Florida Power & Light Company, Environmental Services Dept., P.O. Box 14000, Juno Beach, FL 33408

FPL



May 29, 2003

Via Federal Express

Ms. Trina Vielhauer
State of Florida
Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road
Tallahassee, FL 32399-2400

**Re: Emissions Performance Test Results**
**Fort Myers Peaker Project Gas Heater**

Dear Trina:

The enclosed Emissions Performance Test Report is being submitted in accordance with Condition 25 of PSD FL-298 and 0710002-009-AC. Florida Power & Light Company (FPL) has completed the stack performance testing for Fort Myers Peaker Project Gas Heater. FPL will submit the testing report for Unit 3A when it becomes available.

Please feel free to contact me at (561) 691-7518 or Michael Szybinski at (561) 691-2898 if you have any questions.

Sincerely,

Barbara P. Linkiewicz /scm

Barbara P. Linkiewicz
Sr. Environmental Specialist

Cc:

| | |
|---|---|
| Errin Pichard | FDEP Division of Air Resource Management |
| Richard Cantrell | FDEP South District Office |
| Ron Blackburn | FDEP South District Office |
| Lynn Haynes | EPA Region 4 |
| Brent Burger | OCI/Project Manager |
| Tom DePlonty | Project Manager |
| Bernie Tibble | Environmental Specialist - PFM |
| Bill Reichel | Plant General Manager – PFM |
| Nancy Kierspe | Designated Representative |

# AIR PERMIT COMPLIANCE DEMONSTRATION
# FINAL REPORT

*Performed At*
**Florida Power and Light Company**
**Fort Myers Power Plant**
**Peaking Unit 3B – Gas Heater**
**Fort Myers, Florida**

*Test Dates*
**April 11, 2003**



*Report No.*
**GE Mostardi Platt Report 20030171-03**

*Report Submittal Date*
**May 16, 2003**

GE ENERGY SERVICES

GE Mostardi Platt
1001 Aviation Parkway, Suite 100
Morrisville, NC 27560
Ph: 919-460-1060, Fax: 919-460-1944

# AIR PERMIT COMPLIANCE DEMONSTRATION FINAL REPORT

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## CERTIFICATION SHEET

Having reviewed the test program described in this report, I hereby certify the data, information, and results in this report to be accurate and true according to the methods and procedures used.

Data collected under the supervision of others is included in this report and is presumed to have been gathered in accordance with recognized standards.

GE MOSTARDI PLATT

Michael O. White

Michael O. White
Regional Manager

**EMISSIONS COMPLIANCE TESTING**
Performed At
**Fort Myers Power Plant**
**Unit 3B – Gas Heater**
**Fort Myers, Florida**
**April 11, 2003**

## 1.0 INTRODUCTION

Emissions compliance testing was performed by GE MOSTARDI PLATT, a division of GE Energy and Industrial Services, Inc. (GE Mostardi Platt) on April 11, 2003, at the Fort Myers Power Plant in Fort Myers, Florida. The tests were authorized by and performed for Overland Contracting, Inc.

The purpose of this test program was to demonstrate compliance with the air permit number 0710002-009AC and PSD-FL-298 issued by the Florida Department of Environmental Protection (FL DEP).

### 1.1 Project Contact Information

| Location | Address | Contact |
|---|---|---|
| Test Facility | Fort Myers Power Plant<br>Fort Myers Simple Cycle Expansion Project<br>Fort Myers, Florida | Bernard P. Tibble<br>Florida Power and Light Company<br>239-693-4390 |
| Testing Company Representative | GE Mostardi Platt<br>1001 Aviation Pkwy<br>Suite 100<br>Morrisville, NC 27560 | Michael White<br>Regional Manager<br>919-460-1060 Phone<br>mike2.white@ps.ge.com |

The tests were conducted by John Maxwell and Kevin Dlabaja.

Messr. Sherrill Culliver of the Florida Department of Environmental Protoection (FL DEP) observed the testing.

 

## 2.0 SUMMARY OF RESULTS

The following subsections provide a list of the pollutants tested at each emission source, the calculated averages, the applicable emission limits and the applicable rules or regulations for each emission limit. Completed summaries for testing at all loads are tabulated and can be found in Section 6 of this document.

All reported emission concentrations and emission rates were within the allowable levels cited in the air permit.

Testing was performed at one operating condition.

### Natural Gas Firing Summary of Results

| Source | Pollutant Tested | Test Time (min per run) | Load % | Emission Limit | Measured Results | Permit Citation |
|---|---|---|---|---|---|---|
| Unit 3B Gas Heater | NOx | 60 | 100 | 0.1 lb/MMBtu | 0.040 | #16a |
| | CO | 60 | 100 | 0.075 lb/MMBtu | 0.001 | #19 |
| | VE | 60 | 100 | 10 | 0 | #17 |

## 3.0 DISCUSSION OF RESULTS

No major problems were encountered with the testing equipment during the test program. The CO monitor values were below the minimum detection limit of the instrument. All monitor calibrations (initial and final) were within method data requirements. All data has been included in calculation of the reported averages.

Source operations appeared normal during the entire test program. Plant operating data as provided by the facility are included in the appendices to this document. Fuel factors were taken from EPA Reference Method 19.

## 4.0 TEST PROCEDURES

All testing, sampling, analytical, and calibration procedures used for this test program were performed as described in the Title 40, Code of Federal Regulations, Part 60, Appendix A (40CFR60), Methods 1-4, 5 and the latest revisions thereof. Where applicable, the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods, United States Environmental Protection Agency (USEPA) 600/4-77-027b was used to determine the precise procedures.

The following table summarizes the monitoring procedures followed for the testing.

**Manual Sampling and CEMS Instrument Specifications**

| Analyte | Method | Instrument/Principal | Range Specifications |
|---|---|---|---|
| $NO_x$ | EPA M20 | TECO Model 42 C, Chemiluminescence | 0-10, 0-100 ppm |
| $O_2$ | EPA M3A | Servomex 1400 Paramagnetic | 0-25 percent |
| $CO_2$ | EPA M3A | ACS 3200 Infrared | 0-20 percent |
| CO | EPA M10 | TECO Model 48CTL NDIR/GFC | 0-10, 0-50 ppm |
| Opacity | EPA M9 | Visual observation by qualified observer | 0 – 100% |

The procedures for the measurements during this program were primarily instrumentation techniques using continuous emission monitors. GE Mostardi Platt's continuous emission monitoring system (CEMS) is housed inside a mobile laboratory in the back of an18-foot trailer.

Sample gas extracted from the source being monitored was first cleaned and dried before analysis. The gas is conditioned by passing through a heated filter, a heat traced Teflon line into a condenser-style moisture removal system prior to analysis for $NO_x$, $CO_2$, $O_2$ and CO. The condition system cools the gas to 35 °F and thereby condenses out moisture in the sample. The system is operated with chilled condensers, which are continuously drained thereby minimizing the possibility of scrubbing target compounds. The monitoring rate is controlled through a series of valves and Dwyer rotometers. The flow rate is observed to ensure that an equal gas flow was being drawn from each sampling point.

Calibrations were performed with EPA Protocol 1 gases. Instrument span and the calibration gas concentrations were dependent on the fuel being fired.

Data handling from the analyzers includes output from the analyzer to be compiled on a microprocessor controlled data acquisition system. One-minute averages are recorded and translated to an EXCEL spreadsheet for further data reduction. All data was printed onsite and stored electronically in zip drives including at least one backup file.

The following subsections provide brief descriptions of the EPA Reference Method and any technical concerns encountered during the test program.

### 4.1 Oxygen ($O_2$)/Carbon Dioxide ($CO_2$) Determination

Oxygen ($O_2$) and carbon dioxide ($CO_2$) gas contents were determined in accordance with Method 3A, 40CFR60.

A Servomex 1400 analyzer was used for the oxygen monitoring. Concentrations are detected using a paramagnetic principle. The analyzer evaluates the paramagnetic susceptibility of the sample gas using a magnetodynamic measuring cell. The response voltage is proportional to the oxygen concentration ratio.

An ACS 3200 analyzer was used for the carbon dioxide monitoring. This analyzer emits a single beam of infrared radiation at dual wavelengths. The beam passes through a sample cell and radiation at the specific wavelength is selectively absorbed by the carbon dioxide molecules. The intensity of radiation reaching the end of the sample cell is inversely proportional to the carbon dioxide concentration in the gas.

The carbon dioxide data is collected as an engineering check of the measured oxygen by calculating and applying $F_o$ factors using procedures identified in EPA Reference Method 3B, Section 12.3, Equation 3B-2 (also found in earlier format version at Section 3.4.1, Equation 3B-1).

GE Mostardi Platt followed the requirements of EPA Reference Method 3A, Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources.

### 4.2 $NO_x$ by EPA Method 20

A TECO Model 42C analyzer was used to measure NOx. The operating principle of this instrument is a chemiluminescent reaction in which ozone reacts with nitric oxide to form oxygen and nitrogen dioxide. During the reaction a photon is emitted and measured by a photomultiplier tube. The instrument measures total oxides of nitrogen (nitrogen oxide and nitrogen dioxide) by thermally converting nitrogen dioxide to nitrogen oxide in a separate reaction chamber prior to the multiplier tube.

Measurements were performed in accordance to EPA Reference Method 7E, Determination of Nitrogen Oxides. Three runs were completed.

Quality control checks as identified in Method 7E were performed. These checks include response time checks, system calibrations and bias checks. Vendor data can be provided for interference response checks. GE Mostardi Platt calibrated at a range appropriate to the anticipated concentrations.

 

### 4.3 CO by EPA Method 10

A TECO Model 48CTL trace analyzer was used for the CO monitoring. Concentrations are detected using a nondispersive infrared (NDIR) gas filter correlation technique. Radiation from the infrared source is chopped and then passed through a gas filter alternating between CO and nitrogen due to rotation of the filter wheel. The radiation then passes through an interference filter and enters a multiple optical pass cell where absorption by the sample gas occurs. The CO gas filter produces a reference beam that cannot be further attenuated by CO in the sample cell. At the same time, the nitrogen gas filter produces a measuring beam that can be absorbed by CO in the cell. The chopped detector signal is modulated by the alternation between the two gas filters. The sample amplitude is related to the concentration of CO in the sample cell.

GE Mostardi Platt followed the requirements of EPA Reference Method 10, Determination of Carbon Monoxide Emissions from Stationary Sources. Three runs were completed at the applicable load conditions concurrent with the $NO_x$ readings.

### 4.4 Opacity by Method 9

The emissions from the stack were determined for opacity by a qualified observer during the testing when firing oil. Testing consisted of ten sets of 24 consecutive observations at 15-second intervals to yield a six-minute averages.

### 4.6 Process Data

- Facility personnel were responsible for collection of all pertinent process data. Specific parameters recorded are maintained by the facility.

 

## 5.0 QUALITY ASSURANCE PROCEDURES

GE Mostardi Platt recognizes the previously described reference methods to be very technique oriented and attempts to minimize all factors that can increase error by implementing its Quality Assurance Program into every segment of its testing activities.

Calculations were performed by computer. An explanation of the nomenclature and calculations along with the complete test results are appended. Also appended are the calibration data and copies of the raw field data sheets.

Dry and wet test meters were calibrated according to methods described in the *Quality Assurance Handbook for Air Pollution Measurement Systems*, Sections 3.3.2, 3.4.2 and 3.5.2. Percent error for the wet test meter according to the methods was less than the allowable error of 1.0 percent. The dry test meters measured the test sample volumes to within 2 percent at the flowrate and conditions encountered during sampling.

# 6.0 TEST RESULTS SUMMARIES

## 6.1 CEMS Results

*SUMMARY TABLE - CEMS PARAMETERS - UNIT 3B, GAS HEATER*

| **Test Identification** | | | | | |
|---|---|---|---|---|---|
| Test Period | -- | 1 | 1 | 1 | Average |
| Test Condition | load level, % | 100 | 100 | 100 | |
| Sampling Location | -- | stack | stack | stack | |
| Date | | 11-Apr-03 | 11-Apr-03 | 11-Apr-03 | |
| Test Time (start-stop) | | 1146-1246 | 1313-1413 | 1434-1534 | |
| **Exhaust Gas Conditions** | | | | | |
| Fuel Factor | dscf/MMBtu | 8710 | 8710 | 8710 | 8710 |
| $O_2$ | % | 4.9 | 4.9 | 4.8 | 4.8 |
| $CO_2$ | % | 9.1 | 9.1 | 9.1 | 9.1 |
| $NO_x$ | ppmvd | 34.2 | 34.3 | 35.0 | 34.5 |
| CO | ppmvd | 0.10 | 0.10 | 0.10 | 0.1 |
| **Exhaust Emissions** | | | | | |
| $NO_x$ | ppmvd @ 15% $O_2$ | 12.6 | 12.6 | 12.8 | 12.7 |
| $NO_x$ | lb/MMBtu | 0.046 | 0.036 | 0.037 | 0.040 |
| CO | ppmvd @ 15% $O_2$ | 0.04 | 0.04 | 0.04 | 0.04 |
| CO | lb/MMBtu | 0.000083 | 0.000083 | 0.000082 | 0.000082 |

# APPENDIX

# Calculation Nomenclature and Formulas

## EXAMPLE CALCULATIONS - AIR PERMIT REPORT

***$NO_x$ Conc. adjusted to 15% $O_2$:***

Concentration of measured NOx is adjusted to 15 percent oxygen

| | |
|---|---|
| Run 1 $NO_x$, ppmvd | 34.15 |
| Run 1 $O_2$, percent | 4.87 |

$$\text{NOx measured} \times \frac{(20.9 - 15)}{(20.9 - 4.87)}$$

$$34.15 \times \frac{5.9}{16.03}$$

| | |
|---|---|
| Run 1 $NO_x$, ppmvd @ 15% $O_2$ | *12.57* |

***Mass Emission Rate, lb/MMBtu***

To determine the total mass emissed on a pound per hour basis.

(Concentration, ppm) x (fuel factor from M19) x (0.0000001194) x (Oxygen correction)

34.15 x 8,710 x 1.19E-07 x 20.9 / (20.9- O2 meas)

constant from Method 19

| | |
|---|---|
| $NO_x$ Emission Rate, lb/hr | *0.046* |

# CEMS Gas Firing - Base Load

**PLANT:** Florida Power and Light
**CITY, STATE:** Ft Myers Fl.
**LOCATION:** 3B Gas Turbine
**START DATE:** 4/11/03
**END DATE:** 4/11/03

**RUN NUMBER** 3B Ht-1
RUN START TIME: 11:46
RUN END TIME: 12:46

CEM OPERATOR: Jeff Dean
ENTERED BY: Jeff Dean
CHECKED BY: Michael White

MAXIMUM RESPONSE TIME SEC. 66

| SPECIES | | O2 | CO2 | NOx | CO |
|---|---|---|---|---|---|
| LOCATION | | Stack | Stack | Stack | Stack |
| CONCENTRATION UNIT | | %, dry | %, dry | ppmvd | ppmvd |
| HIGH-RANGE GAS FRACTION OF SPAN | | 0.90 | 0.90 | 0.80 | 0.88 |
| SPAN | | 25 | 25 | 50 | 25 |
| SPAN GAS CONCENTRATION, Cma | HIGH | 22.46 | 22.44 | 40.00 | 22.00 |
| | MID | 12.00 | 12.00 | 20.00 | 12.00 |
| | LO | | | 10.00 | 7.00 |
| | ZERO | 0.0 | 0.0 | 0.00 | 0.0 |
| INITIAL ANALYZER CALIBRATION CHECK, Cai | HIGH | 22.40 | 22.40 | 39.80 | 21.90 |
| | MID | 12.00 | 12.10 | 19.40 | 11.70 |
| | LO | | | 9.40 | 6.87 |
| | ZERO | 0.04 | 0.00 | 0.20 | 0.00 |
| RESPONSE TIME (SECONDS) | | 55 | 50 | 65 | 60 |
| INITIAL ANALYZER CALIBRATION ERROR, Ei | HIGH | -0.2% | -0.2% | -0.4% | -0.4% |
| Ei = ((Cma - Cai)/Span)x100% | MID | 0.0% | 0.4% | -1.2% | -1.2% |
| | LO | N/A | N/A | -1.2% | -0.5% |
| | ZERO | 0.2% | N/A | 0.4% | N/A |
| INITIAL BIAS CHECK, Cbi | UPSCALE HIGH (H), MID (M), or LO (L) | M | M | M | L |
| *(UPSCALE CALIBRATION GAS CLOSEST TO EFFLUENT GAS CONCENTRATION)* | UPSCALE | 11.80 | 11.90 | 19.40 | 6.96 |
| | ZERO | 0.00 | 0.00 | 0.20 | 0.00 |
| INITITAL SYSTEM CALIBRATION BIAS, Bi | UPSCALE | -0.8% | -0.8% | 0.0% | 0.4% |
| Bi = ((Cbi-Cai)/Span)x100% | ZERO | -0.2% | 0.0% | 0.0% | 0.0% |
| FINAL BIAS CHECK, Cbf | UPSCALE | 11.80 | 11.90 | 19.30 | 6.95 |
| *(UPSCALE CALIBRATION GAS CLOSEST TO EFFLUENT GAS CONCENTRATION)* | ZERO | 0.00 | 0.00 | 0.20 | 0.00 |
| FINAL SYSTEM CALIBRATION BIAS, Bf | UPSCALE | -0.8% | -0.4% | -1.4% | -0.2% |
| Bf = ((Cbf - Cai)/(Span))x100% | ZERO | -0.2% | 0.0% | 0.0% | 0.0% |
| DRIFT CHECK, D | UPSCALE | 0.0% | 0.0% | -0.2% | 0.0% |
| D = ((Cbf - Cbi)/(Span))x100% | ZERO | 0.0% | 0.0% | 0.0% | 0.0% |
| AVERAGE BIAS RESPONSE FOR ZERO GAS, Co | | 0.00 | 0.00 | 0.20 | 0.00 |
| Co=(Cbi,zero+Cbf,zero)/2 | | | | | |
| AVERAGE % BIAS | UPSCALE | -0.8% | -0.6% | -0.7% | 0.1% |
| | ZERO | -0.2% | 0.0% | 0.0% | 0.0% |
| AVERAGE BIAS RESPONSE FOR UPSCALE GAS, Cm | | 11.80 | 11.90 | 19.35 | 6.96 |
| Cm=(Cbi,upscale+Cbf,upscale)/2 | | | | | |
| AVERAGE ANALYZER RESPONSE FROM DAS, Cavg | | 4.87 | 9.05 | 34.15 | -0.29 |

4/11/03
Unit: Gas Heater

Run 1

| Time | O2 % | CO2 % | NOX PPM | CO PPM |
|---|---|---|---|---|
| 11:46 | 4.86 | 9.01 | 33.39 | -0.24 |
| 11:47 | 4.84 | 9.03 | 33.93 | -0.23 |
| 11:48 | 4.83 | 9.04 | 33.88 | -0.25 |
| 11:49 | 4.88 | 9.02 | 33.92 | -0.25 |
| 11:50 | 4.88 | 9.03 | 34.10 | -0.24 |
| 11:51 | 4.87 | 9.03 | 33.84 | -0.25 |
| 11:52 | 4.91 | 9.01 | 34.04 | -0.23 |
| 11:53 | 4.88 | 9.03 | 33.85 | -0.26 |
| 11:54 | 4.90 | 9.02 | 33.88 | -0.25 |
| 11:55 | 4.90 | 9.03 | 34.07 | -0.26 |
| 11:56 | 4.88 | 9.03 | 33.96 | -0.25 |
| 11:57 | 4.91 | 9.02 | 34.15 | -0.25 |
| 11:58 | 4.88 | 9.03 | 34.12 | -0.24 |
| 11:59 | 5.13 | 8.88 | 33.87 | -0.25 |
| 12:00 | 5.16 | 8.86 | 34.01 | -0.26 |
| 12:01 | 5.11 | 8.90 | 33.77 | -0.27 |
| 12:02 | 5.03 | 8.95 | 33.31 | -0.28 |
| 12:03 | 4.79 | 9.10 | 33.41 | -0.28 |
| 12:04 | 4.80 | 9.09 | 33.83 | -0.28 |
| 12:05 | 4.77 | 9.11 | 34.52 | -0.29 |
| 12:06 | 4.80 | 9.09 | 34.83 | -0.29 |
| 12:07 | 4.73 | 9.14 | 34.68 | -0.30 |
| 12:08 | 4.82 | 9.08 | 34.52 | -0.29 |
| 12:09 | 4.78 | 9.11 | 34.53 | -0.30 |
| 12:10 | 4.78 | 9.11 | 34.45 | -0.28 |
| 12:11 | 4.79 | 9.10 | 34.81 | -0.29 |
| 12:12 | 4.78 | 9.11 | 34.56 | -0.30 |
| 12:13 | 4.85 | 9.07 | 34.45 | -0.28 |
| 12:14 | 4.80 | 9.09 | 34.36 | -0.31 |
| 12:15 | 4.85 | 9.07 | 34.20 | -0.30 |
| 12:16 | 4.88 | 9.05 | 34.31 | -0.29 |
| 12:17 | 4.82 | 9.08 | 34.23 | -0.28 |
| 12:18 | 4.79 | 9.10 | 33.95 | -0.31 |
| 12:19 | 4.80 | 9.10 | 34.44 | -0.31 |
| 12:20 | 4.81 | 9.09 | 34.54 | -0.29 |
| 12:21 | 4.81 | 9.09 | 34.46 | -0.30 |
| 12:22 | 4.86 | 9.06 | 34.32 | -0.30 |
| 12:23 | 4.87 | 9.05 | 34.41 | -0.30 |
| 12:24 | 4.84 | 9.08 | 34.19 | -0.30 |
| 12:25 | 4.83 | 9.08 | 34.10 | -0.29 |
| 12:26 | 4.83 | 9.08 | 34.23 | -0.32 |
| 12:27 | 4.82 | 9.08 | 34.13 | -0.29 |
| 12:28 | 4.84 | 9.07 | 34.33 | -0.29 |
| 12:29 | 4.85 | 9.07 | 34.20 | -0.31 |
| 12:30 | 4.89 | 9.04 | 34.16 | -0.32 |
| 12:31 | 4.84 | 9.07 | 34.08 | -0.31 |
| 12:32 | 4.92 | 9.02 | 34.15 | -0.31 |
| 12:33 | 4.92 | 9.02 | 33.99 | -0.30 |
| 12:34 | 4.92 | 9.02 | 34.01 | -0.31 |
| 12:35 | 4.89 | 9.04 | 34.00 | -0.30 |
| 12:36 | 4.89 | 9.04 | 33.99 | -0.30 |
| 12:37 | 4.88 | 9.05 | 34.23 | -0.31 |
| 12:38 | 4.86 | 9.06 | 34.22 | -0.32 |
| 12:39 | 4.88 | 9.05 | 34.15 | -0.31 |
| 12:40 | 4.87 | 9.06 | 34.31 | -0.31 |
| 12:41 | 4.89 | 9.04 | 34.20 | -0.32 |
| 12:42 | 4.88 | 9.05 | 33.90 | -0.29 |
| 12:43 | 4.85 | 9.06 | 33.87 | -0.31 |
| 12:44 | 4.86 | 9.06 | 34.06 | -0.30 |
| 12:45 | 4.89 | 9.04 | 34.43 | -0.31 |
| Average | 4.87 | 9.05 | 34.15 | -0.29 |

GE-Mostardi Platt

## CALIBRATION ERROR, BIAS, DRIFT AND O2-CORRECTED CONCENTRATIONS

| | | | | | |
|---|---|---|---|---|---|
| **PLANT:** | Florida Power and Light | **RUN NUMBER** | 3B Ht-2 | CEM OPERATOR: | Jeff Dean |
| **CITY, STATE:** | Ft Myers Fl. | RUN START TIME: | 14:13 | ENTERED BY: | Jeff Dean |
| **LOCATION:** | 3B Gas Turbine | RUN END TIME: | 15:13 | CHECKED BY: | Michael White |
| **START DATE:** | 4/11/03 | | | | |
| **END DATE:** | 4/11/03 | MAXIMUM RESPONSE TIME SEC. | 66 | | |

| SPECIES | | O2 | CO2 | NOx | CO |
|---|---|---|---|---|---|
| LOCATION | | Stack | Stack | Stack | Stack |
| CONCENTRATION UNIT | | %, dry | %, dry | ppmvd | ppmvd |
| HIGH-RANGE GAS FRACTION OF SPAN | | 0.90 | 0.90 | 0.80 | 0.88 |
| SPAN | | 25 | 25 | 50 | 25 |
| SPAN GAS CONCENTRATION, Cma | HIGH | 22.46 | 22.44 | 40.00 | 22.00 |
| | MID | 12.00 | 12.00 | 20.00 | 12.00 |
| | LO | | | 10.00 | 7.00 |
| | ZERO | 0.0 | 0.0 | 0.00 | 0.0 |
| INITIAL ANALYZER CALIBRATION CHECK, Cai | HIGH | 22.40 | 22.40 | 39.80 | 21.90 |
| | MID | 12.00 | 12.10 | 19.40 | 11.70 |
| | LO | | | 9.40 | 6.87 |
| | ZERO | 0.04 | 0.00 | 0.20 | 0.00 |
| RESPONSE TIME (SECONDS) | | 55 | 50 | 65 | 60 |
| INITIAL ANALYZER CALIBRATION ERROR, Ei | HIGH | -0.2% | -0.2% | -0.4% | -0.4% |
| Ei = ((Cma - Cai)/Span)x100% | MID | 0.0% | 0.4% | -1.2% | -1.2% |
| | LO | N/A | N/A | -1.2% | -0.5% |
| | ZERO | 0.2% | N/A | 0.4% | N/A |
| INITIAL BIAS CHECK, Cbi | UPSCALE HIGH (H), MID (M), or LO (L) | M | M | M | L |
| *(UPSCALE CALIBRATION GAS CLOSEST TO EFFLUENT GAS CONCENTRATION)* | UPSCALE | 11.80 | 11.90 | 19.30 | 6.95 |
| | ZERO | 0.00 | 0.00 | 0.20 | 0.00 |
| INITITAL SYSTEM CALIBRATION BIAS, Bi | UPSCALE | -0.8% | -0.8% | -0.2% | 0.3% |
| Bi = ((Cbi-Cai)/Span)x100% | ZERO | -0.2% | 0.0% | 0.0% | 0.0% |
| FINAL BIAS CHECK, Cbf | UPSCALE | 11.80 | 11.90 | 19.60 | 6.96 |
| *(UPSCALE CALIBRATION GAS CLOSEST TO EFFLUENT GAS CONCENTRATION)* | ZERO | 0.20 | 0.00 | 0.10 | 0.00 |
| FINAL SYSTEM CALIBRATION BIAS, Bf | UPSCALE | -0.8% | -0.4% | -0.8% | -0.2% |
| Bf = ((Cbf - Cai)/(Span))x100% | ZERO | 0.6% | 0.0% | -0.2% | 0.0% |
| DRIFT CHECK, D | UPSCALE | 0.0% | 0.0% | 0.6% | 0.0% |
| D = ((Cbf - Cbi)/(Span))x100% | ZERO | 0.8% | 0.0% | -0.2% | 0.0% |
| AVERAGE BIAS RESPONSE FOR ZERO GAS, Co | | 0.10 | 0.00 | 0.15 | 0.00 |
| Co=(Cbi,zero+Cbf,zero)/2 | | | | | |
| AVERAGE % BIAS | UPSCALE | -0.8% | -0.6% | -0.5% | 0.1% |
| | ZERO | 0.2% | 0.0% | -0.1% | 0.0% |
| AVERAGE BIAS RESPONSE FOR UPSCALE GAS, Cm | | 11.80 | 11.90 | 19.45 | 6.96 |
| Cm=(Cbi,upscale+Cbf,upscale)/2 | | | | | |
| AVERAGE ANALYZER RESPONSE FROM DAS, Cavg | | 4.87 | 9.05 | 34.32 | -0.34 |

4/11/03
Unit: Gas Heater

**Run 2**

| Time | O2 % | CO2 % | NOX PPM | CO PPM |
|---|---|---|---|---|
| 13:13 | 5.03 | 8.92 | 32.98 | -0.34 |
| 13:14 | 5.14 | 8.86 | 33.21 | -0.31 |
| 13:15 | 5.14 | 8.86 | 33.77 | -0.34 |
| 13:16 | 5.13 | 8.87 | 33.11 | -0.32 |
| 13:17 | 5.03 | 8.94 | 33.21 | -0.31 |
| 13:18 | 4.96 | 8.98 | 33.22 | -0.33 |
| 13:19 | 4.93 | 9.00 | 33.56 | -0.33 |
| 13:20 | 4.92 | 9.01 | 33.83 | -0.32 |
| 13:21 | 4.88 | 9.04 | 33.94 | -0.34 |
| 13:22 | 4.87 | 9.04 | 34.04 | -0.32 |
| 13:23 | 4.82 | 9.07 | 34.08 | -0.32 |
| 13:24 | 4.79 | 9.09 | 34.23 | -0.33 |
| 13:25 | 4.81 | 9.09 | 34.24 | -0.36 |
| 13:26 | 4.84 | 9.07 | 34.43 | -0.36 |
| 13:27 | 4.83 | 9.07 | 34.38 | -0.34 |
| 13:28 | 4.83 | 9.07 | 34.41 | -0.34 |
| 13:29 | 4.79 | 9.09 | 34.37 | -0.33 |
| 13:30 | 4.81 | 9.08 | 34.28 | -0.33 |
| 13:31 | 4.86 | 9.05 | 34.30 | -0.33 |
| 13:32 | 4.89 | 9.04 | 34.24 | -0.34 |
| 13:33 | 4.92 | 9.02 | 34.11 | -0.34 |
| 13:34 | 4.92 | 9.02 | 34.12 | -0.31 |
| 13:35 | 4.90 | 9.03 | 33.99 | -0.33 |
| 13:36 | 4.89 | 9.04 | 33.97 | -0.33 |
| 13:37 | 4.84 | 9.07 | 33.94 | -0.34 |
| 13:38 | 4.77 | 9.11 | 34.03 | -0.34 |
| 13:39 | 4.77 | 9.11 | 34.35 | -0.36 |
| 13:40 | 4.76 | 9.12 | 34.64 | -0.35 |
| 13:41 | 4.79 | 9.10 | 34.49 | -0.34 |
| 13:42 | 4.86 | 9.05 | 34.58 | -0.33 |
| 13:43 | 4.88 | 9.05 | 34.49 | -0.33 |
| 13:44 | 4.89 | 9.04 | 34.32 | -0.35 |
| 13:45 | 4.89 | 9.04 | 34.28 | -0.35 |
| 13:46 | 4.87 | 9.04 | 34.29 | -0.33 |
| 13:47 | 4.88 | 9.05 | 34.31 | -0.35 |
| 13:48 | 4.87 | 9.05 | 34.44 | -0.37 |
| 13:49 | 4.84 | 9.07 | 34.37 | -0.35 |
| 13:50 | 4.81 | 9.09 | 34.39 | -0.34 |
| 13:51 | 4.81 | 9.09 | 34.36 | -0.33 |
| 13:52 | 4.77 | 9.11 | 34.64 | -0.34 |
| 13:53 | 4.78 | 9.11 | 34.70 | -0.31 |
| 13:54 | 4.84 | 9.07 | 34.98 | -0.35 |
| 13:55 | 4.86 | 9.06 | 34.92 | -0.34 |
| 13:56 | 4.87 | 9.05 | 34.59 | -0.36 |
| 13:57 | 4.89 | 9.04 | 34.59 | -0.36 |
| 13:58 | 4.91 | 9.03 | 34.68 | -0.33 |
| 13:59 | 4.90 | 9.04 | 34.58 | -0.35 |
| 14:00 | 4.90 | 9.03 | 34.35 | -0.36 |
| 14:01 | 4.91 | 9.03 | 34.59 | -0.34 |
| 14:02 | 4.88 | 9.05 | 34.55 | -0.33 |
| 14:03 | 4.84 | 9.07 | 34.58 | -0.35 |
| 14:04 | 4.81 | 9.09 | 34.94 | -0.35 |
| 14:05 | 4.83 | 9.08 | 34.74 | -0.35 |
| 14:06 | 4.84 | 9.08 | 34.93 | -0.35 |
| 14:07 | 4.84 | 9.08 | 34.87 | -0.37 |
| 14:08 | 4.85 | 9.07 | 35.12 | -0.35 |
| 14:09 | 4.85 | 9.07 | 35.15 | -0.35 |
| 14:10 | 4.89 | 9.04 | 35.00 | -0.34 |
| 14:11 | 4.87 | 9.05 | 34.71 | -0.34 |
| 14:12 | 4.88 | 9.05 | 34.92 | -0.34 |
| Average | 4.87 | 9.05 | 34.32 | -0.34 |

GE-Mostardi Platt

## CALIBRATION ERROR, BIAS, DRIFT AND O2-CORRECTED CONCENTRATIONS

**PLANT:** Florida Power and Light
**CITY, STATE:** Ft Myers Fl.
**LOCATION:** 3B Gas Turbine
**START DATE:** 4/11/03
**END DATE:** 4/11/03

**RUN NUMBER** 3B Ht-3
RUN START TIME: 14:34
RUN END TIME: 15:34

CEM OPERATOR: Jeff Dean
ENTERED BY: Jeff Dean
CHECKED BY: Michael White

MAXIMUM RESPONSE TIME SEC. 62

| SPECIES | | O2 | CO2 | NOx | CO |
|---|---|---|---|---|---|
| LOCATION | | Stack | Stack | Stack | Stack |
| CONCENTRATION UNIT | | %, dry | %, dry | ppmvd | ppmvd |
| HIGH-RANGE GAS FRACTION OF SPAN | | 0.90 | 0.90 | 0.80 | 0.88 |
| SPAN | | 25 | 25 | 50 | 25 |
| *SPAN GAS CONCENTRATION, Cma* | *HIGH* | 22.46 | 22.44 | 40.00 | 22.00 |
| | MID | 12.00 | 12.00 | 20.00 | 12.00 |
| | LO | | | 10.00 | 7.00 |
| | ZERO | 0.0 | 0.0 | 0.00 | 0.0 |
| INITIAL ANALYZER CALIBRATION CHECK, Cai | HIGH | 22.40 | 22.40 | 39.80 | 21.90 |
| | MID | 12.00 | 12.10 | 19.40 | 11.70 |
| | LO | | | 9.40 | 6.87 |
| | ZERO | 0.04 | 0.00 | 0.20 | 0.00 |
| RESPONSE TIME (SECONDS) | | 55 | 50 | 65 | 60 |
| INITIAL ANALYZER CALIBRATION ERROR, Ei | HIGH | -0.2% | -0.2% | -0.4% | -0.4% |
| Ei = ((Cma - Cai)/Span)x100% | MID | 0.0% | 0.4% | -1.2% | -1.2% |
| | LO | N/A | N/A | -1.2% | -0.5% |
| | ZERO | 0.2% | N/A | 0.4% | N/A |
| INITIAL BIAS CHECK, Cbi | UPSCALE HIGH (H), MID (M), or LO (L) | M | M | M | L |
| *(UPSCALE CALIBRATION GAS CLOSEST TO EFFLUENT GAS CONCENTRATION)* | UPSCALE | 11.80 | 11.90 | 19.60 | 6.96 |
| | ZERO | 0.20 | 0.00 | 0.10 | 0.00 |
| INITITAL SYSTEM CALIBRATION BIAS, Bi | UPSCALE | -0.8% | -0.8% | 0.4% | 0.4% |
| Bi = ((Cbi-Cai)/Span)x100% | ZERO | 0.6% | 0.0% | -0.2% | 0.0% |
| FINAL BIAS CHECK, Cbf | UPSCALE | 11.80 | 12.00 | 19.60 | 6.95 |
| *(UPSCALE CALIBRATION GAS CLOSEST TO EFFLUENT GAS CONCENTRATION)* | ZERO | 0.00 | 0.00 | 0.20 | 0.01 |
| FINAL SYSTEM CALIBRATION BIAS, Bf | UPSCALE | -0.8% | 0.0% | -0.8% | -0.2% |
| Bf = ((Cbf - Cai)/(Span))x100% | ZERO | -0.2% | 0.0% | 0.0% | 0.0% |
| DRIFT CHECK, D | UPSCALE | 0.0% | 0.4% | 0.0% | 0.0% |
| D = ((Cbf - Cbi)/(Span))x100% | ZERO | -0.8% | 0.0% | 0.2% | 0.0% |
| AVERAGE BIAS RESPONSE FOR ZERO GAS, Co | | 0.10 | 0.00 | 0.15 | 0.01 |
| Co=(Cbi,zero+Cbf,zero)/2 | | | | | |
| AVERAGE % BIAS | UPSCALE | -0.8% | -0.4% | -0.2% | 0.1% |
| | ZERO | 0.2% | 0.0% | -0.1% | 0.0% |
| AVERAGE BIAS RESPONSE FOR UPSCALE GAS, Cm | | 11.80 | 11.95 | 19.60 | 6.96 |
| Cm=(Cbi,upscale+Cbf,upscale)/2 | | | | | |
| AVERAGE ANALYZER RESPONSE FROM DAS, Cavg | | 4.83 | 9.07 | 34.96 | -0.36 |

4/11/03
Unit: Gas Heater

Run 3

| Time | O2 % | CO2 % | NOX PPM | CO PPM |
|---|---|---|---|---|
| 14:34 | 4.87 | 9.03 | 34.83 | -0.34 |
| 14:35 | 4.86 | 9.04 | 34.86 | -0.34 |
| 14:36 | 4.85 | 9.05 | 34.60 | -0.37 |
| 14:37 | 4.82 | 9.07 | 34.78 | -0.37 |
| 14:38 | 4.82 | 9.07 | 34.95 | -0.35 |
| 14:39 | 4.80 | 9.09 | 35.23 | -0.35 |
| 14:40 | 4.79 | 9.09 | 35.04 | -0.37 |
| 14:41 | 4.84 | 9.06 | 35.00 | -0.36 |
| 14:42 | 4.82 | 9.08 | 35.20 | -0.34 |
| 14:43 | 4.84 | 9.07 | 35.02 | -0.37 |
| 14:44 | 4.83 | 9.07 | 35.15 | -0.35 |
| 14:45 | 4.83 | 9.07 | 35.13 | -0.34 |
| 14:46 | 4.86 | 9.06 | 35.19 | -0.35 |
| 14:47 | 4.86 | 9.06 | 35.14 | -0.34 |
| 14:48 | 4.86 | 9.06 | 35.07 | -0.37 |
| 14:49 | 4.88 | 9.04 | 34.98 | -0.36 |
| 14:50 | 4.87 | 9.05 | 35.02 | -0.36 |
| 14:51 | 4.84 | 9.07 | 35.13 | -0.36 |
| 14:52 | 4.85 | 9.07 | 34.95 | -0.37 |
| 14:53 | 4.86 | 9.06 | 35.01 | -0.37 |
| 14:54 | 4.88 | 9.04 | 35.06 | -0.36 |
| 14:55 | 4.86 | 9.05 | 34.79 | -0.36 |
| 14:56 | 4.85 | 9.06 | 34.78 | -0.34 |
| 14:57 | 4.86 | 9.05 | 34.82 | -0.35 |
| 14:58 | 4.83 | 9.07 | 35.00 | -0.37 |
| 14:59 | 4.81 | 9.08 | 34.93 | -0.36 |
| 15:00 | 4.82 | 9.08 | 34.92 | -0.38 |
| 15:01 | 4.80 | 9.09 | 35.01 | -0.38 |
| 15:02 | 4.78 | 9.11 | 34.91 | -0.38 |
| 15:03 | 4.79 | 9.09 | 35.11 | -0.37 |
| 15:04 | 4.79 | 9.10 | 35.04 | -0.37 |
| 15:05 | 4.79 | 9.10 | 35.12 | -0.37 |
| 15:06 | 4.82 | 9.08 | 35.03 | -0.37 |
| 15:07 | 4.85 | 9.06 | 35.15 | -0.39 |
| 15:08 | 4.85 | 9.06 | 35.14 | -0.36 |
| 15:09 | 4.83 | 9.07 | 34.94 | -0.39 |
| 15:10 | 4.83 | 9.08 | 34.86 | -0.36 |
| 15:11 | 4.82 | 9.08 | 34.93 | -0.36 |
| 15:12 | 4.80 | 9.09 | 34.87 | -0.36 |
| 15:13 | 4.81 | 9.08 | 34.98 | -0.36 |
| 15:14 | 4.85 | 9.06 | 35.16 | -0.36 |
| 15:15 | 4.87 | 9.05 | 35.01 | -0.36 |
| 15:16 | 4.85 | 9.06 | 34.84 | -0.35 |
| 15:17 | 4.84 | 9.07 | 34.80 | -0.36 |
| 15:18 | 4.82 | 9.08 | 34.87 | -0.34 |
| 15:19 | 4.80 | 9.09 | 34.76 | -0.35 |
| 15:20 | 4.82 | 9.08 | 35.01 | -0.37 |
| 15:21 | 4.82 | 9.08 | 34.94 | -0.34 |
| 15:22 | 4.82 | 9.08 | 34.89 | -0.37 |
| 15:23 | 4.81 | 9.08 | 34.81 | -0.37 |
| 15:24 | 4.82 | 9.08 | 34.89 | -0.35 |
| 15:25 | 4.84 | 9.07 | 35.10 | -0.38 |
| 15:26 | 4.88 | 9.04 | 35.16 | -0.37 |
| 15:27 | 4.85 | 9.06 | 34.76 | -0.36 |
| 15:28 | 4.84 | 9.07 | 34.76 | -0.34 |
| 15:29 | 4.83 | 9.07 | 34.79 | -0.34 |
| 15:30 | 4.84 | 9.06 | 34.95 | -0.33 |
| 15:31 | 4.82 | 9.07 | 34.99 | -0.34 |
| 15:32 | 4.79 | 9.10 | 34.95 | -0.37 |
| 15:33 | 4.80 | 9.09 | 34.67 | -0.39 |
| Average | 4.83 | 9.07 | 34.96 | -0.36 |

# Visible Emissions

# CERTIFICATIONS

## GAS DIVIDER CERTIFICATION RESULTS

Reference: EPA 205
Location: DeBarry Fla.
Unit 3B
19-Mar-03

| GAS TYPE | % Nox | RESPONSE 1 | RESPONSE 2 | RESPONSE 3 | AVERAGE RESPONSE | DEVIATION A (%) | DEVIATION B (%) |
|---|---|---|---|---|---|---|---|
| UZAM Nitrogen | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | n/a | n/a |
| O2, Protocol I (bipass divider) | 22.46 | 22.46 | 22.45 | 22.43 | 22.45 | -0.06 | 0.07 |
| O2, Protocol I | 22.46 | 22.45 | 22.46 | 22.45 | 22.45 | -0.03 | 0.03 |
| Divided | 18.00 | 18.00 | 18.02 | 18.03 | 18.02 | 0.09 | 0.09 |
| Divided | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 0.00 | 0.00 |
| Divided | 6.00 | 5.97 | 5.98 | 5.97 | 5.97 | -0.44 | 0.11 |
| Divided | 4.00 | 3.99 | 3.98 | 3.99 | 3.99 | -0.33 | 0.17 |

Deviation A = (Average Response/Desired Concentration)*100% (spec<=2%)

Deviation B = (Max deviation/Desired Concentration)*100% (spec<=2%)

Thursday 91
3-27-03
1 97
0
11:30 PM
234 334-3434
MW Hotel conf [65391722]

Cal gases

| Compound | Conc | Cyl # |
|---|---|---|
| $O_2$ 100% | 22.46% | ALM059720 |
| Put | 22.54 | AAL15653 |
| $CO_2$ | 22.44% | ALM011442 |
| $NO_x$ | 93.6 ppm | SS9135167 BAL |
| CO | 89.2 ppm | CC97554 |
| $CH_4$ | 49.38 ppm | AAL14885 |

M5 Points
1-5.2
16.5
29.0
43.5
61.5
87.6
Nozzle 12B = 0.242

Dividers Setup

| channel | Concentration |
|---|---|
| 00 | 100% $N_2$ |
| 01 | 22.46% $O_2$ |
| 02 | 12.00% $O_2$ |
| 03 | 22.44% $CO_2$ |
| 04 | 12.00% $CO_2$ |
| 05 | 18.0 ppm NOx |
| 06 | 10.0 ppm NOx |
| 07 | 6.0 ppm NOx |
| 08 | 22.0 ppm CO |
| 09 | 12.0 ppm CO |
| 10 | 7.0 ppm CO |
| 11 | 18.0 ppm $CH_4$ |
| 12 | 10.0 ppm $CH_4$ |
| 13 | 7.0 ppm $CH_4$ |

Ranges
Gas
$O_2$ 0-25%
$CO_2$ 0-25%
$NO_x$ 0-20 ppm
CO 0-25 ppm
THC 0-20 ppm

The Tuners in Atlanta Need 2 more Curves so we will do those and The $O_2$ Traverse today Base Load 3, 3hr Runs

RATA CLASS

# Scott Specialty Gases

*Dual-Analyzed Calibration Standard*

1290 COMBERMERE STREET, TROY, MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

## CERTIFICATE OF ACCURACY: EPA Protocol Gas

**Assay Laboratory**

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY, MI 48083

P.O. No.: MO PLATT STOCK
Project No.: 05-86200-002

**Customer**

SCOTT SPECIALTY GASES C/C

MOSTARDI PLATT STOCK
868 SIVERT DRIVE
WOOD DALE IL 60191

### ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure #G1; September, 1997.

**Cylinder Number:** ALM059720 **Certification Date:** 12/17/01 **Exp. Date:** 12/16/2004
**Cylinder Pressure***:** 1900 PSIG

| COMPONENT | CERTIFIED CONCENTRATION (Moles) | ANALYTICAL ACCURACY** | TRACEABILITY |
|---|---|---|---|
| OXYGEN | 22.46 % | +/- 1% | Direct NIST and NMi |
| NITROGEN | BALANCE | | |

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocal procedure G1, September 1997. Product certified as +/- 1% analytical accuracy is directly traceable to NIST or NMI standards.

### REFERENCE STANDARD

| TYPE/SRM NO. | EXPIRATION DATE | CYLINDER NUMBER | CONCENTRATION | COMPONENT |
|---|---|---|---|---|
| NTRM 2350 | 2/01/04 | A1377 | 23.51 % | OXYGEN |

### INSTRUMENTATION

| INSTRUMENT/MODEL/SERIAL# | DATE LAST CALIBRATED | ANALYTICAL PRINCIPLE |
|---|---|---|
| ROSEMOUNT/755R/1000430 | 12/17/01 | PARAMAGNETIC |

### ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

**First Triad Analysis**

OXYGEN

| | | |
|---|---|---|
| Date:12/17/01 | Response Unit:% | |
| Z1 = 0.00000 | R1 = 23.51000 | T1 = 22.47000 |
| R2 = 23.51000 | Z2 = 0.00000 | T2 = 22.47000 |
| Z3 = 0.00000 | T3 = 22.47000 | R3 = 23.51000 |
| Avg. Concentration: | 22.46 | % |

**Second Triad Analysis**

**Calibration Curve**

| | |
|---|---|
| Concentration = A + Bx + Cx2 + Dx3 + Ex4 | |
| r = .9999986310 | 2350 |
| Constants: | A = -0.0145321 |
| B = 1.00 | C = 0 |
| D = 0 | E = 0 |

**Special Notes:** SEND CERT WITH CYLINDER

APPROVED BY:

RATA CLASS

# Scott Specialty Gases

*Dual-Analyzed Calibration Standard*

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

## CERTIFICATE OF ACCURACY: Interference Free™ EPA Protocol Gas

**Assay Laboratory**

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: MOSTARDI PLATT STOCK
Project No.: 05-87766-005

**Customer**

SCOTT SPECIALTY GASES C/C

MOSTARDI PLATT STOCK
868 SIVERT DRIVE
WOOD DALE IL 60191

### ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure #G1; September, 1997.

**Cylinder Number:** ALM011442 **Certification Date:** 2/03/02 **Exp. Date:** 2/02/2005

**Cylinder Pressure***:** 1886 PSIG

| COMPONENT | CERTIFIED CONCENTRATION (Moles) | ANALYTICAL ACCURACY** | TRACEABILITY |
|---|---|---|---|
| CARBON DIOXIDE | 22.44 % | +/- 1% | Direct NIST and NMi |
| NITROGEN | BALANCE | | |

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocal procedure G1, September 1997.
Product certified as +/- 1% analytical accuracy is directly traceable to NIST or NMI standards.

### REFERENCE STANDARD

| TYPE/SRM NO. | EXPIRATION DATE | CYLINDER NUMBER | CONCENTRATION | COMPONENT |
|---|---|---|---|---|
| NTRM 2300 | 1/01/04 | ALM047465 | 23.34 % | CO2/N2 |

### INSTRUMENTATION

| INSTRUMENT/MODEL/SERIAL# | DATE LAST CALIBRATED | ANALYTICAL PRINCIPLE |
|---|---|---|
| FTIR System/8220/AA89300205 | 01/24/02 | Scott Enhanced FTIR |

### ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

**First Triad Analysis** **Second Triad Analysis** **Calibration Curve**

CARBON DIOXIDE

| | | |
|---|---|---|
| Date:02/03/02 | Response Unit:% | |
| Z1 = 0.00380 | R1 = 23.32435 | T1 = 22.43159 |
| R2 = 23.34949 | Z2 = 0.00910 | T2 = 22.44253 |
| Z3 = 0.01550 | T3 = 22.44588 | R3 = 23.34614 |
| Avg. Concentration: | 22.44 | % |

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r = 0.999990

| | |
|---|---|
| Constants: | A = 0.000000 |
| B = 1.000000 | C = 0.000000 |
| D = 0.000000 | E = 0.000000 |

APPROVED BY: _____
Scott King

Assay Laboratory
BOC GASES
600 Union Landing Road
Riverton,NJ 08077
(609) 829 7878

# CERTIFICATE OF ANALYSIS
## EPA Protocol Gas

**CUSTOMER**
BOC RTP NC PLT
11 TRIANGLE DRIVE
RESEARCH TRI PK, NC 277090000

**CUSTOMER PO NO:**

**Previous Certification Date(s):**

| | | |
|---|---|---|
| **CYLINDER NO** | : | CC97554 |
| **EXPIRATION DATE** | : | 03/24/05 |
| **CERTIFICATION DATE** | : | 04/01/02 |
| **CYLINDER PRESSURE** | : | 2000 psig |
| **PRODUCT ID NO** | : | 02003794 |
| **LOT NUMBER** | : | 492154 |

## ANALYTICAL INFORMATION

This calibration standard has been certified per the 1997 EPA Traceability Protocol, Document EPA-600/97/121, Using Procedure G1. All Values certified to be +/-1% NIST Traceable.

Do Not Use This Cylinder below 150 psig. i.e. 1.0 Megapascal

### Analytical Results

| Components | Requested Mixture | Certified Concentration | Analytical Uncertainty | Assay Dates |
|---|---|---|---|---|
| CARBON MONOXIDE | 90.00 ppm | 89.2 ppm | +/-1.00% NIST Traceable | 03/25/02 & 04/01/02 |
| NITROGEN | BALANCE GAS | | | |

## CALIBRATION STANDARDS USED IN ASSAY

| Type | LOT ID | Cylinder No | Concentration | Expiration |
|---|---|---|---|---|
| NTRM 81679 | 98060827 | CC10155 | 98.00 +/- 0.70 ppm CO/N2 | 05/01/02 |

## ANALYTICAL INSTRUMENTS USED IN ASSAY

| Instrument/Make/Model | Analytical Principle | Last Multipoint Calibration |
|---|---|---|
| Siemens 6E N1-L9-0191 | NonDispersive Infrared | 03/11/02 |



QA Approved Carmen Rees

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RATA CLASS

# Scott Specialty Gases

*Dual-Analyzed Calibration Standard*

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

## CERTIFICATE OF ACCURACY: EPA Protocol Gas

**Assay Laboratory**

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: BLANKET
Project No.: 05-01911-001

**Customer**

GE-MOSTARDI PLATT/MORRISVILLE

1001 AVIATION PARKWAY
SUITE 100
MORRISVILLE NC 27560

### ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards: Procedure G-1; September, 1997.

**Cylinder Number:** AAL14885 **Certification Date:** 04Mar2002 **Exp. Date:** 03Mar2005
**Cylinder Pressure***:** 1900 PSIG

| COMPONENT | CERTIFIED CONCENTRATION (Moles) | | ANALYTICAL ACCURACY** | TRACEABILITY |
|---|---|---|---|---|
| METHANE | 49.38 | PPM | +/- 1% | Direct NIST and NMi |
| AIR | | BALANCE | | |

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.
Product certified as +/- 1% analytical accuracy is directly traceable to NIST or NMI standards.

### REFERENCE STANDARD

| TYPE/SRM NO. | EXPIRATION DATE | CYLINDER NUMBER | CONCENTRATION | COMPONENT |
|---|---|---|---|---|
| NTRM 2751 | 01Feb2003 | AAL18705 | 100.2 PPM | METHANE |

### INSTRUMENTATION

| INSTRUMENT/MODEL/SERIAL# | DATE LAST CALIBRATED | ANALYTICAL PRINCIPLE |
|---|---|---|
| VARIAN/1400/08982426 | 22Feb2002 | FLAME IONIZATION |

### ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

**First Triad Analysis**

METHANE

Date: 04Mar2002 Response Unit:HGHT
Z1 = 0.00000 R1 = 51629.00 T1 = 25468.00
R2 = 51655.00 Z2 = 0.00000 T2 = 25358.00
Z3 = 0.00000 T3 = 25374.00 R3 = 51786.00
Avg. Concentration: 49.38 PPM

**Second Triad Analysis**

**Calibration Curve**

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r = 0.999977
Constants: A = 0.0022311
B = 1.91E-03 C = 0.00
D = 0.00 E = 0.00

**Special Notes:** STOCK#: RATA330

APPROVED BY: _____

# Visible Emissions

# Southern Environmental Sciences, Inc.

1204 North Wheeler Street ☐ Plant City, Florida 33563 ☐ (813) 752-5014, Fax (813) 752-2475


## VISIBLE EMISSIONS EVALUATION

COMPANY FPL-Ft. Meyers

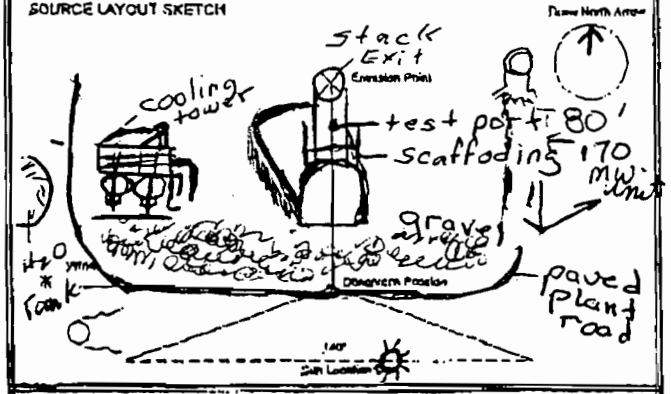
UNIT Gas Heater for 3B

ADDRESS 10650 State Rd 80

near Tice, Lee County

| | |
|---|---|
| PERMIT NO. 071002 | COMPLIANCE? YES ☑ NO ☐ |
| AIRS NO. 071002 | EU NO. ASP-EI 298 |
| PROCESS RATE X | PERMITTED RATE |
| PROCESS EQUIPMENT | |
| CONTROL EQUIPMENT | |
| OPERATING MODE Continous | AMBIENT TEMP. (° F) START 69 STOP 70 |
| HEIGHT ABOVE GROUND LEVEL START ~25' STOP ~25' | HEIGHT RELATIVE TO OBSERVER START 25' STOP 25' |
| DISTANCE FROM OBSERVER START 75' STOP 75' | DIRECTION FROM OBSERVER START N5° STOP N5° |
| EMISSION COLOR none | PLUME TYPE CONTIN. ☐ INTERMITTENT ☐ |
| WATER DROPLETS PRESENT? NO ☑ YES ☐ | IS WATER DROPLET PLUME ATTACHED ☑ DETACHED ☐ |
| POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START Stack exit | STOP Stack exit |
| DESCRIBE BACKGROUND START SKY | STOP SKY |
| BACKGROUND COLOR START White STOP White | SKY CONDITIONS START Overcast STOP Same |
| WIND SPEED (MPH) START 10-12 STOP 10-12 | WIND DIRECTION Variable START NW STOP Swirling |
| AVERAGE OPACITY FOR HIGHEST PERIOD 0% | RANGE OF OPACITY READINGS MIN. 0 MAX. 0 |

SOURCE LAYOUT SKETCH




Comments NO odors or emissions

See process data

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 4/11/03 | 11:23 | 12:23 |

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |

OBSERVER Lynne Stevenson

Certified by: ETA Certif. # 303794 Certified at: Tampa, FL

Date Certified: 2/19/03 Exp. Date: 8/19/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge.

Signature:

Title: Proj Sci.

# Southern Environmental Sciences, Inc.

1204 North Wheeler Street ☐ Plant City, Florida 33563 ☐ (813) 752-5014, Fax (813) 752-2475

## VISIBLE EMISSIONS EVALUATION

COMPANY: FPL - Ft. Meyers

UNIT: Gas Heater for 3B

ADDRESS: 10650 State Rd 80

Near Tice, Lee County

| PERMIT NO. | COMPLIANCE? |
|---|---|
| 071002 | YES ☑ NO ☐ |
| AIRS NO. 071002 | EU NO. PSD-FL298 |
| PROCESS RATE | PERMITTED RATE |

PROCESS EQUIPMENT:

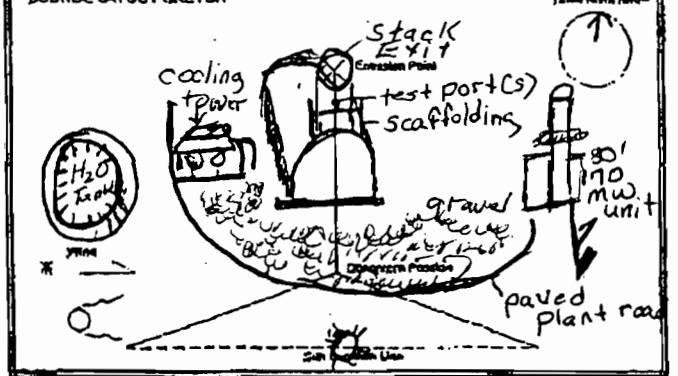
CONTROL EQUIPMENT:

| | |
|---|---|
| OPERATING MODE: continous | AMBIENT TEMP. (° F) START 70 STOP 70° |
| HEIGHT ABOVE GROUND LEVEL START ~25 STOP ~25 | HEIGHT RELATIVE TO OBSERVER START 25 STOP 25 |
| DISTANCE FROM OBSERVER START 75' STOP 75' | DIRECTION FROM OBSERVER START N 5° STOP N 5° |
| EMISSION COLOR: none | PLUME TYPE CONTIN. ☐ INTERMITTENT ☐ |
| WATER DROPLETS PRESENT? NO ☑ YES ☐ | IS WATER DROPLET PLUME ATTACHED ☐ DETACHED ☐ |

POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START Stack Exit STOP SAme

| | |
|---|---|
| DESCRIBE BACKGROUND START sky | STOP sky |
| BACKGROUND COLOR START white STOP white | SKY CONDITIONS START overcast STOP same |
| WIND SPEED (MPH) START 8-10 STOP SAME | WIND DIRECTION START NW STOP variable swirling |
| AVERAGE OPACITY FOR HIGHEST PERIOD 0 % | RANGE OF OPACITY READINGS MIN. 0 MAX. 0 |

SOURCE LAYOUT SKETCH




Comments: No odors or emissions

see process statement

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 4/11/03 | 12:25 | 13:25 |

| SEC MIN | 0 | 15 | 30 | 45 | SEC MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |

OBSERVER: Lynne Stevenson

Certified by: EPA Certif. # 303794 Certified at: TPA, FL

Date Certified: 2/19/03 Exp. Date: 8/19/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge.

Signature:

Title: FDOT Sup.

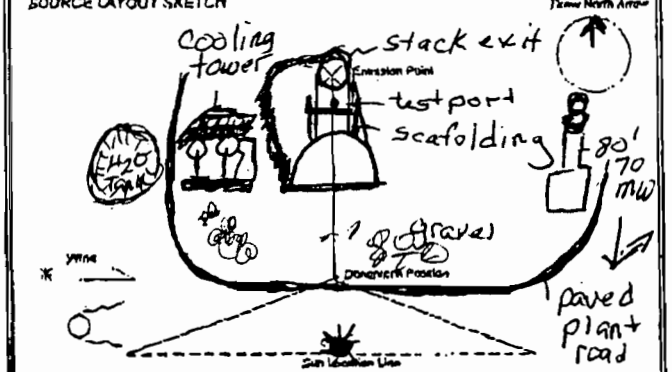
# Southern Environmental Sciences, Inc.

1204 North Wheeler Street ☐ Plant City, Florida 33563 ☐ (813) 752-5014, Fax (813) 752-2475


## VISIBLE EMISSIONS EVALUATION

| | |
|---|---|
| COMPANY | FPL - Ft. Meyers |
| UNIT | Gas Heater for 3B |
| ADDRESS | 10650 State Rd 80 |
| | near Tice Lee County |
| PERMIT NO. | 071002 |
| COMPLIANCE? | YES ☑ NO ☐ |
| AIRS NO. | 071002 |
| EU NO. | psd-FL-298 |
| PROCESS RATE | X |
| PERMITTED RATE | |
| PROCESS EQUIPMENT | |
| CONTROL EQUIPMENT | |
| OPERATING MODE | Continous |
| AMBIENT TEMP. (° F) START | 70 STOP 71 |
| HEIGHT ABOVE GROUND LEVEL START | ~25' STOP ~25' |
| HEIGHT RELATIVE TO OBSERVER START | STOP |
| DISTANCE FROM OBSERVER START | 75' STOP 75' |
| DIRECTION FROM OBSERVER START | N5° STOP N5° |
| EMISSION COLOR | none |
| PLUME TYPE CONTIN. ☐ INTERMITTENT ☐ | |
| WATER DROPLETS PRESENT? NO ☑ YES ☐ | |
| IS WATER DROPLET PLUME ATTACHED ☐ DETACHED ☐ | |
| POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START | Stack exit STOP stack exit |
| DESCRIBE BACKGROUND START | SKY STOP SKY |
| BACKGROUND COLOR START | white STOP blue |
| SKY CONDITIONS START | overcast STOP |
| WIND SPEED (MPH) START | 5-7 STOP |
| WIND DIRECTION START | NW STOP Variable Swirling |
| AVERAGE OPACITY FOR HIGHEST PERIOD | |
| RANGE OF OPACITY READINGS MIN. | MAX. |

SOURCE LAYOUT SKETCH




Comments: no odors or emissions

see process data

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 4/11/03 | 13:36 | 14:36 |

| SEC MIN | 0 | 15 | 30 | 45 | SEC MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |

OBSERVER: Lynne Stevenson

Certified by: EPA Certif. #303794 Certified at: TPA, FL

Date Certified: 2/19/03 Exp. Date: 8/19/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:

Signature:

Title: Field Sci

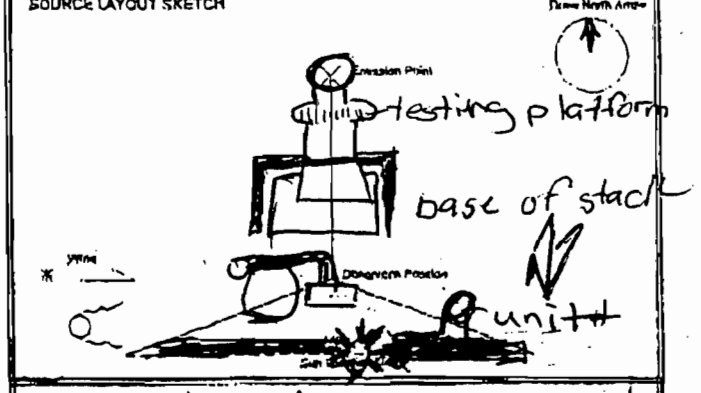
# Southern Environmental Sciences, Inc.

1204 North Wheeler Street ☐ Plant City, Florida 33563 ☐ (813) 752-5014, Fax (813) 752-2475

## VISIBLE EMISSIONS EVALUATION

| | |
|---|---|
| COMPANY | FPL - Ft Meyers Plant |
| UNIT | #3B |
| ADDRESS | 10650 State Road 80 near Tice, Lee Co |
| PERMIT NO. | 0710002-AC-001 |
| COMPLIANCE? | YES ☐ NO ☐ |
| AIRS NO. | 0710002 |
| EU NO. | PSD-FL298 |
| PROCESS RATE | Base Load * |
| PERMITTED RATE | Base Load |
| PROCESS EQUIPMENT | 170 megawatt GE MS7214A |
| CONTROL EQUIPMENT | gas turbine/oil fired |
| OPERATING MODE | continuous |
| AMBIENT TEMP. (° F) START | 68 STOP 68 |
| HEIGHT ABOVE GROUND LEVEL START | 80' STOP 80' |
| HEIGHT RELATIVE TO OBSERVER START | 80 STOP 80 |
| DISTANCE FROM OBSERVER START | 80' STOP 80' |
| DIRECTION FROM OBSERVER START | N 10° STOP N 10° |
| EMISSION COLOR | None |
| PLUME TYPE | CONTIN. ☐ INTERMITTENT ☐ |
| WATER DROPLETS PRESENT? | NO ☑ YES ☐ |
| IS WATER DROPLET PLUME | ATTACHED ☐ DETACHED ☐ |
| POINT IN PLUME AT WHICH OPACITY WAS DETERMINED | START Stack Exit STOP Stack |
| DESCRIBE BACKGROUND | START SKY STOP SKY |
| BACKGROUND COLOR | START Blue STOP Blue |
| SKY CONDITIONS | START Scattered STOP same |
| WIND SPEED (MPH) | START 40 STOP 40 |
| WIND DIRECTION | START SW STOP SW/SE |
| AVERAGE OPACITY FOR HIGHEST PERIOD | 0 % |
| RANGE OF OPACITY READINGS | MIN. 0 MAX. 0 |

SOURCE LAYOUT SKETCH




Comments: x heat waves no odors
D.E.P. was present & satisfied
x See full analysis & process sheet

| | |
|---|---|
| OBSERVATION DATE | 4/10/03 |
| START TIME | 12:20 |
| STOP TIME | 13:20 |

| SEC MIN | 0 | 15 | 30 | 45 | SEC MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |

OBSERVER: Lynne Stevenson

Certified by: E.T.A. Certif. # 803794 Certified at: Tampa

Date Certified: 2/19/03 Exp. Date: 8/19/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge.

Signature:

Title: Project Sup.

# Southern Environmental Sciences, Inc.

1204 North Wheeler Street ☐ Plant City, Florida 33563 ☐ (813) 752 5014, Fax (813) 752-2475

## VISIBLE EMISSIONS EVALUATION

COMPANY FPL - FT. Meyers

UNIT # 3B

ADDRESS 10650 State Rd. 80

near Tice, Lee county

PERMIT NO. 0710002-009A COMPLIANCE? Yes ☑ No ☐

AIRS NO. 0710002 EU NO. PSD-FL-298

PROCESS RATE Base Load PERMITTED RATE Base Load

PROCESS EQUIPMENT 170 Megawatt GE MS7241A

CONTROL EQUIPMENT Gas turbine / fuel oil

OPERATING MODE continuous AMBIENT TEMP. (° F) START 68 STOP 67

HEIGHT ABOVE GROUND LEVEL START 80' STOP 80' HEIGHT RELATIVE TO OBSERVER START 80' STOP 80'

DISTANCE FROM OBSERVER START 80' STOP 80' DIRECTION FROM OBSERVER START N10° STOP N10°

EMISSION COLOR none PLUME TYPE CONTIN. ☐ INTERMITTENT ☐

WATER DROPLETS PRESENT? NO ☑ YES ☐ IS WATER DROPLET PLUME ATTACHED ☐ DETACHED ☐

POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START Stack exit STOP Stack exit

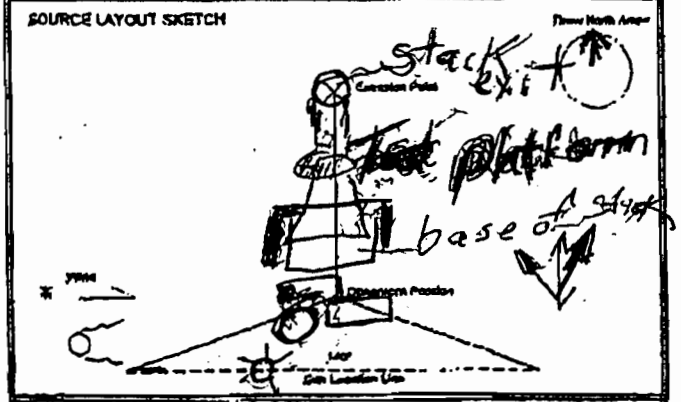
DESCRIBE BACKGROUND START Blue white SKY STOP same

BACKGROUND COLOR START Blue STOP white SKY CONDITIONS START scatter STOP same

WIND SPEED (MPH) START 4/0 STOP 4/5 WIND DIRECTION START SW STOP SW SE swirling

AVERAGE OPACITY FOR HIGHEST PERIOD 0 % RANGE OF OPACITY READINGS MIN. 0 MAX. 0

SOURCE LAYOUT SKETCH




Comments x heat waves no odors or emmisions

OBSERVATION DATE 4/10/03 START TIME 14:50 STOP TIME 15:50

| SEC MIN | 0 | 15 | 30 | 45 | SEC MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |

OBSERVER: Lynne Stevenson

Certified by: EPA Cert. # 503794 Certified at: Tampa

Date Certified: 2/19/03 Exp. Date: 8/19/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:

Signature:

Title: Proj Sci.

# Southern Environmental Sciences, Inc.

1204 North Wheeler Street ☐ Plant City, Florida 33563 ☐ (813) 752 5014, Fax (813) 752-2475


## VISIBLE EMISSIONS EVALUATION

COMPANY FPL-Ft. Meyers

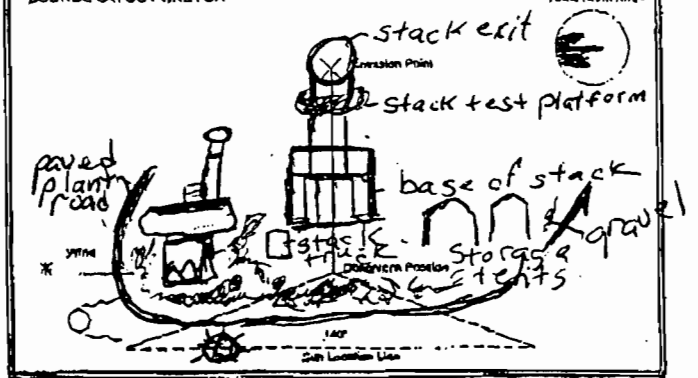
UNIT # 3B

ADDRESS 10650 State Rd. 80

near Tice, Lee County

| | |
|---|---|
| PERMIT NO. 0710002-009AC | COMPLIANCE? YES ☑ NO ☐ |
| AIRS NO. 0710002 | SUNO PSD-Fl-298 X |
| PROCESS RATE Base Load X | PERMITTED RATE Base Load |
| PROCESS EQUIPMENT 170 Meg | |
| CONTROL EQUIPMENT gas turbine / fuel oil X | |
| OPERATING MODE continuous | AMBIENT TEMP. (° F) START 65 STOP 62 |
| HEIGHT ABOVE GROUND LEVEL START 80' STOP 80' | HEIGHT RELATIVE TO OBSERVER START 80' STOP 80' |
| DISTANCE FROM OBSERVER START 100' STOP 100' | DIRECTION FROM OBSERVER START EAST STOP EAST |
| EMISSION COLOR heat waves | PLUME TYPE CONTIN. ☐ INTERMITTENT ☐ |
| WATER DROPLETS PRESENT? NO ☑ YES ☐ | IS WATER DROPLET PLUME ATTACHED ☐ DETACHED ☐ |
| POINT IN PLUME AT WHICH OPACITY WAS DETERMINED START stack exit STOP stack exit | |
| DESCRIBE BACKGROUND START sky STOP sky | |
| BACKGROUND COLOR START blue STOP blue | SKY CONDITIONS START scattered STOP clear |
| WIND SPEED (MPH) START 10 STOP 10 | WIND DIRECTION START SW STOP SW |
| AVERAGE OPACITY FOR HIGHEST PERIOD 0% | RANGE OF OPACITY READINGS MIN. 0 MAX 0 |

SOURCE LAYOUT SKETCH




Comments no odors or emissions

heat waves x see fuel analysis & process rate statement

| OBSERVATION DATE | START TIME | STOP TIME |
|---|---|---|
| 4/10/03 | 18:35 | 18:35 |

| SEC / MIN | 0 | 15 | 30 | 45 | SEC / MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |

OBSERVER Lynne Stevenson

Certified by: EPA Certif. # 303794 Certified at: Tampa

Date Certified: 2/19/03 Exp. Date: 8/19/03

I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:

Signature:

Title: FRO SO2

PAGE 1 OF 1

START TIME 1630 END TIME 1730

OBSERVATION DATE 3-28-03 TIME ZONE EST

FACILITY FPL Ft. Myers

SOURCE Unit 3B

ADDRESS

CITY Ft. Myers STATE-ZIP FL

PHONE SOURCE ID NO. 3B

PROCESS Simple cycle Gas Turbine OPERATING MODE Base

CONTROL EQUIP. DLN OPERATING MODE

DESCRIBE EMISSION POINT

Round Stack, Northern most of 2

HEIGHT OF EMISSION POINT

START ~80' END "

HEIGHT RELATIVE TO OBSERVER

START ~80' END "

DISTANCE TO EMISSIONS POINT

START ~400' END "

DIRECTION TO EM. PT.

START 60° END "

VERTICAL ANGLE TO OBS. PT.

START <18° END "

DESCRIBE EMISSIONS

START Clear Heat Waves END "

EMISSION COLOR

START Clear END "

WATER DROPLET PLUME YES / NO

ATTACHED DETACHED

DESCRIBE PLUME BACKGROUND

START Sky END "

BACKGROUND COLOR

START Blue Gray END "

SKY CONDITION

START Scattered END "

WIND SPEED

START 5 to 8 mph END "

WIND DIRECTION

START W END "

AMBIENT TEMPERATURE

START 87°F END 86°F

WET BULB TEMP —

%RH —

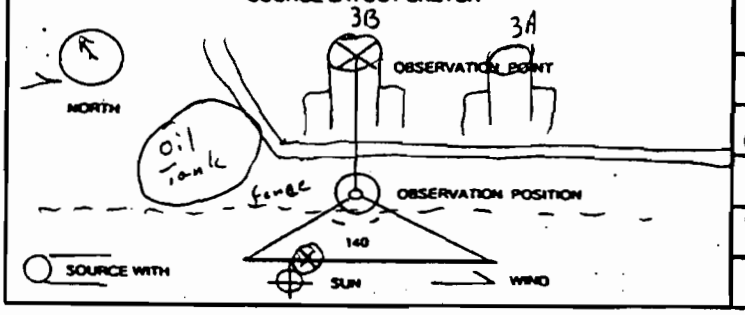
COMMENTS.....

VE was done during run 3 particulate Test.

Pb 29.88

| SEC/MIN | 0 | 15 | 30 | 45 | SEC/MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |

SOURCE LAYOUT SKETCH




Stephen C. Webb

OBSERVER'S NAME (PRINT)

Stephen C. Webb 3-28-03

SIGNATURE DATE

Coastal Air Consulting, Inc.

ORGANIZATION

ETA 2-13-03

CERTIFIED BY ETA ON

PAGE 1 OF 1

START TIME 1308 END TIME 1408

OBSERVATION DATE 3-28-03 TIME ZONE EST

FACILITY FP&L Ft. Myers Plant

SOURCE Unit 3B

ADDRESS

CITY Ft Myers STATE-ZIP FL

PHONE SOURCE ID NO. 3B

PROCESS Simple Cycle Gas Turbine OPERATING MODE Base

CONTROL EQUIP. DLN OPERATING MODE

DESCRIBE EMISSION POINT

Round Stack, Northern most of Two

HEIGHT OF EMISSION POINT

START ~80 END "

HEIGHT RELATIVE TO OBSERVER

START ~80' END "

DISTANCE TO EMISSIONS POINT

START ~400' END "

DIRECTION TO EM. PT.

START 30° END 30°

VERTICAL ANGLE TO OBS. PT.

START <18° END "

DESCRIBE EMISSIONS

START Clear Heat Waves END "

EMISSION COLOR

START Clear END "

WATER DROPLET PLUME YES (NO)

ATTACHED DETACHED

DESCRIBE PLUME BACKGROUND

START SKy END "

BACKGROUND COLOR

START Gray END "

SKY CONDITION (50% - 90%)

START Broken END "

WIND SPEED

START 5-8 mph END 5-8 mph

WIND DIRECTION

START NW END W

AMBIENT TEMPERATURE

START 88°F END "

WET BULB TEMP —

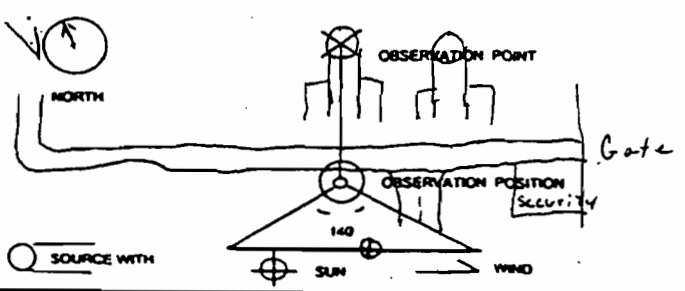
-%RH —

COMMENTS.....

VE done during run2 Particulate

| SEC/MIN | 0 | 15 | 30 | 45 | SEC/MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |

SOURCE LAYOUT SKETCH




Stephen C. Webb

OBSERVER'S NAME (PRINT)

Stephen C. Webb 3-28-03

SIGNATURE DATE

Coastal Air Consulting, Inc.

ORGANIZATION

ETA 2-13-03

CERTIFIED BY ETA ON

PAGE 1 OF 1

START TIME 1037 END TIME 1137

OBSERVATION DATE 3-28-03 TIME ZONE EST

FACILITY FP&L Ft. Myers Plant

SOURCE Unit 313

ADDRESS

CITY Ft. Myers STATE-ZIP FL

PHONE SOURCE ID NO.

PROCESS Simple cycle Gas Turbine OPERATING MODE Base

CONTROL EQUIP. DLN OPERATING MODE

DESCRIBE EMISSION POINT

Round Stack, Northern most of 2

HEIGHT OF EMISSION POINT
START ~80' END "

HEIGHT RELATIVE TO OBSERVER
START ~80' END "

DISTANCE TO EMISSIONS POINT
START ~300' END "

DIRECTION TO EM. PT.
START 278° END "

VERTICAL ANGLE TO OBS. PT.
START < 18° END "

DESCRIBE EMISSIONS
START Clear Heatwaves END "

EMISSION COLOR
START Clear END "

WATER DROPLET PLUME YES (NO)
ATTACHED DETACHED

DESCRIBE PLUME BACKGROUND
START SKY END "

BACKGROUND COLOR
START Blue & White END "

SKY CONDITION
START Scattered END "

WIND SPEED
START 0-3 MPH END

WIND DIRECTION
START Variable END "

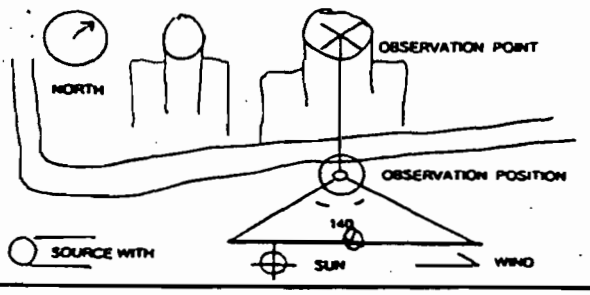
AMBIENT TEMPERATURE
START 82°F END "

WET BULB TEMP —

%RH —

COMMENTS.....
VE done during run | Particulate

SOURCE LAYOUT SKETCH




| SEC/MIN | 0 | 15 | 30 | 45 | SEC/MIN | 0 | 15 | 30 | 45 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 43 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 54 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 57 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 58 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |

Stephen C. Webb
OBSERVER'S NAME (PRINT)

Stephen C. Webb 3-28-03
SIGNATURE DATE

Coastal Air Consulting, Inc.
ORGANIZATION

ETA 2-13-03
CERTIFIED BY ETA ON

# VISIBLE EMISSIONS EVALUATOR

This is to certify that

*Steve Webb*

met the specifications of Federal Reference Method 9 and qualified as a visible emissions evaluator. Maximum deviation on white and black smoke did not exceed 7.5% opacity and no single error exceeding 15% opacity was incurred during the certification test conducted by Eastern Technical Associates of Raleigh, North Carolina. This certificate is valid for six months from date of issue.

| *303412* | *Orlando, Florida* | *February 13, 2003* |
|---|---|---|
| Certificate Number | Location | Date of Issue |

*Thomas Hoel*
President

*Michael W. Lunsford*
Director of Training