

		Time:	0717-0747	0754-0824	0830-0900	
		Run:	1	2	3	
# cubic feet/rev	scfm		555	555	552	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			447.5	447.5	447.5	Btu / ft³
Stack Oxygen			13.0	12.6	12.5	%
Gas Fd-Factor @ 60°F			9,625.0	9,625.0	9,625.0	DSCF/MMBtu
Gas Temperature (°F)			70	70	70	°F
Standard Temperature (°F) Tstd			70	70	70	°F
Realtime Fuel Rate (CFM)			555.0	555.0	552.0	CFM
Corrected Fuel Rate (SCFM) @ Tstd			555.0	555.0	552.0	SCFM
Fuel Flowrate (SCFH)			33,300	33,300	33,120	SCFH
Million Btu per minute			0.244	0.244	0.242	MMBtu/min
Heat Input (MMBtu/hour)			14.6	14.6	14.5	MMBtu/Hr
Stack Gas Flow Rate @ Tstd			**6,322**	**6,043**	**5,947**	**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 - O_2%)

BLUE SKY ENVIRONMENTAL, LLC

Fd-FACTOR CALCULATION

Landfill Gas

Sample ID: 25C +CH4
Date: 09/01/06

	Molecular Weight	Ideal Gas Specific Gravity, G_i	Ideal Gas Total Calorific Value, H_i	Compressibility Summation Factor, $\sqrt{\beta i}$	Specific Volume, ft^3/lb	Composition Mole Fraction, x_i	Specific Gravity Fraction, x_iG_i	Calorific Value Fraction, x_iH_i	Compressibility Fraction, $x_i\sqrt{\beta i}$	x_iMW	Weight Fraction, $x_iMW / \sum x_iMW$	CARBON Weight Fraction	HYDROGEN Weight Fraction	OXYGEN Weight Fraction	NITROGEN Weight Fraction	SULFUR Weight Fraction	CHONS SUM	Specific Volume, ft^3/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	0.0696	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	13.443	**0.2230**	0.2157	0.0	0.0037	6.2462	0.2236				0.2236		0.2236	3.0065
Oxygen	32.00	1.1053	0.0		11.819	**0.0118**	0.0130	0.0	0.0000	0.3776	0.0135			0.0135			0.0135	0.1598
Carbon Monoxide	28.01	0.9671	321.3	0.0217	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	**0.3230**	0.4908	0.0	0.0207	14.2152	0.5090	0.1389	0.0000	0.3701			0.5090	4.3508
Methane	16.04	0.5539	1012.0	0.0436	23.565	**0.4420**	0.2448	447.3	0.0193	7.0897	0.2538	0.1901	0.0638				0.2539	5.9819
Ethane	30.01	1.0382	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	44.09	1.5224	2523.0	0.1342	8.365	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isobutane	58.12	2.0067	3260.1	0.1744	6.321	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
n-Butane	58.12	2.0067	3269.6	0.1825	6.321	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Isopentane	72.14	2.4910	4009.4	0.2276	5.252	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
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	86.17	2.9753	4758.0	0.2830	4.398	**0.0000**	0.0000	0.0	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	0.0000
Total						0.9998	**0.964**	**447.3**	0.0229	27.9287	1.0000	0.3290	0.0638	0.3836	0.2236	0.0000	1.0000	**13.50**
							SG	**Btu/ft^3**	$\sum x_i\sqrt{\beta_i}$	$\sum$xiMW		**32.90%**	**6.38%**	**38.36%**	**22.36%**	**0.00%**		**ft^3/lb**

‡ Omitted from Compressibility Factor Calculation

Calculated Specific Gravity (SG) *(Air = 1.000 @ 760mm Hg, 60°F)* **0.964**

Compressibility Factor (Z) **0.9995**

$Z = 1 - [(\Sigma x_i \sqrt{\beta_i})^2 + (2x_H - x_H^2)(0.0005)]$

Specific Gravity (corrected) **0.965**

Specific Volume, (SV) ft^3/lb **13.50** ft^3/lb

Gross Calorific Value (GCV) @ 60°F **447.5** Btu/ft^3 Gross

Gross Calorific Value (GCV) @ 68°F **440.8** Btu/ft^3 Gross

Ideal Gross Calorific Value (GCV) **6,041** Btu/lb

*Btu/lb = Btu/ft^3 * ft^3/lb*

Gas Fd-Factor @ 68°F **9,773** DSCF/MMBtu

$DSCF/MMBtu = 10^6 * [(3.64*\%H_2)+(1.53*\%C)+(0.57*\%S)+(0.14*\%N_2)-(0.46*\%O_2)] / Btu/lb$

Gas Fd-Factor @ 60°F **9,625** DSCF/MMBtu

Laboratory Reports

Atmospheric Analysis & Consulting, Inc.

CLIENT : Blue Sky Environmental, LLC
PROJECT NAME : SUNNY VALE
AAC PROJECT NO. : 060678
REPORT DATE : 09/07/2006

On September 05, 2006, Atmospheric Analysis & Consulting, Inc. received one (1) Tedlar Bag for non-methane organic compounds analysis by EPA 25C and ASTM D-1945, which includes Hydrocarbons analysis by EPA method 18 and fixed gases analysis by EPA 3C. Upon receipt the sample was assigned a unique Laboratory ID number as follows:

Client ID	Lab No.
SUNNYVALE - 1	060678- 18486

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 - An aliquot of the gaseous sample is injected into the GC/FID for analysis following EPA 18 as specified in the SOW.

EPA 3C - An aliquot of the gaseous sample is injected into the GC/FID for analysis following EPA 3C 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 18 and EPA 3C.

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

ACCREDITED IN ACCORDANCE WITH nelac Certificate #E87837

This report consists of 11 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**	**Sampling Date**	**: 09/01/2006**
Project No.	**: 060678**	**Receiving Date**	**: 09/05/2006**
Matrix	**: air**	**Analysis Date**	**: 09/05/2006**
Units	**: %**	**Report Date**	**: 09/07/2006**

EPA Method 3C

Detection Limit: 0.1 %			Analyte				
Client ID	**AAC ID**	**Hydrogen**	**Oxygen**	**Nitrogen**	**CO**	**Methane**	**CO2**
SUNNYVALE-1	060678-18486	ND	1.18	22.3	ND	44.2	32.3

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**	**SAMPLING DATE**	**: 09/01/2006**
PROJECT NO.	**: 060678**	**RECEIVING DATE**	**: 09/05/2006**
MATRIX	**: AIR**	**ANALYSIS DATE**	**: 09/05/2006**
UNITS	**: PPMV**	**REPORT DATE**	**: 09/07/2006**

Client ID	AAC ID	*ANALYSIS METHOD*		*EPA Method 18*				
		Detection Limit		*0.3 ppmv*				
		C1	C2**	C3**	C4	C5	C6	C6+
SUNNYVALE-1	060678-18486	*	<30	<30	6.03	0.51	2.94	4.71

*** C1 Value from EPA 3C Report**

**** Due to the extremely high C1 concentration, the C2 and C3 concentration could not be measured below this PQL due to matrix interference.**

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, LLC**	**Sampling Date**	**: 09/01/2006**
Project No.	**: 060678**	**Receiving Date**	**: 09/05/2006**
Matrix	**: air**	**Analysis Date**	**: 09/06/2006**
Units	**: ppmv**	**Report Date**	**: 09/07/2006**

EPA Method 25C

Detection Limit:		0.3 ppmv
Client Sample ID	**AAC ID**	**NMHC****
SUNNYVALE-1	**060678-18486**	**492**

****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

Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

Date Analyzed: 9/5/06
Analyst: SW

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	18.1	18.3	90.4	91.3	1.0
	Nitrogen	20.0	20.4	20.4	101.8	102.2	0.4
	CO	20.0	19.0	19.1	95.2	95.6	0.4
	Methane	20.0	21.1	21.2	105.4	105.8	0.4
	CO2	20.0	19.8	19.6	98.8	98.2	0.6

III - Duplicate Analysis - EPA Method 3C

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
060660-18381	Hydrogen	0.0	0.0	0.0	0.0
	Oxygen	15.6	15.7	15.6	0.7
	Nitrogen	61.2	61.3	61.2	0.1
	CO	0.0	0.0	0.0	0.0
	Methane	0.0	0.0	0.0	0.0
	CO2	0.3	0.3	0.3	1.0

IV-Matrix Spike & Duplicate- EPA Method 3C

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD**
060660-18381	Hydrogen	0.0	10.0	8.5	7.9	85	79	7.3
	Nitrogen	30.6	10.0	40.4	41.0	98	104	5.5
	CO	0.0	10.0	9.9	9.6	99	96	2.1
	Methane	0.0	10.0	10.9	10.6	109	106	2.1
	CO2	0.2	10.0	10.1	10.0	100	98	1.4

** 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: 9/5/06
Analyst: SW

Instrument ID: TCD#1
Calibration Date: 04/03/06

Opening Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
Hydrogen	2147	2120	**1.2**
Oxygen* **	58602	58520	**0.1**
Nitrogen	65056	62925	**3.3**
Carbon Monoxide	72946	67341	**8.0**
Methane	60595	57125	**5.9**
Carbon Dioxide	97830	93328	**4.7**

Closing Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
Hydrogen	2147	2042	**5.0**
Nitrogen	65056	62833	**3.5**
Carbon Monoxide	72946	63539	**13.8**
Methane	60595	54882	**9.9**
Carbon Dioxide	97830	90101	**8.2**

* Must be <15%
** Average Calibration 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: 9/5/06
Analyst: SW

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	100.2	90.0	90.1	89.8	89.9	0.1
	Ethane	100.6	94.0	94.1	93.4	93.5	0.1
	Propane	100.0	95.6	95.9	95.6	95.9	0.3
	Butane	99.6	95.2	96.7	95.6	97.1	1.5
	Pentane	99.6	92.6	98.7	93.0	99.1	6.4
	Hexane	97.6	90.0	95.2	92.2	97.5	5.6

III - Duplicate Analysis - EPA Method 18

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
060678-18486 (1000x)	Methane	483793	499703	491700.0	3.2
	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**
060678-18486 (1000x)	Methane	245.9	250.0	483.6	465.4	95	88	8.0
	Ethane	0.0	250.0	253.0	253.4	101	101	0.2
	Propane	0.0	250.0	254.1	253.4	102	101	0.3
	Butane	0.0	250.0	252.0	251.5	101	101	0.2
	Pentane	0.0	250.0	248.8	250.8	100	100	0.8
	Hexane	0.0	250.0	241.4	244.8	97	98	1.4

** 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: 9/5/06
Analyst: SW
Instrument ID: FID#3
Calibration Date: 08/31/06

Opening Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
C1	679	628	**7.9**
C2	1349	1258	**7.0**
C3	1952	1849	**5.4**
C4	2591	2426	**6.6**
C5	3121	2925	**6.5**
C6	3601	3365	**6.8**

Closing Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
C1	679	642	**5.7**
C2	1349	1295	**4.1**
C3	1952	1899	**2.7**
C4	2591	2502	**3.5**
C5	3121	3005	**3.8**
C6	3601	3517	**2.4**

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

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Quality Control/Quality Assurance Report

Date Analyzed: 9/6/06
Analyst: SW
Instrument ID: FID#4
Units: PPMV

I - Method Blank - Method 25.3

AAC ID	Analyte	Sample Analysis
MB	NMEHC	ND

II-Laboratory Control Spike & Duplicate - Method 25.3

AAC ID	Analyte	Spike Added	LCS Result	LCSD Result	LCS % Rec *	LCSD % Rec *	% RPD***
Lab Control Standards	NMEHC	50.0	50.0	49.9	1.0	1.0	0.2

III - Duplicate Analysis - Method 25.3

AAC ID	Analyte	Sample Concentration	Duplicate Concentration	Mean	% RPD***
060656-18366	NMEHC	3.8	3.9	3.9	2.0

IV - Matrix Spike & Duplicate - Method 25.3

AAC ID	Analyte	Sample Concentration	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD***
060656-18366	NMEHC	1.9	25.0	25.6	25.3	94.7	93.3	1.5

V - 1 ppm Backflush - Method 25.3

AAC ID	Analyte	Backflush Result	Backflush % Rec ***
Backflush	NMEHC	1.06	106.0

** Must be 90-110%*
*** Must be 75-125%*
**** Must be < 20%*

Dr. Sucha Parmar,
Technical Director

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Quality Control/Quality Assurance Report

Date Analyzed: 9/6/06
Analyst: SW
Instrument ID: FID#4
Calibration Date: 09/06/06

Opening Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
CO	3866	3813	1.4
CH4	3729	3733	0.1
CO2	3890	3824	1.7
Propane	10500	10338	1.6

Closing Calibration Verification Standard

Analyte	xCF**	CF	%RPD*
CO	3866	3656	5.6
CH4	3729	3615	3.1
CO2	3890	3698	5.1
Propane	10500	10090	4.0

* 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:

CHAIN OF CUSTODY RECORD

Project Name: SUNNYVALE

Project #:

SAMPLE Date	SAMPLE Time	grab or comp	Sample ID (Method-Run-Fraction)	Type/Size of container	Analysis Requested: 25C	Analysis Requested: 1945
9/1/06			SUNNYVALE-1	Tedlar 10L		

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]	9/1/06	5:00	G.S.O	9/1/06	
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			[signature]	9/5/06	831
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Field Data Sheets

BLUE SKY ENVIRONMENTAL, LLC

CONTINUOUS EMISSION MONITORING SUMMARY DATA SHEET

Facility: SUNNYVALE WWTP Test #: 1, 2, 3 Date: 9/1/06

Location: FLARE Barometric: Leak Check: ✓

Observers: Personnel: GW Stratification Check:

Cyl. #s:

	INLET					OUTLET						
Parameter	O2	CO2	THC	CH4		O2	CO2	THC	CH4			
Analyzer	755R	PIR 2000	RS-55	RS-55		755R	PIR 2000	RS-55	RS-55			
Range						25		50	50			
Span Value(s)						20.95		45.6				

Run	Time												
						CAL	20.95		45.6				
						ZERO	0		0				
						0717	13.56		1.25				
						0722	13.50		~~0.5~~	0.5			
						0727	13.45		1.0				
						0732	12.38		0				
						0737	12.0		0				
						0742	12.38		0				
						ZERO	0.375		-1				
						CAL	20.375		45.				
						AVG	12.89		<1				
						0754	12.4		0				
						0759	12.4		0				
						0804	12.4		0				
						0809	12.4		0				
						0814	12.4		0				
						0819	12.4		0				
						ZERO	0.5		-0.5				
						CAL	20.18		44				
						AVG	12.4		<1				
						0830	12.25		0				
						0835	12.25		0				
						0840	12.25		0				
						0845	12.25		0				
						0850	12.25		0				
						0855	12.25		0				
						ZERO	0.6		~~0.5~~				
						CAL	20.2		42.7				
						AVG.	12.25		<1				

Landfill Flare Emissions Test Log
September 1, 2006

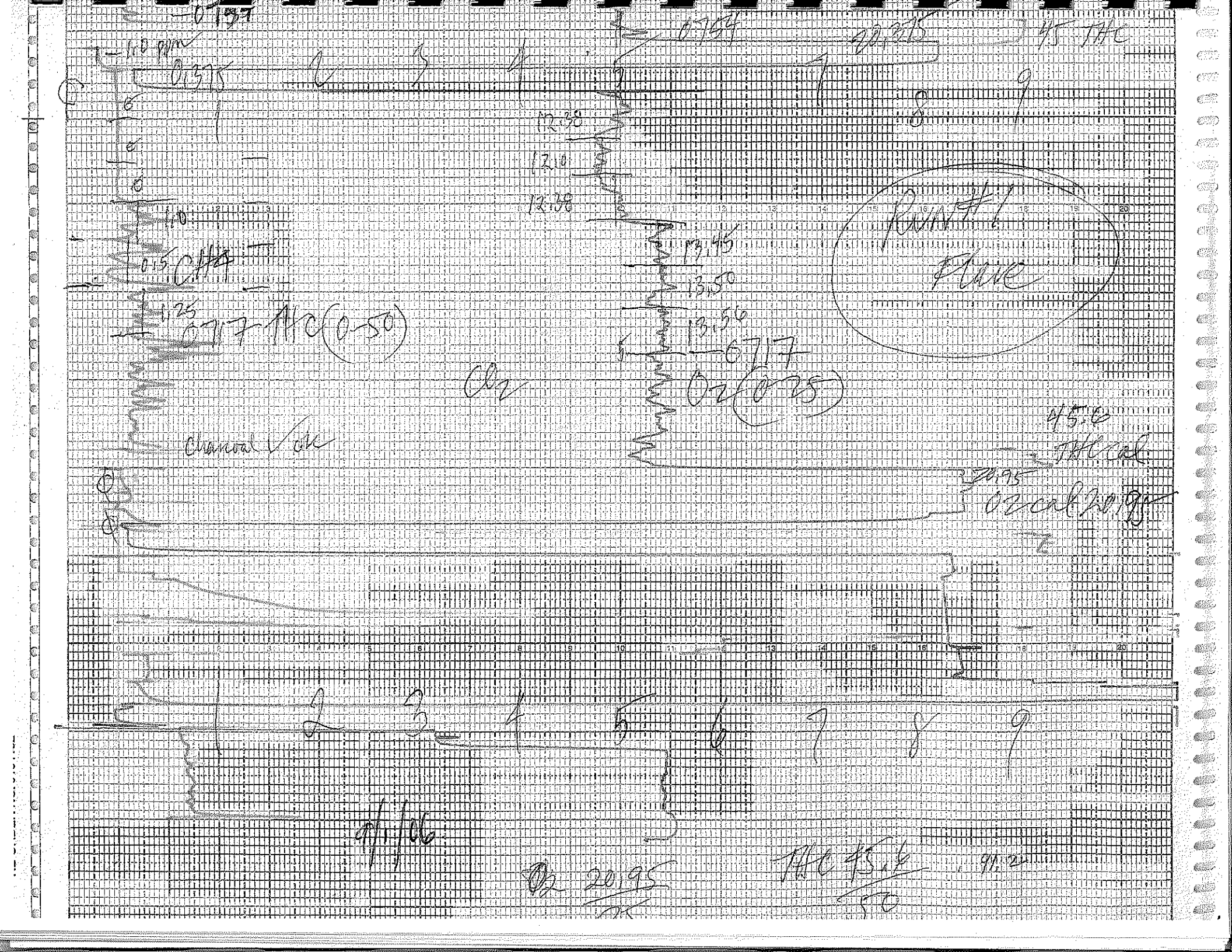
Atmospheric Data

Time: Temperature: 50.3 deg F Dew Point: Wind: 1.0 mph Barometric:29.92" Hg

Time	Field Vac W.C."	DIGAS Flow scfm	LFG Flow scfm	PGF Flow scfm	Flow to Flare precision meter (scfm)	Flare Temp	Thermocouple		Gas Quality				
							Lower	Upper	% CH_4	% CO_2	% O_2	Balance	
6:33	-15.0	0	472	0	465	1455	X		42.2	34.1	0.4	23.1	GEM -14.4 to -13.6
6:40	-14.5	0	464	14.3	466	1459	X						
6:46								X					Changed to upper thermcouple for hi
6:52	-15.1	0	476	0	506	1344		X					LFG only to flare
7:00	-15 to -16	63	494	0	560	1482		X					
7:03	-15 to -16	62	491	0	559	1454		X	41.9	34.1	0.6	23.5	29.93" Hg, GEM -15.5 to -15.7"
7:05	-16 to -16.5	66	489	16.2	559	1450		X					
7:11	-16.5	58	494	15.4	556	1445		X					system stable- still flaring
7:19	-16	55	501	0	557	1458		X					Running good @ this point, begin en
7:25	-16	56	494	0	555	1458		X	41.5	34.2	0.5	23.8	GEM -15.6"
7:30	-16	54	501	15	550	1438		X					
7:40	-16	56	496	0	557	1445		X	41.9	34.4	0.3	23.3	GEM -15.4"
7:57	-16	57	494	0	551	1443		X					
8:06	-16	53	499	0	555	1438		X					
8:13	-16 to -16.5	53	497	0	549	1459		X					
8:28	-16	51	500	0	549	1450		X	41.7	33.9	0.5	23.6	29.91" Hg, GEM -15.6 to -15.8
8:30	-16 to -16.5	51	501	0	552	1456		X					
8:42	-16 to -16.5	50	501	0	552	1438		X					

Test over @ ~9:02.

Strip Chart Records



QC Calibration Gas Certifications

IN SERVICE 9/1/06

PRAXAIR

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

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER BLUE SKY ENV. **P.O NUMBER** #524989

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
PROPANE GMIS	vs.SRM#1666	SA 5175	29.9 ppm

ANALYZER READINGS

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

1. **COMPONENT** PROPANE GMIS **ANALYZER MAKE-MODEL-S/N** HORIBA, FIA-510, 851135122

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

FIRST ANALYSIS DATE 06/20/06 **SECOND ANALYSIS DATE**

Z	0.0	R	80.7	C 41.0	CONC. 15.2	Z	R	C	CONC.
R	80.9	Z	0.0	C 41.0	CONC. 15.2	R	Z	C	CONC.
Z	0.0	C	41.0	R 80.9	CONC. 15.2	Z	C	R	CONC.
U/M	ppm			MEAN TEST ASSAY	15.2	U/M	ppm		MEAN TEST ASSAY

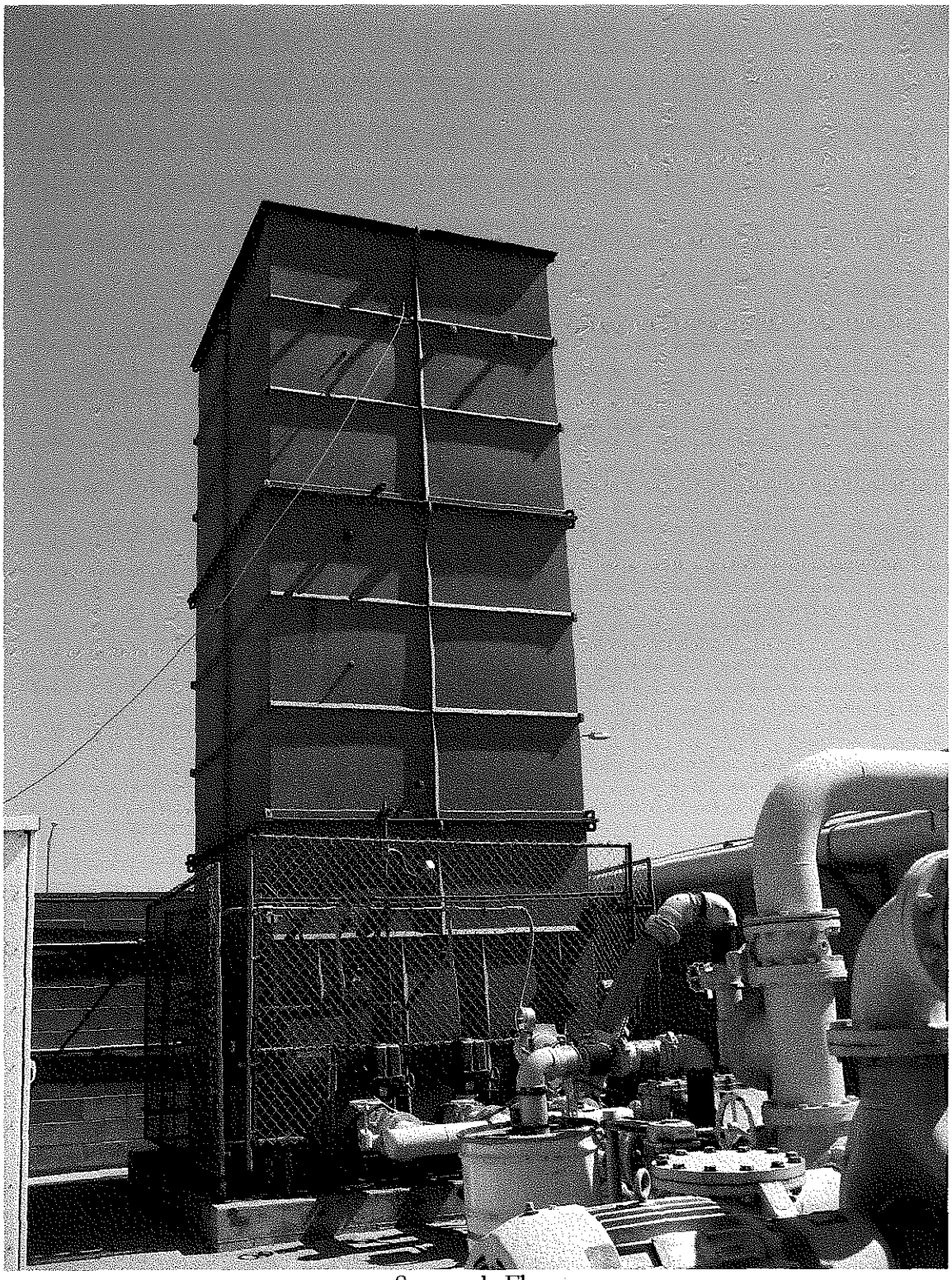
Values not valid below 150 psig

THIS CYLINDER NO.	CC 49867	**CERTIFIED CONCENTRATION**	
HAS BEEN CERTIFIED ACCORDING TO SECTION	EPA-600/R97/121	PROPANE	15.2 ppm
OF TRACEABILITY PROTOCOL NO.	Rev. 9/97	AIR	BALANCE
PROCEDURE	G1		
CERTIFIED ACCURACY	± 1 % NIST TRACEABLE		
CYLINDER PRESSURE	2000 PSIG		
CERTIFICATION DATE	06/20/06		
EXPIRATION DATE	06/20/09 TERM 36 MONTHS		

45.6 G

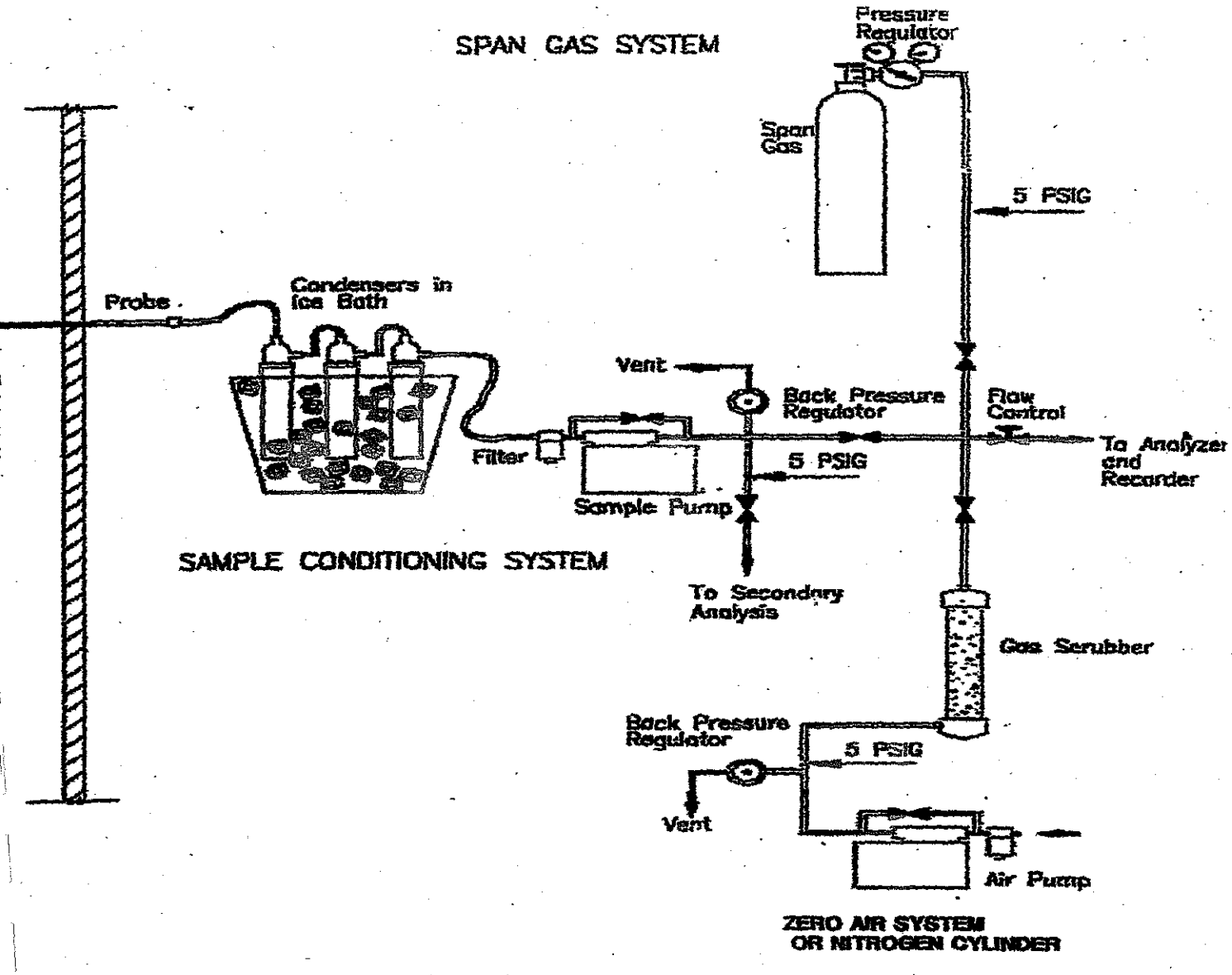
ANALYZED BY HELENA TRAN ***CERTIFIED BY*** PHU NGUYEN

Stack Diagram



Sunnyvale 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

SW-26.12

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 5905 Page: 1 Expires: FEB 1, 2007

This document does not permit the holder to violate any District regulation or other law.

Mark Bowers
City of Sunnyvale/Public Works Dept
P O Box 3707
Sunnyvale, CA 94086

Location: 301 Carl Road
Sunnyvale, CA 94088

S#	DESCRIPTION	[Schedule]	PAID
1	MISC-HDLG> Material handling, Solid waste - other/not spec Solid Waste Transfer Station Abated by: A1 Unclassified Abatement Device	[F]	150
2	MISC-HDLG> Material handling, Wood - other/not spec Wood Waste Unloading Operation Abated by: A2 Unclassified Abatement Device	[F]	150
3	MISC> Waste material grinding, Hogged wood, 17 tons/hr max Wood Shredder	[G1]	624
4	MISC-HDLG> Material handling, Hogged wood, 17 tons/hr max Conveyor Abated by: A5 Baghouse, Pulse Jet	[F]	150
5	MISC-HDLG> Storage, Hogged wood Wood Chip Processing Hoppers (feeding and loadout)	[F]	150
6	MISC-HDLG> Material handling, Hogged wood, 55 tons/hr max Wood Chip Screening Operation Abated by: A5 Baghouse, Pulse Jet	[F]	150
7	STANDBY, Reciprocating Engine, Elect Gen, 736 in3 displ Diesel Engine for an Emergency Standby Generator	[B]	137

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 5905 Page: 2 Expires: FEB 1, 2007

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S#	DESCRIPTION	[Schedule]	PAID
8	CHEM> Landfill with gas collection system, Multi-material City of Sunnyvale Sanitary Landfill with Gas Collection Sys[K] Abated by: A8 Flare A3 Adsorption, Activated Carbon/Charcoal Emissions at: P1 Stack		686
9	Fixed roof tank, 1K gal, Waste water - other/not spec Condensate Feed Storage Tank	[exempt]	0

8 Permit Sources, 1 Exempt Source

*** See attached Permit Conditions ***

The operating parameters described above are based on information supplied by permit holder and may differ from the limits set forth in the attached conditions of the Permit to Operate. The limits of operation in the permit conditions are not to be exceeded. Exceeding these limits is considered a violation of District regulations subject to enforcement action.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
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(415) 771-6000

PERMIT TO OPERATE

Plant# 5905 Page: 3 Expires: FEB 1, 2007

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*** PERMIT CONDITIONS ***

Source# 1	subject to Condition ID# 5367
Source# 2	subject to Condition ID# 5368
Source# 3	subject to Condition ID# 5369
Source# 5	subject to Condition ID# 5370
Source# 6	subject to Condition ID# 5371
Source# 7	subject to Condition ID# 18922
Source# 8	subject to Condition ID# 11586

*** PERMIT CONDITIONS ***

CONDITION ID #5367

FOR: S-1 SOLID WASTE TRANSFER STATION

1. Daily throughput of refuse shall not exceed 1,500 tons in any consecutive 24 hour period.

CONDITION ID #5368

FOR: S-2 WOOD WASTE UNLOADING OPERATION

1. Building demolition debris shall not be accepted.

2. Wood wastes shall not be dumped outside of the wood shredder building.

3. Daily throughput of wood waste shall not exceed 110 tons in any consecutive 24 hour period.

CONDITION ID #5369

For: S-3 WOOD SHREDDER

1. Building demolition debris shall not be processed.

2. The wood shredder shall be enclosed and operated within the wood shredder building at all times.

3. Daily throughput of wood waste shall not exceed 110 tons in any consecutive 24 hour period.

CONDITION ID #5370

For: S-5 WOOD CHIP PROCESSING HOPPERS

1. Daily throughput of wood waste shall not exceed 110 tons in any consecutive 24 hour period.

CONDITION ID #5371

For: S-6 Wood Chip Screening Operation and

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

*** PERMIT CONDITIONS ***

A-5 Baghouse Dust Collector

1. The screening operation shall be enclosed and abated by A-5 Baghouse Dust Collector at all times.

2. The baghouse shall be equipped with a District approved manometer for measuring the pressure drop across the baghouse.

3. Daily throughput of wood waste shall not exceed 110 tons in any consecutive 24 hour period.

CONDITION ID #11586

For: S-8 CITY OF SUNNYVALE SANITARY LANDFILL WITH GAS COLLECTION SYSTEM, A-3 CARBON ADSORBER, AND A-8 LANDFILL GAS FLARE

1. All landfill gas collected by the landfill gas collection system for the S-8 City of Sunnyvale Sanitary Landfill shall be vented to either the IC Engines (S-14 and S-15) located at Plant #733, to the A-8 Landfill Gas Flare located at Plant #5905, or to the A-3 Carbon Adsorber located at Plant #5905.
   a. If only one IC Engine (S-14 or S-15) is operating, the Permit Holder shall ensure that either:
      i. the A-8 Flare is operated concurrently with the single IC Engine, or
      ii. the time that a single IC Engine is operated alone is limited to:

Hours Per Incident	Applicable Year
307	2002
370	2003
472	2004
660	2005
1008	2006
2960	2007
no limit	2008

   b. To demonstrate compliance with Part 1a(ii), the Permit Holder shall maintain records in an APCO approved log of all times when only one IC Engine (S-14 or S-15 at Plant # 733) is operating and no other landfill gas control devices (engine, flare, or carbon adsorber) are operating.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
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*** PERMIT CONDITIONS ***

(Basis: Regulations 8-34-301 and 8-34-301.1)

2. The landfill gas collection system described in Part 3a below shall be operated continuously. Wells shall not be disconnected or removed from operation nor shall isolation or control valves be closed without written authorization from the District, unless the Permit Holder complies with all applicable requirements of Regulation 8, Rule 34, Sections 113, 117, and 118. (Basis: Regulations 8-34-301, 8-34-303, and 8-34-304)

3. The Permit Holder shall apply for and receive an Authority to Construct before modifying the landfill gas collection system described in Part 3a below. Increasing or decreasing the number of wells or collectors or significantly changing the locations, depths, or lengths of wells or collectors are all considered to be modifications that are subject to the Authority to Construct requirement.
   a. The Permit Holder has been issued a Permit to Operate for the landfill gas collection system components listed below. Well and collector locations, depths, and lengths of associated piping are as described in detail in Permit Application #2229.
      Required Vertical Wells: 66
      Required Horizontal Collectors: 13

   (Basis: Regulations 8-34-303 and 8-34-305)

4. The A-8 Landfill Gas Flare shall be properly operated and properly maintained during all hours of operation. Digestor gas may be blended with landfill gas and vented to A-8, as necessary to maintain proper operation of A-8. Raw landfill gas or raw landfill/ digestor gas blend shall not be vented to the atmosphere, except for unavoidable gas emissions that occur during collection system installation, maintenance, or repair, which is performed in compliance with Regulation 8, Rule 34, Sections 113, 117, or 118, and for inadvertent component or surface leaks that do not exceed the limits specified in 8-34-301.2 or 8-34-303.
   (Basis: Regulations 8-34-301 and 8-34-301.1)

5. A temperature monitor with readout display and

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
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PERMIT TO OPERATE

Plant# 5905 Page: 7 Expires: FEB 1, 2007

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*** PERMIT CONDITIONS ***

continuous recorder (recording thermocouple) shall be installed and maintained on the A-8 Landfill Gas Flare. One or more thermocouples shall be placed in the primary combustion zone of the A-8 Flare and shall accurately indicate combustion temperature at all times. Temperature charts shall be retained for at least five years and made available at all times for District inspection. (Basis: Regulations 8-34-501.3, 8-34-501.6, and 8-34-507)

6. The combustion zone temperature of the A-8 Flare shall be maintained at a minimum of 1400 degrees F, averaged over any three hour period, unless the Permit Holder complies with all requirements listed in Part 9 below. If a source test demonstrates compliance with all applicable requirements at a different temperature, the minimum combustion zone temperature for A-8 will be adjusted by the APCO such that the minimum combustion zone temperature is equal to the average combustion zone temperature measured during the most recent complying source test minus 50 degrees F (but not less than 1400 degrees F).
(Basis: Regulation 8-34-301.3 and Toxic Risk Management Policy)

7. A flow meter to measure gas flow into the A-8 Flare shall be installed and maintained.
(Basis: Regulation 8-34-301.1 and Cumulative Increase)

8. The A-8 Flare shall be equipped with both local and remote alarm systems. (Basis: Regulation 8-34-301)

9. Upon the discretion of the Permit Holder, collected landfill gas may be vented to the A-3 Carbon Adsorber, provided that the Permit Holder satisfies all of the following requirements:
   a. The A-3 Carbon Adsorber shall contain at least 140 pounds of activated carbon.
   b. Each 140 pound carbon canister shall treat no more than 3,091,000 scf of landfill gas.
   c. Treated landfill gas shall be vented to the A-8 Landfill Gas Flare, the S-14 IC Engine at Plant #733, or the S-15 IC Engine at Plant #733.
   d. The Permit Holder shall maintain the following records:

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 5905 Page: 8 Expires: FEB 1, 2007

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*** PERMIT CONDITIONS ***

i. Record the operating times for A-3 on a daily basis.
ii. Record the total amount of landfill gas treated by A-3, as determined from the flow meter required by Part 7, for each day that A-3 is operated.
iii. Record the cumulative amount of landfill gas treated by A-3 since the last carbon replacement, for each day that A-3 is operated.
iv. Record the date, time, and amount of fresh carbon installed for each carbon replacement.

e. During any time that landfill gas is vented to A-3 followed by the A-8 Landfill Gas Flare, the A-8 Flare is not required to meet the minimum combustion zone temperature limit in Part 6 above if all other requirements of this part are satisfied.

(Basis: Regulation 8-34-301.4)

CONDITION ID #18922

For: S-7 DIESEL ENGINE FOR AN EMERGENCY STANDBY GENERATOR

1. Hours of Operation: S-7 shall only be operated to mitigate emergency conditions or for reliability-related activities. Operation for reliability-related activities shall not exceed 100 hours in any calendar year. Operation while mitigating emergency conditions is unlimited. (Basis: Regulation 9-8-330)

2. "Emergency Conditions" is defined as any of the following:
   a. Loss of regular natural gas supply.
   b. Failure of regular electric power supply.
   c. Flood mitigation.
   d. Sewage overflow mitigation.
   e. Fire.
   f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor.

   (Basis: Regulation 9-8-231)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000

PERMIT TO OPERATE

Plant# 5905 Page: 9 Expires: FEB 1, 2007

This document does not permit the holder to violate any District regulation or other law.

*** PERMIT CONDITIONS ***

3. "Reliability-related activities" is defined as any of the following:
   a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
   b. Operation of an emergency standby engine during maintenance of a primary motor.
   (Basis: Regulation 9-8-232)

4. The emergency standby engine shall be equipped with a non-resettable totalizing meter that measures and records the hours of operation for the engine.
   (Basis: Regulation 9-8-530)

5. Records: The following monthly records shall be maintained in a District-approved log for at least 2 years and shall be made available for District inspection upon request:
   a. Total hours of operation.
   b. Hours of operation under emergency conditions and a description of the nature of each emergency condition.
   c. Fuel usage.
   (Basis: Regulation 9-8-530, 1-441)

---------- END OF CONDITIONS ----------

ay Area Air Quality Management District

** SOURCE EMISSIONS **

PLANT # 5905
Dec 31, 2005

#	Source Description	Annual Average lbs/day PART	ORG	NOx	SO2	CO
	Solid Waste Transfer Station	5.31	-	-	-	-
	Wood Waste Unloading Operation	-	-	-	-	-
	Wood Shredder	.18	-	-	-	-
	Conveyor	-	-	-	-	-
	Wood Chip Processing Hoppers (feeding and	-	-	-	-	-
	Wood Chip Screening Operation	-	-	-	-	-
	Diesel Engine for an Emergency Standby Gen	.07	.1	.93	.01	.2
	City of Sunnyvale Sanitary Landfill with G	-	48.5	-	-	-
	Condensate Feed Storage Tank	-	-	-	-	-
	T O T A L S	5.56	48.6	.93	.01	.2

** PLANT TOTALS FOR EACH EMITTED TOXIC POLLUTANT **

Pollutant Name	Emissions lbs/day
Benzene	.13
Ethylene dichloride	.04
Hexane	.51
Methyl ethyl ketone (MEK)	.46
Perchloroethylene	.55
Toluene	3.23
Trichloroethylene	.33
Xylene	1.15
Ethylbenzenee	.44
Vinylidene chloride	.02
Methylene chloride	1.08
Ethyl chloride	.07
Vinyl chloride	.41
1,1,1-Trichloroethane	.06
Trichlorofluoromethane	.09
Hydrogen Sulfide (H2S)	1.08

Source Test Plan

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

August 22, 2006

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 one landfill gas flare (A-2) located at Sunnyvale Water Pollution Control Plant (WPCP), 1444 Borregas Avenue, Sunnyvale; Plant # 5905, Condition 11586

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

- Three (3) thirty-minute tests will be performed using BAAQMD Methods for NMOC's (ST-7-FID) and O_2 (ST-14), to determine compliance with the 98% NMHC Destruction Efficiency or 30 ppm @ 3%O_2.
- One integrated gas characterization sample will be collected of the landfill gas for NMOC using EPA Method 25C; CO_2, O_2, N_2, BTU, C1-C6 hydrocarbons by ASTM 1945/3588.
- Fuel flow rate will be measured by BAAQMD Methods 17 & 18 if ports are available. 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 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 (e.g., strip charts, field data sheets, calibrations, calculations, etc.) will also be included.

Testing is scheduled for approximately 8am on September 1st, 2006. The facility contact is Bill Theyskens, who may be reached at 408 730 7718. 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 ✓
Bill Theyskens Fax (408) 730-~~7718~~ emailed Cell 408 242 2137