EPA Method 2 FIELD DATA

Client: Solar Turbines Report #: ~~89~~-017
Location: San Marcos Landfill
Operator: R. Logan
Date: 6-27-89
Run No: 3
Pump No.: GAST
Meter Box No.: 1004 Factor:
Meter ΔH @: 1.028
Pitot Tube No.: GI

Post Test Leak Chk.

Leak Rate: cfm
Vacuum: (in Hg)

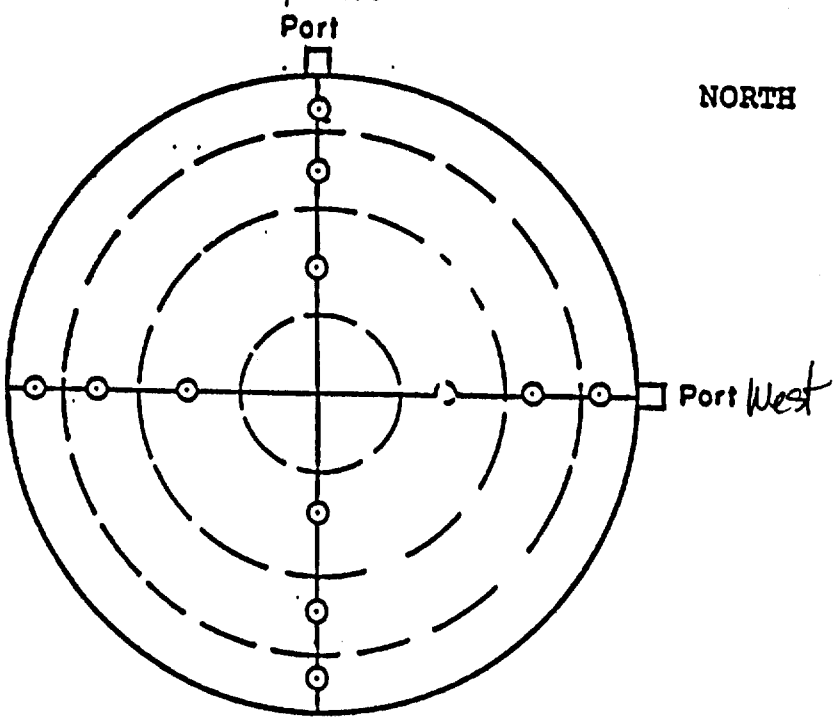
Ambient Temp: 78°
Barometric Pressure: 29.90
Static Pressure, (in Hg): -0.60
Assumed Moisture %:
Nozzle Ident. No.:
Aver. Calib. Nozzle Diam.(in):
Probe Liner Material:
Filter Number:
Duct Diam. (in):

N PORT

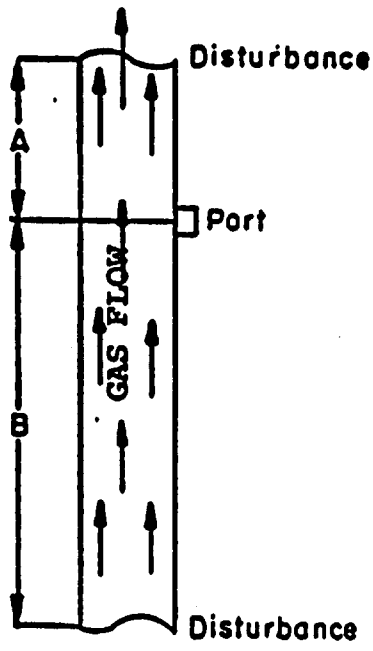
verse Point number	Time: (s) min	Vacuum in Hg	Stack* Temper. (Ts) °F	Velocity* Head (ΔPs) (in) ~~H2O~~	Pressure Differencial across Orifice Meter ΔH (in H_2O)	Gas Sample Volume (ft^3)	Gas Sample Temp. at dry Gas Meter inlet (°F)	Gas Sample Temp. at dry Gas Meter outlet (°F)	Filter Holder Temperature: (°F)	Temperature Gas Leaving Condenser or Impinger
12	1355		572.2	0.65						
11			571.0	0.85						
10			572.0	1.05						
9			572.2	1.00*						
8			573.4	10.90						
7			574.6	0.95						
6			577.0	1.00						
5			577.0	1.00						
4			575.6	1.05						
3			564.4	1.00						
2			563.6	~~0.95~~	0.95					
1	1415		550.	0.85						
			566	0.846			avg.	avg.		

Solar Turbines - San Marcos Turbine #1 & #2

SAMPLE POINTS DESCRIPTION



The illustration shows some of the points and their location at the centroid of equal areas of the sampled cross-section



General view of sampled source.
Diameter= 30'
A= 4 dia.
B= 6 dia

Distances to sampled points from inside of stack wall

Point	Calculated	Actual
1	0.6	6.6
2	2.0	8.0
3	3.5	9.5
4	5.3	11.3
5	7.5	13.5
6	10.7	16.7
7	19.3	25.3
8	22.3	28.3
9	14.7	30.7
10	26.5	52.5
11	28.0	34.0
12	29.4	35.4

Point	Calculated	Actual
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

[redacted]

CHAIN of CUSTODY

DATE: 6-26-89

unit/site: Turbine #1

Client: Solar Turbine

Determination: Toxics

Report No: 89-017

San Marcos : Inlet #1

CUSTODIAN	TIME	PERFORMANCE	RECEIVING CUSTODIAN
CAS	1304	#416 Sample Inlet #1	CAS
CAS	1314	Fini Sample #1	CAS
CAS	6-27 0630	Shipped to CCAS via Fed Exp	CCAS
CCAS	6-28 1000	Received	
CAS	1428	#101 Inlet #2	CAS
CAS	1435	Fini Sample #2	CAS
CAS	6-27 0630 Am	Shipped to CCAS via Fed Exp	CCAS
CCAS	628 1000	Received	
CAS	1512	#411 Inlet #3	CAS
CAS	1610	Run #3 finished	CAS
CAS	6-27 0630 Am	Shipped to CCAS via Fed Exp	CCAS
CCAS	6-28 1000	Received	

CHAIN of CUSTODY

DATE: 6-26-89

unit/site: Turbine #1

Client: Solar Turbines

Determination: Toxics

Report No: 89-017

San Marcos Landfill - outlet #1

CUSTODIAN	TIME	PERFORMANCE	RECEIVING CUSTODIAN
CAS	1106	#014	RPL
RPL	1327	Fini cannister received	CAS
CAS	6-27-89 0630 Am	Shipped via Fed Express	CCAS
CCAS	6-28 1000 Am	Received	
CAS	1331	#412 - given to samplers	PP
~~CAS~~ PP	1450	Fini #2 cannister received	CAS
CAS	6-27-89 630 Am	Shipped to CCAS Fed Exp	CCAS
CCAS	6-28 1000 Am	Received	
CAS	1501	#017 given to samplers	PP
PP	1644	#3 Finished cannister received	CAS
CAS	6-27-89 630 Am	shipped to CCAS Fed Exp	CCAS
CCAS	6-28-89 1000	Received	

CHAIN of CUSTODY

DATE: 6-26:27-89 unit/site: Turbine #1-2

Client: Solar Determination: Hydrocarbon

Report No: 89-07

Outlets

CUSTODIAN	6/26/89 TIME	PERFORMANCE	RECEIVING CUSTODIAN
RPL	1320	Finished Run #1 outlet Turbine #1	CAS
CAS	6/27/89 1900	Delivered samples to lab	FM
FM	6-28-89	Run analysis	
RPL	1430	Finished Run #2 Turbine #1	CAS
CAS	6/27/89 1900	Delivery sample to Lab	FM
FM	6-28-89	Run analysis	
RPL/PP	1635	Finished Run #3 Turbine #1	CAS
CAS	6/27/89 1900	Delivered sample to lab	FM
FM	6-28-89	Run Analysis	
	6-27-89		
RPL/PP	1000	Finished Run #1 Turbine #2	CAS
CAS	1900	Delivered sample to lab	FM
FM	6-28-89	Run Analysis	
PP/	1225	Finished Run #2 Turbine #2	CAS
CAS	1900	Delivered sample to lab	FM
FM	6-28-89	Run analysis	
PP	1400	Finished Run #3 Turbine #2	CAS
CAS	1900	Delivered sample to lab	FM
FM	6-28-89	Run Analysis	

QA

PETRO-CHEM ENVIRONMENTAL
DRY GAS METER CALIBRATION

DATE:3-13-89
OPERATOR:FVR
METER ID 1004

AMBIENT TEMP. 65
BAROMETRIC Pbar 30.40
TEST METER ID#: S5M104564
TEST METER Mcf: 1.0253

		APROXIMATE CFM	1	.75	.5	.3
STD TEST METER VOLUME CF	INT.		0.00	0.00	0.00	0.00
	FINAL		20.325	14.342	14.868	35.578
	TOTAL		20.325	14.34	14.87	35.58
ELD GAS METER VOLUME CF	INT.		304.00	328.34	288.94	343.40
	FINAL		325.70	343.40	304.00	379.70
	TOTAL		21.70	15.06	15.06	36.30
STD TEST METER TEMP F'			67	69	65	71
ELD GAS METER TEMP F'						
	IN		96	97	90	95
	OUT		76	78	73	78
	AVERAGE		86	87.5	81.5	86.5
TD TEST METER PRES.(in H2O)			-1.30	-0.60	-0.30	-0.15
ELD GAS METER PRES.(in H2O)			1.55	1	.75	.5
ELD GAS METER Mcf			.9912396	1.008126	1.042151	1.032991

ELD AVERAGE Mcf: 1.018627

SCOTT-MARRIN, INC.
2001 THIRD ST. • UNIT H • RIVERSIDE, CA 92507
TELEPHONE (714) 784-1240

RECEIVED
JUN 26 1989

REPORT OF ANALYSIS

TO: Tim Brennan
Petrochem Environmental
P.O. Box 5126
Bakersfield, CA 93388

DATE: 21 June 1989

CUSTOMER ORDER NUMBER: 50-000-00108

CYLINDER NUMBER CC51183

COMPONENT	CONCENTRATION(v/v)
Nitric Oxide	49.6 ± 0.5 ppm
Carbon Monoxide	50.4 ± 0.5 ppm
Sulfur Dioxide	80.7 ± 1.6 ppm
Nitrogen	Balance

Cylinder Pressure: 2000 psig

Replicate	5/16/89	50.1 ppm	6/19/89	49.2 ppm
Analysis		49.5 ppm		49.1 ppm
Data On		50.1 ppm		49.3 ppm
NO:	Mean	49.9 ppm		49.2 ppm

Expiration Date NO: 12/19/89

Replicate	5/11/89	50.2 ppm	6/21/89	50.7 ppm
Analysis		49.9 ppm		50.6 ppm
Data On		50.2 ppm		50.8 ppm
CO:	Mean	50.1 ppm		50.7 ppm

Expiration Date CO: 12/21/89

Replicate	5/19/89	80.6 ppm	6/21/89	80.9 ppm
Analysis		81.0 ppm		80.2 ppm
Data On		80.6 ppm		80.4 ppm
SO_2:	Mean	80.8 ppm		80.5 ppm

Expiration Date SO_2: 12/21/89

ANALYST J. W. Gay

APPROVED J. T. Marrin

The only liability of this company for gas which fails to comply with this analysis shall be replacement or reanalysis thereof by the company without extra cost.

SCOTT-MARRIN, INC. 2001 THIRD ST., UNIT I RIVERSIDE, CALIFORNIA 92507

REPORT OF ANALYSIS

CUSTOMER ORDER NUMBER: 50-000-00108

CYLINDER NUMBER CC51183 CYLINDER NUMBER _____

COMPONENT CONCENTRATION(v/v) COMPONENT CONCENTRATION(v/v)

(The Nitric Oxide analysis was performed in accordance with Section 3.0.4 of the revised EPA traceability protocol No. 1 dated June 9, 1987. The analysis is traceable to the National Bureau of Standards by direct intercomparison with GMIS, cylinder number CC49657 at 50.6 ppm Nitric Oxide in Nitrogen. The analysis was performed using a Monitor Labs Model 8440, S/N 136 analyzer with continuous chemiluminescence detection. The last multipoint calibration was performed 5/22/89.)

CYLINDER NUMBER CC51183 CYLINDER NUMBER _____

COMPONENT CONCENTRATION(v/v) COMPONENT CONCENTRATION(v/v)

(The Carbon Monoxide analysis was performed in accordance with Section 3.0.4 of the revised EPA traceability protocol No. 1 dated June 9, 1987. The analysis is traceable to the National Bureau of Standards by direct intercomparison with GMIS, cylinder number CAL5180 at 98.6 ppm Carbon Monoxide in Nitrogen. The analysis was performed using a Carle Model 8000 gas chromatograph with catalytic methanation/ flame ionization detection. The last multipoint calibration was performed 6/1/89.)

CYLINDER NUMBER CC51183 CYLINDER NUMBER _____

COMPONENT CONCENTRATION(v/v) COMPONENT CONCENTRATION(v/v)

(The Sulfur Dioxide analysis was performed in accordance with Section 3.0.4 of the revised EPA traceability protocol No. 1 dated June 9, 1987. The analysis is traceable to the National Bureau of Standards by direct intercomparison with GMIS, cylinder number CC28557 at 101.8 ppm Sulfur Dioxide in Nitrogen. The analysis was performed using an Interscan Model RM2450P, S/N 72138 gas chromatograph with electrochemical detection. The last multipoint calibration was performed 6/22/89.)

CYLINDER NUMBER _____ CYLINDER NUMBER _____

COMPONENT CONCENTRATION(v/v) COMPONENT CONCENTRATION(v/v)

PETRO
CHEM
ENVIRONMENTAL
SERVICES

CALIBRATION GAS CERTIFICATE

DATE: FEBRUARY 10, 1989

ANALYSIST: Leslie A. Johnson

TANK: LK 273312

CONTENTS: Oxygen in Nitrogen

	SET #1	SET #2	SET #3
RUN #1	15.01	15.00	15.00
RUN #2	15.00	15.00	14.99
RUN #3	15.01	14.99	15.01
AVERAGE -	15.01	15.00	15.00

Average Concentration 15.00% 02

Expires August 10, 1989