TOTAL AIR ANALYSIS, INC.

total air

COMPLIANCE SOURCE TEST REPORT

BRADLEY LANDFILL

FOUR I.C. ENGINES - #2, #3, #4 AND #5

Prepared For:

Waste Management Disposal & Recycling Services, Inc.
Bradley Landfill and Recycling Center
9801 Tujunga Avenue
Sun Valley, CA 91352

PERMIT TO OPERATE APPLICATION NO.: 437562, 437563, 437564, 437565
PERMIT NO.: F73942, F73943, F73944, F73945
FACILITY ID: 50310

Conducted By:

Total Air Analysis, Inc.
1210 East 223rd Street, Suite 314
Carson, CA 90745

Test Dates: July 15 - 17, 2008

Report Date: August 25, 2008

Report Identification No: WM-80707

Prepared by: _____
Mr. Eiji J. Harada, Air Quality Engineer

Reviewed by: _____
Mr. Russ P. Logan, Director

Submitted To:

South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765

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1.0 Summary of Results

Facility: Waste Management
Source: ICE #2
Load: Max, Low and Normal Load
Start Date: 7/17/2008

Parameter	Units	Run 1 Max ~1000 kW	Run 2 Low ~550 kW	Run 3 Normal * ~950 kW	Limits	Pass /Fail
NOx	ppmv	45.45	59.05	49.51	-	-
NOx @ 15% O_2	ppmv	**19.22**	**23.77**	**20.73**	**46.0**	**Pass**
Emission Rate**	lb/hr	**1.11**	**1.05**	**1.29**	**2.48**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.312**	**0.60**	**Pass**
CO	ppmv	538.68	487.38	525.47	-	-
CO @ 15% O_2	ppmv	**227.81**	**196.16**	**220.05**	**2000**	**Pass**
Emission Rate**	lb/hr	**8.01**	**5.28**	**8.35**	**9.92**	**Pass**
Emission Rate	g/bhp-hr	-	-	**2.017**	**2.50**	**Pass**
Inlet Sulfur, TRS as H_2S	ppmv	-	-	78.00	-	-
Exhaust Sulfur, as SO_2	ppmv	-	-	5.28	-	-
SO_2, Emission Rates	lb/hr	-	-	**0.19**	**0.82**	**Pass**
Particulate Matter	gr/dscf	-	-	0.0047	-	-
Emission Rate	lb/hr	-	-	**0.1455**	**0.21**	**Pass**
Inlet - ROG	ppmv	-	-	3414	-	-
ROG, Mass Emissions	lb/hr	-	-	3.54	-	-
Outlet ROG	ppmv	-	-	27.476	-	-
ROGs @ 15% O_2	ppmv	-	-	**11.45**	**40**	**Pass**
Emission Rate	lb/hr	-	-	**0.22**	**1.65**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.054**	**0.80**	**Pass**
ROGs (as Hexane)	ppmv	-	-	4.579	**(Rule 1150.1)**	-
ROGs (@ 3% O_2), C6	ppm	-	-	**5.785**	**20.0**	**Pass**
Destruction Efficiency	%	-	-	93.680	-	-
Fuel Flow	scfm	498.9	382.2	456.4	-	-
O_2	%	6.88	6.17	6.74	-	-
CO_2	%	12.65	13.27	12.77	-	-
Brake Horse Power	Bhp	-	-	1877	-	-
Exhaust Flow (measured)	dscfm	-	-	3,584	-	-
Exhaust Flow (Calculated)	dscfm	3,355	2,446	3,039	-	-
Heat Input	MMbtu/hr	14.13	10.82	12.93	-	-

**Note: Measured Exhaust flowrate used for Mass Emissions calculations for Normal load.
*Note: The average of 2 runs at Normal load used for NOx and CO ppmv.

1.1 Summary of Results

Facility: Waste Management
Source: ICE #3
Load: High, Low and Normal Load
Start Date: 7/16/2008

Parameter	Units	Run 1 Low ~600 kW	Run 2 High ~1000 kW	Run 3 Normal ~960 kW	Limits	Pass /Fail
NOx	ppmv	71.72	73.60	64.32	-	-
NOx @ 15% O_2	ppmv	**28.96**	**30.90**	**27.30**	**46.0**	**Pass**
Emission Rate **	lb/hr	**0.95**	**1.63**	**1.71**	**2.48**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.412**	**0.60**	**Pass**
CO	ppmv	513.96	533.63	530.69	-	-
CO @ 15% O_2	ppmv	**207.56**	**224.05**	**225.25**	**2000**	**Pass**
Emission Rate **	lb/hr	**4.16**	**7.18**	**8.56**	**9.92**	**Pass**
Emission Rate	g/bhp-hr	-	-	**2.070**	**2.50**	**Pass**
Inlet Sulfur, TRS as H_2S	ppmv	-	-	69.00	-	-
Exhaust Sulfur, as SO_2	ppmv	-	-	4.36	-	-
SO_2, Emission Rates	lb/hr	-	-	**0.16**	**0.82**	**Pass**
Particulate Matter	gr/dscf	-	-	0.0056	-	-
Emission Rate	lb/hr	-	-	**0.1740**	**0.21**	**Pass**
Inlet - ROG	ppmv	-	-	3575	-	-
ROG, Mass Emissions	lb/hr	-	-	3.92	-	-
Outlet ROG	ppmv	-	-	35.458	-	-
ROGs @ 15% O_2	ppmv	-	-	**14.98**	**40**	**Pass**
Emission Rate	lb/hr	-	-	**0.29**	**1.65**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.071**	**0.80**	**Pass**
ROGs (as Hexane)	ppmv	-	-	5.910	**(Rule 1150.1)**	-
ROGs (@ 3% O_2), C6	ppm	-	-	**7.567**	**20.0**	**Pass**
Destruction Efficiency	%	-	-	92.524	-	-
Fuel Flow	scfm	284.3	454.7	432.7	-	-
O_2	%	6.22	6.78	6.93	-	-
CO_2	%	13.29	12.81	12.65	-	-
Brake Horse Power	Bhp	-	-	1877	-	-
Exhaust Flow (measured)	dscfm	-	-	3,641	-	-
Exhaust Flow (Calculated)	dscfm	1,825	3,034	2,920	-	-
Heat Input	MMbtu/hr	8.05	12.88	12.26	-	-

**Note: Measured Exhaust flowrate used for Mass Emissions calculations for Normal load.

1.2 Summary of Results

Facility: Waste Management
Source: ICE #4
Load: High, Low and Normal Load
Start Date: 7/15/2008

Parameter	Units	Run 1 High ~950 kW	Run 2 Low ~600 kW	Run 3 Normal ~900 kW	Limits	Pass /Fail
NOx	ppmv	64.88	70.34	67.46	-	-
NOx @ 15% O_2	ppmv	**26.80**	**28.10**	**27.73**	**46.0**	**Pass**
Emission Rate **	lb/hr	**1.43**	**0.97**	**1.54**	**2.48**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.371**	**0.60**	**Pass**
CO	ppmv	513.65	491.48	508.12	-	-
CO @ 15% O_2	ppmv	**212.22**	**196.32**	**208.90**	**2000**	**Pass**
Emission Rate **	lb/hr	**6.90**	**4.12**	**7.04**	**9.92**	**Pass**
Emission Rate	g/bhp-hr	-	-	**1.701**	**2.50**	**Pass**
Inlet Sulfur, TRS as H_2S	ppmv	-	-	42.00	-	-
Exhaust Sulfur, as SO_2	ppmv	-	-	3.20	-	-
SO_2, Emission Rates	lb/hr	-	-	**0.101**	**0.82**	**Pass**
Particulate Matter	gr/dscf	-	-	0.0063	-	-
Emission Rate	lb/hr	-	-	**0.1681**	**0.21**	**Pass**
Inlet - ROG	ppmv	-	-	3155	-	-
ROG, Mass Emissions	lb/hr	-	-	3.21	-	-
Outlet ROG	ppmv	-	-	33.123	-	-
ROGs @ 15% O_2	ppmv	-	-	**13.55**	**40**	**Pass**
Emission Rate	lb/hr	-	-	**0.23**	**1.65**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.057**	**0.80**	**Pass**
ROGs (as Hexane)	ppmv	-	-	5.521	**(Rule 1150.1)**	-
ROGs (@ 3% O_2), C6	ppm	-	-	**6.847**	**20.0**	**Pass**
Destruction Efficiency	%	-	-	92.678	-	-
Fuel Flow	scfm	466.3	301.0	448.1	-	-
O_2	%	6.55	6.05	6.48	-	-
CO_2	%	12.96	13.43	13.02	-	-
Brake Horse Power	Bhp	-	-	1877	-	-
Exhaust Flow (measured)	dscfm	-	-	3,125	-	-
Exhaust Flow (Calculated)	dscfm	3,032	1,892	2,900	-	-
Heat Input	MMbtu/hr	13.07	8.43	12.56	-	-

**Note: Measured Exhaust flowrate used for Mass Emissions calculations for Normal load.

1.3 Summary of Results

Facility: Waste Management
Source: ICE #5
Load: High, Low and Normal Load
Start Date: 7/16/2008

Parameter	Units	Run 1 High ~1020 kW	Run 2 Low ~600 kW	Run 3 Normal ~960 kW	Limits	Pass /Fail
NOx	ppmv	45.77	52.37	48.24	-	-
NOx @ 15% O_2	ppmv	**19.34**	**21.09**	**20.34**	**46.0**	**Pass**
Emission Rate **	lb/hr	**1.17**	**0.77**	**1.22**	**2.48**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.295**	**0.60**	**Pass**
CO	ppmv	535.91	491.11	524.85	-	-
CO @ 15% O_2	ppmv	**226.46**	**197.78**	**221.34**	**2000**	**Pass**
Emission Rate **	lb/hr	**8.32**	**4.42**	**8.09**	**9.92**	**Pass**
Emission Rate	g/bhp-hr	-	-	**1.955**	**2.50**	**Pass**
Inlet Sulfur, TRS as H_2S	ppmv	-	-	69.00	-	-
Exhaust Sulfur, as SO_2	ppmv	-	-	5.15	-	-
SO_2, Emission Rates	lb/hr	-	-	**0.18**	**0.82**	**Pass**
Particulate Matter	gr/dscf	-	-	0.0056	-	-
Emission Rate	lb/hr	-	-	**0.1657**	**0.21**	**Pass**
Inlet - ROG	ppmv	-	-	3575	-	-
ROG, Mass Emissions	lb/hr	-	-	3.97	-	-
Outlet ROG	ppmv	-	-	35.458	-	-
ROGs @ 15% O_2	ppmv	-	-	**14.88**	**40**	**Pass**
Emission Rate	lb/hr	-	-	**0.28**	**1.65**	**Pass**
Emission Rate	g/bhp-hr	-	-	**0.068**	**0.80**	**Pass**
ROGs (as Hexane)	ppmv	-	-	5.910	**(Rule 1150.1)**	-
ROGs (@ 3% O_2), C6	ppm	-	-	**7.519**	**20.0**	**Pass**
Destruction Efficiency	%	-	-	92.946	-	-
Fuel Flow	scfm	521.8	317.3	488.8	-	-
O_2	%	6.87	6.17	6.84	-	-
CO_2	%	12.68	13.37	12.77	-	-
Brake Horse Power	Bhp	-	-	1877	-	-
Exhaust Flow (measured)	dscfm	-	-	3,477	-	-
Exhaust Flow (Calculated)	dscfm	3,505	2,031	3,277	-	-
Heat Input	MMbtu/hr	14.78	8.99	13.84	-	-

**Note: Measured Exhaust flowrate used for Mass Emissions calculations for Normal load.

2.0 Introduction

Total Air Analysis, Inc. was contracted by Waste Management, Inc. to perform a compliance test program on four I.C. Engines (#2 - #5) at the Bradley Landfill that are operated by Run Energy, Inc. The purpose of the test program was to determine the emissions of Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Oxygen (O_2) at the exhaust, Total Sulfur at the inlet, exhaust volume flow rates, and Reactive Organic Gases (ROGs). ROG's are determined as Total Non-Methane Non-Ethane Hydro-Carbons (TNMNEHC). The test program was conducted on July 15 - 17, 2008.

Testing was performed by Mr. Russ P. Logan and Mr. Eiji J. Harada of Total Air Analysis, Inc. Arrangements for the source testing were made through Mr. Kishore Billapati of Shaw Environmental. Total Air Analysis performed the test program using standard SCAQMD test methods demonstrated in the approved protocol according to the following table.

TABLE 1
EQUIPMENT AND TEST REQUIREMENTS

Parameter	***Method***	***Sampling Location***	***Number/ Duration of Runs***
Reactive Organic Gases (ROGs)	SCAQMD 25.3	Outlet	Duplicate, 1 hour/ICE
Reactive Organic Gases (ROGs)	ASTM D-1945	Inlet	Single, 1 hour/ICE
NO_x, CO, CO_2, O_2	SCAQMD 100.1	Outlet	Single, 1 hour/ICE
Particulate Matter (PM) & Volume Flow Rate	SCAQMD 1.1 – 5.1	Outlet	Single, 1 hour/ICE
Calculated Exhaust Flow Rate	EPA 19, Fuel usage	Inlet	Single, 1 sample/Day
Total Sulfur as H_2S	SCAQMD 307-91	Inlet	Single, 1 sample/Day

Contracting Firm:	*Mr. Kishore Billapati*	*949/660-7555*
Testing Firm Contact:	*Mr. Russ P. Logan*	*310/ 518-5133*
SCAQMD Representative:	*Mr. Ted Kowalczyk*	*909/ 396-2592*

3.0 Process Description

The test programs for Engines #2 - #5 were conducted on July 15 - 17, 2008 while firing on landfill gas to generate electrical power.

The identical resource recovery systems consist of Deutz, Model TBG620V16K landfill gas fired internal combustion engines with sixteen cylinders 1877 BHP, lean burn, turbocharged and intercooled, driving a 1.3 MW electrical generator. A 3000 CFM, 50 HP compressor (common to A/N 437561, 437562, 437563, 437564, and 437565), a radiator with fans, and an ancillary skid with a muffler, heat exchanger, filter, intercooler, and exhaust stack.

4.0 Rule/Compliance Requirements

The I.C. engines were being source tested to ascertain whether they meet the requirements of their SCAQMD Permits to Operate Application No. 437562, 437563, 437564, and 437565.

5.0 Operating Parameters

The engines were operated at High and Low load for 15 min. each, then at a normal load condition for one (1) hour during the test program. Averages for the operating parameters are shown in Table 2. Process data showing fuel usages and operating rates (SCFM and KW Output) throughout the test program are shown in Appendix F.

TABLE 2
OPERATING PARAMETERS - AVERAGE

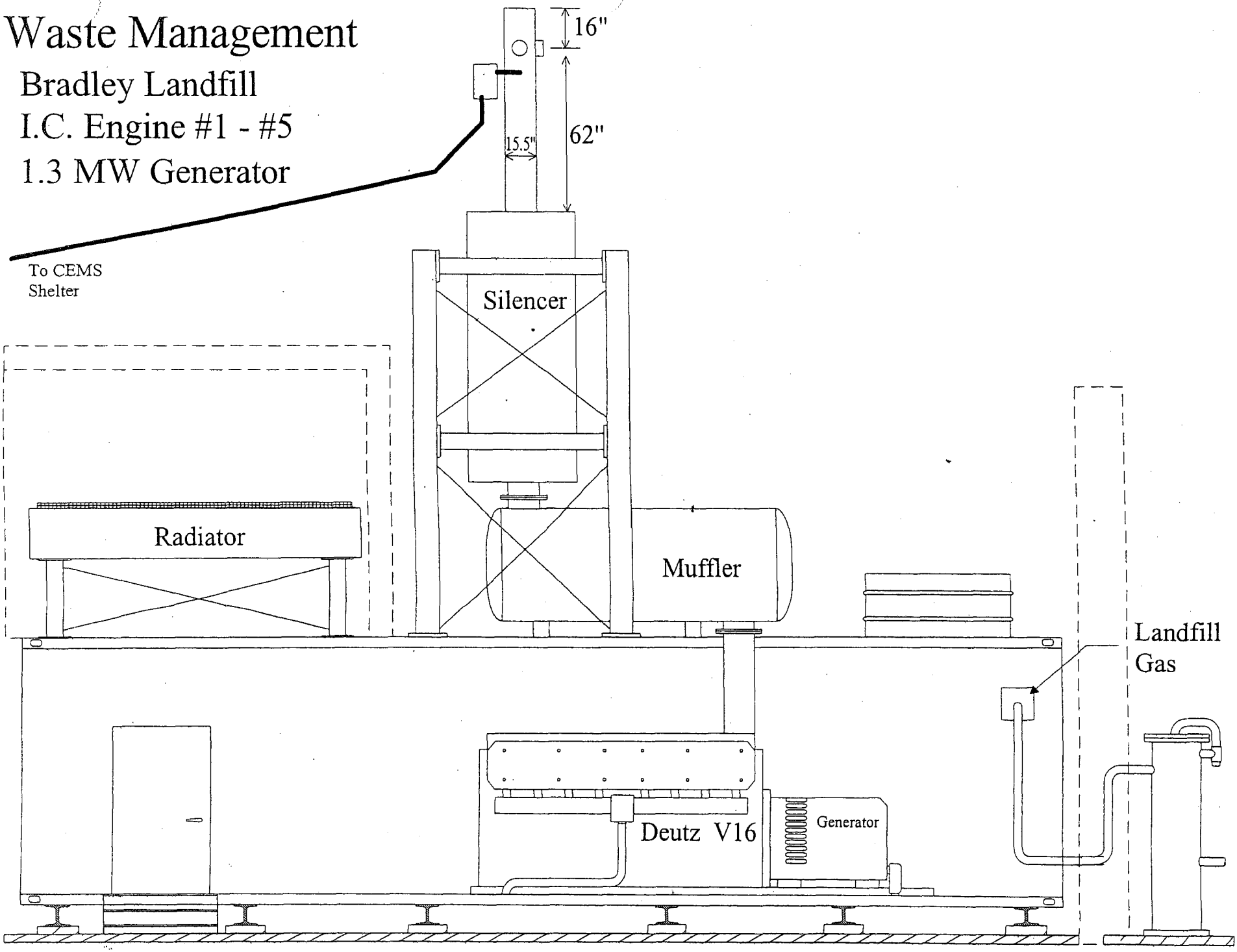
Engine	*Load*	*Time*	*SCFM*	*BHP*	*kW*
#2	High	8:30 – 8:44	498.9	1877	~1000
#2	Low	8:50 – 9:04	382.19	1877	~550
#2	Normal	9:20 – 11:27	456.41	1877	~950
#3	Low	12:39 – 12:53	284.29	1877	~600
#3	High	13:09 – 13:23	454.69	1877	~1000
#3	Normal	13:42 – 14:43	432.74	1877	~960
#4	High	11:20 – 11:34	466.29	1877	~950
#4	Low	11:51 – 12:05	300.99	1877	~600
#4	Normal	12:11 – 13:34	448.09	1877	~900
#5	High	8:30 – 8:44	521.76	1877	~1020
#5	Low	8:59 – 9:13	317.34	1877	~600
#5	Normal	9:25 – 10:21	488.83	1877	~960

Waste Management

Bradley Landfill

I.C. Engine #1 - #5

1.3 MW Generator



6.0 Test Methods and References

6.1 SCAQMD Method 1.1 - Sampling and Velocity Traverse for Stationary Sources

A preliminary source test site assessment was performed prior to the source test in order to determine applicable testing port locations and sample point traverse locations. The stack diameter and the distance upstream and downstream from sample ports to disturbances, i.e., bends, flanges, etc. was measured. This information was utilized to determine the minimum number of sampling points per traverse and the distance from the inner stack wall to each sample point location. Additionally, this method takes into account cyclonic flow patterns and in-situ stratified pollutant concentrations.

6.2 SCAQMD Method 2.1 - Velocity and Volumetric Flow Rate

The velocity of the gas stream was determined using an "S" type pitot tube, an inclined manometer and type "K" thermocouple with a digital temperature measuring device. The calibrated Pitot tube was connected to the inclined manometer and leak checked. A temperature and delta P was obtained at each traverse point, and the duct static pressure is measured. The dry volumetric flow rate was determined from the gas velocity data, stack pressure, stack gas moisture content, stack gas molecular weight, and cross-sectional area of duct.

Calculations:

$$\text{Velocity (Vs)} = 85.49 * Cp * \text{Avg sq. rt. dP} * \left(\frac{T_s \text{ Avg}}{P_s * MW_w}\right)^{0.5}$$

$$\text{Volume Flow Rate (DSCFM)} = 60\,(1 - B_{ws})\,Vs * As * \frac{Tstd * Ps}{Ts(avg) * Pstd}$$

Where: Vs = Velocity of Stack Gas
Cp = Pitot Tube Coefficient (Std = 0.84)
$\sqrt{\Delta P}$ = Avg. Delta P inches H_2O
Ts = Avg. Absolute Stack Gas Temp (^oF actual + 460)
Ps = Absolute Stack Gas Pressure P_{bar}+ [(P_{static}/13.6)]
As = Area of Stack, Ft^2
T_{std} = 520 ^oF (60^oF + 460)
P_{std} = 29.92, Barometric Pressure

6.3 SCAQMD Method 3.1 - Gas Analysis for Dry Molecular Weight and Excess Air

Carbon Dioxide (CO_2) and Oxygen (O_2) was determined in accordance with SCAQMD Method 3. The sample was collected utilizing continuous emissions analyzers, which are operated in accordance with the specified method and any approved deviations. Nitrogen was determined by difference: 100 - ($\%O_2 + CO_2$).

Calculations:

$$MW_D = 0.44*(\%CO_2)+0.32*(\%O_2)+0.28*(\%N_2+\%CO)$$
$$MW_W = MW_D*(1\text{-bws})+18*(\text{bws})$$

Where:

MW_D = Dry Molecular Weight of exhaust gas, lb/lb-mole
MW_W = Wet Molecular Weight of exhaust gas, lb/lb-mole

6.4 SCAQMD Method 4.1 - Stack Gas Moisture Content Determination

Moisture content was determined using a sampling train consisting of a stainless steel probe, Teflon line, four impingers in an ice-water bath, a leak-free pump, a vacuum gauge, and a temperature compensated dry gas meter. Prior to sampling, a leak check of the sampling train was performed to ensure system integrity. Additionally, tare weights of the charged individual impingers were recorded using an electronic balance capable of weighing to the nearest 0.1 grams. Moisture was determined from the PM sample train.

Calculations:

Moisture (bw_s) = Vwstd/(Vmstd + Vwstd)

Where:

Vwstd = 0.04707 ft^3/ml x Vol. H_2O collected (mL)
Vmstd = 17.38 x Ym x Vm x Pm/Tm

Where:

0.04707	=	volume of water vapor @ 60°F/ml of water
17.38	=	520°R/29.92 in. Hg
Ym	=	meter correction factor
Vm	=	sample gas volume collected
Pm	=	sample gas pressure in Hga
Tm	=	sample gas temperature in °R at meter

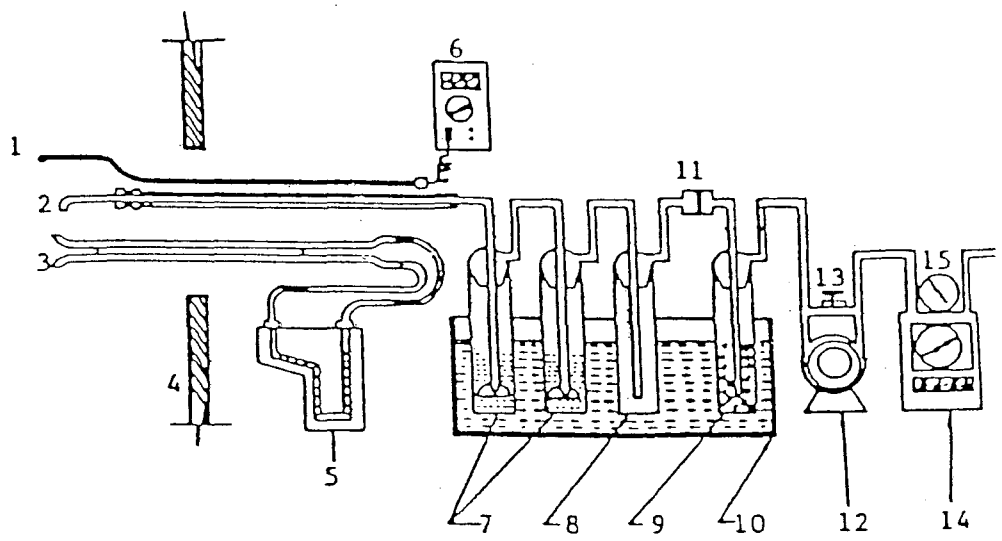
6.5 SCAQMD Method 5.1 - Particulate Matter (PM) Emissions Determination

A series of preliminary measurements were conducted prior to conducting the test. SCAQMD Methods 1.1, 2.1 and 3.1 were performed to determine location and number of traverse points. Percent moisture was estimated and the nozzle size was determined for isokinetic sampling.

The sampling train was prepared on-site in our mobile emissions laboratory. The first two impingers were charged with 100 ml of deionized distilled water (DI H_20), the third impinger was empty and the fourth impinger contained approximately 300 gram of silica gel. The probe was brushed and rinsed with DI H_20 and dried with acetone. The preweighed Backup filter was placed in the filter holder and connected to the sample train. The sampling apparatus was sealed and transported to the sampling locations where it was assembled and leak checked at 15 in. mercury vacuum.

The test was started when the nozzle was positioned into the gas flow, the vacuum pump started and the dH set to obtain an isokinetic sampling rate. Sixteen (16) sample points were traversed for 4.0 minutes each for a total of sixty four (64) minutes.

SCAQMD Method 5.1



1. Temperature Sensor
2. Glass Probe and Nozzle
3. S-Type Pitot Tube
4. Stack Wall
5. Inclined Manometer
6. Temperature Sensor Meter
7. Impingers with 100 mL
8. Empty Bubbler
9. Bubbler with Tared Silica Gel
10. Ice Bath
11. Back-Up Filter
12. Sealed Pump
13. By-Pass Valve
14. Dry Gas Meter
15. Temperature Gauge

Upon completion of the sampling run, the apparatus was leak checked at a vacuum greater than the highest observed vacuum during the test. The probe and filter was removed from the train and sealed, then the train was transported to the mobile laboratory for recovery.

The filter and the loose particulate was carefully removed from the filter holder with tweezers and placed into a labeled petri dish. The Probe and nozzle was rinsed at least 3 times or until no visible particulate was present, all rinses were added to the bottle labeled "Impinger Catch." The impinger's solution was also measured. The samples were transported to Quantum Analytical Services, Inc. laboratory for analysis.

The filter was oven dried at 105°C for one hour and then placed in a desiccator for two hours and weighed. The filter was then placed in the desiccator for another two hours and weighed for the second time. The "Impinger Catch" was also dried in a preweighed beaker on a hot plate and then desiccated to a constant weight.

6.6 SCAQMD Method 100.1 - Continuous Gaseous Emissions Sampling

A continuous gas sample was extracted from the stack through a coarse filter, heated stainless steel probe, and Teflon line attached to our iced sample conditioner followed by the electronic thermal cooler. The sample is then drawn via 3/8" Teflon line into the climate controlled Mobile Emission Laboratory and delivered to the analyzers through the manifold, dedicated valves, and pressure indicators.

Prior to beginning of testing, a system leak check, calibration error, and system bias check was performed. The leak check was accomplished by plugging the probe tip and drawing at least 20" Hg vacuum on the entire sampling system. When all flow meters indicate 0.0 SCFH flow, the system is proven to be free of any leaks.

The calibration error check was performed as follows: After zeroing all analyzers, EPA Protocol No. 1 gases are used to calibrate each analyzer within 80-100% of full scale of the selected range. Then a 40%-60% of the selected range gas is introduced to each analyzer. Additionally, a system bias calibration check is performed by passing EPA protocol I zero and calibration gases through the entire sampling system using a three-way valve located at the probe tip. Sampling system bias checks are determined by comparing the external calibration values to that of the values when introduced directly to each instrument.

To verify the latest sample conditioning requirements for SCAQMD Method 100.1, two type-k thermocouples was used to measure the exit temperatures from the sample conditioner and electronic chiller. The gas temperature at the outlet of the sample conditioner was kept below 60°F and the temperature from the chiller was maintained below 37°F.

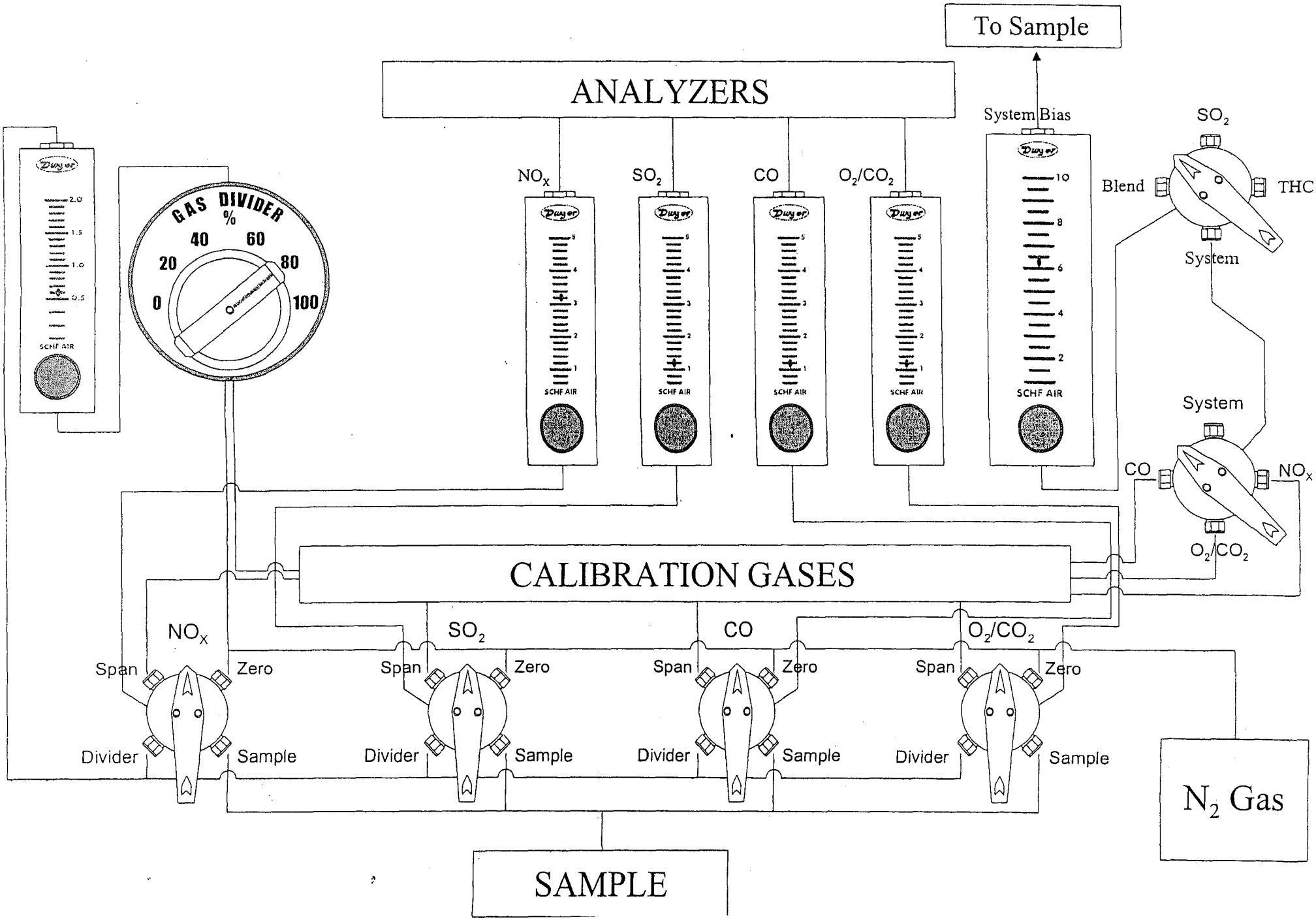
A NO_x conversion efficiency (CE) test was performed as required by SCAQMD on-site for the test program. The specifications of the instruments used for the SCAQMD 100.1 sampling are as follows:

NO_x CHEMILUMINESCENT ANALYZER	*THERMO ELECTRON Model 10S Serial No. 32621-242*
Ranges	0-2.5 ppm, 0-10 ppm, 0-20 ppm, 0-100 ppm, 0-250 ppm, 0-500 ppm, 0-1,000 ppm, 20-2,500 ppm, 0-10,000 ppm
Output	1-10mV, 0-10V
Linearity	+/- 1% of full scale
Operating Temperature	375°C (Moly Converter)
Detection Limit	0.5 ppm
Response Time (0%-90%)	1.5 Seconds in NO mode 1.7 Seconds in NO_x mode
Accuracy	+/- 1% of full scale
Drift	Negligible after ½ hour warm up
Sample Flow rate	2 scfh

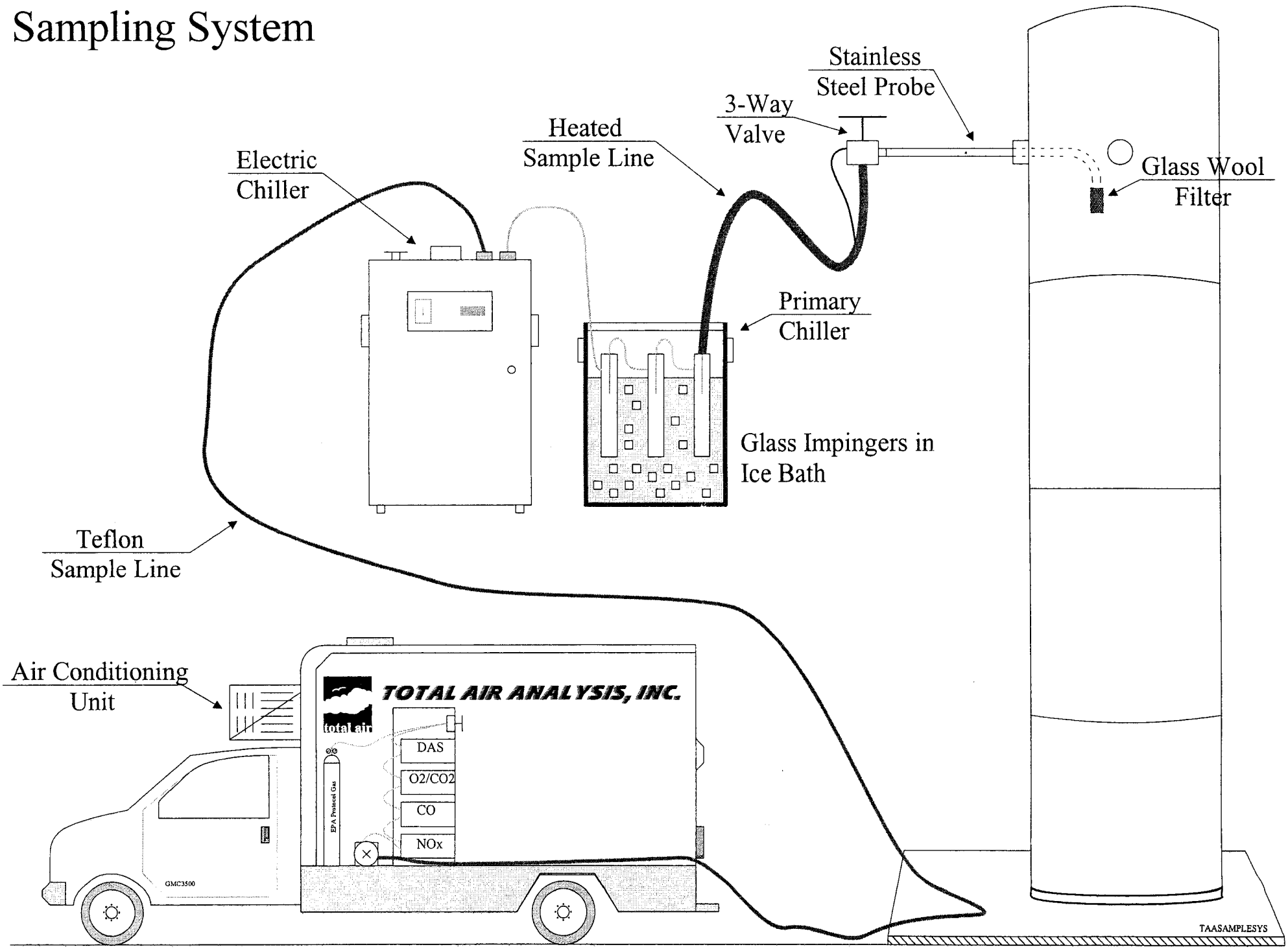
CO_2 ANALYZER Non-Dispersive Infrared (NDIR)	*SERVOMEX, Model 1400 B Serial No. 4363*
Ranges	0%-25%, single range
Output	0-1 V or 4-20 mA (isolated)
Linearity	+/- 1% of full scale
Operating Temperature	0 to 40°C
Detection Limit	0.1%
Response Time (0%-90%)	<30 Seconds
Accuracy	+/- 1% of full scale
Repeatability	+/- 1% of full scale
Drift	<1% of full scale per 24 hours
Sample Flow Rate	0.5 – 1 li./min

CO, California Analytical Instruments (CAI) Non-Dispersive Infrared (NDIR)	*Model 602 Serial No. 512011*
Ranges	0-25 ppm, 0-10,000 ppm
Output	0-10V
Linearity	+/- 0.5%
Operating Temperature	5-45°C
Detection Limit	1.0 ppm
Response Time (0%-90%)	20 seconds
Accuracy	+/- 0.1%
Repeatability	< 1.0% of full scale
Noise	< 1.0% of full scale
Drift	<+/- 1% of full scale per 24 hours
Sample Flow Rate	0.5 – 2.0 l pm

MANIFOLD SCHEMATIC



Total Air Analysis, Inc.
Sampling System



O_2 ANALYZER, PARAMAGNETIC	*SERVOMEX, Model 1400*
Ranges	Selectable from 0%-1% up to 0%-100%
Output	0-1 V
Linearity	+/- 1% of full scale
Operating Temperature	5 to 50°C
Detection Limit	0.1%
Response Time (0%-90%)	<15 Seconds
Accuracy	+/- 0.1%
Repeatability	+/- 0.1%
Drift	<0.1%
Sample Flow Rate	1-2 li./min

THERMAL ELECTRIC SAMPLE COOLER	*BALDWIN TESTER CHOICE Model No. 5210*
Maximum Inlet Gas Temperature	+ 450 °F
Maximum Inlet Gas Dewpoint	+138 °F
Maximum Inlet Water Concentration	30% by volume
Maximum Ambient Temperature	+104 °F
Maximum Inlet Pressure	50 psig
Maximum Sample Gas Flow Rate	8 li/min (12.9 scfh)
Ambient Temperature Range	+40 to 104 °F
Outlet Sample Gas Dewpoint	<36 °F +/- 1 °F
Power	740 Watts
Water Removal	Peristaltic Drain Pump

STRIP CHART RECORDER	*YOKOGAWA Model HR 2400*
Scan Cycle Time	1-60 Seconds
Scanning Rate	60 ms/Channel
Input Bias	Less than 10mA
Chart Speed	1-15,000 mm/hr
Maximum Allowable Input Voltage	60 VDC
Recording Accuracy	+/- 0.1 of effective range
Chart Speed Accuracy	+/- 0.1% recordings greater than 1 m
Data Acquisition System	Varilink Digital Software

MOBILE EMISSIONS LABORATORY	*GMC 15' BOX VAN*
Insulation	Fully Insulated
Air Conditioning	1 Full-size Coleman Air Conditioner
Computer	IBM Compatible System

Calculations:

Corrected Concentrations = (Raw Conc. – Avg. Zero) x Cal. Gas Value/(Avg. Span – Avg. Zero)
ppm NO_x @ 15% O_2 = Corrected Concentrations x 5.95/(20.95 - %O_2 drift corr.)
LB/hr, Emission Rate = Corrected Concentrations x **1.583×10^{-7} @ 60 °F** x DSCFM x M_d
1.552×10^{-7} @ 70 °F
1.558×10^{-7} @ 68 °F
M_d = Dry Molecular Weight of NO_x and CO= 46 and 28
g/bhp-hr = lb/hr * (453.6 g/lb)/(bhp-eng.)
NO_2 Conversion Efficiency, % CE = $(D_3 - D_2/D_1) \times 100$
Where: D_1 = ppmv, NO_2 (cylinder)
D_2 = ppmv, reading NO mode
D_3 = ppmv, NO_2, NO_x mode

6.7 ASTM D-1945 – ROGs Emissions (High Level)

A gas sample was withdrawn from the inlet fuel source at a constant rate into a new Tedlar bag. Reactive Organic Gases (ROGs) as Total Non-Methane Ethane Compounds (TNMEOC) were analyzed.

The samples were analyzed using gas chromatograph equipped with oxidizer and methanizer. The results from the analysis are reported as Total Non-Methane Ethane Organic Compounds measured as Methane in ppmv.

6.8 SCAQMD Method 25.3 – ROGs Emissions (Low Level)

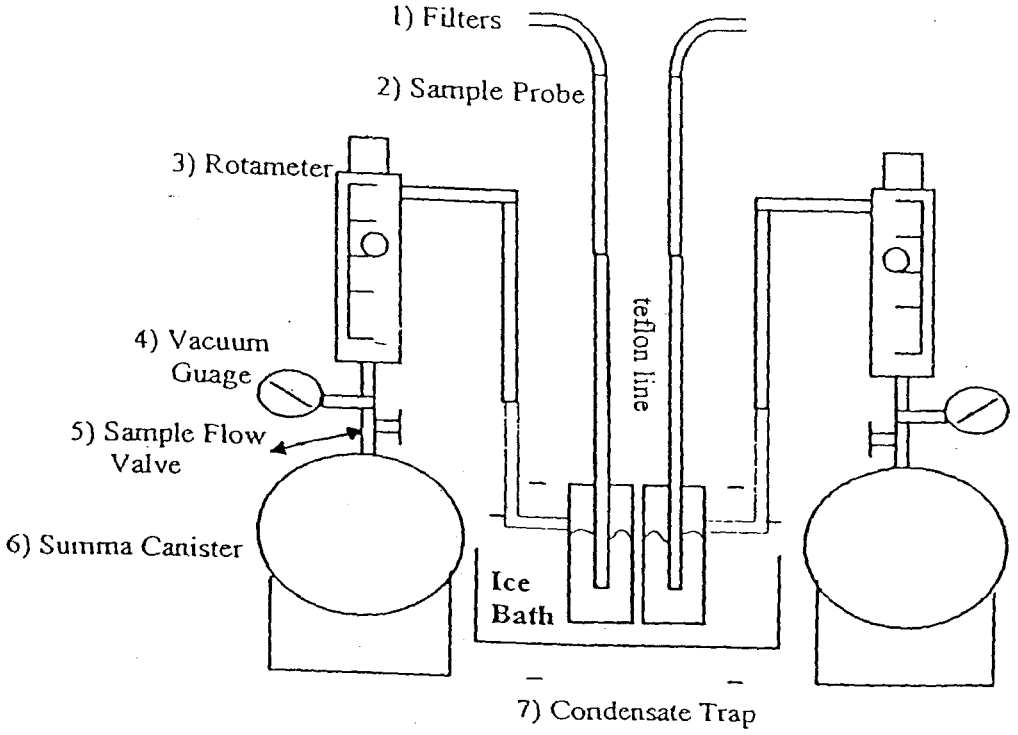
Sample was extracted from the stack at a constant rate through an ultra pure water trap immersed in ice followed by an evacuated 6-liter tank. Heavy organic components were trapped as liquids in the water trap. Lighter components passed through the water trap into the tank. After sampling was completed, the tanks and the water traps were sent to Almega Environmental laboratory for analysis.

In the laboratory, a Total Organic Carbon (TOC) analyzer according to EPA Method 415.1 determined the organic content of the water trap. The organic content of the sample in the tank was measured according to SCAQMD Method 25.3 using Total Combustion Analysis (TCA). The sample was analyzed using gas chromatograph equipped with oxidizer and methanizer. The Total Non-Methane Ethane Organic Compounds (TNMEOC) were separated from CO, CO_2, and CH_4 via a chromatograph column. The TNMEOC were oxidized to CO_2 via oxidizer then reduced to CH_4 via methanizer and finally detected by Flame Ionization Detector (FID). The results from the independent analyses of the water traps and tanks were combined and reported as Total Non-Methane Ethane Organic Compounds measured as Methane in ppmv.

TCA Sampling Schematic

SCAQMD Method 25.3

(low concentration levels)



1) Filter Nozzels with Glass fiber

2) Sample Probe, 1/8" Stainless Steel tubing, with teflon sample line

3) Rotameter, Specifically designed for low flow vacuum applications 100 cc/min. with stainless steel top mounted critical flow valve

4) Vacuum Guage

5) Sample Flow Valve

6) Summa Canister, 6 liters Stainless Steel or Silico can

7) Condensate Traps, 10ml UHP water traps

Calculations:

$$C_{sa}\ (Tank) = \frac{C_{st} \times A_{sa} \times P_f \times D}{A_{st} \times P_i}$$

$$C_{sa}\ (Trap) = \frac{C_{st} \times A_{sa} \times P_f \times D}{A_{st} \times P_i \times}$$

Where:

C_{sa}	=	CO, CH_4, CO_2 or backflush concentration corresponding to peak being measured, ppmv
C_{st}	=	Concentration of CO, CH_4 or CO_2 in the standard, ppmv
A_{sa}	=	Area of charted response curve for the CO, CH_4, CO_2 or backflush sample in identical units
A_{st}	=	Area of charted response curve for the standard in identical units to A_{sa}
Pi	=	Initial pressure of sample in tank as received after sample collection, Torr
P_f	=	Final pressure to which the sample was pressurized, Torr
D	=	Dilution Factor

6.9 *SCAQMD 307-91 – Total Sulfur as H_2S*

A new ten-liter Tedlar bag fitted with polypropylene valve or the equivalent was used for sample transportation and storage. The bag was leak checked and purged with ultra pure nitrogen and stored in a safe area. Prior to sampling, the bag was conditioned to the fuel gas by filling and emptying the bag at least three times before the actual sample was taken. The sample was collected in a dark container to prevent sunlight from modifying the sample matrix.

The sample was analyzed within 24-hours of the sampling time. This Inlet sample was analyzed for Total Reduced Sulfur (TRS) as H_2S by Quantum Analytical Services, Inc.

Calculations:

1) Calculating Total Sulfur from the Inlet = Total Sulfur Emission @ Outlet
   Since Total Sulfur In = Total Sulfur Out (mass emissions)
2) Calculate lb/hr (Inlet)
   lb/hr = ppm * scfm * 1.583×10^{-7} * 64
3) Solve for ppm @ Outlet
   ppmv = lb/hr/dscfm *1583×10^{-7} * M.W.

6.10 EPA Method 19 – Emission Rates Determination using Calculated Stack Gas Flowrate

The fuel usage was monitored and recorded for the duration of the test. The stack gas flowrate was then calculated stochiometrically based on the analyzed gas heating value taken the day of testing and analyzed by Quantum Analytical Services, Inc. (See Appendix G.)

Calculations:

Stack gas flow rate = Fuel Flow rate x Heat Content x F Factor x $(20.9/(20.9-O_2)$

7.0 Test Results and Discussion

The compliance test was conducted at the outlet of each I.C. Engine for emissions of Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Oxygen (O_2), and Reactive Organic Compounds (ROGs) (determined as Total Non-Methane Ethane Hydro-Carbons (TNMEHC)), and Total Sulfur content. Single (1 hour) sample runs were performed at normal operating load. In addition, 15 minute sample runs were performed to verify NOx and CO concentrations at Low and High operating loads. Eng #2 normal load was averaged for Two 30 minute loads.

Internal Calibrations, System Bias Checks, and an NO_2 converter test were conducted and the data can be found in Appendix A. The flue gas temperature out of the primary water knockout was maintained below 50 ^{0}F and below 37 ^{0}F out of the Thermal Electric Chiller. The heated sample line automatically maintains approximately 250 ^{0}F.

Exhaust low-level ROGs were analyzed by Almega Environmental laboratory. The analyzed O_2% and CO_2% matched with the on-line instrument O_2 % and CO_2 % consistently. Inlet high-level ROGs were analyzed by Quantum Analytical Services, Inc. taken from the inlet fuel. The inlet fuel was taken from the Landfill's #2 Flare line.

Particulate Matter (PM) emissions were measured via SCAQMD Method 5.1. Sulfur Dioxide (SO_2) determination is derived from the fuel analysis and calculated from Total Sulfur compounds. (See Appendix E – Total Sulfur.) All results were below limits.

Results of the Compliance test and their emission limits are in the Summary of Results section.

8.0 Quality Assurance and Quality Control

Total Air Analysis, Inc. applies stringent quality control and quality assurance procedures to ensure the validity of measurements for all projects. Our QA/QC procedures are documented in detailed Quality Assurance Project Plans similar to those used by the EPA, CARB, SCAQMD, and SDAPCD.

8.1 QA/QC Overview

Our QA/QC procedures follow guidelines in *Quality Assurance Handbook for Air Pollution Measurement Systems*, Volumes I through III. These procedures outline pretest preparation and calibrations of sampling equipment, post-test sample handling, and post-test calibrations. Standardized, written procedures, calculator programs, and spreadsheets are used for test planning, pre-surveys, equipment checklists, preliminary calculations, data and sample collection, sample tracking, data analysis, and reporting. Pre-test preparations and maintenance include organization of the following equipment:

- Calibrated pitots, balances, TCs, control boxes, sampling train specific for moisture, sample probes suitable for type of sampling to be done, and support equipment such as tools, safety gear, radios, and spares.

Test procedures follow applicable CARB/EPA or other approved test methods. For non-continuous sampling systems (moisture train, etc.), these procedures specify the following:

- Pre-test and post-test leak checks on both pitot connections and moisture trains.
- Maintenance of pitot tubes in a horizontal attitude by employment of special rail systems or jigs.
- Proper configuration of moisture train.
- Sample and velocity traverses, number and location of sampling points, check for cyclonic flow; stratification checks.
- Minimum sample time and volume for moisture determination.
- Required temperature limitations.
- Other test method-specific procedures.

8.2 QA/QC Equipment Calibration Procedures

Table 3 contains the specific QA/QC equipment calibration requirements that are strictly followed by Total Air Analysis personnel.

TABLE 3
QUALITY ASSURANCE / QUALITY CONTROL CALIBRATION TABLE

Component	*Frequency of Calibration*	*Requirements of Calibration*	*Limits of Calibration*
Pitots	Prior to each source testing program and semiannually	Visual inspection and measurements of angles and distances	C_p is assumed to be 0.84 if all measurements are within specification
Temperature Sensors	Bimonthly	Ice water, boiling water, and boiling oil	$\pm$ 1.5% deviation from referenced mercury in-glass thermometer
Barometer	Semiannual	Comparison to mercury in-glass barometer	$\pm$0.1 inches from deviation from referenced mercury in-glass thermometer
Reference Wet Test Meter	Semiannual	Calibrated against an NBS traceable orifice or NBS laminar flow element	$Y_{rm} = 1.00 \pm 0.05$
Analyzer Linearity Checks	Daily Per Site	3 points – 0.%, 40% or 60% and 80% of full scale	Analyzer linearity = $\pm$ 2% from actual value
Gas Divider Verification	Daily Per Site	6 point linearity check followed by internal calibration	Gas divider = $\pm$ 2% from verification cylinder value
NO_2 Conversion Efficiency	Daily Per Site	NO_2 calibration gas direct to NO_x analyzer	Greater than 90% conversion efficiency

Appendix A

SCAQMD Method 100.1

Calibrations, DAS, and Stripcharts

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 1

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #2
Load: High Load (~950 kW)
Start Date: 7/17/2008
End Date: 7/17/2008

Start Time: 8:30
End Time: 8:44

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.0	23.00	18.00	875.0
	MID	88.0	9.06	8.95	452.0
	ZERO	0.00	0.00	0.00	0.00
Initial Analyzer Calibration Check, Cai	HIGH	222.8	22.95	17.94	877.0
	MID	87.3	8.88	9.02	449.0
	ZERO	0.00	0.02	0.00	0.00
Response Time (seconds)		26	21	22	21
Initial Analyzer Calibration Error, Ei	HIGH	0.32	-0.20	-0.24	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	-0.28	-0.72	0.28	-0.30
	ZERO	0.00	0.08	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	86.1	8.82	8.96	869.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.1	0.00	0.01	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.48	-0.24	-0.24	-0.80
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.04	-0.08	0.04	0.00
Final Bias Check, Cbf	UPSCALE	85.1	8.86	9.04	866.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.3	0.02	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	-0.88	-0.08	0.08	-1.10
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.12	0.00	0.12	0.00
Drift Check, D	UPSCALE	-0.40	0.16	0.32	-0.30
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.08	0.08	0.08	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.20	0.01	0.02	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		85.60	8.84	9.00	867.50
Average Measured Concentration, Cavg		44.31	6.72	12.72	534.07
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**45.45**	**6.88**	**12.65**	**538.68**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 2

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #2
Load: Low Load (~600 kW)
Start Date: 7/17/2008
End Date: 7/17/2008

Start Time: 8:50
End Time: 9:04

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.80	22.95	17.94	877.00
(Must repeat if drift from previous test >=3%	MID	87.30	8.88	9.02	449.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	0.00	0.02	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.32	-0.20	-0.24	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	-0.28	-0.72	0.28	-0.30
	ZERO	0.00	0.08	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	86.1	8.82	8.96	869.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.1	0.00	0.01	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.48	-0.24	-0.24	-0.80
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.04	-0.08	0.04	0.00
Final Bias Check, Cbf	UPSCALE	85.1	8.86	9.04	866.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.3	0.02	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	-0.88	-0.08	0.08	-1.10
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.12	0.00	0.12	0.00
Drift Check, D	UPSCALE	-0.40	0.16	0.32	-0.30
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.08	0.08	0.08	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.20	0.01	0.02	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		85.60	8.84	9.00	867.50
Average Measured Concentration, Cavg		57.51	6.02	13.33	483.20
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**59.05**	**6.17**	**13.27**	**487.38**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 3

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #2
Load: Normal Load (~950 kW)
Start Date: 7/17/2008
End Date: 7/17/2008

Start Time: 9:20
End Time: 11:27

Concentration Unit		NOx	O2	CO2	CO
High-Range Gas Fraction of Span		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.80	22.95	17.94	877.00
(Must repeat if drift from previous test >=3%	MID	88.00	8.88	9.02	449.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	0.00	0.02	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.32	-0.20	-0.24	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	0.00	-0.72	0.28	-0.30
	ZERO	0.00	0.08	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	86.1	8.82	8.96	869.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.1	0.00	0.01	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.76	-0.24	-0.24	-0.80
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.04	-0.08	0.04	0.00
Final Bias Check, Cbf	UPSCALE	85.1	8.86	9.04	866.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.3	0.02	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	-1.16	-0.08	0.08	-1.10
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.12	0.00	0.12	0.00
Drift Check, D	UPSCALE	-0.40	0.16	0.32	-0.30
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.08	0.08	0.08	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.20	0.01	0.02	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		85.60	8.84	9.00	867.50
Average Measured Concentration, Cavg		48.25	6.58	12.83	520.97
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**49.51**	**6.74**	**12.77**	**525.47**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 4

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #2
Load: Normal Load (~950 kW)
Start Date: 7/17/2008
End Date: 7/17/2008

Start Time: 9:20
End Time: 11:27

High-Range Gas Fraction of Span Span		NOx ppm	O2 %	CO2 %	CO ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.80	22.95	17.94	877.00
(Must repeat if drift from previous test >=3%	MID	88.00	8.88	9.02	449.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	0.00	0.00	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.32	-0.20	-0.24	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	0.00	-0.72	0.28	-0.30
	ZERO	0.00	0.00	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	85.1	8.86	9.04	866.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.3	0.02	0.03	0.00
Initial System Calibration Bias, Bi	UPSCALE	-1.16	-0.08	0.08	-1.10
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.12	0.08	0.12	0.00
Final Bias Check, Cbf	UPSCALE	85.6	8.85	8.95	870.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	2.4	0.02	0.01	0.00
Final System Calibration Bias, Bf	UPSCALE	-0.96	-0.12	-0.28	-0.70
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.96	0.08	0.04	0.00
Drift Check, D	UPSCALE	0.20	-0.04	-0.36	0.40
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.84	0.00	-0.08	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		1.35	0.02	0.02	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		85.35	8.86	9.00	868.00
Average Measured Concentration, Cavg		48.25	6.58	12.83	520.97
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**49.13**	**6.73**	**12.77**	**525.17**

Total Air Analysis Data Acquisition
Bradley ICE # 2 , High Load (~950kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/18/12	08:30:27	6.69	12.78	45.2	532
07/18/12	08:31:27	6.7	12.74	43.6	535
07/18/12	08:32:27	6.67	12.71	46.3	532
07/18/12	08:33:27	6.7	12.67	45.7	530
07/18/12	08:34:27	6.74	12.68	44	536
07/18/12	08:35:27	6.78	12.67	42.3	541
07/18/12	08:36:27	6.73	12.72	43.8	536
07/18/12	08:37:27	6.68	12.77	45.3	529
07/18/12	08:38:42	6.68	12.72	46.2	534
07/18/12	08:39:27	6.71	12.69	43.9	534
07/18/12	08:40:27	6.75	12.67	44.7	537
07/18/12	08:41:27	6.75	12.71	43.7	536
07/18/12	08:42:27	6.76	12.72	43.2	537
07/18/12	08:43:27	6.75	12.65	43	538
07/18/12	08:44:38	6.65	12.86	43.7	524
	Average	6.72	12.72	44.31	534.07

Total Air Analysis Data Acquisition
Bradley ICE # 2 , Low Load (~600kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/18/12	08:50:27	6.11	13.24	60.2	488
07/18/12	08:51:37	6.06	13.22	61	491
07/18/12	08:52:27	5.95	13.38	60.7	481
07/18/12	08:53:37	5.91	13.46	62.3	480
07/18/12	08:54:27	5.9	13.45	65.2	485
07/18/12	08:55:27	5.95	13.42	63.2	484
07/18/12	08:56:27	5.96	13.41	57.7	484
07/18/12	08:57:27	6.02	13.34	55.4	482
07/18/12	08:58:27	6.05	13.31	55.1	483
07/18/12	08:59:37	6.02	13.3	54.2	486
07/18/12	09:00:27	6.08	13.28	52.6	483
07/18/12	09:01:27	6.07	13.31	53	480
07/18/12	09:02:27	6.07	13.32	53.7	479
07/18/12	09:03:27	6.07	13.27	54	483
07/18/12	09:04:27	6.08	13.29	54.3	479
	Average	6.02	13.33	57.51	483.20

Total Air Analysis Data Acquisition

Bradley ICE # 2 , Normal Load (~900kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)	
07/18/12	09:20:27	6.36	13.03	59.3	504	
07/18/12	09:21:37	6.36	13.01	59.1	504	
07/18/12	09:22:27	6.38	13.03	57.5	504	
07/18/12	09:23:44	6.38	13.14	58.1	505	
07/18/12	09:24:27	6.4	13.07	56.2	505	
07/18/12	09:25:27	6.42	13.13	56.8	504	
07/18/12	09:26:27	6.44	13.09	55.6	509	
07/18/12	09:27:27	6.44	13.08	56	507	
07/18/12	09:28:27	6.48	13.01	54.1	510	
07/18/12	09:29:37	6.43	13.09	55.3	510	
07/18/12	09:30:27	6.4	13.11	56.4	509	
07/18/12	09:31:27	6.46	12.97	55.7	508	
07/18/12	09:32:27	6.49	12.98	53.2	512	
07/18/12	09:33:37	6.5	12.94	51.2	509	
07/18/12	09:34:27	6.54	12.92	50.7	516	
07/18/12	09:35:27	6.5	13.03	51.7	516	
07/18/12	09:36:27	6.49	12.97	53.1	513	
07/18/12	09:37:37	6.51	12.95	53	511	
07/18/12	09:38:27	6.49	12.93	52.9	515	
07/18/12	09:39:37	6.5	12.92	53.1	510	
07/18/12	09:40:27	6.51	12.93	52.1	514	
07/18/12	09:41:27	6.48	12.93	53.5	510	
07/18/12	09:42:27	6.48	13.06	53.5	511	
07/18/12	09:43:27	6.52	13.01	51.8	513	
07/18/12	09:44:27	6.48	13.01	54.8	512	
07/18/12	09:45:27	6.51	13	53.1	512	
07/18/12	09:46:27	6.5	12.91	52.4	512	
07/18/12	09:47:27	6.47	12.93	53.4	511	
07/18/12	09:48:27	6.51	12.96	54.4	510	
07/18/12	09:49:27	6.53	13.01	52.4	511	
07/18/12	09:50:27	6.51	12.95	51.7	513	
07/18/12	09:51:27	6.52	12.87	51.5	512	
07/18/12	09:52:27	6.52	12.88	52.6	512	
07/18/12	09:53:27	19.08	1.52	16.6	60	
07/18/12	09:54:27	19.83	0.76	12.5	36	
07/18/12	09:55:27	20.1	0.56	10.5	25	
07/18/12	09:56:27	20.22	0.48	9.4	20	
07/18/12	09:57:27	20.27	0.43	8.6	17	
07/18/12	09:58:27	20.31	0.42	7.9	17	
07/18/12	09:59:27	20.36	0.37	7.4	14	Engine Offline
07/18/12	10:00:27	20.43	0.32	11.3	11	

07/18/12	10:01:27	20.5	0.27	1.5	9	
07/18/12	10:02:27	20.53	0.23	1.5	7	
07/18/12	10:03:27	20.58	0.2	1.3	5	
07/18/12	10:04:27	20.58	0.22	0.7	5	
07/18/12	10:05:27	20.61	0.17	0.6	4	
07/18/12	10:06:31	20.53	0.16	0.7	4	
07/18/12	10:07:27	20.6	0.18	0.8	3	
07/18/12	10:08:27	0.31	0.03	1	849	
07/18/12	10:09:27	0.04	0.04	0.3	867	
07/18/12	10:10:27	6.41	5.79	0.4	236	
07/18/12	10:11:27	8.85	9.01	0.3	0	
07/18/12	10:12:27	8.86	9.04	0.3	0	
07/18/12	10:13:36	8.86	9.03	0.3	0	Calibration
07/18/12	10:14:27	8.85	9.03	0.3	0	
07/18/12	10:15:27	8.83	8.93	0.4	0	
07/18/12	10:16:27	5.68	6.14	21.6	0	
07/18/12	10:17:27	0.05	0.07	84.7	0	
07/18/12	10:18:27	0	0.03	71.4	0	
07/18/12	10:19:27	0	0.1	0.6	0	
07/18/12	10:20:27	0.01	0.2	0.5	0	
07/18/12	10:21:27	0.02	0.31	0.4	0	
07/18/12	10:22:27	0.04	0.38	0.5	0	
07/18/12	10:23:27	0.07	0.42	0.7	0	
07/18/12	10:24:27	0.08	0.47	0.6	0	
07/18/12	10:25:27	0.13	0.5	0.6	0	
07/18/12	10:26:27	0.16	0.49	0.6	0	
07/18/12	10:27:27	0.22	0.46	0.6	0	
07/18/12	10:28:27	0.27	0.44	0.6	0	
07/18/12	10:29:27	0.32	0.39	0.7	0	Leak Check
07/18/12	10:30:27	0.33	0.43	0.7	0	
07/18/12	10:31:27	0.34	0.46	0.7	1	
07/18/12	10:32:27	0.35	0.46	0.6	0	
07/18/12	10:33:36	0.4	0.43	0.8	1	
07/18/12	10:34:27	0.43	0.41	0.6	0	
07/18/12	10:35:27	0.51	0.3	0.7	0	
07/18/12	10:36:27	0.52	0.32	0.9	0	
07/18/12	10:37:27	0.52	0.44	0.9	1	
07/18/12	10:38:27	0.51	0.5	0.9	1	
07/18/12	10:39:36	0.53	0.47	0.8	1	
07/18/12	10:40:30	0.41	0.13	84.4	1	
07/18/12	10:41:36	20.64	0.04	1.2	0	
07/18/12	10:42:28	20.7	0.05	0.8	0	

07/18/12	10:43:27	20.7	0.04	0.8	0	
07/18/12	10:44:27	20.7	0.04	0.8	0	
07/18/12	10:45:36	20.7	0.05	0.8	0	
07/18/12	10:46:27	20.71	0.05	0.8	0	
07/18/12	10:47:27	20.71	0.04	0.9	0	Engine Offline
07/18/12	10:48:27	20.71	0.03	0.9	0	
07/18/12	10:49:27	20.71	0.05	0.9	0	
07/18/12	10:50:27	20.71	0.04	1	0	
07/18/12	10:51:36	20.71	0.04	1	0	
07/18/12	10:52:27	20.71	0.03	0.9	0	
07/18/12	10:53:27	20.71	0.03	1	0	
07/18/12	10:54:27	20.71	0.04	1	0	
07/18/12	10:55:36	17.68	1.1	1.2	0	
07/18/12	10:56:27	15.93	3.4	5.6	193	
07/18/12	10:57:36	6.62	12.74	22.4	454	
07/18/12	10:58:27	6.63	12.79	43.2	531	
07/18/12	10:59:27	6.63	12.79	43.6	532	
07/18/12	11:02:14	6.7	12.72	0.4	530	
07/18/12	11:02:14	6.72	12.72	44.2	539	
07/18/12	11:02:27	6.73	12.73	44.1	539	
07/18/12	11:05:12	5.14	12.71	44	530	
07/18/12	11:05:12	6.75	12.67	43.4	532	
07/18/12	11:05:27	6.75	12.65	43.9	531	
07/18/12	11:06:27	6.76	12.65	43	533	
07/18/12	11:07:27	6.8	12.61	41.6	536	
07/18/12	11:08:27	6.76	12.64	42.5	533	
07/18/12	11:09:27	6.82	12.55	43.9	537	
07/18/12	11:10:27	6.82	12.56	45.2	538	
07/18/12	11:11:27	6.83	12.56	44.8	541	
07/18/12	11:12:27	6.84	12.55	44.6	540	
07/18/12	11:13:27	6.85	12.56	42	537	
07/18/12	11:14:27	6.79	12.58	42.4	532	
07/18/12	11:15:27	6.83	12.57	41.4	538	
07/18/12	11:16:27	6.82	12.58	40.3	538	
07/18/12	11:19:12	6.74	12.62	43.3	531	
07/18/12	11:19:12	6.75	12.63	42.5	527	
07/18/12	11:19:27	6.76	12.64	42.4	529	
07/18/12	11:20:27	6.76	12.64	42.1	529	
07/18/12	11:21:27	6.76	12.66	42.3	530	
07/18/12	11:22:27	6.77	12.62	41.7	532	
07/18/12	11:23:27	6.77	12.61	42	531	
07/18/12	11:24:27	6.82	12.57	40.7	536	
07/18/12	11:27:12	6.8	12.59	41.3	533	
	Average	6.58	12.83	48.25	520.97	

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 1

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #3
Load: Low Load (575 ~ 600 kW)
Start Date: 7/16/2008
End Date: 7/16/2008

Start Time: 12:39
End Time: 12:53

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.0	23.00	18.00	875.0
	MID	88.0	9.06	8.95	452.0
	ZERO	0.00	0.00	0.00	0.00
Initial Analyzer Calibration Check, Cai	HIGH	222.6	23.04	17.93	877.0
	MID	88.4	8.98	8.96	450.0
	ZERO	1.60	0.09	0.00	0.00
Response Time (seconds)		26	21	22	21
Initial Analyzer Calibration Error, Ei	HIGH	0.24	0.16	-0.28	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	0.16	-0.32	0.04	-0.20
	ZERO	0.64	0.36	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	87.3	8.93	8.94	874.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	2.0	0.11	0.01	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.44	-0.20	-0.08	-0.30
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.16	0.08	0.04	0.00
Final Bias Check, Cbf	UPSCALE	85.7	8.94	8.89	870.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	1.4	0.10	0.01	0.00
Final System Calibration Bias, Bf	UPSCALE	-1.08	-0.16	-0.28	-0.70
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	-0.08	0.04	0.04	0.00
Drift Check, D	UPSCALE	-0.64	0.04	-0.20	-0.40
D = ((Cbf - Cbi)/(Span))x100%	ZERO	-0.24	-0.04	0.00	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		1.70	0.11	0.01	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		86.50	8.94	8.92	872.00
Average Measured Concentration, Cavg		70.81	6.16	13.23	512.20
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**71.72**	**6.22**	**13.29**	**513.96**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 2

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #3
Load: High Load (~1000 kW)
Start Date: 7/16/2008
End Date: 7/16/2008

Start Time: 13:00
End Time: 13:14

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.60	23.04	17.93	877.00
(Must repeat if drift from previous test >=3%	MID	88.40	8.98	8.96	450.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	1.60	0.09	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.24	0.16	-0.28	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	0.16	-0.32	0.04	-0.20
	ZERO	0.64	0.36	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	87.3	8.93	8.94	874.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	2.0	0.11	0.01	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.44	-0.20	-0.08	-0.30
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.16	0.08	0.04	0.00
Final Bias Check, Cbf	UPSCALE	85.7	8.94	8.89	870.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	1.4	0.10	0.01	0.00
Final System Calibration Bias, Bf	UPSCALE	-1.08	-0.16	-0.28	-0.70
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	-0.08	0.04	0.04	0.00
Drift Check, D	UPSCALE	-0.64	0.04	-0.20	-0.40
D = ((Cbf - Cbi)/(Span))x100%	ZERO	-0.24	-0.04	0.00	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		1.70	0.11	0.01	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		86.50	8.94	8.92	872.00
Average Measured Concentration, Cavg		72.63	6.71	12.75	531.80
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**73.60**	**6.78**	**12.81**	**533.63**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 3

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #3
Load: Normal Load (~960 kW)
Start Date: 7/16/2008
End Date: 7/16/2008

Start Time: 13:42
End Time: 14:43

Concentration Unit		NOx	O2	CO2	CO
High-Range Gas Fraction of Span		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.60	23.04	17.93	877.00
(Must repeat if drift from previous test >=3%	MID	88.00	8.98	8.96	450.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	1.60	0.09	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.24	0.16	-0.28	0.20
Ei = ((Cma - Cai)/Span)x100%	MID	0.00	-0.32	0.04	-0.20
	ZERO	0.64	0.36	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	85.7	8.94	8.89	870.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	1.4	0.10	0.01	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.92	-0.16	-0.28	-0.70
Bi = ((Cbi-Cai)/Span)x100%	ZERO	-0.08	0.04	0.04	0.00
Final Bias Check, Cbf	UPSCALE	86.6	8.93	8.89	871.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	2.2	0.10	0.01	0.00
Final System Calibration Bias, Bf	UPSCALE	-0.56	-0.20	-0.28	-0.60
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.24	0.04	0.04	0.00
Drift Check, D	UPSCALE	0.36	-0.04	0.00	0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.32	0.00	0.00	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		1.80	0.10	0.01	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		86.15	8.94	8.89	870.50
Average Measured Concentration, Cavg		63.45	6.86	12.56	527.97
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**64.32**	**6.93**	**12.65**	**530.69**

Total Air Analysis Data Acquisition

Bradley ICE # 3 , Low Load (575 ~ 600 kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/16/08	12:39:45	6.17	13.27	69.5	511
07/16/08	12:40:45	6.17	13.23	70	512
07/16/08	12:41:45	6.16	13.24	70.3	514
07/16/08	12:42:45	6.15	13.24	71.9	513
07/16/08	12:43:45	6.15	13.25	71.2	513
07/16/08	12:44:45	6.12	13.28	72.7	513
07/16/08	12:45:45	6.14	13.25	73.7	514
07/16/08	12:46:45	6.16	13.22	71.4	513
07/16/08	12:47:45	6.18	13.21	70.1	513
07/16/08	12:48:45	6.17	13.23	70	510
07/16/08	12:49:45	6.14	13.24	71.7	513
07/16/08	12:50:45	6.18	13.21	70.7	510
07/16/08	12:51:45	6.18	13.21	69.8	511
07/16/08	12:52:45	6.21	13.21	69.8	512
07/16/08	12:53:45	6.18	13.21	69.4	511
	Average	6.16	13.23	70.81	512.20

Total Air Analysis Data Acquisition

Bradley ICE # 3 , High Load (~1000 kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/16/08	13:00:45	6.46	12.97	89.3	530
07/16/08	13:01:45	6.54	12.88	83.2	530
07/16/08	13:02:45	6.59	12.85	79.8	528
07/16/08	13:03:45	6.64	12.79	76.8	529
07/16/08	13:04:45	6.7	12.74	72.8	532
07/16/08	13:05:45	6.7	12.74	72.7	529
07/16/08	13:06:45	6.7	12.76	72.1	532
07/16/08	13:07:45	6.74	12.74	71.3	531
07/16/08	13:08:45	6.76	12.72	69.7	531
07/16/08	13:09:45	6.77	12.76	68.7	535
07/16/08	13:10:45	6.8	12.69	67	533
07/16/08	13:11:45	6.8	12.69	67.2	533
07/16/08	13:12:45	6.8	12.7	67.6	534
07/16/08	13:13:45	6.82	12.66	66.7	535
07/16/08	13:14:45	6.85	12.62	64.5	535
	Average	6.71	12.75	72.63	531.80

Total Air Analysis Data Acquisition

Bradley ICE # 3 , Normal Load (~900kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)	
07/16/08	13:42:45	6.73	12.72	59.4	530	
07/16/08	13:43:45	6.7	12.71	63.9	531	
07/16/08	13:44:45	6.73	12.69	63.5	532	
07/16/08	13:45:45	6.72	12.69	62.9	532	
07/16/08	13:46:45	6.75	12.69	65.1	531	
07/16/08	13:47:45	6.75	12.69	64.4	533	
07/16/08	13:48:45	6.74	12.72	65.9	530	
07/16/08	13:49:45	6.73	12.74	65.4	531	
07/16/08	13:50:45	6.75	12.7	65	530	
07/16/08	13:51:45	6.77	12.65	65.7	530	
07/16/08	13:52:45	6.81	12.58	65.9	529	
07/16/08	13:53:45	6.82	12.55	65.4	528	
07/16/08	13:54:45	6.86	12.55	64	528	
07/16/08	13:55:45	6.84	12.57	63.5	528	
07/16/08	13:56:45	6.86	12.56	64	529	
07/16/08	13:57:45	6.84	12.59	66.1	527	
07/16/08	13:58:47	6.84	12.59	65.4	527	
07/16/08	13:59:45	6.85	12.59	64.8	527	
07/16/08	14:00:45	6.85	12.6	64.9	530	
07/16/08	14:01:45	6.85	12.59	64.5	527	
07/16/08	14:02:45	6.9	12.58	63.8	527	
07/16/08	14:03:45	6.86	12.6	65.4	526	
07/16/08	14:04:45	6.88	12.55	66.2	526	
07/16/08	14:05:45	6.89	12.52	64.1	528	
07/16/08	14:06:45	6.87	12.53	64.1	529	
07/16/08	14:07:45	6.88	12.51	64.6	529	
07/16/08	14:08:45	6.86	12.52	64.8	531	
07/16/08	14:09:45	6.88	12.52	64.2	531	
07/16/08	14:10:45	6.9	12.5	61.6	529	
07/16/08	14:11:45	6.86	12.53	65.3	530	
07/16/08	14:12:45	20.49	0.24	8.2	5	
07/16/08	14:13:45	20.65	0.05	5	2	Port
07/16/08	14:14:45	18.18	1.02	4.3	86	Change
07/16/08	14:15:45	7.11	12.27	56.1	523	
07/16/08	14:16:45	6.93	12.46	62	526	

07/16/08	14:17:45	6.9	12.56	62.7	527
07/16/08	14:18:45	6.88	12.53	64.1	526
07/16/08	14:19:45	6.88	12.52	63.6	525
07/16/08	14:20:45	6.89	12.53	62.7	524
07/16/08	14:21:45	6.91	12.59	63.3	527
07/16/08	14:22:45	6.9	12.55	62.7	524
07/16/08	14:23:45	6.89	12.53	62.7	526
07/16/08	14:24:45	6.92	12.51	61.3	525
07/16/08	14:25:45	6.89	12.53	62.7	525
07/16/08	14:26:45	6.92	12.47	61.5	525
07/16/08	14:27:45	6.9	12.48	62.5	525
07/16/08	14:28:45	6.9	12.53	62.6	526
07/16/08	14:29:45	6.9	12.49	62.5	527
07/16/08	14:30:45	6.91	12.48	62	526
07/16/08	14:31:45	6.93	12.46	61.4	526
07/16/08	14:32:45	6.92	12.47	61.1	527
07/16/08	14:33:45	6.94	12.46	61.8	527
07/16/08	14:34:45	6.89	12.49	61.8	529
07/16/08	14:35:45	6.92	12.49	60.5	528
07/16/08	14:36:45	6.92	12.48	62.3	531
07/16/08	14:37:45	6.91	12.5	62.3	530
07/16/08	14:38:45	6.94	12.48	62.3	528
07/16/08	14:39:45	6.89	12.52	61.7	530
07/16/08	14:40:45	6.87	12.56	63.9	527
07/16/08	14:41:45	6.89	12.56	63.2	525
07/16/08	14:42:45	6.87	12.53	61.6	527
07/16/08	14:43:45	6.87	12.54	63.5	527
	Average	6.86	12.56	63.45	527.97

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 1

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #4
Load: High Load (~950 kW)
Start Date: 7/15/2008
End Date: 7/15/2008

Start Time: 11:20
End Time: 11:34

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		4.44	0.92	0.72	8.75
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.0	23.00	18.00	875.0
	MID	88.0	13.80	10.80	525.0
	ZERO	0.00	0.00	0.00	0.00
Initial Analyzer Calibration Check, Cai	HIGH	222.4	22.93	17.97	872.0
	MID	86.5	13.60	10.42	516.0
	ZERO	0.00	-0.01	0.00	0.00
Response Time (seconds)		26	21	22	21
Initial Analyzer Calibration Error, Ei	HIGH	0.16	-0.28	-0.12	-0.30
Ei = ((Cma - Cai)/Span)x100%	MID	-0.60	-0.80	-1.52	-0.90
	ZERO	0.00	-0.04	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)*	M	H	H	H
	UPSCALE	86.6	22.89	18.06	861.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.1	0.12	0.08	0.00
Initial System Calibration Bias, Bi	UPSCALE	0.04	-0.16	0.36	-1.10
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.04	0.52	0.32	0.00
Final Bias Check, Cbf	UPSCALE	88.4	22.83	17.81	860.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.2	0.04	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	0.76	-0.40	-0.64	-1.20
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.08	0.20	0.12	0.00
Drift Check, D	UPSCALE	0.72	-0.24	-1.00	-0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.04	-0.32	-0.20	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.15	0.08	0.06	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		87.50	22.86	17.94	860.50
Average Measured Concentration, Cavg		64.55	6.57	12.93	505.13
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**64.88**	**6.55**	**12.96**	**513.65**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 2

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #4
Load: Low Load (~600 kW)
Start Date: 7/15/2008
End Date: 7/15/2008

Start Time: 11:51
End Time: 12:05

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		4.44	0.92	0.72	8.75
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	13.80	10.80	525.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.40	22.93	17.97	872.00
(Must repeat if drift from previous test >=3%	MID	86.50	13.60	10.42	516.00
Otherwise, copy calibration check from most recent cal. error determinati	ZERO	0.00	-0.01	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.16	-0.28	-0.12	-0.30
Ei = ((Cma - Cai)/Span)x100%	MID	-0.60	-0.80	-1.52	-0.90
	ZERO	0.00	-0.04	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)	M	H	H	H
	UPSCALE	86.6	22.89	18.06	861.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.1	0.12	0.08	0.00
Initial System Calibration Bias, Bi	UPSCALE	0.04	-0.16	0.36	-1.10
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.04	0.52	0.32	0.00
Final Bias Check, Cbf	UPSCALE	88.4	22.83	17.81	860.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.2	0.04	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	0.76	-0.40	-0.64	-1.20
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.08	0.20	0.12	0.00
Drift Check, D	UPSCALE	0.72	-0.24	-1.00	-0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.04	-0.32	-0.20	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.15	0.08	0.06	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		87.50	22.86	17.94	860.50
Average Measured Concentration, Cavg		69.97	6.08	13.40	483.33
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**70.34**	**6.05**	**13.43**	**491.48**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 3

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #4
Load: Normal Load (~900 kW)
Start Date: 7/15/2008
End Date: 7/15/2008

Start Time: 12:11
End Time: 13:28

Concentration Unit		NOx	O2	CO2	CO
High-Range Gas Fraction of Span		ppm	%	%	ppm
High-Range Gas Fraction of Span		4.44	0.92	0.72	8.75
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	13.80	10.80	525.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.40	22.93	17.97	872.00
(Must repeat if drift from previous test >=3%	MID	88.00	13.60	10.42	516.00
Otherwise, copy calibration check from most recent cal. error determinati	ZERO	0.00	-0.01	0.00	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.16	-0.28	-0.12	-0.30
Ei = ((Cma - Cai)/Span)x100%	MID	0.00	-0.80	-1.52	-0.90
	ZERO	0.00	-0.04	0.00	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)	M	H	H	H
	UPSCALE	86.6	22.89	18.06	861.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.1	0.12	0.08	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.56	-0.16	0.36	-1.10
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.04	0.52	0.32	0.00
Final Bias Check, Cbf	UPSCALE	88.4	22.83	17.81	860.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.2	0.04	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	0.16	-0.40	-0.64	-1.20
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.08	0.20	0.12	0.00
Drift Check, D	UPSCALE	0.72	-0.24	-1.00	-0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.04	-0.32	-0.20	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.15	0.08	0.06	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		87.50	22.86	17.94	860.50
Average Measured Concentration, Cavg		67.11	6.50	12.99	499.70
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**67.46**	**6.48**	**13.02**	**508.12**

Total Air Analysis Data Acquisition
Bradley ICE # 4 , High Load (~950kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/15/08	11:20:53	6.5	12.96	64.3	503
07/15/08	11:21:53	6.53	12.93	62.8	505
07/15/08	11:22:53	6.45	13.01	76.2	504
07/15/08	11:23:53	6.54	12.94	66.5	504
07/15/08	11:24:53	6.54	12.94	66.3	504
07/15/08	11:25:53	6.69	12.8	54.3	513
07/15/08	11:26:53	6.53	12.95	66.3	504
07/15/08	11:27:53	6.48	13.01	72.1	502
07/15/08	11:28:53	6.55	12.97	69.2	504
07/15/08	11:29:53	6.66	12.86	61.9	507
07/15/08	11:30:53	6.64	12.88	59.7	505
07/15/08	11:31:53	6.65	12.85	55.7	509
07/15/08	11:32:53	6.58	12.95	65.7	504
07/15/08	11:33:53	6.55	12.94	64.6	504
07/15/08	11:34:53	6.6	12.92	62.6	505
	Average	6.57	12.93	64.55	505.13

Total Air Analysis Data Acquisition
Bradley ICE # 4 , Low Load (~600kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/15/08	11:51:53	6.05	13.47	62.8	481
07/15/08	11:52:53	6.03	13.45	63.4	482
07/15/08	11:53:53	6.01	13.46	63.6	482
07/15/08	11:54:53	6.04	13.44	66.1	481
07/15/08	11:55:53	6.05	13.43	66.1	482
07/15/08	11:56:53	6.02	13.45	65.1	482
07/15/08	11:57:53	6.08	13.39	61.7	482
07/15/08	11:58:53	5.98	13.47	68.3	481
07/15/08	11:59:53	5.99	13.48	69.7	481
07/15/08	12:00:53	6.16	13.32	60.5	479
07/15/08	12:01:53	6.03	13.42	74	481
07/15/08	12:02:53	6.15	13.33	74.6	481
07/15/08	12:03:53	6.15	13.32	79.5	487
07/15/08	12:04:53	6.22	13.26	83	492
07/15/08	12:05:53	6.19	13.27	91.1	496
	Average	6.08	13.40	69.97	483.33

Total Air Analysis Data Acquisition

Bradley ICE # 4 , Normal Load (~900kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)	
07/15/08	12:11:53	6.43	13.06	72.5	502	
07/15/08	12:12:53	6.4	13.08	75.4	501	
07/15/08	12:13:53	6.43	13.07	74.3	498	
07/15/08	12:14:53	6.47	13.04	72.3	499	
07/15/08	12:15:53	6.48	13.04	73.1	500	
07/15/08	12:16:53	6.49	13.01	68.6	502	
07/15/08	12:17:53	6.43	13.05	71.9	499	
07/15/08	12:18:53	6.48	13.01	68.8	502	
07/15/08	12:19:53	6.47	13.03	71	500	
07/15/08	12:20:53	6.47	13.03	69.6	502	
07/15/08	12:21:53	6.39	13.1	76.7	499	
07/15/08	12:22:53	6.45	13.04	72.9	500	
07/15/08	12:23:53	6.49	13.02	70.9	501	
07/15/08	12:24:53	6.5	13.01	67.7	500	
07/15/08	12:25:53	6.36	13.13	80.2	500	
07/15/08	12:27:00	6.49	13.03	71.3	501	
07/15/08	12:27:53	6.49	13.02	71.4	499	
07/15/08	12:28:53	6.53	12.99	70.4	503	
07/15/08	12:29:53	6.51	12.98	67.8	501	
07/15/08	12:30:53	6.55	12.96	65.1	503	
07/15/08	12:31:53	6.56	12.95	64.2	507	
07/15/08	12:32:53	6.49	13.01	69.5	503	
07/15/08	12:33:53	6.48	13.03	76.2	502	
07/15/08	12:34:53	6.57	12.95	67.9	505	
07/15/08	12:35:53	6.58	12.94	65.9	504	
07/15/08	12:36:53	6.47	13.04	70.5	504	
07/15/08	12:37:53	6.59	12.95	62	506	
07/15/08	12:38:53	19.89	0.86	20.6	21	Port Change
07/15/08	12:39:53	6.67	12.85	60.9	503	
07/15/08	12:40:53	6.55	12.96	65.3	504	
07/15/08	12:41:53	6.58	12.94	62.5	508	
07/15/08	12:42:53	6.55	12.98	67.5	503	
07/15/08	12:43:53	6.52	13	71.6	502	
07/15/08	12:44:53	6.58	12.92	61.5	506	
07/15/08	12:45:53	6.54	12.97	64.1	505	
07/15/08	12:46:53	6.68	12.87	58.4	506	
07/15/08	12:47:53	9.85	10.41	19.5	805	
07/15/08	12:48:53	9.69	10.51	17.9	780	
07/15/08	12:49:53	19.26	1.65	19.3	116	Engine Down Fuel Loss
07/15/08	12:50:53	19.27	1.39	11.2	107	
07/15/08	12:51:53	19.39	1.3	10.4	99	
07/15/08	12:52:53	19.61	1.06	9.8	85	
07/15/08	12:53:53	20.01	0.75	9.2	55	

07/15/08	12:54:53	18.75	2.27	32	927	
07/15/08	12:55:53	5.94	13.44	105.2	-99999	
07/15/08	12:56:53	2.83	16.41	223.8	815	Engine Down
07/15/08	12:57:53	4.79	14.55	173.6	553	Fuel Loss
07/15/08	12:58:53	5.59	13.81	75	507	
07/15/08	12:59:53	5.83	13.56	68.4	493	
07/15/08	13:00:53	5.97	13.46	66.4	483	
07/15/08	13:01:53	6.08	13.37	66.1	470	
07/15/08	13:02:53	6.17	13.3	65.3	472	
07/15/08	13:03:53	6.14	13.34	71.8	477	
07/15/08	13:04:53	6.26	13.24	71.8	482	
07/15/08	13:05:53	6.77	12.76	44.7	516	
07/15/08	13:06:53	6.49	13	57.4	500	
07/15/08	13:07:53	6.14	13.28	98.8	498	
07/15/08	13:08:53	6.26	13.19	93.3	498	
07/15/08	13:09:53	6.36	13.11	82.3	498	
07/15/08	13:10:53	6.5	12.99	69.6	496	
07/15/08	13:11:53	6.44	13.08	76.1	495	
07/15/08	13:12:53	6.48	13.08	76.3	498	
07/15/08	13:13:53	6.52	12.96	71.4	502	
07/15/08	13:14:53	6.52	12.96	71.8	497	
07/15/08	13:15:53	6.54	12.98	69.1	498	
07/15/08	13:16:53	6.53	13.01	71.5	499	
07/15/08	13:17:53	6.54	13.06	70.8	500	
07/15/08	13:18:53	6.58	12.84	66.2	499	
07/15/08	13:19:53	6.56	12.88	67.4	500	
07/15/08	13:20:53	6.56	12.89	68.1	500	
07/15/08	13:21:53	6.64	12.82	62.9	506	
07/15/08	13:22:53	6.55	12.9	67.1	501	
07/15/08	13:23:53	6.58	12.86	68.5	502	
07/15/08	13:24:53	6.6	12.86	68.2	503	
07/15/08	13:25:53	6.61	12.76	45.9	502	
07/15/08	13:26:53	6.6	12.61	4.5	501	
07/15/08	13:27:53	6.61	12.61	4.2	502	
07/15/08	13:28:53	6.85	12.75	56.9	489	
	Average	6.50	12.99	67.11	499.70	

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 1

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #5
Load: High Load (~1020 kW)
Start Date: 7/16/2008
End Date: 7/16/2008

Start Time: 8:30
End Time: 8:44

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.0	23.00	18.00	875.0
	MID	88.0	9.06	8.95	452.0
	ZERO	0.00	0.00	0.00	0.00
Initial Analyzer Calibration Check, Cai	HIGH	222.7	22.99	17.97	879.0
	MID	87.0	8.95	8.96	448.0
	ZERO	0.00	-0.03	0.02	0.00
Response Time (seconds)		26	21	22	21
Initial Analyzer Calibration Error, Ei	HIGH	0.28	-0.04	-0.12	0.40
Ei = ((Cma - Cai)/Span)x100%	MID	-0.40	-0.44	0.04	-0.40
	ZERO	0.00	-0.12	0.08	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	86.1	8.97	8.94	869.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.0	0.11	0.02	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.36	0.08	-0.08	-1.00
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.00	0.56	0.00	0.00
Final Bias Check, Cbf	UPSCALE	87.0	8.97	8.93	868.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	1.8	0.11	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	0.00	0.08	-0.12	-1.10
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.72	0.56	0.04	0.00
Drift Check, D	UPSCALE	0.36	0.00	-0.04	-0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.72	0.00	0.04	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.90	0.11	0.03	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		86.55	8.97	8.94	868.50
Average Measured Concentration, Cavg		45.45	6.83	12.65	531.93
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**45.77**	**6.87**	**12.68**	**535.91**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 2

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #5
Load: Low Load (~600 kW)
Start Date: 7/16/2008
End Date: 7/16/2008

Start Time: 8:59
End Time: 9:13

Species		NO_x	O_2	CO_2	CO
Concentration Unit		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.70	22.99	17.97	879.00
(Must repeat if drift from previous test >=3%	MID	87.00	8.95	8.96	448.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	0.00	-0.03	0.02	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.28	-0.04	-0.12	0.40
Ei = ((Cma - Cai)/Span)x100%	MID	-0.40	-0.44	0.04	-0.40
	ZERO	0.00	-0.12	0.08	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	86.1	8.97	8.94	869.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.0	0.11	0.02	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.36	0.08	-0.08	-1.00
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.00	0.56	0.00	0.00
Final Bias Check, Cbf	UPSCALE	87.0	8.97	8.93	868.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	1.8	0.11	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	0.00	0.08	-0.12	-1.10
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.72	0.56	0.04	0.00
Drift Check, D	UPSCALE	0.36	0.00	-0.04	-0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.72	0.00	0.04	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.90	0.11	0.03	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		86.55	8.97	8.94	868.50
Average Measured Concentration, Cavg		51.87	6.15	13.34	487.47
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**52.37**	**6.17**	**13.37**	**491.11**

Calibration Error, Bias, Drift & Drift-Corrected Concentration.

Run Number 3

CEM Operator: RPL

Facility: Bradley Landfill
Source: ICE #5
Load: Normal Load (~960 kW)
Start Date: 7/16/2008
End Date: 7/16/2008

Start Time: 9:25
End Time: 10:21

Concentration Unit		NOx	O2	CO2	CO
High-Range Gas Fraction of Span		ppm	%	%	ppm
High-Range Gas Fraction of Span		0.89	0.92	0.72	0.88
Span		250	25	25	1000
Span Gas Concentration, Cma	HIGH	222.00	23.00	18.00	875.00
	MID	88.00	9.06	8.95	452.00
	ZERO	0.00	0.00	0.00	0.00
Drift Check from Previous Run less than 3 %?	UPSCALE	Yes	Yes	Yes	Yes
Yes (Y) or No (N)	ZERO	Yes	Yes	Yes	Yes
Initial Analyzer Calibration Check, Cai	HIGH	222.70	22.99	17.97	879.00
(Must repeat if drift from previous test >=3%	MID	88.00	8.95	8.96	448.00
Otherwise, copy calibration check from most recent cal. error determinatio	ZERO	0.00	-0.03	0.02	0.00
Initial Analyzer Calibration Error, Ei	HIGH	0.28	-0.04	-0.12	0.40
Ei = ((Cma - Cai)/Span)x100%	MID	0.00	-0.44	0.04	-0.40
	ZERO	0.00	-0.12	0.08	0.00
Initial Bias Check, Cbi	Upscale High (H) or Mid (M)?	M	M	M	H
	UPSCALE	86.1	8.97	8.94	869.0
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	0.0	0.11	0.02	0.00
Initial System Calibration Bias, Bi	UPSCALE	-0.76	0.08	-0.08	-1.00
Bi = ((Cbi-Cai)/Span)x100%	ZERO	0.00	0.56	0.00	0.00
Final Bias Check, Cbf	UPSCALE	87.0	8.97	8.93	868.00
(Select Upscale Calibration Gas Closest to Stack Gas Concentration)	ZERO	1.8	0.11	0.03	0.00
Final System Calibration Bias, Bf	UPSCALE	-0.40	0.08	-0.12	-1.10
Bf = ((Cbf - Cai)/(Span))x100%	ZERO	0.72	0.56	0.04	0.00
Drift Check, D	UPSCALE	0.36	0.00	-0.04	-0.10
D = ((Cbf - Cbi)/(Span))x100%	ZERO	0.72	0.00	0.04	0.00
Average Bias Response for zero Gas, Co=(Cbi,zero+Cbf,zero)/2		0.90	0.11	0.03	0.00
Average Bias Response for Upscale Gas, Cm=(Cbi,upscale+Cbf,upscale)/2		86.55	8.97	8.94	868.50
Average Measured Concentration, Cavg		47.85	6.80	12.74	520.95
Drift Corrected Concentration, Cgas=(Cavg-Co)xCma/(Cm-Co)		**48.24**	**6.84**	**12.77**	**524.85**

Total Air Analysis Data Acquisition

Bradley ICE # 5 , High Load (~1020 kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/16/08	08:30:48	6.71	12.75	50.8	522
07/16/08	08:31:48	6.75	12.72	49.4	527
07/16/08	08:32:48	6.76	12.69	47.6	523
07/16/08	08:33:48	6.71	12.74	49.6	521
07/16/08	08:34:48	6.8	12.67	48.1	529
07/16/08	08:35:48	6.84	12.64	45.3	536
07/16/08	08:36:48	6.82	12.64	45.1	531
07/16/08	08:37:48	6.79	12.68	45.7	524
07/16/08	08:38:48	6.85	12.63	45	536
07/16/08	08:39:48	6.85	12.62	44.6	532
07/16/08	08:40:48	6.84	12.64	43.7	526
07/16/08	08:41:48	6.91	12.58	42.9	542
07/16/08	08:42:48	7	12.52	40	546
07/16/08	08:43:48	6.93	12.57	40.2	545
07/16/08	08:44:48	6.86	12.62	43.7	539
	Average	6.83	12.65	45.45	531.93

Total Air Analysis Data Acquisition

Bradley ICE # 5 , Low Load (~600 kW)

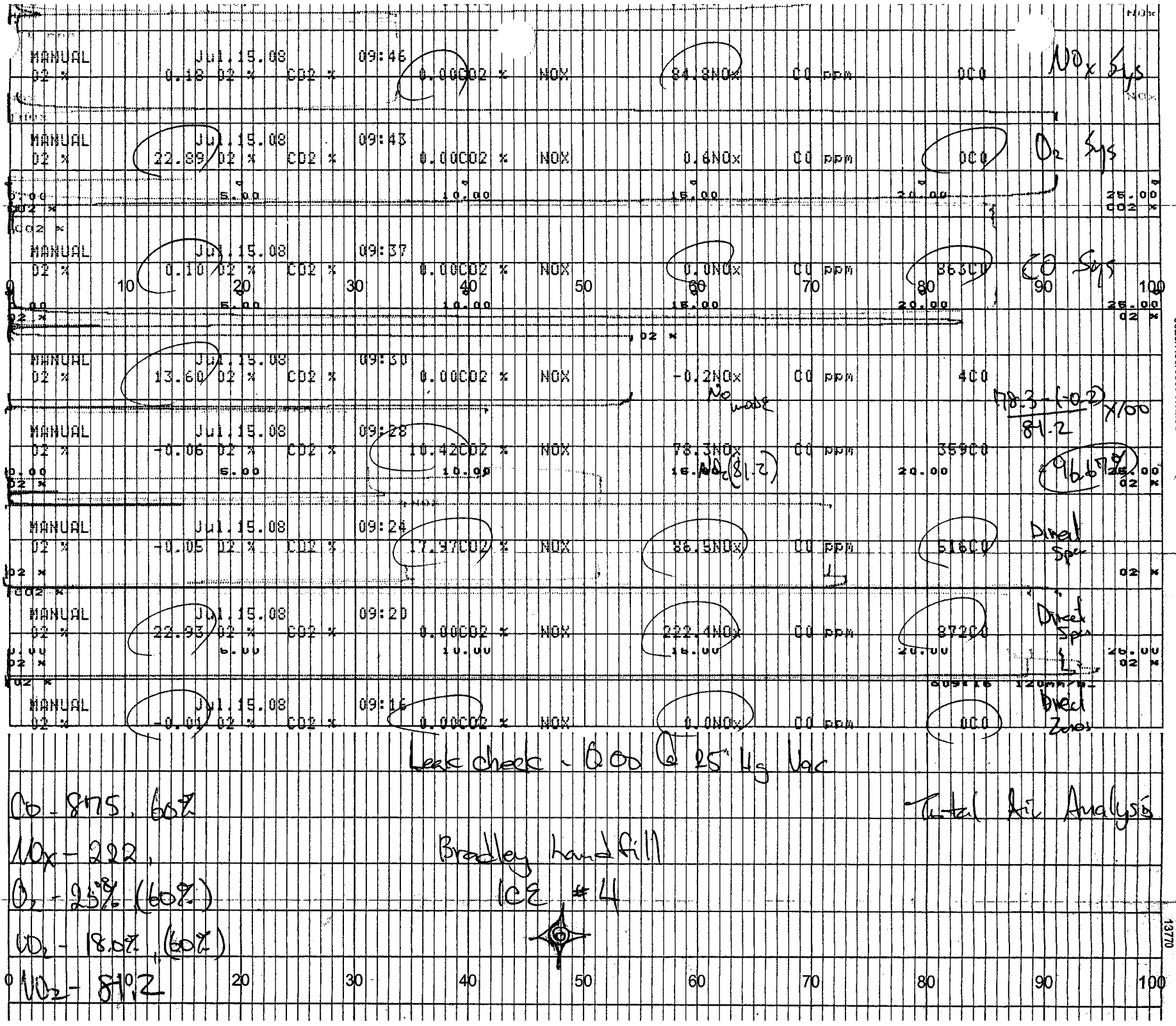
Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)
07/16/08	08:59:48	6.13	13.31	51.9	487
07/16/08	09:00:48	6.12	13.34	51.6	487
07/16/08	09:01:48	6.14	13.32	51.4	487
07/16/08	09:02:48	6.14	13.32	51.2	488
07/16/08	09:03:48	6.13	13.34	52.7	487
07/16/08	09:04:48	6.14	13.36	52.3	488
07/16/08	09:05:48	6.27	13.32	51.6	485
07/16/08	09:06:48	6.14	13.34	52	489
07/16/08	09:07:48	6.07	13.39	54.3	488
07/16/08	09:08:48	6.15	13.34	53.5	488
07/16/08	09:09:48	6.18	13.3	49.3	490
07/16/08	09:10:48	6.16	13.32	50.9	486
07/16/08	09:11:48	6.15	13.34	51.6	488
07/16/08	09:12:48	6.14	13.36	52.2	486
07/16/08	09:13:48	6.17	13.36	51.6	488
	Average	6.15	13.34	51.87	487.47

Total Air Analysis Data Acquisition

Bradley ICE # 5 , Normal Load (~960kW)

Date	Time	RM O_2 (%)	RM CO_2 (%)	RM NOx (ppm)	RM CO (ppm)	
07/16/08	09:25:48	6.71	12.82	50	513	
07/16/08	09:26:48	6.67	12.87	51.7	510	
07/16/08	09:27:48	6.68	12.82	62	543	
07/16/08	09:28:48	6.72	12.81	56.1	532	
07/16/08	09:29:48	6.65	12.95	57.6	523	
07/16/08	09:30:48	6.69	12.85	54.8	525	
07/16/08	09:31:48	6.72	12.82	53.3	527	
07/16/08	09:32:48	6.67	12.86	53.2	520	
07/16/08	09:33:48	6.71	12.86	52.6	525	
07/16/08	09:34:48	6.73	12.88	49.2	527	
07/16/08	09:35:48	6.66	12.93	52.9	521	
07/16/08	09:36:48	6.72	12.88	50.2	527	
07/16/08	09:37:48	6.74	12.83	49.5	525	
07/16/08	09:38:48	6.73	12.76	50	516	
07/16/08	09:39:48	6.75	12.73	48.9	518	
07/16/08	09:40:48	6.75	12.73	46.8	511	
07/16/08	09:41:48	6.73	12.74	47.2	509	
07/16/08	09:42:48	6.74	12.76	48.5	513	
07/16/08	09:43:48	6.81	12.7	45.5	515	
07/16/08	09:44:48	6.72	12.78	47.7	510	
07/16/08	09:45:48	6.78	12.74	46.7	516	
07/16/08	09:46:48	6.83	12.7	44.7	519	
07/16/08	09:47:48	6.73	12.79	48.3	510	
07/16/08	09:48:48	6.76	12.76	48.9	516	
07/16/08	09:49:48	6.81	12.72	46.1	516	
07/16/08	09:50:48	6.73	12.79	49.9	509	
07/16/08	09:51:48	6.81	12.73	47.7	518	
07/16/08	09:52:48	6.84	12.69	43.8	520	
07/16/08	09:53:48	6.77	12.75	47.7	515	
07/16/08	09:54:48	6.88	12.66	43	526	
07/16/08	09:55:48	11.29	7.88	15.9	341	Port Change
07/16/08	09:56:48	6.77	12.76	49.5	515	
07/16/08	09:57:48	6.84	12.7	46.1	523	
07/16/08	09:58:48	6.77	12.76	47.7	515	
07/16/08	09:59:48	6.77	12.74	49.9	517	
07/16/08	10:00:48	6.86	12.67	45.7	525	
07/16/08	10:01:48	6.82	12.71	46.1	520	
07/16/08	10:02:48	6.88	12.66	46.7	527	
07/16/08	10:03:48	6.87	12.66	45.9	521	
07/16/08	10:04:48	6.79	12.72	46.2	515	
07/16/08	10:05:48	6.84	12.68	48.1	523	

07/16/08	10:06:48	6.9	12.62	43.5	523
07/16/08	10:07:48	6.8	12.72	48.1	514
07/16/08	10:08:48	6.89	12.65	45.8	522
07/16/08	10:09:48	6.85	12.7	45.9	518
07/16/08	10:10:48	6.87	12.66	47.9	523
07/16/08	10:11:48	6.95	12.63	42.8	530
07/16/08	10:12:48	6.82	12.7	45.7	517
07/16/08	10:13:48	6.85	12.69	46.4	524
07/16/08	10:14:48	6.84	12.65	45.7	521
07/16/08	10:15:48	6.92	12.65	45.5	530
07/16/08	10:16:48	6.92	12.65	42.8	527
07/16/08	10:17:48	6.85	12.72	43.2	520
07/16/08	10:18:48	6.87	12.68	45.7	526
07/16/08	10:19:48	6.87	12.64	45.1	525
07/16/08	10:20:48	6.87	12.72	46.8	527
07/16/08	10:21:48	6.94	12.61	43	528
07/16/08	10:18:48	6.87	12.68	45.7	526
07/16/08	10:19:48	6.87	12.64	45.1	525
07/16/08	10:20:48	6.87	12.72	46.8	527
07/16/08	10:21:48	6.94	12.61	43	528
	Average	6.80	12.74	47.85	520.95



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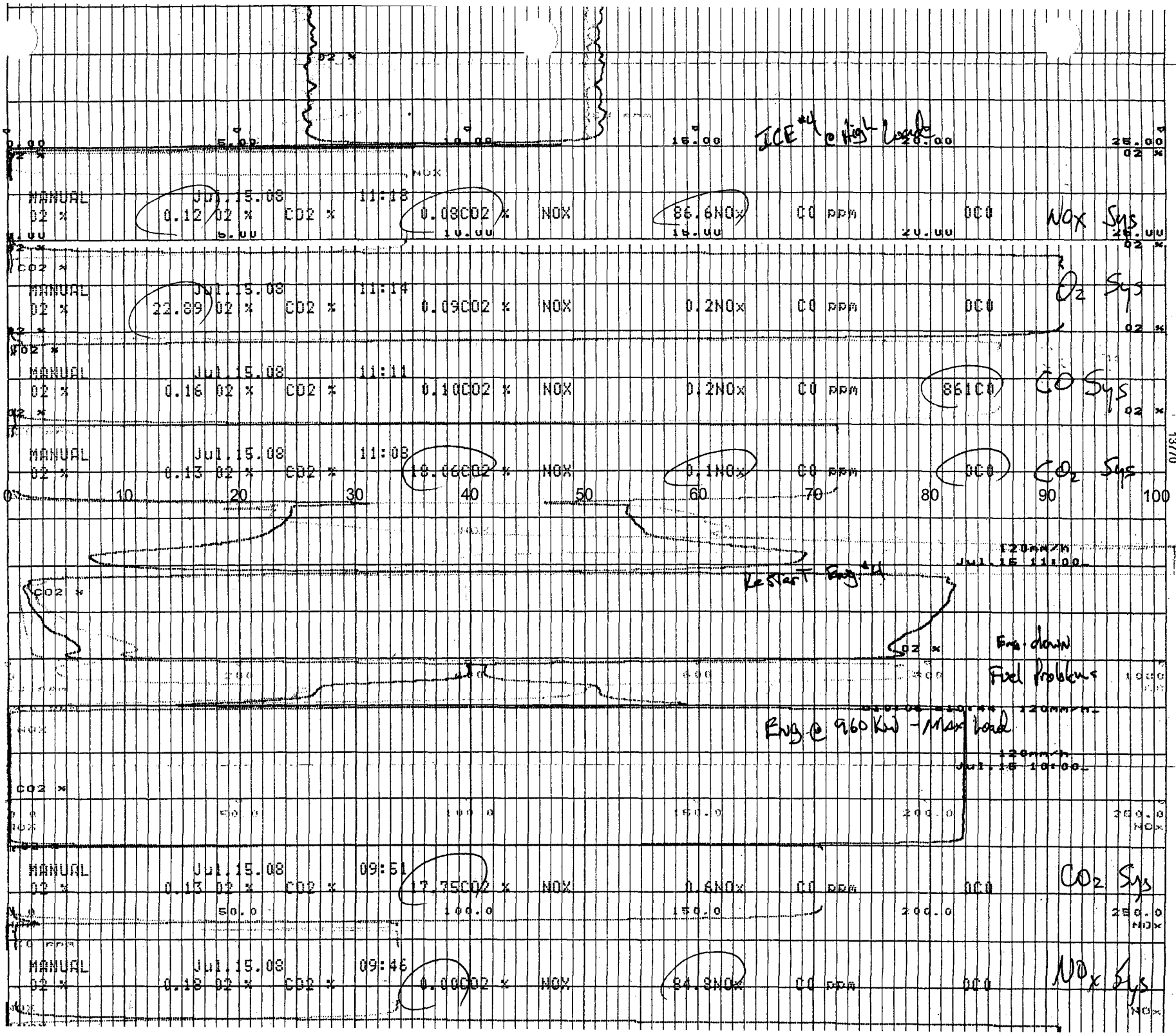
13770


ICE #4 @ High Load
MANUAL Jul.15.08 11:18
O2 % 0.12 O2 % CO2 % 0.08CO2 % NOX 86.6NOx CO ppm 0C0
NOx Sys
MANUAL Jul.15.08 11:14
O2 % 22.89 O2 % CO2 % 0.09CO2 % NOX 0.2NOx CO ppm 0C0
O2 Sys
MANUAL Jul.15.08 11:11
O2 % 0.16 O2 % CO2 % 0.10CO2 % NOX 0.2NOx CO ppm 86C0
CO Sys
MANUAL Jul.15.08 11:08
O2 % 0.13 O2 % CO2 % 10.06CO2 % NOX 0.1NOx CO ppm 0C0
CO2 Sys
Restart Eng #4
Eng. down
Fuel Problems
Eng @ 960 Kw - Max load
MANUAL Jul.15.08 09:51
O2 % 0.13 O2 % CO2 % 17.75CO2 % NOX 0.6NOx CO ppm 0C0
CO2 Sys
MANUAL Jul.15.08 09:46
O2 % 0.18 O2 % CO2 % 0.00CO2 % NOX 84.3NOx CO ppm 0C0
NOx Sys

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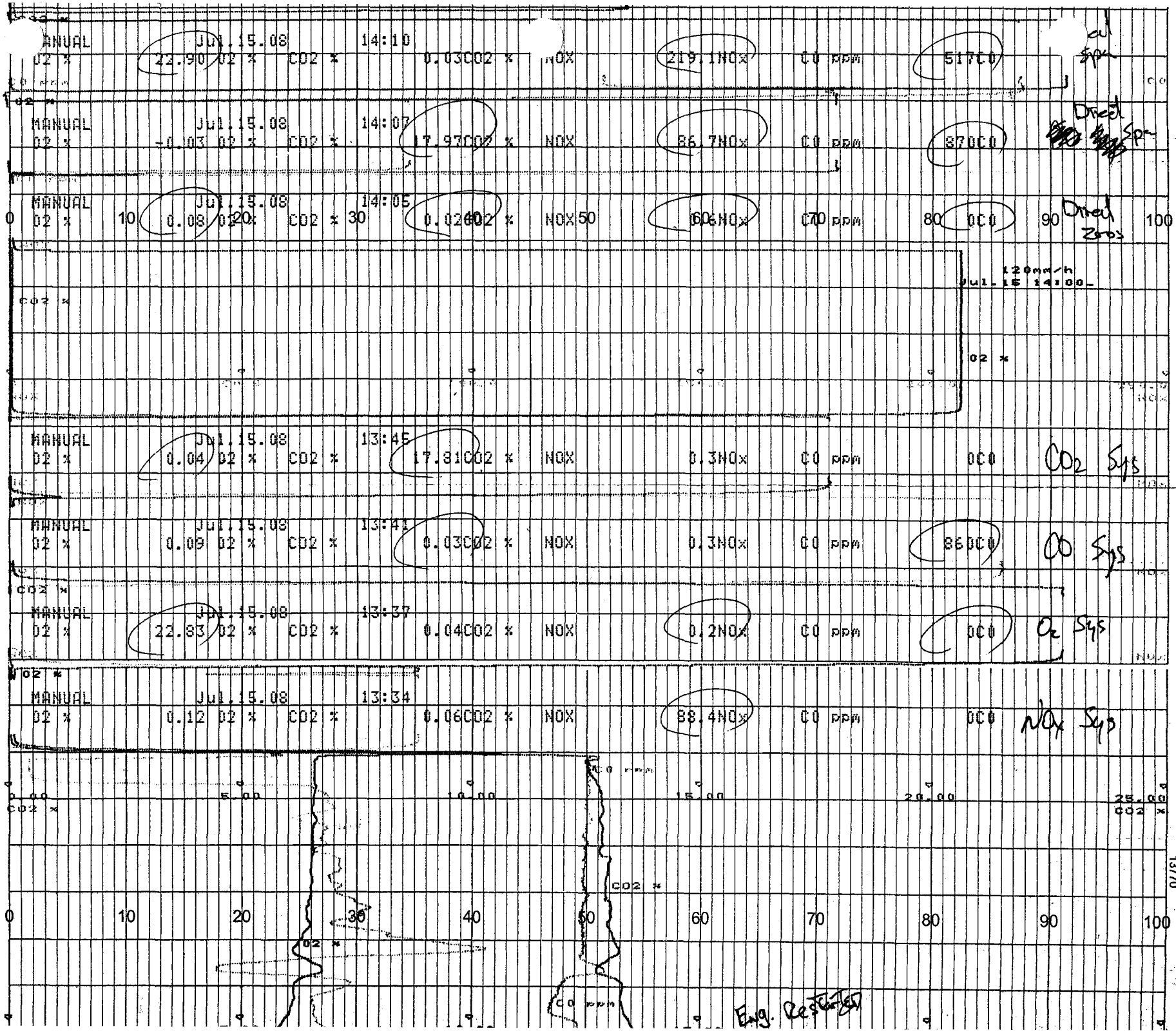

Dual Spn

Direct Spn

Direct Zero

CO_2 Sys

CO Sys

O_2 Sys

NOx Sys

Eng. Restricted

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13770

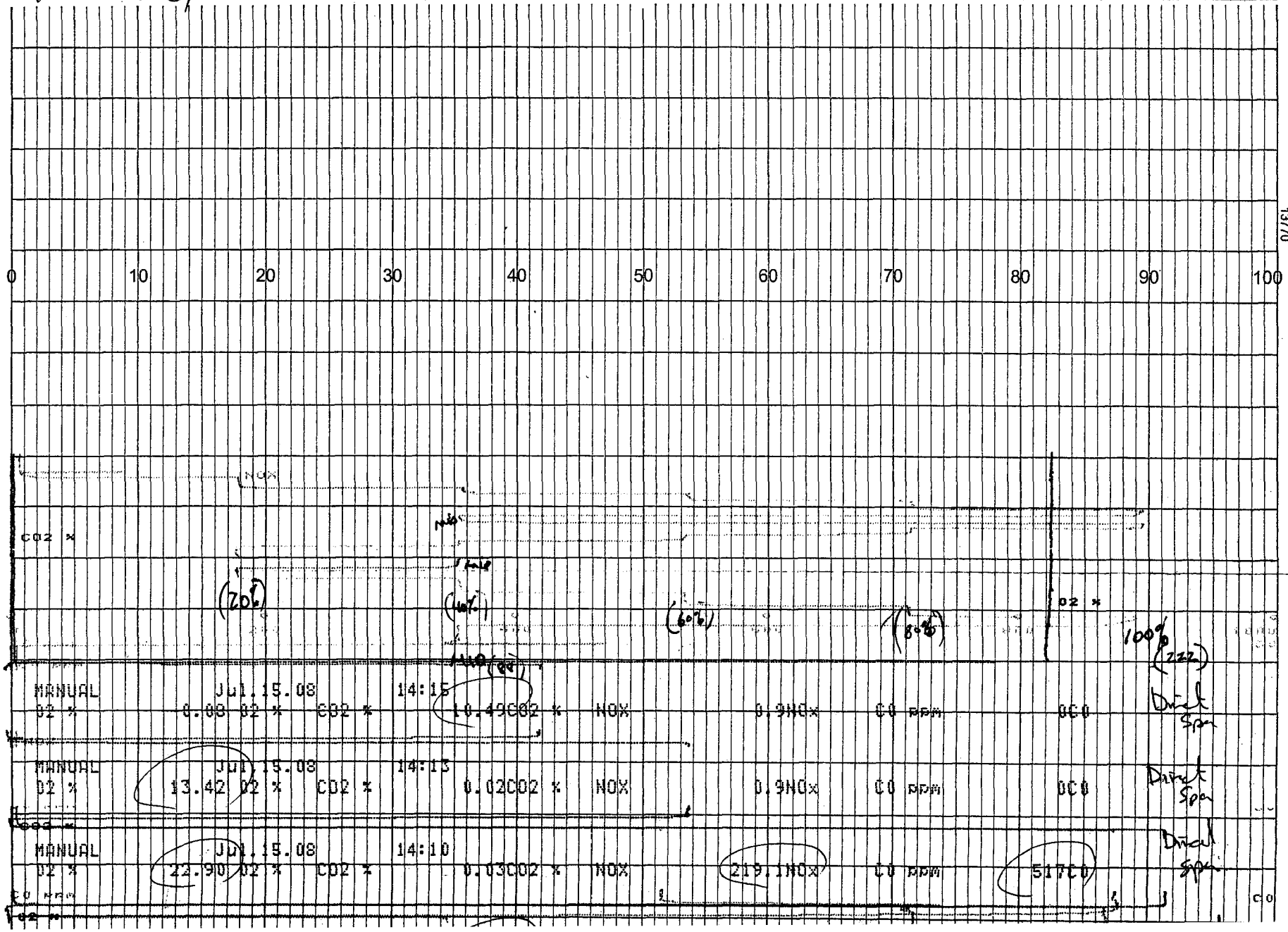
O_2 - 18.00%

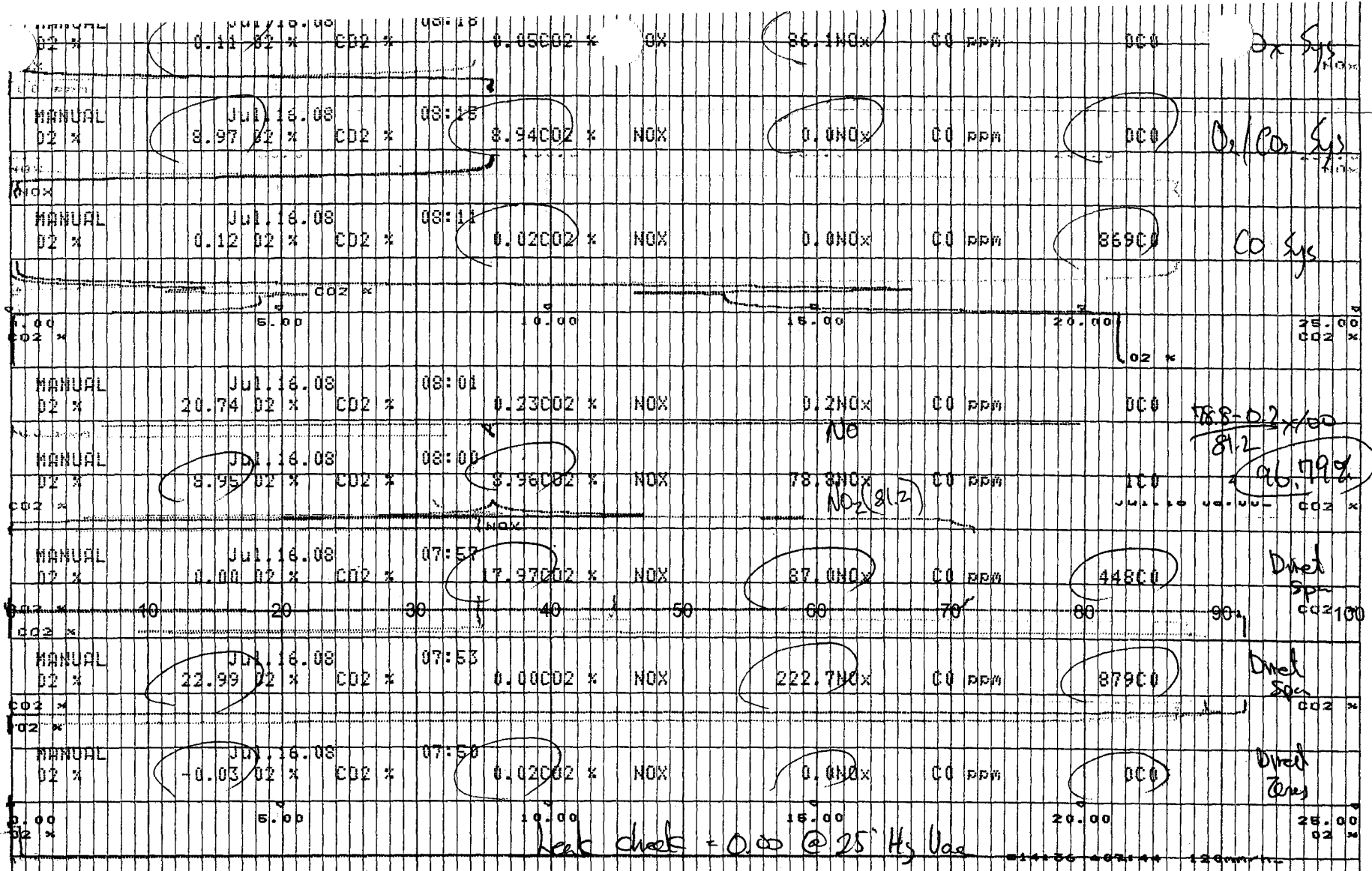
CO - 875.452

NO_x - 222.88

O_2/CO_2 - 9.00%/8.59%

Total Air Analysis





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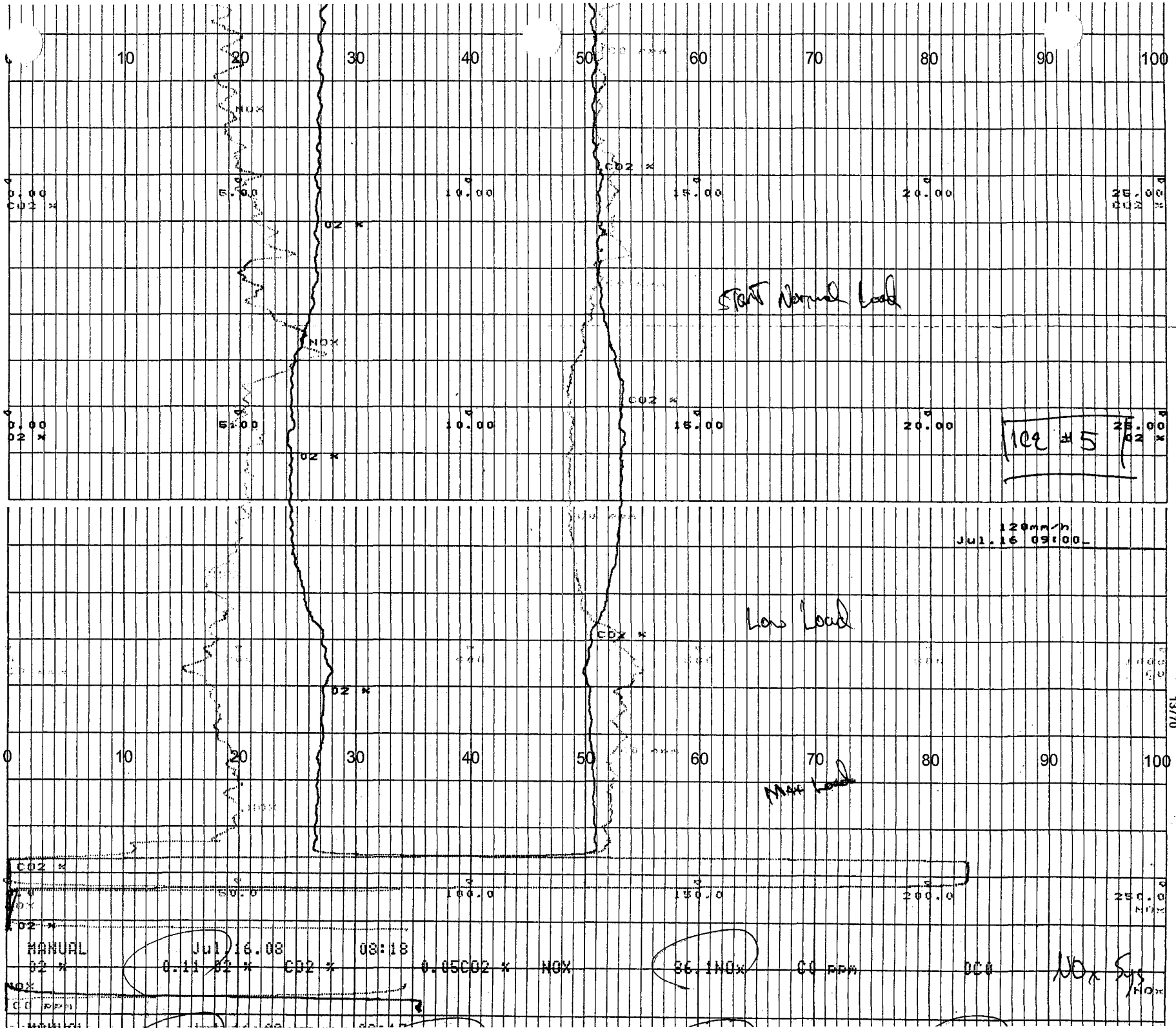
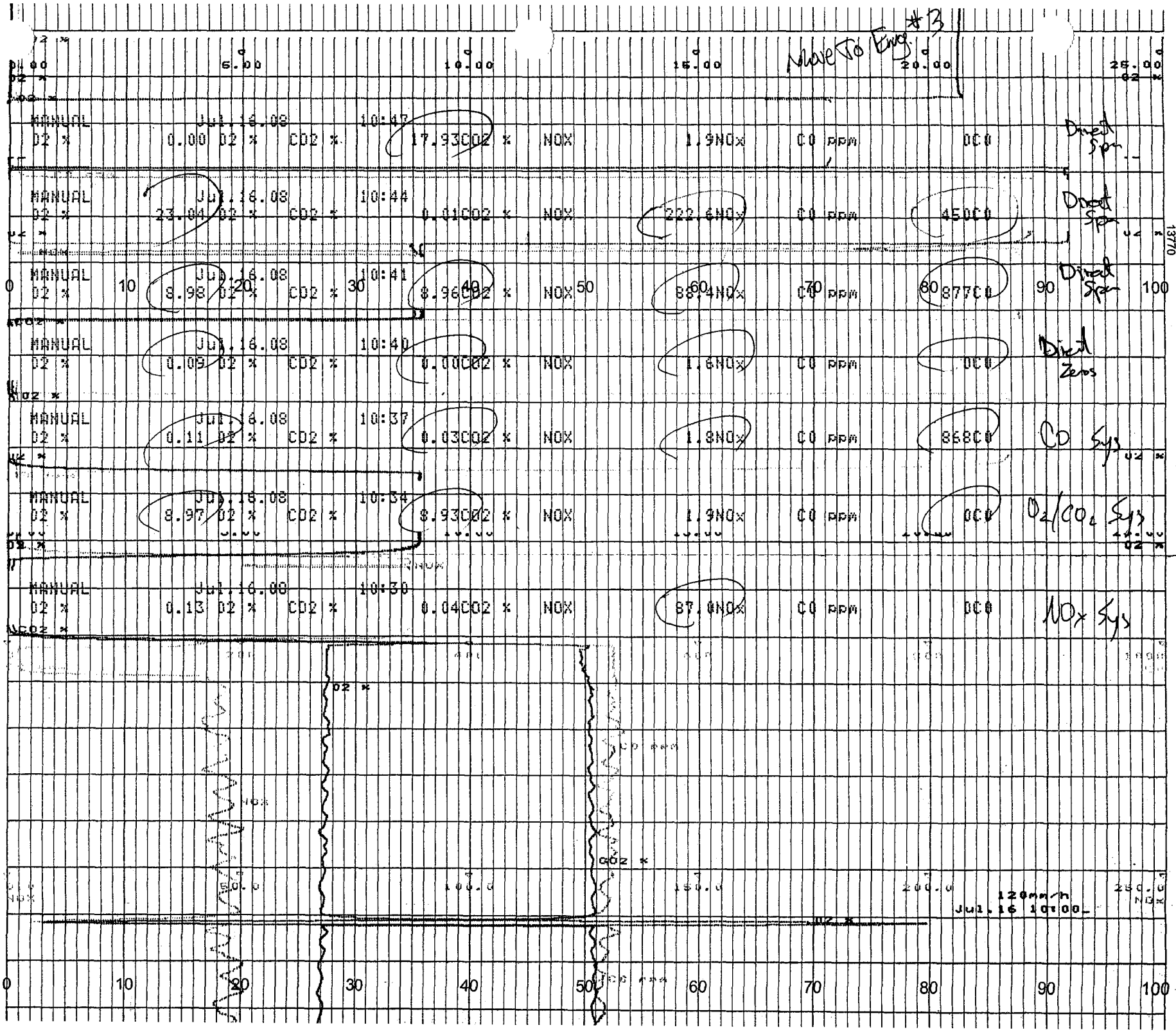
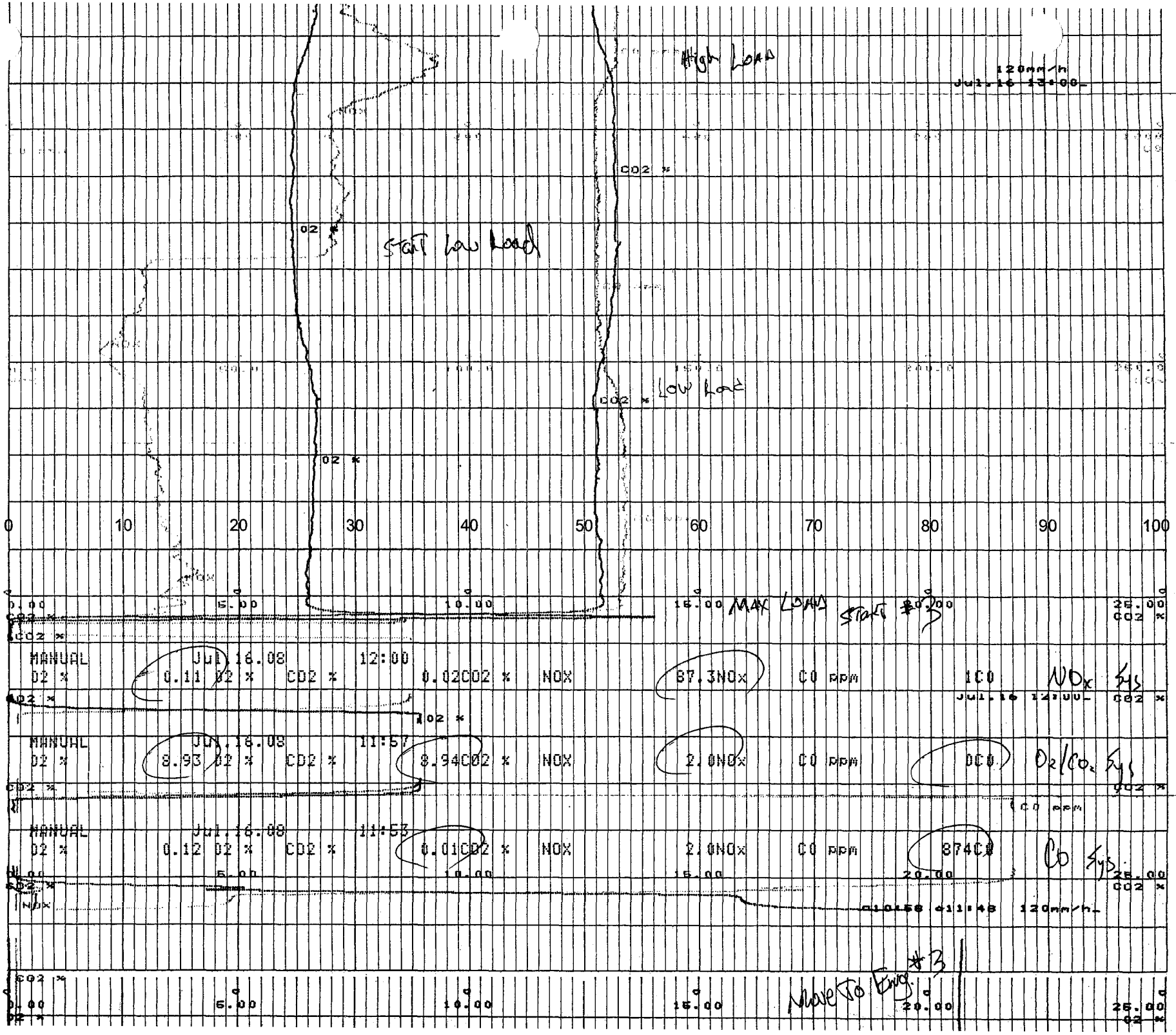
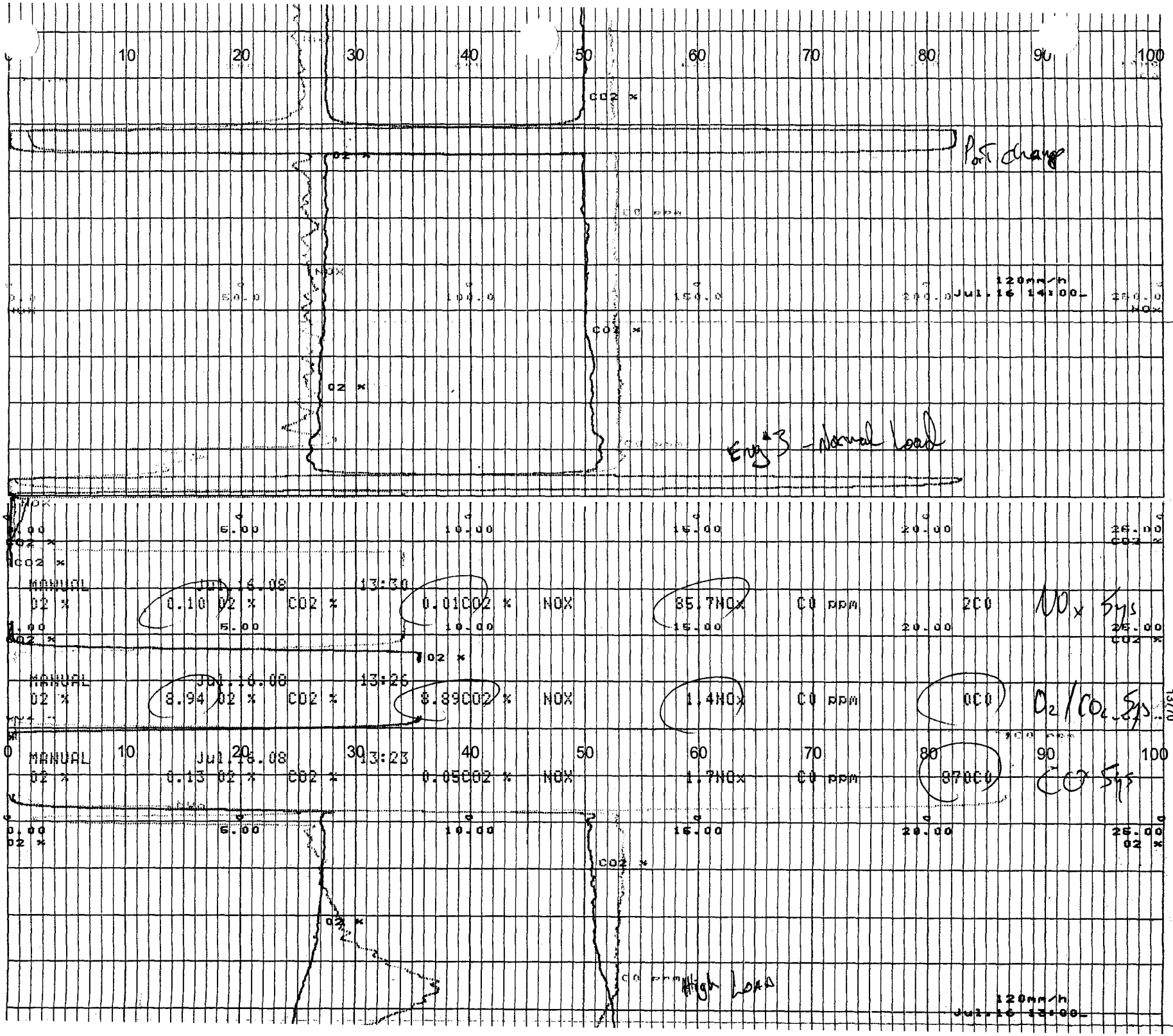

0323/N50/0507172.08
13770
Start Normal Load
Low Load
Max Load
NOx Sys
Jul.16 09:00
MANUAL
Jul 16.08
08:18
CO2 %
O2 %
NOX
CO ppm
10
20
30
40
50
60
70
80
90
100


Move To Eng. #3
MANUAL Jul.16.08 10:47
O2 % 0.00 O2 % CO2 % 17.93CO2 % NOX 1.9NOx CO ppm 0CO
Direct Span
MANUAL Jul.16.08 10:44
O2 % 23.04 O2 % CO2 % 0.01CO2 % NOX 222.6NOx CO ppm 450CO
Direct Span
MANUAL Jul.16.08 10:41
O2 % 8.98 O2 % CO2 % 8.96CO2 % NOX 88.4NOx CO ppm 877CO
Direct Span
MANUAL Jul.16.08 10:40
O2 % 0.09 O2 % CO2 % 0.00CO2 % NOX 1.6NOx CO ppm 0CO
Direct Zeros
MANUAL Jul.16.08 10:37
O2 % 0.11 O2 % CO2 % 0.03CO2 % NOX 1.8NOx CO ppm 868CO
CO Sys
MANUAL Jul.16.08 10:34
O2 % 8.97 O2 % CO2 % 8.93CO2 % NOX 1.9NOx CO ppm 0CO
O2/CO2 Sys
MANUAL Jul.16.08 10:30
O2 % 0.13 O2 % CO2 % 0.04CO2 % NOX 87.0NOx CO ppm 0CO
NOx Sys
120mm/h
Jul.16 10:00
13770

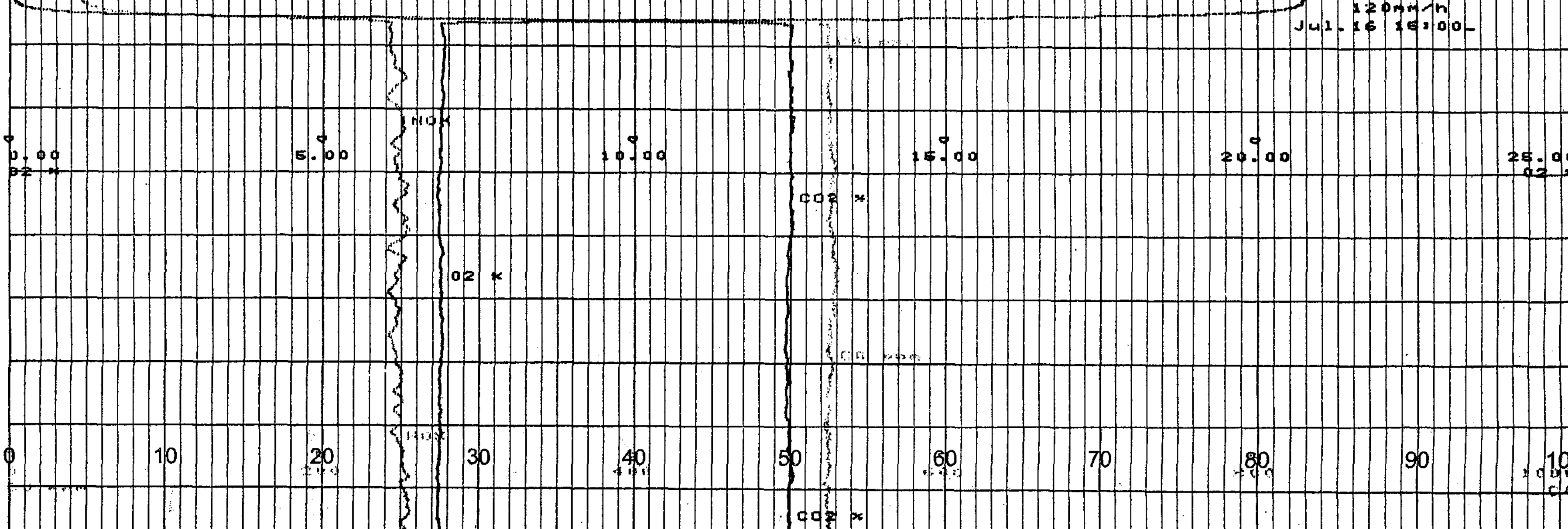



0323/N50/050717/2.08
Post change
Eng 3 - normal load
MANUAL Jul.16.08 13:30
02 % 0.10 02 % CO2 % 0.01CO2 % NOX 85.7NOx CO ppm 2C0
NOx Sys
MANUAL Jul.16.08 13:26
02 % 8.94 02 % CO2 % 8.89CO2 % NOX 1.4NOx CO ppm 0C0
O2/CO2 Sys
MANUAL Jul.16.08 13:23
02 % 0.13 02 % CO2 % 0.05CO2 % NOX 1.7NOx CO ppm 870C0
CO Sys
Eng 3 - High Load
120mm/h
Jul.16 14:00
120mm/h
Jul.16 13:00
13770

13770

Mode	Date	Time	O_2 %	CO_2 %	NOX	CO ppm	Annotation
MANUAL	Jul.16.08	15:18	-0.03	17.850	2.1	2	Drift Spn
MANUAL	Jul.16.08	15:16	22.98	0.000	220.5	453	Direct Spn
MANUAL	Jul.16.08	15:14	8.95	8.900	87.9	881	Direct Spn
MANUAL	Jul.16.08	15:13	0.05	-0.010	2.0	2	Direct Zeros
MANUAL	Jul.16.08	15:10	0.10	0.010	2.2	871	CO Sys
MANUAL	Jul.16.08	15:08	8.93	8.890	2.3	0	O_2/CO_2 Sys
MANUAL	Jul.16.08	15:05	0.14	0.020	86.6	2	NOx Sys

120mm/h
Jul.16 16:00



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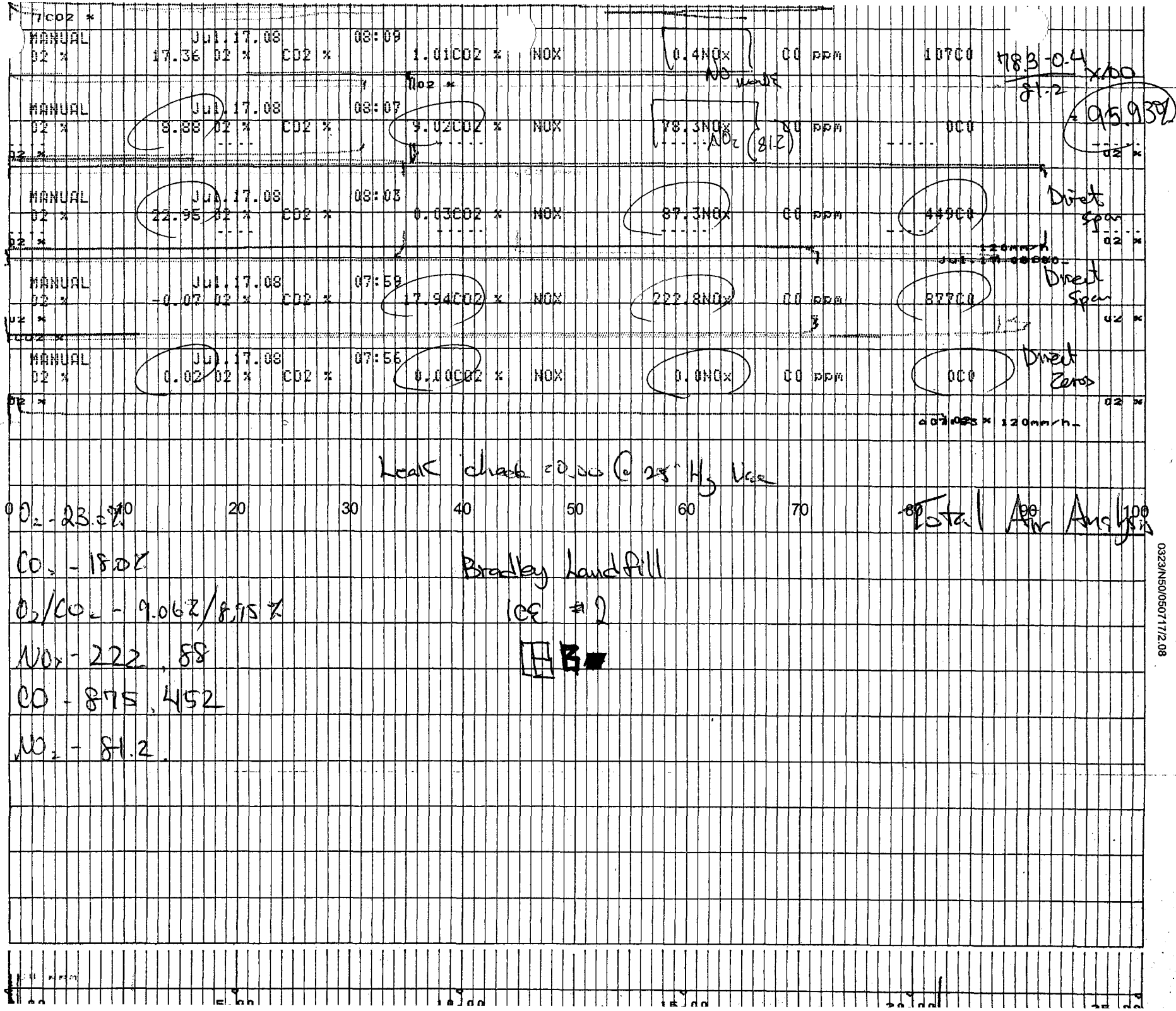

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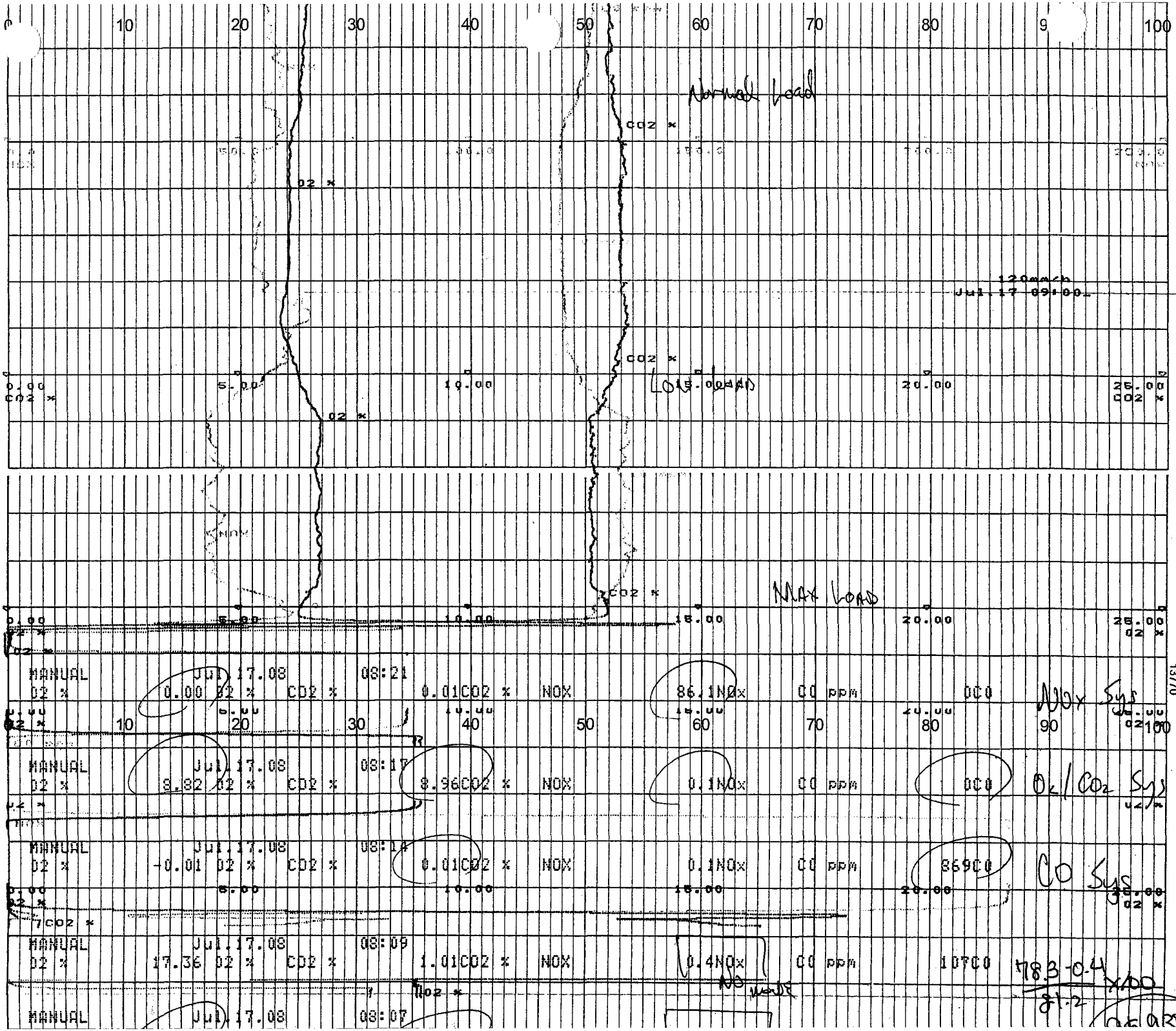

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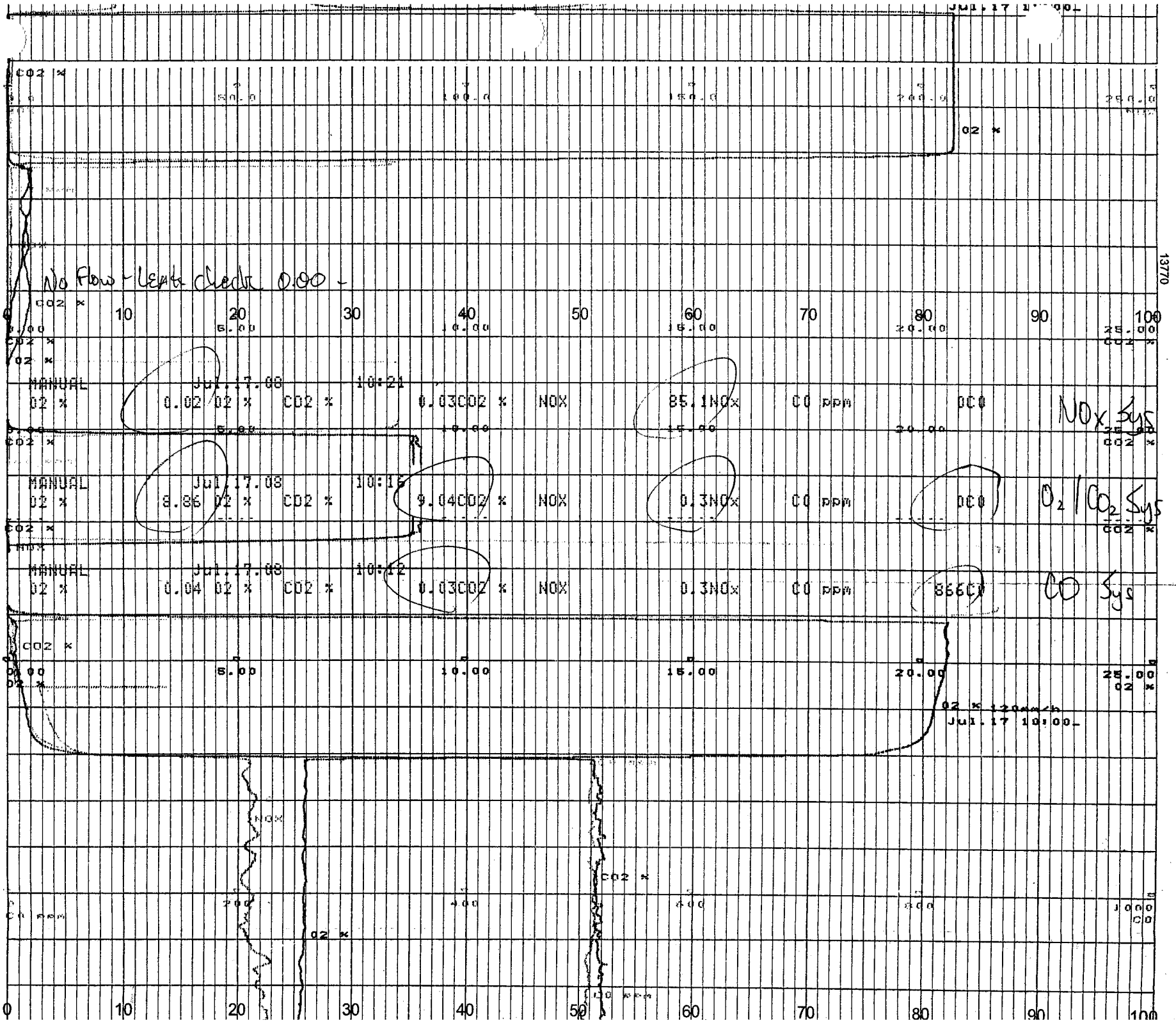
13770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02 % 0.02 02 % CO2 % 0.03CO2 % NOX 85.1NOx CO ppm DCO
NOx Sys
MANUAL Jul.17.08 10:16
02 % 8.86 02 % CO2 % 9.04CO2 % NOX 0.3NOx CO ppm DCO
O2/CO2 Sys
MANUAL Jul.17.08 10:12
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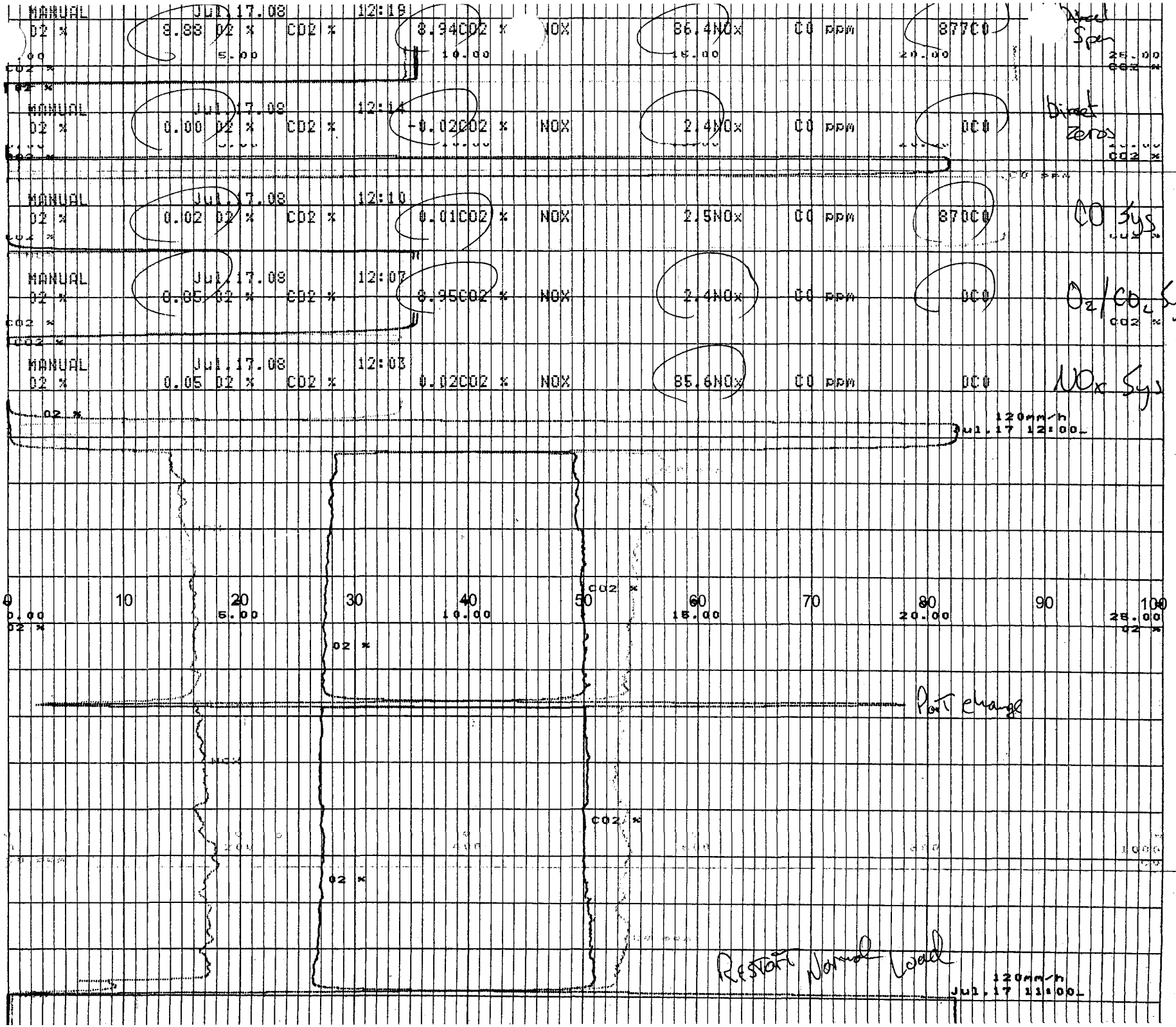
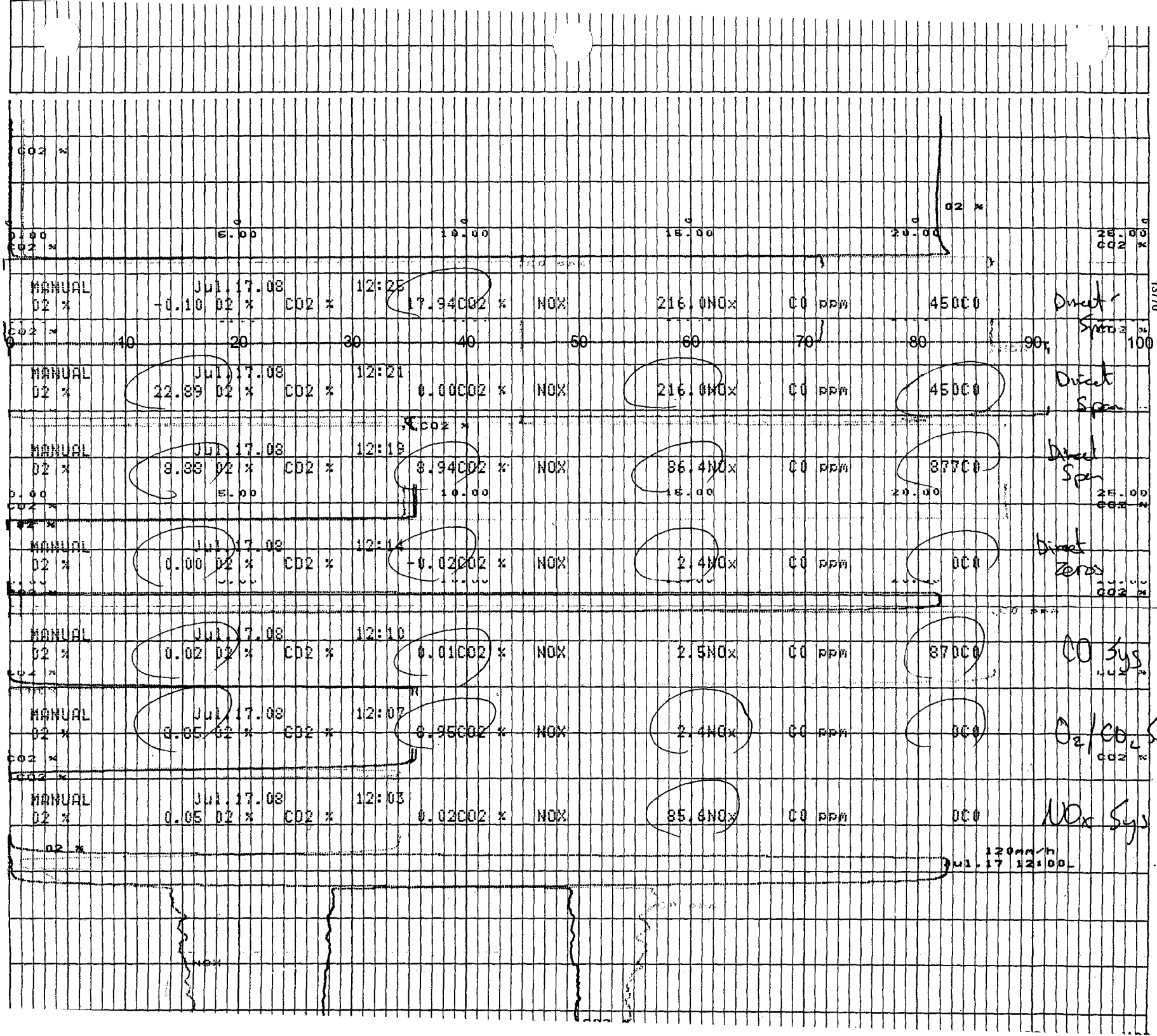
CO Sys
02 % 120m/h
Jul.17 10:00
13770




MANUAL Jul.17.08 12:25
02 % -0.10 02 % CO2 % 17.94CO2 % NOX 216.0NOx CO ppm 450CO
Direct Span
MANUAL Jul.17.08 12:21
02 % 22.89 02 % CO2 % 0.00CO2 % NOX 216.0NOx CO ppm 450CO
Direct Span
MANUAL Jul.17.08 12:19
02 % 8.88 02 % CO2 % 8.94CO2 % NOX 86.4NOx CO ppm 877CO
Direct Span
MANUAL Jul.17.08 12:14
02 % 0.00 02 % CO2 % -0.02CO2 % NOX 2.4NOx CO ppm 0CO
Direct Zero
MANUAL Jul.17.08 12:10
02 % 0.02 02 % CO2 % 0.01CO2 % NOX 2.5NOx CO ppm 870CO
CO Sys
MANUAL Jul.17.08 12:07
02 % 0.05 02 % CO2 % 8.95CO2 % NOX 2.4NOx CO ppm 0CO
O2/CO2 Sys
MANUAL Jul.17.08 12:03
02 % 0.05 02 % CO2 % 0.02CO2 % NOX 85.6NOx CO ppm 0CO
NOx Sys
120mm/h
Jul.17 12:00
13770

Appendix B

ASTM D-1945

ROGs (High Level) Calculations, Lab Analysis and Field Data Sheets

ASTM D-1945 Data Calculation Sheet

Facility: Waste Management
Source: ICE #2
Load: Normal Load (~950 kW)
Start Date: 7/17/2008

Parameter/Run No.	Units	
Fuel Usage Flowrate	scfm	456
ROGs (as CH_4)	ppmv	3414
ROGs (as Hexane)	ppmv	569.0
ROGs, Mass Emissions	lb/hr	3.5

ASTM D-1945 Data Calculation Sheet

Facility: Waste Management
Source: ICE #3
Load: Normal Load (~960 kW)
Start Date: 7/16/2008

Parameter/Run No.	Units	
Fuel Usage Flowrate	scfm	432.7
ROGs (as CH_4)	ppmv	3575
ROGs (as Hexane)	ppmv	595.8
ROGs, Mass Emissions	lb/hr	3.5

ASTM D-1945 Data Calculation Sheet

Facility: Waste Management
Source: ICE #4
Load: Normal Load (~900 kW)
Start Date: 7/15/2008

Parameter/Run No.	Units	
Fuel Usage Flowrate	scfm	448.09
ROGs (as CH_4)	ppmv	3155
ROGs (as Hexane)	ppmv	525.8
ROGs, Mass Emissions	lb/hr	3.2

ASTM D-1945 Data Calculation Sheet

Facility: Waste Management
Source: ICE #5
Load: Normal Load (~960 kW)
Start Date: 7/16/2008

Parameter/Run No.	Units	
Fuel Usage Flowrate	scfm	488.8
ROGs (as CH_4)	ppmv	3575
ROGs (as Hexane)	ppmv	595.8
ROGs , Mass Emissions	lb/hr	4.0

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www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-607**
SAMPLING DATE: July 16 & 17, 2008
RECEIVING DATE: July 16 & 17, 2008
ANALYSIS DATE: July 17, 2008
REPORT DATE: July 18, 2008

Laboratory Analysis Report

Analysis Method	**SCAQMD 25.1**				
Detection Limits	**0.2 PPMV**				
Total Air Sample ID	**Lab Sample ID**	**Methane %**	**Ethane PPMV**	**Ethylene PPMV**	**TNMNEOC PPMV**
Bradley ICE #5+#3	**19808-7**	46.8	24.3	<10	3575
Bradley ICE #2	**19908-13**	45.3	19.3	<10	3414

TNMNEOC: Total non-Methane non-Ethane Organic Carbon

Dr. Andrew Kitto
President

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-607**
SAMPLING DATE: July 16 & 17, 2008
RECEIVING DATE: July 16 & 17, 2008
ANALYSIS DATE: July 17, 2008
REPORT DATE: July 18, 2008

Quality Assurance Report

Duplicate Analyses

Analysis Method		**SCAQMD 25.1**			
Detection Limits		**0.2 PPMV**			
Total Air Sample ID	**Analyte**	**Analysis #1 PPMV**	**Analysis #2 PPMV**	**Mean PPMV**	**% Difference from the Mean**
Bradley ICE #5 + #3	Ethane	24.3	23.5	23.9	1.8%
	Ethylene	<10	<10	N/A	N/A
	TNMNEOC	3575	3569	3572	0.1%

TNMNEOC: Total non-Methane non-Ethane Organic Carbon

Analysis Method		**SCAQMD 25.1**			
Detection Limits		**0.2 PPMV**			
Total Air Sample ID	**Analyte**	**Analysis #1 PPMV**	**Analysis #2 PPMV**	**Mean PPMV**	**% Difference from the Mean**
Bradley ICE #2	Ethane	19	19	19	2.1%
	Ethylene	<10	<10	N/A	N/A
	TNMNEOC	3414	3428	3421	0.2%

TNMNEOC: Total non-Methane non-Ethane Organic Carbon

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President

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-604**
SAMPLING DATE: July 15, 2008
RECEIVING DATE: July 16, 2008
ANALYSIS DATE: July 16, 2008
REPORT DATE: July 17, 2008

Laboratory Analysis Report

Analysis Method	**SCAQMD 25.3**				
Detection Limits	**0.2 PPMV**				
Total Air Sample ID	**Lab Sample ID**	**Methane %**	**Ethane PPMV**	**Ethylene PPMV**	**TNMNEOC PPMV**
Bradley - Eng #4	19808-1	46.1	<10	18.3	3155

TNMNEOC: Total non-Methane non-Ethane Organic Carbon

Dr. Andrew Kitto
President

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-604**
SAMPLING DATE: July 15, 2008
RECEIVING DATE: July 16, 2008
ANALYSIS DATE: July 16, 2008
REPORT DATE: July 17, 2008

Quality Assurance Report

Duplicate Analyses

Analysis Method		**SCAQMD 25.3**			
Detection Limits		**0.2 PPMV**			
Total Air Sample ID	**Analyte**	**Analysis #1 PPMV**	**Analysis #2 PPMV**	**Mean PPMV**	**% Difference from the Mean**
Bradley - Eng #4	Ethane	<10	<10	N/A	N/A
	Ethylene	18	19	19	3.0%
	TNMNEOC	3155	3136	3146	0.3%

TNMNEOC: Total non-Methane non-Ethane Organic Carbon

Dr. Andrew Kitto
President

Appendix C

SCAQMD Method 25.3

ROGs (Low Level), Calculations, Lab Analysis, and Field Data Sheets

SCAQMD Method 25.3 Data Calculation Sheet

Facility: Waste Management
Source: ICE #2
Load: Normal Load (~950 kW)
Start Date: 7/17/2008

Parameter/Run No.	Units	91184	S 031	Average
Stack Gas Flowrate (M5)	dscfm	3,583	3,583	3,583
Moisture	%	12.42%	12.42%	12.42%
Oxygen Concentration	%	6.63	6.63	6.63
ROGs (as CH_4), Total	ppmv	27.40	23.20	25.30
ROGs 25.3 (1.086 factor)	ppmv	29.76	25.20	27.48
ROGs (as Hexane)	ppmv	4.96	4.20	4.58
ROGs (@ 15% O2)	ppm	12.30	10.42	11.36
ROGs	lb/hr	0.24	0.20	**0.22**
ROGs (@ 3% O_2), C6	ppm	6.216	5.263	**5.74**

SCAQMD Method 25.3 Data Calculation Sheet

Facility: Waste Management
Source: ICE #3
Load: Normal Load (~960 kW)
Start Date: 7/16/2008

Parameter/Run No.	Units	91187	S 002	Average
Stack Gas Flowrate (M5)	dscfm	3,641	3,641	3,641
Moisture	%	13.63%	13.63%	13.63%
Oxygen Concentration	%	6.93	6.93	6.93
ROGs (as CH_4), Total	ppmv	33.40	31.90	32.65
SCAQMD 25.3 (1.086 factor)	ppmv	36.27	34.64	35.46
ROGs (as Hexane)	ppmv	6.05	5.77	5.91
ROGs (@ 15% O2)	ppm	15.32	14.63	14.98
ROGs	lb/hr	0.30	0.29	**0.29**
ROGs (@ 3% O2), C6	ppm	7.74	7.39	**7.567**

SCAQMD Method 25.3 Data Calculation Sheet

Facility: Waste Management
Source: ICE #4
Load: Normal Load (~900 kW)
Start Date: 7/15/2008

Parameter/Run No.	Units	91182	S-021	Average
Stack Gas Flowrate (M5)	dscfm	3,125	3,125	3,125
Moisture	%	12.01%	12.01%	12.01%
Oxygen Concentration	%	6.48	6.48	6.48
ROGs (as CH_4), Total	ppmv	33.70	27.30	30.50
SCAQMD 25.3 (1.086 factor)	ppmv	36.60	29.65	33.12
ROGs (as Hexane)	ppmv	6.10	4.94	5.52
ROGs (@ 15% O2)	ppm	14.97	12.13	13.55
ROGs	lb/hr	0.26	0.21	**0.23**
ROGs (@ 3% O2), C6	ppm	7.57	6.13	**6.847**

SCAQMD Method 25.3 Data Calculation Sheet

Facility: Waste Management
Source: ICE #5
Load: Normal Load (~960 kW)
Start Date: 7/16/2008

Parameter/Run No.	Units	91187	S 002	Average
Stack Gas Flowrate (M5)	dscfm	3,477	3,477	3,477
Moisture	%	12.68%	12.68%	12.68%
Oxygen Concentration	%	6.84	6.84	6.84
ROGs (as CH_4), Total	ppmv	33.40	31.90	32.65
SCAQMD 25.3 (1.086 factor)	ppmv	36.27	34.64	35.46
ROGs (as Hexane)	ppmv	6.05	5.77	5.91
ROGs (@ 15% O2)	ppm	15.22	14.54	14.88
ROGs	lb/hr	0.29	0.27	**0.28**
ROGs (@ 3% O2), C6	ppm	7.69	7.35	**7.519**

Almega

LABORATORY REPORT

Non-Methane Non-Ethane Organic compound Emissions by SCAQMD Method 25.3 (TCA/FID)

Client: Total Air Analysis,Inc
Project No.: L 1419
Unit Tested: Bradley ICE
Sampling Date: 17-Jul-08
Analyzed Date: 7-Aug-08
Lab No.: A 151

Client Sample ID	Lab ID	Almega Sample ID		Total* NMNEO ppm	NMNEO ppm condensable	NMNEO ppm noncondensable	CH_4 ppm	C_2H_6 ppm	CO ppm	CO_2 % v/v by TCD	O_2 % v/v by TCD
		Tank	Trap								
ICE 2											
Bradley ICE 2	A 151 - 041 A	91184	17	27.4	21.6	5.74	1849	68.5	624	13.0	6.8
Bradley ICE 2	A 151 - 041 B	S 031	14	23.2	14.9	8.26	2100	66.6	525	12.8	6.9
Detection Limit					1	2	2	2	2	0.3	0.3

* NOTE - the BIAS FACTOR (of 1.086) is NOT applied in these results
ND=Not Detected

Water Blank, ppmC 0.00

TGNMNEO concentration values are reported in ppm (v/v) as Methane (carbon#=1)

The sample cylinder is analyzed for NMNEO, CO, CH_4, CO_2 and C_2H_6. It is then directed to a separation column where all heavy organics (C_3+) separate from the light organics (CO, CO_2, CH_4 and C_2H_6). The light organics are then passed through a reduction catalyst to convert CO and CO_2 to CH_4, and are then directed to a FID for detection and quantification. The heavy organics are backflushed off the holding column, passed through an oxidation catalyst, which convert all organics to CO_2, then through a reduction catalyst to convert CO_2 to CH_4 and then to a FID for detection and quantification.

Reviewed by: GA

Almega Environmental & Technical Services
5251 McFadden Ave. Huntington Beach CA. 92649
Phone 714-889-4000 Fax 714-889-7030
www.almegaenvironmental.com

CALCULATIONS

Client:	Total Air Analysis.Inc	Lab No.: A 151
Project No.:	L 1419	
Unit Tested:	Bradley ICE	
Sampling Date:	17-Jul-08	
Date tested:	7-Aug-08	

Parameter	Symbol	Units	ICE 2	ICE 2
Sample ID			Bradley ICE 2	Bradley ICE 2
Lab ID			A 151 - 041 A	A 151 - 041 B
Sample Tank				
Tank No			91184	S 031
Sample Tank Volume	V_T	L	6.000	6.000
Barometric Pressure	P_b	mm Hg	763	763
Pre-test Pressure	P_{TI}	mm Hg (abs)	2	2
Pre-test Temperature	t_{TI}	°C	22	22
Abs. Pre-test Temperature	T_{TI}	°K	295	295
Post-test Pressure	P_{TS}	mm Hg (abs)	580	452
Post-test Temperature	t_{TS}	°C	22	22
Abs. Post-test Temperature	T_{TS}	°K	295	295
Final Pressure	P_{TF}	mm Hg (abs)	860	868
Abs.Final Temperature	T_{TF}	°K	295	295
Dilution Factor	DF_T		1.50	1.94
Concentration Methane	C_{CH4}	ppm	1234.17	1081.18
NMNEO (noncond)	C_{SA}	ppm	**3.83**	**4.25**
Sample Volume	Vs	L	4.466	3.477
Methane in Tank(C_{CH4}*DF_T)	C_{CH4T}	ppm	**1848.8**	**2099.7**
NMNEO (noncond)	C_{SAT}	ppm	**5.74**	**8.26**
Condensate Recovery - Trap				
Sample ID			Bradley ICE 2	Bradley ICE 2
Trap No			17	14
Lab No.:			A 151 - 042 A	A 151 - 042 B
Sample Impinger Volume	V_{IMP}	ml	2.0	2.0
Sample Volume	V_S	L	4.466	3.477
TC Concentration	C_{TC}	mg/L	60.03	46.44
IC Concentration	C_{IC}	mg/L	35.57	33.30
TOC Concentration	C_{TOC}	mg/L	24.460	13.140
NMNEO, Condensable	C_T	ppm	**21.61**	**14.91**
TNMNEOC (Csa+C_T)	C	ppmC	**27.35**	**23.17**

Calculations

$V_S=k_1*V_T*(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$k_1 = (273+15.56)/760=0.3799$

$C_{SAT}= DF * C_{SA}$

$C_{CH4T} = DF * C_{CH4}$

$DF=(P_{TF}/T_{TF})/(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$C_T =(C_{TOC} * V_{IMP} * V_{ID})/(V_S*A_C)$

$V_{ID} =23.6902$ L/mole

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LABORATORY REPORT

Non-Methane Non-Ethane Organic compound Emissions by SCAQMD Method 25.3 (TCA/FID)

Client: Total Air Analysis,Inc
Project No.: L 1419
Unit Tested. Bradley ICE
Sampling Date: 15-Jul-08
Analyzed Date: 7-Aug-08
Lab No.: A 151

Client Sample ID	Lab ID	Almega Sample ID		Total* NMNEO ppm	NMNEO ppm condensable	NMNEO ppm noncondensable	CH_4 ppm	C_2H_6 ppm	CO ppm	CO_2 % v/v by TCD	O_2 % v/v by TCD
		Tank	Trap								
ICE 4											
Bradley ICE 4	A 151 - 011 A	91182	15	**33.7**	13.4	20.3	2085	20.3	638	12.7	6.5
Bradley ICE 4	A 151 - 011 B	S 021	6	**27.3**	5.64	21.6	1984	20.0	546	12.6	6.5
Detection Limit					1	2	2	2	2	0.3	0.3

* NOTE - the BIAS FACTOR (of 1.086) is NOT applied in these results
ND=Not Detected

Water Blank , ppmC 0.00

TGNMNEO concentration values are reported in ppm (v/v) as Methane (carbon#=1)

The sample cylinder is analyzed for NMNEO, CO, CH_4, CO_2 and C_2H_6. It is then directed to a separation column where all heavy organics (C_3+) separate from the light organics (CO, CO_2, CH_4 and C_2H_6). The light organics are then passed through a reduction catalyst to convert CO and CO_2 to CH_4, and are then directed to a FID for detection and quantification. The heavy organics are backflushed off the holding column, passed through an oxidation catalyst, which convert all organics to CO_2, then through a reduction catalyst to convert CO_2 to CH_4 and then to a FID for detection and quantification.

Reviewed by: GA

Almega Environmental & Technical Services
5251 McFadden Ave. Huntington Beach CA. 92649
Phone 714-889-4000 Fax 714-889-7030
www.almegaenvironmental.com

CALCULATIONS

Client:	Total Air Analysis,Inc	Lab No.: A 151
Project No.:	L 1419	
Unit Tested:	Bradley ICE	
Sampling Date:	15-Jul-08	
Date tested:	7-Aug-08	

Parameter	Symbol	Units	ICE 4	ICE 4
Sample ID			Bradley ICE 4	Bradley ICE 4
Lab ID			A 151 - 011 A	A 151 - 011 B
Sample Tank				
Tank No			91182	S 021
Sample Tank Volume	V_T	L	6.000	6.000
Barometric Pressure	P_b	mm Hg	763	763
Pre-test Pressure	P_{TI}	mm Hg (abs)	2	2
Pre-test Temperature	t_{TI}	°C	22	22
Abs. Pre-test Temperature	T_{TI}	°K	295	295
Post-test Pressure	P_{TS}	mm Hg (abs)	596	598
Post-test Temperature	t_{TS}	°C	22	22
Abs. Post-test Temperature	T_{TS}	°K	295	295
Final Pressure	P_{TF}	mm Hg (abs)	854	858
Abs.Final Temperature	T_{TF}	°K	295	295
Dilution Factor	DF_T		1.45	1.45
Concentration Methane	C_{CH4}	ppm	1440.33	1369.03
NMNEO (noncond)	C_{SA}	ppm	**14.03**	**14.91**
Sample Volume	Vs	L	4.590	4.605
Methane in Tank(C_{CH4}*DF_T)	C_{CH4T}	ppm	**2084.9**	**1984.3**
NMNEO (noncond)	C_{SAT}	ppm	**20.31**	**21.61**
Condensate Recovery - Trap				
Sample ID			Bradley ICE 4	Bradley ICE 4
Trap No			15	6
Lab No.:			A 151 - 012 A	A 151 - 012 B
Sample Impinger Volume	V_{IMP}	ml	2.0	2.0
Sample Volume	V_S	L	4.590	4.605
TC Concentration	C_{TC}	mg/L	57.53	41.61
IC Concentration	C_{IC}	mg/L	41.97	35.03
TOC Concentration	C_{TOC}	mg/L	15.560	6.587
NMNEO, Condensable	C_T	ppm	**13.37**	**5.64**
TNMNEOC (Csa+C_T)	C	ppmC	**33.69**	**27.25**

Calculations

$V_S=k_1*V_T*(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$k_1 = (273+15.56)/760=0.3799$

$C_{SAT}= DF * C_{SA}$

$C_{CH4T} = DF * C_{CH4}$

$DF=(P_{TF}/T_{TF})/(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$C_T =(C_{TOC} * V_{IMP} * V_{ID})/(V_S*A_C)$

V_{ID} =23.6902 L/mole

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ENVIRONMENTAL

LABORATORY REPORT

Non-Methane Non-Ethane Organic compound Emissions by SCAQMD Method 25.3 (TCA/FID)

Client: Total Air Analysis,Inc
Project No.: L 1419
Unit Tested: Bradley ICE
Sampling Date: 16-Jul-08
Analyzed Date: 7-Aug-08
Lab No.: A 151

Client Sample ID	Lab ID	Almega Sample ID		Total* NMNEO ppm	NMNEO ppm condensable	NMNEO ppm noncondensable	CH_4 ppm	C_2H_6 ppm	CO ppm	CO_2 % v/v by TCD	O_2 % v/v by TCD
		Tank	Trap								
ICE 5											
Bradley ICE 5	A 151 - 021 A	91187	10	33.4	6.12	27.3	1954	25.5	568	12.6	6.7
Bradley ICE 5	A 151 - 021 B	S 002	21	31.9	10.0	21.8	1879	24.3	586	11.9	7.6
ICE 3											
Bradley ICE 3	A 151 -031 A	A 116	19	15.8	11.0	4.80	1416	53.4	649	13.1	6.7
Bradley ICE 3	A 151 -031 B	A 112	20	15.7	12.6	3.07	1333	53.7	640	13.0	6.7
Detection Limit					1	2	2	2	2	0.3	0.3

* NOTE - the BIAS FACTOR (cf 1 086) is NOT applied in these results
ND=Not Detected

Water Blank , ppmC 0.00

TGNMNEO concentration values are reported in ppm (v/v) as Methane (carbon#= 1)

The sample cylinder is analyzed for NMNEO, CO, CH_4, CO_2 and C_2H_6. It is then directed to a separation column where all heavy organics (C_3+) separate from the light organics (CO, CO_2, CH_4 and C_2H_6). The light organics are then passed through a reduction catalyst to convert CO and CO_2 to CH_4, and are then directed to a FID for detection and quantification. The heavy organics are backflushed off the holding column, passed through an oxidation catalyst, which convert all organics to CO_2, then through a reduction catalyst to convert CO_2 to CH_4 and then to a FID for detection and quantification.

Reviewed by: GA

Almega Environmental & Technical Services
5251 McFadden Ave. Huntington Beach CA, 92649
Phone 714-889-4000 Fax 714-889-7030
www.almegaenvironmental.com

CALCULATIONS

Client:	Total Air Analysis.Inc	Lab No.: A 151
Project No.:	L 1419	
Unit Tested:	Bradley ICE	
Sampling Date:	16-Jul-08	
Date tested:	7-Aug-08	

Parameter	Symbol	Units	ICE 5	ICE 5
Sample ID			Bradley ICE 5	Bradley ICE 5
Lab ID			A 151 - 021 A	A 151 - 021 B
Sample Tank				
Tank No			91187	S 002
Sample Tank Volume	V_T	L	6.000	6.000
Barometric Pressure	P_b	mm Hg	763	763
Pre-test Pressure	P_{TI}	mm Hg (abs)	2	2
Pre-test Temperature	t_{TI}	°C	22	22
Abs. Pre-test Temperature	T_{TI}	°K	295	295
Post-test Pressure	P_{TS}	mm Hg (abs)	600	632
Post-test Temperature	t_{TS}	°C	22	22
Abs. Post-test Temperature	T_{TS}	°K	295	295
Final Pressure	P_{TF}	mm Hg (abs)	866	848
Abs.Final Temperature	T_{TF}	°K	295	295
Dilution Factor	DF_T		1.46	1.36
Concentration Methane	C_{CH4}	ppm	1340.45	1386.48
NMNEO (noncond)	C_{SA}	ppm	**18.71**	**16.11**
Sample Volume	Vs	L	4.621	4.868
Methane in Tank(C_{CH4}*DF_T)	C_{CH4T}	ppm	**1954.4**	**1879.0**
NMNEO (noncond)	C_{SAT}	ppm	**27.28**	**21.84**
Condensate Recovery - Trap				
Sample ID			Bradley ICE 5	Bradley ICE 5
Trap No			10	21
Lab No.:			A 151 - 022 A	A 151 - 022 B
Sample Impinger Volume	V_{IMP}	ml	2.0	2.0
Sample Volume	V_S	L	4.621	4.868
TC Concentration	C_{TC}	mg/L	31.26	41.90
IC Concentration	C_{IC}	mg/L	24.09	29.51
TOC Concentration	C_{TOC}	mg/L	7.173	12.387
NMNEO, Condensable	C_T	ppm	**6.12**	**10.04**
TNMNEOC (Csa+C_T)	C	ppmC	**33.41**	**31.87**

Calculations

$V_S = k_1 * V_T * (P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$k_1 = (273+15.56)/760 = 0.3799$

$C_{SAT} = DF * C_{SA}$

$C_{CH4T} = DF * C_{CH4}$

$DF = (P_{TF}/T_{TF})/(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$C_T = (C_{TOC} * V_{IMP} * V_{ID})/(V_S * A_C)$

$V_{ID} = 23.6902$ L/mole

CALCULATIONS

Client:	Total Air Analysis.Inc		Lab No.: A 151
Project No.:	L 1419		
Unit Tested:	Bradley ICE		
Sampling Date:	16-Jul-08		
Date tested:	7-Aug-08		

Parameter	Symbol	Units	ICE 3	ICE 3
Sample ID			Bradley ICE 3	Bradley ICE 3
Lab ID			A 151 -031 A	A 151 -031 B
Sample Tank				
Tank No			A 116	A 112
Sample Tank Volume	V_T	L	6.000	6.000
Barometric Pressure	P_b	mm Hg	763	763
Pre-test Pressure	P_{TI}	mm Hg (abs)	2	2
Pre-test Temperature	t_{TI}	°C	22	22
Abs. Pre-test Temperature	T_{TI}	°K	295	295
Post-test Pressure	P_{TS}	mm Hg (abs)	622	602
Post-test Temperature	t_{TS}	°C	22	22
Abs. Post-test Temperature	T_{TS}	°K	295	295
Final Pressure	P_{TF}	mm Hg (abs)	848	858
Abs.Final Temperature	T_{TF}	°K	295	295
Dilution Factor	DF_T		1.38	1.44
Concentration Methane	C_{CH4}	ppm	1028.19	967.79
NMNEO (noncond)	C_{SA}	ppm	3.49	2.13
Sample Volume	Vs	L	4.791	4.636
Methane in Tank(C_{CH4}*DF_T)	C_{CH4T}	ppm	**1415.9**	**1332.7**
NMNEO (noncond)	C_{SAT}	ppm	**4.80**	**3.07**
Condensate Recovery - Trap				
Sample ID			Bradley ICE 3	Bradley ICE 3
Trap No			19	20
Lab No.:			A 151 -032 A	A 151 -032 B
Sample Impinger Volume	V_{IMP}	ml	2.0	2.0
Sample Volume	V_S	L	4.791	4.636
TC Concentration	C_{TC}	mg/L	37.36	50.787
IC Concentration	C_{IC}	mg/L	24.01	35.940
TOC Concentration	C_{TOC}	mg/L	13.347	14.847
NMNEO, Condensable	C_T	ppm	**10.991**	**12.634**
TNMNEOC (Csa+C_T)	C	ppmC	**15.80**	**15.71**

Calculations

$V_S=k_1*V_T*(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$k_1 = (273+15.56)/760=0.3799$

$C_{SAT}= DF * C_{SA}$

$C_{CH4T} = DF * C_{CH4}$

$DF=(P_{TF}/T_{TF})/(P_{TS}/T_{TS} - P_{TI}/T_{TI})$

$C_T =(C_{TOC} * V_{IMP} * V_{ID})/(V_S*A_C)$

$V_{ID} =23.6902$ L/mole

TOTAL AIR ANALYSIS, INC.
SCAQMD Method 25.3 Field Data Sheet

Facility: Bradley
Source: ICE 2
Test Date: 7/17/08

Run No.: 1
Pbar:
Operator: EH

	A	B
Trap No.:	14	17
Tank No.:	5-051	91184
Initial Vacuum:	29	28
Pre-Test Leak Rate:	0.00	0.00

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	9:31	29	
	:41	25	
	off	line	
	10:00	25	
	:10	23	
	:20	20	
	:30	17	
	:40	15	
	:54	7"	

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	9:31	28	
	:41	24	
	off	line	
	10:00	24	
	:10	20	
	:20	16	
	:30	12	
	:40	8	
	:50	4	

Post-Test Leak Check: 0.00
Final Vacuum: 7

Post-Test Leak Check: ✓ 0.00
Final Vacuum: 4"

TOTAL AIR ANALYSIS, INC.
SCAQMD Method 25.3 Field Data Sheet

Facility: Bradley
Source: ICE 3
Test Date: 7/16/08

Run No.: 1
Pbar:
Operator: EH

	A	B
Trap No.:	19	20
Tank No.:	A116	A112
Initial Vacuum:	28.5	28
Pre-Test Leak Rate:	0.00	0.00

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	13:42	28.5	
	:52	24.5	
	14:02	20.5	
	:12	16.5	
	:22	12.5	
	:32	9	
	:42	5	
	:49	4	

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	13:42	28	
	:52	24	
	14:02	20	
	:12	16	
	:22	12	
	:32	8	
	:42	4	
	:49		

Post-Test Leak Check: 0.00
Final Vacuum: 4"

Post-Test Leak Check: 0.00
Final Vacuum: 4"

TOTAL AIR ANALYSIS, INC.
SCAQMD Method 25.3 Field Data Sheet

Facility: Bradley
Source: ICE 4
Test Date: 7/15/08

Run No.: 1
Pbar:
Operator: GH

	A	B
Trap No.:	15	6
Tank No.:	91182	5021
Initial Vacuum:	28	29.5
Pre-Test Leak Rate:	0.00	0.00

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	11:10	28	
	:20	24	
	:30	20	
	:40	16	
	:47	13	
	12:08	13	
	:18	9	
	:28	5	

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	11:10	29.5	
	:20	23.5	
	:30	19.5	
	:40	15.5	
	:47	12.5	
	12:08	12.5	
	:18	8.5	
	:28	4.5	

Post-Test Leak Check: 0.00
Final Vacuum: 5

Post-Test Leak Check: 0.00
Final Vacuum: 4.5

TOTAL AIR ANALYSIS, INC.
SCAQMD Method 25.3 Field Data Sheet

Facility: Bradley
Source: TC 5
Test Date: 7/16/08

Run No.: 1
Pbar:
Operator: EM

	A	B
Trap No.:	21	10
Tank No.:	5-007	911 BT
Initial Vacuum:	28	28
Pre-Test Leak Rate:	0.00	0.00

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	9:32	28	
	:42	24	
	:52	20	
	10:02	16	
	:12	12	
	:22	8	
	:32	4	

Sample Point	Time (hr)	Vacuum ("Hg)	Flow rate (CC/min)
	9:32	28	
	:42	24	
	:52	20	
	10:02	16	
	:12	12	
	:22	8	
	:32	4	

	A	B
Post-Test Leak Check:	0.01	0.00
Final Vacuum:	4	4

Appendix D

SCAQMD Method 1.1 – 5.1

PM Emissions, Volume Flow Calculations, and Field Data Sheets

SCAQMD Method 5.1 - Particulate Matter Emission

Facility:	Bradley Landfill		
Source:	ICE #2	**Operator:**	EJH
Load:	Normal Load (~950 kW)	**Entered By:**	EJH
Start Date:	7/17/2008	**Checked By:**	RPL

Data Entry	Symbol	Units	RUN
Run Number	-	-	3
Unit	-	-	ICE #2
Round Stack, Diameter	ds	inches	15.50
Rectangular Stack, Length	L	inches	
Wdth	W	inches	
Nozzle Diameter	dn	inches	0.210
Average Stack Temperature	Fs	degrees F	887.4
Average Meter Temperature	Fm	degrees F	99.75
Barometric Pressure	Pbar	in. Hg	29.95
Stack Static Pressure	Pg	in. H20	-0.040
Avg. Delta H	dH	in. H20	1.65
Avg. Velocity Head	dP	in. H20	2.187
Pitot Coefficient	Cp	-	0.84
Gas Sample Volume	Vm	cubic ft.	44.16
Meter Calibration Factor	Y	-	0.9888
Total Sampling Time	min	minutes	64
Stack Gas Oxygen Content	Co2,m	%	6.74
Stack Gas Carbon Dioxide Content	Cco2,m	%	12.77
Total Impinger Gain	Ww	grams	126.3

Particulate Matter Weight			
Filter	Wf	mg	3.8
Probe, Impinger Catch	Wfht	mg	8.9
Total Particulate Catch	Wfht	mg	12.7

SCAQMD Method 5.1 - Particulate Matter Emission

Facility: Bradley Landfill
Start Date: 7/17/08 **Operator:** EJH

Calculated Data	Symbol	Units	RUN
Run Number	-	-	3
Nozzle Area, An = 3.14(dn)**2/4	An	sq. in.	0.03
Stack Area, As = 3.14*(ds)**2/4 (Round) = L * W/144 (Rectangular)	As	sq. feet	1.31
Avg. Stack Temperature, Ts = Fs + 460	Ts	degrees R	1347.38
Avg. Meter Temperature, Tm = Fm + 460	Tm	degrees R	559.75
Gas Sample Volume @ Standard Conditions, VmStd = 17.64 Y (Vm/Tm) (Pbar + dH/13.6)	VmStd	cubic ft.	41.38
Volume of Water Vapor, VwStd = 0.04647*Ww	VwStd	cubic ft.	5.87
Moist. Fraction, Bws = VwStd/(VmStd + VwStd)	Bws	-	0.1242
Dry Stack Gas Mol. Weight, Md = 0.32(Co2,m)+ 0.44(Cco2,m)+0.28{100-(Co2,m)-(Cco2,m)|	Md	g/g-mole	30.31
Wet Stack Gas Molecular Weight, Mw = Md(1-Bws)+18.0(Bws)	Mw	g/g-mole	28.78
Absolute Stack Pressure, Ps = Pbar + Pg/13.6	Ps	in. Hg	29.95
Stack Gas Velocity vs = 85.49 Cp { sqrt|(dP*Ts) /(Ps*Mw)| } vm = 0.3048 * vs	vs vsm	ft/s m/s	132.77 40.47
Actual Stack Gas Flow Rate, Q = 60*vs*As	Q	acf/min	10,439
Dry Gas Stack Flowrate (Dry,STD) Qsd = 17.64*Q*(1-Bws)*(Ps/Ts)	Qsd	dscf/min	3,584
Qsdm = Qsd/35.31	Qsdm	dscm/min	101.51
Isokinetic Rate, I = 13.61*Ts*VmStd/|Ps*vs*An*min*(1-Bws)|	I	%	98.31

Total Particulate, Tpm=.01543*Wpmt/Vmstd	Wpmt	gr/dscf	**0.00473555**

Front Half Mass Flow of Particulate, Ms = 0.00857*Qsd*Cfhpm	Ms	lb/hr	**1.45E-01**

IMPINGER	FINAL WT.	INT.WT	NET
1	671.5	566.0	105.5
2	708.0	693.6	14.4
3	594.4	594.2	0.2
4	818.4	812.2	6.2
		TOTAL	126.3

Run 1

	dH	dP	sqrt (dP)	Vm	Ts	Tm, in	Tm,out
1	1.5	2.000	1.4142136	828.64	880		89
2	1.65	2.200	1.4832397		892		89
3	1.65	2.200	1.4832397		894		91
4	1.8	2.400	1.5491933		894		94
5	1.725	2.300	1.5165751		895		98
6	1.725	2.300	1.5165751		896		99
7	1.575	2.100	1.4491377		892		99
8	1.35	1.800	1.3416408		876		99
9	1.275	1.700	1.3038405		880		100
10	1.35	1.800	1.3416408		882		101
11	1.65	2.200	1.4832397		886		103
12	1.8	2.400	1.5491933		881		105
13	1.875	2.500	1.5811388		894		106
14	1.8	2.400	1.5491933		891		107
15	1.8	2.400	1.5491933		886		108
16	1.8	2.400	1.5491933		879		108
				872.80			
AVERAGE	**1.6453125**	**2.1938**	**1.478778**	**44.16**	**887.4**		**99.75**
			2.1867844				

TOTAL AIR ANALYSIS, INC.

Method 5 Field Data Sheet

Facility:	Bradley	*Stack Dia.:*	195	*Meter No.:*	APEX 1	*Pitot Tube Leak Test:*	
Source:	ICE 2	*Nozzle Size:*	0.21	*dH@:*		*Before:* 0.00 *After:*	0.00
Test Date:	7/17/05	*Pbar:*		*Y:*	0.9885	*Assumed Moisture:*	
Run No.:	1	*Static P:*	-0.04	*Sampling Train Leak Test:*		*Assumed O_2:*	
Project No.:		*Probe Type:*		*Before:*	0.00	*Assumed CO_2:*	
Method:	5.1	*Pitot Coef./No.:*	0.84	*After:*	0.00	*Ambient Temp.:*	

Time	*Sample Point*	*Delta P*	*Delta H*	*DGM Reading*	*Temperature*					*Pump Vacuum*	*Imp. Out Temp.*	*Comments*
					Stack	*DGM In*	*DGM Out*	*Probe*	*Filter*			
9:37	12	2.0	1.5	828.639	880		89			5		0.75-K
:41	11	2.2	1.65	831.7	892		89			5		
:45	10	2.2	1.65	834.2	894		91			5		
:49	9	2.4	1.8	837.6	894		94			5		
[illegible]	8			838.6								
[illegible]	7											0.86 line
11[illegible]:01	6	2.3	1.725	838.6	895							
:05	5	2.3	1.725	841.1	896		98			5		
:09	4	2.1	1.575	843.9	892		99			5		
:13	3	1.8	1.35	846.8	876		99			5		
:17	2			849.6	882		99			5		
	1											
11[illegible]:22	12	1.7	1.275	849.6	880		99			5		
26	11	1.8	1.35	851.9	882		100			5		
:30	10	2.2	1.65	854.1	886		101			5		
:34	9	2.4	1.8	857.6	881		103			5		
38	8	2.5	1.875	860.2	894		105			5		
:42	7	2.4	1.8	863.9	891		106			5		
:46	6	2.4	1.8	867.3	886		107			5		
:50	5	2.4	1.8	870.8	899		108			5		
	4			872.800	871		108			5		
	3											
	2											
	1											

Total Air Analysis, Inc.
Impingers Weight Sheet

Facility: Bradley
Source: ICE 2
Run No.: 1
Test Date: 7/17/08
Operator: EH

Filter No.: 185

Impinger No.	*Impinger Solution*	*Amount (ml)*	*Impinger Type*	*Weight*	*Comments*
1	DI H_2O	~100	6/S	*Final:* 671.5 *Init.:* 566.0 *Net:*	Clean
2	DI H_2O	~100	6/S	*Final:* 708.0 *Init.:* 693.6 *Net:*	Clean
3	Empty	—	6/S	*Final:* 594.4 *Init.:* 594.2 *Net:*	—
4	Silica	~300gm	Modified 6/S	*Final:* 818.4 *Init.:* 812.2 *Net:*	—
5				*Final:* *Init.:* *Net:*	
6				*Final:* *Init.:* *Net:*	
7				*Final:* *Init.:* *Net:*	

Total Gain: _____

Preparation Date: 7/17/08
Prepared By: EPL

Recovery Date: 7/17/08
Recovered By: EPL

SCAQMD Method 5.1 - Particulate Matter Emission

Facility:	Bradley Landfill		
Source:	ICE #3	**Operator:**	EJH
Load:	Normal Load (~960 kW)	**Entered By:**	EJH
Start Date:	7/16/2008	**Checked By:**	RPL

Data Entry	Symbol	Units	RUN
Run Number	-	-	3
Unit	-	-	ICE #3
Round Stack, Diameter	ds	inches	15.50
Rectangular Stack, Length	L	inches	
Wdth	W	inches	
Nozzle Diameter	dn	inches	0.210
Average Stack Temperature	Fs	degrees F	880.6
Average Meter Temperature	Fm	degrees F	105.19
Barometric Pressure	Pbar	in. Hg	29.95
Stack Static Pressure	Pg	in. H20	-0.070
Avg. Delta H	dH	in. H20	1.73
Avg. Velocity Head	dP	in. H20	2.296
Pitot Coefficient	Cp	-	0.84
Gas Sample Volume	Vm	cubic ft.	48.90
Meter Calibration Factor	Y	-	0.9888
Total Sampling Time	min	minutes	64
Stack Gas Oxygen Content	Co2,m	%	6.93
Stack Gas Carbon Dioxide Content	Cco2,m	%	12.65
Total Impinger Gain	Ww	grams	154.1

Particulate Matter Weight			
Filter	Wf	mg	2.4
Probe, Impinger Catch	Wfht	mg	14.0
Total Particulate Catch	Wfht	mg	16.4

SCAQMD Method 5.1 - Particulate Matter Emission

Facility: Bradley Landfill
Start Date: 7/16/08 **Operator:** EJH

Calculated Data	Symbol	Units	RUN
Run Number	-	-	3
Nozzle Area, An = 3.14(dn)**2/4	An	sq. in.	0.03
Stack Area, As = 3.14*(ds)**2/4 (Round) = L * W/144 (Rectangular)	As	sq. feet	1.31
Avg. Stack Temperature, Ts = Fs + 460	Ts	degrees R	1340.63
Avg. Meter Temperature, Tm = Fm + 460	Tm	degrees R	565.19
Gas Sample Volume @ Standard Conditions, VmStd = 17.64 Y (Vm/Tm) (Pbar + dH/13.6)	VmStd	cubic ft.	45.39
Volume of Water Vapor, VwStd = 0.04647*Ww	VwStd	cubic ft.	7.16
Moist. Fraction, Bws = VwStd/(VmStd + VwStd)	Bws	-	0.1363
Dry Stack Gas Mol. Weight, Md = 0.32(Co2,m)+ 0.44(Cco2,m)+0.28{100-(Co2,m)-(Cco2,m)]	Md	g/g-mole	30.30
Wet Stack Gas Molecular Weight, Mw = Md(1-Bws)+18.0(Bws)	Mw	g/g-mole	28.62
Absolute Stack Pressure, Ps = Pbar + Pg/13.6	Ps	in. Hg	29.95
Stack Gas Velocity vs = 85.49 Cp { sqrt[(dP*Ts) /(Ps*Mw)] } vm = 0.3048 * vs	vs vsm	ft/s m/s	136.07 41.48
Actual Stack Gas Flow Rate, Q = 60*vs*As	Q	acf/min	10,698
Dry Gas Stack Flowrate (Dry,STD) Qsd = 17.64*Q*(1-Bws)*(Ps/Ts)	Qsd	dscf/min	3,641
Qsdm = Qsd/35.31	Qsdm	dscm/min	103.12
Isokinetic Rate, I = 13.61*Ts*VmStd/[Ps*vs*An*min*(1-Bws)]	I	%	106.15

Total Particulate, Tpm=.01543*Wpmt/Vmstd	Wpmt	gr/dscf	**0.00557499**

Front Half Mass Flow of Particulate, Ms = 0.00857*Qsd*Cfhpm	Ms	lb/hr	**1.74E-01**

IMPINGER	FINAL WT.	INT.WT	NET
1	681.4	560.9	120.5
2	712.5	693.8	18.7
3	594.0	590.0	4.0
4	809.9	799.0	10.9
		TOTAL	154.1

Run **1**

	dH	dP	sqrt (dP)	Vm	Ts	Tm, in	Tm,out
1	1.35	1.800	1.3416408	779.40	874		102
2	1.2	1.600	1.2649111		881		102
3	1.35	1.800	1.3416408		877		103
4	1.425	1.900	1.3784049		885		103
5	1.575	2.100	1.4491377		885		103
6	1.575	2.100	1.4491377		886		104
7	1.725	2.300	1.5165751		881		104
8	1.725	2.300	1.5165751		883		105
9	1.875	2.500	1.5811388		871		106
10	1.875	2.500	1.5811388		879		107
11	1.875	2.500	1.5811388		882		107
12	1.8	2.400	1.5491933		885		107
13	2.025	2.700	1.6431677		885		107
14	2.1	2.800	1.6733201		883		107
15	2.1	2.800	1.6733201		881		108
16	2.175	2.900	1.7029386		872		108
				828.30			
AVERAGE	**1.734375**	**2.3125**	**1.5152112**	**48.90**	**880.6**		**105.1875**
			2.295865				

TOTAL AIR ANALYSIS, INC.

Method 5 Field Data Sheet

Facility:	Bradley	*Stack Dia.:*	15.5	*Meter No.:*	APEX 1	*Pitot Tube Leak Test:*	
Source:	ICE 3	*Nozzle Size:*	0.21	*dH@:*		*Before:*	*After:*
Test Date:	7/16/08	*Pbar:*		*Y:*	0.9888	*Assumed Moisture:*	
Run No.:	1	*Static P:*	-0.07	*Sampling Train Leak Test:*		*Assumed O_2:*	
Project No.:		*Probe Type:*		*Before:*		*Assumed CO_2:*	
Method:	5.1	*Pitot Coef./No.:*		*After:*		*Ambient Temp.:*	

Time	*Sample Point*	*Delta P*	*Delta H*	*DGM Reading*	*Temperature*					*Pump Vacuum*	*Imp. Out Temp.*	*Comments*
					Stack	*DGM In*	*DGM Out*	*Probe*	*Filter*			
13:48	12	1.8	1.35	779.400	874		102			4		K=0.95
:52	11	1.6	1.2	782.1	881		102			4		
:56	10	1.8	1.35	784.6	877		103			4		
14:00	9	1.9	1.425	787.2	885		103			4		
:04	8	2.1	1.575	790.0	885		103			4		
:08	7	2.1	1.575	793.1	886		104			4		
:12	6	2.1	1.725	796.0	881		104			4		
:16	5	2.3	1.725	799.2	883		105			4		
	4			802.9								
	3											
	2											
	1											
14:20	12	2.5	1.875	802.9	871		106			4		
:24	11	2.5	1.875	806.0	879		107			4		
:28	10	2.5	1.875	808.7	882		107			4		
:32	9	2.4	1.8	812.0	885		109			4		
:36	8	2.7	2.025	814.8	885		109			4		
:40	7	2.8	2.1	817.6	883		109			4		
:44	6	2.8	2.1	820.4	881		108			4		
:48	5	2.9	2.175	824.1	872		108			4		
	4			828.300	869		107			4		
	3											
	2											
	1											

Total Air Analysis, Inc.
Impingers Weight Sheet

Facility: Bradley
Source: ICE 3
Run No.: 1
Test Date: 7/16/08
Operator: EH

Filter No.: 186

Impinger No.	*Impinger Solution*	*Amount (ml)*	*Impinger Type*	*Weight*	*Comments*
1	DI H_2O	~100	6/S	*Final:* 681.4 *Init.:* 560.9 *Net:*	Clear
2	DI H_2O	~100	6/S	*Final:* 7/2.5 *Init.:* 693.8 *Net:*	Clear
3	Empty	—	6/S	*Final:* 594.0 *Init.:* 590.0 *Net:*	—
4	Silica	~300gms	Mod. 6/S	*Final:* 809.9 *Init.:* 799.0 *Net:*	—
5				*Final:* *Init.:* *Net:*	
6				*Final:* *Init.:* *Net:*	
7				*Final:* *Init.:* *Net:*	

Total Gain: _____

Preparation Date: 7/16/08
Prepared By: DPL

Recovery Date: 7/16/08
Recovered By: DPL

SCAQMD Method 5.1 - Particulate Matter Emission

Facility:	Bradley Landfill		
Source:	ICE #4	**Operator:**	EJH
Load:	Normal Load (~900 kW)	**Entered By:**	EJH
Start Date:	7/15/2008	**Checked By:**	RPL

Data Entry	Symbol	Units	RUN
Run Number	-	-	**3**
Unit	-	-	ICE #4
Round Stack, Diameter	ds	inches	15.50
Rectangular Stack, Length	L	inches	
Wdth	W	inches	
Nozzle Diameter	dn	inches	0.210
Average Stack Temperature	Fs	degrees F	846.4
Average Meter Temperature	Fm	degrees F	91.94
Barometric Pressure	Pbar	in. Hg	29.95
Stack Static Pressure	Pg	in. H20	-0.080
Avg. Delta H	dH	in. H20	1.21
Avg. Velocity Head	dP	in. H20	1.601
Pitot Coefficient	Cp	-	0.84
Gas Sample Volume	Vm	cubic ft.	42.20
Meter Calibration Factor	Y	-	0.9888
Total Sampling Time	min	minutes	64
Stack Gas Oxygen Content	Co2,m	%	6.48
Stack Gas Carbon Dioxide Content	Cco2,m	%	13.02
Total Impinger Gain	Ww	grams	117.7

Particulate Matter Weight			
Filter	Wf	mg	3.1
Probe, Impinger Catch	Wfht	mg	13.2
Total Particulate Catch	Wfht	mg	16.3

SCAQMD Method 5.1 - Particulate Matter Emission

Facility: Bradley Landfill
Start Date: 7/15/08 **Operator:** EJH

Calculated Data	Symbol	Units	RUN
Run Number	-	-	3
Nozzle Area, An = 3.14(dn)**2/4	An	sq. in.	0.03
Stack Area, As = 3.14*(ds)**2/4 (Round) = L * W/144 (Rectangular)	As	sq. feet	1.31
Avg. Stack Temperature, Ts = Fs + 460	Ts	degrees R	1306.44
Avg. Meter Temperature, Tm = Fm + 460	Tm	degrees R	551.94
Gas Sample Volume @ Standard Conditions, VmStd = 17.64 Y (Vm/Tm) (Pbar + dH/13.6)	VmStd	cubic ft.	40.06
Volume of Water Vapor, VwStd = 0.04647*Ww	VwStd	cubic ft.	5.47
Moist. Fraction, Bws = VwStd/(VmStd + VwStd)	Bws	-	0.120
Dry Stack Gas Mol. Weight, Md = 0.32(Co2,m)+ 0.44(Cco2,m)+0.28{100-(Co2,m)-(Cco2,m)|	Md	g/g-mole	30.34
Wet Stack Gas Molecular Weight, Mw = Md(1-Bws)+18.0(Bws)	Mw	g/g-mole	28.86
Absolute Stack Pressure, Ps = Pbar + Pg/13.6	Ps	in. Hg	29.95
Stack Gas Velocity vs = 85.49 Cp { sqrt|(dP*Ts) /(Ps*Mw)| } vm = 0.3048 * vs	vs vsm	ft/s m/s	111.72 34.05
Actual Stack Gas Flow Rate, Q = 60*vs*As	Q	acf/min	8,783
Dry Gas Stack Flowrate (Dry,STD) Qsd = 17.64*Q*(1-Bws)*(Ps/Ts)	Qsd	dscf/min	3,125
Qsdm = Qsd/35.31	Qsdm	dscm/min	88.50
Isokinetic Rate, I = 13.61*Ts*VmStd/|Ps*vs*An*min*(1-Bws)|	I	%	109.16

Total Particulate, Tpm=.01543*Wpmt/Vmstd	Wpmt	gr/dscf	**0.00627819**

Front Half Mass Flow of Particulate, Ms = 0.00857*Qsd*Cfhpm	Ms	lb/hr	**1.68E-01**

IMPINGER	FINAL WT.	INT.WT	NET
1	659.2	562.5	96.7
2	705.3	693.1	12.2
3	590.9	590.7	0.2
4	821.3	812.7	8.6
		TOTAL	117.7

Run **1**

	dH	dP	sqrt (dP)	Vm	Ts	Tm, in	Tm out
1	0.75	1.000	1	689.10	741		87
2	0.825	1.100	1.0488088		754		88
3	1.275	1.700	1.3038405		856		89
4	1.35	1.800	1.3416408		880		90
5	1.5	2.000	1.4142136		884		91
6	1.425	1.900	1.3784049		884		91
7	1.425	1.900	1.3784049		876		92
8	1.275	1.700	1.3038405		841		92
9	1.2	1.600	1.2649111		836		93
10	1.275	1.700	1.3038405		842		93
11	1.35	1.800	1.3416408		863		93
12	1.425	1.900	1.3784049		877		94
13	1.425	1.900	1.3784049		879		94
14	1.2	1.600	1.2649111		868		94
15	0.9	1.200	1.0954451		871		95
16	0.825	1.100	1.0488088		791		95
				731.30			
AVERAGE	**1.2140625**	**1.6188**	**1.2653451**	**42.20**	**846.4**		**91.9375**
			1.6010981				

TOTAL AIR ANALYSIS, INC.

Method 5 Field Data Sheet

Facility:	Bradley Landfill	*Stack Dia.:*	16.5	*Meter No.:*	Apex #1	*Pitot Tube Leak Test:*	
Source:	ICE #4	*Nozzle Size:*		*dH@:*	0.9888	*Before:* 0.00	*After:* 0.00
Test Date:	7/15/08	*Pbar:*		*Y:*		*Assumed Moisture:*	
Run No.:	1	*Static P:*	-0.09	*Sampling Train Leak Test:*		*Assumed O_2:*	
Project No.:		*Probe Type:*	S.S.	*Before:*	0.00	*Assumed CO_2:*	
Method:	SCAQMD 5.1	*Pitot Coef./No.:*	0.84	*After:*	0.00	*Ambient Temp.:*	

Time	Sample Point	Delta P	Delta H	DGM Reading	Temperature					Pump Vacuum	Imp. Out Temp.	Comments
					Stack	DGM In	DGM Out	Probe	Filter			
11:16	12	1.0	0.75	689.100	741					5		K = 0.75
:20	11	1.1	0.825		754					5		4 min/point
:24	10	1.7	1.275		856					5		8 points/port
:28	9	1.8	1.35		880					5		
:32	8	2.0	1.50		884					5		
:36	7	1.9	1.425		884					5		
:40	6	1.9	1.425		876					5		
:44	5	1.7	1.275		841					5		
	4			709.800	836					5		
	3											
	2											
	1											
12:08	12	1.6	1.2	709.800	842					5		
:12	11	1.7	1.275		863					5		
:16	10	1.8	1.35		877					5		
:20	9	1.9	1.425		879					5		
:24	8	1.9	1.425		868 871					5		
:28	7	1.6	1.2							5		
:32	6	1.2	0.9		791					5		
:36	5	1.1	0.825		731					5		
	4			731.300	--					5		
	3											
	2											
	1											

TOTAL AIR ANALYSIS, INC.

MOISTURE & VELOCITY TRAVERSE DATA SHEET

Run Number: 1

Facility: Bradley
Source: ICE 4
Load: Normal
Start Date: 7/15/08
Start Time:
Operator: EH
Pbarr:

Meter Box No.: APEX 1
Meter Gamma:
Meter dH@: 0.9888
Pitot No.: TC-40
Pitot Factor: 0.84
Static Pressure (Pg):
Stack Diam.(in.):

Sampling Train Leak Test:
Before:
After:
Pitot Leak Check:
Before:
After:

Port	Traverse Point	Time (h/m)	Vel Head dP, in. H_2O	Stack Temp. Ts (deg. F)	Cyc. Flow (Angle deg)	Port	Traverse Point	Time (h/m)	Vel Head dP, in. H_2O	Stack Temp. Ts (deg. F)	Cyc. Flow (Angle deg)
	1						1				
	2						2				
	3						3				
	4						4				
	5						5				
	6						6				
	7						7				
	8						8				
	9						9				
	10						10				
	11						11				
	12						12				

Average:

Moisture

Time	Orif. Pres. dH (in. H_2O)	Meter Vol. Vm (cu. ft.)	Dry Gas Meter Temp. In (deg. F)	Dry Gas Meter Temp. Out (deg. F)	Imp Out Temp. (deg. F)	Meter Vac.

Total:
Average:

Train Recovery Data

Impinger No.	1	2	3	4
Final Weight(g)	659.2	705.3	590.9	821.3
Initial Weight(g)	562.5	693.1	590.7	812.7

Net Weight (g)

Total (g):

SCAQMD Method 5.1 - Particulate Matter Emission

Facility:	Bradley Landfill		
Source:	ICE #5	**Operator:**	EJH
Load:	Normal Load (~960 kW)	**Entered By:**	EJH
Start Date:	7/16/2008	**Checked By:**	RPL

Data Entry	Symbol	Units	RUN
Run Number	-	-	3
Unit	-	-	ICE #5
Round Stack, Diameter	ds	inches	15.50
Rectangular Stack, Length	L	inches	
Wdth	W	inches	
Nozzle Diameter	dn	inches	0.210
Average Stack Temperature	Fs	degrees F	882.1
Average Meter Temperature	Fm	degrees F	102.38
Barometric Pressure	Pbar	in. Hg	29.95
Stack Static Pressure	Pg	in. H20	-0.040
Avg. Delta H	dH	in. H20	1.56
Avg. Velocity Head	dP	in. H20	2.059
Pitot Coefficient	Cp	-	0.84
Gas Sample Volume	Vm	cubic ft.	43.43
Meter Calibration Factor	Y	-	0.9888
Total Sampling Time	min	minutes	64
Stack Gas Oxygen Content	Co2,m	%	6.84
Stack Gas Carbon Dioxide Content	Cco2,m	%	12.77
Total Impinger Gain	Ww	grams	126.5

Particulate Matter Weight			
Filter	Wf	mg	3.4
Probe, Impinger Catch	Wfht	mg	11.2
Total Particulate Catch	Wfht	mg	14.6

SCAQMD Method 5.1 - Particulate Matter Emission

Facility: Bradley Landfill
Start Date: 7/16/08 **Operator:** EJH

Calculated Data	Symbol	Units	RUN
Run Number	-	-	3
Nozzle Area, An = 3.14(dn)**2/4	An	sq. in.	0.03
Stack Area, As = 3.14*(ds)**2/4 (Round) = L * W/144 (Rectangular)	As	sq. feet	1.31
Avg. Stack Temperature, Ts = Fs + 460	Ts	degrees R	1342.06
Avg. Meter Temperature, Tm = Fm + 460	Tm	degrees R	562.38
Gas Sample Volume @ Standard Conditions, VmStd = 17.64 Y (Vm/Tm) (Pbar + dH/13.6)	VmStd	cubic ft.	40.50
Volume of Water Vapor, VwStd = 0.04647*Ww	VwStd	cubic ft.	5.88
Moist. Fraction, Bws = VwStd/(VmStd + VwStd)	Bws	-	0.1268
Dry Stack Gas Mol. Weight, Md = 0.32(Co2,m)+ 0.44(Cco2,m)+0.28{100-(Co2,m)-(Cco2,m)]	Md	g/g-mole	30.32
Wet Stack Gas Molecular Weight, Mw = Md(1-Bws)+18.0(Bws)	Mw	g/g-mole	28.76
Absolute Stack Pressure, Ps = Pbar + Pg/13.6	Ps	in. Hg	29.95
Stack Gas Velocity vs = 85.49 Cp { sqrt[(dP*Ts) /(Ps*Mw)] } vm = 0.3048 * vs	vs vsm	ft/s m/s	128.65 39.21
Actual Stack Gas Flow Rate, Q = 60*vs*As	Q	acf/min	10,114
Dry Gas Stack Flowrate (Dry,STD) Qsd = 17.64*Q*(1-Bws)*(Ps/Ts)	Qsd	dscf/min	3,477
Qsdm = Qsd/35.31	Qsdm	dscm/min	98.46
Isokinetic Rate, I = 13.61*Ts*VmStd/[Ps*vs*An*min*(1-Bws)]	I	%	99.19

Total Particulate, Tpm=.01543*Wpmt/Vmstd	Wpmt	gr/dscf	**0.0055625**

Front Half Mass Flow of Particulate, Ms = 0.00857*Qsd*Cfhpm	Ms	lb/hr	**1.66E-01**

IMPINGER	FINAL WT.	INT.WT	NET
1	676.4	565.8	110.6
2	707.0	694.2	12.8
3	593.7	593.6	0.1
4	827.4	824.4	3.0
		TOTAL	126.5

ICE #5

Run 1

	dH	dP	sqrt (dP)	Vm	Ts	Tm, in	Tm,out
1	0.975	1.300	1.1401754	732.97	873		96
2	1.2	1.600	1.2649111		882		96
3	1.5	2.000	1.4142136		872		97
4	1.8	2.400	1.5491933		887		97
5	1.8	2.400	1.5491933		889		98
6	1.725	2.300	1.5165751		889		99
7	1.725	2.300	1.5165751		887		100
8	1.65	2.200	1.4832397		880		102
9	1.8	2.400	1.5491933		885		103
10	1.725	2.300	1.5165751		887		104
11	1.725	2.300	1.5165751		886		105
12	1.725	2.300	1.5165751		888		106
13	1.65	2.200	1.4832397		886		107
14	1.725	2.300	1.5165751		876		108
15	1.425	1.900	1.3784049		870		109
16	0.825	1.100	1.0488088		876		111
				776.40			
AVERAGE	**1.5609375**	**2.0813**	**1.4350015**	**43.43**	**882.1**		**102.375**
			2.0592293				

TOTAL AIR ANALYSIS, INC.

Method 5 Field Data Sheet

Facility:	Bradley	*Stack Dia.:*		*Meter No.:*	APEX 1	*Pitot Tube Leak Test:*	
Source:	ICE 5	*Nozzle Size:*		*dH@:*		*Before:* 0.00	*After:*
Test Date:	7/16/08	*Pbar:*		*Y:*	0.9888	*Assumed Moisture:*	
Run No.:	1	*Static P:*	-1.0	*Sampling Train Leak Test:*		*Assumed O_2:*	
Project No.:		*Probe Type:*		*Before:*	0.00	*Assumed CO_2:*	
Method:		*Pitot Coef./No.:*		*After:*		*Ambient Temp.:*	

Time	Sample Point	Delta P	Delta H	DGM Reading	Temperature					Pump Vacuum	Imp. Out Temp.	Comments
					Stack	DGM In	DGM Out	Probe	Filter			
9:39	12	1.3	0.975	732.968	803		96			5		K = 0.75
:43	11	1.2	1.2	734.8	882		96			5		4min / point
:47	10	2.0	1.5	737.6	872		97			5		8 points
:51	9	2.4	1.8	740.1	887		97			5		
:55	8	2.4	1.8	743.7	889		98			5		
:59	7	2.3	1.725	747.1	889		99			5		
10:03	6	2.3	1.725	749.3	887		100			5		
:07	5	2.2	1.65	751.9	880		102			5		
	4			755.2	884		103			5		
	3											
	2											
	1											
10:11	12	2.4	1.8	755.2	885		103			5		
:15	11	2.3	1.725	758.6	887		104			5		
:19	10	2.3	1.725	761.9	886		105			5		
:23	9	2.3	1.725	764.6	888		106			5		
:27	8	2.2	1.65	767.7	886		107			5		
:31	7	2.3	1.725	770.8	876		108			5		
:35	6	1.9	1.425	773.7	870		109			5		
:39	5	1.1	0.825	776.4	876		111			5		
	4											
	3											
	2											
	1											

Total Air Analysis, Inc.
Impingers Weight Sheet

Facility: Bradley
Source: IC# 5
Run No.: 1
Test Date: 7/16/08
Operator: EH

Filter No.: PM5.1-184

Impinger No.	*Impinger Solution*	*Amount (ml)*	*Impinger Type*	*Weight*	*Comments*
1	DI H_2O	~100	6/S	*Final:* 676.4 *Init.:* 565.8 *Net:*	Clean
2	DI H_2O	~100	6/S	*Final:* 707.0 *Init.:* 694.2 *Net:*	Clean
3	Empty	—	6/S	*Final:* 593.7 *Init.:* 593.6 *Net:*	—
4	Silica	~300 gms	mod 6/S	*Final:* 827.4 *Init.:* 824.4 *Net:*	—
5				*Final:* *Init.:* *Net:*	
6				*Final:* *Init.:* *Net:*	
7				*Final:* *Init.:* *Net:*	

Total Gain: _____

Preparation Date: _____
Prepared By: _____

Recovery Date: _____
Recovered By: _____

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT **Total Air Analysis, Inc**
LABORATORY NO: **08-639**
SAMPLING DATE: July 15, 2008
RECEIVING DATE: July 25, 2008
ANALYSIS DATE: July 30, 2008
REPORT DATE: August 12, 2008

Laboratory Analysis Report

Analysis Method	**SCAQMD Method 5.1**			
Sensitivity	**0.1 mg**			
EER Sample ID **Test ID / Description**	**Sample Vol. (mL)**	**Initial Wt. gram**	**Final Wt gram**	**PM gram/sample**
Bradley ICE #4				
Impinger	283	162.3350	162.3482	0.0132
Filter (PM 5.1-183)	-	0.4262	0.4293	0.0031
Bradley ICE #5				
Impinger	338	164.9606	164.9718	0.0112
Filter (PM 5.1-184)	-	0.4301	0.4335	0.0034
Bradley ICE #3				
Impinger	326	166.0080	166.0220	0.0140
Filter (PM 5.1-186)	-	0.4312	0.4336	0.0024
Bradley ICE #2				
Impinger	306	110.9518	110.9607	0.0089
Filter (PM 5.1-185)	-	0.4263	0.4301	0.0038

PM: Particulate Matter

Dr. Andrew Kitto
President

TOTAL AIR ANALYSIS, INC.

08-639

1210 East 223 rd Street, # 314 Carson, CA 90745 (310) 518 5133 Fax: (310) 518 5107

CHAIN OF CUSTODY

Page: 1 of: 1

Client: Waste Management

Contact Person: Ross Logan

tel:

fax:

Project No.: WM-80707

Project Name: Bradley

Project Manager: RPL

P.O. Number:

Analysis: Liquid to 1 u Gravimetric

Turnaround Time:

- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☑ Normal

Total Air ID #	Client Sample ID	Summa Canister #	Date	Type of Sample	Lab ID Number	Analysis	Remarks
	Bradley ICE #4 - Filter	—	7/15/08	Solid		✓	
	" ICE #4 - Evp/Abz	—		Liquid		✓	
	Bradley ICE #5 - Filter	—		Solid		✓	
	" ICE 5 - Evp/Abz	—		Liq		✓	
	Bradley ICE #3 - Filter	—		Solid		✓	
	" ICE 3 - Evp/Abz	—		Liq		✓	
	Bradley ICE #2 - Filter	—		Solid		✓	
	" ICE 2 - Evp/Abz	—		Liq		✓	

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
	7/25/08 @ 16:30		7/25/08 @ 1630
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time

Appendix E

SCAQMD 307-91

Total Sulfur as H_2S, Lab Analysis, and Calculations

Total Reduced Sulfur (TRS)

Facility: Bradley Landfill
Source: ICE #2
Load: Normal Load (~900 kW)
Start Date: 7/17/08

Parameter/Run No.	Units	ICE #2
Inlet Sulfur		
Fuel Gas Usage	scfm	456.4
Total Reduced Sulfur as H2S	ppmv	**78**
Molecular Weight (H2S)		34
Molecular Weight (SO2)		64
Total Reduced Sulfur as SO2	ppmv	41.4
Sulfur Dioxide, mass	lb/hr	**0.192**
Outlet Sulfur		
Exhaust Flow rate	dscfm	3583
Total Reduced Sulfur as SO2	ppmv	**5.28**

Inlet Calculation: lb/hr = ppmv * scfm * 1.583 x 10-7 * MW
Outlet Calculation: ppmv = lb/hr / (dscfm * 1.583 x 10-7 * MW)
Note: Assuming Mass balance, Mass (lb/hr) In = Mass (lb/hr) Out

Total Reduced Sulfur (TRS)

Facility: Bradley Landfill
Source: ICE #3
Load: Normal Load (~960 kW)
Start Date: 7/16/08

Parameter/Run No.	Units	ICE #3
Inlet Sulfur		
Fuel Gas Usage	scfm	432.7
Total Reduced Sulfur as H2S	ppmv	**69**
Molecular Weight (H2S)		34
Molecular Weight (SO2)		64
Total Reduced Sulfur as SO2	ppmv	36.7
Sulfur Dioxide, mass	lb/hr	**0.161**
Outlet Sulfur		
Exhaust Flow rate	dscfm	3641
Total Reduced Sulfur as SO2	ppmv	**4.36**

Inlet Calculation: lb/hr = ppmv * scfm * 1.583 x 10-7 * MW
Outlet Calculation: ppmv = lb/hr / (dscfm * 1.583 x 10-7 * MW)
Note: Assuming Mass balance, Mass (lb/hr) In = Mass (lb/hr) Out

Total Reduced Sulfur (TRS)

Facility: Bradley Landfill
Source: ICE #4
Load: High Load (~950 kW)
Start Date: 7/15/08

Parameter/Run No.	Units	ICE #4
Inlet Sulfur		
Fuel Gas Usage	scfm	448.1
Total Reduced Sulfur as H2S	ppmv	**42**
Molecular Weight (H2S)		34
Molecular Weight (SO2)		64
Total Reduced Sulfur as SO2	ppmv	22.3
Sulfur Dioxide, mass	lb/hr	**0.101**
Outlet Sulfur		
Exhaust Flow rate	dscfm	3125
Total Reduced Sulfur as SO2	ppmv	**3.20**

Inlet Calculation: lb/hr = ppmv * scfm * 1.583 x 10-7 * MW
Outlet Calculation: ppmv = lb/hr / (dscfm * 1.583 x 10-7 * MW)
Note: Assuming Mass balance, Mass (lb/hr) In = Mass (lb/hr) Out

Total Reduced Sulfur (TRS)

Facility: Bradley Landfill
Source: ICE #5
Load: Normal Load (~960 kW)
Start Date: 7/16/08

Parameter/Run No.	Units	ICE #5
Inlet Sulfur		
Fuel Gas Usage	scfm	488.8
Total Reduced Sulfur as H2S	ppmv	**69**
Molecular Weight (H2S)		34
Molecular Weight (SO2)		64
Total Reduced Sulfur as SO2	ppmv	36.7
Sulfur Dioxide, mass	lb/hr	**0.182**
Outlet Sulfur		
Exhaust Flow rate	dscfm	3477
Total Reduced Sulfur as SO2	ppmv	**5.15**

Inlet Calculation: lb/hr = ppmv * scfm * 1.583 x 10-7 * MW
Outlet Calculation: ppmv = lb/hr / (dscfm * 1.583 x 10-7 * MW)
Note: Assuming Mass balance, Mass (lb/hr) In = Mass (lb/hr) Out

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CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-607**
SAMPLING DATE: July 16 & 17, 2008
RECEIVING DATE: July 16 & 17, 2008
ANALYSIS DATE: July 17, 2008
REPORT DATE: July 18, 2008

Laboratory Analysis Report

Analysis Method	**SCAQMD 307-91**	
Detection Limits	**0.1 PPMV**	
	Client ID	**Bradley ICE #5 + #3**	**Bradley ICE #2**
	Sampling Date	**7/16/2008**	**7/17/2008**
	Lab ID	**19808-7**	**19908-13**
Analyte	**Units**	**PPMV**	**PPMV**
Hydrogen Sulfide		51	57
Carbonyl Sulfide		0.4	0.4
Methyl Mercaptan		4.9	6.1
Ethyl Mercaptan		0.3	0.2
Un-Identified S Compounds		13	15
TRS as H2S		**69**	**78**

TRS: Total Reduced Sulfur as Hydrogen Sulfide

Dr. Andrew Kitto
President

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CLIENT:	**Total Air Analysis, Inc.**
LABORATORY NO:	**08-607**
SAMPLING DATE:	July 16 & 17, 2008
RECEIVING DATE:	July 16 & 17, 2008
ANALYSIS DATE:	July 17, 2008
REPORT DATE:	July 18, 2008

Quality Assurance Report

Sample ID: Bradley ICE #5 + #3 on 7/16/2008 **Lab ID: 19808-7**

Analysis Method		**SCAQMD 307-91**		
Detection Limit		**0.1 PPMV**		
Analyte	**Aver. Conc. PPMV**	**Dil. Factor Ambient Air**	**DF*A/CF PPMV**	**% Sample Recovery**
H2S	51	5.0	52	101
Carbonyl Sulfide	0.4	5.0	0.4	99
Methyl mercaptan	4.9	5.0	4.9	100
Ethyl Mercaptan	0.2	5.0	0.2	96
Unidentified S Compounds	13	5.0	13	101
TRS as H2S	**70**	**5.0**	**70**	**101**

Sample ID: Bradley ICE #2 on 7/17/2008 **Lab ID: 19908-13**

Analysis Method		**SCAQMD 307-91**		
Detection Limit		**0.1 PPMV**		
Analyte	**Aver. Conc. PPMV**	**Dil. Factor Ambient Air**	**DF*A/CF PPMV**	**% Sample Recovery**
H2S	56	5.0	55	98
Carbonyl Sulfide	0.4	5.0	0.4	100
Methyl mercaptan	5.9	5.0	5.7	97
Ethyl Mercaptan	0.2	5.0	0.2	100
Unidentified S Compounds	14	5.0	14	98
TRS as H2S	**78**	**5.0**	**76**	**96**

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President

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CLIENT:	**Total Air Analysis, Inc.**
LABORATORY NO:	**08-604**
SAMPLING DATE:	July 15, 2008
RECEIVING DATE:	July 16, 2008
ANALYSIS DATE:	July 16, 2008
REPORT DATE:	July 17, 2008

Laboratory Analysis Report

Analysis Method	**SCAQMD 307-91**	
Detection Limits	**0.1 PPMV**	
	Client ID	**Bradley - Eng #4**
	Sampling Date	**7/15/2008**
	Lab ID	**19808-1**
Analyte	**Units**	**PPMV**
Hydrogen Sulfide		26
Carbonyl Sulfide		0.4
Methyl Mercaptan		4.2
Ethyl Mercaptan		0.2
Un-Identified S Compounds		11
TRS as H2S		**42**

TRS: Total Reduced Sulfur as Hydrogen Sulfide

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President

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CLIENT:	**Total Air Analysis, Inc.**
LABORATORY NO:	**08-604**
SAMPLING DATE:	July 15, 2008
RECEIVING DATE:	July 16, 2008
ANALYSIS DATE:	July 16, 2008
REPORT DATE:	July 17, 2008

Quality Assurance Report

Sample ID: Bradley - Eng #4 on 7/15/2008 **Lab ID: 19808-1**

Analysis Method		**SCAQMD 307-91**		
Detection Limit		**0.1 PPMV**		
Analyte	**Aver. Conc. PPMV**	**Dil. Factor Ambient Air**	**DF*A/CF PPMV**	**% Sample Recovery**
H2S	25	5.0	25	99
Carbonyl Sulfide	0.4	5.0	0.4	103
Methyl mercaptan	4.2	5.0	4.2	100
Ethyl Mercaptan	0.2	5.0	0.2	102
Unidentified S Compounds	12	5.0	12	101
TRS as H2S	**42**	**5.0**	**42**	**100**

Dr. Andrew Kitto
President

TOTAL AIR ANALYSIS, INC.

1210 East 223 rd Street, # 314 Carson, CA 90745 (310) 518 5133 Fax: (310) 518 5107

CHAIN OF CUSTODY

Page: 1 of: 1

Client: Bradley Waste Mgmt

Contact Person: Russ Logan

tel:

fax:

Project No.: WM-80707

Project Name: Bradley

Project Manager: RPL

P.O. Number:

Analysis: Scan via 309-91 : Sulfurs, ASTM D-1945 : Inerts, ASTM D-3588 : BTU + F' factor

Turnaround Time:

- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☑ Normal

Total Air ID #	Client Sample ID	Summa Canister #	Date	Type of Sample	Lab ID Number	Analysis	Remarks
	Bradley-Eng.#4	—	7/15/08	GAS	19808-1	✓ ✓ ✓	Landfill GAS

Relinquished by: (signature) — Date/Time: 7/15/08 @ 17:45 — Received by: (signature) — Date/time: 7/16/08 @ 9:02

Relinquished by: (signature) — Date/Time — Received by: (signature) — Date/time

TOTAL AIR ANALYSIS, INC.

1210 East 223 rd Street, # 314 Carson, CA 90745 (310) 518 5133 Fax: (310) 518 5107

CHAIN OF CUSTODY

Client: Waste Mangement

Contact Person: Russ Logan

tel:

fax:

Project No.: WM 8090D

Project Name: Bradly

Project Manager: RPL

P.O. Number:

Analysis: SCAQMD 307-91 S. Comp; ASTM 3588 BTU/Reactor; ASTM D 1945; TNMEOC

Turnaround Time:

- ☐ Same Day
- ☐ 24 Hours
- ☐ 48 Hours
- ☑ Normal

Total Air ID #	Client Sample ID	Summa Canister #	Date	Type of Sample	Lab ID Number	SCAQMD 307-91 S. Comp	ASTM 3588 BTU/Reactor	ASTM D 1945	TNMEOC			Remarks
	Bradley Landfill Gas ICE #5 + #3		7/16/08	GAS		✓	✓	✓				

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time
[signature]	7/16/08	[signature]	7-16-08 17:15
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/time

Appendix F

EPA Method 19 and Operating Parameters

EPA Method 19, Stack Gas Flowrate Calculation

Facility: Bradley Landfill
Source: ICE #2
Load: Max, Low and Normal Load
Start Date: 7/17/08

ICE #2	Time		O_2	Fuel Flow	HHV	F Factor	System Flow	Heat Input
	Start	End	(%)	(scfm)	(btu/scf)	(sdcf/Mmbtu)	(scfm)	(Mmbtu/hr)
Run #1 (High)	8:30	8:44	6.88	498.9	472.0	9,558	3,355	14.13
Run #2 (Low)	8:50	9:04	6.17	382.2	472.0	9,558	2,446	10.82
Run #3 (Normal)	9:20	9:52	6.63	456.4	472.0	9,558	3,015	12.93

Flow Rate = Fuel Flow Rate x F Factor x HHV/1000000 x 20.9/(20.9 - O2 conc)

Bradley Landfill (Max Load ~1000 kW)

Unit #2		NOX #2 ppm		O2 #2 %		FUEL FLOW #2 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/17	08:30:00	69.67	73.36	6.38	6.52	456.0	476.8
2008/07/17	08:31:00	64.85	70.34	6.47	6.61	475.0	483.6
2008/07/17	08:32:00	55.49	65.03	6.56	6.80	481.8	502.6
2008/07/17	08:33:00	50.99	55.54	6.80	6.95	498.6	506.4
2008/07/17	08:34:00	49.64	51.26	6.86	6.95	500.7	508.3
2008/07/17	08:35:00	49.46	50.99	6.83	6.93	497.5	507.2
2008/07/17	08:36:00	48.42	50.41	6.85	6.97	499.7	515.1
2008/07/17	08:37:00	48.20	52.16	6.85	7.01	498.6	511.0
2008/07/17	08:38:00	47.52	51.85	6.80	6.94	498.7	513.9
2008/07/17	08:39:00	50.00	54.10	6.80	6.89	496.5	503.9
2008/07/17	08:40:00	51.53	54.05	6.80	6.89	498.8	508.5
2008/07/17	08:41:00	50.05	51.80	6.83	6.98	501.0	506.2
2008/07/17	08:42:00	47.88	50.86	6.89	6.97	502.1	513.0
2008/07/17	08:43:00	47.84	51.44	6.87	6.96	498.7	508.5
2008/07/17	08:44:00	51.13	52.30	6.82	6.92	495.4	502.9
	Average	**52.18**	**55.70**	**6.76**	**6.89**	**493.27**	**504.53**
		53.94		***6.82***		***498.90***	

Bradley Landfill (Low Load ~550 kW)

Unit #2		NOX #2 ppm		O2 #2 %		FUEL FLOW #2 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/17	08:50:00	48.60	50.18	6.86	6.97	474.4	507.5
2008/07/17	08:51:00	50.09	52.21	6.79	6.93	446.5	478.4
2008/07/17	08:52:00	51.53	56.53	6.63	6.85	439.9	450.3
2008/07/17	08:53:00	55.81	59.41	6.54	6.65	411.9	449.2
2008/07/17	08:54:00	59.41	63.55	6.44	6.56	413.0	423.3
2008/07/17	08:55:00	62.69	65.84	6.39	6.57	414.2	420.0
2008/07/17	08:56:00	65.66	69.04	6.35	6.44	391.8	418.8
2008/07/17	08:57:00	67.19	69.17	6.30	6.39	373.9	398.7
2008/07/17	08:58:00	67.82	69.49	6.21	6.34	347.0	374.0
2008/07/17	08:59:00	67.96	70.34	6.10	6.26	329.3	347.0
2008/07/17	09:00:00	66.97	71.69	6.05	6.18	329.3	333.6
2008/07/17	09:01:00	71.69	73.94	6.05	6.14	326.8	331.4
2008/07/17	09:02:00	70.30	73.94	6.05	6.17	299.2	326.8
2008/07/17	09:03:00	64.76	70.30	6.11	6.18	299.2	304.9
2008/07/17	09:04:00	61.25	64.81	6.13	6.20	298.7	306.6
	Average	**62.12**	**65.36**	**6.33**	**6.46**	**373.01**	**391.37**
		63.74		***6.39***		***382.19***	

Bradley Landfill (Normal Load ~950 kW)

Unit #2		NOX #2 ppm		O2 #2 %		FUEL FLOW #2 scfm		
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX	
2008/07/17	09:20:00	64.49	65.71	6.16	6.25	342.6	352.5	
2008/07/17	09:21:00	65.39	67.42	6.22	6.34	348.1	378.1	
2008/07/17	09:22:00	64.90	66.52	6.25	6.41	370.4	400.6	
2008/07/17	09:23:00	64.09	66.29	6.34	6.47	394.8	420.7	
2008/07/17	09:24:00	61.93	64.18	6.35	6.47	416.0	445.3	
2008/07/17	09:25:00	62.06	66.34	6.42	6.56	439.2	447.5	
2008/07/17	09:26:00	66.02	67.69	6.35	6.52	440.4	462.7	
2008/07/17	09:27:00	64.76	66.56	6.40	6.49	462.7	471.0	
2008/07/17	09:28:00	65.17	66.47	6.41	6.47	465.1	471.3	
2008/07/17	09:29:00	63.28	65.80	6.44	6.53	465.1	471.3	
2008/07/17	09:30:00	64.54	66.83	6.44	6.53	465.1	473.5	
2008/07/17	09:31:00	63.28	64.67	6.44	6.53	466.2	472.4	
2008/07/17	09:32:00	63.50	65.39	6.47	6.56	467.4	473.5	
2008/07/17	09:33:00	61.84	63.68	6.52	6.60	466.2	474.6	
2008/07/17	09:34:00	61.57	63.46	6.53	6.59	466.2	475.7	
2008/07/17	09:35:00	59.86	62.42	6.44	6.66	467.4	473.5	
2008/07/17	09:36:00	60.40	62.06	6.52	6.66	468.5	475.8	
2008/07/17	09:37:00	60.04	63.59	6.51	6.65	466.2	473.5	
2008/07/17	09:38:00	60.58	63.95	6.44	6.58	464.3	474.6	
2008/07/17	09:39:00	58.82	60.58	6.47	6.66	469.8	474.9	
2008/07/17	09:40:00	57.61	59.14	6.57	6.69	468.7	476.0	
2008/07/17	09:41:00	56.35	58.24	6.57	6.74	469.9	478.3	
2008/07/17	09:42:00	55.85	58.37	6.57	6.74	469.9	479.2	
2008/07/17	09:43:00	56.98	58.64	6.61	6.66	468.7	475.9	
2008/07/17	09:44:00	57.74	60.80	6.62	6.66	467.6	475.4	
2008/07/17	09:45:00	57.56	60.80	6.58	6.67	469.9	478.2	
2008/07/17	09:46:00	56.26	58.15	6.53	6.68	470.9	478.2	
2008/07/17	09:47:00	56.30	58.24	6.62	6.72	464.6	474.9	
2008/07/17	09:48:00	57.88	60.26	6.58	6.67	464.3	471.5	
2008/07/17	09:49:00	59.23	61.16	6.60	6.65	464.3	471.2	
2008/07/17	09:50:00	56.71	59.36	6.62	6.70	465.7	473.9	
2008/07/17	09:51:00	57.34	60.76	6.61	6.69	463.4	470.6	
2008/07/17	09:52:00	58.01	59.95	6.56	6.70	465.7	471.7	
2008/07/17	09:53:00	56.84	58.15	6.56	6.64	465.7	474.0	
2008/07/17	09:54:00	57.70	59.59	6.59	6.69	466.8	472.9	
2008/07/17	09:55:00	58.91	61.39	6.54	6.64	465.7	471.7	
2008/07/17	09:56:00	58.37	61.39	6.56	6.65	465.7	472.8	
2008/07/17	09:57:00	57.97	58.96	6.54	6.64	466.8	472.9	
2008/07/17	09:58:00	57.07	58.69	6.59	6.70	465.7	474.0	
2008/07/17	09:59:00	58.55	59.95	6.61	6.67	0.2	479.0	
2008/07/17	10:00:00	5.94	58.69	6.62	19.58	0.1	0.2	
2008/07/17	10:01:00	7.16	8.82	18.81	19.58	0.1	0.2	
2008/07/17	10:02:00	4.77	7.47	19.30	19.72	0.1	0.2	**Engine**
2008/07/17	10:03:00	4.37	5.90	19.72	20.03	0.1	0.2	**Down**
2008/07/17	10:04:00	3.24	4.86	20.03	20.17	0.1	0.2	
2008/07/17	10:05:00	3.29	4.41	20.12	20.32	0.1	0.2	
2008/07/17	10:06:00	2.70	3.74	20.27	20.43	0.1	0.2	

2008/07/17	10:07:00	2.61	3.60	20.39	20.51	0.1	0.2	
2008/07/17	10:08:00	1.89	3.96	20.45	20.60	0.1	0.2	
2008/07/17	10:09:00	1.53	2.88	20.53	20.65	0.1	0.2	
2008/07/17	10:10:00	1.49	3.33	20.57	20.66	0.1	0.2	
2008/07/17	10:11:00	0.32	2.16	20.62	20.72	0.1	0.2	
2008/07/17	10:12:00	0.81	3.06	20.64	20.73	0.1	0.1	
2008/07/17	10:13:00	1.40	2.34	20.69	20.78	0.1	0.2	
2008/07/17	10:14:00	1.40	2.34	20.66	20.78	0.0	0.2	
2008/07/17	10:15:00	1.22	2.12	20.68	20.74	0.1	0.2	
2008/07/17	10:16:00	0.50	1.44	20.71	20.82	0.0	0.2	
2008/07/17	10:17:00	0.18	1.53	20.71	20.82	0.0	0.1	
2008/07/17	10:18:00	0.99	2.16	20.73	20.84	0.1	0.2	
2008/07/17	10:19:00	0.81	2.39	20.69	20.82	0.1	0.2	
2008/07/17	10:20:00	0.77	2.70	20.72	20.84	0.0	0.2	
2008/07/17	10:21:00	0.00	0.99	20.73	20.86	0.0	0.2	
2008/07/17	10:22:00	0.81	1.58	20.73	20.83	0.0	0.2	
2008/07/17	10:23:00	0.41	2.07	20.75	20.84	0.0	0.2	
2008/07/17	10:24:00	0.63	2.52	20.72	20.87	0.0	0.2	
2008/07/17	10:25:00	-0.05	1.76	20.73	20.87	0.0	0.1	**Engine**
2008/07/17	10:26:00	1.13	2.07	20.76	20.87	0.0	0.2	**Down**
2008/07/17	10:27:00	0.90	2.12	20.76	20.85	0.0	0.2	
2008/07/17	10:28:00	0.63	1.94	20.76	20.90	0.0	0.2	
2008/07/17	10:29:00	0.63	1.98	20.77	20.83	0.0	0.2	
2008/07/17	10:30:00	0.72	1.89	20.75	20.89	0.0	0.2	
2008/07/17	10:31:00	0.54	1.22	20.78	20.84	0.0	0.2	
2008/07/17	10:32:00	0.32	1.53	20.78	20.85	0.1	0.2	
2008/07/17	10:33:00	0.32	2.07	20.73	20.86	0.0	0.1	
2008/07/17	10:34:00	0.54	1.76	20.73	20.84	0.0	0.1	
2008/07/17	10:35:00	0.68	1.58	20.73	20.81	0.0	0.1	
2008/07/17	10:36:00	0.72	1.67	20.72	20.84	0.0	0.1	
2008/07/17	10:37:00	0.32	1.40	20.73	20.85	0.0	0.1	
2008/07/17	10:38:00	0.90	2.12	20.75	20.82	0.0	0.1	
2008/07/17	10:39:00	-0.09	1.35	20.80	20.88	0.0	0.1	
2008/07/17	10:40:00	0.14	1.62	20.74	20.84	0.0	0.1	
2008/07/17	10:41:00	0.05	2.25	20.72	20.81	0.0	0.1	
2008/07/17	10:42:00	0.81	1.76	20.78	20.82	0.1	0.1	
2008/07/17	10:43:00	0.36	1.49	20.74	20.82	0.0	0.1	
2008/07/17	10:44:00	0.23	1.62	20.78	20.87	0.1	0.1	
2008/07/17	10:45:00	0.09	1.26	20.84	20.92	0.1	64.3	
2008/07/17	10:46:00	0.36	84.70	7.64	20.85	19.9	85.3	
2008/07/17	10:47:00	77.90	98.42	3.95	7.64	0.1	35.4	
2008/07/17	10:48:00	98.42	110.49	3.64	3.98	0.1	141.5	
2008/07/17	10:49:00	110.49	181.23	3.52	3.75	141.5	197.8	
2008/07/17	10:50:00	118.00	181.23	3.75	5.11	197.7	216.2	
2008/07/17	10:51:00	84.38	118.00	5.11	5.67	216.1	236.0	
2008/07/17	10:52:00	68.86	84.38	5.67	5.85	236.0	259.1	
2008/07/17	10:53:00	67.78	70.16	5.83	5.94	259.1	292.2	
2008/07/17	10:54:00	69.40	71.38	5.93	6.03	292.2	321.9	
2008/07/17	10:55:00	71.33	73.72	6.02	6.08	321.8	343.1	
2008/07/17	10:56:00	73.36	77.00	6.06	6.16	336.7	364.2	
2008/07/17	10:57:00	72.59	76.37	6.06	6.21	364.2	399.5	
2008/07/17	10:58:00	75.65	77.41	6.17	6.26	394.9	403.8	
2008/07/17	10:59:00	73.45	76.19	6.24	6.32	403.8	443.3	

2008/07/17	11:00:00	71.33	74.57	6.23	6.38	443.3	468.3
2008/07/17	11:01:00	65.62	71.33	6.38	6.55	462.3	469.5
2008/07/17	11:02:00	60.44	65.84	6.48	6.64	465.5	474.9
2008/07/17	11:03:00	59.00	60.80	6.61	6.68	467.8	473.9
2008/07/17	11:04:00	55.36	59.27	6.64	6.75	471.1	478.3
2008/07/17	11:05:00	54.28	55.81	6.64	6.79	472.2	478.3
2008/07/17	11:06:00	52.93	54.73	6.68	6.80	472.2	482.6
2008/07/17	11:07:00	51.26	53.15	6.68	6.79	475.7	484.9
2008/07/17	11:08:00	50.00	51.35	6.79	6.85	476.8	484.0
2008/07/17	11:09:00	50.41	51.49	6.78	6.86	476.8	481.8
2008/07/17	11:10:00	49.59	51.08	6.77	6.87	474.6	486.2
2008/07/17	11:11:00	50.00	51.13	6.74	6.83	475.7	485.1
2008/07/17	11:12:00	49.32	50.59	6.80	6.92	474.6	487.4
2008/07/17	11:13:00	48.06	50.36	6.80	6.86	476.8	487.3
2008/07/17	11:14:00	46.94	49.05	6.80	6.86	477.9	487.3
2008/07/17	11:15:00	47.34	48.96	6.79	6.87	476.8	489.5
2008/07/17	11:16:00	47.16	48.96	6.83	6.92	478.1	489.5
2008/07/17	11:17:00	47.48	48.38	6.80	6.91	478.1	488.5
2008/07/17	11:18:00	46.08	47.57	6.84	6.92	479.2	488.7
2008/07/17	11:19:00	46.53	47.48	6.89	7.00	480.4	486.4
2008/07/17	11:20:00	45.95	47.84	6.87	7.01	479.2	487.5
2008/07/17	11:21:00	47.12	49.59	6.83	6.95	477.0	485.3
2008/07/17	11:22:00	46.94	49.41	6.78	6.87	477.0	488.7
2008/07/17	11:23:00	45.32	47.12	6.84	6.92	477.1	488.6
2008/07/17	11:24:00	46.40	50.09	6.76	6.92	474.8	484.2
2008/07/17	11:25:00	49.23	50.32	6.77	6.86	477.0	484.2
2008/07/17	11:26:00	48.92	50.59	6.74	6.91	477.0	482.0
2008/07/17	11:27:00	48.74	49.59	6.71	6.91	475.9	483.2
	Average	**57.97**	**60.32**	**6.53**	**6.64**	**441.60**	**459.45**
		59.15		***6.58***		***450.53***	

Bradley Landfill

Burbank, CA

HEAT INPUT RATE SHEET
GenSet 2

Date	7/17/2008					Engine Permit Limit	16.8	Chiller Permit Limit	1.447500
Time	Genset Runtime	Genset KWH	Average LFG Gross BTU	Engine Avg SCFM	Engine MMBTU	Engine Permit Exceedence	Total Site Chiller Avg SCFM	Total Site Chiller MMBTU/Hr	Chiller Permit Exceedence
1:00 AM	0:00	0.00	456.36	0.00	0.00	No	0.00	0.000000	No
2:00 AM	0:00	0.00	456.89	0.00	0.00	No	0.00	0.000000	No
3:00 AM	0:00	0.00	457.02	0.00	0.00	No	0.00	0.000000	No
4:00 AM	0:00	0.00	457.31	0.00	0.00	No	0.00	0.000000	No
5:00 AM	0:00	0.00	456.85	0.00	0.00	No	0.00	0.000000	No
6:00 AM	0:00	0.00	456.78	0.00	0.00	No	0.00	0.000000	No
7:00 AM	0:00	0.00	456.25	0.00	0.00	No	0.00	0.000000	No
8:00 AM	0:26	266.24	456.01	316.99	8.50	No	0.00	0.000000	No
9:00 AM	1:00	946.18	456.12	438.89	10.23	No	0.00	0.000000	No
10:00 AM	0:56	817.15	456.09	413.44	10.25	No	0.00	0.000000	No
11:00 AM	0:14	159.74	456.89	346.07	10.27	No	0.00	0.000000	No
12:00 PM	1:00	1015.81	456.63	485.14	10.32	No	0.00	0.000000	No
1:00 PM	0:44	628.74	456.52	433.86	10.56	No	0.00	0.000000	No
2:00 PM	0:49	681.98	456.61	396.52	10.58	No	0.00	0.000000	No
3:00 PM	1:00	884.74	456.63	420.16	10.88	No	0.00	0.000000	No
4:00 PM	1:00	901.12	456.66	421.13	10.53	No	0.00	0.000000	No
5:00 PM	1:00	882.69	456.52	420.30	10.24	No	0.00	0.000000	No
6:00 PM	1:00	901.12	456.55	419.71	10.26	No	0.00	0.000000	No
7:00 PM	1:00	876.54	456.54	412.98	10.61	No	0.00	0.000000	No
8:00 PM	1:00	876.54	456.64	413.73	10.59	No	0.00	0.000000	No
9:00 PM	1:00	901.12	456.61	415.84	10.52	No	0.00	0.000000	No
10:00 PM	1:00	884.74	456.59	414.42	10.56	No	0.00	0.000000	No
11:00 PM	1:00	894.98	456.57	413.12	10.38	No	0.00	0.000000	No
12:00 AM	1:00	872.44	456.52	410.91	10.31	No	0.00	0.000000	No
Daily Totals	15:09	13391.87	456.59	6993.19	175.59	0	0.00	0.000000	0

Note: MMBTU = LFG Gross BTU * Average SCFM * Runtime/60

EPA Method 19, Stack Gas Flowrate Calculation

Facility: Bradley Landfill
Source: ICE #3
Load: High, Low and Normal Load
Start Date: 7/16/08

	Time		O_2	Fuel Flow	HHV	F Factor	System Flow	Heat Input
	Start	End	(%)	(scfm)	(btu/scf)	(sdcf/Mmbtu)	(scfm)	(Mmbtu/hr)
Run #1 (Low)	12:39	12:53	6.22	284.3	472.0	9,553	1,825	8.05
Run #2 (High)	13:00	13:14	6.78	454.7	472.0	9,553	3,034	12.88
Run #3 (Normal)	13:42	14:43	6.93	432.7	472.0	9,553	2,920	12.26

Flow Rate = Fuel Flow Rate x F Factor x HHV/1000000 x 20.9/(20.9 - O2 conc)

Bradley Landfill (Low Load 575 ~ 600 kW)

Unit #3		NOX #3 ppm		O2 #3 %		FUEL FLOW #3 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/16	12:39:00	22.50	24.62	6.10	6.21	280.9	287.4
2008/07/16	12:40:00	24.62	26.46	6.06	6.17	280.9	286.3
2008/07/16	12:41:00	25.47	26.78	6.11	6.21	281.9	289.1
2008/07/16	12:42:00	26.78	27.77	6.06	6.21	281.9	287.4
2008/07/16	12:43:00	26.87	27.59	6.10	6.14	280.9	285.8
2008/07/16	12:44:00	26.24	27.14	6.08	6.14	280.9	289.1
2008/07/16	12:45:00	27.05	28.76	6.05	6.14	281.9	285.8
2008/07/16	12:46:00	28.67	29.07	5.97	6.08	280.9	288.5
2008/07/16	12:47:00	28.89	30.38	6.01	6.13	281.9	288.0
2008/07/16	12:48:00	27.95	29.30	5.99	6.05	283.0	286.3
2008/07/16	12:49:00	28.85	30.33	5.99	6.05	281.9	287.9
2008/07/16	12:50:00	29.48	30.60	5.96	6.04	281.9	286.9
2008/07/16	12:51:00	29.39	30.56	5.96	6.04	279.8	286.9
2008/07/16	12:52:00	30.42	31.28	5.96	6.05	279.8	288.0
2008/07/16	12:53:00	30.11	31.68	5.98	6.10	278.7	288.0
	Average	**27.55**	**28.82**	**6.03**	**6.12**	**281.15**	**287.43**
		28.19		***6.07***		***284.29***	

Bradley Landfill (High Load ~1000 kW)

Unit #3		NOX #3 ppm		O2 #3 %		FUEL FLOW #3 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/16	13:09:00	33.35	36.99	6.29	6.38	443.7	456.1
2008/07/16	13:10:00	32.09	33.35	6.33	6.44	445.9	456.2
2008/07/16	13:11:00	27.95	32.09	6.38	6.49	449.1	458.3
2008/07/16	13:12:00	27.27	28.89	6.46	6.54	448.1	458.3
2008/07/16	13:13:00	27.00	28.31	6.47	6.56	450.2	457.2
2008/07/16	13:14:00	25.52	27.09	6.43	6.51	453.4	459.4
2008/07/16	13:15:00	25.65	26.46	6.41	6.53	452.3	459.4
2008/07/16	13:16:00	24.66	25.79	6.50	6.60	453.4	459.4
2008/07/16	13:17:00	23.45	24.98	6.54	6.64	454.5	460.5
2008/07/16	13:18:00	23.00	23.54	6.56	6.65	453.4	460.5
2008/07/16	13:19:00	23.31	24.30	6.49	6.64	450.2	460.5
2008/07/16	13:20:00	22.91	24.12	6.56	6.64	453.4	460.5
2008/07/16	13:21:00	21.96	23.36	6.55	6.65	454.6	462.7
2008/07/16	13:22:00	21.33	22.19	6.61	6.69	455.6	460.5
2008/07/16	13:23:00	21.47	22.19	6.55	6.67	432.9	460.4
	Average	**25.39**	**26.91**	**6.48**	**6.58**	**450.05**	**459.33**
		26.15		***6.53***		***454.69***	

Bradley Landfill (Normal Load ~960 kW)

Unit #3		NOX #3 ppm		O2 #3 %		FUEL FLOW #3 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/16	13:42:00	27.36	30.15	6.32	6.42	387.8	411.3
2008/07/16	13:43:00	27.54	30.33	6.30	6.36	405.1	419.1
2008/07/16	13:44:00	28.98	32.85	6.29	6.36	413.8	437.6
2008/07/16	13:45:00	25.02	29.03	6.32	6.41	422.4	439.0
2008/07/16	13:46:00	24.98	36.27	6.31	6.43	419.1	432.5
2008/07/16	13:47:00	27.41	36.05	6.29	6.50	422.4	433.6
2008/07/16	13:48:00	28.08	30.38	6.36	6.49	421.3	437.9
2008/07/16	13:49:00	21.83	28.26	6.38	6.61	433.2	440.1
2008/07/16	13:50:00	21.92	24.62	6.55	6.63	425.3	437.9
2008/07/16	13:51:00	23.94	25.74	6.51	6.59	425.3	439.0
2008/07/16	13:52:00	22.50	24.35	6.51	6.61	430.6	437.9
2008/07/16	13:53:00	22.77	25.61	6.53	6.63	430.6	437.9
2008/07/16	13:54:00	23.49	24.66	6.50	6.62	430.7	439.0
2008/07/16	13:55:00	22.82	24.57	6.55	6.64	426.7	439.0
2008/07/16	13:56:00	23.76	24.84	6.48	6.64	431.0	439.0
2008/07/16	13:57:00	22.01	23.94	6.50	6.65	432.1	439.0
2008/07/16	13:58:00	23.00	24.39	6.49	6.62	429.5	437.9
2008/07/16	13:59:00	23.94	26.24	6.50	6.59	432.1	437.9
2008/07/16	14:00:00	22.64	24.17	6.55	6.65	432.1	436.8
2008/07/16	14:01:00	22.91	24.12	6.55	6.62	431.0	437.9
2008/07/16	14:02:00	22.82	24.26	6.60	6.72	429.6	443.3
2008/07/16	14:03:00	22.73	24.30	6.53	6.62	431.7	439.0
2008/07/16	14:04:00	22.23	25.02	6.55	6.65	426.7	439.0
2008/07/16	14:05:00	23.00	24.89	6.57	6.65	427.8	440.1
2008/07/16	14:06:00	23.13	23.94	6.47	6.59	430.6	437.9
2008/07/16	14:07:00	22.55	24.26	6.56	6.64	428.9	439.0
2008/07/16	14:08:00	22.64	23.63	6.57	6.68	432.1	439.0
2008/07/16	14:09:00	22.68	24.26	6.53	6.65	432.1	439.0
2008/07/16	14:10:00	22.28	24.48	6.50	6.63	427.8	437.9
2008/07/16	14:11:00	24.44	25.43	6.53	6.60	430.0	436.9
2008/07/16	14:12:00	23.00	24.84	6.53	6.65	430.6	439.0
2008/07/16	14:13:00	22.73	23.49	6.59	6.68	430.6	439.0
2008/07/16	14:14:00	22.55	23.85	6.59	6.70	432.1	439.0
2008/07/16	14:15:00	23.00	24.08	6.58	6.68	432.1	437.9
2008/07/16	14:16:00	22.32	23.94	6.57	6.68	429.6	439.0
2008/07/16	14:17:00	21.69	22.32	6.59	6.68	433.2	437.9
2008/07/16	14:18:00	21.92	24.03	6.56	6.69	430.0	436.8
2008/07/16	14:19:00	23.22	24.08	6.55	6.64	433.2	436.9
2008/07/16	14:20:00	21.96	23.40	6.55	6.63	433.2	437.9
2008/07/16	14:21:00	21.60	23.90	6.59	6.66	431.0	437.9
2008/07/16	14:22:00	23.18	25.20	6.53	6.64	430.0	437.9
2008/07/16	14:23:00	22.64	23.76	6.57	6.64	428.9	437.9
2008/07/16	14:24:00	22.82	24.66	6.56	6.63	428.9	436.9
2008/07/16	14:25:00	22.82	24.75	6.47	6.61	430.0	434.7
2008/07/16	14:26:00	23.45	24.57	6.56	6.62	431.0	434.7
2008/07/16	14:27:00	22.59	23.54	6.53	6.59	427.7	436.9
2008/07/16	14:28:00	22.68	23.72	6.56	6.64	428.9	435.8
2008/07/16	14:29:00	22.41	23.45	6.53	6.59	432.1	437.9
2008/07/16	14:30:00	22.64	23.54	6.58	6.65	431.0	436.8
2008/07/16	14:31:00	21.42	23.58	6.56	6.65	428.9	439.0
2008/07/16	14:32:00	21.47	23.63	6.54	6.64	428.9	436.8
2008/07/16	14:33:00	21.51	23.54	6.60	6.71	427.7	437.9
2008/07/16	14:34:00	21.47	23.27	6.54	6.67	428.9	437.9
2008/07/16	14:35:00	22.05	23.18	6.62	6.67	428.9	436.9
2008/07/16	14:36:00	22.37	22.91	6.59	6.69	432.1	436.8
2008/07/16	14:37:00	22.05	22.86	6.61	6.65	432.1	436.9
2008/07/16	14:38:00	21.33	22.05	6.62	6.68	432.1	436.9
2008/07/16	14:39:00	21.06	21.65	6.56	6.67	428.9	437.9
2008/07/16	14:40:00	21.60	22.37	6.56	6.68	432.1	437.9
2008/07/16	14:41:00	21.56	22.28	6.59	6.71	431.0	436.9
2008/07/16	14:42:00	20.70	21.65	6.62	6.68	432.1	436.9
2008/07/16	14:43:00	20.79	22.46	6.64	6.71	433.2	439.0
	Average	**22.97**	**24.93**	**6.52**	**6.62**	**428.39**	**437.10**
		23.95		***6.57***		***432.74***	

Bradley Landfill

Burbank, CA

HEAT INPUT RATE SHEET
GenSet 3

Date	7/16/2008				Engine Permit Limit	16.8	Chiller Permit Limit		1.447500
Time	Genset Runtime	Genset KWH	Average LFG Gross BTU	Engine Avg SCFM	Engine MMBTU	Engine Permit Exceedence	Total Site Chiller Avg SCFM	Total Site Chiller MMBTU/Hr	Chiller Permit Exceedence
1:00 AM	0:00	0.00	457.10	0.00	0.00	No	0.00	0.000000	No
2:00 AM	0:00	0.00	457.65	0.00	0.00	No	0.00	0.000000	No
3:00 AM	0:00	0.00	456.33	0.00	0.00	No	0.00	0.000000	No
4:00 AM	0:00	0.00	457.20	0.00	0.00	No	0.00	0.000000	No
5:00 AM	0:00	0.00	455.63	0.00	0.00	No	0.00	0.000000	No
6:00 AM	0:00	0.00	455.74	0.00	0.00	No	0.00	0.000000	No
7:00 AM	0:00	0.00	455.36	0.00	0.00	No	0.00	0.000000	No
8:00 AM	0:00	0.00	455.25	0.00	0.00	No	0.00	0.000000	No
9:00 AM	0:00	0.00	455.10	0.00	0.00	No	0.00	0.000000	No
10:00 AM	0:00	0.00	455.09	0.00	0.00	No	0.00	0.000000	No
11:00 AM	0:00	0.00	455.63	0.00	0.00	No	0.00	0.000000	No
12:00 PM	0:37	362.50	455.20	294.13	10.33	No	0.00	0.000000	No
1:00 PM	1:00	796.67	456.01	362.31	10.29	No	0.00	0.000000	No
2:00 PM	1:00	937.98	455.93	426.17	10.24	No	0.00	0.000000	No
3:00 PM	1:00	974.85	457.25	434.00	10.32	No	0.00	0.000000	No
4:00 PM	1:00	960.51	455.12	433.51	10.56	No	0.00	0.000000	No
5:00 PM	1:00	960.51	455.87	433.42	10.30	No	0.00	0.000000	No
6:00 PM	1:00	974.85	456.12	431.48	10.58	No	0.00	0.000000	No
7:00 PM	1:00	944.13	455.51	422.17	10.66	No	0.00	0.000000	No
8:00 PM	1:00	950.27	455.30	416.87	10.27	No	0.00	0.000000	No
9:00 PM	1:00	935.94	455.98	416.42	10.55	No	0.00	0.000000	No
10:00 PM	1:00	935.93	455.89	416.81	10.36	No	0.00	0.000000	No
11:00 PM	1:00	948.23	455.23	417.15	10.54	No	0.00	0.000000	No
12:00 AM	1:00	935.93	456.36	416.84	10.58	No	0.00	0.000000	No
Daily Totals	12:37	11618.30	455.91	5321.28	176.76	0	0.00	0.000000	0

Note: MMBTU = LFG Gross BTU * Average SCFM * Runtime/60

EPA Method 19, Stack Gas Flowrate Calculation

Facility: Bradley Landfill
Source: ICE #4
Load: High, Low and Normal Load
Start Date: 7/15/08

ICE #4	Time		O_2 (%)	Fuel Flow (scfm)	HHV (btu/scf)	F Factor (sdcf/Mmbtu)	System Flow (scfm)	Heat Input (Mmbtu/hr)
	Start	End						
Run #1 (High)	11:20	11:34	6.55	466.3	467.0	9,562	3,032	13.07
Run #2 (Low)	11:51	12:05	6.05	301.0	467.0	9,562	1,892	8.43
Run #3 (Normal)	12:11	13:28	6.48	448.1	467.0	9,562	2,900	12.56

Flow Rate = Fuel Flow Rate x F Factor x HHV/1000000 x 20.9/(20.9 - O2 conc)

Bradley Landfill (Max Load ~950 kW)

Unit #4		NOX #4 ppm		O2 #4 %		FUEL FLOW #4 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/15	11:20:00	77.41	82.63	6.41	6.47	446.9	454.6
2008/07/15	11:21:00	80.78	86.95	6.45	6.51	454.6	468.3
2008/07/15	11:22:00	85.42	89.87	6.41	6.48	462.0	473.0
2008/07/15	11:23:00	78.85	85.42	6.42	6.56	459.3	471.9
2008/07/15	11:24:00	74.62	80.33	6.54	6.66	457.0	475.2
2008/07/15	11:25:00	73.72	76.51	6.55	6.65	454.9	474.1
2008/07/15	11:26:00	74.66	79.43	6.54	6.64	465.8	480.1
2008/07/15	11:27:00	64.00	76.55	6.59	6.70	460.3	481.8
2008/07/15	11:28:00	64.09	72.28	6.62	6.74	459.2	479.6
2008/07/15	11:29:00	67.01	73.81	6.65	6.70	452.7	470.3
2008/07/15	11:30:00	73.81	81.73	6.55	6.65	458.1	479.6
2008/07/15	11:31:00	68.45	75.43	6.57	6.71	460.3	474.2
2008/07/15	11:32:00	69.35	70.57	6.59	6.65	469.7	486.2
2008/07/15	11:33:00	60.13	69.80	6.64	6.74	459.2	470.8
2008/07/15	11:34:00	63.55	71.33	6.60	6.74	457.1	471.8
	Average	**71.72**	**78.18**	**6.54**	**6.64**	**458.47**	**474.10**
		74.95		***6.59***		***466.29***	

Bradley Landfill (Low Load ~600 kW)

Unit #4		NOX #4 ppm		O2 #4 %		FUEL FLOW #4 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/15	11:51:00	53.47	59.14	6.44	6.52	298.8	303.8
2008/07/15	11:52:00	52.57	54.77	6.44	6.51	298.8	305.0
2008/07/15	11:53:00	52.57	58.69	6.34	6.46	297.7	302.7
2008/07/15	11:54:00	56.80	59.45	6.29	6.35	301.0	304.2
2008/07/15	11:55:00	55.40	56.89	6.35	6.40	299.9	303.9
2008/07/15	11:56:00	56.66	64.36	6.26	6.37	297.7	302.8
2008/07/15	11:57:00	62.47	66.34	6.16	6.26	298.8	305.0
2008/07/15	11:58:00	62.47	67.82	6.11	6.23	299.9	305.0
2008/07/15	11:59:00	63.64	67.87	6.11	6.24	298.8	302.7
2008/07/15	12:00:00	67.42	68.18	6.16	6.22	298.8	302.7
2008/07/15	12:01:00	67.60	70.61	6.12	6.17	297.7	300.5
2008/07/15	12:02:00	67.01	71.83	6.14	6.22	298.8	302.8
2008/07/15	12:03:00	66.25	69.62	6.11	6.20	298.8	302.7
2008/07/15	12:04:00	65.80	70.70	6.14	6.24	297.1	302.7
2008/07/15	12:05:00	64.58	71.51	6.08	6.22	297.7	302.8
	Average	**60.98**	**65.19**	**6.22**	**6.31**	**298.69**	**303.29**
		63.08		***6.26***		***300.99***	

Bradley Landfill Normal Load ~900 kW)

Unit #4		NOX #4 ppm		O2 #4 %		FUEL FLOW #4 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/15	12:11:00	75.61	86.99	6.25	6.33	417.2	452.6
2008/07/15	12:12:00	86.63	88.70	6.23	6.33	441.2	454.8
2008/07/15	12:13:00	88.70	95.99	6.26	6.35	451.1	457.0
2008/07/15	12:14:00	86.77	96.08	6.27	6.41	450.0	454.8
2008/07/15	12:15:00	86.77	88.39	6.38	6.44	451.1	455.9
2008/07/15	12:16:00	83.71	86.99	6.39	6.45	448.8	458.1
2008/07/15	12:17:00	79.93	84.79	6.41	6.47	448.9	461.4
2008/07/15	12:18:00	74.93	82.22	6.41	6.53	451.1	459.2
2008/07/15	12:19:00	74.26	76.19	6.44	6.50	439.7	457.0
2008/07/15	12:20:00	75.02	78.98	6.45	6.53	436.0	447.4
2008/07/15	12:21:00	76.28	78.94	6.47	6.54	436.0	449.6
2008/07/15	12:22:00	72.64	78.44	6.48	6.56	433.8	450.7
2008/07/15	12:23:00	72.82	77.54	6.50	6.59	440.4	449.6
2008/07/15	12:24:00	71.42	74.17	6.53	6.59	438.2	448.5
2008/07/15	12:25:00	71.24	73.22	6.52	6.59	443.7	451.8
2008/07/15	12:26:00	68.59	73.22	6.53	6.59	442.6	451.8
2008/07/15	12:27:00	68.41	72.01	6.51	6.58	442.6	452.9
2008/07/15	12:28:00	71.33	72.55	6.51	6.56	442.6	447.4
2008/07/15	12:29:00	72.46	77.90	6.49	6.55	443.7	450.7
2008/07/15	12:30:00	72.55	77.54	6.43	6.54	444.8	449.6
2008/07/15	12:31:00	71.74	72.86	6.52	6.57	440.5	452.9
2008/07/15	12:32:00	68.99	73.90	6.53	6.58	431.7	449.6
2008/07/15	12:33:00	69.71	81.01	6.43	6.55	438.2	449.6
2008/07/15	12:34:00	70.97	79.39	6.44	6.59	439.3	448.5
2008/07/15	12:35:00	71.02	73.81	6.49	6.63	434.9	450.6
2008/07/15	12:36:00	67.37	74.26	6.50	6.60	439.4	452.9
2008/07/15	12:37:00	65.21	69.85	6.58	6.64	440.5	454.0
2008/07/15	12:38:00	64.63	70.07	6.57	6.65	448.1	454.6
2008/07/15	12:39:00	63.95	66.56	6.59	6.65	439.7	452.9
2008/07/15	12:40:00	64.67	75.52	6.55	6.65	432.8	449.6
2008/07/15	12:41:00	73.04	78.67	6.44	6.55	443.8	452.9
2008/07/15	12:42:00	66.11	73.09	6.49	6.61	442.6	454.0
2008/07/15	12:43:00	63.59	68.50	6.59	6.65	437.4	453.9
2008/07/15	12:44:00	63.32	70.57	6.53	6.65	444.8	462.8
2008/07/15	12:45:00	60.94	69.35	6.50	6.71	431.0	452.9
2008/07/15	12:46:00	63.32	76.87	6.48	6.66	442.9	460.8
2008/07/15	12:47:00	63.50	74.57	6.50	6.62	434.2	453.2
2008/07/15	12:48:00	64.72	69.31	6.52	6.63	447.7	453.2
2008/07/15	12:49:00	62.92	65.62	6.56	6.67	446.2	452.7
2008/07/15	12:50:00	64.90	67.10	6.55	6.67	435.3	455.4
2008/07/15	12:51:00	65.48	72.77	6.47	6.63	444.4	454.3
2008/07/15	12:52:00	63.77	68.27	6.50	6.62	440.7	452.1
2008/07/15	12:53:00	66.29	68.23	6.46	6.62	444.0	482.1
2008/07/15	12:54:00	49.91	67.78	6.59	6.73	482.1	509.3
2008/07/15	12:55:00	12.83	49.91	6.73	9.82	509.3	521.2
2008/07/15	12:56:00	12.42	13.14	9.72	9.89	0.1	548.5
2008/07/15	12:57:00	5.04	20.75	9.66	18.12	0.1	0.1

2008/07/15	12:58:00	2.97	5.04	18.12	19.50	0.1	0.1	
2008/07/15	12:59:00	3.06	3.56	18.96	19.10	0.1	0.1	
2008/07/15	13:00:00	2.88	3.42	19.09	19.49	0.1	0.1	Engine
2008/07/15	13:01:00	2.39	2.88	19.48	19.88	0.1	0.1	Down
2008/07/15	13:02:00	2.84	31.23	19.40	20.00	0.0	80.4	
2008/07/15	13:03:00	31.23	105.76	10.82	19.40	0.1	185.7	
2008/07/15	13:04:00	103.24	181.50	2.71	10.82	185.7	213.2	
2008/07/15	13:05:00	141.00	181.46	3.04	4.83	210.6	226.1	
2008/07/15	13:06:00	76.15	141.00	4.83	5.66	224.6	264.4	
2008/07/15	13:07:00	72.50	76.15	5.66	5.91	263.9	298.8	Start up
2008/07/15	13:08:00	69.53	72.50	5.90	6.05	298.8	315.1	
2008/07/15	13:09:00	68.68	69.62	6.04	6.17	315.1	350.4	
2008/07/15	13:10:00	68.27	70.34	6.12	6.20	350.4	362.4	
2008/07/15	13:11:00	70.34	77.45	6.13	6.23	362.4	411.4	
2008/07/15	13:12:00	68.63	78.49	6.12	6.26	411.4	478.4	
2008/07/15	13:13:00	43.38	68.63	6.26	6.80	463.6	483.8	
2008/07/15	13:14:00	43.70	67.24	6.53	6.84	439.7	466.3	
2008/07/15	13:15:00	67.24	107.38	6.20	6.53	438.5	447.8	
2008/07/15	13:16:00	92.80	107.34	6.18	6.26	445.0	451.1	
2008/07/15	13:17:00	80.38	92.80	6.26	6.42	449.4	457.6	
2008/07/15	13:18:00	69.80	80.38	6.41	6.51	445.1	453.2	
2008/07/15	13:19:00	70.61	77.90	6.41	6.50	445.1	451.0	
2008/07/15	13:20:00	75.61	78.85	6.40	6.49	447.2	454.2	
2008/07/15	13:21:00	71.96	75.61	6.48	6.53	444.2	451.3	
2008/07/15	13:22:00	71.42	73.22	6.50	6.56	448.0	452.4	
2008/07/15	13:23:00	69.76	71.42	6.54	6.62	443.1	450.2	
2008/07/15	13:24:00	70.30	72.05	6.52	6.61	444.3	450.3	
2008/07/15	13:25:00	69.44	71.83	6.59	6.64	446.4	453.5	
2008/07/15	13:26:00	66.16	69.49	6.59	6.67	445.4	450.3	
2008/07/15	13:27:00	68.63	69.76	6.62	6.66	446.4	452.4	
2008/07/15	13:28:00	67.24	69.04	6.57	6.65	447.5	457.8	
2008/07/15	13:29:00	60.04	67.96	6.56	6.65	447.5	456.7	
2008/07/15	13:30:00	59.95	68.81	6.57	6.71	445.3	451.3	
2008/07/15	13:31:00	68.32	69.80	6.53	6.62	446.5	450.8	
2008/07/15	13:32:00	67.10	69.62	6.61	6.64	448.5	453.5	
2008/07/15	13:33:00	62.29	67.15	6.62	6.73	447.6	452.4	
2008/07/15	13:34:00	60.85	62.47	6.65	6.72	444.3	456.8	
	Average	**70.06**	**76.11**	**6.48**	**6.58**	**442.48**	**453.71**	
		73.09		***6.53***		***448.09***		

Bradley Landfill

Burbank, CA

HEAT INPUT RATE SHEET
GenSet 4

Date	7/15/2008					Engine Permit Limit	16.8	Chiller Permit Limit	1.447500
Time	**Genset Runtime**	**Genset KWH**	**Average LFG Gross BTU**	**Engine Avg SCFM**	**Engine MMBTU**	**Engine Permit Exceedence**	**Total Site Chiller Avg SCFM**	**Total Site Chiller MMBTU/Hr**	**Chiller Permit Exceedence**
1:00 AM	1:00	851.97	470.29	384.24	10.84	No	0.00	0.000000	No
2:00 AM	1:00	849.92	470.36	384.81	10.86	No	0.00	0.000000	No
3:00 AM	1:00	866.30	470.31	384.51	10.85	No	0.00	0.000000	No
4:00 AM	1:00	862.21	470.20	384.45	10.85	No	0.00	0.000000	No
5:00 AM	1:00	851.97	470.68	384.97	10.87	No	0.00	0.000000	No
6:00 AM	1:00	864.26	469.80	385.65	10.87	No	0.00	0.000000	No
7:00 AM	1:00	851.96	468.30	386.18	10.85	No	0.00	0.000000	No
8:00 AM	1:00	849.92	466.39	383.02	10.72	No	0.00	0.000000	No
9:00 AM	1:00	866.31	465.19	385.88	10.77	No	0.00	0.000000	No
10:00 AM	0:57	817.15	467.29	398.07	10.60	No	0.00	0.000000	No
11:00 AM	0:34	389.12	467.06	347.16	5.51	No	0.00	0.000000	No
12:00 PM	0:58	817.15	465.44	384.81	10.39	No	0.00	0.000000	No
1:00 PM	0:53	837.63	465.43	434.08	10.71	No	0.00	0.000000	No
2:00 PM	1:00	907.27	466.11	418.31	11.70	No	0.00	0.000000	No
3:00 PM	0:08	77.82	467.99	277.23	1.04	No	0.00	0.000000	No
4:00 PM	0:00	0.00	289.99	0.00	0.00	No	0.00	0.000000	No
5:00 PM	0:00	0.00	448.09	0.00	0.00	No	0.00	0.000000	No
6:00 PM	0:00	0.00	477.28	0.00	0.00	No	0.00	0.000000	No
7:00 PM	0:00	0.00	477.13	0.00	0.00	No	0.00	0.000000	No
8:00 PM	0:00	0.00	476.59	0.00	0.00	No	0.00	0.000000	No
9:00 PM	0:00	0.00	477.55	0.00	0.00	No	0.00	0.000000	No
10:00 PM	0:00	0.00	477.82	0.00	0.00	No	0.00	0.000000	No
11:00 PM	0:00	0.00	476.79	0.00	0.00	No	0.00	0.000000	No
12:00 AM	0:00	0.00	475.59	0.00	0.00	No	0.00	0.000000	No
Daily Totals	13:30	11560.96	462.40	5723.39	147.43	0	0.00	0.000000	0

Note: MMBTU = LFG Gross BTU * Average SCFM * Runtime/60

EPA Method 19, Stack Gas Flowrate Calculation

Facility: Bradley Landfill
Source: ICE #5
Load: High, Low and Normal Load
Start Date: 7/16/08

	Time		O_2	Fuel Flow	HHV	F Factor	System Flow	Heat Input
	Start	End	(%)	(scfm)	(btu/scf)	(sdcf/Mmbtu)	(scfm)	(Mmbtu/hr)
Run #1 (High)	8:30	8:44	6.87	521.8	472.0	9,553	3,505	14.78
Run #2 (Low)	8:59	9:13	6.17	317.3	472.0	9,553	2,031	8.99
Run #3 (Normal)	9:25	10:21	6.84	488.8	472.0	9,553	3,277	13.84

Flow Rate = Fuel Flow Rate x F Factor x HHV/1000000 x 20.9/(20.9 - O2 conc)

Bradley Landfill (High Load ~1020 kW)

Unit #5		NOX #5 ppm		O2 #5 %		FUEL FLOW #5 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/16	08:30:00	58.82	60.26	6.53	6.60	508.8	524.1
2008/07/16	08:31:00	57.07	60.31	6.54	6.65	516.6	527.7
2008/07/16	08:32:00	52.39	57.07	6.60	6.70	516.7	525.4
2008/07/16	08:33:00	52.70	55.49	6.62	6.69	515.6	524.3
2008/07/16	08:34:00	53.33	55.22	6.65	6.74	515.7	528.8
2008/07/16	08:35:00	53.78	55.81	6.65	6.72	515.6	527.9
2008/07/16	08:36:00	51.98	54.55	6.65	6.74	517.9	531.0
2008/07/16	08:37:00	50.90	53.92	6.66	6.75	515.7	525.4
2008/07/16	08:38:00	53.78	55.18	6.64	6.73	514.5	530.1
2008/07/16	08:39:00	52.48	54.68	6.65	6.71	515.7	525.4
2008/07/16	08:40:00	50.99	52.66	6.68	6.74	511.2	524.3
2008/07/16	08:41:00	51.85	54.19	6.65	6.74	516.8	531.1
2008/07/16	08:42:00	48.78	51.98	6.74	6.80	519.0	530.3
2008/07/16	08:43:00	48.29	49.37	6.78	6.87	518.0	532.2
2008/07/16	08:44:00	48.06	49.41	6.79	6.86	516.9	530.1
	Average	**52.35**	**54.67**	**6.66**	**6.74**	**515.65**	**527.87**
		53.51		***6.70***		***521.76***	

Bradley Landfill (Low Load ~600 kW)

Unit #5		NOX #5 ppm		O2 #5 %		FUEL FLOW #5 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/16	08:59:00	46.17	47.52	6.38	6.44	313.3	322.9
2008/07/16	09:00:00	45.54	46.98	6.30	6.39	315.5	322.9
2008/07/16	09:01:00	46.76	50.99	6.23	6.33	313.3	322.9
2008/07/16	09:02:00	50.95	51.89	6.19	6.24	313.3	320.7
2008/07/16	09:03:00	51.80	53.87	6.17	6.23	313.3	321.8
2008/07/16	09:04:00	52.70	54.82	6.11	6.23	312.1	322.9
2008/07/16	09:05:00	53.42	55.58	6.11	6.19	312.1	322.9
2008/07/16	09:06:00	52.66	56.44	6.09	6.16	313.2	320.7
2008/07/16	09:07:00	54.64	56.35	6.02	6.15	312.1	321.8
2008/07/16	09:08:00	54.86	56.44	6.03	6.17	312.1	321.8
2008/07/16	09:09:00	55.09	55.81	6.04	6.14	313.8	320.7
2008/07/16	09:10:00	55.04	57.56	6.09	6.14	311.5	318.9
2008/07/16	09:11:00	55.27	57.47	6.08	6.14	314.9	321.2
2008/07/16	09:12:00	55.22	56.39	6.10	6.14	313.7	321.2
2008/07/16	09:13:00	55.22	56.03	6.11	6.15	312.6	320.1
	Average	**52.36**	**54.28**	**6.14**	**6.22**	**313.12**	**321.56**
		53.32		***6.18***		***317.34***	

Bradley Landfill (Normal Load ~960 kW)

Unit #5		NOX #5 ppm		O2 #5 %		FUEL FLOW #5 scfm	
Date	Time	MIN	MAX	MIN	MAX	MIN	MAX
2008/07/16	09:25:00	67.96	70.61	6.23	6.32	474.2	481.4
2008/07/16	09:26:00	68.09	69.35	6.31	6.37	474.2	482.5
2008/07/16	09:27:00	62.06	68.09	6.33	6.41	477.4	491.4
2008/07/16	09:28:00	60.26	62.06	6.38	6.52	476.4	493.0
2008/07/16	09:29:00	55.13	60.31	6.47	6.59	479.9	493.9
2008/07/16	09:30:00	54.82	57.43	6.53	6.65	474.4	488.3
2008/07/16	09:31:00	56.17	58.91	6.53	6.65	475.5	496.2
2008/07/16	09:32:00	53.24	56.17	6.62	6.70	478.8	490.5
2008/07/16	09:33:00	52.66	54.91	6.61	6.68	478.8	490.5
2008/07/16	09:34:00	54.55	55.67	6.57	6.68	477.7	497.3
2008/07/16	09:35:00	52.43	54.86	6.57	6.71	481.0	500.6
2008/07/16	09:36:00	50.32	53.29	6.68	6.76	478.7	500.6
2008/07/16	09:37:00	53.29	54.91	6.59	6.68	479.9	496.1
2008/07/16	09:38:00	51.76	53.74	6.61	6.69	482.1	493.9
2008/07/16	09:39:00	51.40	53.51	6.62	6.71	479.0	491.3
2008/07/16	09:40:00	53.15	54.23	6.60	6.65	479.0	493.0
2008/07/16	09:41:00	49.46	54.10	6.64	6.73	479.0	501.9
2008/07/16	09:42:00	49.28	52.03	6.64	6.74	479.0	493.0
2008/07/16	09:43:00	51.98	55.18	6.62	6.68	480.1	497.9
2008/07/16	09:44:00	50.05	52.03	6.62	6.77	484.6	500.8
2008/07/16	09:45:00	49.82	50.77	6.71	6.77	476.8	499.7
2008/07/16	09:46:00	50.23	55.36	6.59	6.73	476.8	497.5
2008/07/16	09:47:00	52.61	54.32	6.60	6.74	480.1	493.0
2008/07/16	09:48:00	51.89	52.61	6.62	6.72	477.0	494.1
2008/07/16	09:49:00	52.30	54.86	6.56	6.71	477.1	493.2
2008/07/16	09:50:00	50.72	54.32	6.59	6.73	483.1	497.7
2008/07/16	09:51:00	49.91	52.21	6.63	6.74	479.2	488.8
2008/07/16	09:52:00	52.03	54.82	6.63	6.68	479.2	495.8
2008/07/16	09:53:00	50.05	53.60	6.65	6.71	488.1	499.9
2008/07/16	09:54:00	48.83	52.12	6.68	6.78	475.9	496.5
2008/07/16	09:55:00	52.12	55.63	6.64	6.69	476.0	493.2
2008/07/16	09:56:00	50.18	53.60	6.64	6.70	481.5	497.6
2008/07/16	09:57:00	48.92	52.88	6.66	6.74	479.2	496.5
2008/07/16	09:58:00	52.84	55.00	6.63	6.70	479.2	496.6
2008/07/16	09:59:00	47.30	53.11	6.65	6.77	482.8	504.5
2008/07/16	10:00:00	47.07	52.75	6.65	6.83	479.5	497.2
2008/07/16	10:01:00	45.32	52.30	6.65	6.76	488.9	503.3
2008/07/16	10:02:00	45.23	51.35	6.69	6.83	480.6	496.8
2008/07/16	10:03:00	51.35	55.45	6.63	6.74	478.4	495.6
2008/07/16	10:04:00	49.55	55.31	6.59	6.74	480.5	501.1
2008/07/16	10:05:00	48.51	49.55	6.68	6.77	480.5	500.0
2008/07/16	10:06:00	49.37	53.83	6.62	6.74	479.5	492.3
2008/07/16	10:07:00	49.64	53.15	6.62	6.77	485.0	500.1
2008/07/16	10:08:00	46.67	49.64	6.72	6.84	487.2	500.1
2008/07/16	10:09:00	48.47	52.03	6.71	6.83	480.9	503.4
2008/07/16	10:10:00	48.29	50.36	6.72	6.85	483.0	502.3
2008/07/16	10:11:00	44.73	48.92	6.69	6.82	477.5	505.8
2008/07/16	10:12:00	47.88	55.49	6.68	6.82	477.5	499.2
2008/07/16	10:13:00	47.61	53.60	6.70	6.80	488.5	504.7
2008/07/16	10:14:00	47.21	51.26	6.68	6.81	480.8	492.4
2008/07/16	10:15:00	50.59	52.30	6.68	6.76	484.1	498.0
2008/07/16	10:16:00	46.58	50.59	6.71	6.86	479.7	503.6
2008/07/16	10:17:00	46.71	52.61	6.69	6.87	478.7	498.0
2008/07/16	10:18:00	47.21	52.34	6.67	6.82	485.2	506.9
2008/07/16	10:19:00	45.45	48.51	6.77	6.85	479.7	502.5
2008/07/16	10:20:00	48.51	50.95	6.70	6.77	484.1	498.0
2008/07/16	10:21:00	46.31	50.27	6.72	6.81	483.2	502.5
2008/07/16	10:22:00	46.89	50.41	6.69	6.83	481.0	503.8
2008/07/16	10:23:00	44.82	50.18	6.69	6.86	491.0	504.1
2008/07/16	10:24:00	44.46	46.04	6.79	6.88	482.1	506.0
2008/07/16	10:25:00	46.04	51.58	6.77	6.81	485.4	496.1
	Average	**50.63**	**54.06**	**6.63**	**6.73**	**480.40**	**497.25**
		52.34		***6.68***		***488.83***	

Bradley Landfill

Burbank, CA

HEAT INPUT RATE SHEET
GenSet 5

Date	7/16/2008				Engine Permit Limit	16.8		Chiller Permit Limit	1.447500
Time	Genset Runtime	Genset KWH	Average LFG Gross BTU	Engine Avg SCFM	Engine MMBTU	Engine Permit Exceedence	Total Site Chiller Avg SCFM	Total Site Chiller MMBTU/Hr	Chiller Permit Exceedence
1:00 AM	0:36	565.23	457.10	288.97	6.88	No	0.00	0.000000	No
2:00 AM	0:00	0.00	457.65	0.00	0.00	No	0.00	0.000000	No
3:00 AM	0:00	0.00	456.33	0.00	0.00	No	0.00	0.000000	No
4:00 AM	0:00	0.00	457.20	0.00	0.00	No	0.00	0.000000	No
5:00 AM	0:00	0.00	455.63	0.00	0.00	No	0.00	0.000000	No
6:00 AM	0:00	0.00	455.74	0.00	0.00	No	0.00	0.000000	No
7:00 AM	0:02	54.20	455.36	208.23	1.04	No	0.00	0.000000	No
8:00 AM	0:41	658.52	455.25	337.90	10.29	No	0.00	0.000000	No
9:00 AM	1:00	786.89	455.10	452.14	10.33	No	0.00	0.000000	No
10:00 AM	1:00	975.85	455.09	431.30	10.35	No	0.00	0.000000	No
11:00 AM	1:00	946.12	455.63	492.95	10.29	No	0.00	0.000000	No
12:00 PM	0:09	78.03	455.20	343.33	10.37	No	0.00	0.000000	No
1:00 PM	0:00	0.00	456.01	0.00	0.00	No	0.00	0.000000	No
2:00 PM	0:00	0.00	455.93	0.00	0.00	No	0.00	0.000000	No
3:00 PM	0:00	0.00	457.25	0.00	0.00	No	0.00	0.000000	No
4:00 PM	0:00	0.00	455.12	0.00	0.00	No	0.00	0.000000	No
5:00 PM	0:00	0.00	455.87	0.00	0.00	No	0.00	0.000000	No
6:00 PM	0:00	0.00	456.12	0.00	0.00	No	0.00	0.000000	No
7:00 PM	0:00	0.00	455.51	0.00	0.00	No	0.00	0.000000	No
8:00 PM	0:00	0.00	455.30	0.00	0.00	No	0.00	0.000000	No
9:00 PM	0:00	0.00	455.98	0.00	0.00	No	0.00	0.000000	No
10:00 PM	0:00	0.00	455.89	0.00	0.00	No	0.00	0.000000	No
11:00 PM	0:00	0.00	455.23	0.00	0.00	No	0.00	0.000000	No
12:00 AM	0:00	0.00	456.36	0.00	0.00	No	0.00	0.000000	No
Daily Totals	4:28	4064.84	455.91	2554.82	59.55	0	0.00	0.000000	0

Note: MMBTU = LFG Gross BTU * Average SCFM * Runtime/60

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-607**
SAMPLING DATE: July 16 & 17, 2008
RECEIVING DATE: July 16 & 17, 2008
ANALYSIS DATE: July 17, 2008
REPORT DATE: July 18, 2008

Laboratory Analysis Report

Analysis Method: ASTM-3588-98

Analyte, Units	Sample ID	Bradley ICE #5 + #3	Bradley ICE #2
	Sampling Date	7/16/2008	7/17/2008
	Lab ID	19808-7	19908-13
	Units	Mole %	Mole %
Methane, %		47	46
Ethane, %		<0.1	<0.1
Ethylene, %		<0.1	<0.1
Propane, %		<0.1	<0.1
Propylene, %		<0.1	<0.1
i-Butane, %		<0.1	<0.1
n-Butane, %		<0.1	<0.1
1-Butene, %		<0.1	<0.1
i-Butylene, %		<0.1	<0.1
trans-2-Butene,%		<0.1	<0.1
cis-2-Butene,%		<0.1	<0.1
i-Pentane, %		<0.1	<0.1
n-Pentane, %		<0.1	<0.1
2,2-Dimethyl Butane, %		<0.1	<0.1
2,3-Dimethyl Butane, %		<0.1	<0.1
2-Methyl Pentane, %		<0.1	<0.1
3-Methyl Pentane, %		<0.1	<0.1
n-Hexane, %		<0.1	<0.1
C6+, %		<0.1	<0.1
CO2, %		38	37
CO, %		<0.1	<0.1
O2, %		1.1	1.1
N2 %		14	15
H2, %		0.7	0.7
H2S, %		<0.1	<0.1
Average Molecular Weight		**28.309**	**28.265**
Total Wt.% Adjusted Sp. Gravity		**0.977**	**0.9759**
Compressibility Factor (14.696 Psi, 60 F)		**0.998**	**0.9977**
NET BTU/Cub. Ft.		**425**	**424**
GROSS BTU/Cub. Ft.		**472**	**472**
CHONS		**%**	**%**
Carbon		36	36
Hydrogen		6.7	6.7
Oxygen		44	43
Nitrogen		14	14
Sulfur		<0.1	<0.1
Dry F Factor (60 F, 1 Atm); SDCF/MMBTU, ASTM 3588		**9553**	**9558**

Dr. Andrew Kitto
President

Quantum Analytical Services Inc.
www.quantumairlab.com
1210 E. 223rd Street, Suite #314 • Carson, California 90745 • 310/830-2226 • Fax 310/830-2227

CLIENT: **Total Air Analysis, Inc.**
LABORATORY NO: **08-604**
SAMPLING DATE: July 15, 2008
RECEIVING DATE: July 16, 2008
ANALYSIS DATE: July 16, 2008
REPORT DATE: July 17, 2008

Laboratory Analysis Report

Analysis Method: ASTM-3588-98

Analyte, Units	Sample ID	Bradley - Eng #4
	Sampling Date	7/15/2008
	Lab ID	19808-1
	Units	Mole %
Methane, %		46
Ethane, %		<0.1
Ethylene, %		<0.1
Propane, %		<0.1
Propylene, %		<0.1
i-Butane, %		<0.1
n-Butane, %		<0.1
1-Butene, %		<0.1
i-Butylene, %		<0.1
trans-2-Butene,%		<0.1
cis-2-Butene,%		<0.1
i-Pentane, %		<0.1
n-Pentane, %		<0.1
2,2-Dimethyl Butane, %		<0.1
2,3-Dimethyl Butane, %		<0.1
2-Methyl Pentane, %		<0.1
3-Methyl Pentane, %		<0.1
n-Hexane, %		<0.1
C6+, %		<0.1
CO2, %		37
CO, %		<0.1
O2, %		1.2
N2 %		15
H2, %		0.7
H2S, %		<0.1
Average Molecular Weight		**28.331**
Total Wt.% Adjusted Sp. Gravity		**0.9781**
Compressibility Factor (14.696 Psi, 60 F)		**0.9977**
NET BTU/Cub. Ft.		**420**
GROSS BTU/Cub. Ft.		**467**
CHONS		**%**
Carbon		35
Hydrogen		6.6
Oxygen		43
Nitrogen		15
Sulfur		<0.1
Dry F Factor (60 F, 1 Atm); SDCF/MMBTU, ASTM 3588		**9562**

Dr. Andrew Kitto
President

Appendix G

Quality Assurance/Quality Control

TOTAL AIR ANALYSIS, INC.

totalair

CERTIFICATE OF NO CONFLICT OF INTEREST

I certify that I am responsible for the testing operations of Total Air Analysis, Inc. and am authorized to sign this certificate on the company's behalf.

Total Air Analysis, Inc. may conduct tests as an independent tester in accordance with SCAQMD Rule 304 (k). I further certify that Total Air Analysis, Inc. has no conflict of interests, and is not related or owned in any way to the company being tested.

Facility To Be Tested: Bradley Landfill, Waste Management

Permit to Operate/Construct Application No.: 437562, 437563, 437564 + 437565

Signature: _____

Printed Name: Russ P. Logan

Title: Director

Date: Aug. 25th, 2008

1210 East 223rd Street, Suite 314 ■ Carson, CA 90745 ■ 310.518.5133 ■ Fax: 310.518.5107

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
TECHNICAL SERVICES DIVISION

CHECK LIST (ST-1) FOR REQUEST TO REVIEW SOURCE TEST PROTOCOL/REPORT

This checklist is to be submitted with the Engineering Division's standardized Review Request Memorandum when an evaluation of a source test protocol or report is requested.

To begin the evaluation of the Source Test Protocol/Report, the reviewing engineer requires certain basic information. The processing engineer is to use the check list below to assure that this basic information is provided either in or along with the report to be reviewed. An incomplete submittal may delay the evaluation of the report.

LIST I Please check off all the following items to verify that the information is provided in the Source Test Report, and then send it along with the Source Test Report.

[ ] Information Form ST-2 with those applicable parts filled out completely.

[✓] Complete Permit to Construct, Permit to Operate, and/or Application Number including company ID number.

[✓] Brief description of the equipment (to be) tested.

[✓] Brief process description, including maximum and normal operating temperatures, pressures, through-put, etc.

[✓] Operating conditions under which test (will be) was performed.

[✓] Process schematic diagram showing the ports and sampling locations, including the dimensions of the ducts/stacks at the sampling locations, along with upstream and downstream locations, and distances of flow disturbances, (e.g. elbows, tees, fans) from the sampling locations (upstream & downstream).

[✓] Field and laboratory data forms.

[✓] Brief description of sampling and analytical methods for each gaseous and particulate constituent to be measured. If a standard District, EPA, or ARB method without "any deviation" will be used, reference it by number.

[✓] Calculations for volumetric flow rates and emission rates.

[✓] Calibration and quality assurance procedures identified.

[✓] For Reg 11 VOC Testing, an acceptable method is provided for determining usage rate of organic materials.

[✓] Testing laboratory qualifies as an "independent testing laboratory" under Rule 304 (no coenflict of interest).

CEMS Calibration Data Check

Facility: Bradley Landfill
Source: ICE #2
Load: Max, Low and Normal Load
Start Date: 7/17/2008
End Date: 7/17/2008

	Parameter		NOx	O_2	CO_2	CO
A	**Span Gas Concentration**	**HIGH**	**222.0**	**23.00**	**18.00**	**875.00**
B		**MID**	**88.0**	**9.06**	**8.95**	**452.00**
C	**Initial Analyzer Response**	**ZERO**	**0.00**	**0.02**	**0.00**	**0.00**
D		**HIGH**	**222.80**	**22.95**	**17.94**	**877.00**
E		**MID**	**87.30**	**8.88**	**9.02**	**449.00**
F	**Final Analyzer Response**	**ZERO**	**2.4**	**0.00**	**-0.02**	**0.0**
G		**HIGH**	**216.0**	**22.89**	**17.94**	**877.0**
H		**MID**	**86.4**	**8.88**	**8.94**	**450.0**
I	Analyzer Range		250	25	25	1000
J	***Linearity = {[B - ((E-C)(A/(D-C)))]/I} x 100***		***0.4***	***0.7***	***-0.4***	***0.4***
K	***Cal Error, Zero (%F.S.) = [(F-C)/I] x 100***		***1.0***	***-0.1***	***-0.1***	***0.0***
L	***Cal Error, Mid (%F.S.) = [{(H-F)-(E-C)}/I] x 100***		***-1.3***	***0.1***	***-0.2***	***0.1***
M	***Cal Error, High (%F.S.) = [{(G-F)-(D-C)}/I] x 100***		***-3.7***	***-0.2***	***0.1***	***0.0***
N	***Average NOx Converter Test, (%) - (from stripchart)***		***95.93***			

CEMS Calibration Data Check

Facility: Bradley Landfill
Source: ICE #3
Load: Max, Low and Normal Load
Start Date: 7/16/2008
End Date: 7/16/2008

	Parameter		NOx	O_2	CO_2	CO
A	**Span Gas Concentration**	**HIGH**	**222.0**	**23.00**	**18.00**	**875.00**
B		**MID**	**88.0**	**9.06**	**8.95**	**452.00**
C	**Initial Analyzer Response**	**ZERO**	**1.60**	**0.09**	**0.00**	**0.00**
D		**HIGH**	**222.60**	**23.04**	**17.93**	**877.00**
E		**MID**	**88.40**	**8.98**	**8.96**	**450.00**
F	**Final Analyzer Response**	**ZERO**	**2.0**	**0.05**	**-0.01**	**2.0**
G		**HIGH**	**220.5**	**22.98**	**17.85**	**881.0**
H		**MID**	**87.9**	**8.95**	**8.90**	**453.0**
I	Analyzer Range		250	25	25	1000
J	***Linearity = {[B - ((E-C)(A/(D-C)))]/I} x 100***		***0.3***	***0.6***	***-0.2***	***0.3***
K	***Cal Error, Zero (%F.S.) = [(F-C)/I] x 100***		***0.2***	***-0.2***	***0.0***	***0.2***
L	***Cal Error, Mid (%F.S.) = [{(H-F)-(E-C)}/I] x 100***		***-0.4***	***0.0***	***-0.2***	***0.1***
M	***Cal Error, High (%F.S.) = [{(G-F)-(D-C)}/I] x 100***		***-1.0***	***-0.1***	***-0.3***	***0.2***
N	***Average NOx Converter Test, (%) - (from stripchart)***		***96.79***			

CEMS Calibration Data Check

Facility: Bradley Landfill
Source: ICE #4
Load: High Load (~950 kW)
Start Date: 7/15/2008
End Date: 7/15/2008

	Parameter		NOx	O_2	CO_2	CO
A	**Span Gas Concentration**	**HIGH**	**222.0**	**23.00**	**18.00**	**875.00**
B		**MID**	**88.0**	**13.80**	**10.80**	**525.00**
C	**Initial Analyzer Response**	**ZERO**	**0.00**	**-0.01**	**0.00**	**0.00**
D		**HIGH**	**222.40**	**22.93**	**17.97**	**872.00**
E		**MID**	**86.50**	**13.60**	**10.42**	**516.00**
F	**Final Analyzer Response**	**ZERO**	**0.6**	**0.08**	**0.02**	**0.0**
G		**HIGH**	**219.1**	**22.90**	**17.97**	**870.0**
H		**MID**	**86.7**	**13.42**	**10.49**	**517.0**
I	Analyzer Range		250	25	25	1000
J	***Linearity = {[B - ((E-C)(A/(D-C)))]/I} x 100***		***0.7***	***0.6***	***1.5***	***0.7***
K	***Cal Error, Zero (%F.S.) = [(F-C)/I] x 100***		***0.2***	***0.4***	***0.1***	***0.0***
L	***Cal Error, Mid (%F.S.) = [{(H-F)-(E-C)}/I] x 100***		***-0.2***	***-1.1***	***0.2***	***0.1***
M	***Cal Error, High (%F.S.) = [{(G-F)-(D-C)}/I] x 100***		***-1.6***	***-0.5***	***-0.1***	***-0.2***
N	***Average NOx Converter Test, (%) - (from stripchart)***		***96.7***			

CEMS Calibration Data Check

Facility: Bradley Landfill
Source: ICE #5
Load: Max, Low and Normal Load
Start Date: 7/16/2008
End Date: 7/16/2008

	Parameter		NOx	O_2	CO_2	CO
A	**Span Gas Concentration**	**HIGH**	**222.0**	**23.00**	**18.00**	**875.00**
B		**MID**	**88.0**	**9.06**	**8.95**	**452.00**
C	**Initial Analyzer Response**	**ZERO**	**0.00**	**-0.03**	**0.02**	**0.00**
D		**HIGH**	**222.70**	**22.99**	**17.97**	**879.00**
E		**MID**	**87.00**	**8.95**	**8.96**	**448.00**
F	**Final Analyzer Response**	**ZERO**	**1.6**	**0.09**	**0.00**	**0.0**
G		**HIGH**	**222.6**	**23.04**	**17.93**	**877.0**
H		**MID**	**88.4**	**8.98**	**8.96**	**450.0**
I	Analyzer Range		250	25	25	1000
J	***Linearity = {[B - ((E-C)(A/(D-C)))]/I} x 100***		***0.5***	***0.4***	***-0.1***	***0.6***
K	***Cal Error, Zero (%F.S.) = [(F-C)/I] x 100***		***0.6***	***0.5***	***-0.1***	***0.0***
L	***Cal Error, Mid (%F.S.) = [{(H-F)-(E-C)}/I] x 100***		***-0.1***	***-0.4***	***0.1***	***0.2***
M	***Cal Error, High (%F.S.) = [{(G-F)-(D-C)}/I] x 100***		***-0.7***	***-0.3***	***-0.1***	***-0.2***
N	***Average NOx Converter Test, (%) - (from stripchart)***		***96.79***			

MASS FLOW DILUTER CHECK

Facility: Bradley Landfill
Source: ICE #4
Test Date: 7/15/2008

Analyt: NO_x
Range: 250.00
Dilution Gas Conc.: 222

Dilution (%)	100	80	60	40	20	Challenge Gas
Expected Value	**222.00**	**177.60**	**133.20**	**88.80**	**44.40**	**88.00**
Run 1 Actual Value	222.50	177.80	132.50	88.75	45.00	88.20
Run 2 Actual Value	223.40	178.20	133.30	87.90	44.80	88.30
Run 3 Actual Value	222.90	178.30	133.70	89.00	44.60	88.40
Run 1 % Error	**0.23**	**0.11**	**0.53**	**0.06**	**1.35**	**0.23**
Run 2 % Error	**0.63**	**0.34**	**0.08**	**1.01**	**0.90**	**0.34**
Run 3 % Error	**0.41**	**0.39**	**0.38**	**0.23**	**0.45**	**0.45**

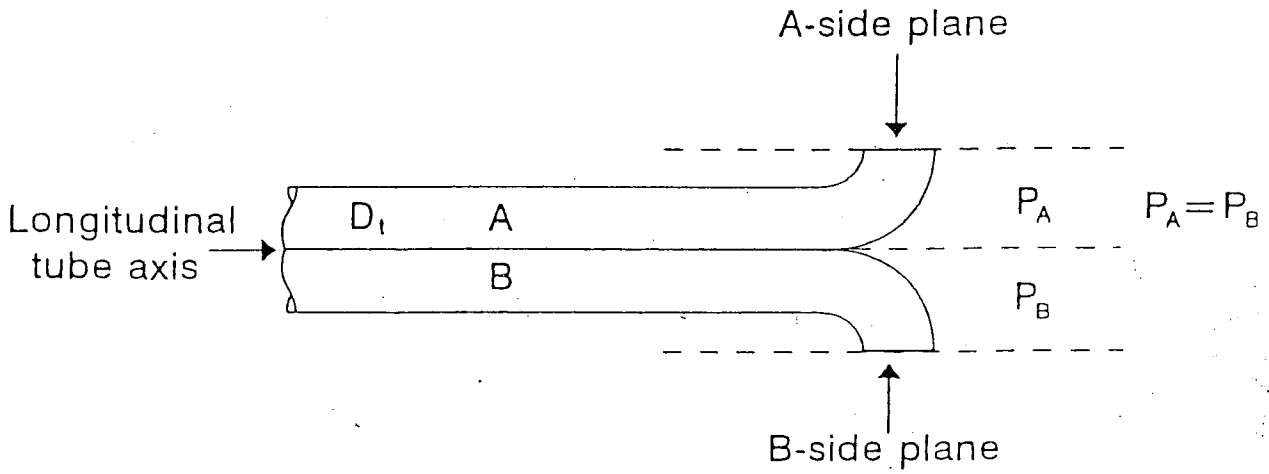
PASS

Post Test Pitot Tube Calibration Sheet

Pitot Tube I.D. #: PT-67-5.1

Date: July 18th, 2008

Pitot Tube Visual Alignment Check: OK ✓ or Misaligned ___



Dt Distance:

$1.05\ D_t \leq P \leq 1.50\ D_t$

P_A Distance:

P_B Distance:

$1.05\ D_t \leq P \leq 1.50\ D_t$: YES: ✓ NO: ___

COMMENTS:

$C_P = .84$

TOTAL AIR ANALYSIS, INC.

Temperature Sensor Calibration

TC I.D #: TC-68
Date: 7/1/2008
Calibrator: Jofra 600S S/N 54005
Calibrated By: Eiji Harada

90 ° F			
Ref. Thermometer, (° F)	*Field TC, (° F)*	*Absolute Difference*	*Difference, (° Rankin)*
87	88	**-1.15**	**-0.18**
87	88	**-1.15**	**-0.18**
87	88	**-1.15**	**-0.18**

300 ° F			
Ref. Thermometer, (° F)	*Field TC, (° F)*	*Absolute Difference*	*Difference, (° Rankin)*
299	303	**-1.34**	**-0.53**
299	303	**-1.34**	**-0.53**
299	303	**-1.34**	**-0.53**

800 ° F			
Ref. Thermometer, (° F)	*Field TC, (° F)*	*Absolute Difference*	*Difference, (° Rankin)*
799	807	**-1.00**	**-0.64**
799	807	**-1.00**	**-0.64**
799	807	**-1.00**	**-0.64**

DRY GAS METER CALIBRATION DATA SHEET

Control Console I.D.:	Apex 1		
Reference Meter Y:	0.9989	Calibration Frequency:	Annual
Date:	3/21/08	Standard Temp.	68
Pbar	29.96		
Ambient Temp.:	68		

Rate (CFM)		dH	Field Dry Gas Meter		Time	Reference Wet gas Meter		Yfm	dH@
			Temp Out (0F)	Meter Reading (CF)		Temp. Out (0F)	Meter Reading (CF)		
	start	0.25	67	10.500	0	68	555.200		
0.25	end	0.25	67	18.017	30	68	562.720	0.9974	2.276
	avg/total	0.25	67.0	7.517	30	68.0	7.520		
	start	0.25	67	18.017	0	68	562.720		
0.25	end	0.25	68	25.533	30	69	570.235	0.9969	2.281
	avg/total	0.25	67.5	7.516	30	68.5	7.515		
	start	0.25	68	25.533	0	69	570.235		
0.25	end	0.25	69	33.048	30	69	577.748	0.9977	2.283
	avg/total	0.25	68.5	7.515	30	69.0	7.513		
	start	1	69	35.505	0	69	580.295		
0.5	end	1	69	45.528	20	69	590.305	0.9976	2.284
	avg/total	1	69	10.023	20	69	10.010		
	start	1	69	45.528	0	70	590.305		
0.5	end	1	69	55.550	20	70	600.314	0.9957	2.293
	avg/total	1	69	10.022	20	70	10.009		
	start	1	70	55.550	0	70.5	600.314		
0.5	end	1	70	65.573	20	71	610.322	0.9960	2.295
	avg/total	1	70	10.023	20	70.75	10.008		
	start	1.95	70	70.000	0	71	610.890		
0.75	end	1.95	70.5	77.653	10	71	618.400	0.9789	1.988
	avg/total	1.95	70.25	7.653	10	71	7.510		
	start	1.95	70.5	77.653	0	71	618.400		
0.75	end	1.95	71	85.305	10	72	625.903	0.9781	1.994
	avg/total	1.95	70.75	7.652	10	71.5	7.503		
	start	1.95	71	85.305	0	72	625.903		
0.75	end	1.95	71	92.958	10	72	633.409	0.9779	1.995
	avg/total	1.95	71	7.653	10	72	7.506		
	start	3.5	71	95.500	0	72	636.005		
1.00	end	3.5	71	105.659	10	72	646.020	0.9829	2.011
	avg/total	3.5	71	10.159	10	72	10.015		
	start	3.5	71	105.659	0	72	646.020		
1.00	end	3.5	71.5	115.816	10	72	656.037	0.9837	2.010
	avg/total	3.5	71.25	10.157	10	72	10.017		
	start	3.5	71.5	115.816	0	72.5	656.037		
1.00	end	3.5	72	125.974	10	72.5	666.052	0.9835	2.012
	avg/total	3.5	71.75	10.158	10	72.5	10.015		

Rate (CFM)	Run No.	Reference Wet gas Meter			Field Dry gas Meter			coefficient Y<(1+/- 0.05)	(Ymax-Ymin)<0.01	Average Y	Average dH@	dH@<dH @+/- 0.15)	0.98<(Y/Y)<1.02
		Rate Qrm (cfm)	Avg. Meter Temp.	Corr. Rate (scfm)	Rate Qrm (cfm)	Avg. Meter Temp.	Corr. Rate (scfm)						
	1	0.2507	68.0	0.2502	0.2506	67.0	0.2506	0.9974					
0.25	2	0.2505	68.5	0.2498	0.2505	67.5	0.2503	0.9969	0.0008	0.9973	2.280	0.136	1.0086
	3	0.2504	69.0	0.2495	0.2505	68.5	0.2498	0.9977					
	1	0.5005	69	0.4977	0.5012	69	0.4983	0.9976					
0.5	2	0.5005	70	0.4967	0.5011	69	0.4983	0.9957	0.0019	0.9964	2.291	0.147	1.0077
	3	0.5004	70.75	0.4959	0.5012	70	0.4974	0.9960					
	1	0.751	71	0.7422	0.7653	70.25	0.7574	0.9789					
0.75	2	0.7503	71.5	0.7408	0.7652	70.75	0.7566	0.9781	0.0010	0.9783	1.992	0.151	0.9893
	3	0.7506	72	0.7404	0.7653	71	0.7563	0.9779					
	1	1.0015	72	0.9842	1.0159	71	1.0002	0.9829					
1.00	2	1.0017	72	0.9844	1.0157	71.25	0.9996	0.9837	0.0009	0.9834	2.011	0.132	0.9945
	3	1.0017	72.5	0.9835	1.0157	71.75	0.9986	0.9835					

Overall Averages

dH@ = 2.144 Y = 0.9888

HOMER R. DULIN CO.

729 EAST WILLOW STREET
SIGNAL HILL, CALIFORNIA 90755
(562) 424-8533 FAX (562) 426-7707

CERT. NO. 3-334-8

CALIBRATION CERTIFICATION

SUBMITTED BY: TOTAL AIR ANALYSIS, INC.

FLOWMETER SERIAL NO: . MFG. SERIAL NO: 967239

MANUFACTURER: ROCKWELL MODEL: S-110

TUBE NO: N/A FLOAT NO: N/A

DATA IS: As Found/As Left ; In Tolerance with curve

See Remarks ☑
Calibrated @ customer's facility ☐

REMARKS: CALIBRATED IN CFH AIR @ 14.7 PSIA & 70° F. METER CALIBRATED WITH CUSTOMER'S ORIFICE FITTING IN OUTLET - FIRST CALIBRATION

ACCURACY ± 1% RATE W/ CURVE

INDICATED		ACTUAL	
CFH		CFH	
125.2		127.8	
113.5		114.5	
102.3		102.5	
91.3		91.2	
79.5		79.0	
68.3		67.6	
56.3		55.4	
42.9		42.0	
30.7		30.3	
15.7		15.7	

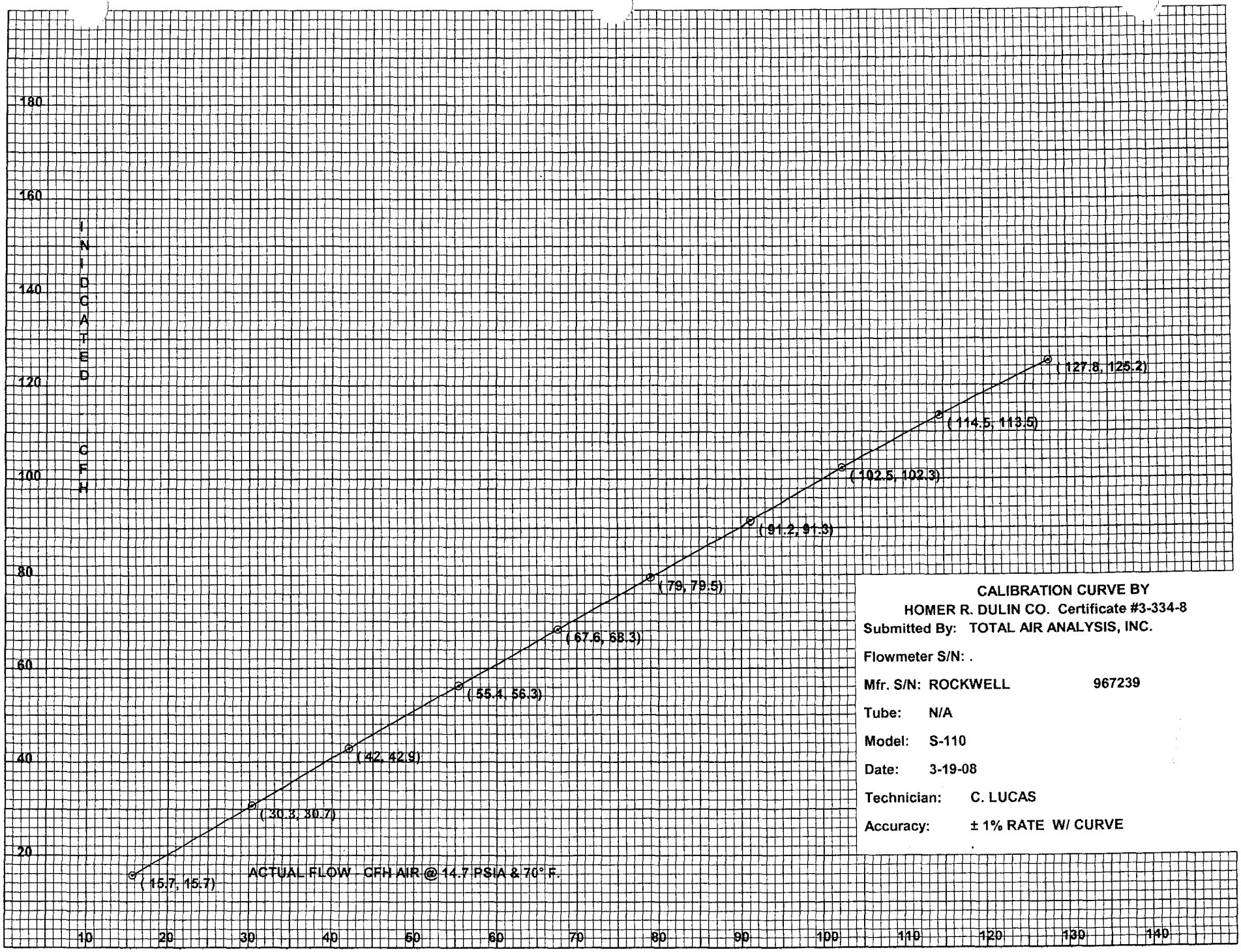
Flowmeter Certified with HOMER R. DULIN CO.

Equip. No. 12400 Accuracy 0.20% Equip. Cal. Date: 4/24/06 Cal. Due: 4/24/09

NIST Cert. No. 821/269740-04 Procedure No: 101G Rev 2

P.O. No . Shipper No. .

3-19-08	3-19-09	C. LUCAS
CALIBRATION DATE	RECALIBRATION DUE	CALIBRATION TECHNICIAN



CALIBRATION CURVE BY
HOMER R. DULIN CO. Certificate #3-334-8

Submitted By: TOTAL AIR ANALYSIS, INC.

Flowmeter S/N: .

Mfr. S/N: ROCKWELL 967239

Tube: N/A

Model: S-110

Date: 3-19-08

Technician: C. LUCAS

Accuracy: ± 1% RATE W/ CURVE

AIR LIQUIDE™

CERTIFICATE OF ANALYSIS

Interference-Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section No. 2.2, Procedure . G-1

Cylinder Number: CC66671

Customer: TOTAL AIR ANALYSIS INC.
CARSON, CA
P.O. Number: VERBAL
Item Number:

Shipping Order #: 22614377
Transfer #:
Lot Number: SFS101107
Valve: CGA 580
Cyl. Pressure:* 2000PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 13-Oct-06

Expiration Date: 13-Oct-09

Component	Requested Concentration	ASSAY Concentration
Carbon Dioxide	**18 %**	**18.0 ± 0.2 %**
Nitrogen	**Balance**	**Balance**

Reference Standard Employed For Analysis:

Concentration				Component	Balance	Cyl. No.	SRM or GMIS NTRM No.	Exp. Date	Sample No.	Type
21.93	±	0.11	%	Carbon Dioxide	Nitrogen	CC55253	950801	06/29/08	PD	GMIS

Analysis Information:

Component	Carbon Dioxide		First Triad Analysis: 10/13/06			
Analyzer Information			Triad 1	Triad 2	Triad 3	Units
Manufacturer:	Hewlett Pac	Zero	0	0	0	%
Model Number:	5890A	Reference	22.00	22.00	22.01	%
Serial Number:	3336A54620	Candidate	18.06	18.06	18.05	%
MPR Last Calibrated:	10/06/06	Result	18.00	18.00	17.98	%
Analytical Principle:	FID & TCD	Evaluation	VALID	VALID	VALID	
			MEAN ANALYTICAL RESULT:			18.00 %

Analyst Signature: _____ Eric Barron

Approved by: _____ Thuan Tran

AIR LIQUIDE AMERICA, L.P. Region Office • 8832 Dice Road, Santa Fe Springs, CA 90670-2516
Phone: (562) 945-1383 • Fax: (562) 693-1156

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CERTIFICATION OF ANALYSIS

Interference Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section 2.2, Procedure G-1

Cylinder S/N: CC103287

Customer: TOTAL AIR ANALYSIS INC.
Location: CARSON, CA

P.O. Number: VERBAL

Shipping Order Number: 29894121
Transfer Number:
Lot Number: SFS122238
Valve: CGA 590
Cylinder Pressure*: 2000 PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 2-Jul-2008 **Expiration Date: 1-Jul-2011**

Components	Requested Concentration	Assay Concentration
Nitrogen	**Balance**	**Balance**
Carbon Dioxide	**9 %**	**9.06 ± 0.09 %**
Oxygen	**9 %**	**8.95 ± 0.11 %**

Reference Standard(s) Employed For Analysis

Certified Concentration and Uncertainty			Component	Balance	Cyl. No.	SRM/PRM/Mix No.	Exp. Date	Sample No.	Type
12.00	± 0.03	%	Carbon Dioxide	Nitrogen	CC69601	SFS105702	2-May-2010	CT	GMIS
10.00	± 0.07	%	Oxygen	Nitrogen	CC16686	SFS76760	23-Jul-2009	SD	GMIS

Analytical Data

Component:	Carbon Dioxide		FIRST TRIAD ANALYSIS	2-Jul-2008		
Analyzer Information			Trial 1	Trial 2	Trial 3	Units
Analyzer Type:	Series II Gas Chromatograph	Zero	0.0000	0.0000	0.0000	%
Manufacturer:	Hewlett Packard	Reference	10.998	11.000	11.028	%
Model Number:	5890A	Candidate	8.3097	8.3108	8.3193	%
Serial Number:	3336A54620	Result	9.067	9.066	9.053	%
MPR Last Calibrated:	12-Jun-2008	Evaluation	Valid	Valid	Valid	
Analytical Principle:	FID & TCD			Mean Analytical Result:	9.062	%

Component:	Oxygen		FIRST TRIAD ANALYSIS	1-Jul-2008		
Analyzer Information			Trial 1	Trial 2	Trial 3	Units
Analyzer Type:	Series II Gas Chromatograph	Zero	0.0000	0.0000	0.0000	%
Manufacturer:	Hewlett Packard	Reference	9.8023	9.8173	9.8289	%
Model Number:	5890A	Candidate	8.7747	8.7853	8.7964	%
Serial Number:	3336A54620	Result	8.952	8.949	8.950	%
MPR Last Calibrated:	12-Jun-2008	Evaluation	Valid	Valid	Valid	
Analytical Principle:	FID & TCD			Mean Analytical Result:	8.950	%

Analyst: _____ Gary Williams

Approved by: _____ Thuan Tran

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CERTIFICATE OF ANALYSIS
Interference-Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section No. 2.2, Procedure . G-1

Cylinder Number: CC243119

Customer: TOTAL AIR ANALYSIS INC.
CARSON, CA
P.O. Number: VERBAL
Item Number:

Shipping Order Number 23255205
Transfer Number:
Lot Number: SFS103113
Valve: CGA 660
Cyl. Pressure:* 2000PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 20-Dec-06

Expiration Date: 20-Dec-08

Component	REQUESTED Concentration	ASSAY Concentration		
Nitrogen Dioxide	**80-90 ppm**	**81.2**	**± 1.4**	**ppm**
Nitrogen	**Balance**	**Balance**		

Reference Standard Employed For Analysis:

Concentration				Component	Balance	Cyl. No.	SRM or GMIS NTRM No.	Exp. Date	Sample No.	Type
210.9	±	3.0	ppm	Nitrogen Dioxide	Air	CC249649	YF	12/09/08	SFS99690	GMIS

Analysis Information:

Component	Nitrogen Dioxide		First Triad Analysis 12/13/06					Second Triad Analysis 12/20/06				
Analyzer Information			Trial 1	Trial 2	Trial 3	Units		Trial 4	Trial 5	Trial 6	Units	
Manufacturer:	MKS Instruments	Zero	-0.016	0.020	0.011	ppm	Zero	0.030	0.023	0.025	ppm	
Model Number:	2031	Reference	208.136	208.200	208.316	ppm	Reference	209.075	208.808	208.862	ppm	
Serial Number:	10387278	Candidate	80.006	80.052	80.093	ppm	Candidate	80.611	80.570	80.561	ppm	
MPR Last Calibrated:	11/26/06	Result	81.08	81.08	81.08	ppm	Result	81.30	81.36	81.33	ppm	
Analytical Principle:	FTIR	Evaluation	VALID	VALID	VALID		Evaluation	VALID	VALID	VALID		
			MEAN ANALYTICAL RESULT:			81.08	ppm	MEAN ANALYTICAL RESULT:			81.33	ppm

Analyst Signature: _____ Thuan Tran

Approved by: _____ Aidan Ifland

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AIR LIQUIDE

CERTIFICATE OF BATCH/LOT ANALYSIS

Certification Of Batch/Lot #: DA0260596A

Product: Nitrogen **Grade: Ultra High Purity**

Customer:	Total Air A nalysis	**Test Cylinder #:**	0
Date of Certification:	6/27/2007	**Item Number:**	625-44+
P.O. Number:	NA	**Valve:**	CGA 580
Document Number:	n/a	**Cylinder Size:**	44

ANALYSIS REPORT

Major Component	Specification	Purity
Nitrogen Ultra High Purity	99.9990%	99.999%

Impurities	Specification	Actual Analysis
Moisture	<3 ppm	<3 ppm
Oxygen	<2 ppm	<2 ppm
Total Hydrocarbons	<0.5 ppm	<0.5 ppm

Notes:

Certified By: _____
Name

Air Liquide America, L.P.

8832 Dice Road Santa Fe Springs, CA 90670-2516
Phone: 800-323-2212

AIR LIQUIDE™

CERTIFICATION OF ANALYSIS

Interference Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section 2.2, Procedure G-1

Cylinder S/N: CC31941

Customer: TOTAL AIR ANALYSIS INC.
Location: CARSON, CA

P.O. Number: VERBAL

Shipping Order Number: 29313171
Transfer Number:
Lot Number: SFS120593
Valve: CGA 660
Cylinder Pressure*: 2000 PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 19-May-2008 **Expiration Date: 19-May-2010**

Components	Requested Concentration	Assay Concentration
Nitrogen	**Balance**	**Balance**
Nitric Oxide	**220 ppm**	**222 ± 3 ppm**
NOx		**222 ppm**

Reference Standard(s) Employed For Analysis

Certified Concentration and Uncertainty	Component	Balance	Cyl. No.	SRM/PRM/Mix No.	Exp. Date	Sample No.	Type
253.8 ± 1.7 ppm	Nitric Oxide	Nitrogen	CC243131	SFS98343	5-Dec-2008	YM	GMIS

Analytical Data

Component:	Nitric Oxide		FIRST TRIAD ANALYSIS 12-May-2008					SECOND TRIAD ANALYSIS 19-May-2008				
Analyzer Information			Trial 1	Trial 2	Trial 3	Units		Trial 1	Trial 2	Trial 3	Units	
Analyzer Type:	Fourier Transform IR	Zero	-0.05	-0.06	-0.08	ppm	Zero	-0.03	0.02	-0.02	ppm	
Manufacturer:	MKS Instruments	Reference	252.59	252.56	252.58	ppm	Reference	252.40	252.32	252.40	ppm	
Model Number:	2031	Candidate	220.90	220.97	220.76	ppm	Candidate	220.44	220.44	220.49	ppm	
Serial Number:	10387278	Result	222.0	222.1	221.8	ppm	Result	221.7	221.7	221.7	ppm	
MPR Last Calibrated:	9-May-2008	Evaluation	Valid	Valid	Valid		Evaluation	Valid	Valid	Valid		
Analytical Principle:	FTIR			Mean Analytical Result:		222.0	ppm			Mean Analytical Result:		221.7 ppm

Analyst: _____ Tan Ngo

Approved by: _____ Thuan Tran

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CERTIFICATION OF ANALYSIS

Interference Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section 2.2, Procedure G-1

Cylinder S/N: CC159973

Customer: TOTAL AIR ANALYSIS INC.
Location: CARSON, CA

P.O. Number: VERBAL
Item Number:

Assay Date: 5-Mar-2008

Expiration Date: 5-Mar-2010

Shipping Order Number: 28367020
Transfer Number:
Lot Number: SFS117733
Valve: CGA 660
Cylinder Pressure*: 2000 PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Components	Requested Concentration	Assay Concentration
Nitrogen	Balance	Balance
Nitric Oxide	88 ppm	88.0 ± 1.0 ppm
NOx		88.0 ppm

Reference Standard(s) Employed For Analysis

Certified Concentration and Uncertainty			Component	Balance	Cyl. No.	SRM/PRM/Mix No.	Exp. Date	Sample No.	Type
97.45	± 0.41	ppm	Nitric Oxide	Nitrogen	CAL015609	1684b	1-Sep-2011	44-5-94	SRM

Analytical Data

Component:	Nitric Oxide		FIRST TRIAD ANALYSIS 27-Feb-2008				SECOND TRIAD ANALYSIS 5-Mar-2008			
Analyzer Information			Trial 1	Trial 2	Trial 3	Units	Trial 1	Trial 2	Trial 3	Units
Analyzer Type:	Fourier Transform IR	Zero	-0.002	-0.040	-0.003	ppm	-0.002	0.004	-0.044	ppm
Manufacturer:	MKS Instruments	Reference	97.514	97.494	97.423	ppm	97.521	97.565	97.510	ppm
Model Number:	2031	Candidate	88.011	88.015	88.070	ppm	88.011	88.004	87.985	ppm
Serial Number:	10387278	Result	87.95	87.98	88.09	ppm	87.95	87.90	87.94	ppm
MPR Last Calibrated:	22-Feb-2008	Evaluation	Valid	Valid	Valid		Valid	Valid	Valid	
Analytical Principle:	FTIR			Mean Analytical Result:		88.01 ppm		Mean Analytical Result:		87.93 ppm

Analyst: _____ Thuan Tran

Approved by: _____ David Connolly

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CERTIFICATION OF ANALYSIS

Interference Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section 2.2, Procedure G-1

Cylinder S/N: CC15697

Customer: TOTAL AIR ANALYSIS INC.
Location: CARSON, CA

P.O. Number: VERBAL

Shipping Order Number: 29894121
Transfer Number:
Lot Number: SFS122239
Valve: CGA 350
Cylinder Pressure*: 2000 PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 10-Jul-2008 **Expiration Date: 10-Jul-2011**

Components	Requested Concentration	Assay Concentration
Nitrogen	**Balance**	**Balance**
Carbon Monoxide	**450 ppm**	**452 ± 5 ppm**

Reference Standard(s) Employed For Analysis

Certified Concentration and Uncertainty	Component	Balance	Cyl. No.	SRM/PRM/Mix No.	Exp. Date	Sample No.	Type
498.9 ± 2.6 ppm	Carbon Monoxide	Nitrogen	CC148496	SFS108217	31-Dec-2009	BX	GMIS

Analytical Data

Component:	Carbon Monoxide		FIRST TRIAD ANALYSIS 3-Jul-2008					SECOND TRIAD ANALYSIS 10-Jul-2008				
Analyzer Information			Trial 1	Trial 2	Trial 3	Units		Trial 1	Trial 2	Trial 3	Units	
Analyzer Type:	Gas Chromatograph	Zero	0.0000	0.0000	0.68	ppm	Zero	0.0000	0.0000	0.0000	ppm	
Manufacturer:	Varian	Reference	545.81	548.20	549.14	ppm	Reference	528.27	528.95	530.21	ppm	
Model Number:	3400A	Candidate	494.47	496.85	497.08	ppm	Candidate	478.72	479.13	480.15	ppm	
Serial Number:	2805	Result	452.0	452.2	451.5	ppm	Result	452.1	451.9	451.8	ppm	
MPR Last Calibrated:	13-Jun-2008	Evaluation	Valid	Valid	Valid		Evaluation	Valid	Valid	Valid		
Analytical Principle:	FID & TCD				Mean Analytical Result:	451.9	ppm			Mean Analytical Result:	451.9	ppm

Analyst: _____ Gary Williams

Approved by: _____ Tan Ngo

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AIR LIQUIDE™

CERTIFICATE OF ANALYSIS
Interference-Free Multi-Component EPA Protocol Gases

Note: Analytical uncertainty and NIST traceability are in compliance with EPA-600/R-97/121
Section No. 2.2, Procedure . G-1

Cylinder Number: CC161806

Customer: TOTAL AIR ANALYSIS INC.
CARSON, CA
P.O. Number: VERBAL
Item Number:

Shipping Order Number 18975715
Transfer Number:
Lot Number: SFS92210
Valve: CGA 350
Cyl. Pressure:* 2000 PSIG
*Cylinder should not be used when gas pressure is below 150 psig

Assay Date: 23-Dec-05

Expiration Date: 23-Dec-08

Component	REQUESTED Concentration	ASSAY Concentration		
Carbon Monoxide	**875 ppm**	**875**	**± 12**	**ppm**
Nitrogen	**Balance**	**Balance**		

Reference Standard Employed For Analysis:

Concentration				Component	Balance	Cyl. No.	SRM or GMIS NTRM No.	Exp. Date	Sample No.	Type
993	±	9	ppm	Carbon Monoxide	Nitrogen	CC-66116	970808	08/01/07	97080811	NTRM

Analysis Information:

Component	Carbon Monoxide		First Triad Analysis 12/16/05				Second Triad Analysis 12/20/05			
Analyzer Information			Trial 1	Trial 2	Trial 3	Units	Trial 4	Trial 5	Trial 6	Units
Manufacturer:	Varian(B)	Zero	0	0	0	ppm	0	0	0	ppm
Model Number:	3400	Reference	990.0	993.0	991.3	ppm	993.1	993.0	992.5	ppm
Serial Number:	2806	Candidate	874.8	873.8	872.6	ppm	874.4	875.1	875.6	ppm
MPR Last Calibrated:	11/28/05	Result	877.5	873.8	874.1	ppm	874.3	875.1	876.0	ppm
Analytical Principle:	FID & TCD	Evaluation	VALID	VALID	VALID		VALID	VALID	VALID	
			MEAN ANALYTICAL RESULT:			875.1 ppm	MEAN ANALYTICAL RESULT:			875.2 ppm

Analyst Signature: _____ Eric Barron

Approved by: _____ Jason Unger

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Appendix H

SCAQMD Permit to Operate

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive, Diamond Bar, CA 91765

PERMIT TO OPERATE

Permit No.
F73942
A/N 437562

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

ID 50310

Legal Owner
or Operator:

WASTE MGMT DISPOSAL&RECYCLING SERVS INC
9081 TUJUNGA AVE
SUN VALLEY, CA 91352

Equipment Location: 9227 TUJUNGA AVE, SUN VALLEY, CA 91352-1542

Equipment Description :

LANDFILL GAS TO ENERGY SYSTEM NO. 2 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 2, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1877 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED, DRIVING A 1.3 MW ELECTRICAL GENERATOR.
2. COMPRESSOR, 3000 CFM, 50 HP (COMMON TO A/N 437561, 437562, 437563, 437564 AND 437565)
3. RADIATOR WITH FANS
4. ANCILLARY SKID WITH A MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.

Conditions :

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
4. A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
5. A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
6. THIS EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF RULE 1110.2.

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7. THE HEATING VALUE OF LANDFILL GAS TO THE ENGINE SHALL NOT EXCEED 16.8 MM BTU PER HOUR. AN HOURLY LOG OF THE LANDFILL GAS HEATING VALUE, BASED ON THE RECORDED FLOW RATE (SCFM), SHALL BE KEPT FOR AT LEAST TWO YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.

8. READINGS OF THE HEATING VALUE (BTU/HR) OF LANDFILL GAS AT THE INLET TO THE ENGINE SHALL BE TAKEN HOURLY WITH AN AQMD APPROVED INSTRUMENT AND THE RESULTS RECORDED.

9. THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.

10. TWO SAMPLING PORTS SHALL BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS SHALL BE SUPPLIED BY THE APPLICANT.

11. THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/HR
NON-METHANE HYDROCARBONS	1.65
NITROGEN OXIDE	2.48
SULFUR DIOXIDE	0.82
CARBON MONOXIDE	9.92
PARTICULATES	0.21

12. NON-METHANE HYDROCARBON EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 0.8 GR/BHP-HR.

13. OXIDES OF NITROGEN EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 0.6 GR/BHP-HR AND 46 PPMV AT 15% O2.

14. CARBON MONOXIDE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 2.5 GR/BHP-HR.

15. NON METHANE HYDROCARBON EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 20 PPMV AS HEXANE, AT 3 PERCENT OXYGEN, UNLESS THE EMISSIONS HAVE BEEN REDUCED BY AT LEAST 98 PERCENT BY WEIGHT ACROSS THE ENGINE.

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16. A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O2 ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O2. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD. AN ALTERNATIVE OR PREDICTIVE MONITORING SYSTEM (PEMS), IF USED, SHALL BE SUBMITTED CONCURRENTLY WITH THE AFOREMENTIONED CEMS.

17. ALL RECORDS, SUCH AS FUEL USAGE, MAINTENANCE RECORDS AND ANNUAL PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.

18. THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

Dorris M. Bailey

By Dorris M.Bailey/TK01
2/25/2005

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