Golder Associates Inc.

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January 11, 2007

063-7647

Florida Department of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Attention: Syed Arif, P.E.

RE: CF INDUSTRIES INC., PLANT CITY PHOSPHATE COMPLEX
FDEP FILE NO. 0570005-021-AC; PSD-FL 355
'A' SULFURIC ACID PLANT & 'A' AND 'B' PHOSPHORIC ACID PLANTS PRODUCTION INCREASE
REQUEST FOR ADDITIONAL INFORMATION

Dear Syed:

CF Industries (CF) received a second request from the Florida Department of Environmental Protection (FDEP) for additional information (RAI) dated August 25, 2006 regarding the 'A' Sulfuric Acid Plant (A-SAP) & 'A' and 'B' Phosphoric Acid Plants (A-PAP and B-PAP, respectively) production increase project at the Plant City Phosphate Complex. Each of the FDEP's requests is answered below, in the same order as they appear in the RAI letter. The revised application form pages and application attachments are included as part of this RAI response.

Bureau of Air Regulations Comments

Comment 1. **Additional information received by the Department, dated July 27, 2006, comment C-2 on page 7, states that the Annual Fertilizer Production of 2,735,528 TPY is calculated from the permitted production capacity of "X", "Y", and "Z" DAP/MAP plants. Please show this calculation. Will this production capacity increase with the proposed modification? Comment C-2 also states that "production of 'A' DAP/MAP is not included as it is not operational." Will plant "A" become operational? Is it permitted to operate?**

Response: The annual fertilizer production capacity of "X", "Y", and "Z" Plants is calculated assuming the plants operate at maximum permitted rates with a 100 percent operating factor. The basis of this calculation is shown in Appendix A. The permitted production capacity of the "X", "Y", and "Z" plants will not increase and the "A" DAP/MAP plant will not be required to operate as a result of the proposed modification. The "A" DAP/MAP is currently permitted to operate, but will only be used in the future to provide spare granulation capacity should an extended outage at either X, Y, or Z be required.

Comment 2. **Additional information received by the Department, dated July 27, 2006, comment C-3 on page 8, does not include specific information regarding land use as requested. Please provide specific information concluding that the land use at the meteorological site is representative of the land use at the facility.**

Response: Meteorological data used in the CFI modeling analysis were supplied by the FDEP, and consisted of 5 years of hourly surface weather observations and twice-daily upper air sounding data collected at the National Weather Service (NWS) stations in Tampa International Airport and Ruskin, respectively. The period of record is 2001 to 2005. Land use data representing the average surface roughness, albedo, and Bowen ratio that exist within a 3-km radius of both the project site and the Tampa International Airport were extracted from 1-degree land use files from the U.S. Geological Survey (USGS) using the AERSURFACE program and are presented in Appendix B attached.

As shown in Appendix B, the land use parameters for the project site and the Tampa International Airport are somewhat similar. Since the AERSURFACE program extracts land use parameters from only a 3-km radius area, land use parameters from two different sites may never be exactly same. In general, low surface roughness parameters are observed in both datasets between directions of 210 and 300 degrees. For all other directions, surface roughness parameters around Tampa Airport are found to be higher than those around the project site. Based on the recent regulatory guidance, the land use parameters should be representative of the weather data measurement site, which is the Tampa International Airport for this project. Considering the fact that land use parameters from the available weather data measurement site and project site may never be same and the need to be consistent with regulatory guidance, use of Tampa Airport weather data set with Tampa Airport land use parameters may be the best alternative at present to using site-specific weather data with site-specific land use parameters.

The FDEP considers the Tampa International Airport to have surface meteorological data representative of the project site and therefore the Tampa meteorological data set was used in all previous modeling analysis for the CFI.

Comment 3. **The same comment, C-8 on page 8, states that 5-year AERMET data provided by the Department has "questionable surface characteristics" and that the "State is currently considering modifying the data set." The Department has provided a final Tampa data set. While this dataset may be replaced in the future based on EPA guidance, the Department is currently requiring the use of this dataset and does not consider the data "questionable." Please use the Tampa dataset if deemed representative and provide those results to the Department.**

Response: The PSD increment consumption modeling runs for the 24-hour average PM_{10} impacts were completed using the latest Tampa dataset provided by FDEP for the period 2001-2005. The results are presented in Appendix C. The initial model runs using this latest Tampa dataset produced 24-hour average impacts several times larger than the impacts predicted during the original modeling presented with the original permit application dated April, 2006. It was also determined that the fugitive PM_{10} emissions due to truck traffic within the facility boundary are responsible for most of the impacts. As a result, the emission calculations due to truck traffic were re-evaluated. CFI conducted a silt loading test to determine a silt loading representative of the project site, to be used in the fugitive dust emission calculations. CFI also determined the effect of sweeping of the roadways by conducting a second test after sweeping of the roadways using a street sweeper. The control

efficiency was found to be 20 percent, which was then used in the revised fugitive PM_{10} emissions calculation due to truck traffic.

Following are the revisions reflected in the latest modeling runs:

- Based on test data attached in Appendix D, the silt-loading used in the fugitive truck traffic PM_{10} emission calculations have been revised to be 0.89 g/m^2. The silt-loading used in the original modeling analysis was 1.0 g/m^2.

- Based on test data, a 20-percent control efficiency was used in the fugitive truck traffic PM_{10} emission calculations to reflect the use of a street sweeper on the roadway (equivalent to 0.71 g/m^2). No control efficiency was used in the emissions calculation for the original modeling. In order to implement this control measure, CFI proposes to perform street sweeping at any time visible dust emissions are observed from the plant's paved roadways.

- The hourly PM_{10} emissions rates for "A" and "B" Shipping baghouses have been revised as 1.71 lb/hr each, based on manufacturer specification on dust loading and exhaust flow rates (see Appendix E). The calculation is also shown in the application pages for "A" and "B" Shipping baghouses, attached in Appendix F. These emission sources are currently permitted to emit 5.0 lb/hr of PM_{10} each based on Title V permit 0570005-017-AV.

- CFI is proposing a PM emission limit of 13.0 lb/hr and 56.9 TPY for the "A" DAP/MAP plant. Currently the "A" DAP/MAP plant is permitted to emit 32.6 lb/hr and 143.1 TPY, which is based on the process weight table. Based on the last five years of stack test data, the maximum hourly PM emission rate from "A" DAP/MAP was 7.9 lb/hr. The requested change is shown in Appendix F.

- CFI is proposing a PM emission limit of 15.0 lb/hr and 65.7 TPY for the "Z" DAP/MAP plant. Currently the "Z" DAP/MAP is permitted to emit 22.6 lb/hr and 99.0 TPY, which is based on the process weight table. Based on the last 5 years of test data, the maximum hourly PM emission rate from "Z" DAP/MAP was 6.75 lb/hr. The requested change is shown in Appendix F.

- The stack heights for "X", "Y", and "Z" DAP/MAP plants have been revised to be 180 ft each based on careful checking of the modeling parameters by CFI. Stack heights of these sources were incorrectly used in previous modeling as 136 ft each.

- The building height of the XYZ DAP Granulation building (see Table 6-15 of the original application dated April 2006) has been revised to be 150 ft. The height of this building was incorrectly used in previous modeling as 127 ft.

The revised modeling results are presented in Appendix C attached. All appropriate tables of the original application, revised to show the correct stack parameters for the "X", "Y", and "Z" DAP/MAP plants and revised emission rates of the "A", "B" shipping baghouses and the "A" DAP/MAP plant, are presented in Appendix G.

Comment 4. **Please explain how the Initial Vertical Dimension was determined for the volume sources, including trucks. In comment C-8 of the additional information received by the Department, dated July 27, 2006, the release**

Dimension should equal 1.7 ft. The modeling shows 6.99 ft. While this may be correct, the Department requests an explanation of why 6.99 ft was used.

Response: Based on the recommendations in the AERMOD User's Guide, the fugitive PM_{10} emissions due to truck traffic were modeled as line sources represented by a series of volume sources. The individual volume height used is 15 ft, which means a release height of 7.5 ft, which is the height of the center of the volume. According to Table 3-1 of the User's Guide, the initial vertical dimension for a surface-based source should be estimated as the vertical dimension of the source divided by 2.15. Therefore, the initial vertical dimension is calculated as 15 ft divided by 2.15, which is equivalent to 2.13 meters (6.99 ft).

Comment 5. **Additional information received by the Department, dated July 27, 2006, comment C-12, refers to the increment modeling receptor grid. The Department recognizes that AERMOD runs take a longer period of time than the previous ISC runs. However, the Department requires that the complete Significant Impact Area be modeled to ensure that no increment is exceeded. Please model the PM short term increment with a receptor grid to cover the entire Significant Impact Area for the one year of meteorological data that shows the greatest impact result from the entire receptor grid. The Department will run the other four years if deemed necessary.**

Response: As requested by the FDEP, the model run for the year which produced the maximum 24-hour average PM_{10} impacts in the increment consumption modeling using the latest 2001-2005 Tampa meteorological data set, was re-run using the full receptor grid used in the initial significant impact analysis model. The model run produced the same maximum 24-hour average PM_{10} impact predicted by the model run using initial receptor grid.

Hillsborough County EPC Comments

Comment 1. **According to the Response to the RAI, Appendix A-1, CF Industries requests a maximum production rate of 1600 TPD, 3.5 lb-SO_2 per ton-H_2SO_4 (equivalent to 233.3 lb/hr) on a 3-hour and 24-hour average and annual SO_2 emissions of 1022 TPY for the A-SAP. However, the Appendix B-3, PSD Report, referred by the Response to Comment B-3 has not been revised. It still refers to a 3.85 lb-SO_2 per ton-H_2SO_4 on a 3-hour average. Also, the permit application page, Subsection III, Page 20, has not been corrected and resubmitted.**

Response: Please note that CFI has decided to modify the "B" SAP (EU ID 003) instead of the "A" SAP (EU ID 002) in the original application dated April 2006. The "A" and the "B" SAPs are identical emission units with same existing production capacity and emissions limitations and standards (see Permit No. 0570005-017-AV). The maximum production rate for "B" SAP will be increased to 1,600 TPD, while the maximum rate for "A" SAP will remain at 1,300 TPD. All the tables of the original application that had showed "A" SAP have been modified to show the "B" SAP. In addition to the reduction in SO_2 emissions from "B" SAP (to 233.3 lb/hr), CFI is also proposing a 24-hour average SO_2 emission rate of 250 lb/hr for the "A" SAP (EU ID 002), which currently has a 3-hour average SO_2 emission rate of 303.3 lb/hr. The purpose of this reduction is to demonstrate compliance with the 24-hour AAQS for SO_2 based on the modeling analysis. Permit application forms for the "B" and "A" SAPs are also attached in Appendix H.

Comment 2. **CF Industries requests a new SAM emissions limit on the A-SAP, an hourly 0.75 lb-SAM per ton-H_2SO_4 (equivalent to 5 lb/hr) and annual SAM emissions of 21.91 TPY. However, the change has not been reflected on the resubmitted PSD Report, Page 2-3. Also, the permit application page, Subsection III, Page 20, needs to be corrected and resubmitted.**

Response: Please refer to the response of Hillsborough County EPC Comment 1.

Comment 3. **A review of the application and past inspection reports indicate that sulfuric acid from the storage tanks is recirculated throughout all four acid plants. Please explain how the production increase at A-SAP will affect production and emissions from the other three SAP plants (de-bottlenecking). In addition, please explain why the Department should not consider all four SAPs as a single emission unit for PSD purposes.**

Response: The production increase in A-SAP will not affect emissions at the other three sulfuric acid production plants. The four sulfuric acid plants operate independently in terms of their production rates and associated emissions. The sulfuric acid storage tanks are not permitted emission sources, and the movement of acid between tanks should not increase as a result of the higher permitted rates in A-SAP. There is no reason to consider the four sulfuric acid plants as a single emission source.

CF also wishes to correct and clarify information previously submitted related to the proposed construction of a new evaporator for B-PAP. First, in the previous July 27, 2006 submittal, Appendix B-1 referred to the No. 6 Evaporator as related to A-PAP. The new No. 6 Evaporator is proposed for construction in B-PAP. The corrected documents are included in this submittal.

Second, the new evaporator has the potential of being used in a variety of services depending on operational needs. Concentration of phosphoric acid in the five evaporators at B-PAP typically happens in one of three configurations, or combinations of evaporators: in a single stage from 24 percent P_2O_5 to 54 percent P_2O_5; in two stages from 24 percent P_2O_5 to 40 percent P_2O_5 and then from 40 percent P_2O_5 to 54 percent P_2O_5; or from 24 percent P_2O_5 to 40 percent P_2O_5, then 40 percent P_2O_5 to about 48 percent P_2O_5, and finally from 48 percent P_2O_5 to 54 percent P_2O_5. These configurations may be altered from day to day as one or more units must be taken out of service for weekly cleaning or maintenance. The proposed new evaporator will normally be used in configurations which concentrate phosphoric acid from 40 percent P_2O_5 to 54 percent P_2O_5 in either one or two stages. Also, the above stated P_2O_5 concentrations should be considered typical as they vary depending on process control.

The new evaporator is needed for two reasons. First, as the total permitted phosphoric acid production capacity is increased, as proposed in the current permit application, an increase in evaporation capacity is required to allow the additional phosphoric acid to be concentrated in order to be converted into finished products, MAP and DAP. In addition, market conditions have indicated a need to convert a higher percentage of the total phosphoric acid production to MAP. Prior to the last construction permit for an increase in phosphoric acid production in 1993, MAP production averaged less than 100,000 TPY. In fact, 1987 was the first year that any MAP was produced at the Plant City Complex. Currently, farmers are requesting a greater portion of phosphates to be supplied as MAP. In 2005, the Plant City Complex produced 404,290 tons of MAP, and future production requests may approach 500,000 to 600,000 TPY. The production of MAP requires a higher phosphoric acid feed concentration as compared to DAP, and thus, additional evaporation capacity must be provided for

this purpose. The evaporator itself, however, does not generate new phosphoric acid production capacity apart from the other modifications proposed.

To illustrate, during the highest P_2O_5 production year under the current permit (1999), approximately 6 percent of the production was MAP, and the required evaporation capacity was 1.49 million tons of water. In comparison, the production plan for year 2007 calls for a slightly lower P_2O_5 production than in 1999, of which 20 percent will be MAP. Even though the total production will be lower, the additional MAP in the product mix will require an increase of 12 percent in evaporation capacity.

Since the "A" and "B" SAPs are not PM_{10} sources, the air impacts due to PM_{10} emissions resulting from the project will not be affected by the switch between "A" and "B" SAPs. Tables 7-4 and 7-6 of the permit application showed that the SO_2 impacts are well below the Ambient Air Quality Standards (AAQS) and allowable PSD Class II increments. The SO_2 AAQS and PSD Class II increment runs were re-run after switching the "B" SAP with "A" SAP and using the latest 2001-2005 Tampa dataset and the results are presented in Tables I-1 to I-4 of Appendix I. As shown in Appendix I, the revised SO_2 impacts are below the AAQS and allowable PSD Class II increments. Pollutant impacts at the Chassahowitzka NWA were also revised using the VISTAS 2001 to 2003 CALMET dataset and the results are presented in Appendix I. Revised visibility impacts and the sulfur and nitrogen deposition are also presented in Appendix I.

Thank you for consideration of this information. If you have any questions, please do not hesitate to call me at (352) 336-5600.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011
SEAL

DB/all

Enclosures

cc: Tom Edwards, CF Industries
Bob May, CF Industries

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APPENDIX A

APPENDIX A
GRANULATION PLANT PRODUCTION SUMMARY - CFI PLANT CITY

Assumed Average Product P_2O_5 Analysis: DAP = 45.85%
MAP = 52.00%

Assumed Actual P_2O_5 Recovery for Granulation = 98.00%

Ton of DAP/ton of P_2O_5 = 100 ton DAP/45.85 ton P_2O_5 x 0.98 = 2.137
Ton of MAP/ton of P_2O_5 = 100 ton MAP/52.0 ton P_2O_5 x 0.98 = 1.885

Plant	Phosphoric Acid Input Capacity (P_2O_5) (tons/hr)	Operating Factor (%)	Operating Capacity (%)	Annual Operation hr/yr	Annual P_2O_5 Consumption (tons/yr)	DAP or MAP/P_2O_5 (tons/ton)	Annual DAP/MAP Production (tons/yr)
"A" DAP	29.53 DAP	0%	100%	8,760	0	2.137	0
"X" DAP	48.7 DAP	100%	100%	8,760	426,612	2.137	911,842
"Y" DAP	48.7 DAP	100%	100%	8,760	426,612	2.137	911,842
"Y" MAP	55.0 MAP	0%	100%	8,760	0	1.885	0
"Z" DAP	48.7 DAP	100%	100%	8,760	426,612	2.137	911,842
						Total of "X", "Y", & "Z" =	2,735,527

APPENDIX B

APPENDIX B
SURFACE PARAMETERS BY SECTORS AND FREQUENCY

Sector	Direction	Albedo		Bowen Ratio		Surface Roughness	
		Project Site	Tampa Int'l	Project Site	Tampa Int'l	Project Site	Tampa Int'l
1	0-30	0.16	0.18	1.00	1.50	0.276	1.000
2	30-60	0.15	0.18	0.87	1.37	0.429	0.858
3	60-90	0.21	0.18	0.96	1.49	0.173	0.992
4	90-120	0.18	0.17	0.86	1.36	0.384	0.906
5	120-150	0.18	0.17	0.99	1.34	0.212	0.871
6	150-180	0.16	0.16	0.94	0.95	0.309	0.550
7	180-210	0.17	0.13	0.96	0.36	0.257	0.164
8	210-240	0.24	0.10	1.00	0.05	0.089	0.047
9	240-270	0.26	0.10	1.01	0.04	0.069	0.033
10	270-300	0.25	0.16	1.01	0.45	0.091	0.161
11	300-330	0.17	0.20	1.02	1.13	0.408	0.528
12	330-360	0.15	0.17	0.95	1.29	0.435	0.785

Note: Surface parameters determined in a 3-km radius area using AERSURFACE program.

APPENDIX C

APPENDIX C
MAXIMUM PREDICTED PM_{10} IMPACTS USING LATEST TAMPA MET DATASET -- PSD CLASS II INCREMENT ANALYSES

Pollutant, Averaging Time, and Rank	Concentration [a] ($\mu g/m^3$)	Receptor Location [b]		Time Period (YYMMDDHH)
		X (m)	Y (m)	
24-Hour, HSH	28.4	-427	573	01120824
	28.4	-427	573	02111124
	29.9	-427	573	03030724
	26.2	-427	573	04090824
	24.9	-378	573	05012624

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest

[a] Concentrations are based on highest concentrations predicted using 5 years of surface and upper air meteorological data for 20011 to 2005 from the National Weather Service stations at Tampa and Ruskin, respectively.

[b] Relative to the "C" SAP stack location.

APPENDIX D

APPENDIX D
CF INDUSTRIES - SILT LOADING ANALYSIS

Sampling Station 1 - Pre Street Sweeping

Sampling area : 20.0 ft X 23.1 ft = 461 ft^2
= 42.8 m^2

Laboratory Results : Total weight of silt (<75 um) = 38.21 g

Silt Loading = 0.89 g/m^2

Sampling Station 2 - Post Street Sweeping

Sampling area : 20.0 ft X 22.8 ft = 456.2 ft^2
= 42.4 m^2

Laboratory Results : Total weight of silt (<75 um) = 30.26 g

Silt Loading = 0.71 g/m^2

PAL Precision Analytical Laboratories, Inc.
2106 NW 67th Place, Suite-4, Gainesville, Florida 32653
Phone: (352) 335-1889 Fax: (352) 335-1891

October 11,2006

Mr. Mike Arrants
Golder Associates, Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

Subject: Final report: PAL MC2-0690
Gravimetric silt analyses of road dust samples collected 10/8/06.
Golder Project # 0637626.
Golder Project Name: CFI.

Samples were received October 9, 2006 and analyzed October 10, 2006 using "Procedures for Laboratory Analysis of Surface/Bulk Dust Loading Samples" (AP-42 Appendix C.2). Tyler brand sieves (#20, #140 and #200), and USA standard sieves (#60 and #100) were used in conjunction with a Thomas Rotating Apparatus (No. 3623) and an Ohaus Electronic Pan Balance (3000 g capacity). Tyler test sieve certificates of compliance are attached to this report. The balance was calibrated daily using two Ohaus standard 100 gram weights. The balance zero was checked and adjusted as needed before each weighing. All laboratory data and calibrations are included in the attached analysis sheets.

The Hoover 4010100A Type A Allergen Filtration vacuum cleaner bags were emptied and then re-weighed. The difference between the clean and dirty bag weights was assumed to be due to particles <75 um in size. These particles had coated and penetrated the inner bag liner and could not be removed quantitatively.

Results of the analysis are listed in the attached Table. The total dust loading before street-sweeper activity was 309.78 grams, of which 38.21 grams, or 12.33%, were silt particles <75 micron in size. The total dust loading after street-sweeper activity was 222.91 grams, of which 30.26 grams, or 13.57%, were silt particles <75 micron in size.

All sample fractions and vacuum cleaner bags were recovered separately and placed in labeled Ziploc brand plastic bags for long-term storage. This letter and attachments constitutes the full report for this sample set.

Sincerely,

Charles G. Simon, Ph.D.

attachments

PAL Job No: MC2-0690

Client Name and Sample Receipt Date: Golder, 10/9/06

Sample Recovery and Analysis Date: Octopber 10, 2006 by C.G. Simon and J. Powell

Paved Road Dust Samples. *NOTE All weights are in grams.*

Sample ID	Initial Vac Bag Weight	Final Vac Bag Weight	Net Sample Weight	Total Weight of Collected Sample Fractions	Emptied Vac Bag weight	Final Weight of Silt in Vac Bag Lining (<75 um)	Final Weight of Silt in Pan (<75 um)	Total Weight of Silt (<75 um)	Final Weight in No. 200 Sieve	Final Weight in No. 140 Sieve	Final Weight in No. 100 Sieve	Final Weight in No. 60 Sieve	Final Weight in No. 20 Sieve
MC2-0690-CFI-1	43.81	353.59	309.78	308.19	54.77	10.96	27.25	38.21	17.45	26.84	62.47	101.87	61.35
Percent of Net Sample				99.49%				12.33%	5.63%	8.66%	20.17%	32.88%	19.80%
MC2-0690-CFI-2	44.12	267.07	222.95	222.91	54.88	10.76	19.50	30.26	16.60	24.16	60.95	65.42	25.52
Percent of Net Sample				99.98%				13.57%	7.45%	10.84%	27.34%	29.34%	11.45%

SILT ANALYSIS

Date: 10/10/06 By: C. Simon and J. Powell

Sample No: MC2-0690-1
Material: Paved Road dust

Make US Standard Sieves
Smallest Division 75 micron

Sample Weight (after drying) grams
Bag + Sample: 353.59
Bag: 43.81
Split Sample Balance:
Dry Sample:
Capacity:
Final Weight: 309.78

Net Weight <200 Mesh
% Silt = Total Net Weight x 100 = __%

SIEVING

Time: Start: 10:20	Weight (Pan Only)
Initial (Tare):	375.03 g
10 min:	379.52 g
20 min:	391.12 g
30 min:	401.06 g
40 min:	402.28 g

35 min 402.03 g

Emptied Bag = 54.77
Assume dust trapped in Bag lining is < 75 μm.

0 g = 0.00
100 g = 99.92
200 g = 199.84

Screen	Tare Weight (Screen)	Final Weight (Screen + Sample)	Net Weight (Sample)	%
3/8 in.				
4 mesh				
10 mesh				
20 mesh	413.79 g	475.14 g	61.35 g	19.80
60 mesh	372.20 g	474.07 g	101.87 g	32.88
100 mesh	359.28 g	421.75 g	62.47 g	20.17
140 mesh	340.26 g	367.10 g	26.84 g	8.66
200 mesh	249.59 g	267.04 g	17.45 g	5.63
Pan	375.03 g	402.28 g	27.25 g ⊕ 10.96	12.33

Figure C.2-4. Example silt analysis form.

PAL

SILT ANALYSIS

Date: 10/10/06 By: C. Simon and J. Powell

Sample No: MC2-0640-2
Material: Paved Road dust

Make US Standard Sieves
Smallest Division 75 micron

Sample Weight (after drying)
Bag + Sample: 267.07
Bag: 44.12
Split Sample Balance: used whole sample
Dry Sample:
Capacity:
Final Weight: 222.95
Net Weight <200 Mesh
% Silt = Total Net Weight x 100 = __%

SIEVING

Time: Start: 1210	Weight (Pan Only)
Initial (Tare):	375.03g
10 min:	392.17g
20 min:	393.50
30 min:	394.08
40 min:	394.53

Emptied Bag = 54.889

200g = 199.84
100g = 99.92
0g = 0.00

Screen	Tare Weight (Screen)	Final Weight (Screen + Sample)	Net Weight (Sample)	%
3/8 in.				
4 mesh				
10 mesh				
20 mesh	413.74g	439.26	25.52	11.45
60 mesh	372.20g	437.62	65.42	29.34
100 mesh	359.28g	420.23	60.95	27.34
140 mesh	340.26g	364.42	24.16	10.84
200 mesh	249.59g	266.19g	16.60	7.45
Pan	375.03g	394.53g	19.50+10.76	13.57

Figure C.2-4. Example silt analysis form.

Golder Associates

CHAIN OF CUSTODY

Golder Associates Inc.
6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Project # 0637626

Project Name CFI SILT ANALYSIS

Station	Sample No.	Time	Date	Type/Sample	Grab	Comp	Preservative	Sample Disp.	Iced	# Cont.
1	CFI-1		10/9/06	VAC. BAG.	✓		N/A	NO	N/A	1
2	CFI-2		↓	↓	✓		N/A	NO	N/A	1

Samplers (Signature) [signature]

Containers 2

Cartons 1

Analyses Requested	Remarks
silt by MC22	

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	9 oct 06	1640	Charles Senior	10/9/06	1650

W.S. TYLER
TEST SIEVE CERTIFICATE OF COMPLIANCE

W.S. TYLER
8570 TYLER BLVD., MENTOR, OHIO 44060 U.S.A.
IN USA 1-800-321-6188
E-mail: wstyler@wstyler.com

This Certificate of Compliance represents W.S. Tyler's commitment to deliver testing sieves of the highest quality. As part of our quality commitment, W.S. Tyler maintains ISO 9002 registration. Every test sieve conforms to the manufacturing requirements of the following specifications:

ASTM E-11	ISO 565 3310-1

09060393

Sieve Serial Number

PAL #200

W.S. TYLER
TEST SIEVE CERTIFICATE OF COMPLIANCE

W.S. TYLER
8570 TYLER BLVD., MENTOR, OHIO 44060 U.S.A.
IN USA 1-800-321-6188
E-mail: wstyler@wstyler.com

This Certificate of Compliance represents W.S. Tyler's commitment to deliver testing sieves of the highest quality. As part of our quality commitment, W.S. Tyler maintains ISO 9002 registration. Every test sieve conforms to the manufacturing requirements of the following specifications:

ASTM E-11	ISO 565 3310-1

01022734

Sieve Serial Number

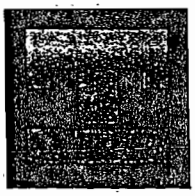
PAL #140 (D)

W.S. TYLER
TEST SIEVE CERTIFICATE OF COMPLIANCE

W.S. TYLER
8570 TYLER BLVD., MENTOR, OHIO 44060 U.S.A.
IN USA 1-800-321-6188
E-mail: wstyler@wstyler.com

This Certificate of Compliance represents W.S. Tyler's commitment to deliver testing sieves of the highest quality. As part of our quality commitment, W.S. Tyler maintains ISO 9002 registration. Every test sieve conforms to the manufacturing requirements of the following specifications:

ASTM E-11	ISO 565 3310-1



02050072

Sieve Serial Number

INVOICE *#06190* *11-Oct-06* *INVOICE*

Make check payable and mail to:

Precision Analytical Laboratories, Inc.
2106 NW 67th Place, S-4
Gainesville, FL 32653
Tel: (352) 335-1889 Fax: (352) 335-1891
TIN 59-3274419

Note: PAL is a division of Air Consulting & Engineering, Inc.

BILL TO:
Golder Associates, Inc.
6241 NW 23rd Street, Suite 500
Gainesville, Florida 32653-1500

PAL Job ID: MC2-0690
Client Name: Golder Associates, #0637626
Sample Receipt Date: 10/9/2006
Analysis Dates: 10/10/2006

Terms: Net 30 days from date of invoice.
Past due accounts are subject to 1.5%/month interest charges.
Accounts past due >90 days are subject to collection fees.

The listed activities were performed by C.G. Simon and J. Powell

Number	Item	Unit cost	Sub-total
2	Gravimetricsilt analyses of road dust samples	195	$390
		TOTAL:	**$390**

APPENDIX E

APPENDIX E
CF INDUSTRIES - PM EMISSIONS FROM "A" & "B" SHIPPING BAGHOUSES

Particulate matter emissions from "A" and "B" shipping are controlled by 10,000 acfm Mikro-Pulsaire Model 1F2-48 baghouse dust collectors, one for each unit.

Outlet dust loading: 0.02 grains/acf

Gas volume: 10,000 acfm

Hourly PM Emissions = 0.02 grains/ft^3 x 10,000 ft^3/min x 60 min/hr x 1 lb/7,000 grains
= 1.71 lb/hr

Annual PM Emissions = Hourly emissions x 8,760 hr/yr x 1 ton/2,000 lb
= 7.51 tons/yr

P.O. Drawer L.
Plant City, Florida 33566
Telephone: 813/782-1591

CENTRAL PHOSPHATES, INC., Subsidiary of

CF Industries, Inc.
Plant City Phosphate Complex

October 17, 1984

Mr. Victor San Agustin
Hillsborough County
Environmental Protection Commission
1900 Ninth Avenue
Tampa, Florida 33605

Dear Mr. San Agustin:

The additional information you requested from Jim Martin for the "A" Shipping permit application is attached.

The permit application states an efficiency of 99.9%. Page 1 of the descriptive literature shows "99.99% plus recovery".

If anything additional is needed, please give us a call.

Sincerely,

J. E. Parsons
General Manager

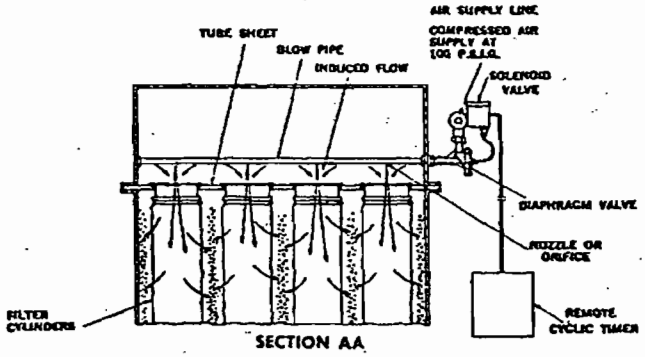
JEP/CJM:gf

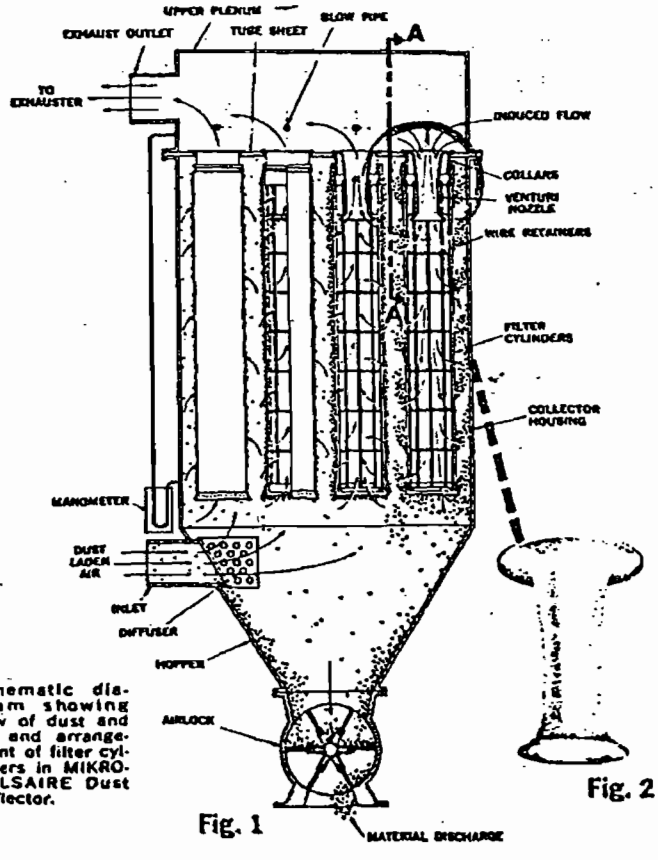
Enclosure

cc: Mr. P. R. Roberts
Mr. W. A. Schimming
Mr. C. J. Martin/Env. File

the mikro-pulsaire* dust collector

what it is The MIKRO-PULSAIRE is a complete, simplified, versatile dry filter collector combining high dust collection efficiency and very low maintenance. It is fully automatic, self-cleaning, with NO INTERNAL MOVING PARTS. All controls are on the outside of the unit. It has a high air capacity that makes it possible to do a specific job in less floor space than other units designed for similar operations.





Schematic diagram showing flow of dust and air and arrangement of filter cylinders in MIKRO-PULSAIRE Dust Collector.

Fig. 1

Fig. 2

how it operates The MIKRO-PULSAIRE consists primarily of a series of cylindrical filter elements enclosed in a dust-tight housing. Dust-laden air is admitted to the housing and clean air withdrawn from inside the filter cylinders. As dust laden particles accumulate on the filter elements, periodic cleaning is accomplished by introduction of a momentary jet of high-pressure air through a specially designed venturi mounted above each filter cylinder. This primary high-pressure jet pumps secondary air via the jet pump method, thus producing a reverse flow sufficient to clean the filter cylinders. Since only a fraction of the total filter area is cleaned at one time, continuous flow through the collector is maintained. The jets are controlled by diaphragm valves, activated by solenoid pilot valves and a timer.

features at a glance:

economy operation — no internal moving parts. Elimination of chains, blow rings, mechanical shakers and compartmenting valves means drastically reduced maintenance, longer bag life, uninterrupted processing.

economy installation — all units pre-wired! MIKRO-PULSAIRE is virtually ready for operation as delivered — with no hidden extras or additional costs.

economy performance — 99.99% plus recovery! Proved in more than 20,000 installations throughout the world . . . performing outstandingly in the chemical, food, drug, metal-working, milling, animal feeds and rock products fields. Applicable to any industry that has a dry dust problem.

handles dust streams to 425°Fahrenheit! High temperature filter elements of DuPont "Nomex"® permit operation above most acid dew points. DuPont Teflon® also available when extra resistance to chemicals is required.

look for the venturi... the big difference in performance!

Standard equipment on all MIKRO-PULSAIRE Collectors . . . a basic requirement for maximum efficiency of the filter media of any unit that employs the jet-cleaning principle!

Member Industrial Gas Cleaning Institute

*Originated and manufactured solely by MikroPul Division of The Slick Corporation

the modular mikro-

flexible, field-erected units to mee

There is no dust recovery job too big for the Modular Mikro-Pulsaire because there is no limit to its filtering capacity. Units are designed in precision sections which are combined as required to meet any CFM specification. Knocked-down, they are economical to ship, and all parts are manufactured for simple alignment and speedy assembly at the site. Applicable throughout the processing industries, the Modular Mikro-Pulsaire is designed to vent all types of particle reduction equipment, spray dryers, separators, calciners, mixers, packaging machinery, mechanical conveyors, carloading operations, and many other dust generating sources. Units listed

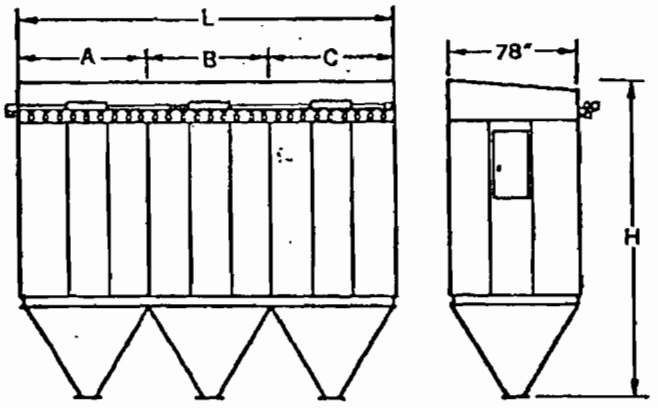
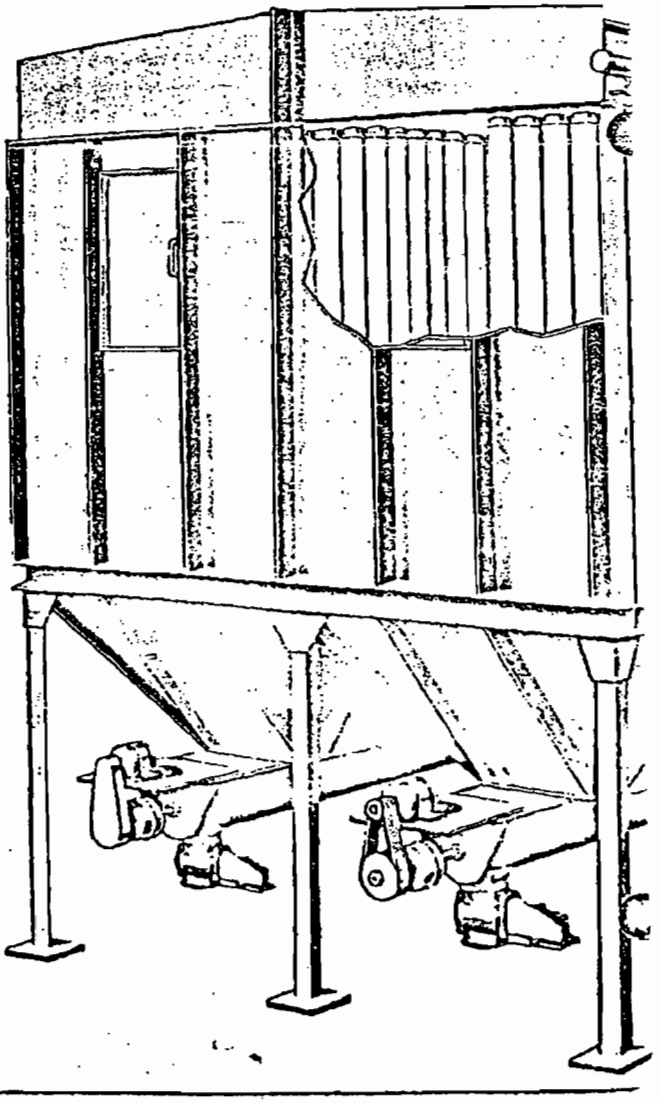


Fig. 13

specifications

Model	8 FT. FILTER TUBES					6 FT. FILTER TUBES				
	1F1	1F2	1F3	1F4	1F5	1C1	1C2	1C3	1C4	1C5
Number of Filter Tubes	72	144	216	288	360	72	144	216	288	360
Filter Area Ft.²	678	1357	2036	2714	3393	509	1018	1527	2036	2544
Comp. Air Req'd. SCFM @ 100 P.S.I. Avg.	5.3	10.5	15.7	21	26.3	5.3	10.5	15.7	21	26.3
Comp. Air Req'd. SCFM @ 100 P.S.I. Max.	10.5	21	31.5	42	52.5	10.5	21	31.5	42	52.5
Approx. Wt. in lbs.	3700	6600	8700	11500	14400	3500	6100	8400	11000	13800
Dim. "A"	75"	75"	75"	75"	75"	75"	75"	75"	75"	75"
Dim. "B"	—	—	72"	144"	216"	—	—	72"	144"	216"
Dim. "C"	—	75"	75"	75"	75"	—	75"	75"	75"	75"
Dim. "L"	75"	150"	222"	294"	366"	75"	150"	222"	294"	366"
Dim. "H"	193⅛"	193⅛"	193⅛"	193⅛"	193⅛"	169⅛"	169⅛"	169⅛"	169⅛"	169⅛"

NOTE: Tables above may be extended to accommodate any capacity requirement. For example, in an installation calling for 6700 sq. ft. of filter area, using 8 ft. bags, we would provide Model 1F10, which consists of 10 basic modular sections of 72 filter tubes each, for a total of 720 filter tubes. For intermediate capacities, all models can be supplied with additional increments of 24 or 48 filter bags. Send for free Filter Rate Guide — a handy tool in figuring number of sq. ft. of cloth area required for efficient collection.



THE MODULAR MIKRO-PULSAIRE, Model 2G4, equipped with screw conveyor, one of many models available to suit any filtering capacity. Cutaway shows arrangement of filter tubes which are accessible by means of interior catwalk.

MikroPul
Formerly PULVERIZING MACHINERY

MIKRO-PULSAIRE DATA SHEET

CUSTOMER: Central Phosphates, Inc. DATE: 5-8-71

Plant City, Florida P.O. NO. 22153

SERIAL NO. 71-H-650

UNIT SIZE 1F2-48 Bin Mount REF. DWG. NO. N664565

CONSTRUCTION

PRODUCT & GAS CONTACT HRS

CLEAN GAS CONTACT HRS

VENTURIES Aluminum

RETAINERS Steel 8' LG.

FILTER BAGS Polypropylene-HCE 8' LG.

ELECTRICALS

SOLENOID: 110 V 1 PH 60 CY NEMA 12

TIMER: Electronic 9 POSITION NEMA 12

WIRING DIAGRAM W- 380

EXHAUST FAN Not Furnished

DELIVERS _____ ACFM _____ SP. _____ TEMP.

DRIVE ____ HP ____ V ____ PH ____ CY ____ RPM

AIRLOCK Not Furnished

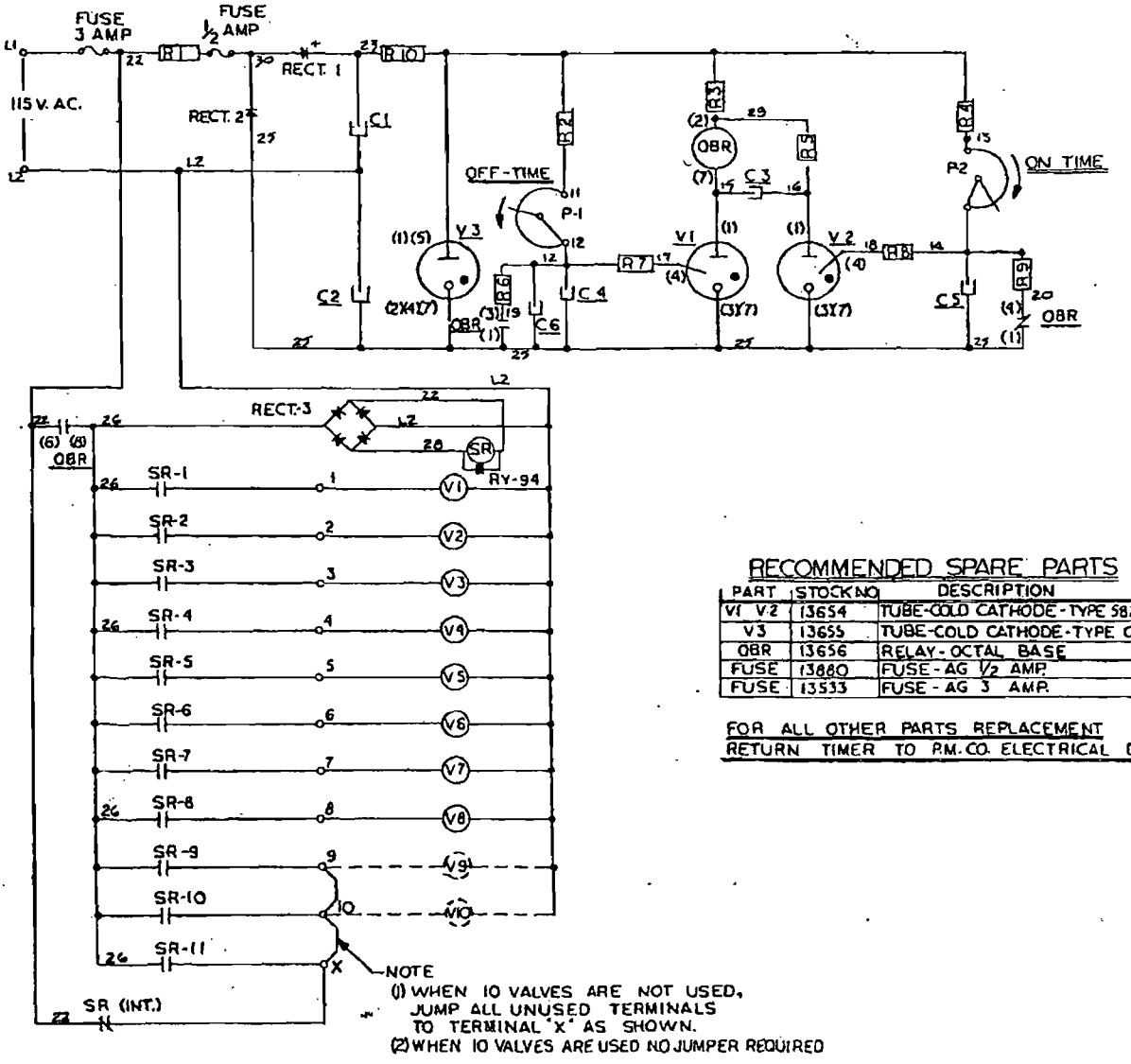
TYPE _____ RPM _____ SERIAL NO. _____

CONST. _____ HSG _____ ROTOR _____ BLADES

DRIVE: ____ HP ____ V ____ PH ____ CY ____ RPM

SPECIAL FEATURES: Internal Catwalk, No Exhaust, Special Diaphragm Valves Threaded Ends

A66



RECOMMENDED SPARE PARTS

PART	STOCK NO	DESCRIPTION
V1 V2	13654	TUBE-COLD CATHODE-TYPE 5823
V3	13655	TUBE-COLD CATHODE-TYPE OA2
OBR	13656	RELAY-OCTAL BASE
FUSE	13880	FUSE-AG ½ AMP.
FUSE	13533	FUSE-AG 3 AMP.

FOR ALL OTHER PARTS REPLACEMENT RETURN TIMER TO P.M.CO. ELECTRICAL DEPT.

MikroPul
FORMERLY PULVERIZING MACHINERY
DIVISION OF THE SLICK CORPORATION
SUMMIT, NEW JERSEY 07901

SCHEMATIC WIRING DIAGRAM
ELECTRONIC TIMER
MIKRO PULSAIRE

JANUARY 1971 | W 380

THIS PRINT FOR REFERENCE ONLY UNLESS CERTIFIED

MikroPul
Formerly PULVERIZING MACHINERY
DIVISION OF THE BLICK CORPORATION / 10 Chatham Road, Summit, New Jersey 07901 / 201-273-6360 / CABLE: MIKROPUL / TWX: 201-273-6360 / TELEX: 13-6167

May 28, 1971

GUARANTY

Purchaser: Central Phosphates, Inc. P.O. #22153

Location: Zephyrnills, Florida

Equipment: Model 1F2-48 Mikro-Pulsaire Dust Collector. **Serial No.** 71-H-650

Application: Venting DAP (Phosphate) Nuisance Dust Laden Air.

Design Condition: 5.5:1 (Air-To-Cloth Ratio)

1.	Gas Volume (ACFM)	10,000
2.	Gas Temperature ^{o}F	Ambient
3.	Gas Pressure (psig)	6" Across Filter
4.	Moisture Content (% H_2O by Volume)	Dry Air
5.	Inlet Grain Loading (gr/acf)	15-20
6.	Particle Size Distribution	All minus 200 Mesh
7.	Inlet Contaminant Concentration (#/hr or PPM)	Approx. [illegible]#/Hour

MikroPul hereby makes the following guaranty of the performance of the Model 1F2-48 specified in this proposal:

For the initial thirty (30) days of plant operation which would result in conditions as specified above, the subject equipment will:

A. Remove at least 99 % of all particulate matter larger than .1 Micron which was contained in inlet gases.

B. Reduce outlet _____ loadings to less than .02 grains /ACF _____ based on inlet conditions as described above.

The following conditions are an inseparable part of this guaranty and are conditions precedent to any performance by MikroPul under this guaranty:

A. Initial operation starts not later than ninety (90) days after installation or one hundred eighty (180) days after delivery, whichever occurs first.

APPENDIX F

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **"A" DAP/MAP Plant**

3. Emissions Unit Identification Number: **010**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment: **This emissions unit represents the A-train DAP mode and the A-train MAP mode.**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Three-stage Fume Scrubber:
Stage I - Ducon Envir. Tech. Series venturi/cyclonic scrubber with phosphoric acid scrubbing liquid.
Stage II - Fume Downcomer, which consists of duct work with fresh water sprays. The water is from the abatement scrubber.
Stage III - Ducon Envir. Tech. Abatement scrubber with fresh water scrubbing liquid.
Three-stage Dryer/Dust Scrubber:
Stage I - Ducon Envir. Tech. Series venturi/cyclonic scrubber with phosphoric acid scrubbing liquid.
Stage II - Fume Downcomer, which consists of duct work with fresh water sprays. The water is from the abatement scrubber.
Stage III - Ducon Envir. Tech. Abatement scrubber with fresh water scrubbing liquid.
Dryer Cyclones: Four (4) Dust Cyclones - Fly Ash Arrestor Corp.
Dust Cyclones: Two (2) Dust Cyclones - Fly Ash Arrestor Corp.
Mill and Screen Dust Cyclones: Two (2) Dust Cyclones - Fly Ash Arrestor Corp.
Product Cooler Dust Cyclones: Two (2) Dust Cyclones - Fly Ash Arrestor Corp.
Product Cooler Scrubber - Fume Downcomer - duct work with fresh water sprays. The water is from the abatement scrubber. The gas stream is then vented to the abatement scrubber.
Three-stage Cooler Scrubber:
Stage I - Two (2) Dust Cyclones - Fly Ash Arrestor Corp.
Stage II - Fume Downcomer, which consists of ductwork with fresh water sprays. The water is from the abatement scrubber.
Stage III - Ducon Envir. Tech. Abatement scrubber with fresh water scrubbing liquid.

2. Control Device or Method Code(s): **001, 002, 053, 076**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **33.3 Tons 100% P_2O_5/hr**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: **28.5**million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: **24** hours/day **52** weeks/year	**7** days/week **8,760** hours/year
6. Operating Capacity/Schedule Comment: **Process rate represents maximum permitted P_2O_5 input rate when operating in MAP mode.** **Maximum operating rate when operating in DAP mode is 29.53 TPH 100% P_2O_5 input** **The dryer is fired on natural gas or No. 5 fuel oil or better grade (backup) at a maximum heat input of 28.5 MMBtu/hr.**	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **010**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **99** feet	7. Exit Diameter: **10** feet
8. Exit Temperature: **137**°F	9. Actual Volumetric Flow Rate: **173,300** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.0** lb/hour **56.94** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Proposed limit**	7. Emissions Method Code: **5**
8. Calculation of Emissions: **Annual emissions = 13.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 56.94 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **13.0 lb/hr**	4. Equivalent Allowable Emissions: **13.0** lb/hour **56.94** tons/year
5. Method of Compliance: **EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed emission limit for the "A" DAP/MAP Plant (EU ID 010).**	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   ☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   ☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   ☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   ☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **"Z" DAP/MAP Plant**

3. Emissions Unit Identification Number: **011**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
   Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment: **This emission unit represents the Z-train DAP mode and the Z-train MAP mode.**

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **011**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **9** feet
8. Exit Temperature: **140**°F	9. Actual Volumetric Flow Rate: **169,800** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **15.0** lb/hour **65.7** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: **Proposed limit**	7. Emissions Method Code: **5**
8. Calculation of Emissions: **Annual emissions = 15.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 65.7 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **15.0 lb/hr**	4. Equivalent Allowable Emissions: **15.0** lb/hour **65.7** tons/year
5. Method of Compliance: **EPA Method 5**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed emission limit for the "Z" DAP/MAP Plant (EU ID 011).**	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **"X" DAP/MAP Plant**

3. Emissions Unit Identification Number: **012**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment: **This emission unit represents the X-train DAP mode and the X-train MAP mode.**

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **012**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **9** feet
8. Exit Temperature: **134**°F	9. Actual Volumetric Flow Rate: **193,700** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **"Y" DAP/MAP Plant**

3. Emissions Unit Identification Number: **013**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment: **This emission unit represents the Y-train DAP mode and the Y-train MAP mode.**

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **013**	2. Emission Point Type Code: **1**	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **180** feet	7. Exit Diameter: **9** feet
8. Exit Temperature: **135**°F	9. Actual Volumetric Flow Rate: **203,400** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☒ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **"A" Shipping Baghouse and "B" Shipping Baghouse**

3. Emissions Unit Identification Number: **015, 018**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment: **Emission unit is for the operation of the "A" and "B" Shipping baghouses that control the sizing and screening operations.**

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

Mikro-Pulsaire Baghouses (2)

2. Control Device or Method Code(s): **101**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: **750 TPH**	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment: **The maximum throughput is based on the the combined maximum loading rate at the "A" shipping unit of 250 TPH and at the "B" shipping unit of 500 TPH.**	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **3.43** lb/hour **15.0** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.02 grains/acf** Reference: **Manufacturer's Specifications**	7. Emissions Method Code: **5**

8. Calculation of Emissions:

Potential emissions shown are total forboth baghouses.

"A" Shipping (EU ID 015):

Hourly emissions = 0.02 grains/ft^3 x 10,000 ft^3/min x 60 min/hr x 1 lb/7,000 grains = 1.71 lb/hr

Annual emissions = 1.71 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 7.5 TPY

"B" Shipping (EU ID 018):

Hourly emissions = 0.02 grains/ft^3 x 10,000 ft^3/min x 60 min/hr x 1 lb/7,000 grains = 1.71 lb/hr

Annual emissions = 1.71 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 7.5 TPY

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.71 lb/hr**	4. Equivalent Allowable Emissions: **1.71** lb/hour **7.5** tons/year
5. Method of Compliance: **DEP Method 9 (during annual VE emission test)**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed emission limit for the "A" Shipping Baghouse (EU ID 015).**	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.71 lb/hr**	4. Equivalent Allowable Emissions: **1.71** lb/hour **7.5** tons/year
5. Method of Compliance: **DEP Method 9 (during annual VE emission test)**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed emission limit for the "B" Shipping Baghouse (EU ID 018).**	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

APPENDIX G

TABLE 2-1
SUMMARY OF CURRENT AND PROPOSED PERMITTED EMISSION RATES FOR THE B SULFURIC ACID PLANT, CF INDUSTRIES, PLANT CITY

Pollutant & Averaging Time	Current Permit Limits[a]				Proposed Permit Limits[d]			
	Production Rate	Emission Rates			Production Rate	Emission Rates		
	(TPD)	(lb/ton H_2SO_4)	(lb/hr)	(TPY)	(TPD)	(lb/ton H_2SO_4)	(lb/hr)	(TPY)
	1,300				1,600			
SO_2								
3-Hour		5.6 [b]	303.3 [b]	--		3.50	233.3	--
24-Hour		--	--	--		3.50	233.3	--
Annual		4.23	229.0 [c]	1,003 [c]		--	--	1,022.0
SAM								
Hourly		0.3	1.43	--		0.075	5.0	--
Annual		--	0.83 [c]	3.49 [c]		--	--	21.9
NO_x								
Annual		[e]	[e]	[e]		0.12	8.0	35.0

[a] Based on Title V Permit No. 0570005-017-AV.

[b] Limits are based on a 3-hour rolling average.

[c] Limits are based on a consecutive 12-month rolling average.

[d] Based on proposed BACT limits.

[e] Currently, there is no permit limit for NO_x.

TABLE 2-2
ACTUAL ANNUAL (2003-2004) AND FUTURE POTENTIAL EMISSIONS FOR SOURCES AFFECTED BY THE PROPOSED PROJECT

Source Description	EU ID	Pollutant Emission Rate (TPY)							
		SO_2	NO_x	CO	PM	PM_{10}	VOC	SAM	Fluoride
2003 Actual Emissions[a]									
B Sulfuric Acid Plant	003	605.01	7.10 [g]	--	--	--	--	1.72	--
A Phosphoric Acid Plant	004	--	--	--	--	--	--	--	2.43
B Phosphoric Acid Plant	009	--	--	--	--	--	--	--	1.22
Z DAP/MAP Plant	011	0.01	0.42 [h]	1.77	16.54	16.54	0.12	--	3.83
X DAP/MAP Plant	012	0.00	0.13 [h]	0.56	8.48	8.48	0.04	--	1.08
Y DAP/MAP Plant	013	0.01	0.33 [h]	1.40	13.71	13.71	0.09	--	2.58
A & B Storage Buildings Scrubber	014	--	--	--	0.07	0.07	--	--	--
A Shipping Baghouse	015	--	--	--	0.79	0.79	--	--	--
B Shipping Baghouse	018	--	--	--	1.84	1.84	--	--	--
B Shipping Truck Loading Station	019	--	--	--	1.71	1.71	--	--	--
B Shipping Railcar Loading	020	--	--	--	1.71	1.71	--	--	--
2004 Actual Emissions[a]									
B Sulfuric Acid Plant	003	717.64	8.21 [g]	--	--	--	--	1.99	--
A Phosphoric Acid Plant	004	--	--	--	--	--	--	--	2.44
B Phosphoric Acid Plant	009	--	--	--	--	--	--	--	2.96
Z DAP/MAP Plant	011	0.01	0.36 [h]	1.50	13.84	13.84	0.10	--	2.67
X DAP/MAP Plant	012	0.00	0.09 [h]	0.39	13.68	13.68	0.03	--	3.05
Y DAP/MAP Plant	013	0.01	0.35 [h]	1.46	19.46	19.46	0.10	--	2.00
A & B Storage Buildings Scrubber	014	--	--	--	0.11	0.11	--	--	--
A Shipping Baghouse	015	--	--	--	0.99	0.99	--	--	--
B Shipping Baghouse	018	--	--	--	1.78	1.78	--	--	--
B Shipping Truck Loading Station	019	--	--	--	1.40	1.40	--	--	--
B Shipping Railcar Loading	020	--	--	--	2.34	2.34	--	--	--
Average 2003 & 2004 Actual Emissions									
B Sulfuric Acid Plant	003	661.325	7.65	--	--	--	--	1.86	--
A Phosphoric Acid Plant	004	--	--	--	--	--	--	--	2.43
B Phosphoric Acid Plant	009	--	--	--	--	--	--	--	2.09
Z DAP/MAP Plant	011	0.012	0.39	1.63	15.19	15.19	0.11	--	3.25
X DAP/MAP Plant	012	0.004	0.11	0.47	11.08	11.08	0.03	--	2.07
Y DAP/MAP Plant	013	0.010	0.34	1.43	16.59	16.59	0.09	--	2.29
A & B Storage Buildings Scrubber	014	--	--	--	0.09	0.09	--	--	--
A Shipping Baghouse	015	--	--	--	0.89	0.89	--	--	--
B Shipping Baghouse	018	--	--	--	1.81	1.81	--	--	--
B Shipping Truck Loading Station	019	--	--	--	1.55	1.55	--	--	--
B Shipping Railcar Loading	020	--	--	--	2.02	2.02	--	--	--
Future Potential Emissions									
A Sulfuric Acid Plant	002	1,022.00 [b]	35.04 [c]	--	--	--	--	21.90 [b]	--
A Phosphoric Acid Plant	004	--	--	--	--	--	--	--	3.72 [b]
B Phosphoric Acid Plant	009	--	--	--	--	--	--	--	5.54 [b]
Z DAP/MAP Plant	011	9.50 [d]	26.75 [d]	15.73 [d]	65.70 [e]	65.70 [e]	1.03 [d]	0.16 [d]	6.31 [e]
X DAP/MAP Plant	012	9.94 [d]	27.99 [d]	16.46 [d]	41.88 [e]	41.88 [e]	1.08 [d]	0.17 [d]	6.70 [e]
Y DAP/MAP Plant	013	11.00 [d]	30.97 [d]	18.21 [d]	67.00 [e]	67.00 [e]	1.19 [d]	0.19 [d]	9.60 [e]
A & B Storage Buildings	014	--	--	--	4.8 [d]	2.3 [d]	--	--	--
A Shipping Baghouse	015	--	--	--	7.5 [f]	7.5 [f]	--	--	--
B Shipping Baghouse	018	--	--	--	7.5 [f]	7.5 [f]	--	--	--
B Shipping Truck&Railcar Loading	019,020	--	--	--	5.7 [d]	2.7 [d]	--	--	--
A Shipping Truck&Railcar Loading	--	--	--	--	2.9 [d]	1.4 [d]	--	--	--

[a] From the 2003 and 2004 Annual Operating Reports, CF Industries, Plant City facility.

[b] Based on proposed BACT limits (see Tables 2-1 and 2-5).

[c] Proposed emission limit.

[d] See Appendix A for calculations of potential emissions.

[e] Based on Title V Permit No. 0570005-017-AV.

[f] Based on dust loading of 0.02 gr/acfm and 10,000 acfm of exhaust flow rate. 0.02 gr/acfm x 10,000 acfm x 60 min/hr x 1 lb/7,000 gr x 8,760 hr/yr x 1 ton/2,000 lb

[g] Based on 0.04 lb/ton H_2SO_4 from stack test dated 8/25/93 and actual annual H_2SO_4 production.

[h] See Table A-8 for calculations of current actual NO_x emissions from "X", "Y", and "Z" DAP/MAP dryers.

Note: The "A" DAP/MAP plant is in cold shutdown status and there is no plan to activate it in the near future. Therefore, the "A" DAP/MAP plant is not affected by the proposed project.

TABLE 2-3
CURRENT ACTUAL AND FUTURE POTENTIAL HOURLY EMISSIONS FOR SOURCES AFFECTED BY THE PROPOSED PROJECT

Source Description	EU ID	SO_2 3-Hr (lb/hr)	SO_2 24-Hr (lb/hr)	CO (lb/hr)	PM_{10} (lb/hr)	SAM (lb/hr)	Fluoride (lb/hr)
Current Actual Hourly Emissions							
B Sulfuric Acid Plant	003	250.0 [a]	195.0 [b]	--	--	0.44 [c]	--
A Phosphoric Acid Plant	004	--	--	--	--	--	0.83 [d]
B Phosphoric Acid Plant	009	--	--	--	--	--	0.80 [e]
Z DAP/MAP Plant	011	0.0031 [c]	0.0031 [c]	0.43 [c]	6.75 [f]	--	1.30 [g]
X DAP/MAP Plant	012	0.0009 [c]	0.0009 [c]	0.13 [c]	3.63 [h]	--	0.79 [h]
Y DAP/MAP Plant	013	0.0027 [c]	0.0027 [c]	0.38 [c]	8.06 [i]	--	1.05 [j]
A & B Storage Buildings Scrubber	014	--	--	--	2.79 [c]	--	--
A Shipping Baghouse	015	--	--	--	0.43 [c]	--	--
B Shipping Baghouse	018	--	--	--	0.43 [c]	--	--
B Shipping Truck Loading Station	019	--	--	--	0.49 [c]	--	--
B Shipping Railcar Loading	020	--	--	--	0.64 [c]	--	--
Future Potential Hourly Emissions							
B Sulfuric Acid Plant	003	233.3 [k]	233.3 [k]	--	--	5.0 [k]	--
A Phosphoric Acid Plant	004	--	--	--	--	--	0.85 [k]
B Phosphoric Acid Plant	009	--	--	--	--	--	1.26 [k]
Z DAP/MAP Plant	011	2.17 [l]	2.17 [l]	3.59 [l]	15.00 [o]	0.04 [l]	1.44 [m]
X DAP/MAP Plant	012	2.52 [l]	2.52 [l]	4.17 [l]	13.75 [m]	0.04 [l]	2.20 [m]
Y DAP/MAP Plant	013	2.51 [l]	2.51 [l]	4.16 [l]	15.30 [m]	0.04 [l]	2.20 [m]
A & B Storage Buildings		--	--	--	0.52 [l]	--	--
A Shipping Baghouse	015	--	--	--	1.71 [n]	--	--
B Shipping Baghouse	018	--	--	--	1.71 [n]	--	--
B Shipping Truck&Railcar Loading	019,020	--	--	--	0.62 [l]	--	--
A Shipping Truck&Railcar Loading		--	--	--	0.31 [l]	--	--

[a] Based on the maximum 3-hr average emissions from CEM data dated 6/19/03.

[b] Based on the maximum 24-hr average emissions from CEM data dated 5/7/04.

[c] Based on the average actual annual emissions and actual operating hours for 2003 and 2004.

[d] Based on compliance test data of 6/17/2003.

[e] Based on compliance test data of 5/19/2004.

[f] Based on compliance test data of 3/10/2005.

[g] Based on compliance test data of 3/11/2003.

[h] Based on compliance test data of 4/20/2004.

[i] Based on compliance test data of 4/27/2004.

[j] Based on compliance test data of 4/29/2003.

[k] Proposed BACT limits.

[l] See Appendix A for calculations of potential emissions.

[m] Based on Title V Permit No. 0570005-017-AV.

[n] Based on dust loading of 0.02 gr/acfm and 10,000 acfm of exhaust flow rate. 0.02 gr/acfm x 10,000 acfm x 60 min/hr x 1 lb/7,000 gr = 1.71 TPY.

[o] Proposed emission limit.

TABLE 2-4
SUMMARY OF STACK AND OPERATING PARAMETERS AND LOCATIONS FOR THE PROJECT AFFECTED SOURCES

		Relative Location [a]				Stack and Operating Parameters								
		X		Y		Height		Diameter		Flow Rate	Exit Temperature		Velocity	
Emission Unit	ISCST3 ID	ft	m	ft	m	ft	m	ft	m	(acfm)	°F	K	ft/s	m/s
Current Operations														
"B" SAP	SAPB	-171.6	-52.3	-157.1	-47.9	110	33.53	5.0	1.52	80,950	83	301	68.7	20.94
"A" PAP	PAPA	-666.7	-203.2	46.3	14.1	85	25.91	5.0	1.52	49,900	120	322	42.4	12.91
"B" PAP	PAPB	-879.7	-268.1	255.0	77.7	119	36.27	4.0	1.22	34,300	116	320	45.5	13.87
"Z" DAP/MAP Plant	ZDMP	-1042.8	-317.9	150.6	45.9	180	54.86	9.0	2.74	169,800	140	333	44.5	13.56
"X" DAP/MAP Plant	XDMGP	-1118.7	-341.0	310.3	94.6	180	54.86	9.0	2.74	193,700	134	330	50.7	15.47
"Y" DAP/MAP Plant	YDMGP	-1074.8	-327.6	245.1	74.7	180	54.86	9.0	2.74	203,400	135	330	53.3	16.24
"A" and "B" Storage Building Scrubber	ABSTO	-1197.4	-365.0	-219.5	-66.9	86	26.21	9.0	2.74	175,000	80	300	45.8	13.97
"A" Shipping Baghouse	ASBAG	-1153.9	-351.7	-332.3	-101.3	90	27.43	1.7	0.52	8,500	110	316	62.4	19.02
"B" Shipping Baghouse	BSBAG	-1343.5	-409.5	-134.8	-41.1	35	10.67	2.0	0.61	10,000	120	322	53.1	16.17
"B" Truck/Railcar Loading [b]	BLOAD	-1489.5	-454.0	-134.5	-41.0	10	3.05	--	--	--	--	--	--	--
"A" Railcar/Truck Loading [b]	ALOAD	-1112.2	-339.0	-318.2	-97.0	10	3.05	--	--	--	--	--	--	--
Future Operations														
"B" SAP	SAPB	-171.6	-52.3	-157.1	-47.9	110	33.53	5.0	1.52	88,140	83	302	74.8	22.80
"A" PAP	PAPA	-666.7	-203.2	46.3	14.1	85	25.91	5.0	1.52	49,900	120	322	42.4	12.91
"B" PAP	PAPB	-879.7	-268.1	255.0	77.7	119	36.27	4.0	1.22	34,300	116	320	45.5	13.87
"Z" DAP/MAP Plant	ZDMP	-1042.8	-317.9	150.6	45.9	180	54.86	9.0	2.74	169,800	140	333	44.5	13.56
"X" DAP/MAP Plant	XDMGP	-1118.7	-341.0	310.3	94.6	180	54.86	9.0	2.74	193,700	134	330	50.7	15.47
"Y" DAP/MAP Plant	YDMGP	-1074.8	-327.6	245.1	74.7	180	54.86	9.0	2.74	203,400	135	330	53.3	16.24
"A" and "B" Storage Building [c]	ABSTO	--	--	--	--	--	--	--	--	--	--	--	--	--
"A" Shipping Baghouse	ASBAG	-1153.9	-351.7	-332.3	-101.3	90	27.43	1.7	0.52	8,500	110	316	62.4	19.02
"B" Shipping Baghouse	BSBAG	-1343.5	-409.5	-134.8	-41.1	35	10.67	2.0	0.61	10,000	120	322	53.1	16.17
"B" Truck/Railcar Loading [b]	BLOAD	-1489.5	-454.0	-134.5	-41.0	10	3.05	--	--	--	--	--	--	--
"A" Railcar/Truck Loading [b]	ALOAD	-1112.2	-339.0	-318.2	-97.0	10	3.05	--	--	--	--	--	--	--

[a] Relative to the C SAP stack, true north.

[b] Fugitive emissions, modeled as volume source.

[c] Fugitive emissions, modeled as volume source, "A" storage building represented by three volumes and "B" storage building represented by two volumes.

TABLE 6-3
SUMMARY OF PM_{10}, F, AND NO_x CURRENT ACTUAL AND FUTURE POTENTIAL EMISSION RATES FOR THE PROPOSED PROJECT -- CF INDUSTRIES, PLANT CITY

Source	EU ID	Model ID	PM_{10} Emissions Hourly [b] lb/hr	PM_{10} Hourly [b] g/s	PM_{10} Annual [c] TPY	PM_{10} Annual [c] g/s	Fluoride Emissions Hourly [b] lb/hr	Fluoride Hourly [b] g/s	Fluoride Annual [c] TPY	Fluoride Annual [c] g/s	NO_x Emissions Annual [c] TPY	NO_x Annual [c] g/s
Current Actual Emissions												
"B" SAP	003	SAPB	--	--	--	--	--	--	--	--	7.66	0.220
"A" PAP	004	PAPA	--	--	--	--	0.83	0.105	2.43	0.070	--	--
"B" PAP	009	PAPB	--	--	--	--	0.80	0.101	2.09	0.060	--	--
"Z" DAP/MAP Plant	011	ZDMP	6.75	0.851	15.19	0.437	1.30	0.164	3.25	0.093	0.39	0.011
"X" DAP/MAP Plant	012	XDMGP	3.63	0.457	11.08	0.319	0.79	0.100	2.07	0.059	0.11	0.003
"Y" DAP/MAP Plant	013	YDMGP	8.06	1.016	16.59	0.477	1.05	0.132	2.29	0.066	0.34	0.010
"A" and "B" Storage Building Scrubber	014	ABSTO	2.79	0.352	0.09	0.002	--	--	--	--	--	--
"A" Shipping Baghouse	015	ASBAG	0.43	0.054	0.89	0.026	--	--	--	--	--	--
"B" Shipping Baghouse	018	BSBAG	0.43	0.054	1.81	0.052	--	--	--	--	--	--
"B" Truck/Railcar Loading [a]	019	BLOAD	0.49	0.062	1.55	0.045	--	--	--	--	--	--
"A" Railcar/Truck Loading [a]	020	ALOAD	0.64	0.081	2.02	0.058	--	--	--	--	--	--
Future Potential Emissions												
"B" SAP	003	SAPB	--	--	--	--	--	--	--	--	35.0	1.008
"A" PAP	004	PAPA	--	--	--	--	0.85	0.107	3.72	0.107	--	--
"B" PAP	009	PAPB	--	--	--	--	1.26	0.159	5.54	0.159	--	--
"Z" DAP/MAP Plant	011	ZDMP	15.00	1.890	65.7	1.890	1.44	0.181	6.310	0.1815	26.7	0.770
"X" DAP/MAP Plant	012	XDMGP	13.75	1.733	41.9	1.205	2.2	0.277	6.700	0.1927	28.0	0.805
"Y" DAP/MAP Plant	013	YDMGP	15.30	1.928	67.0	1.927	2.20	0.277	9.6	0.276	31.0	0.891
"A" and "B" Storage Building [a]	014	ABSTO	0.52	0.066	4.8	0.138	--	--	--	--	--	--
"A" Shipping Baghouse	015	ASBAG	1.71	0.215	7.5	0.215	--	--	--	--	--	--
"B" Shipping Baghouse	018	BSBAG	1.71	0.215	7.5	0.215	--	--	--	--	--	--
"B" Truck/Railcar Loading [a]	019	BLOAD	0.62	0.078	5.7	0.164	--	--	--	--	--	--
"A" Railcar/Truck Loading [a]	020	ALOAD	0.31	0.039	2.9	0.083	--	--	--	--	--	--
Truck Traffic [d]	--	--	0.19	0.024	0.83	0.024						

[a] Fugitive emissions, modeled as volume source.

[b] Hourly emissions from Table 2-3.

[c] Annual emissions from Table 2-2.

[d] Emissions increases due to the proposed project. Emission calculations are shown in Appendix A.

TABLE 6-4

SUMMARY OF SO_2 AND SAM CURRENT ACTUAL AND FUTURE POTENTIAL EMISSION RATES FOR THE PROPOSED PROJECT – CF INDUSTRIES, PLANT CITY

			SO_2 Emissions						SAM Emissions			
			3-Hour [b]		24-Hour [b]		Annual [c]		Hourly [b]		Annual [c]	
Source	EU ID	Model ID	lb/hr	g/s	lb/hr	g/s	TPY	g/s	lb/hr	g/s	TPY	g/s
Current Actual Emissions												
"B" SAP	003	SAPB	250.0	--	195.0	--	661.3	--	0.44	0.055	1.86	0.234
"A" PAP	004	PAPA	--	--	--	--	--	--	--	--	--	--
"B" PAP	009	PAPB	--	--	--	--	--	--	--	--	--	--
"Z" DAP/MAP Plant	011	ZDMP	0.0031	3.94E-04	0.0031	3.94E-04	0.0120	1.51E-03	--	--	--	--
"X" DAP/MAP Plant	012	XDMGP	0.0009	1.19E-04	0.0009	1.19E-04	0.0035	4.41E-04	--	--	--	--
"Y" DAP/MAP Plant	013	YDMGP	0.0027	3.38E-04	0.0027	3.38E-04	0.0100	1.26E-03	--	--	--	--
"A" and "B" Storage Building Scrubber	014	ABSTO	--	--	--	--	--	--	--	--	--	--
"A" Shipping Baghouse	015	ASBAG	--	--	--	--	--	--	--	--	--	--
"B" Shipping Baghouse	018	BSBAG	--	--	--	--	--	--	--	--	--	--
"B" Truck/Railcar Loading [a]	019	BLOAD	--	--	--	--	--	--	--	--	--	--
"A" Railcar/Truck Loading [a]	020	ALOAD	--	--	--	--	--	--	--	--	--	--
Future Potential Emissions												
"B" SAP	003	SAPB	233.3	--	233.3	--	1022.0	--	5.00	0.63	21.9	2.76
"A" PAP	004	PAPA	--	--	--	--	--	--	--	--	--	--
"B" PAP	009	PAPB	--	--	--	--	--	--	--	--	--	--
"Z" DAP/MAP Plant	011	ZDMP	2.17	0.273	2.17	0.273	9.5	0.273	0.037	0.0046	0.16	0.0046
"X" DAP/MAP Plant	012	XDMGP	2.52	0.318	2.52	0.318	9.9	0.286	0.043	0.0054	0.17	0.0048
"Y" DAP/MAP Plant	013	YDMGP	2.51	0.316	2.51	0.316	11.0	0.316	0.042	0.0053	0.19	0.0053
"A" and "B" Storage Building [a]	014	ABSTO	--	--	--	--	--	--	--	--	--	--
"A" Shipping Baghouse	015	ASBAG	--	--	--	--	--	--	--	--	--	--
"B" Shipping Baghouse	018	BSBAG	--	--	--	--	--	--	--	--	--	--
"B" Truck/Railcar Loading [a]	019	BLOAD	--	--	--	--	--	--	--	--	--	--
"A" Railcar/Truck Loading [a]	020	ALOAD	--	--	--	--	--	--	--	--	--	--

[a] Fugitive emissions, modeled as volume source.

[b] Hourly emissions from Table 2-3.

[c] Annual emissions from Table 2-2.

TABLE 6-5

SUMMARY OF PM_{10} AND SO_2 EMISSION RATES FROM ALL FUTURE CF INDUSTRIES, PLANT CITY SOURCES NOT AFFECTED BY THE PROJECT

			SO_2 Emission Rate						PM_{10} Emission Rate			
	EU	Model	3-Hour		24-Hour		Annual		24-Hour		Annual	
Source	ID	ID	lb/hr	g/s	lb/hr	g/s	TPY	g/s	lb/hr	g/s	TPY	g/s
Johnston Scotch Marine Type Boiler [a]	001	JSMTB	46.86	5.90	46.86	5.90	9.37	0.27	1.32	0.166	5.77	0.166
A SAP [b]	002	SAPA	303.3	38.22	250.0	31.50	1,003.0	28.85	--	--	--	--
C SAP [b]	007	SAPC	401.0	50.53	401.0	50.53	1,757.0	50.54	--	--	--	--
D SAP [b]	008	SAPD	401.0	50.53	401.0	50.53	1,757.0	50.54	--	--	--	--
A DAP/MAP Plant [b]	010	ADMP	1.45	0.183	1.45	0.183	6.33	0.182	16.3	2.06	71.5	2.06
Phosphoric Acid Cleanup System	032	PACS	--	--	--	--	--	--	0.94	0.118	4.10	0.118
Molten Sulfur Storage and Handling System: [a]												
--Storage Tank (022)	022	MSTK22	0.13	0.017	0.13	0.017	0.57	0.017	0.13	0.017	0.37	0.011
--Truck Pit A	023	MSTPTA	0.13	0.017	0.13	0.017	0.57	0.017	0.13	0.017	0.41	0.012
--Truck Pit B	024	MSTPTB	0.13	0.017	0.13	0.017	0.57	0.017	0.13	0.017	0.41	0.012
--Storage Tank (033)	033	MSTK33	0.13	0.017	0.13	0.017	0.57	0.017	0.13	0.017	0.41	0.012
--Railcar Unloading Pit		MSRCUP	0.13	0.017	0.13	0.017	0.57	0.017	0.13	0.017	0.36	0.010

[a] Based on information presented in the *PSD Application for the C and D Sulfuric Acid Plants, CF Industries, Inc., Plant City Phosphate Complex*, Golder Associates Inc., January 2004 (0337620).

[b] Based on Title V Permit No. 0570005-017-AV. 24-hour average SO_2 emission rate for the "A" SAP is the proposed limit.

TABLE 6-6

SUMMARY OF STACK AND OPERATING PARAMETERS AND LOCATIONS FOR ALL FUTURE CF INDUSTRIES, PLANT CITY, SOURCES NOT AFFECTED BY THE PROJECT

		Relative Location [a]				Stack and Operating Parameters					Exit			
		X		Y		Height		Diameter		Flow Rate	Temperature		Velocity	
Emission Unit	ISCST3 ID	ft	m	ft	m	ft	m	ft	m	(acfm)	°F	K	ft/s	m/s
Johnson Scotch Boiler	JSMTB	-405.4	-123.6	85.9	26.2	25	7.62	3.5	1.07	35,566	550	560.9	61.6	18.78
"A" SAP	SAPA	-244.4	-74.5	58.5	17.8	110	33.53	5.0	1.52	80,950	83	301.5	68.7	20.94
"C" SAP	SAPC	0.0	0.0	0.0	0.0	199	60.66	8.0	2.44	140,700	158	343.2	46.7	14.22
"D" SAP	SAPD	174.3	53.1	58.9	17.9	199	60.66	8.0	2.44	145,600	161	344.8	48.3	14.71
"A" DAP/MAP Plant	ADMP	-991.6	-302.2	-368.2	-112.2	99	30.18	10.0	3.05	173,300	137	331.5	36.8	11.21
Phosphoric Acid Cleanup System	PACS	-669.3	-204.0	-1115.5	-340.0	80	24.38	4.0	1.22	--	110	316.5	46.4	14.15
Molten Sulfur Storage and Handling System:														
--Storage Tank (022)[b]	MSTK22	-67.3	-20.5	95.4	29.1	38	11.58	2.0	0.61	[e]	212	373.2	-	0.01
--Truck Pit A[b]	MSTPTA	-171.7	-52.3	35.4	10.8	12	3.66	0.67	0.20	[e]	212	373.2	-	0.01
--Truck Pit B[b]	MSTPTB	-125.9	-38.4	-95.5	-29.1	12	3.66	0.67	0.20	[e]	212	373.2	-	0.01
--Storage Tank (033)[c]	MSTK33	-204.8	-62.4	654.2	199.4	41	12.50	-	-	[e]	-	-	-	-
--Railcar Unloading Pit[d]	MSRCUP	-332.3	-101.3	696.5	212.3	0	0.00	-	-	[e]	-	-	-	-

[a] Relative to the C SAP stack, true north.

[b] Source has a rain cap. Modeled with a velocity of 0.01 m/s.

[c] Modeled as a 16.4 x 16.4 m square area source, based on the physical dimensions of the tank.

[d] Modeled as a 3.5 x 19 m area square, based on the physical dimensions of the pit.

[e] Ventilation rate is 30 dscfm.

TABLE 6-8
ESTIMATION OF ANNUAL PM EMISSION FACTORS AND RATES FOR VEHICLE TRAFFIC ON PAVED ROADS IN THE FUTURE, CFI PLANT CITY

General Data		Types of Truck Traffic: DAP/MAP (Type A)	Molten Sulfur (Type B)	Molten Sulfur In DAP/MAP Out (Type C)	H_2SO_4 (Type D)
Throughput Data					
Operation days	Annual	365	365	365	365
Annual Fertilizer Production (TPY) [a]	Annual	2,735,528	--	--	--
Annual Molten Sulfur Storage & Handling (TPY) [a]	Annual	--	965,388	965,388	--
Annual H_2SO_4 Import (TPY) [b]	Annual	--	--	--	106,506
Fertilizer Shipment by Truck (%) [c]	Annual	33	--	--	--
Molten Sulfur Delivery by Truck (%) [c]	Annual	--	91	91	--
H2SO4 Delivery by Truck (%) [c]	Annual	--	--	--	51
Throughput (TPY) [d]	Annual	639,173	614,952	263,551	54,318
Vehicle Data					
Vehicle weight (W), ton	Loaded	38	39.5	40	39
	Unloaded	14	15.5	16.5	14.5
	Average	26	27.5	28.25	26.75
	Payload	24	24	23.5	24.5
Number of vehicles (Material throughput/average vehicle weight)	Annual	26,632	25,623	11,215	2,217
Number of vehicles/Day	Daily	73	70	31	6
Distance (miles) travelled/ vehicle/ route [e]	Per trip	1.61	1.06	2.11	1.06
VMT (no. vehicles x miles travelled)	Annual	43,000	27,050	23,679	2,341
General/ Site Characteristics					
Days of precipitation greater than or	Short-term	0	0	0	0
equal to 0.254 mm (p)	Annual	120	120	120	120
Silt Loading (sL), g/m^2 [f]		0.89	0.89	0.89	0.89
Particle size multiplier, PM (k)		0.082	0.082	0.082	0.082
PM_{10} (k)		0.016	0.016	0.016	0.016
Emission Factor Fleet Exhaust (C), lb/VMT		0.00047	0.00047	0.00047	0.00047
Emission Control Data					
Emission control method		Sweeping	Sweeping	Sweeping	Sweeping
Emission control removal efficiency (%)[g]		20	20	20	20
Emission Factor (EF) Equation (Equation 1, AP-42, Section 13.2.1.3)					
Uncontrolled EF (UEF) Equation - PM	UEF(lb/VMT) = [k x $\{(sL/2)^{0.65}$ x $(W(ton, ave)/3)^{1.5}\}$-C] x [1 - p/(4 x 365)]				
PM_{10}	UEF(lb/VMT) = [k x $\{(sL/2)^{0.65}$ x $(W(ton, ave)/3)^{1.5}\}$-C] x [1 - p/(4 x 365)]				
Controlled (Final) EF (CEF) Equation	CEF(lb/VMT) = UEF (lb/VMT) x (100 - Removal efficiency (%))				
Calculated PM Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Annual	1.13	1.23	1.28	1.18
Controlled (Final) EF, lb/VMT	Annual	0.91	0.99	1.03	0.95
Calculated PM_{10} Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Annual	0.221	0.240	0.250	0.231
Controlled (Final) EF, lb/VMT	Annual	0.177	0.192	0.200	0.184
Estimated Emission Rate (ER)					
PM Emission Rate (TPY)	TPY	19.5	13.3	12.2	1.1
PM_{10} Emission Rate (TPY)	TPY	3.80	2.60	2.37	0.22

Source: USEPA, 2003 (AP-42, Section 13.2.1, Paved Roads)

[a] From Permit Nos. 0570005-017-AV and 0570005-019-AC.

[b] Up to 310,000 TPY of H_2SO_4 have been imported in the past. Future H_2SO_4 import is 310,000 minus the annual production increase of 203,494 TPY

[c] Conservative assumption based on current plant data. About 33% fertilizer, 90.5% molten sulfur, and 51% H_2SO_4 are transported by trucks.

[d] Throughput: Type A = Annual Fertilizer Production x Percent Shipped by Truck - Amount shipped by Type C Trucks.
Type B = Annual Molten Sulfur Capacity x Percent delivered by truck x 70% delivery by Type B Trucks.
Type C = Annual Molten Sulfur Capacity x Percent delivered by truck x 30% delivery by Type C Trucks.
Type D = Annual H_2SO_4 Import x Percent delivered by trucks.

[e] Travel distance of round-trip from fence to drop-off/pick-up location.

[f] Based on silt loading test conducted at CFI on 10/8/06.

[g] Control efficiency based on silt loading test conducted at the CFI on 10/8/06 before and after sweeping.

TABLE 6-12
ESTIMATION OF DAILY PM EMISSION FACTORS AND RATES
FOR VEHICLE TRAFFIC ON PAVED ROADS IN 1974, CFI PLANT CITY

General Data		Types of Truck Traffic			
		DAP/MAP (Type A)	Molten Sulfur (Type B)	Molten Sulfur In DAP/MAP Out (Type C)	H_2SO_4 (Type D)
Throughput Data					
Operation days	Annual	365	365	365	365
Annual Fertilizer Production (TPY) [a]	Annual	561,177	--	--	--
Annual Molten Sulfur Storage & Handling (TPY) [a]	Annual	--	240,168	240,168	--
Annual H_2SO_4 Import (TPY) [b]	Annual	--	--	--	0
Fertilizer Shipment by Truck (%) [c]	Annual	33	--	--	--
Molten Sulfur Delivery by Truck (%) [c]	Annual	--	91	91	--
H2SO4 Delivery by Truck (%) [c]	Annual	--	--	--	60
Throughput (TPY)	Annual	119,623	152,987	65,566	0
Vehicle Data					
Vehicle weight (W), ton	Loaded	38	39.5	40	39
	Unloaded	14	15.5	16.5	14.5
	Average	26	27.5	28.25	26.75
	Payload	24	24	23.5	24.5
Number of vehicles (Material throughput/average vehicle weight)	Annual	4,984	6,374	2,790	0
Number of vehicles/Day	Daily	14	17	8	0
Distance (miles) travelled/ vehicle/ route [d]	Per trip	1.61	1.06	2.11	1.06
VMT (no. vehicles x miles travelled)	Daily	22.0	18.4	16.1	0.0
General/ Site Characteristics					
Days of precipitation greater than or	Short-term	0	0	0	0
equal to 0.254 mm (p)	Annual	120	120	120	120
Silt Loading (sL), g/m^2 [e]		0.89	0.89	0.89	0.89
Particle size multiplier, PM (k)		0.082	0.082	0.082	0.082
PM_{10} (k)		0.016	0.016	0.016	0.016
Emission Factor Fleet Exhaust (C), lb/VMT		0.00047	0.00047	0.00047	0.00047
Emission Control Data					
Emission control method		None	None	None	None
Emission control removal efficiency, %		0	0	0	0
Emission Factor (EF) Equation (Equation 1, AP-42, Section 13.2.1.3)					
Uncontrolled EF (UEF) Equation - PM	UEF (lb/VMT) = [k x {(sL/2)$^{0.65}$x (W(ton, ave)/3)$^{1.5}$}-C]				
PM_{10}	UEF (lb/VMT) = [k x {(sL/2)$^{0.65}$x (W(ton, ave)/3)$^{1.5}$}-C]				
Controlled (Final) EF (CEF) Equation	CEF (lb/VMT) = UEF (lb/VMT) x (100 - Removal efficiency (%))				
Calculated PM Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Daily	1.24	1.34	1.40	1.29
Controlled (Final) EF, lb/VMT	Daily	1.24	1.34	1.40	1.29
Calculated PM_{10} Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Daily	0.241	0.262	0.273	0.251
Controlled (Final) EF, lb/VMT	Daily	0.241	0.262	0.273	0.251
Estimated Emission Rate (ER)					
PM Emission Rate (lb)	Daily	27.2	24.8	22.6	0.0
PM_{10} Emission Rate (lb)	Daily	5.31	4.83	4.40	0.00

Source: USEPA, 2003 (AP-42, Section 13.2.1, Paved Roads)

[a] CFI Data for annual P_2O_5 input and calculations based on 2003 & 2004 AOR data.

[b] No H_2SO_4 was imported in 1974.

[c] Conservative assumption based on current plant data. About 33% fertilizer, 90.5% molten sulfur, and 51% H_2SO_4 are transported by trucks.

[c] Throughput: Type A = Annual Fertilizer Production x Percent Shipped by Truck - Amount shipped by Type C Trucks.
Type B = Annual Molten Sulfur Capacity x Percent delivered by truck x 70% delivery by Type B Trucks.
Type C = Annual Molten Sulfur Capacity x Percent delivered by truck x 30% delivery by Type C Trucks.
Type D = Annual H_2SO_4 Import x Percent delivered by trucks.

[d] Travel distance of round-trip from fence to drop-off/pick-up location.

[e] Based on silt loading test conducted at CFI on 10/8/06.

TABLE 6-13
ESTIMATION OF ANNUAL PM EMISSION FACTORS AND RATES FOR VEHICLE TRAFFIC ON PAVED ROADS IN 1974, CFI Plant City

General Data		Types of Truck Traffic			
		DAP/MAP (Type A)	Molten Sulfur (Type B)	Molten Sulfur In DAP/MAP Out (Type C)	H_2SO_4 (Type D)
Throughput Data					
Operation days	Annual	365	365	365	365
Annual Fertilizer Production (TPY) [a]	Annual	561,177	--	--	--
Annual Molten Sulfur Storage & Handling (TPY) [a]	Annual	--	240,168	240,168	--
Annual H_2SO_4 Import (TPY) [b]	Annual	--	--	--	0
Fertilizer Shipment by Truck (%) [c]	Annual	33	--	--	--
Molten Sulfur Delivery by Truck (%) [c]	Annual	--	91	91	--
H2SO4 Delivery by Truck (%) [c]	Annual	--	--	--	51
Throughput (TPY)	Annual	119,623	152,987	65,566	0
Vehicle Data					
Vehicle weight (W), ton	Loaded	38	39.5	40	39
	Unloaded	14	15.5	16.5	14.5
	Average	26	27.5	28.25	26.75
	Payload	24	24	23.5	24.5
Number of vehicles (Material throughput/average vehicle weight)	Annual	4,984	6,374	2,790	0
Number of vehicles/Day	Daily	14	17	8	0
Distance (miles) travelled/ vehicle/ route [d]	Per trip	1.61	1.06	2.11	1.06
VMT (no. vehicles x miles travelled)	Annual	8,048	6,730	5,891	0
General/ Site Characteristics					
Days of precipitation greater than or	Short-term	0	0	0	0
equal to 0.254 mm (p)	Annual	120	120	120	120
Silt Loading (sL), g/m^2 [e]		0.89	0.89	0.89	0.89
Particle size multiplier, PM (k)		0.082	0.082	0.082	0.082
PM_{10} (k)		0.016	0.016	0.016	0.016
Emission Factor Fleet Exhaust (C), lb/VMT		0.00047	0.00047	0.00047	0.00047
Emission Control Data					
Emission control method		None	None	None	None
Emission control removal efficiency, %		0	0	0	0
Emission Factor (EF) Equation (Equation 1, AP-42, Section 13.2.1.3)					
Uncontrolled EF (UEF) Equation - PM		$UEF(lb/VMT) = [k \times \{(sL/2)^{0.65} \times (W(ton, ave)/3)^{1.5}\} - C] \times [1 - p/(4 \times 365)]$			
PM_{10}		$UEF(lb/VMT) = [k \times \{(sL/2)^{0.65} \times (W(ton, ave)/3)^{1.5}\} - C] \times [1 - p/(4 \times 365)]$			
Controlled (Final) EF (CEF) Equation		CEF(lb/VMT) = UEF (lb/VMT) x (100 - Removal efficiency (%))			
Calculated PM Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Annual	1.13	1.23	1.28	1.18
Controlled (Final) EF, lb/VMT	Annual	1.13	1.23	1.28	1.18
Calculated PM_{10} Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Annual	0.221	0.240	0.250	0.231
Controlled (Final) EF, lb/VMT	Annual	0.221	0.240	0.250	0.231
Estimated Emission Rate (ER)					
PM Emission Rate (TPY)	TPY	4.6	4.2	3.8	0.0
PM_{10} Emission Rate (TPY)	TPY	0.89	0.81	0.74	0.00

Source: USEPA, 2003 (AP-42, Section 13.2.1, Paved Roads)

[a] CFI Data for annual P_2O_5 input and calculations based on 2003 & 2004 AOR data.

[b] No H_2SO_4 was imported in 1974.

[c] Conservative assumption based on current plant data. About 33% fertilizer, 90.5% molten sulfur, and 51% H_2SO_4 are transported by trucks.

[c] Throughput: Type A = Annual Fertilizer Production x Percent Shipped by Truck - Amount shipped by Type C Trucks.
Type B = Annual Molten Sulfur Capacity x Percent delivered by truck x 70% delivery by Type B Trucks.
Type C = Annual Molten Sulfur Capacity x Percent delivered by truck x 30% delivery by Type C Trucks.
Type D = Annual H_2SO_4 Import x Percent delivered by trucks.

[d] Travel distance of round-trip from fence to drop-off/pick-up location.

[e] Based on silt loading test conducted at CFI on 10/8/06.

TABLE 6-15
BUILDING/STRUCTURE DIMENSIONS USED IN THE AIR DISPERSION MODELING ANALYSIS

Building / Structure	Building Dimensions					
	Height		Length		Width	
	ft	m	ft	m	ft	m
Uranium Control Room	22.0	6.7	135.0	41.1	42.6	13.0
Uranium Clarifier No. 1	22.6	6.9	80.0 [a]	24.4	-	-
Uranium Clarifier No. 2	22.6	6.9	80.0 [a]	24.4	-	-
Uranium Storage Tank 1	66.0	20.1	49.0 [a]	14.9	-	-
Uranium Storage Tank 2	66.0	20.1	49.0 [a]	14.9	-	-
Uranium Belt Filter	75.0	22.9	90.0	27.4	48.0	14.6
ROP Maintenance Warehouse	60.0	18.3	99.0	30.2	400.0	121.9
Cogeneration Building	66.0	20.1	142.0	43.3	79.0	24.1
A DAP Granulation	93.0	28.3	121.0	36.9	51.0	15.5
XYZ DAP Granulation	150.0	45.7	140.0	42.7	277.0	84.4
A Shipping Warehouse	67.0	20.4	130.0	39.6	440.0	134.1
B Shipping Warehouse	87.0	26.5	159.0	48.5	337.0	102.7
A PAP Belt Filter	65.0	19.8	92.0	28.0	33.0	10.1
B PAP Belt Filter	96.0	29.3	32.0	9.8	123.0	37.5
A PAP Byrd Filter	71.0	21.6	75.0	22.9	75.0	22.9
B PAP Byrd Filter	86.5	26.4	80.0	24.4	80.0	24.4
Molten Sulfur Storage Tank 022	30.0	9.1	49.0 [a]	14.9	-	-
A Shipping Elevator Building	100.0	30.5	37.9	11.6	32.8	10.0
B Shipping Elevator Building	96.0	29.3	54.5	16.6	44.0	13.4
"A" Railcar and Truck Loading St	40.0	12.2	66.6	20.3	40.4	12.3

[a] Indicates a tank diameter.

Source: CF Industries, 2005.

TABLE A-1
ESTIMATION OF PM EMISSION FACTORS AND RATES FOR VEHICLE TRAFFIC ON PAVED ROADS DUE TO THE PROJECT, CF INDUSTRIES, PLANT CITY FACILITY

General Data		Types of Truck Traffic: DAP/MAP (Type A)	Molten Sulfur (Type B)	Molten Sulfur In DAP/MAP Out (Type C)	H_2SO_4 (Type D)
Throughput Data					
Operation days	Annual	365	365	365	365
Increase in Fertilizer Production (TPY) [a]	Annual	373,019	--	--	--
Increase in Molten Sulfur Throughput (TPY) [b]	Annual	--	66,714	66,714	--
Reduced Throughput of H_2SO_4 Import (TPY) [c]	Annual	--	--	--	-203,494
Fertilizer Shipment by Truck (%) [d]	Annual	33	--	--	--
Molten Sulfur Delivery by Truck (%) [d]	Annual	--	91	91	--
H_2SO_4 Delivery by Truck (%) [d]	Annual	--	--	--	51
Throughput (TPY) [e]	Annual	104,883	42,497	18,213	-103,782
Vehicle Data					
Vehicle weight (W), ton	Loaded	38	39.5	40	39
	Unloaded	14	15.5	16.5	14.5
	Average	26	27.5	28.25	26.75
	Payload	24	24	23.5	24.5
Number of vehicles (Material throughput/average vehicle weight)	Annual	4,370	1,771	775	-4,236
Number of vehicles/Day	Daily	12	5	2	-12
Distance (miles) travelled/ vehicle/ route [f]	Per trip	1.61	1.06	2.11	1.06
VMT (no. vehicles x miles travelled)	Daily	19.3	5.1	4.5	-12.3
General/ Site Characteristics					
Days of precipitation greater than or	Short-term	0	0	0	0
equal to 0.254 mm (p)	Annual	120	120	120	120
Silt Loading (sL), g/m^2 [g]		0.89	0.89	0.89	0.89
Particle size multiplier, PM (k)		0.082	0.082	0.082	0.082
PM_{10} (k)		0.016	0.016	0.016	0.016
Emission Factor Fleet Exhaust (C), lb/VMT		0.00047	0.00047	0.00047	0.00047
Emission Control Data					
Emission control method		Sweeping	Sweeping	Sweeping	Sweeping
Emission control removal efficiency (%) [h]		20	20	20	20
Emission Factor (EF) Equation (Equation 1, AP-42, Section 13.2.1.3)					
Uncontrolled EF (UEF) Equation - PM		$UEF(lb/VMT) = [k \times \{(sL/2)^{0.65} \times (W(ton, ave)/3)^{1.5}\} - C]$			
PM_{10}		$UEF(lb/VMT) = [k \times \{(sL/2)^{0.65} \times (W(ton, ave)/3)^{1.5}\} - C]$			
Controlled (Final) EF (CEF) Equation		CEF(lb/VMT) = UEF (lb/VMT) x [100 - Removal efficiency (%)]			
Calculated PM Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Daily	1.24	1.34	1.40	1.29
Controlled (Final) EF, lb/VMT	Daily	0.99	1.08	1.12	1.03
Calculated PM_{10} Emission Factor (EF)					
Uncontrolled EF, lb/VMT	Daily	0.241	0.262	0.273	0.251
Controlled (Final) EF, lb/VMT	Daily	0.193	0.209	0.218	0.201
Estimated Emission Rate (ER)					
PM Emission Rate (lb)	Daily	19.1	5.5	5.0	-12.6
PM_{10} Emission Rate (lb)	Daily	3.72	1.07	0.98	-2.46

Source: USEPA, 2003 (AP-42, Section 13.2.1, Paved Roads)

[a] Increase in fertilizer production is based on 20% of average actual fertilizer production from 2003 and 2004.

[b] Throughput of increased S is based on the throughput of reduced import of H_2SO_4 and calculated assuming 100% S converts into 98% pure H_2SO_4, Molten S (TPY) = H_2SO_4 (TPY) x $MW_S/(0.98 * MW_{H2SO4})$, where $MW_S = 32$ and $MW_{H2SO4} = 98$.

[c] Reduction in H_2SO_4 throughput is based on the average A-SAP production of 2003 and 2004 (from AORs) and future potential rpoduction.

[d] Conservative assumption based on current plant data. About 33% fertilizer, 90.5% molten sulfur, and 51% H_2SO_4 are transported by trucks.

[e] Throughput: Type A = Annual Fertilizer Production x Percent Shipped by Truck - Amount shipped by Type C Trucks.
Type B = Annual Molten Sulfur Capacity x Percent delivered by truck x 70% delivery by Type B Trucks.
Type C = Annual Molten Sulfur Capacity x Percent delivered by truck x 30% delivery by Type C Trucks.
Type D = Annual H_2SO_4 Import x Percent delivered by trucks.

[f] Travel distance of round-trip from fence to drop-off/pick-up location.

[g] Based on silt loading test conducted at CFI on 10/8/06.

[h] Control efficiency based on silt loading test conducted at the CFI on 10/8/06 before and after sweeping.

TABLE D-1
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - 24-HOUR AVERAGE PM_{10} EMISSIONS INCREASE DUE TO THE PROJECT

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TRUCK PATH 1											
TP1VOL01	-443.96	567.68	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL02	-435.73	546.35	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL03	-427.50	525.02	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL04	-419.28	503.69	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL05	-411.05	482.36	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL06	-402.82	461.04	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL07	-394.59	439.71	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL08	-386.36	418.38	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL09	-378.13	397.05	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL10	-369.91	375.72	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL11	-361.68	354.39	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL12	-353.45	333.06	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL13	-344.40	314.49	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL14	-334.69	296.23	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL15	-324.99	277.96	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL16	-315.28	259.70	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL17	-305.58	241.43	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL18	-295.87	223.16	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL19	-286.17	204.90	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL20	-274.81	190.91	2	2	2	2	0.00033	0.00014	0.00006	-0.00033	0.00021
TP1VOL21	-262.07	177.93	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL22	-248.77	158.51	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL23	-236.58	138.22	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL24	-224.40	117.93	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL25	-212.21	97.64	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL26	-200.02	77.35	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL27	-187.83	57.06	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL28	-178.06	35.77	--	2	2	2	--	0.00014	0.00006	-0.00033	-0.00012
TP1VOL29	-170.10	13.90	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL30	-162.46	-8.09	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL31	-154.81	-30.07	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL32	-147.17	-52.06	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL33	-139.53	-74.04	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL34	-122.82	-75.65	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL35	-102.29	-69.99	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL36	-81.77	-64.33	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL37	-61.24	-58.67	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL38	-49.90	-62.36	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL39	-35.94	-65.34	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL40	-25.32	-54.07	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL41	-27.75	-35.16	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL42	-34.64	-16.10	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL43	-41.53	2.96	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL44	-48.42	22.03	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL45	-55.31	41.09	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL46	-75.10	46.85	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL47	-98.84	47.00	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL48	-122.59	47.16	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL49	-138.65	43.68	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL50	-154.38	38.18	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TP1VOL51	-170.11	32.67	--	1	1	1	--	0.00007	0.00003	-0.00016	-0.00006
TRUCK PATH 2											
TP2VOL01	-281.98	175.03	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL02	-298.33	170.76	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL03	-314.69	166.50	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL04	-331.04	162.23	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL05	-347.57	171.01	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL06	-362.62	185.45	2	--	2	--	0.00033	--	0.00006	--	0.00039

TABLE D-1
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - 24-HOUR AVERAGE PM_{10} EMISSIONS INCREASE DUE TO THE PROJECT

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TP2VOL07	-377.67	199.89	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL08	-392.72	214.33	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL09	-407.77	228.77	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL10	-422.82	243.22	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL11	-441.48	242.22	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL12	-461.45	235.05	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL13	-481.42	227.88	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL14	-501.39	220.70	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL15	-521.36	213.53	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL16	-522.98	197.38	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL17	-517.29	177.49	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL18	-511.61	157.61	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL19	-505.93	137.72	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL20	-500.25	117.83	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL21	-493.11	95.75	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL22	-485.71	73.76	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL23	-478.31	51.76	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL24	-470.91	29.77	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL25	-463.50	7.78	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL26	-456.10	-14.22	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL27	-448.70	-36.21	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL28	-441.30	-58.21	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL29	-433.90	-80.20	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL30	-426.50	-102.20	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL31	-419.09	-124.19	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL32	-411.69	-146.19	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL33	-404.29	-168.18	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL34	-396.89	-190.18	2	--	2	--	0.00033	--	0.00006	--	0.00039
TP2VOL35	-389.49	-212.17	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL36	-382.08	-234.16	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL37	-369.75	-242.93	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL38	-353.57	-247.72	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL39	-332.32	-243.42	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL40	-321.34	-225.42	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL41	-323.53	-208.96	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL42	-329.79	-192.58	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL43	-344.20	-190.74	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL44	-362.20	-196.27	1	--	1	--	0.00016	--	0.00003	--	0.00020
TP2VOL45	-380.20	-201.80	1	--	1	--	0.00016	--	0.00003	--	0.00020
		Total By Truck =	119	79	158	79	0.0195	0.0056	0.0051	-0.0129	
		Total PM_{10} Emissions per Truck (lb/day) [b] =	3.72	1.07	0.98	-2.46					
		Total Emissions per Truck (g/s) =	0.0195	0.0056	0.0051	-0.0129					

[a] Truck paths are represented by volume sources. If the trucks follow the same path on their return journey, volumes representing that path segment are used twice.

[b] See Table A-1 for calculations of emissions per truck type.

Note: Type of Trucks:
Type A - Trucks shipping out DAP/MAP.
Type B - Trucks delivering molten sulfur.
Type C - Trucks delivering molten sulfur and and carrying out DAP/MAP on their return journey.
Type D - Trucks delivering H2SO4.

TABLE D-2
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - FUTURE POTENTIAL 24-HOUR AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TRUCK PATH 1											
TP1VOL01	-443.96	567.68	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL02	-435.73	546.35	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL03	-427.50	525.02	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL04	-419.28	503.69	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL05	-411.05	482.36	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL06	-402.82	461.04	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL07	-394.59	439.71	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL08	-386.36	418.38	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL09	-378.13	397.05	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL10	-369.91	375.72	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL11	-361.68	354.39	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL12	-353.45	333.06	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL13	-344.40	314.49	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL14	-334.69	296.23	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL15	-324.99	277.96	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL16	-315.28	259.70	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL17	-305.58	241.43	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL18	-295.87	223.16	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL19	-286.17	204.90	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL20	-274.81	190.91	2	2	2	2	0.00200	0.00206	0.00094	0.00017	0.00518
TP1VOL21	-262.07	177.93	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL22	-248.77	158.51	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL23	-236.58	138.22	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL24	-224.40	117.93	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL25	-212.21	97.64	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL26	-200.02	77.35	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL27	-187.83	57.06	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL28	-178.06	35.77	--	2	2	2	--	0.00206	0.00094	0.00017	0.00318
TP1VOL29	-170.10	13.90	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL30	-162.46	-8.09	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL31	-154.81	-30.07	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL32	-147.17	-52.06	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL33	-139.53	-74.04	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL34	-122.82	-75.65	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL35	-102.29	-69.99	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL36	-81.77	-64.33	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL37	-61.24	-58.67	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL38	-49.90	-62.36	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL39	-35.94	-65.34	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL40	-25.32	-54.07	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL41	-27.75	-35.16	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL42	-34.64	-16.10	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL43	-41.53	2.96	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL44	-48.42	22.03	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL45	-55.31	41.09	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL46	-75.10	46.85	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL47	-98.84	47.00	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL48	-122.59	47.16	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL49	-138.65	43.68	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL50	-154.38	38.18	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TP1VOL51	-170.11	32.67	--	1	1	1	--	0.00103	0.00047	0.00009	0.00159
TRUCK PATH 2											
TP2VOL01	-281.98	175.03	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL02	-298.33	170.76	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL03	-314.69	166.50	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL04	-331.04	162.23	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL05	-347.57	171.01	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL06	-362.62	185.45	2	--	2	--	0.00200	--	0.00094	--	0.00294

TABLE D-2
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - FUTURE POTENTIAL 24-HOUR AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TP2VOL07	-377.67	199.89	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL08	-392.72	214.33	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL09	-407.77	228.77	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL10	-422.82	243.22	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL11	-441.48	242.22	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL12	-461.45	235.05	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL13	-481.42	227.88	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL14	-501.39	220.70	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL15	-521.36	213.53	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL16	-522.98	197.38	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL17	-517.29	177.49	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL18	-511.61	157.61	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL19	-505.93	137.72	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL20	-500.25	117.83	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL21	-493.11	95.75	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL22	-485.71	73.76	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL23	-478.31	51.76	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL24	-470.91	29.77	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL25	-463.50	7.78	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL26	-456.10	-14.22	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL27	-448.70	-36.21	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL28	-441.30	-58.21	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL29	-433.90	-80.20	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL30	-426.50	-102.20	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL31	-419.09	-124.19	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL32	-411.69	-146.19	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL33	-404.29	-168.18	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL34	-396.89	-190.18	2	--	2	--	0.00200	--	0.00094	--	0.00294
TP2VOL35	-389.49	-212.17	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL36	-382.08	-234.16	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL37	-369.75	-242.93	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL38	-353.57	-247.72	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL39	-332.32	-243.42	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL40	-321.34	-225.42	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL41	-323.53	-208.96	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL42	-329.79	-192.58	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL43	-344.20	-190.74	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL44	-362.20	-196.27	1	--	1	--	0.00100	--	0.00047	--	0.00147
TP2VOL45	-380.20	-201.80	1	--	1	--	0.00100	--	0.00047	--	0.00147
		Total By Truck =	119	79	158	79	0.1191	0.0815	0.0743	0.0068	
		Total PM_{10} Emissions per Truck (lb/day) [b] =	22.69	15.53	14.15	1.29					
		Total Emissions per Truck (g/s) =	0.1191	0.0815	0.0743	0.0068					

[a] Truck paths are represented by volume sources. If the trucks follow the same path on their return journey, volumes representing that path segment are used twice.

[b] See Table 6-7 for calculations of emissions per truck type.

Note: Type of Trucks:
Type A - Trucks shipping out DAP/MAP.
Type B - Trucks delivering molten sulfur.
Type C - Trucks delivering molten sulfur and and carrying out DAP/MAP on their return journey.
Type D - Trucks delivering H2SO4.

TABLE D-3
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - BASELINE (1974) 24-HOUR AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TRUCK PATH 1											
TP1VOL01	-443.96	567.68	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL02	-435.73	546.35	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL03	-427.50	525.02	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL04	-419.28	503.69	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL05	-411.05	482.36	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL06	-402.82	461.04	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL07	-394.59	439.71	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL08	-386.36	418.38	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL09	-378.13	397.05	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL10	-369.91	375.72	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL11	-361.68	354.39	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL12	-353.45	333.06	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL13	-344.40	314.49	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL14	-334.69	296.23	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL15	-324.99	277.96	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL16	-315.28	259.70	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL17	-305.58	241.43	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL18	-295.87	223.16	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL19	-286.17	204.90	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL20	-274.81	190.91	2	2	2	2	0.00047	0.00064	0.00029	0.00000	0.00140
TP1VOL21	-262.07	177.93	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL22	-248.77	158.51	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL23	-236.58	138.22	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL24	-224.40	117.93	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL25	-212.21	97.64	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL26	-200.02	77.35	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL27	-187.83	57.06	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL28	-178.06	35.77	--	2	2	2	--	0.00064	0.00029	0.00000	0.00093
TP1VOL29	-170.10	13.90	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL30	-162.46	-8.09	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL31	-154.81	-30.07	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL32	-147.17	-52.06	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL33	-139.53	-74.04	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL34	-122.82	-75.65	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL35	-102.29	-69.99	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL36	-81.77	-64.33	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL37	-61.24	-58.67	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL38	-49.90	-62.36	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL39	-35.94	-65.34	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL40	-25.32	-54.07	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL41	-27.75	-35.16	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL42	-34.64	-16.10	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL43	-41.53	2.96	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL44	-48.42	22.03	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL45	-55.31	41.09	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL46	-75.10	46.85	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL47	-98.84	47.00	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL48	-122.59	47.16	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL49	-138.65	43.68	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL50	-154.38	38.18	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TP1VOL51	-170.11	32.67	--	1	1	1	--	0.00032	0.00015	0.00000	0.00047
TRUCK PATH 2											
TP2VOL01	-281.98	175.03	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL02	-298.33	170.76	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL03	-314.69	166.50	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL04	-331.04	162.23	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL05	-347.57	171.01	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL06	-362.62	185.45	2	--	2	--	0.00047	--	0.00029	--	0.00076

TABLE D-3
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - BASELINE (1974) 24-HOUR AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TP2VOL07	-377.67	199.89	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL08	-392.72	214.33	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL09	-407.77	228.77	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL10	-422.82	243.22	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL11	-441.48	242.22	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL12	-461.45	235.05	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL13	-481.42	227.88	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL14	-501.39	220.70	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL15	-521.36	213.53	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL16	-522.98	197.38	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL17	-517.29	177.49	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL18	-511.61	157.61	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL19	-505.93	137.72	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL20	-500.25	117.83	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL21	-493.11	95.75	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL22	-485.71	73.76	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL23	-478.31	51.76	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL24	-470.91	29.77	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL25	-463.50	7.78	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL26	-456.10	-14.22	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL27	-448.70	-36.21	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL28	-441.30	-58.21	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL29	-433.90	-80.20	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL30	-426.50	-102.20	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL31	-419.09	-124.19	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL32	-411.69	-146.19	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL33	-404.29	-168.18	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL34	-396.89	-190.18	2	--	2	--	0.00047	--	0.00029	--	0.00076
TP2VOL35	-389.49	-212.17	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL36	-382.08	-234.16	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL37	-369.75	-242.93	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL38	-353.57	-247.72	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL39	-332.32	-243.42	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL40	-321.34	-225.42	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL41	-323.53	-208.96	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL42	-329.79	-192.58	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL43	-344.20	-190.74	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL44	-362.20	-196.27	1	--	1	--	0.00023	--	0.00015	--	0.00038
TP2VOL45	-380.20	-201.80	1	--	1	--	0.00023	--	0.00015	--	0.00038
Total By Truck =			119	79	158	79	0.0279	0.0253	0.0231	0.0000	
Total PM_{10} Emissions per Truck (lb/day) [b] =			5.31	4.83	4.40	0.00					
Total Emissions per Truck (g/s) =			0.0279	0.0253	0.0231	0.0000					

[a] Truck paths are represented by volume sources. If the trucks follow the same path on their return journey, volumes representing that path segment are used twice.

[b] See Table 6-12 for calculations of emissions per truck type.

Note: Type of Trucks:
Type A - Trucks shipping out DAP/MAP.
Type B - Trucks delivering molten sulfur.
Type C - Trucks delivering molten sulfur and and carrying out DAP/MAP on their return journey.
Type D - Trucks delivering H2SO4.

TABLE D-4
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - FUTURE POTENTIAL ANNUAL AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TRUCK PATH 1											
TP1VOL01	-443.96	567.68	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL02	-435.73	546.35	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL03	-427.50	525.02	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL04	-419.28	503.69	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL05	-411.05	482.36	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL06	-402.82	461.04	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL07	-394.59	439.71	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL08	-386.36	418.38	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL09	-378.13	397.05	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL10	-369.91	375.72	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL11	-361.68	354.39	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL12	-353.45	333.06	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL13	-344.40	314.49	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL14	-334.69	296.23	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL15	-324.99	277.96	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL16	-315.28	259.70	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL17	-305.58	241.43	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL18	-295.87	223.16	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL19	-286.17	204.90	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL20	-274.81	190.91	2	2	2	2	0.00184	0.00189	0.00086	0.00016	0.00475
TP1VOL21	-262.07	177.93	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL22	-248.77	158.51	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL23	-236.58	138.22	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL24	-224.40	117.93	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL25	-212.21	97.64	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL26	-200.02	77.35	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL27	-187.83	57.06	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL28	-178.06	35.77	--	2	2	2	--	0.00189	0.00086	0.00016	0.00291
TP1VOL29	-170.10	13.90	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL30	-162.46	-8.09	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL31	-154.81	-30.07	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL32	-147.17	-52.06	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL33	-139.53	-74.04	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL34	-122.82	-75.65	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL35	-102.29	-69.99	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL36	-81.77	-64.33	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL37	-61.24	-58.67	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL38	-49.90	-62.36	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL39	-35.94	-65.34	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL40	-25.32	-54.07	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL41	-27.75	-35.16	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL42	-34.64	-16.10	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL43	-41.53	2.96	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL44	-48.42	22.03	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL45	-55.31	41.09	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL46	-75.10	46.85	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL47	-98.84	47.00	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL48	-122.59	47.16	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL49	-138.65	43.68	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL50	-154.38	38.18	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TP1VOL51	-170.11	32.67	--	1	1	1	--	0.00095	0.00043	0.00008	0.00146
TRUCK PATH 2											
TP2VOL01	-281.98	175.03	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL02	-298.33	170.76	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL03	-314.69	166.50	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL04	-331.04	162.23	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL05	-347.57	171.01	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL06	-362.62	185.45	2	--	2	--	0.00184	--	0.00086	--	0.00270

TABLE D-4
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - FUTURE POTENTIAL ANNUAL AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TP2VOL07	-377.67	199.89	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL08	-392.72	214.33	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL09	-407.77	228.77	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL10	-422.82	243.22	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL11	-441.48	242.22	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL12	-461.45	235.05	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL13	-481.42	227.88	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL14	-501.39	220.70	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL15	-521.36	213.53	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL16	-522.98	197.38	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL17	-517.29	177.49	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL18	-511.61	157.61	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL19	-505.93	137.72	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL20	-500.25	117.83	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL21	-493.11	95.75	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL22	-485.71	73.76	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL23	-478.31	51.76	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL24	-470.91	29.77	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL25	-463.50	7.78	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL26	-456.10	-14.22	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL27	-448.70	-36.21	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL28	-441.30	-58.21	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL29	-433.90	-80.20	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL30	-426.50	-102.20	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL31	-419.09	-124.19	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL32	-411.69	-146.19	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL33	-404.29	-168.18	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL34	-396.89	-190.18	2	--	2	--	0.00184	--	0.00086	--	0.00270
TP2VOL35	-389.49	-212.17	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL36	-382.08	-234.16	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL37	-369.75	-242.93	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL38	-353.57	-247.72	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL39	-332.32	-243.42	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL40	-321.34	-225.42	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL41	-323.53	-208.96	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL42	-329.79	-192.58	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL43	-344.20	-190.74	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL44	-362.20	-196.27	1	--	1	--	0.00092	--	0.00043	--	0.00135
TP2VOL45	-380.20	-201.80	1	--	1	--	0.00092	--	0.00043	--	0.00135
		Total By Truck =	119	79	158	79	0.1093	0.0748	0.0682	0.0062	
		Total PM_{10} Emissions per Truck (TPY) [b] =	3.80	2.60	2.37	0.22					
		Total Emissions per Truck (g/s) =	0.1093	0.0748	0.0682	0.0062					

[a] Truck paths are represented by volume sources. If the trucks follow the same path on their return journey, volumes representing that path segment are used twice.

[b] See Table 6-8 for calculations of emissions per truck type.

Note: Type of Trucks:
Type A - Trucks shipping out DAP/MAP.
Type B - Trucks delivering molten sulfur.
Type C - Trucks delivering molten sulfur and and carrying out DAP/MAP on their return journey.
Type D - Trucks delivering H2SO4.

TABLE D-5
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - BASELINE (1974) ANNUAL AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TRUCK PATH 1											
TP1VOL01	-443.96	567.68	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL02	-435.73	546.35	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL03	-427.50	525.02	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL04	-419.28	503.69	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL05	-411.05	482.36	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL06	-402.82	461.04	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL07	-394.59	439.71	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL08	-386.36	418.38	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL09	-378.13	397.05	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL10	-369.91	375.72	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL11	-361.68	354.39	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL12	-353.45	333.06	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL13	-344.40	314.49	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL14	-334.69	296.23	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL15	-324.99	277.96	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL16	-315.28	259.70	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL17	-305.58	241.43	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL18	-295.87	223.16	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL19	-286.17	204.90	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL20	-274.81	190.91	2	2	2	2	0.00043	0.00059	0.00027	0.00000	0.00129
TP1VOL21	-262.07	177.93	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL22	-248.77	158.51	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL23	-236.58	138.22	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL24	-224.40	117.93	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL25	-212.21	97.64	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL26	-200.02	77.35	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL27	-187.83	57.06	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL28	-178.06	35.77	--	2	2	2	--	0.00059	0.00027	0.00000	0.00086
TP1VOL29	-170.10	13.90	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL30	-162.46	-8.09	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL31	-154.81	-30.07	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL32	-147.17	-52.06	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL33	-139.53	-74.04	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL34	-122.82	-75.65	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL35	-102.29	-69.99	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL36	-81.77	-64.33	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL37	-61.24	-58.67	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL38	-49.90	-62.36	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL39	-35.94	-65.34	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL40	-25.32	-54.07	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL41	-27.75	-35.16	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL42	-34.64	-16.10	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL43	-41.53	2.96	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL44	-48.42	22.03	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL45	-55.31	41.09	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL46	-75.10	46.85	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL47	-98.84	47.00	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL48	-122.59	47.16	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL49	-138.65	43.68	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL50	-154.38	38.18	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TP1VOL51	-170.11	32.67	--	1	1	1	--	0.00029	0.00013	0.00000	0.00043
TRUCK PATH 2											
TP2VOL01	-281.98	175.03	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL02	-298.33	170.76	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL03	-314.69	166.50	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL04	-331.04	162.23	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL05	-347.57	171.01	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL06	-362.62	185.45	2	--	2	--	0.00043	--	0.00027	--	0.00070

TABLE D-5
VOLUME SOURCE EMISSION RATES REPRESENTING FUGITIVE TRUCK TRAFFIC EMISSIONS - BASELINE (1974) ANNUAL AVERAGE PM_{10} EMISSIONS

Volume Source ID	Location X (m)	Location Y (m)	Usage By Types of Trucks [a] Type A	Type B	Type C	Type D	Emissions By Types of Trucks Type A (g/s)	Type B (g/s)	Type C (g/s)	Type D (g/s)	Total Emissions (g/s)
TP2VOL07	-377.67	199.89	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL08	-392.72	214.33	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL09	-407.77	228.77	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL10	-422.82	243.22	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL11	-441.48	242.22	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL12	-461.45	235.05	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL13	-481.42	227.88	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL14	-501.39	220.70	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL15	-521.36	213.53	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL16	-522.98	197.38	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL17	-517.29	177.49	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL18	-511.61	157.61	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL19	-505.93	137.72	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL20	-500.25	117.83	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL21	-493.11	95.75	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL22	-485.71	73.76	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL23	-478.31	51.76	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL24	-470.91	29.77	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL25	-463.50	7.78	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL26	-456.10	-14.22	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL27	-448.70	-36.21	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL28	-441.30	-58.21	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL29	-433.90	-80.20	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL30	-426.50	-102.20	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL31	-419.09	-124.19	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL32	-411.69	-146.19	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL33	-404.29	-168.18	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL34	-396.89	-190.18	2	--	2	--	0.00043	--	0.00027	--	0.00070
TP2VOL35	-389.49	-212.17	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL36	-382.08	-234.16	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL37	-369.75	-242.93	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL38	-353.57	-247.72	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL39	-332.32	-243.42	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL40	-321.34	-225.42	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL41	-323.53	-208.96	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL42	-329.79	-192.58	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL43	-344.20	-190.74	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL44	-362.20	-196.27	1	--	1	--	0.00021	--	0.00013	--	0.00035
TP2VOL45	-380.20	-201.80	1	--	1	--	0.00021	--	0.00013	--	0.00035
Total By Truck =			119	79	158	79	0.0256	0.0233	0.0212	0.0000	
Total PM_{10} Emissions per Truck (TPY) [b] =			0.89	0.81	0.74	0.00					
Total Emissions per Truck (g/s) =			0.0256	0.0233	0.0212	0.0000					

[a] Truck paths are represented by volume sources. If the trucks follow the same path on their return journey, volumes representing that used twice.

[b] See Table 6-13 for calculations of emissions per truck type.

Note: Type of Trucks:
Type A - Trucks shipping out DAP/MAP.
Type B - Trucks delivering molten sulfur.
Type C - Trucks delivering molten sulfur and and carrying out DAP/MAP on their return journey.
Type D - Trucks delivering H_2SO_4.

APPENDIX H

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
"A" Sulfuric Acid Plant (SAP)

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
There exists a potential for fugitive emissions of SO_2/NO_X/SAM to occur from this emissions unit. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/state/local emission standards.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **303.3** lb/hour **1,022.0** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **5.6 lb/ton 100% H_2SO_4** Reference: **Permit No. 0570005-017-AV**	7. Emissions Method Code: **0**

8. Calculation of Emissions:

3-hour Average: **5.6 lb/ton x 1,300 TPD x 1 day/24 hr = 303.3 lb/hr**
24-hour Average: **4.615 lb/ton x 1,300 TPD x 1 day/24 hr = 250.0 lb/hr**
Annual: **4.23 lb/ton x 1,300 TPD x 1 day/24 hr x 8,760 hr/yr x 1 ton/2,000 lb = 1,003.0 TPY**

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
Potential hourly emissions represent 3-hour average (5.6 lb/ton). The 24-hour average emission rate is 250.0 lb/hr.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **5.6 lb/ton**	4. Equivalent Allowable Emissions: **303.3** lb/hour tons/year
5. Method of Compliance: **Continuous SO_2 monitor**	
6. Allowable Emissions Comment (Description of Operating Method): **Represents 3-hour average** **Permit No. 0570005-017-AV**	

Allowable Emissions Allowable Emissions 2 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4.615 lb/ton**	4. Equivalent Allowable Emissions: **250.0** lb/hour tons/year
5. Method of Compliance: **Continuous SO_2 monitor**	
6. Allowable Emissions Comment (Description of Operating Method): **Represents 24-hour average** **Proposed emission limit for the "A" SAP (EU ID 002)**	

Allowable Emissions Allowable Emissions 3 of 3

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **4.23**	4. Equivalent Allowable Emissions: lb/hour **1,003** tons/year
5. Method of Compliance: **Continuous SO_2 monitor**	
6. Allowable Emissions Comment (Description of Operating Method): **Represents annual average** **Permit No. 0570005-017-AV**	

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

☐ The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

☐ The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

☒ This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

☐ This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

☐ This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:
"B" Sulfuric Acid Plant (SAP)

3. Emissions Unit Identification Number: **003**

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A			**28**	☐ Yes ☒ No

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
There exists a potential for fugitive emissions of SO_2/NO_X/SAM to occur from this emissions unit. It is our understanding, based on past FDEP interpretations and permitting history, that these emissions are not regulated under federal/state/local emission standards.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:

   038 – Two-stage Ammonia Scrubber

   014 – Brink's demister

2. Control Device or Method Code(s): **038, 014**

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate: **1,600 TPD 100% H_2SO_4**	
3. Maximum Heat Input Rate: million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment:	

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **"B" SAP**		2. Emission Point Type Code: **1**
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: **V**	6. Stack Height: **110** feet	7. Exit Diameter: **5.0** feet
8. Exit Temperature: **83** °F	9. Actual Volumetric Flow Rate: **88,140** acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment: **Flow rate and temperature updated based on recent compliance tests.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): **Industrial Processes; Chemical Manufacturing; Sulfuric Acid (Contact Process); Absorber at 99.9% Conversion**		
2. Source Classification Code (SCC): **3-01-023-01**	3. SCC Units: **Tons 100% H_2SO_4 Produced**	
4. Maximum Hourly Rate: **66.67**	5. Maximum Annual Rate: **584,000**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: **Maximum rates based on 1,600 TPD 100% H_2SO_4.**		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2	038		EL
SAM	014		EL
NO_X			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **233.3** lb/hour **1,022.0** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **3.50 lb/ton 100% H_2SO_4** Reference: **Proposed BACT**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Hourly (3-hour & 24-hour): 3.5 lb/ton x 1,600 TPD x 1 day/24 hr = 233.3 lb/hr Annual: 3.5 lb/ton x 1,600 TPD x 1 day/24 hr x 8,760 hr/yr x 1 ton/2,000 lb = 1,022.0 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **3.50 lb/ton**	4. Equivalent Allowable Emissions: **233.3** lb/hour **1,022.0** tons/year
5. Method of Compliance: **Continuous SO_2 monitor**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed BACT**	

Allowable Emissions Allowable Emissions of

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **5.0** lb/hour **21.9** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.075 lb/ton 100% H_2SO_4** Reference: **Proposed BACT Limit**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Hourly: 0.075 lb/ton x 1,600 TPD 1 day/24 hr = 5.0 lb/hr** **Annual: 5.0 lb/hr x 8,760 hr/yr x 1 ton/2,000 lb = 21.9 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment:	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **0.075 lb/ton**	4. Equivalent Allowable Emissions: **5.0** lb/hour **21.9** tons/year
5. Method of Compliance: **Annual stack test using EPA Method 8**	
6. Allowable Emissions Comment (Description of Operating Method): **Proposed BACT**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NO_X**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **8.0** lb/hour **35.0** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.12 lb/ton 100% H_2SO_4** Reference: **Test data from similar plants**	7. Emissions Method Code: **0**
8. Calculation of Emissions: **Hourly: 0.12 lb/ton x 1,600 TPD x 1 day/24 hr = 8.0 lb/hr** **Annual: 0.12 lb/ton x 1,600 TPD x 1 day/24 hr x 8,760 hr/yr x 1 ton/2,000 lb = 35.0 TPY**	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: **Emission factor based on test data from similar plants.**	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: **VE10**	2. Basis for Allowable Opacity: ☒ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: **10** % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: **Annual EPA Method 9 stack test**	
5. Visible Emissions Comment: **Permit No. 0570005-007-AV, Rules 62-296.402(1)(b)1, 62-204.800 (NSPS), F.A.C., and 40 CFR 60.83(a)(2).**	

Visible Emissions Limitation: Visible Emissions Limitation ____ of ____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: ☐ Rule ☐ Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: **EM**	2. Pollutant(s): **SO_2**
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **DuPont** Model Number: **460-002-901**	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Permit No. 0570005-017-AV, 40 CFR 60.84, and Rule 62-296.402(4), F.A.C.**	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: **Acid Production**	2. Pollutant(s):
3. CMS Requirement:	☒ Rule ☐ Other
4. Monitor Information... Manufacturer: **Yokogawa AdMag** Model Number: **AE 100**	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: **Rule 62-297.310(5)(b), F.A.C., and Permit No. 0570005-017-AV.**	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: **O_2**	2. Pollutant(s):
3. CMS Requirement: ☒ Rule ☐ Other	
4. Monitor Information... Manufacturer: **Yokogawa** Model Number: **ZR402 G** Serial Number:	
5. Installation Date:	6. Performance Specification Test Date: **02/27/04**
7. Continuous Monitor Comment: **NSPS Subpart H (40 CFR Part 60.84) and Permit No. 0570005-017-AV.**	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement: ☒ Rule ☐ Other	
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☒ Attached, Document ID: **Figure 1** ☐ Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **PSD Report, 04/06**

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **CF-EU1-I4, 04/06**
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date **CF-EU1-I5, 04/06**
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ Previously Submitted, Date: _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   ☒ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Air Construction Permit Applications

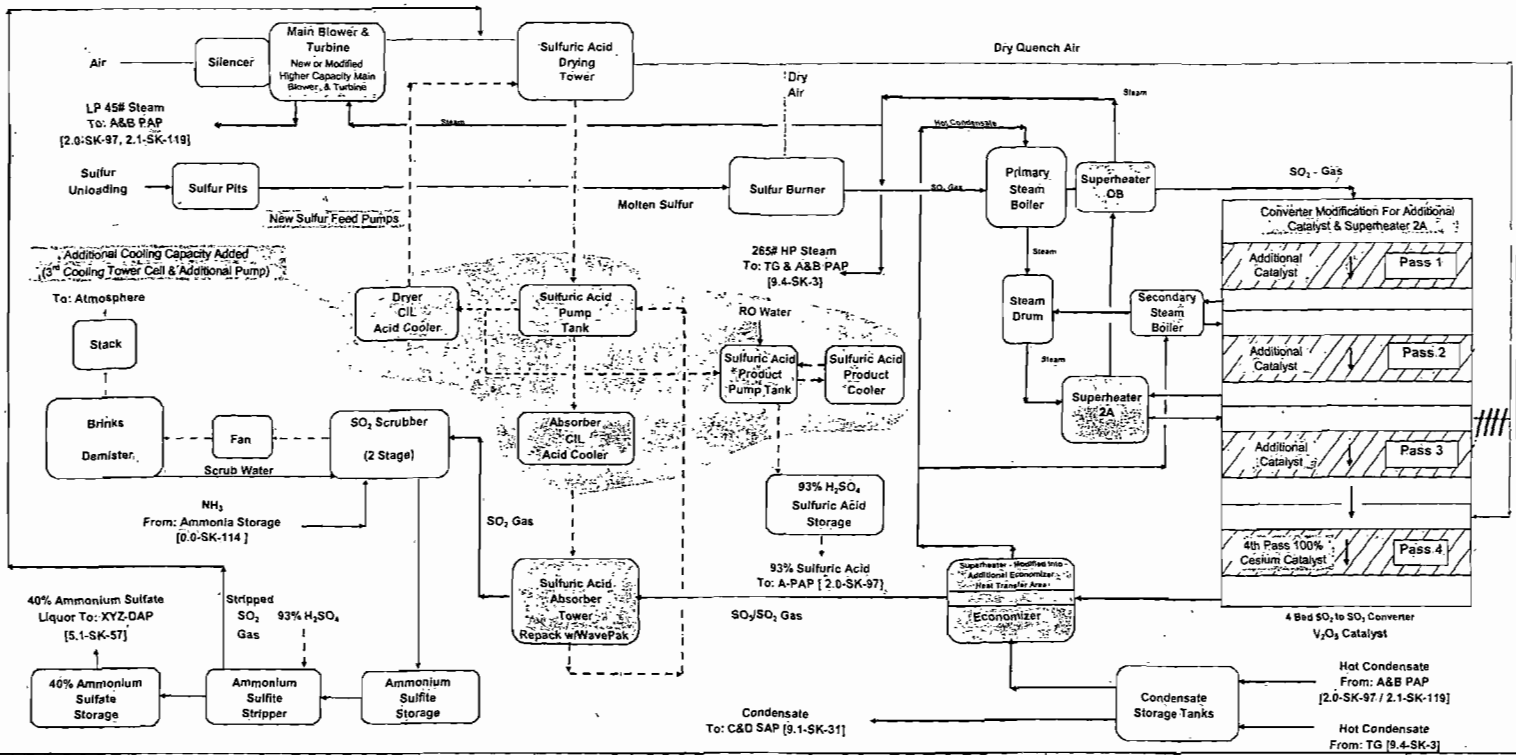
1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: **PSD Report, 04/06** ☐ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: **PSD Report, 04/06** ☐ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____ ☐ Not Applicable
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID: _____
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Not Applicable

Additional Requirements Comment

Increased Sulfuric Acid Production B-SAP - Proposed Modifications



Legend		By	Date
Sulfuric Acid	Sulfur	Randy Charlot	1/10/07
Steam/Condensate	Ammonia		
Process Gas SO_2/SO_3	Scrub Liquor		
Air	Air + trace SO_2		
Other			

CF Industries, Inc.
Plant City Phosphate Complex
P.O. Drawer L
Plant City, Florida 33564
Phone: (813) 782-1591
Fax: (813) 788-9126

Title	DWR. NO
A&B Sulfuric Acid Plants & Ammonium Sulfate	
Process Block Flow Diagram	9.0-SK-86
Proposed B-SAP Upgrades	

APPENDIX I

APPENDIX I

TABLE I-1
MAXIMUM PREDICTED SO_2 IMPACTS - AAQS SCREENING ANALYSES

Pollutant, Averaging Time, and Rank	Concentration [a] ($\mu g/m^3$)	Receptor Location [b] X (m)	Receptor Location [b] Y (m)	Time Period (YYMMDDHH)
Annual, Highest	34.8	-573	573	01123124
	36.9	-476	573	02123124
	41.5	-378	573	03123124
	37.1	-476	573	04123124
	34.8	-378	573	05123124
24-Hour, HSH	198.4	-671	573	01101324
	243.8	-280	573	02082824
	201.4	-476	573	03081224
	222.6	18	585	04112424
	210.5	-427	573	05060224

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest
H6H = Highest, Sixth-Highest

[a] Concentrations are based on highest concentrations predicted using 5 years of surface and upper air meteorological data for 2001 to 2005 from the National Weather Service stations at Tampa and Ruskin, respectively.

[b] Relative to the "C" SAP stack location.

TABLE I-2
MAXIMUM PREDICTED SO_2 IMPACTS FOR COMPARISON TO AAQS - REFINED ANALYSES

Pollutant, Averaging Time, and Rank	Concentration ($\mu g/m^3$) [a]			Receptor Location [b]		Time Period (YYMMDDHH)	National AAQS ($\mu g/m^3$)	Florida AAQS ($\mu g/m^3$)
	Total	Modeled Sources	Background	X (m)	Y (m)			
Annual, Highest	46.8	41.5	5.3	-378	573	03123124	80	60
24-Hour, HSH	256.8	243.8	13	-280	573	02082824	365	260

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest
H6H = Highest, Sixth-Highest

[a] Concentrations are based on highest concentrations predicted using 5 years of surface and upper air meteorological data for 2001 to 2005 from the National Weather Service stations at Tampa and Ruskin, respectively.

[b] Relative to the "C" SAP stack location.

TABLE I-3
MAXIMUM PREDICTED SO_2 IMPACTS --
PSD CLASS II INCREMENT SCREENING ANALYSES

Pollutant, Averaging Time, and Rank	Concentration [a] ($\mu g/m^3$)	Receptor Location [b] X (m)	Receptor Location [b] Y (m)	Time Period (YYMMDDHH)
Annual, Highest	0.0	0	0	01123124
	0.0	0	0	02123124
	0.0	0	0	03123124
	0.0	0	0	04123124
	0.0	0	0	05123124
24-Hour, HSH	17.9	-1,256	573	01081124
	17.5	-183	585	02071824
	26.5	-700	800	03060524
	14.6	1,500	1,100	04062124
	21.0	-1,800	-2,000	05061524

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest

[a] Concentrations are based on highest concentrations predicted using 5 years of surface and upper air metdata for 2001 to 2005 from the National Weather Service stations at Tampa and Ruskin, respectively.

[b] Relative to the "C" SAP stack location.

TABLE I-4
MAXIMUM PREDICTED SO_2 IMPACTS FOR COMPARISON TO THE PSD CLASS II INCREMENTS - REFINED ANALYSES

Pollutant, Averaging Time, and Rank	Concentration [a] ($\mu g/m^3$)	Receptor Location [b]		Time Period (YYMMDDHH)	PSD Class II Increment ($\mu g/m^3$)
		Direction (m)	Distance (m)		
Annual, Highest	0.0	0	0	01123124	20
24-Hour, HSH	26.5	-700	800	03060524	91

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest

[a] Concentrations are based on highest concentrations predicted using 5 years of surface and upper air meteorological data for 2001 to 2005 from the National Weather Service stations at Tampa and Ruskin, respectively.

[b] Relative to the "C" SAP stack location.

TABLE I-5
MAXIMUM CONCENTRATIONS PREDICTED FOR THE PROJECT ONLY FOR COMPARISON TO THE PSD CLASS I SIGNIFICANT IMPACT LEVELS

Pollutant, Averaging Time, and Rank	Year	Concentration [a] ($\mu g/m^3$)	Significant Impact Level ($\mu g/m^3$)
SO_2			
Annual, Highest	2001	0.0046	0.1
	2002	0.0041	
	2003	0.0048	
24-Hour, Highest	2001	0.085	0.2
	2002	0.053	
	2003	0.101	
3-Hour, Highest	2001	0.392	1.0
	2002	0.281	
	2003	0.337	
NO_2			
Annual, Highest	2001	0.0012	0.1
	2002	0.0012	
	2003	0.0012	
PM_{10}			
Annual, Highest	2001	0.0043	0.1
	2002	0.0044	
	2003	0.0047	
24-Hour, Highest	2001	0.080	0.2
	2002	0.050	
	2003	0.111	

[a] Concentrations are highest predicted using CALPUFF Version 5.711a model and VISTAS CALMET domains for 2001, 2002, and 2003.

TABLE I-6
MAXIMUM 24-HOUR AVERAGE VISIBILITY IMPAIRMENT PREDICTED FOR THE PROPOSED PROJECT ONLY, CFI PLANT CITY

Method/Ranking	Visibility Impairment (%) [a] 2001	2002	2003	Visibility Impairment Criteria (%)
EPA Method 2 Highest	2.95	2.10	3.44	5.0
EPA Method 6 Highest	2.22	1.58	3.22	5.0

[a] Concentrations are highest predicted using the CALPUFF model and VISTAS Florida Domain

TABLE I-7
MAXIMUM NITROGEN ANNUAL DEPOSITION PREDICTED AT THE CHASSAHOWITZKA NWA FOR THE PROPOSED PROJECT ONLY, CFI PLANT CITY

Species	Total Deposition (Wet & Dry)						Deposition Analysis Threshold [b]
	2001		2002		2003		
	($g/m^2/s$)	(kg/ha/yr)[a]	($g/m^2/s$)	(kg/ha/yr)[a]	($g/m^2/s$)	(kg/ha/yr)[a]	(kg/ha/yr)
Nitrogen (N)	3.25E-12	0.0010	2.93E-12	0.0009	3.40E-12	0.0011	0.01
Sulfur (S)	1.39E-11	0.0044	1.22E-11	0.0038	1.37E-11	0.0043	0.01

[a] Conversion factor is used to convert $g/m^2/s$ to kg/hectare (ha)/yr with the following units:

$g/m^2/s$ x 0.001 kg/g
x 10,000 m^2/hectare
x 3,600 sec/hr
x 8,760 hr/yr = kg/ha/yr
or
$g/m^2/s$ x 3.154E+08 = kg/ha/yr

[b] Deposition analysis thresholds (DAT) for nitrogen and sulfur deposition provided by the U.S. Fish and Wildlife Service, January 2002. A DAT is the additional amount of N or S deposition within a Class I area, below which estimated impacts from a propos

TABLE I-8
MAXIMUM PREDICTED SAM IMPACTS
AT THE CHASSAHOWITZKA PSD CLASS I AREA
DUE TO THE PROPOSED PROJECT

Averaging Period	Year	Concentration[a] ($\mu g/m^3$)
Annual	2001	0.001
	2002	0.001
	2003	0.001
24-Hour	2001	0.014
	2002	0.012
	2003	0.021
8-Hour	2001	0.036
	2002	0.025
	2003	0.040
3-Hour	2001	0.077
	2002	0.042
	2003	0.049
1-Hour	2001	0.102
	2002	0.070
	2003	0.075

[a] Concentrations predicted with the CALPUFF model and VISTAS developed domains for 2001, 2002, and 2003..

TABLE I-9
MAXIMUM PREDICTED FL IMPACTS
AT THE CHASSAHOWITZKA PSD CLASS I AREA
DUE TO THE PROPOSED PROJECT

Averaging Period	Year	Concentration[a] ($\mu g/m^3$)
Annual	2001	0.0002
	2002	0.0002
	2003	0.0002
24-Hour	2001	0.004
	2002	0.003
	2003	0.006
8-Hour	2001	0.010
	2002	0.008
	2003	0.011
3-Hour	2001	0.017
	2002	0.012
	2003	0.013
1-Hour	2001	0.025
	2002	0.024
	2003	0.025

[a] Concentrations predicted with the CALPUFF model and VISTAS developed domains for 2001, 2002, and 2003..