P.O. Drawer L.
Plant City, Florida 33564-9007
Telephone: 813/782-1591

CF Industries, Inc.
Plant City Phosphate Complex

July 8, 2004

Ms. Diana Lee
Hillsborough County
Environmental Protection Commission
1410 North 21st Street
Tampa, Florida 33605

Subject: Corrections to July 1, 2004, Letter

Dear Ms. Lee:

CF Industries, Inc., notified you on July 1, 2004, of a scheduled stack performance test and CEMS RATA test for the "C" Sulfuric Acid Plant. It has been pointed out that the day of the week mentioned in the letter does not agree with the specified date, and that the testing protocol attached to the letter mentions another date.

This letter is provided to clarify that the correct date for the testing is July 16, 2004, which is a Friday.

I apologize for any inconvenience that may have been caused by the confused dates.

Sincerely,

Thomas A. Edwards
Superintendent, Environmental Affairs

TAE/tjj

cc: Alice Harmon, EPCHC
Errin Pichard, FDEP
Jerry Kissel, FDEP
Syed Arif, FDEP

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CF Industries, Inc.
Plant City Phosphate Complex

July 1, 2004

RECEIVED
JUL 06 2004
BUREAU OF AIR REGULATION

Ms. Diana Lee
Hillsborough County
Environmental Protection Commission
1410 N. 21st Street
Tampa, FL 33605

Dear Ms Lee:

The required initial performance test and CEM's relative accuracy test audits (RATA's) for the recently modified "C" Sulfuric Acid Plant at the CF Plant City Phosphate Complex are scheduled for ~~Wednesday~~ Friday, July 16, 2004. The stack sampling will be conducted by Southern Environmental Services, Inc., of Plant City, Florida. The performance test and RATA's are requirements of Specific Conditions 13 and 14, Section III, of Permit No. PSD-FL-339, DEP File No. 0570005-019-AC. The performance test will serve as the annual compliance test required by Specific Condition 16 of the same permit, for 2004.

A copy of the Testing Protocol, prepared by Southern Environmental Services, is enclosed for your review. The CF Industries, Inc., Instrument Maintenance Group will conduct the 7-day calibration drift determinations of 40 CFR 60, Appendix B, Specifications 2 and 3.

Any comments may be addressed to the undersigned at 813-364-5608.

Sincerely,

Thomas A. Edwards
Superintendent, Environmental Affairs

cc: Alice Harmon, EPCHC
Errin Pichard, FDEP
Jerry Kissel, FDEP
Syed Arif, FDEP

TESTING PROTOCOL
for
C. F. INDUSTRIES, INC.
Sulfuric Acid Plant "C"

Sulfur Dioxide/Acid Mist Compliance
Nitrogen Oxides Compliance
Oxygen CEMS RATA
Sulfur Dioxide CEMS RATA

June 29, 2004

Submitted to:

Frank Dlugos
C.F. INDUSTRIES, INC.
P. O. Drawer L
Plant City, Florida 33564

Submitted by:

SOUTHERN ENVIRONMENTAL SCIENCES, INC.
1204 North Wheeler St.
Plant City, Florida 33563

1.0 INTRODUCTION

Southern Environmental Sciences, Inc. (SES) is scheduled to conduct relative accuracy testing of the oxygen (O_2) and sulfur dioxide (SO_2) continuous emissions monitoring systems (CEMS) and sulfur dioxide/acid mist and nitrogen oxides compliance testing of the C.F. Industries, Inc. Sulfuric Acid Plant "C" on July 27, 2004. This plant is located at State Road 39 in Hillsborough County, Florida. Testing will be performed to determine conformance with current Florida Department of Environmental Protection Title V permit conditions.

2.0 TEST METHODS

2.1 SO_2 CEMS Relative Accuracy & SO2/Acid Mist Compliance

The SO_2 CEMS relative accuracy test will be conducted in accordance with Performance Specification 2 - Specifications and Test Procedures for SO_2 and NO_2 Continuous Emission Monitoring Systems in Stationary Sources, 40 CFR 60, Appendix B. The relative accuracy test procedures require that a minimum of nine sets of reference method tests be conducted. Six SO_2 runs will be performed for a minimum period of 21 minutes per run. Three SO_2/Acid Mist runs will be performed for a minimum period of 60 minutes per run to satisfy compliance testing requirements. Reference method samples will be collected in accordance with EPA Method 8 - Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions from Stationary Sources, 40 CFR 60, Appendix A. Sample analysis will be performed by CF Industries, Inc. personnel. SES will be not be conducting a 7-day calibration drift determination as part of this testing procedure.

2.2 O_2 CEMS Relative Accuracy

The O_2 relative accuracy test will be conducted in accordance with Performance Specification 3 - Specifications and Test Procedures For O_2 and CO_2 Continuous Emission Monitoring Systems in Stationary Sources, 40 CFR 60, Appendix B. The relative accuracy test procedures require that a minimum of nine sets of reference method tests be conducted. Six O_2 runs will be performed for a minimum period of 21 minutes per run. Three O_2 runs will be performed for a minimum period of 60 minutes per run in conjunction with SO_2/acid mist compliance testing. Reference method samples will be collected and analyzed in accordance with EPA Method 3B - Gas Analysis for the Determination of Emission Rate Correction Factor or Excess Air, 40 CFR 60, Appendix A. SES will be not be conducting a 7-day calibration drift determination as part of this testing procedure.

2.3 Nitrogen Oxides Compliance Testing

All NOx sampling will be performed using methods currently acceptable to the FDEP. Nitrogen oxides sampling will be conducted in accordance with EPA Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure), 40 CFR 60, Appendix A-4. Three runs will be performed for a minimum period of 60 minutes per run to satisfy compliance testing requirements.

3.0 TEST LOCATIONS

3.1 SO2 CEMS Relative Accuracy & SO2/Acid Mist Compliance

During the relative accuracy test runs a minimum of three sample points will be utilized for collecting the reference method sulfur dioxide sample. The points will be located along a measurement line that passes through the centroidal area of the stack at 0.4, 1.2 and 2.0 meters from the stack wall. Velocity traverses will be performed at twenty four points during each of these runs for determination of flow rate. The three runs that will be used for sulfuric acid mist and sulfur dioxide compliance testing will be sampled by conducting horizontal traverses through each of the two ports located at a ninety degree angle from one another on the circular stack. Twenty four points will be sampled in accordance with EPA Method 1 - Sample and Velocity Traverses for Stationary Sources, 40 CFR 60, Appendix A.

3.1 Oxygen

During the six 21-minute runs three sample points will be utilized for collecting each reference method oxygen sample. The points will be located along a measurement line that passes through the centroidal area of the stack at 0.4, 1.2 and 2.0 meters from the stack wall. During the three 60-minute runs, twenty four points will be sampled and will coincide with the SO_2/Acid Mist compliance test sampling points.

3.2 Nitrogen Oxides

Nitrogen oxides sampling will be performed from the same sampling ports as the sulfuric acid mist and sulfur dioxide sampling.

4.0 SAMPLING TRAINS

4.1 SO_2/Acid Mist Sampling Train

The sampling train will consist of a stainless steel nozzle, a Nutech Corporation borosilicate glass or teflon lined probe, a glass filter bypass tube, a glass fiber filter and four impingers. The first impinger will be charged with 100 milliliters of 80 percent isopropanol. The second and third impingers will each be charged with 100 milliliters of 3 percent hydrogen peroxide and the fourth impinger will contain indicating silica gel desiccant. The impingers will be cooled in an ice and water bath during sampling. A Nutech Corporation control console will be used to monitor the gas flow rates and stack conditions during sampling.

4.2 Oxygen Sampling Train

Integrated samples will be pulled through a stainless steel probe, condenser, sample line, teflon lined pump, valve, flowmeter and into a tedler sample bag. Upon completion of each run the sample will be analyzed using an ORSAT analyzer. Multiple sample bags will be utilized so that a new run can be initiated immediately upon completion of the previous run. Each tedlar bag will be leak checked prior to the test by pressurizing the bag to 2 to 4 in. H_2O and allowing it to stand overnight. A deflated bag would indicate a leak. A leak check of the sample line will be performed prior to sampling.

4.3 Nitrogen Oxides Sampling Train

The NOx oxides sampling train will consist of a stainless steel probe, calibration valve,

heated teflon sample line, condenser and a Thermo Environmental Instruments, Inc. Model 10S Chemiluminiscent NO/NO_X Analyzer.

5.0 SAMPLE COLLECTION

5.1 SO_2/Acid Mist

Prior to sulfuric acid mist and sulfur dioxide sampling, the pitot tubes will be checked for leaks and the manometers will be zeroed. A pretest leak check of the sample line will be conducted by sealing the nozzle and applying a 15" Hg vacuum. A leak rate of less than 0.02 cubic feet per minute (CFM) will be considered acceptable. During the RATA runs requiring only SO_2, the sample will be collected at a constant rate of approximately 0.75 cubic feet per minute for seven minutes at each of the three points. During the compliance test runs sample will be collected isokinetically for two and one half minutes at each of the 24 points sampled.

5.2 Oxygen

Prior to sampling the system will be checked for leaks. During the RATA runs the sample will be collected at a constant rate of approximately 0.5 liters per minute for seven minutes at each of the three points. During the compliance test runs sample will be collected for two and one half minutes for each of the 24 points sampled.

5.3 Nitrogen Oxides

Prior to sampling the system will be checked for leaks. The analyzer will be calibrated immediately prior to the beginning of the test by introducing known gases into the

instrument through the sampling system. Zero and a mid-range calibration gas will be introduced after each run to check for instrument drift. Nitrogen oxides sampling will conducted simultaneously with the three sulfuric acid mist and sulfur dioxide compliance test runs.

6.0 Sample Recovery

A post test leak check of the sulfuric acid mist and sulfur dioxide sampling train will be performed at the completion of each run by sealing the nozzle and applying a vacuum equal to or greater than the maximum value reached during the sample run. A leak rate of less than 0.02 CFM or 4 percent of the average sampling rate (whichever is less) will be considered acceptable. The probe will then be disconnected and the ice bath will be drained. The remaining part of the sample train will be purged by drawing charcoal filtered air through the system for fifteen minutes at the average flow rate used during sampling. The nozzle and probe will then be rinsed with 80 percent isopropanol and the rinsings placed into a clean polyethylene container along with the contents of the first impinger. The glass fiber filter will be removed from the holder with forceps and placed in the same container. The filter bypass tube, first impinger, front half of the filter holder and associated connecting glassware will be then rinsed with 80 percent isopropanol and the rinsings will be added to the above container. The second and third impingers, associated connecting glassware, and back half of the filter holder will be rinsed with distilled, deionized water into a clean polyethylene container. This container also held the impinger solutions for transportation back to the laboratory for subsequent analysis.

7.0 ANALYTICAL PROCEDURE

7.1 Pretest Preparation

The 3 percent hydrogen peroxide solution will be prepared from 30 percent reagent grade hydrogen peroxide and distilled, deionized water on the morning of the test. The 80 percent isopropanol solution will be prepared from 100 percent reagent grade isopropanol and distilled, deionized water. Both solutions will be kept and transported on ice to and from the sampling location.

7.2 Analysis

After recovery, the samples will be analyzed by CF Industries, Inc. personnel using procedures outlined in EPA Method 8 - Determination of Sulfuric Acid Mist and Sulfur Dioxide Emissions From Stationary Sources, 40 CFR 60, Appendix A. Duplicate results will be obtained in milliliters of barium perchlorate titrant. The average of these titration values will be used to compute the sulfur dioxide and sulfuric acid mist concentrations.