



Mosaic Fertilizer, LLC 8813 Highway 41 South Riverview, FL 33569 www.mosaicco.com

Via Overnight Mail

RECEIVED

JUN 28 2006

BUREAU OF AIR REGULATION

June 27, 2006

Florida Department of Environmental Protection Bureau of Air Regulation 111 S. Magnolia Drive, Suite 4 Tallahassee, FL 32399-2400.

Re:

Mosaic Fertilizer, LLC Riverview Facility DEP File no. 0570008-053-AC; PSD-FL-315G Animal Feed Ingredient (AFI) Plant Modification Response to Request for Additional Information

Dear Mr. Arif:

Mosaic has received the Departments Request for Additional information on the proposed modifications to the AFI No. 1 and No. 2 Plants at the Riverview facility and has the following response:

Item 1 (A):

"Please provide necessary documentation to the Department that the control equipments were designed as suggested by the consultants and the reasons why the control equipments did not performed as designed."

Response:

The scrubber was designed and constructed per Mr. Greenwood's (formerly with Kemworks) October 24, 2002 letter. While the scrubber has met the required duty in meeting allowable emissions, the defluorination process developed by Cargill Crop Nutrition did not deliver the promised production volume. Problems with the scrubber that negatively impacted production volume included weekly cleaning to remove silica build-up in the scrubber. The silica precipitate is an inherent result of the reaction process, and collects on the Kimre packing and causes excessive pressure drop and loss of ventilation.

As a result of these shortcomings, a venturi throat section was added up-stream of the packed scrubber in order to collect as much of the silica precipitate with the venturi section as possible before the gas contacts the packing. The service of the packed scrubber has improved, with cleaning now occurring much less frequently.

Item 1 (B):

"Also, provide PE sealed statement from the vendor concerning the modifications to the scrubbers and the ability of the scrubbers to meet the increased load and the emission limits established for the acid defluorination system."

Response:

The vendor who sold the packed scrubber was "Kemworks" which is no longer in business. It will not be possible for "Kemworks" to approve modifications because of this. However, the Oct 24, 2002 letter states that the design load to the scrubber is 1300 lb/hr fluorine. The requested modifications do not affect the fluorine loading as stated by Mr. Greenwood.

Mosaic believes the best measure of compliance with the previously approved emission limitations is to conduct stack tests. Mosaic has demonstrated compliance with the permitted emission limits on numerous occasions including a test completed on June 23, 2006. Further testing will be performed following completion of the requested modifications as outlined in the February 23, 2006 letter to the Department.

Item 1-C:

This should include detailed engineering descriptions of the modified scrubbers as well as calculations of their design efficiencies for PM/PM10 and fluorides.

Response:

The fan airflow is approximately 20,000 actual cubic feet per minute (ACFM) depending on the scrubber condition. The venturi throat cross section is currently 2.5 square feet ($\rm ft^2$), with packing cross section of 10 feet ($\rm ft$) high by 6 ft wide = 60 ft². Targeted airflow is 25,000 ACFM after the fan upgrade, providing a nominal throat velocity of over 9,000 feet per minute (fpm) in the venturi and 375 fpm through the packing.

The defluorination fan is operating at 90 to 100 horsepower (hp), or 5.3 hp/1,000 ACFM. The new fan will allow higher power application, expected to be 150 hp, or 6.7 hp/1,000 ACFM. About 30% of this power is lost across the venturi based on pressure surveys. As discussed above and the reduction in pad fouling, the venturi section removes particulate matter and will also collect some gaseous silica fluorides. Based on the higher power application to the venturi from the upgraded fan, Mosaic anticipates an efficiency increase of approximately 10% for particulate.

The proposed modification to the crossflow packed scrubber includes the installation of a weir in the sump between the second and third packing sections to allow recirculation of the fresh water that is introduced on the fourth stage. This fresh water will then be pumped to, and sprayed on the third packed section via the existing header (see sketch). The third stage flow will be similar to current flows (220 to 260 gallons per minute [gpm]), maintaining coverage at the recommended 4 gpm/ft² per Mr. Greenwood. The principle improvement is the substitution of recirculated fresh water for pond water as the scrubbing fluid. The fluoride content of pond water is approximately 0.6%, while the recirculated fresh water will be approximately half of that concentration. This produces a lower fluoride vapor pressure and lower concentration of soluble fluoride in the gas stream. This modification will also allow further control of the overall fresh water usage at the facility which is an important component of the Process Water Reduction Plan and pond water reduction initiatives.

Overall scrubber performance (venturi + packed) will be less than 2 pounds per hour (lb/hr)fluoride emissions with an inlet loading of 260 lb/hr at a 450 tons per day (TPD) P_2O_5 defluorination rate. This is a removal efficiency of at least 99.4%.

Item 2(A): "Please submit compliance test data for the AFI plants. This should include the recent test done in November 2005."

Mosaic has reviewed all compliance test data for the AFI plants and has found no record of a test performed in November of 2005. Mosaic has conducted compliance testing on the AFI No. 1 and No. 2 Plants as follows:

AFI No. 1: May 7, 2003

May 13, 2004 July 29, 2005 June 23, 2006

AFI No. 2: May 8, 2003

May 20, 2004 August 4, 2005

Mosaic has enclosed emission test summaries and process data for the each compliance tests referenced above, including fluoride and particulate matter emission results, as well as the volumetric flow, pressure drop, and fan amperage readings for the corresponding pollution control equipment.

Item 2(B): "The test data should also include emissions from the limestone silo (EU 080)..."

Emissions testing of the Limestone Silo has been limited to visual emission evaluations in accordance with Rule 62-296.711(3)(c), F.A.C. that establishes an opacity limitation of 5% in lieu of a particulate stack test. Visual emission Evaluations were conducted as follows:

Limestone Silo: May 8, 2003 June 3, 2004 August 29, 2005

In each case, the resultant visual emissions were zero. Mosaic has enclosed a copy of each of these visual emissions evaluations.

Item 2(C): "The test data should also include... actual operating hours and production rates."

Mosaic has also enclosed operating hours and production data on the AFI Plant No. 1, AFI Plant No. 2, and the Limestone Silo.

Item 3(A): "Please provide documentation to the Department which reflects that the phosphoric acid storage tank is classified as an unregulated emission unit. Indicate which phosphoric acid storage tank will be used to store defluorinated acid..."

The proposed project involves converting the No. 2 Evaporator Feed Tank (formerly known as the No. 2 Aging Tank) into a defluorinated acid storage tank. This tank is classified in the Riverview facility Title V Permit, 0570008-045-AV, Appendix U-1, "List of Unregulated Emission units and/or Activities" as part of Emission Unit No. 105, "Aging, filtrate, raw material, and product storage tanks". A copy of Appendix U-1 is attached.

Item 3(B): "...indicate the quantity of defluorinated acid being presently produced."

Since the start-up of the AFI Plant No. 2, the highest month of production was March of 2006. In March the facility defluorinated a total of 11,267 tons of acid, or 363.4 TPD.

Item 3(C): "Is it being stored in any storage tank?"

There are currently six reaction/process vessels in the production area: two dilution vessels and four defluorination vessels. Each of these vessels is inherent to the production process and are therefore not storage tanks. Currently, the defluorinated acid must be used in the AFI Plants as it is produced.

Item 3(D): "Is the amount of defluorinated acid being produced equivalent to the allowable production rate for the two AFI plants?"

No, the amounts are not equal. The rate of acid defluorination is not directly linked to the rate of granulation. For example, if the defluorination system was down for maintenance, defluorinated acid could be obtained from other sources for use in the granulation plant, allowing continued production of animal feed ingredients. Having the capability to store defluorinated acid would allow the AFI plants to continue production of feed products while the defluorination system is down (pulling defluorinated acid from the proposed defluorinated acid storage tank), Capturing these opportunities will lead to decreased production unit downtime and result in annual production more consistent with the currently permitted production rates.

Item 4(A) "Enclosed are comments submitted by the Hillsborough County Environmental Protection Commission. Please respond to their concerns."

"Within the application submitted, Mosaic specifies that the construction authorized by those permits (0570008-043-AC and 0570008-036-AC) was completed. Per rule 62-210.300(1)(a), F.A.C. a construction permit is issued for a period of time to allow for construction and to demonstrate compliance. It does not appear appropriate to process an application for modification of a construction permit that should be included into a revised operating permit as already submitted. Incorporation of the existing construction permit into an operating permit is necessary to establish operating parameters to define its operation. Continual modification of construction permits never allows for these parameters to be established. Therefore EPC believes that a new standalone construction application should be processed regarding the changes requested. In accordance with Rule 62-213.420(1)(a)4., F.A.C, the facility should submit a revised TV application no later than 180 days after the emission unit commences operation."

Obtaining a new construction permit for minor process changes which result in no increase over the previously permitted emission or production rates unnecessarily delays the future incorporation of the AC permit into the facility Title V permit. Modifying the existing construction permit is the most appropriate means as it enables Mosaic to achieve the production rates intended by the

previous construction permit, and will expedite the future establishment of operating parameters. Also, since the existing construction permit remains in effect beyond its incorporation into the Title V Permit, the proper approach is to modify the existing construction permit if the proposed project requires a change to its conditions or modification of the specified equipment.

Item 4(B)

"...an updated process flow diagram detailing the changes requested as part of the application was not included with the package received by EPC. A diagram from a former application was reviewed; however, sufficient time to evaluate the application was not available. EPC believes that detailed analysis of an updated diagram is necessary to provide reasonable assurance that the changes will maintain compliance with emission standards. A better description of how the "recirculated fresh water" scrubber will operate should be included with a response."

Mosaic has included an updated process flow diagram and scrubber layout highlighting the requested changes. As stated in the air construction permit modification request, the proposed upgrades include conversion of the third stage of the Kimre scrubber into a recirculated freshwater scrubber and the potential replacement of the existing 100 hp induced draft fan and motor with a 200 hp motor and associated induced draft fan.

Conversion of the third stage will be accomplished by installing a sump at the base of the Kimre scrubber, which will collect freshwater from the third and fourth stages of the Kimre packing. This recycled freshwater will be pumped back to the spray nozzles to irrigate the surfaces of the third stage of the Kimre Packing. Again, this modification will aid the facility in the reduction of freshwater use, and aid in the attainment of the facility's Process Water Reduction Plan and process water inventory reduction initiatives that were mandated by Consent Order No. 04-1548 as part of the facility response to the 2004 Hurricane Frances release. The existing 100 hp induced fan may be replaced to recapture air flow that was lost following the installation of the venturi in 2005. No increases in the current permitted fluoride emission rates are requested as a result of these modifications.

Sincerely,

Jeffrey M. Stewart

Environmental Superintendent

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cc: Giblin, Lulf, Provenzano

File P-05-01

D. Lee, HCEPC Certified Mail 7003 2260 0004 7571 3306

Scott McCann - Golder

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name:

Mr. Jeffrey M. Stewart, Environmental Superintendent

2. Owner/Authorized Representative Mailing Address...

Organization/Firm: Mosaic Fertilizer, LLC

Street Address: 8813 U.S. Highway 41 South

City: Riverview

State: FL

Zip Code: **33569**

3. Owner/Authorized Representative Telephone Numbers...

Telephone: (813) 671-6369 ext.

Fax: (813) 671-6149

- 4. Owner/Authorized Representative Email Address: Jeff.Stewart@mosaicco.com
- 5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

May M. Hewar 6

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effrey M. Hews b

Pr	ofessional Engineer Certification
1.	Professional Engineer Name: Scott A. McCann
	Registration Number: 54172
2.	Professional Engineer Mailing Address
	Organization/Firm: Golder Associates Inc.**
	Street Address: 6241 NW 23 rd Street, Suite 500
	City: Gainesville State: FL Zip Code: 32653
3.	Professional Engineer Telephone Numbers
1	Telephone: (352) 336-5600 ext. Fax: (352) 336-6603
4.	Professional Engineer Email Address: smccann@golder.com
5.	Professional Engineer Statement:
	I, the undersigned, hereby certify, except as particularly noted herein*, that:
	(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and
	(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.
	(3) If the purpose of this application is to obtain a Title V air operation permit (check here , if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.
	(4) If the purpose of this application is to obtain an air construction permit (check here \boxtimes , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here \square , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.
	(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.
	i DAM

DEP Form No. 62-219.900(1) - Form Effective: 06/16/03

^{*} Attach any exception to certification statement.
** Board of Professional Engineers Certificate of Authorization #00001670

<u>Pr</u>	ofessional Engineer Certification
1.	Professional Engineer Name: Scott A. McCann
	Registration Number: 54172
2.	Professional Engineer Mailing Address
	Organization/Firm: Golder Associates Inc.**
	Street Address: 6241 NW 23 rd Street, Suite 500
	City: Gainesville State: FL Zip Code: 32653
3.	Professional Engineer Telephone Numbers
<u> </u>	Telephone: (352) 336-5600 ext. Fax: (352) 336-6603
4.	Professional Engineer Email Address: smccann@golder.com
5.	Professional Engineer Statement:
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	(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.
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	Signature (seal) $\frac{6/26/06}{Date}$
	626/06
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	P Form No. 62-210.900(1) – Form 0537589/4.1/MF-Riverview_SAM_EU6.doc

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	Signature Date /

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Production and Operating Hours

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EU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical
		January	474	9115	January	517	9040	January	545	10940
		February	492	8635	February	382	9988	February	572	6658
:		March	531	9808	March	516	9615	March	588	10809
		April	602	10472	April	613	10771	April	629	8701
	AFI #1 (common stack w defourts #100 of the first form to the firs	May	602	9721	May	602	11084	May	484	7444
		June	572	9454	June	618	10695	June	300	5635
078		July	572	9493	July	606	10105	July	391	4902
	acrubber)	August	611	11026	August	440	7967	August	323	. 6851
		September	657	11089	September	267	5217	September	555	11114
		October	567	9119	October	542	9710	October	403	5080
i		November	385	6786	November	609	10848	November	603	11820
		December	635	10889	December	544	10766	December	611	7923
		TOTAL	6698	115607	TOTAL	6256	115806	TOTAL	6004	97877

Production and Operating Hours

EU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		January	381	6957	January	517	10303	January	628	7936
		February	432	6482	February	382	11408	February	640	12243
		March	597	11296	March	605	13084	March	633	11885
		April	498	8322	April	572	11913	Aprîl	ខារ	7050
!		May	548	8739	May	681	12397	May	637	13105
	AFI#2	June	526	9412	June	658	13174	June .	552	8506
103		July	522	1 0596	July	6 77	11686	July	713	11082
		August	614	10242	August	· 649	10804	August	692	9208
		September :	580	8548	September	615	6346	September	694	12057
		October	423	6675	October	695	9904	October	663	10276
į		November	587	9709	November	690	11194	November	694	12789
		December	541	10019	December	674	14803	December	651	9812
		TOTAL	6249	106997	TOTAL	7415	137016	TOTAL	7808	125949



Riverview Chemical Complex Limestone Tons Processed

	Limestone Silo
Month	Tons Processed
. 1	14,070
2	14,344
3	17,360
4	17,965
5	16,961
6	15,782
7	16,711
` 8	18,783
9	19,536
10	12,524
11	14,223
12	18,009
TOTAL TONS PROCESSED	196,268



Riverview Chemical Complex Limestone Tons Processed

	- 080 Limestone Silo
Month	Tons Processed
1	8,812
2	9,227
3	9,192
4	9,784
5	10,549
6	10,220
7	9,301
8	7,501
9	4,600
. 10	9,065
11	9,289
12	10,097
TOTAL TONS PROCESSED	107,637



Riverview Chemical Complex Limestone Tons Processed

	080
	Limestone Silo
Month	Tons Processed
I	8,260
2	10,070
3	9,533
4	7,611
5	8,936
6	5,291
7	7,042
8	5,868
9	8,443
10	6,527
11	9,614
12	8,264
TOTAL TONS PROCESSED	95,459

Appendix U-1, List of Unregulated Emissions Units and/or Activities.

Mosaic Fertilizer, LLC. Riverview Facility Revised Draft Permit Renewal No. 0570008-045-AV (Initial Title V Permit No.: 0570008-014-AV)

Facility ID No.: 0570008

<u>Unregulated Emissions Units and/or Activities</u>. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

{Permitting Notes: 1. Letter dated 9/19/2005 from David Buff, P.E. of Golder Associates Inc. was received by the Department on 9/29/2005 concerning the phosphoric acid clarifier, clarifier feed tank and associated wet scrubbers and is being reviewed by the Department.

- 2. There will be no GTSP production/handling at the Riverview facility. So, GTSP handling related activities are removed from the list below except coating oil tank that may be used for dust suppression for other types of fertilizer at the facility.
- 3. Construction permit application for ammoniated phosphates storage and loadouts dated 9/27/2005 was received by the Department on 9/29/2005 and it is currently being processed.}

E.U. ID Brief Description of Emissions Units and/or Activity No. Fertilizer Plants Coating drums (containing coating oil that is used for dust suppression) -105 Raw material and product storage tanks, bins, and storage buildings -105 -105 Grinding mills, chain mills, cage mills, lump breakers Cooling tower, slurry pumps, scrubber water sumps -105 -105 DAP rail loading system, truck unloading Material conveyors, elevators, and screens -105 Ammonia chillers and vaporizers -105 **Product Recovery Units** -105 Ammonia Flare -105 -105 Coating Oil Tank – 17,233 gallons (installed 1986) Material Handling System -105 Choke feeder, covered conveyors, screening tower (fugitive only) Phosphoric Acid Production Facility Flash Cooler Hotwells -105-105 Flash coolers, vacuum pumps, seal pumps and seal tanks Nos. 1, 2 and 3 Filters - unevacuated area (fugitive only) -105 -105 Centrifuges, pumps East, north, and south coolers -105 -105 Truck loading/unloading Clarifier and clarifier feed tank -105

E.U. ID	
No.	Brief Description of Emissions Units and/or Activity
-105	Aging, filtrate, raw material, and product storage tanks
-105	Auxiliary power diesel generator with tank
	Molten Sulfur Handling
-105	Dock unloading/truck loading (fugitive only)
-105	Molten sulfur storage tank fires
-105	Molten Sulfur Tank # 2 – 3,104,714 gallons (installed 1990)*
	Sulfuric Acid Plants
-105	Water reuse tanks, water storage tanks, condensate tanks
-105	Economizers
-105	Sulfuric acid storage tanks
-105	Sulfuric acid truck loading/unloading
-105	Cooling towers
	Animal Feed Plant
-105	Acid heaters and dilution tank
-105	High speed mixer
-105	Diatomaceous earth weigh bin and feed splitters
-105	Limestone metering feeder and screen feed splitter
-105	Weigh bin slide gate and weighing belt
-105	Conveyors
	Ammonia Handling
-105	Bullets, pipeline, pop off valves, truck unloading
105	Facilitywide Fuel to all dispenses
-105	Fuel tanks and dispensers
-105	Compressors, generators (6 MW, 35 MW) Wastewater treatment plant and collection system
-105	Locomotive Engines
-105 -105	Laboratory, lime hopper, refrigerators
-105	Pressure/steam relief valves
-105	Railcar/truck unloading, conveyor belts (fugitive only)
-105	Wet rock pile, rock hoppers, rock grinding mills (fugitive only)
-105	Safety kleen solvent cleaners
-105	Sand blasters, welding equipment, supersucker
-105	Raw material and product storage tanks
-105	Minor fugitive leaks from process equipment
-105	Diesel pump at NPDES Outfall 005
-105	Diesel pump at active phosphogypsum stack
-105	Asbestos Waste and hazardous waste removal
-105	Refrigeration equipment < 50 lbs charge
-105	Oil-fired catalyst
-105	400 hp emergency generator

^{*} Tanks subject to 40 CFR 60, Subpart Kb, NSPS for VOC Storage Tanks.

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1.

	Run 1	Run 2	Run 3	
Date of Run	5/7/03	5/7/03	5/7/03	
Process Rate (TPH)	701❖	604 ∜	655 🔨	
Start Time (24-hr. clock)	0824	1056	1115	
End Time (24-hr. clock)	0928	1056	1218	
Vol. Dry Gas Sampled Meter Cond. (DCF)	47.553	44.698	43.438	
Gas Meter Calibration Factor	0.994	0.994	0.994	
Barometric Pressure at Barom. (in. Hg.)	30.09	30.09	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.122	42.429	40.642	
Vol. Liquid Collected Std. Cond. (SCF)	8.638	8.214	7.586	
Moisture in Stack Gas (% Vol.)	16.10	16.20	15.73	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.23	27.22	29.00	
Stack Gas Static Press. (in. H20 gauge)	-0.41	-0.42	-0.41	
Stack Gas Static Press. (in. Hg. abs.)	30.06	30.06	30.09	
Average Square Root Velocity Head	0.955	0.882	0.862	
Average Orifice Differential (in. H2O)	1.535	1.317	1.249	
Average Gas Meter Temperature (°F)	98.3	97.8	106.4	
Average Stack Gas Temperature (°F)	144.8	[*] 144.8	144.3	,
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.93	54.47	51.49	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,592	67,913	64,673	
Stack Gas Flow Rate Stack Cond. (ACFM)	99,972	92,413	87,345	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	102.9	104.8	105.4	
				Average
Particulate Collected (mg.)	15.8	12.7	18.7	15.7
Particulate Emissions (grains/DSCF)	0.005	0.005	0.007	0.01
Particulate Emissions (lb./hr.)	3.4	2.7	3.9	3.34
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.733	1.260	1.353	1.448
Fluoride Emissions (mg/DSCF)	0.038	0.030	0.033	0.034
Fluoride Emissions (lb./hr.)	0.37	0.27	0.28	0.31
Allowable Fluoride Emissions (lb./hr.)				2.1

Note: Standard conditions 68°F, 29.92 in. Hg

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	⁴ Run 3	AVG
Start Time	05/07/2003 8:24	05/07/2003 9:53	05/07/2003 11:15		
End Time	05/07/2003 9:28	05/07/2003 10:56	05/07/2003 12:18		
Granulation Plant Scrubb	er			<u> </u>	
Recirc Flow	GPM	1171	1169	1168	1169
Make-up Flow	GPM	47	49	44	46
Pressure Drop	"H2O	24	23	23	23
Fan Amps	amps	115	115	115	115
Defluorination Scrubber		·	<u>-</u>	· · · · · · · · · · · · · · · · · · ·	
Pondwater Flow	GPM	856	855	854	855
Demister Flow	GPM	82	82	79	81
Pressure Drop	"H2O	6	6	6	6
Fan Amps	amps	68	68	68	68
Plant Production				······································	
AFI	TPD	701	604	655	653

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview Source: AFI - Plant No. 1

•			•	
	Run 1	Run 2	Run 3	
Date of Run	5/13/04	5/13/04	5/13/04	
Process Rate (TPH)	23.3	22.6	21.1	
Start Time (24-hr. clock)	0807	0944	1113	
End Time (24-hr. clock)	0914	1047	1216	
Vol. Dry Gas Sampled Meter Cond. (DCF)	45.876	45.424	45.210	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.12	30.12	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.641	44.913	44.319	
Vol. Liquid Collected Std. Cond. (SCF)	7.313	8.152	7.318	
Moisture in Stack Gas (% Vol.)	13.8	15.4	14.2	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.48	27.31	27.44	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.32	-0.31	
Stack Gas Static Press. (in. Hg. abs.)	30.01	30.02	30.02	
Average Square Root Velocity Head	0.940	0.934	0.923	
Average Orifice Differential (in. H2O)	2.008	1.984	1.941	
Average Gas Meter Temperature (°F)	83.5	86.8	91.5	
Average Stack Gas Temperature (°F)	145.7	144.6	145.4	
Pitot Tube Coefficient	0.84	0.84	0.84	•
Stack Gas Vel. Stack Cond. (ft./sec.)	57.84	57.61	56.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,963	72,478	72,403	•
Stack Gas Flow Rate Stack Cond. (ACFM)	98,127	97,739	96,414	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.234	0.234	0.234	
Percent Isokinetic	97.4	97.8	96.6	_
Destinuists Callestad (may)	40.0	04.7	0.4.0	Average
Particulate Collected (mg.)	19.3	21.7	21.3	20.7
Particulate Emissions (grains/DSCF)	0.007	0.007	0.007	0.01
Particulate Emissions (lb./hr.)	4.1	4.6	4.6	4.5
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.9	2.5	1.7	2.0
Fluoride Emissions (mg/DSCF)	0.04	0.06	0.04	0.05
Fluoride Emissions (lb./hr.)	0.40	0.54	0.38	0.44
Allowable Fluoride Emissions (lb./hr.)				2.1

Note: Standard conditions 68°F, 29.92 in. Hg

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

Start Time	"是","我们是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	Run de Sa	Run 2	Na GRunt3k	AVG
Start Time		05/13/2004 08:07	05/13/2004 09:44	05/13/2004 11:13	Euglava ar s
End Time		05/13/2004 09:14	05/13/2004 10:47	05/13/2004 12:16	PC TO
Granulation Plant Scrub	oer.			ELIST DELICITION AND THE	Ender Chief
Recirc Flow	GPM	1294	1295	1295	1294
Make-up Flow	GPM	64	61	60	63
Pressure Drop	"H2O	25	26	26	26
Fan Amps	amps	108	109	100	109
Defluorination Scrubber		ALLE ALLE ALLE ALLE ALLE ALLE ALLE ALLE	ANTENY LAVINGO	Para Continue Four Con	
Pondwater Flow	GPM	798	798	798	798
Demister Flow	GPM	34	38	39	36
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	72	72	70	70
Plant Production	A PARAMETER STATE	HAN AL MITSHAW WA	SHIP IN NOT		GIEL CHE
AFI	TPH	23.3	22.6	21.1	22.3
AFI	TPD	559	543	507	536

Area Superintendent:	

TABLE 1. PARTICULATE AND FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 1

	Run 1	Run 2	¹ Run 3	
Date of Run	07/29/05	07/29/05	07/29/05	
Process Rate (TPH)	20.8	20.7	20.8	
Start Time (24-hr. clock)	1016	1133	1505	
End Time (24-hr. clock)	1119	1338	1607	
Vol. Dry Gas Sampled Meter Cond. (DCF)	55.871	48.110	58.397	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.06	30.06	30.03	
Elev. Diff. Manom. to Barom. (ft.)	. 0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52.111	44.274	53.473	
Vol. Liquid Collected Std. Cond. (SCF)	8.855	9.675	10.562	
Moisture in Stack Gas (% Vol.)	14.5	17.9	16.5	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.40	27.03	27.19	
Stack Gas Static Press. (in. H2O gauge)	-0.52	-0.24	-0.64	
Stack Gas Static Press. (in. Hg. abs.)	30.02	30.04	29.98	
Average Square Root Velocity Head	0.949	0.961	0.952	
Average Orifice Differential (in. H2O)	2.568	2.658	2.763	
Average Gas Meter Temperature (°F)	98.6	106.3	108.7	
Average Stack Gas Temperature (°F)	150.8	151.3	154.2	•
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	55.25	56.30	55.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	69,500	67,983	68,137	
Stack Gas Flow Rate Stack Cond. (ACFM)	93,734	95,510	94,712	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.249	0.249	0.249	
Percent Isokinetic	104.5	90.8	109.4	
Destinutate Cally start (com)				<u>Average</u>
Particulate Collected (mg.)	38.3	35.8	44.1	39.4
Particulate Emissions (grains/DSCF)	0.011	0.012	0.013	0.01
Particulate Emissions (lb./hr.) Allowable Particulate Emissions (lb./hr.)	6.76	7.27	7.43	7.2
·				13.0
Fluoride Collected (mg.)	3.325	3.691	6.331	4.449
Fluoride Emissions (mg/DSCF)	0.064	0.083	0.118	0.089
Fluoride Emissions (lb./hr.)	0.59	0.75	1.07	8.0
Allowable Fluoride Emissions (lb./hr.)				2.1

Note: Standard conditions 68°F, 29.92 in. Hg

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

Start Time	- 2 - 4 - 2 - 4 - 4 - 4 - 4 - 4 - 4 - 4	Rund	Run 2 Run 2	Runs	AVG
otart Title	· · · · · · · · · · · · · · · · · · ·	07/29/2005 10:16	07/29/2005 11:33	07/29/2005 15:05	Part
End Time		07/29/2005 11:19	07/29/2005 13:33	07/29/2005 16:07	
Granulation Plant Scrubb	er day at a training		Contribute To the Control way	20 75 15 15 15 15 15 15 15 15 15 15 15 15 15	THE SHAPE OF STREET
Recirc Flow	GPM	1237	1241	1246	1239
Make-up Flow	GPM	46	45	26	46
Pressure Drop	"H2O	20	20	20	20
Fan Amps	amps	108	108	110	100
Defluorination Scrubber			ECCENTER OF THE PROPERTY.		
Foliuwater Flow	GPM	758	756	749	757
Demister Flow	GPM	69	70	73	70
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	83	84	92	02
Plant Production	一种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种种		A THE TOTAL ST	E TOTAL TIME A VISITION	7
AFI	TPH	20.8	20.7	20.8	20.7
AFI	TPD	498	496	499	498

Area Superintendent:		
•	 	

TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 2

•		-		
	Run 1	Run 2	Run 3	
Date of Run	5/8/03	5/8/03	5/8/03	
Process Rate (TPH)	522	522	521	
Start Time (24-hr. clock)	0848	1029	1310	
End Time (24-hr. clock)	0952	1230	1415	
Vol. Dry Gas Sampled Meter Cond. (DCF)	31.254	31.692	31.760	
Gas Meter Calibration Factor	0.997	0.997	0.997	
Barometric Pressure at Barom. (in. Hg.)	30.11	30.11	30.12	
Elev. Diff. Manom. to Barom. (ft.)	116	116	116	
Vol. Gas Sampled Std. Cond. (DSCF)	30.120	30.517	30.100	
Vol. Liquid Collected Std. Cond. (SCF)	2.414	2.315	1.504	
Moisture in Stack Gas (% Vol.)	7.4	7.1	4.8	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	28.18	28.22	28.48	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.42	-0.29	
Stack Gas Static Press. (in. Hg. abs.)	30.08	30.08	30.10	
Average Square Root Velocity Head	0.796	0.751	0.743	
Average Orifice Differential (in. H20)	0.722	0.629	0.496	
Average Gas Meter Temperature (°F)	90.7	91.0	99.8	
Average Stack Gas Temperature (°F)	142.4	× 141.8	141.9	,
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	48.18	45.42	44.69	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	82,322	77,983	78,666	
Stack Gas Flow Rate Stack Cond. (ACFM)	100,898	95,125	93,601	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.195	0.195	0.195	
Percent Isokinetic	102.7	109.8	107.4	
				Average
Particulate Collected (mg.)	20.3	7.2	10.0	12.5
Particulate Emissions (grains/DSCF)	0.010	0.004	0.005	0.006
Particulate Emissions (lb./hr.)	7.4	2.4	3.5	4.43
Allowable Particulate Emissions (lb./hr.)				13.0

Note: Standard conditions 68°F, 29.92 in. Hg

AFI 2 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 8, 2003

Source: EU ID No. 103 AFI 2 Plant

	Run 1	Run 2	Run 3	
	05/08/2003 8:48	05/08/2003 10:29	05/08/2003 13:10	AVG
	05/08/2003 9:52	05/08/2003 12:30	05/08/2003 14:15	
		<u> </u>	<u> </u>	•
GPM	1083	1031	1219	1111
"H2O	14	14	15	15
		 		
GPM	1482	1478	1469	1476
"H2O	20	19	20	20
amps	120	120	120	120
		<u> </u>		-
TPD	522	522	521	522
lb/hr	7.4	2.4	3.5	4.4
	GPM "H2O amps TPD	GPM 1083 "H2O 14 GPM 1482 "H2O 20 amps 120 TPD 522	O5/08/2003 8:48 05/08/2003 10:29 O5/08/2003 9:52 05/08/2003 12:30 GPM 1083 1031 "H2O 14 14 GPM 1482 1478 "H2O 20 19 amps 120 120 TPD 522 522	O5/08/2003 8:48 O5/08/2003 10:29 O5/08/2003 13:10 O5/08/2003 9:52 O5/08/2003 12:30 O5/08/2003 14:15 GPM 1083 1031 1219 "H2O 14 14 15 GPM 1482 1478 1469 "H2O 20 19 20 amps 120 120 120 TPD 522 522 521

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Cargill Crop Nutrition - Riverview AFI - Plant No. 2 Company:

Source:

			•_	
	Run 1	Run 2	Run 3	
Date of Run	5/20/04	5/20/04	5/20/04	
Process Rate (TPH)	25.7	25.7	25.8	
Start Time (24-hr. clock)	0802	0928	1049	
End Time (24-hr. clock)	0905	1032	1151	
Vol. Dry Gas Sampled Meter Cond. (DCF)	32.550	34.752	34.665	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.21	30.21	30,21	
Elev. Diff. Manom, to Barom, (ft.)	0 .	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	31.957	33.857	33.571	
Vol. Liquid Collected Std. Cond. (SCF)	6.078	7.228	6.455	
Moisture in Stack Gas (% Vol.)	16.0	17.6	16.1	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.24	27.06	27.23	
Stack Gas Static Press. (in. H2O gauge)	-0.30	-0.32	-0.34	
Stack Gas Static Press. (in. Hg. abs.)	30.07	30.09	30.10	
Average Square Root Velocity Head	0.739	0.747	0.742	
Average Orifice Differential (in. H2O)	1.152	1.117	1.106	
Average Gas Meter Temperature (°F)	90.6	95.2	98.7	
Average Stack Gas Temperature (°F)	140.7	143.2	144.7	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	45.43	46.15	45.76	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	70,637	70,120	70,607	
Stack Gas Flow Rate Stack Cond. (ACFM)	95,157	96,653	95,833	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	93.7	100.0	98.5	
				Average
Particulate Collected (mg.)	14.4	20.0	18.6	17.7
Particulate Emissions (grains/DSCF)	0.007	0.009	0.009	0.008
Particulate Emissions (lb./hr.)	4.2	5.5	5.2	5.0
Allowable Particulate Emissions (lb./hr.)				13.0

Note: Standard conditions 68°F, 29.92 in. Hg

AFI 2 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 20, 03 Test For: PM

Source: AFI 2 Plant

Compliance Test

· AND SECTION	图案边影的	是 Aun 1 /	ar ∌aRuni2	Run 3	PT TO
Start Time		5/20/04 8:02	5/20/04 9:28	5/20/04 10:49	AVG
End Time		5/20/04 9:05	5/20/04 10:32	5/20/04 11:51	
Equipment Scrubber	PLACE SERVE			The state of the s	82. 554.
Flow	GPM	1480.2	1478.6	1478.6	1447
Pressure Drop	"H2O	11.7	11.7	11.7	16
Dryer Scubber					
Flow	GPM	1409.8	1404.7	1404.7	1544
Pressure Drop	"H2O	20.2	20.4	20.4	21
Production			E A REAL STATE		
AFI	TPH	25.7	25.7	25.8	25.7
AFI	TPD	617	617	618	617

Area Superintendent:					
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TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 2

	Run 1	Run 2	Run 3	
Date of Run	8/4/05	8/4/05	8/4/05	
Process Rate (TPH)	23.7	23.8	23.7	
Start Time (24-hr. clock)	0828	0952	1121	
End Time (24-hr. clock)	0931	1056	1223	
Vol. Dry Gas Sampled Meter Cond. (DCF)	40.592	42.723	40.713	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.05	30.05	30.05	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	38.386	39.916	37.940	
Vol. Liquid Collected Std. Cond. (SCF)	5.031	8.133	8.723	
Moisture in Stack Gas (% Vol.)	11.6	16.9	18.7	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.73	27.14	26.94	
Stack Gas Static Press. (in. H2O gauge)	-0.29	-0.26	-0.26	
Stack Gas Static Press. (in. Hg. abs.)	30.03	30.03	30.03	
Average Square Root Velocity Head	0.726	0.728	0.724	
Average Orifice Differential (in. H2O)	1.328	1.438	1.246	
Average Gas Meter Temperature (°F)	89.1	95.9	97.1	,
Average Stack Gas Temperature (°F)	148.5	149.0	148.1	
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	41.91	42.50	42.40	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	•
Stack Gas Flow Rate Std. Cond. (DSCFM)	67,578	64,351	62,925	
Stack Gas Flow Rate Stack Cond. (ACFM)	87,770	89,018	88,801	
Net Time of Run (min.)	60.0	60.0	60.0	
Nozzle Diameter (in.)	0.246	0.246	0.246	
Percent Isokinetic	100.2	109.4	106.3	
Portioulate Callegated (mar.)	40.5	477.0	00.5	Average
Particulate Collected (mg.)	19.5	17.6	23.6	20.2
Particulate Emissions (grains/DSCF)	0.008	0.007	0.010	0.008
Particulate Emissions (lb./hr.)	4.5	3.8	5.2	4.5
Allowable Particulate Emissions (lb./hr.)				13.0

Note: Standard conditions 68°F, 29.92 in. Hg

AFI 2 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Test Date(s): August 4, 2005 Test For: PM

Source: AFI 2 Plant

Compliance Test

国家通过基础的	图:27.	Runda 🚉	Run 2	Run 3	
Start Time		08/04/2005 08:28	08/04/2005 09:52	08/04/2005 11:21	AVG
End Time		08/04/2005 09:31	08/04/2005 10:56	08/04/2005 12:23	
Equipment Scrubber		學的意思。	到2—13—12 中国2 中国2	A CONTRACTOR OF THE PARTY OF TH	4.00
Flow	GPM	1236.0	1239.5	1243.1	1240
Pressure Drop	"H2O	12.6	12.5	12.4	13
Dryer Scubber	南道是數	建设建筑等等等 。	更强, 2018年7月2		《西西山西南西东 沙·美
Flow	GPM	1227.6	1230.5	1229.7	1229
Pressure Drop	"H2O	20.5	20.3	20.0	20
Production	2000年	医红色性性红色外类征			建设设置
AFI	TPH	23.7	23.8	23.7	24
AFI	TPD	569	570	569	569

Southern Environmental Sciences, Inc.

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

VISIBLE EMISSIONS EVALUATION Limestone									۱۰ کار			
COMPANY Cargell Crop Nothition - Tempa			OBSERVAT	TAG NOIT			START T			STOP TIME		
UNIT Limestone	Silo		SEC					SEC				
ADDRESS US 41 27	Conview Dr		MIN	0	15	30	45	MIN	0	15	30	45
Rivery	FL			Š	0	Ó	٥	30				
PERMIT NO.	COMPLIANCE?		- 1	Ô	0	0	Ď	31	<u> </u>	-		
057000S-014-AV	YES NO 🗆	Ì	2	Õ	9	Š	5	32		}		
AIRS NO. 0570005	EU NO. 080		3 4	0	00	00	0	33	 	-		
PROCESS RATE & A	PERMITTED RATE NA A		5	0	Ô	0	0	35				
PROCESS EQUIPMENT	Tome Sturage Silo		<u>6</u> 7	0	00	00	0	36 37				
	Novsk		8	0	0	Ô	0	38		-		
OPERATING MODE	AMBIENT TEMP. (* F)	, ,	9	0	0	0	8	39		 	ļ	
Normal	START 800 STOP		10	0	0	0	0	40		 		-
HEIGHT ABOVE GROUND LEVEL	HEIGHT RELATIVE TO OBSERVER		11	0	0	0	6	41	<u> </u>		-	
DISTANCE FROM OBSERVER	DIRECTION FROM OBSERVER START 2700 STOP		13	Õ	0	0	ō	43				
EMISSION COLOR	PLUME TYPE NA		14 15	0	0	0	0	44 45		 -		
None	IS WATER DROPLET PLUME NA		16	0	Ö	0	0	46	 	 	 	
WATER DROPLETS PRESENT? NO DE YES □	IS WATER DROPLET PLUME NT		17	0	0	0	Ō	47				
POINT IN PLUME AT WHICH OPACITY	WAS DETERMINED		18	0	0	0	<u>O</u>	48	_			
DESCRIBE BACKGROUND	stop V		19 20	0	<u>ට</u> ථ	0	<u>0</u>	49 50	┼─			
BACKGROUND COLOR	SKY CONDITIONS Scattered		21	0	0	0	0	51				
START BILLE STOP	WIND DIRECTION		22	0	0	0	0	52	<u> </u>	 	 	
START 7-4 STOP	START SE STOP		23	8	2	0	0	53	-		 -	
AVERAGE OPACITY FOR HIGHEST PERIOD	RANGE OF OPACITY READINGS		24_	0	12	0	13	54	}	├──	 	
$\bigcirc \iota_b$	MIN. 07c MAX. 070		25 26	07	\overline{C}	<u>0</u>	12	55 56		`	 - -	
SOURCE LAYOUT SKETCH	Draw North Arrow		27	8	ŏ	8	5	57	 -	 	 	
			28	0	0	5	6	58	 -	1		
	Emission Point		29	6	ð	Ŏ	3	59	1	1		
	7,0		OBSER'	VER: \	<u> </u>	آخِ جَا	27	cit				
		Certified by: FDEP Certif. # 303921 Certified at: Tampa										
3Mnd			Date Ce									
* Disserver's Position			I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:									
~	sand un Calabian Line		Signatu					<i>يار (و</i> د		-	·/·	_
Comments		1	Title:			7	· · · · · ·				•	

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street, Plant City, Florida 33566 (813)752-5014

VISIBLE EMISSIONS EVALUATION

COMPANY Caigill-	Tampa							
unit Limesjone								
ADDRESS US HWY	41 9 Riverview Dr							
RIVERVICE: FL								
PERMIT NO.	COMPLIANCE?							
AIRS NO. 0570008	EU NO. 080							
PROCESS RATE	PERMITTED RATE							
PROCESS EQUIPMENT	e STOROSE Silo							
CONTROL EQUIPMENT Baghouse								
OPERATING MODE . Filling Silo W/Railcar	AMBIENT TEMP. (°F) START 87 STOP 87							
HEIGHT ABOVE GROUND LEVEL START NION' STOP Dame	HEIGHT REL. TO OBSERVER START NOE STOP.							
DISTANCE FROM OBSERVER START v 300' STOP sume	DIRECTION FROM OBSERVER START 280 STOP 280							
EMISSION COLOR NOWE	PLUME TYPE N/H CONTIN. INTERMITTENT							
WATER DROPLETS PRESENT NO X YES []	IS WATER DROPLET PLUMENTATTACHED IN DETACHED IN							
POINT IN THE PLUME AT WHICH O START BQ JALUSE VENT	OPACITY WAS DETERMINED STOP							
DESCRIBE BACKGROUND	STOP 3 K Y							
BACKGROUND COLOR START BIN HI STOP JAM	SKY CONDITIONS START Sould STOP							
WIND SPEED IMPHI START 3-15 STOP JUTNE	WIND DIRECTION START STOP 5							
AVERAGE OPACITY FOR CALL HIGHEST PERIOD	RANGE OF OPAC. READINGS MIN. MAX.							
SOURCE LAYOUT SKETCH TAF F	DRAW NORTH ARROW							
	Ernission Point							
Sun * Wind Plume and Stack Observer's Position								
Surf Location Line								
COMMENTS								

OBSERVATION DATE START TIME STOP TIME						<u> </u>			
SEC	0	15	30	45-	SEC	0	15	30	45
MIN	<u></u>				MIN				
0	0	0	Ċ	0	30				
1	0	0	0		31				
2	0	0	0	0	32				
3	0	0	0	0	33				
4	0	0	0	0	34				
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12	0	0	0		42				
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28	<u></u>	୍ର	\bigcirc		58				
29	<u></u>	0	<u>ر</u> ک	\mathcal{C}	59				
Observer: Mark Gickle									
Certified by: FD.P Certified at: Tumpy									
Date Certified: 2/64 Exp. Date: 8/64									
I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:									
Signature: Sec Process Data									
Title:									

EPA a / Form Number Page VISIBLE EMISSION OBSERVATION FORM 1 Continued on VEO Form Number Method Used (Circle One) 2038 Other: Method 9 Observation Date 8/29/05 Time Zona EST Start Time Company Name 950 1020 Massic Fertiliza. Sec Facility Name 0 15 30 45 Comments Min' RIVOYICM Street Address 8813 0 Hut Way 33569 0 2 State KIVEN: CW Ó 0 () \bigcirc 3 Operating Mode 0 0 4 0 LineStave Storge 5.10 Mormic 1 Operating Mode Control Equipment 0 0 NETATE! 5 0 0 0 6 0 0 Describe Emission Point Sylvest Vert on 0 7 0 0 0 5.10 0 0 0 8 0 Height of Emiss. Pt. Rel. to Observer Height of Emiss. Pt. Start /OE End 5 End Same Start /00 5,4mc 0 9 0 0 0 Distance to Erriss. Pt. Stat 750° End James Samo Stoot ~ 20 5 10 0 0 6 0 Vertical Angle to Obs. Pt. Stat: 1/8 E Direction to Obs. Pt. (Degrees) -0 \Diamond End Same 11 0 5.9000 0 Stort 350 0 End Distance and Direction to Observation Point from Emission Point 0 \circ O \bigcirc 12 Stort - 300 SE End SAME 13 0 0 0 \bigcirc Describe Emissions End Same 0 NONE 14 0 Ö 0 Stort Emission Color Attached Detached None 15 \circ \mathcal{O} Ö Stort NOVE Eno Symc \circ Describe Furne aggloround 16 0 \bigcirc 0 0 End SAME Sky Conditions son Heclorey 17 0 Background Color 0 0 0 Stat Broken End SAMIC son theeling end game 0 16 0 0 What Direction Start South Start 5-10 End SAMO IRH Percent End S Frence 0 0_ 19 0 0 Wet Build Terric. Arrichent Temp. End & 1 " WA Son 88 MA 0 0 0 20 0 Source Layout Sketch Draw North Arrow 0 21 0 0 0 MN ☐ MI 0 22 0 O. 0 O 0 23 0 0 0 24 0 Û 25 0 \bigcirc 0 0 26 0 0 0 \bigcirc 0 0 27 0 0 0 Objerver's Position 28 \circ \circ \mathcal{O} 0 0 29 Ó Stock With Plumo 0 0 30 0 4 9.m Sun Location Line Who Observer Norme (Punt) Dectrotion Longitude 8/28/05 Commission MOSaic Additional information 8/16/05

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PARTICULATE & FLUORIDE EMISSIONS TEST SUMMARY

Source:

Company: MOSAIC RIVERVIEW AFI NO. 1 STACK

	ี่ ส ีบท 1	Run 2	Run 3	
Date of Run Process Rate (TPH)	06/23/06	06/23/06	06/23/06	
Start Time (24-hr. clock)	1526	1656	1822	
End Time (24-hr, clock)	1628	1758	1924	
Vol. Dry Gas Sampled Meter Cond. (DCF)	54,782	58,805	57,746	
Gas Meter Calibration Factor	0.991	0.991	0.991	
Barometric Pressure at Barom. (in. Hg.)	30.01	30.01	30.01	
Elev. Diff. Manom. to Barom. (ft.)	0	Ó	Ó	
Vol. Gas Sampled Std. Cond. (DSCF)	52.147	55.232	53,949	
Vol. Liquid Collected Std. Cond. (SCF)	7.275 -	8.110	8,364	
Molsture In Stack Gas (% Vol.)	12.2	12.8	13.4	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27,65	27.59	27.52	
Stack Gas Static Press. (in. H2O gauge)	-0,38	-0.27	-0.38	
Stack Gas Static Press. (in, Hg. abs.)	29.98	29.99	29.98	
Average Square Root Velocity Head	0.967	0,978	0,966	
Average Orifice Differential (In. H2O)	2.527	2,903	2,778	
Average Gas Meter Temperature ('F)	94.8	102.8	105.6	
Average Stack Gas Temperature ('F)	148.9	149.7	148.B	
Pitot Tube Coefficient	0.82	0.82	0.82	
Stack Ges Vel. Stack Cond. (ft./sec.)	58.10	58.83	58.17	
Effective Stack Area (sq. ft.)	28,27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	75,160	75,538	74,248	
Stack Gas Flow Rate Stack Cond. (ACFM)	98,567	99,795	98.684	
Net Time of Run (min.)	60	60,	60	
Nozzie Diameter (in.)	0,249	0,249	0,249	
Percent Isokinetic	96.7	102.0	101,3	
Total Resemble	20,1	100.0		Average
Perticulate Collected (mg.)	14,916667	18,55	14,866667	18,111111
Particulate Emissions (grains/DSCF)	0.004	0.005	0.004	0.00
Particulate Emissions (lb./hr.)	2.84	3.36	2.71	2.97
,	2.7.2.1			
Total			_	
Fluoride Collected (mg.)	0.716	1.416	1 350	1.161
Fluoride Emissions (mg/DSCF)	0.014	0.026	0.025	0.021
Fluoride Emissions ((b./hr.)	0.14	0.26	0.25	0.21
` '	****			
Probe Wash				
Fluoride Collected (mg.)	0,037	0.014	0.018	0.023
Fluoride Emissions (mg/DSCF)	0,001	0,000	0.000	0.000
Fluoride Emissions (lb./hr.)	0.007	0,003	0.003	0.004
, .			-	
Filter				
Fluoride Collected (mg.)	0.014	0.012	0.013	0.013
Fluoride Emissions (mg/DSCF)	0.000	0.000	0.000	0.000
Fluoride Emissions (ib./hr.)	0,003	0.002	0.002	0.002
•				•
<u>Impingers</u>				
Fluoride Collected (mg.)	0.6650	1.3900	1.3200	1.125
Fluoride Emissions (mg/DSCF)	0.013	0.025	0.024	0.021
Fluoride Emissions (ib./hr.)	0,127	0.251	0,240	0.208
·				

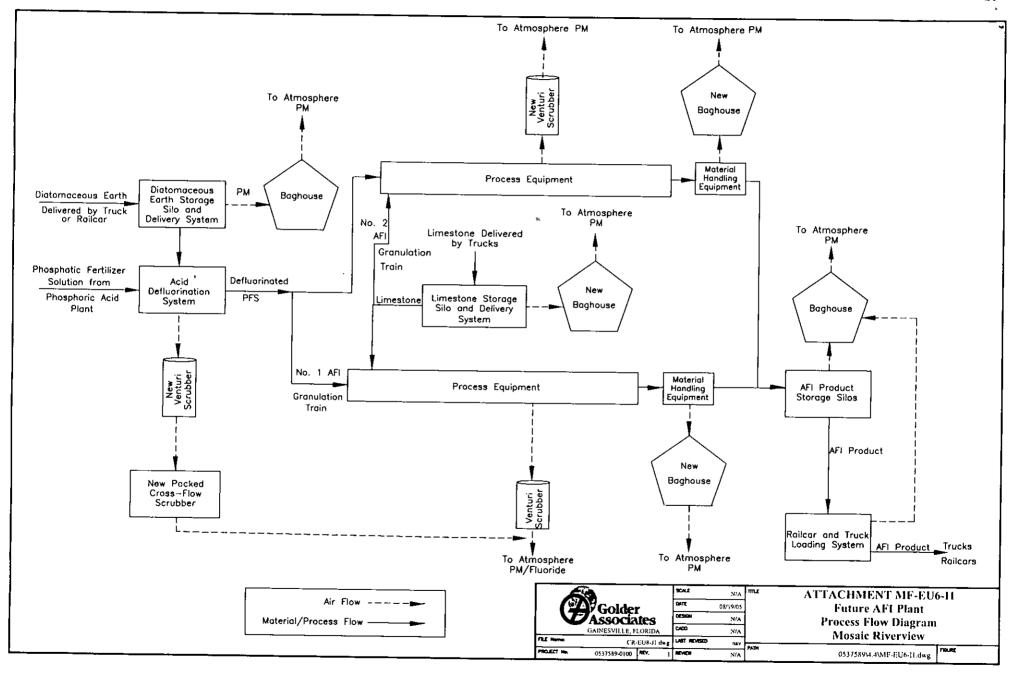
Note: Standard conditions 68°F, 29.92 in, Hg

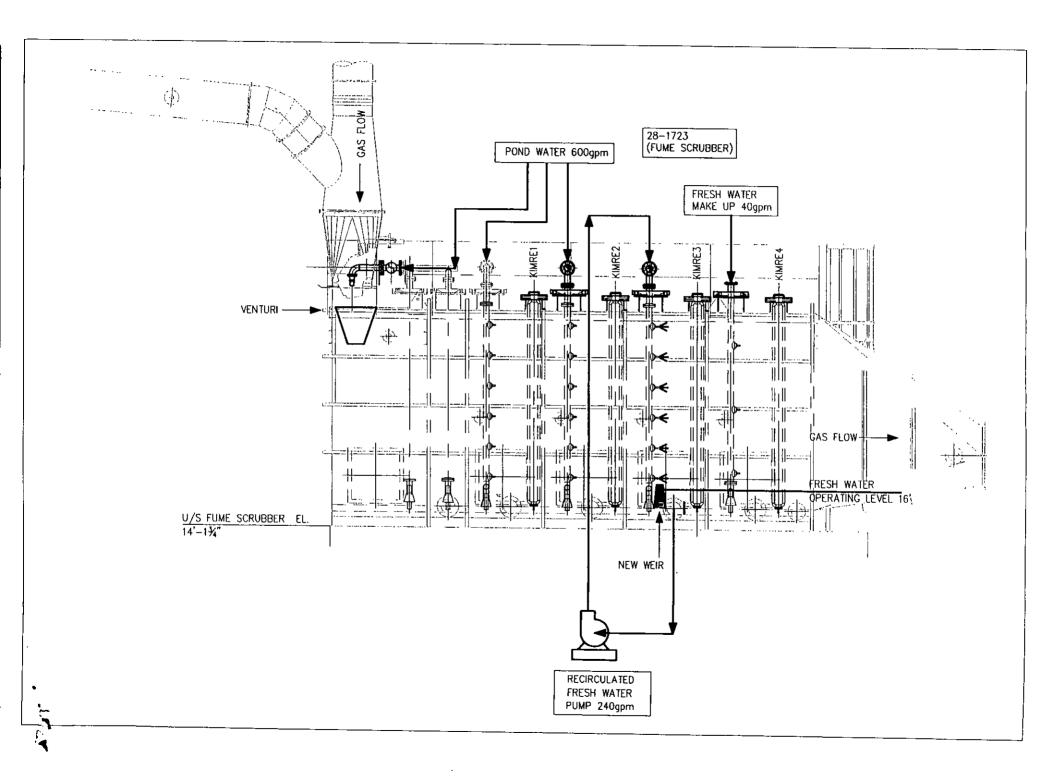
AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	Run 3	AVG
Start Time		06/23/2006 15:26	06/23/2006 16:56	06/23/2006 18:22	
End Time		06/23/2006 16:28	06/23/2006 17:58	06/23/2006 19:24	
Granulation Plant Scrubb	ег				
Recirc Flow	GPM	1281	1277	1276	1278
Make-up Flow	GPM	46	37	42	42
Pressure Drop	"H2O	19	18	19	19
Fan Amps	amps	112	112	111	112
Defluorination Scrubber					
Pondwater Flow	GPM	886	857	821	855
Demister Flow	GPM	58	73	69	67
Pressure Drop	"H2O	14	14	14	14
Fan Amps	amps	101	100	98	100
Plant Production	<u></u> -			1	100
AFI	ТРН	19.5	19.3	19.8	19.5
AFI	TPD	469	463	475	469

Area Superintendent:	





Production and Operating Hours

- 'B' - 1	A. 18 14	C.F.C. A.	2003 FF		72 200	7 20 AN		M. N. C.	* 1209 E	
EU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		January	474	9115	January	517	9040	January	545	10940
		February	492	8635	February	382	9988	February	572	6658
		March	531	9808	March	516	9615	March	588	10809
		April	602	10472	April	613	10771	April	629	8701
		May	602	9721	May	602	11084	May	484	7444
		June	572	9454	June	618	10695	June	300	5635
078	deflournation	July	572	9493	July	606	10105	July	391	4902
	scrubber)	August	611	11026	August	440	7967	August	323	6851
:		September	657	11089	September	267	5217	September	555	11114
		October	567	9119	October	542	9710	Octob er	403	5080
		November	385	6786	November	609	10848	November	603	11820
	:	December	635	10889	December	544	10766	December	611	7923
		TOTAL	6698	115607	TOTAL	6256	115806	TOTAL	6004	97877

Production and Operating Hours

...

		7	2003	* (A. * * * * * * * * * * * * * * * * * * *	2000年100		66.27			THE RESERVED OF
EU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		January	381	6957	January	517	10303	January	628	7936
	i	February	432	6482	February	382	11408	February	640	12243
		March	597	11296	March	605	13084	March	633	11885
		April	498	8322	April	572	11913	April	611	7050
		May	548	8739	May	681	12397	May	637	13105
		June	526	9412	June	658	13174	June	552	8506
103	AFI#2	July	522	10596	July	677	11686	July	713	11082
		August	614	10242	August	649	10804	August	692	9208
		September	580	8548	September	615	6346	September	694	12057
		October	423	6675	October	695	9904	October	663	10276
		November	587	9709	November	690	11194	November	694	12789
		December	541	10019	December	674	14803	December	651	9812
		TOTAL	6249	106997	TOTAL	7415	137016	TOTAL.	7808	125949



ľ	080 Limestone Silo
Month	Tans Processed
1	8,812
2	9,227
3	9,192
4	9,784
5	10,549
6	10,220
7	9,301
8	7,501
9	4,600
10	9,065
11	9,289
12	10,097
TOTAL TONS PROCESSED	107,637



	080
Month .	Limestone Silo Tons Processed
1	8,260
2	10,070
3	9,533
4	7,611
5	8,936
6	5,291
7	7,042
8	5,868
9	8,443
10	6,527
11	9,614
12	8,264
TOTAL TONS PROCESSED	95,459

Appendix U-1, List of Unregulated Emissions Units and/or Activities.

Mosaic Fertilizer, LLC. Riverview Facility Revised Draft Permit Renewal No. 0570008-045-AV (Initial Title V Permit No.: 0570008-014-AV)

Facility ID No.: 0570008

<u>Unregulated Emissions Units and/or Activities</u>. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

{Permitting Notes: 1. Letter dated 9/19/2005 from David Buff, P.E. of Golder Associates Inc. was received by the Department on 9/29/2005 concerning the phosphoric acid clarifier, clarifier feed tank and associated wet scrubbers and is being reviewed by the Department.

- 2. There will be no GTSP production/handling at the Riverview facility. So, GTSP handling related activities are removed from the list below except coating oil tank that may be used for dust suppression for other types of fertilizer at the facility.
- 3. Construction permit application for ammoniated phosphates storage and loadouts dated 9/27/2005 was received by the Department on 9/29/2005 and it is currently being processed.}

E.U. ID	
<u>No.</u>	Brief Description of Emissions Units and/or Activity
	Fertilizer Plants
-105	Coating drums (containing coating oil that is used for dust suppression)
-105	Raw material and product storage tanks, bins, and storage buildings
-105	Grinding mills, chain mills, cage mills, lump breakers
-105	Cooling tower, slurry pumps, scrubber water sumps
-105	DAP rail loading system, truck unloading
-105	Material conveyors, elevators, and screens
-105	Ammonia chillers and vaporizers
-105	Product Recovery Units
-105	Ammonia Flare
-105	Coating Oil Tank – 17,233 gallons (installed 1986)
	Material Handling System
-105	Choke feeder, covered conveyors, screening tower (fugitive only)
	Phosphoric Acid Production Facility
-105	Flash Cooler Hotwells
-105	Flash coolers, vacuum pumps, seal pumps and seal tanks
-105	Nos. 1, 2 and 3 Filters - unevacuated area (fugitive only)
-105	Centrifuges, pumps
-105	East, north, and south coolers
-105	Truck loading/unloading
-105	Clarifier and clarifier feed tank

E.U. ID	
No.	Brief Description of Emissions Units and/or Activity
-105	Aging, filtrate, raw material, and product storage tanks
-105	Auxiliary power diesel generator with tank
	Molten Sulfur Handling
-105	Dock unloading/truck loading (fugitive only)
-105	Molten sulfur storage tank fires
-105	Molten Sulfur Tank # 2 – 3,104,714 gallons (installed 1990)*
	Sulfuric Acid Plants
-105	Water reuse tanks, water storage tanks, condensate tanks
-105	Economizers
-105	Sulfuric acid storage tanks
-105	Sulfuric acid truck loading/unloading
-105	Cooling towers
	Animal Feed Plant
-105	Acid heaters and dilution tank
-105	High speed mixer
-105	Diatomaceous earth weigh bin and feed splitters
-105	Limestone metering feeder and screen feed splitter
-105	Weigh bin slide gate and weighing belt
-105	Conveyors
	Ammonia Handling
-105	Bullets, pipeline, pop off valves, truck unloading
	<u>Facilitywide</u>
-105	Fuel tanks and dispensers
-105	Compressors, generators (6 MW, 35 MW)
-105	Wastewater treatment plant and collection system
-105	Locomotive Engines
-105	Laboratory, lime hopper, refrigerators
-105	Pressure/steam relief valves
-105	Railcar/truck unloading, conveyor belts (fugitive only)
-105	Wet rock pile, rock hoppers, rock grinding mills (fugitive only)
-105	Safety kleen solvent cleaners
-105	Sand blasters, welding equipment, supersucker
-105	Raw material and product storage tanks
-105	Minor fugitive leaks from process equipment
-105	Diesel pump at NPDES Outfall 005
-105	Diesel pump at active phosphogypsum stack
-105	Asbestos Waste and hazardous waste removal
-105	Refrigeration equipment < 50 lbs charge
-105	Oil-fired catalyst
-105	400 hp emergency generator

^{*} Tanks subject to 40 CFR 60, Subpart Kb, NSPS for VOC Storage Tanks.

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1

	Run 1	Run 2	Run 3	
Date of Run	5/7/03	5/7/03	5/7/03	
Process Rate (TPH)	701 √	604 ∜	655 🗘	
Start Time (24-hr. clock)	0824	1056	1115	
End Time (24-hr. clock)	0928	1056	1218	
Vol. Dry Gas Sampled Meter Cond. (DCF)	47.553	44.698	43.438	
Gas Meter Calibration Factor	0.994	0.994	0.994	
Barometric Pressure at Barom. (in. Hg.)	30.09	30.09	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.122	42.429	40.642	
Vol. Liquid Collected Std. Cond. (SCF)	8.638	8.214	7.586	
Moisture in Stack Gas (% Vol.)	16.10	16.20	15.73	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.23	27.22	29.00	
Stack Gas Static Press. (in. H2O gauge)	-0.41	-0.42	-0.41	
Stack Gas Static Press. (in. Hg. abs.)	30.06	30.06	30.09	
Average Square Root Velocity Head	0.955	0.882	0.862	
Average Orifice Differential (in. H2O)	1.535	1.317	1.249	
Average Gas Meter Temperature (°F)	98.3	97.8	106.4	
Average Stack Gas Temperature (°F)	144.8	[*] 144.8	144.3	,
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.93	54.47	51.49	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,592	67,913	64,673	
Stack Gas Flow Rate Stack Cond. (ACFM)	99,972	92,413	87,345	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	102.9	104.8	105.4	
				Average
Particulate Collected (mg.)	15.8	12.7	18.7	15.7
Particulate Emissions (grains/DSCF)	0.005	0.005	0.007	0.01
Particulate Emissions (lb./hr.)	3.4	2.7	3.9	3.34
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.733	1.260	1.353	1.448
Fluoride Emissions (mg/DSCF)	0.038	0.030	0.033	0.034
Fluoride Emissions (lb./hr.)	0.37	0.27	0.28	0.31
Allowable Fluoride Emissions (lb./hr.)				2.1

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	¹ Run 3	AVG
Start Time		05/07/2003 8:24	05/07/2003 9:53	05/07/2003 11:15	
End Time		05/07/2003 9:28	05/07/2003 10:56	05/07/2003 12:18	
Granulation Plant Scrubbe	er			<u></u>	
Recirc Flow	GPM	1171	1169	1168	1169
Make-up Flow	GPM	47	49	44	46
Pressure Drop	"H2O	24	23	23	23
Fan Amps	amps	115	115	115	115
Defluorination Scrubber					
Pondwater Flow	GPM	856	855	854	855
Demister Flow	GPM	82	82	79	81
Pressure Drop	"H2O	6	6	6	6
Fan Amps	amps	68	68	68	68
Plant Production			-		
AFI	TPD	701	604	655	653

Area Superintendent:

Defill

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1

•			4.1	
·	Run 1	Run 2	Run 3	
Date of Run	5/13/04	5/13/04	5/13/04	
Process Rate (TPH)	23.3	22.6	21.1	
Start Time (24-hr. clock)	0807	0944	1113	
End Time (24-hr. clock)	0914	1047	1216	
Vol. Dry Gas Sampled Meter Cond. (DCF)	45.876	45.424	45.210	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.12	30.12	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.641	44.913	44.319	
Vol. Liquid Collected Std. Cond. (SCF)	7.313	8.152	7.318	
Moisture in Stack Gas (% Vol.)	13.8	15.4	14.2	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.48	27.31	27.44	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.32	-0.31	
Stack Gas Static Press. (in. Hg. abs.)	30.01	30.02	30.02	
Average Square Root Velocity Head	0.940	0.934	0.923	
Average Orifice Differential (in. H2O)	2.008	1.984	1.941	
Average Gas Meter Temperature (°F)	83.5	86.8	91.5	
Average Stack Gas Temperature (°F)	145.7	144.6	145.4	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	57.84	57.61	56.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,963	72,4 7 8	72,403	•
Stack Gas Flow Rate Stack Cond. (ACFM)	98,127	97,739	96,414	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.234	0.234	0.234	
Percent Isokinetic	97.4	97.8	96.6	
Portioulate Callegated (mar.)	40.0	-		<u>Average</u>
Particulate Collected (mg.)	19.3	21.7	21.3	20.7
Particulate Emissions (grains/DSCF)	0.007	0.007	0.007	0.01
Particulate Emissions (lb./hr.)	4.1	4.6	4.6	4.5
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.9	2.5	1.7	2.0
Fluoride Emissions (mg/DSCF)	0.04	0.06	0.04	0.05
Fluoride Emissions (lb./hr.)	0.40	0.54	0.38	0.44
Allowable Fluoride Emissions (lb./hr.)				2.1

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

Stort Time	11.	Rundks #	Run 21	Run 3	AVG
Start Time		05/13/2004 08:07	05/13/2004 09:44	05/13/2004 11:13	ET-TELEOUS V
End lime		05/13/2004 09:14	05/13/2004 10:47	05/13/2004 12:16	第200 年,约
Granulation Plant Scrubb	OF STATE OF STATE	THE STATE OF STATE			
Recirc Flow	GPM	1294	1295	1295	1294
Make-up Flow	GPM	64	61	60	63
Pressure Drop	"H2O	25	26	26	26
Fan Amps	amps	108	109	100	108
Defluorination Scrubber	AND SALANDERS	4.00			1.2 Mar. 1.1.5 Mar. 1.
Pondwater Flow	GPM	798	798	798	798
Demister Flow	GPM	34	38	39	36
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	72	72	72	72
Plant Production	CENTURAL SE		SAPARE TEN COLONO	ANT TELEVISION	TOTAL SERVICE
AFI_	ТРН	23.3	22.6	21.1	22.3
AFI	TPD	559	543	507	536

Area Superintendent:	

TABLE 1. PARTICULATE AND FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 1

	Run 1	Run 2	¹ Run 3	
Date of Run	07/29/05	07/29/05	07/29/05	
Process Rate (TPH)	20.8	20.7	20.8	
Start Time (24-hr. clock)	1016	1133	1505	
End Time (24-hr. clock)	1119	1338	1607	
Vol. Dry Gas Sampled Meter Cond. (DCF)	55.871	48.110	58.397	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.06	30.06	30.03	
Elev. Diff. Manom. to Barom. (ft.)	. 0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52.111	44.274	53.473	
Vol. Liquid Collected Std. Cond. (SCF)	8.855	9.675	10.562	
Moisture in Stack Gas (% Vol.)	14.5	17.9	16.5	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.40	27.03	27 .19	
Stack Gas Static Press. (in. H2O gauge)	-0.52	-0.24	-0.64	
Stack Gas Static Press. (in. Hg. abs.)	30.02	30.04	29.98	
Average Square Root Velocity Head	0.949	0.961	0.952	
Average Orifice Differential (in. H2O)	2.568	2.658	2.763	
Average Gas Meter Temperature (°F)	98.6	106.3	108.7	
Average Stack Gas Temperature (°F) Pitot Tube Coefficient	150.8	151.3	154.2	-
	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.) Effective Stack Area (sq. ft.)	55.25	56.30	55.83	
Stack Gas Flow Rate Std. Cond. (DSCFM)	28.27	28.27	28.27	-
Stack Gas Flow Rate Stack Cond. (ACFM)	69,500	67,983	68,137	
Net Time of Run (min.)	93,734	95,510	94,712	
Nozzle Diameter (in.)	60	60	60	
Percent Isokinetic	0.249 104.5	0.249	0.249	
1 CICCIN ISOKINGUC	104.5	90.8	109.4	
5				<u>Average</u>
Particulate Collected (mg.)	38.3	35.8	44.1	39.4
Particulate Emissions (grains/DSCF)	0.011	0.012	0.013	0.01
Particulate Emissions (lb./hr.)	6.76	7.27	7.43	7.2
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	3.325	3.691	6.331	4.449
Fluoride Emissions (mg/DSCF)	0.064	0.083	0.118	0.089
Fluoride Emissions (lb./hr.)	0.59	0.75	1.07	0.8
Allowable Fluoride Emissions (lb./hr.)				2.1

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

Start Time	MATERIAL TERMS	Run (Providence	Runi2	MONEY RUNGER	LSTAVCE/
Start Time		07/29/2005 10:16	07/29/2005 11:33		
End Time	· · · · · · · · · · · · · · · · · · ·	07/29/2005 11:19	07/29/2005 13:33	07/20/2005 16:07	FALK BY
Granulation Plant Scrub	ber		THE PERSON NAMED IN COLUMN	0772072000 10.07	
Recirc Flow	I GPM	1237	1241	1246	1239
Make-up Flow	GPM	46	45	26	46
Pressure Drop	"H2O	20	20	20	20
Fan Amps	amps	108	108	110	100
Defluorination Scrubber		William Control	INCIS NAME OF THE		
Pondwater Flow	GPM	758	756	749	757
Demister Flow	GPM	69	70	73	70
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	83	84	82	92
Plant Production 产型。他	人祖太太太子子 其實於			VILLE TO SHIP HELD	600 6437-463872
AFI	TPH	20.8	20.7	20.8	20.7
AFI	TPD	498	496	499	498

Area Superintendent:	

TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 2

·		•		
	Run 1	Run 2	Run 3	
Date of Run	5/8/03	5/8/03	5/8/03	
Process Rate (TPH)	522	522	521	
Start Time (24-hr. clock)	0848	1029	1310	
End Time (24-hr. clock)	0952	1230	1415	
Vol. Dry Gas Sampled Meter Cond. (DCF)	31.254	31.692	31.760	
Gas Meter Calibration Factor	0.997	0.997	0.997	
Barometric Pressure at Barom. (in. Hg.)	30.11	30.11	30.12	
Elev. Diff. Manom. to Barom. (ft.)	· 116	116	116	
Vol. Gas Sampled Std. Cond. (DSCF)	30.120	30.517	30.100	
Vol. Liquid Collected Std. Cond. (SCF)	2.414	2.315	1.504	
Moisture in Stack Gas (% Vol.)	7.4	7.1	4.8	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	28.18	28.22	28.48	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.42	-0.29	
Stack Gas Static Press. (in. Hg. abs.)	30.08	30.08	30.10	
Average Square Root Velocity Head	0.796	0.751	0.743	
Average Orifice Differential (in. H20)	0.722	0.629	0.496	
Average Gas Meter Temperature (°F)	90.7	91.0	99.8	
Average Stack Gas Temperature (°F)	142.4	* 141.8	141.9	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	48.18	45.42	44.69	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	82,322	77,983	78,666	
Stack Gas Flow Rate Stack Cond. (ACFM)	100,898	95,125	93,601	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.195	0.195	0.195	
Percent Isokinetic	102.7	109.8	107.4	
Postigulate Callege I.				<u>Average</u>
Particulate Collected (mg.)	20.3	7.2	10.0	12.5
Particulate Emissions (grains/DSCF)	0.010	0.004	0.005	0.006
Particulate Emissions (lb./hr.)	7.4	2.4	3.5	4.43
Allowable Particulate Emissions (lb./hr.)				13.0

AFI 2 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 8, 2003

Source: EU ID No. 103 AFI 2 Plant

		Run 1	Run 2	Run 3	
Start Time		05/08/2003 8:48	05/08/2003 10:29	05/08/2003 13:10	AVG
End Time		05/08/2003 9:52	05/08/2003 12:30	05/08/2003 14:15	
Equipment Scrubber		. "	<u> </u>		
Flow	GPM	1083	1031	1219	1111
Pressure Drop	"H2O	14	14	15	15
Dryer Scubber			·		
Flow	GPM	1482	1478	1469	1476
Pressure Drop	"H2O	20	19	20	20
Fan Amps	amps	120	120	120	120
Production Rate		· · · · · · · · · · · · · · · · · · ·			
AFI Product Rate	TPD	522	522	521	522
Emissions			-		
PM Emissions	lb/hr	7.4	2.4	3.5	4.4

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Cargill Crop Nutrition - Riverview AFI - Plant No. 2 Company:

Source:

			4.	
	Run 1	Run 2	Run 3	
Date of Run	5/20/04	5/20/04	5/20/04	
Process Rate (TPH)	25.7	25.7	25.8	
Start Time (24-hr. clock)	0802	0928	1049	
End Time (24-hr. clock)	0905	1032	1151	
Vol. Dry Gas Sampled Meter Cond. (DCF)	32.550	34.752	34.665	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.21	30.21	30.21	
Elev. Diff. Manom. to Barom. (ft.)	0 .	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	31.957	33.857	33.571	
Vol. Liquid Collected Std. Cond. (SCF)	6.078	7.228	6.455	
Moisture in Stack Gas (% Vol.)	16.0	17.6	16.1	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.24	27.06	27.23	
Stack Gas Static Press. (in. H2O gauge)	-0.30	-0.32	-0.34	
Stack Gas Static Press. (in. Hg. abs.)	30.07	30.09	30.10	
Average Square Root Velocity Head	0.739	0.747	0.742	
Average Orifice Differential (in. H2O)	1.152	1.117	1.106	
Average Gas Meter Temperature (°F)	90.6	95.2	98.7	
Average Stack Gas Temperature (°F)	140.7	143,2	144.7	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	45.43	46.15	45.76	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	70,637	70,120	70,607	•
Stack Gas Flow Rate Stack Cond. (ACFM)	95,157	96,653	95,833	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	93.7	100.0	98.5	
				<u>Average</u>
Particulate Collected (mg.)	14.4	20.0	18.6	17.7
Particulate Emissions (grains/DSCF)	0.007	0.009	0.009	0.008
Particulate Emissions (lb./hr.)	4.2	5.5	5.2	5.0
Allowable Particulate Emissions (lb./hr.)				13.0

AFI 2 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 20, 03 Test For: PM

Source: AFI 2 Plant

Compliance Test

电影中国的现在分词的	生态。	量 Run 和 国	Runi2	Run 3	
Start Time		5/20/04 8:02	5/20/04 9:28	5/20/04 10:49	AVG
End Time		5/20/04 9:05	5/20/04 10:32	5/20/04 11:51	建建工
Equipment Scrubber	-123	建筑是在约约	和 原教皇 5岁 经		A. T. B. T. C.
Flow	GPM	1480.2	1478.6	1478.6	1447
Pressure Drop	"H2O	11.7	11.7	11.7	16
Dryer Scubber					
Flow	GPM	1409.8	1404.7	1404.7	1544
Pressure Drop	"H2O	20.2	20.4 20.4		21
Production					
AFI	TPH	25.7	25.7	25.8	25.7
AFI	TPD	617	617	618	617

Area Superintendent:	
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TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 2

	Run 1	Run 2	Run 3	
Date of Run	8/4/05	8/4/05	8/4/05	
Process Rate (TPH)	23.7	23.8	23.7	
Start Time (24-hr. clock)	0828	0952	1121	
End Time (24-hr. clock)	0931	1056	1223	
Vol. Dry Gas Sampled Meter Cond. (DCF)	40.592	42.723	40.713	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.05	30.05	30.05	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	38.386	39.916	37.940	
Vol. Liquid Collected Std. Cond. (SCF)	5.031	8.133	8.723	
Moisture in Stack Gas (% Vol.)	11.6	16.9	18.7	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.73	27.14	26.94	
Stack Gas Static Press. (in. H2O gauge)	-0.29	-0.26	-0.26	
Stack Gas Static Press. (in. Hg. abs.)	30.03	30.03	30.03	
Average Square Root Velocity Head	0.726	0.728	0.724	
Average Orifice Differential (in. H2O)	1.328	1.438	1.246	
Average Gas Meter Temperature (°F)	89.1	95.9	97.1	
Average Stack Gas Temperature (°F)	148.5	149.0	148.1	
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	41.91	42.50	42.40	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	•
Stack Gas Flow Rate Std. Cond. (DSCFM)	67,578	64,351	62,925	
Stack Gas Flow Rate Stack Cond. (ACFM)	87,770	89,018	88,801	
Net Time of Run (min.)	60.0	60.0	60.0	
Nozzle Diameter (in.)	0.246	0.246	0.246	
Percent Isokinetic	100.2	109.4	106.3	_
Dortioulate Callested (mar.)	40.5	47.0	00.0	Average
Particulate Collected (mg.)	19.5	17.6	23.6	20.2
Particulate Emissions (grains/DSCF)	0.008	0.007	0.010	0.008
Particulate Emissions (lb./hr.)	4.5	3.8	5.2	4.5
Allowable Particulate Emissions (lb./hr.)				13.0

AFI 2 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Test Date(s): August 4, 2005 Test For: PM

Source: AFI 2 Plant

Compliance Test

		Page Run 1号。	Run 2	Run3	D. 基。对第73
Start Time		08/04/2005 08:28	08/04/2005 09:52	08/04/2005 11:21	AVG
End Time		08/04/2005 09:31	08/04/2005 10:56	08/04/2005 12:23	
Equipment Scrubber	元。"西西德	Children and Company	Ent Colorada de la	**************************************	TANK YER, I
Flow	GPM	1236.0	1239.5	1243.1	1240
Pressure Drop	"H2O	12.6	12.5	12.4	13
Dryer Scubber	632多处理	型面 医红斑 医二种	建设型工程工程		
Flow	GPM	1227.6	1230.5	1229.7	1229
Pressure Drop	"H2O	20.5	20.3	20.0	20
Production		变。 第14章 14章 14章 14章 14章 14章 14章 14章 14章 14章			
AFI	TPH	23.7	23.8	23.7	24
AFI	TPD	569	570	569	569

Southern Environmental Sciences, Inc. 1204 North Wheeler Street | Plant City, Florida 33563 | (813) 752-5014, Fax (813) 752-2475

	VISIBLE EMISS	SIONS E	VAL	UAT	ION					Lin	-دع <u>ظ</u> ن	<u>. • 5</u> .
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DISTANCE FROM OBSERVER	DIRECTION FROM OBSERVER	ון וו	12	0	0	0	0	42				
START 300 STOP	PLUME TYPE NA	¶ [14	O	0	G	0	44				
EMISSION COLOR	CONTIN. INTERMITTENT	∥	15	Ó	0	0	0	45	_			
WATER DROPLETS PRESENT?	IS WATER DROPLET PLUME NA	11	16	<u>_</u>	0	0	0	46				
POINT IN PLUME AT WHICH OPACITY	MAS DETERMINED	11	17 18	ව	$\mathcal{O}_{\mathcal{O}}$	\mathbb{C}	0	47 48				ļ
START Bashing Vent	STOP V		19	0	0	0	0	49				
START SX	STOP V		20	0	0	\circ	à	50				
BACKGROUND COLOR START BLUE STOP	SKY CONDITIONS Scattered		21	0	0	0	0	51	 			
WIND SPEED IMPHI	WIND DIRECTION	11	22 23	00	0	00	0	<u>52</u>		 		
START Z-4 STOP	START SE STOP)) [—	24	Ŏ	0	0	0	53 54	-	 	-	-
AVERAGE OPACITY FOR HIGHEST PERIOD	RANGE OF OPACITY READINGS MIN. 070 MAX. 070	1)	25	Ö	0	Ŏ	0	55				
SOURCE LAYOUT SKETCH	Draw North Arrow	1	26	<u>0</u>	Q_	0	\bigcirc	56				
			27	\circ	O.	0	0	57	<u> </u>	<u> </u>		
	Emission Point	-	28	<u>Q</u>	Ó	<u>ي</u>	Q	58	<u> </u>	ļ		
	7		29	<u> </u>	٥	0	0	59	<u> </u>			<u> </u>
	100	0	BSERV	ER: \	<u> </u>	<u> </u>	<u> </u>	ente				
		C	ertified	by: 🏲	930	Certí	f. #3c	3321	Certifi	ed at:	Tan	<u>ea</u>
Whol		D	ate Ce	rtified:	210	6/03	Ехр.	Date:	3/2	<u>010</u> 2	_	
*	Observers Posdion		-				d to the	•			g the t	est
<u> </u>	n Lagran Line	s	ignatur	e: <	 ⊃e ≈	< ~	> < ℃	<i>ار زو</i> ح	- S	جا ھ	ta	_
Comments]	itle:		 -	- 4	<u></u>					
		(⊫=									-	

SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street, Plant City, Florida 33566 (813)752-5014

VISIBLE EMISSIONS EVALUATION

COMPANY CaigoII-	Tampa
UNIT Limics Tone	silo
ADDRESS US Hwy	41 9 River View Dir
11	cw. FL
PERMIT NO.	COMPLIANCE? YES NO 🗆
AIRS NO. 0570008	EU NO. 080
PROCESS RATE	PERMITTED RATE
PROCESS EQUIPMENT LIMESTON	e Storege Silo
CONTROL FOUIPMENT .	house
OPERATING MODE Filling Silo w/Kailcar	AMBIENT TEMP. (*F) START 87 STOP 87
HEIGHT ABOVE GROUND LEVEL STARTNICO' STOP	HEIGHT REL. TO OBSERVER START NOC STOP Owne
DISTANCE FROM OBSERVER	DIRECTION FROM OBSERVER START 280 STOP 280
EMISSION COLOR	PLUME TYPE N/H CONTIN. INTERMITTENT
WATER DROPLETS PRESENT NO SY YES D	IS WATER DROPLET PLUMEN ATTACHED IN DETACHED IN
POINT IN THE PLUME AT WHICH O START BO THOUSE VANT	DPACITY WAS DETERMINED STOP
DESCRIBE BACKGROUND	STOP 3 Ky
BACKGROUND COLOR START BIN HISTOP 22M	SKY CONDITIONS START South, STOP South
WIND SPEED (MPH) START 3-15 STOP 2007NE	WIND DIRECTION START STOP 5
AVERAGE OPACITY FOR COLUMN FIRMS PERIOD COLUMN FOR COLU	RANGE OF OPAC. READINGS MIN. MAX. ()
SOURCE LAYOUT SKETCH TAFT	DRAW NORTH ARROW
Sun * Wind	Emission Point
Plume and Stack	Observer's Position
Surction	40°
COMMENTS	

EVALUATION									
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3	0	O	0	0	33				
4	0	0	0	0	34				
5	0	0	0	0	35				
6	0		0	0	36				
7 '	0	0	0	0	37		 	_	
8	0	0	0		38				
9	0	0	0	0	39				
10	0	0	0	\circ	40				
11	0	0	0	0	41		ļ		
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14	$Q_{\tilde{a}}$	<u>ن</u>	0	0	44				
15	Š	0	0	0	45				
16	(2)	0	0	0	46				
17	0	0	0	0	47				
18	\mathbb{Q}	0	0	2	48				∤
19	3	0	0	0	49				
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26	6	ð	7	ارجم	56				
27	7		7	6	57				
28	A	성	\overline{C}		58				
29	0	0	<u>C</u>)	0	59				
Obser	ver:	Ma			روالا	 _		<u></u>	
Certif					crtified		 «Ти	Dr.	
Date			2/01		cp. Dat		<u>Tam</u> 8/c		{
I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:									
Signa	ture:	<	<u>2.⇔. C</u>	P	<u>000</u>	<u> </u>	ا كخ	<u>a</u>	ģ
Title:									

EPA -	Form Nu	mber		- 7		Page /	α/
VISIBLE EMISSION OBSERVATION FORM 1	Contru	ed on VEC	Form Nu	nber	<u>}</u>		, , , , , ,
Method Seg (Circle Che) Method 9 203A 2038 Other:							
	Observo	don Date		īms Zo	na	Start Time	End Ilma
Company Name Mass. c Fertiliza. LLC	8/	27/25	T——	E.	5T_	950	1020
ROUBLY NORTH	Min	0	15	30	45		Correments
Street Actives & 813 U.S HILL Way 41	1	0	0	0	0		
Riverview FL 33569	2	0	0	0	0	ļ	
	3	0	0	0	0		
Linc Stave Store S.10 Hornize 1 Control Equatorism 1 Operating Mode	4	0	0	0	0		
Process Limit Stave Store 5.10 Unit # Operating Mode Hor Mil / Control Equipment Bufforuse Displaces Note Mile / Displaces Note Mile	5	0	0	0	0		
	6	0	0	0	0		
Describe Emission Politics Servert on Tep or 1-ne Stime	7	0	0	0	0		
Height of Erniss, Pt. Height of Erniss, Pt. Red. to Observer	8	0	0	0	0	· · · · · · · · · · · · · · · · · · ·	
one 1002 and Came Sot 100 and Jame	9	0	0	0	0		
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Supritory Arrote to Ohe Pt Direction to Obe Pt. (Degrees)	11	0	.0	0	0		
Start 1/8 End Some Start 350 End Some	12	0	C	0	0		
Start 300 SE End SAME	13	0	0	0	0		
Describe Emissions Start NoviC End Sizem C	14	0	0	0	0	<u> </u>	
Emission Color Water Droplet Plume	15	0	0	0	O		
	16	0	 	0			
Scattle Plume Background Start Gue 1 End Signic Background Color Sky Conditions	17) 0	0		0		
Start Buckey and Game Start Broken and Same Wind Speed Wind Speed			0	0	0		
Wind Speed Start 5 70 End 5 GM 2 Start South End 5 GM 2 Ambient Temp. West Build Temp. RM Percent	18	0	0	0	0		
Start Chief Crey and Game Start Broken and Same Wind Speed Start 5-10 and 5-3me start South and Same Antibiert Temp. Start 88 and 89 - HA NIA	19	0	0	0_	O		
	20	0	0	0	0		
Source Layout Sketch Drow North Arrow	21	0	0	0 .	0		
	22	0	0	_0	0		
	23	0	0	0	0		
A Communition Point	24	0	0	G	0		·
	25	0	0	0	0		·
	26	0	0	0	0		
WEY !	27	Õ	0	0	0		
Cooperver's Position	28	0	0	0	0		
Scis View Street	29	0	0	0	0		
140°	30	0	0	0	0		
Sun Location Line Sun Wind	Observer	None /	icit)				
Longitude Latitude Declination	<i>F/</i>	VT	Barn	£5_			
	Observer's	Sprature	Sa	we	- س	Date	8/28/05
Additional information	Organizati	on Mo.	Sair				
	Certified B		- <u></u>			Date	INICC

PARTICULATE & FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC RIVERVIEW Source: AFI NO. 1 STACK

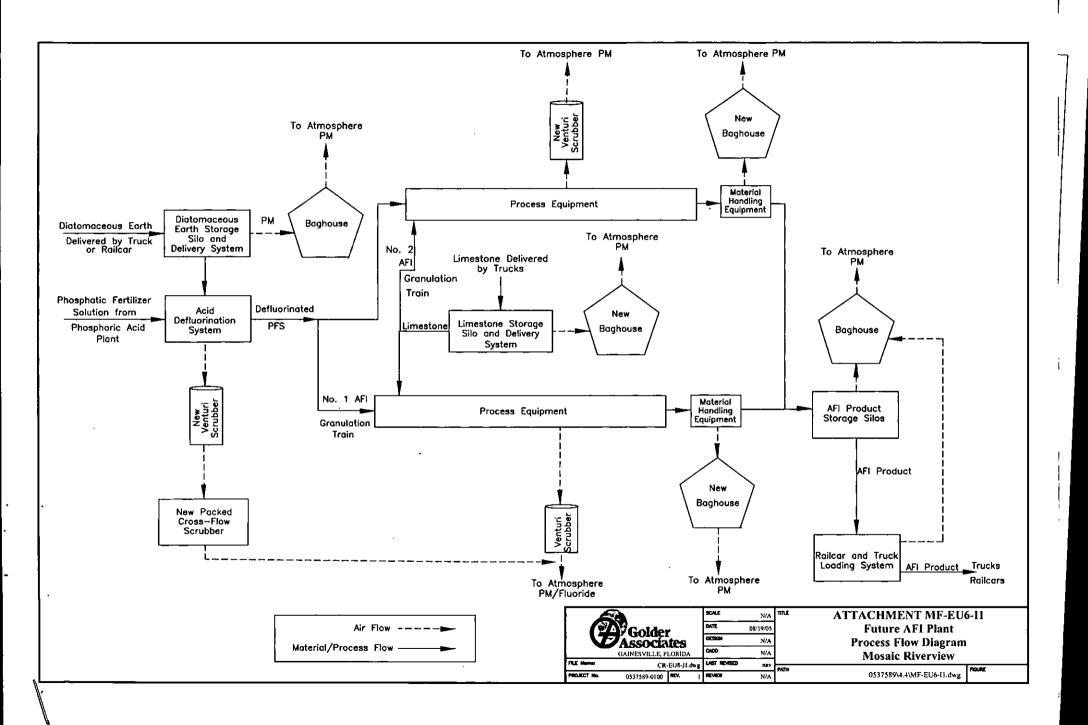
	Run 1	Run 2	Run 3	
Date of Run	06/23/06	06/23/06	06/23/06	
Process Rate (TPH)				
Start Time (24-hr, clock)	1526	1656	1822	
End Time (24-hr, clock)	1628	1758	1924	
Vol. Dry Gas Sampled Meter Cond. (DCF)	54.782	58.805	57,746	
Gas Meter Calibration Factor	0.991	0.991	0.991	
Barometric Pressure at Barom. (In. Hg.)	30.01	30.01	30.01	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52,147	55.232	53,949	
Vol. Liquid Collected Std. Cond. (SCF)	7.275	8.110	8,364	
Molsture in Stack Gas (% Vol.)	12.2	12.8	13.4	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.65	27.59	27,52	
Stack Gas Static Press. (in. H2O gauge)	-0,38	-0.27	-0,38	
Stack Gas Static Press, (in, Hg. abs.)	29.98	29.99	29.98	
Average Square Root Velocity Head	0.987	0.978	0.966	
Average Orifice Differential (In. H2O)	2.527	2,903	2.778	
Average Gas Meter Temperature ('F)	94.8	102.8	105.6	
Average Stack Gas Temperature ('F)	148.9	149.7	148.8	
Pitot Tube Coefficient	0.82	0.82	0.82	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.10	58.83	56,17	
Effective Stack Area (sq. ft.)	28,27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	75,160	75,538	74,248	
Stack Gas Flow Rate Stack Cond. (ACFM)	98,567	99,795	98,684	
Net Time of Run (min.)	60	60,	60	
Nozzle Diameter (In.)	0.249	0.249	0.249	
Percent Isokinetic	96.7	102.0	101.3	
1 di datte to anno de	1,00	102.0	101.0	Average
Perticulate Collected (mg.)	14.916667	18.55	14,866667	18.111111
Particulate Emissions (grains/DSCF)	0.004	0,005	0.004	0.00
Perticulate Emissions (lb./hr.)	2,84	3.36	2.71	2.97
The state of the s	2.04	0.00	4.71	4. 31
Total			-	
Fluoride Collected (mg.)	0.718	1,416	1.350	1.161
Fluoride Emissions (mg/DSCF)	0.014	0.026	0.025	0.021
Fluoride Emissions (lb./hr.)	0.14	0.26	0.25	0.21
Probe Wash				
Fluoride Collected (mg.)	0.037	0.014	0.018	0.023
Fluoride Emissions (mg/DSCF)	0.001	0,000	0.000	0.000
Fluoride Emissions (lb./hr.)	0.007	0,003	0.003	0.004
•	-1447	0,000	0.000	0.001
<u>Filter</u>				
Fluoride Collected (mg.)	0.014	0.012	0.013	0.013
Fluoride Emissions (mg/DSCF)	0.000	0.000	0.000	0.000
Fluoride Emissions (ib./hr.)	0.003	0.002	0.002	0.002
<u>Impingers</u>				
Fluoride Collected (mg.)	0.6650	1,3900	1.3200	1,125
Fluoride Emissions (mg/DSCF)	0,013	0.025	0.024	0.021
Fluoride Emissions (lb./hr.)	0.127	0.251	0.240	0.208
	V. 121	4.201	3,243	U.E.00

AFI 1 Plant Process Data

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	Run 3	AVG
Start Time		06/23/2006 15:26	06/23/2006 16:56	06/23/2006 18:22	
End Time		06/23/2006 16:28	06/23/2006 17:58	06/23/2006 19:24	
Granulation Plant Scrubbe	er				
Recirc Flow	GPM	1281	1277	1276	1278
Make-up Flow	GPM	46	37	42	42
Pressure Drop	"H2O	19	18	19	19
Fan Amps	amps	112	112	111	112
Defluorination Scrubber				1	112
Pondwater Flow	GPM	886	857	821	855
Demister Flow	GPM	58	73	69	67
Pressure Drop	"H2O	14	14	14	14
Fan Amps	amps	101	100	98	100
Plant Production					100
AFI	TPH	19.5	19.3	19.8	19.5
AFI	TPD	469	463	475	469

Area Superintendent:		



Production and Operating Hours

N:T: 6::4			T P This was a looks							
	N. E. S. 240	3. <u>4. %</u> 3. 1. 44		ស្លាស់មិន ប្រឹក្សា	1. 450 m	\$ 1900 BOOK 1	· [ની ું સાલકાનું	Mergio Carl
eu id	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		Jamuary	474	9115	January	517	9040	January	545	10940
		February	492	8635	February	382	9988	February	572	6658
		March	531	9808	March	516	9615	March	588	10809
		April	602	10472	April	613	10771	April	629	8701
		May	602	9721	May	602	11084	May	484	7444
		June	572	9454	June	618	10695	Jume	300	5635
078	AFI#1 (common stack w / deflourination	July	572	9493	July	606	10105	July	391	4902
	scrubber)	August	611	11026	August ·	440	7967	August	323	. 6851
	1	September	657	11089	September	267	S 217	September	555	11114
		October	567	9119	October	542	9710	Octob er	403	5080
		November	385	6786	Novamba	609	10848	November	603	11820
		December	635	10889	December	544	10766	December	611	7923
	}	TOTAL	6698	115607	TOTAL	6256	115806	TOTAL	6004	97877

Production and Operating Hours

		250			44 S. S.		2.47	30 W.125	\$ 1 A D N	
KU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Moath	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		January	381	6957	January	517	10303	Jamuary	628	7936
		February	432	6482	February	382	11408	February	640	12243
		March	597	11296	March	605	13084	March	633	11885
		April	498	8322	April	572	11913	April	611	7050
		May	548	8739	May	681	12397	May	637	13105
		June	526	9412	June	658	13174	June	552	8506
103	AFI#2	July	522	10596	July	ள	11686	July .	713	11082
		August	614	10242	August	649	10804	August	692	9208
·		September	580	8548	September	615	6346	September	694	12057
		October	423	6675	October	695	9904	October	663	· 10276
		November	587	9709	November	690 _.	11194	November	694	12789
		December	541	10019	December	674	14803	December	651	9812
		TOTAL	6249	106997	TOTAL	7415	137016	TOTAL	7808	125949



	080
10. 4	Limestone Silo
Month	Tons Processed
1	14,070
2	14,344
3	17,360
4	17,965
5	16,961
6	15,782
. 7	16,711
8	18,783
9	19,536
10	12,524
11	14,223
. 12	18,009
TOTAL TONS PROCESSED	196,268



	080
	Limestone Silo
Month	Tons Processed
1	8,812
2	9,227
3	9,192
4	9,784
. 5	10,549
- 6	10,220
7	9,301
8	7,501
9	4,600
10	9,065
11	9,289
12	10,097
TOTAL TONS PROCESSED	107,637



	080
Month	Limestone Silo
1	Tons Processed 8,260
2	10,070
3	9,533
4	7,611
5	8,936
6	5,291
7	7,042
8	5,868
9	8,443
· 10	6,527
11	9,614
12	8,264
TOTAL TONS PROCESSED	95,459

Appendix U-1, List of Unregulated Emissions Units and/or Activities.

Mosaic Fertilizer, LLC. Riverview Facility

وفايت م بار سر

Revised Draft Permit Renewal No. 0570008-045-AV (Initial Title V Permit No.: 0570008-014-AV)

Facility ID No.: 0570008

<u>Unregulated Emissions Units and/or Activities</u>. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

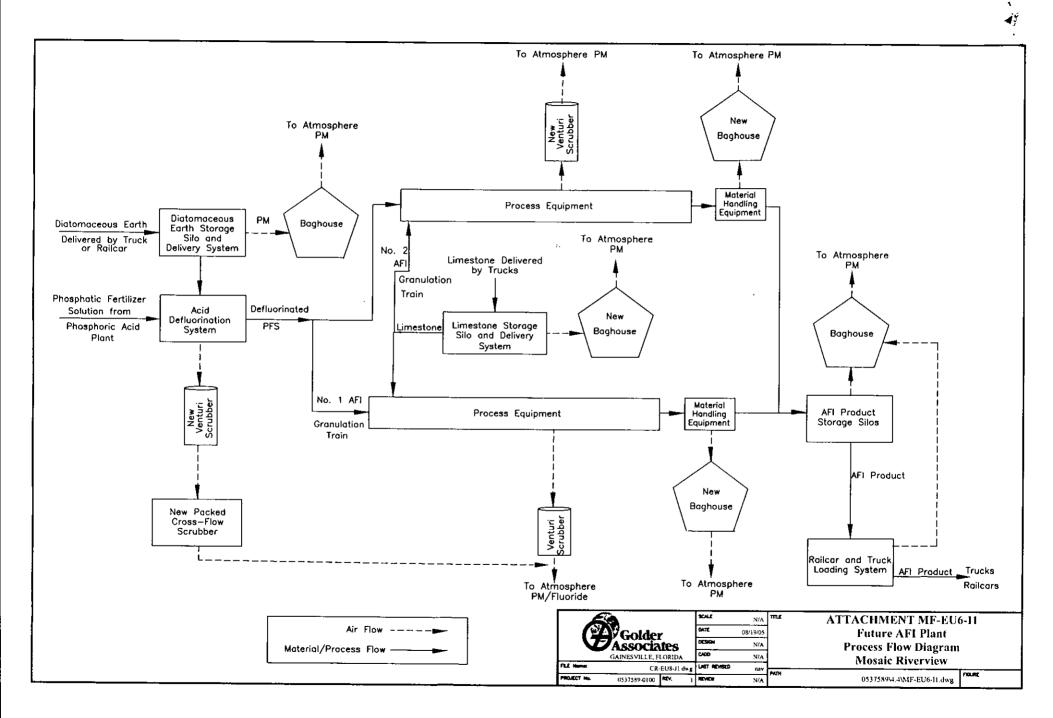
{Permitting Notes: 1. Letter dated 9/19/2005 from David Buff, P.E. of Golder Associates Inc. was received by the Department on 9/29/2005 concerning the phosphoric acid clarifier, clarifier feed tank and associated wet scrubbers and is being reviewed by the Department.

- 2. There will be no GTSP production/handling at the Riverview facility. So, GTSP handling related activities are removed from the list below except coating oil tank that may be used for dust suppression for other types of fertilizer at the facility.
- 3. Construction permit application for ammoniated phosphates storage and loadouts dated 9/27/2005 was received by the Department on 9/29/2005 and it is currently being processed.}

E.U. ID Brief Description of Emissions Units and/or Activity No. Fertilizer Plants Coating drums (containing coating oil that is used for dust suppression) -105 Raw material and product storage tanks, bins, and storage buildings -105 Grinding mills, chain mills, cage mills, lump breakers -105 -105 Cooling tower, slurry pumps, scrubber water sumps DAP rail loading system, truck unloading -105 Material conveyors, elevators, and screens -105 Ammonia chillers and vaporizers -105 Product Recovery Units -105 -105 Ammonia Flare Coating Oil Tank – 17,233 gallons (installed 1986) -105 Material Handling System Choke feeder, covered conveyors, screening tower (fugitive only) -105 Phosphoric Acid Production Facility Flash Cooler Hotwells -105 Flash coolers, vacuum pumps, seal pumps and seal tanks -105 Nos. 1, 2 and 3 Filters - unevacuated area (fugitive only) -105 Centrifuges, pumps -105 -105 East, north, and south coolers -105 Truck loading/unloading Clarifier and clarifier feed tank -105

E.U. ID	
No.	Brief Description of Emissions Units and/or Activity
-105	Aging, filtrate, raw material, and product storage tanks
-105	Auxiliary power diesel generator with tank
	Molten Sulfur Handling
-105	Dock unloading/truck loading (fugitive only)
-105	Molten sulfur storage tank fires
-105	Molten Sulfur Tank # 2 – 3,104,714 gallons (installed 1990)*
	Sulfuric Acid Plants
-105	Water reuse tanks, water storage tanks, condensate tanks
-105	Economizers
-105	Sulfuric acid storage tanks
-105	Sulfuric acid truck loading/unloading
-105	Cooling towers
	Animal Feed Plant
-105	Acid heaters and dilution tank
-105	High speed mixer
-105	Diatomaceous earth weigh bin and feed splitters
-105	Limestone metering feeder and screen feed splitter
-105	Weigh bin slide gate and weighing belt
-105	Conveyors
	Ammonia Handling
-105	Bullets, pipeline, pop off valves, truck unloading
	<u>Facilitywide</u>
-105	Fuel tanks and dispensers
-105	Compressors, generators (6 MW, 35 MW)
-105	Wastewater treatment plant and collection system
-105	Locomotive Engines
-105	Laboratory, lime hopper, refrigerators Pressure/steam relief valves
-105 -105	Railcar/truck unloading, conveyor belts (fugitive only)
-103 -105	Wet rock pile, rock hoppers, rock grinding mills (fugitive only)
-105 -105	Safety kleen solvent cleaners
-105	Sand blasters, welding equipment, supersucker
-105	Raw material and product storage tanks
-105	Minor fugitive leaks from process equipment
-105	Diesel pump at NPDES Outfall 005
-105	Diesel pump at active phosphogypsum stack
-105	Asbestos Waste and hazardous waste removal
-105	Refrigeration equipment < 50 lbs charge
-105	Oil-fired catalyst
-105	400 hp emergency generator

^{*} Tanks subject to 40 CFR 60, Subpart Kb, NSPS for VOC Storage Tanks.



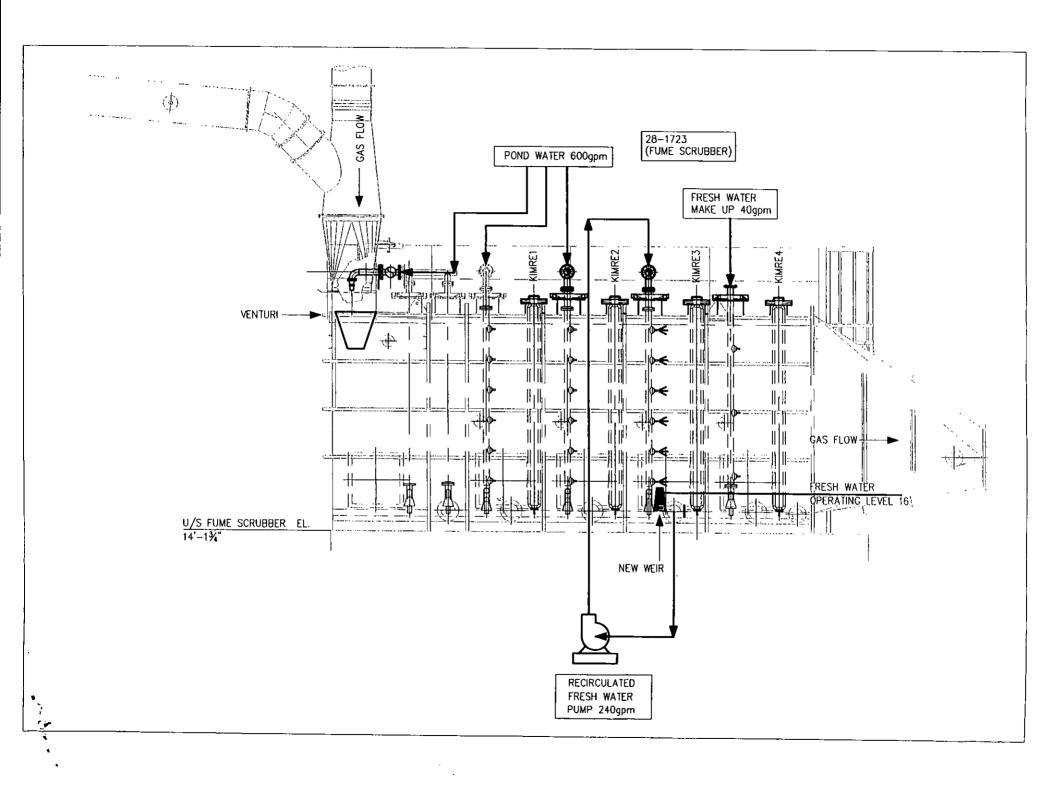


TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1.

	Run 1	Run 2	Run 3	
Date of Run	5/7/03	5/7/03	5/7/03	
Process Rate (TPH)	701 √	604 ∜	655 -♦	
Start Time (24-hr. clock)	0824	1056	1115	•
End Time (24-hr. clock)	0928	1056	1218	
Vol. Dry Gas Sampled Meter Cond. (DCF)	47.553	44.698	43.438	
Gas Meter Calibration Factor	0.994	0.994	0.994	
Barometric Pressure at Barom. (in. Hg.)	30.09	30.09	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.122	42.429	40.642	
Vol. Liquid Collected Std. Cond. (SCF)	8.638	8.214	7.586	
Moisture in Stack Gas (% Vol.)	16.10	16.20	15.73	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.23	27.22	29.00	
Stack Gas Static Press. (in. H20 gauge)	-0.41	-0.42	-0.41	
Stack Gas Static Press. (in. Hg. abs.)	30.06	30.06	30.09	
Average Square Root Velocity Head	0.955	0.882	0.862	
Average Orifice Differential (in. H2O)	1.535	1.317	1,249	
Average Gas Meter Temperature (°F)	98.3	97.8	106.4	
Average Stack Gas Temperature (°F)	144.8	144.8	144.3	•
Pitot Tube Coefficient	0.84	. 0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.93	54.47	51.49	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,592	67,913	64,673	
Stack Gas Flow Rate Stack Cond. (ACFM)	99,972	92,413	87,345	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	102.9	104.8	105.4	
Portioulate Cells stad (Average
Particulate Collected (mg.)	15.8	12.7	18.7	15.7
Particulate Emissions (grains/DSCF)	0.005	0.005	0.007	0.01
Particulate Emissions (lb./hr.)	3.4	2.7	3.9	3.34
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.733	1.260	1.353	1.448
Fluoride Emissions (mg/DSCF)	0.038	0.030	0.033	0.034
Fluoride Emissions (lb./hr.)	0.37	0.27	0.28	0.31
Allowable Fluoride Emissions (lb./hr.)			V.20	2.1

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	⁴ Run 3	AVG
Start Time		05/07/2003 8:24	05/07/2003 9:53	05/07/2003 11:15	
End Time		05/07/2003 9:28	05/07/2003 10:56	05/07/2003 12:18	
Granulation Plant Scrubber					
Recirc Flow	GPM	1171	1169	1168	1169
Make-up Flow	GPM	47	49	44	46
Pressure Drop	"H2O	24	23	23	23
Fan Amps	amps	115	115	115	115
Defluorination Scrubber					
Pondwater Flow	GPM	856	855	854	855
Demister Flow	GPM	82	82	79	81
Pressure Drop	"H2O	6	6	6	6
Fan Amps	amps	68	68	68	68
Plant Production					
AFI	TPD	701	604	655	653

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1

	· ·			
	Run 1	Run 2	Run 3	
Date of Run	5/13/04	5/13/04	5/13/04	
Process Rate (TPH)	23.3	22.6	21.1	
Start Time (24-hr. clock)	0807	0944	1113	
End Time (24-hr. clock)	0914	1047	1216	
Vol. Dry Gas Sampled Meter Cond. (DCF)	45.876	45.424	45.210	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.12	30.12	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.641	44.913	44.319	
Vol. Liquid Collected Std. Cond. (SCF)	7.313	8.152	7.318	
Moisture in Stack Gas (% Vol.)	13.8	15.4	14.2	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.48	27.31	27.44	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.32	-0.31	
Stack Gas Static Press. (in. Hg. abs.)	30.01	30.02	30.02	
Average Square Root Velocity Head	0.940	0.934	0.923	
Average Orifice Differential (in. H2O)	2.008	1.984	1.941	
Average Gas Meter Temperature (°F)	83.5	86.8	91.5	
Average Stack Gas Temperature (°F)	145.7	144.6	145.4	
Pitot Tube Coefficient	0.84	0.84	0.84	•
Stack Gas Vel. Stack Cond. (ft./sec.)	57.84	57.61	56.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,963	72,478	72,403	÷
Stack Gas Flow Rate Stack Cond. (ACFM)	98,127	97,739	96,414	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.234	0.234	0.234	
Percent Isokinetic	97.4	97.8	96.6	
				<u>Average</u>
Particulate Collected (mg.)	19.3	21.7	21.3	20.7
Particulate Emissions (grains/DSCF)	0.007	0.007	0.007	0.01
Particulate Emissions (lb./hr.)	4.1	4.6	4.6	4.5
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.9	2.5	1.7	2.0
Fluoride Emissions (mg/DSCF)	0.04	0.06	0.04	0.05
Fluoride Emissions (lb./hr.)	0.40	0.54	0.38	0.44
Allowable Fluoride Emissions (lb./hr.)				2.1

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run4	Run 2	SAME RIDIS BAR	
Start Time			05/13/2004 09:44		
End Time	-		05/13/2004 10:47		\$25 T \$35 K Part 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Granulation Plant Scrubber			A STATE OF S		The second of the second
Recirc Flow	GPM	1294	1295	1295	1294
Make-up Flow	GPM	64	61	60	63
Pressure Drop	"H2O	25	26	26	26
Fan Amps	amps	108	109	109	108
Defluorination Scrubber	. 2 . 4 . 7 . 7 . 7 . 7 . 7 . 7 . 7 . 7 . 7			· 100 4 100 100	To the Carting Section
Pondwater Flow	GPM	798	798	798	798
Demister Flow	GPM	34	38	39	36
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	72	72	72	72
Plant Production		事 論 "表生"。	Contraction &	the state of the state of the state of	and the same
AFI	TPH	23.3	22.6	21.1	22.3
AFI	TPD	559	543	507	536

Area Superintendent:	

TABLE 1. PARTICULATE AND FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 1

	Run 1	Run 2	¹ Run 3	
Date of Run	07/29/05	07/29/05	07/29/05	
Process Rate (TPH)	20.8	20.7	20.8	
Start Time (24-hr. clock)	1016	1133	1505	
End Time (24-hr. clock)	1119	1338	1607	
Vol. Dry Gas Sampled Meter Cond. (DCF)	55.871	48.110	58.397	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.06	30.06	30.03	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52.111	44.274	53.473	
Vol. Liquid Collected Std. Cond. (SCF)	8.855	9.675	10.562	
Moisture in Stack Gas (% Vol.)	14.5	17.9	16.5	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.40	27.03	27.19	
Stack Gas Static Press. (in. H2O gauge)	-0.52	-0.24	-0.64	
Stack Gas Static Press. (in. Hg. abs.)	30.02	30.04	29.98	
Average Square Root Velocity Head	0.949	0.961	0.952	
Average Orifice Differential (in. H2O)	2.568	2.658	2.763	
Average Gas Meter Temperature (°F)	98.6	106.3	108.7	
Average Stack Gas Temperature (°F)	150.8	151.3	154.2	•
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	55.25	56.30	55.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	-
Stack Gas Flow Rate Std. Cond. (DSCFM)	69,500	67,983	68,137	
Stack Gas Flow Rate Stack Cond. (ACFM)	93,734	95,510	94,712	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.249	0.249	0.249	
Percent Isokinetic	104.5	90.8	109.4	
				<u>Average</u>
Particulate Collected (mg.)	38.3	35.8	44.1	39.4
Particulate Emissions (grains/DSCF)	0.011	0.012	0.013	0.01
Particulate Emissions (lb./hr.)	6.76	7.27	7.43	7.2
Allowable Particulate Emissions (lb./hr.)	00			13.0
Fluoride Collected (mg.)	3.325	3.691	6.331	4.449
Fluoride Emissions (mg/DSCF)	0.064	0.083	0.118	0.089
Fluoride Emissions (lb./hr.)	0.59	0.75	1.07	0.8
Allowable Fluoride Emissions (lb./hr.)	0.00	0.75	1.07	2.1

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run1	Run2	Run 3	AVG
Start Time		07/29/2005 10:16	07/29/2005 11:33		
End Time		07/29/2005 11:19	07/29/2005 13:33	07/29/2005 16:07	
Granulation Plant Scrubber	1.00		Carla Adata O	2014 建模型 2018 1	
Recirc Flow	GPM	1237	1241	1246	1239
Make-up Flow	GPM	46	45	26	46
Pressure Drop	"H2O	20	20	20	20
Fan Amps	amps	108	108	110	108
Defluorination Scrubber	The state of	The state of the s			
Pondwater Flow	GPM	758	756	749	757
Demister Flow	GPM	69	70	73	70
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	83	84	82	83
Plant Production * * * * * * * * * * * * * * * * * * *	. [成形的]		A Section of the second	生	No L
AFI	TPH	20.8	20.7	20.8	20.7
AFI	TPD	498	496	499	498

Area Superintendent:		_	

TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 2

·		-		
	Run 1	Run 2	Run 3	
Date of Run	5/8/03	5/8/03	5/8/03	
Process Rate (TPH)	522	522	521	
Start Time (24-hr. clock)	0848	1029	1310	
End Time (24-hr. clock)	0952	1230	1415	
Vol. Dry Gas Sampled Meter Cond. (DCF)	31.254	31.692	31.760	
Gas Meter Calibration Factor	0.997	0.997	0.997	
Barometric Pressure at Barom. (in. Hg.)	30.11	30.11	30.12	
Elev. Diff. Manom. to Barom. (ft.)	116	116	116	
Vol. Gas Sampled Std. Cond. (DSCF)	30.120	30.517	30.100	
Vol. Liquid Collected Std. Cond. (SCF)	2.414	2.315	1.504	
Moisture in Stack Gas (% Vol.)	7.4	7.1	4.8	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	28.18	28.22	28.48	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.42	-0.29	
Stack Gas Static Press. (in. Hg. abs.)	30.08	30.08	30.10	
Average Square Root Velocity Head	0.796	0.751	0.743	
Average Orifice Differential (in. H20)	0.722	0.629	0.496	
Average Gas Meter Temperature (°F)	90.7	91.0	99.8	
Average Stack Gas Temperature (°F)	142.4	141.8	141.9	,
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	48.18	45.42	44.69	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	82,322	77,983	78,666	
Stack Gas Flow Rate Stack Cond. (ACFM)	100,898	95,125	93,601	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.195	0.195	0.195	
Percent Isokinetic	102.7	109.8	107.4	
				Average
Particulate Collected (mg.)	20.3	7.2	10.0	12.5
Particulate Emissions (grains/DSCF)	0.010	0.004	0.005	0.006
Particulate Emissions (lb./hr.)	7.4	2.4	3.5	4.43
Allowable Particulate Emissions (lb./hr.)				13.0

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 8, 2003 Source: EU ID No. 103 AFI 2 Plant

		Run 1	Run 2	Run 3	
Start Time		05/08/2003 8:48	05/08/2003 10:29	05/08/2003 13:10	AVG
EndTime		05/08/2003 9:52	05/08/2003 12:30	05/08/2003 14:15	
Equipment Scrubber					
Flow	GPM	1083	1031	1219	1111
Pressure Drop	"H2O	14	14	15	15
Dryer Scubber		·			
Flow	GPM	1482	1478	1469	1476
Pressure Drop	"H2O	20	19	20	20
Fan Amps	amps	120	120	120	120
Production Rate		•		· · · · · · · · · · · · · · · · · · ·	
AFI Product Rate	TPD	522	522	521	522
Emissions				<u> </u>	
PM Emissions	lb/hr	7.4	2.4	3.5	4.4

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 2

			4	
	Run 1	Run 2	Run 3	
Date of Run	5/20/04	5/20/04	5/20/04	
Process Rate (TPH)	25.7	25.7	25.8	
Start Time (24-hr. clock)	0802	0928	1049	
End Time (24-hr. clock)	0905	1032	1151	
Vol. Dry Gas Sampled Meter Cond. (DCF)	32.550	34.752	34.665	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.21	30.21	30.21	
Elev. Diff. Manom, to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	31.957	33.857	33.571	
Vol. Liquid Collected Std. Cond. (SCF)	6.078	7.228	6.455	
Moisture in Stack Gas (% Vol.)	16.0	17.6	16.1	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.24	27.06	27.23	
Stack Gas Static Press. (in. H2O gauge)	-0.30	-0.32	-0.34	
Stack Gas Static Press. (in. Hg. abs.)	30.07	30.09	30.10	
Average Square Root Velocity Head	0.739	0.747	0.742	
Average Orifice Differential (in. H2O)	1.152	1.117	1.106	
Average Gas Meter Temperature (°F)	90.6	95.2	98.7	
Average Stack Gas Temperature (°F)	140.7	143.2	144.7	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	45.43	46.15	45.76	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	70,637	70,120	70,607	
Stack Gas Flow Rate Stack Cond. (ACFM)	95,157	96,653	95,833	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	93.7	100.0	98.5	
				<u>Average</u>
Particulate Collected (mg.)	14.4	20.0	18.6	17.7
Particulate Emissions (grains/DSCF)	0.007	0.009	0.009	0.008
Particulate Emissions (lb./hr.)	4.2	5.5	5.2	5.0
Allowable Particulate Emissions (lb./hr.)				13.0

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 20, 03 Test For: PM

Source: AFI 2 Plant

Compliance Test

华三国海州产业。 艾斯瓦		基基 Run 1 字 5 字	Run 2	是是 Run 3 是是	阿里斯里姆
Start Time		5/20/04 8:02	5/20/04 9:28	5/20/04 10:49	AVG
End Time		5/20/04 9:05	5/20/04 10:32	5/20/04 11:51	
Equipment Scrubber					
Flow	GPM	1480.2	1478.6	1478.6	1447
Pressure Drop	*H2O	11.7	11.7	11.7	16
Dryer Scubber	erektaja				
Flow	GPM	1409.8	1404.7	1404.7	1544
Pressure Drop	"H2O	20.2	20.4	20.4	21
Production ***			k a rayu i		
AFI	TPH	25.7	25.7	25.8	25.7
AFI	TPD	617	617	618	617

Area Superintendent: _	
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TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 2

	Run 1	Run 2	Run 3	
Date of Run	8/4/05	8/4/05	8/4/05	
Process Rate (TPH)	23.7	23.8	23.7	
Start Time (24-hr. clock)	0828	0952	1121	
End Time (24-hr. clock)	0931	1056	1223	
Vol. Dry Gas Sampled Meter Cond. (DCF)	40.592	42.723	40.713	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.05	30.05	30.05	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	38.386	39.916	37.940	
Vol. Liquid Collected Std. Cond. (SCF)	5.031	8.133	8.723	
Moisture in Stack Gas (% Vol.)	11.6	16.9	18.7	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.73	27.14	26.94	
Stack Gas Static Press. (in. H2O gauge)	-0.29	-0.26	-0.26	
Stack Gas Static Press. (in. Hg. abs.)	30.03	30.03	30.03	
Average Square Root Velocity Head	0.726	0.728	0.724	
Average Orifice Differential (in. H2O)	1.328	1.438	1.246	
Average Gas Meter Temperature (°F)	89.1	95.9	97.1	,
Average Stack Gas Temperature (°F)	148.5	149.0	148.1	
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	41.91	42.50	42.40	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	67,578	64,351	62,925	
Stack Gas Flow Rate Stack Cond. (ACFM)	87,770	89,018	88,801	
Net Time of Run (min.)	60.0	60.0	60.0	
Nozzle Diameter (in.)	0.246	0.246	0.246	
Percent Isokinetic	100.2	109.4	106.3	
		. — -		Average
Particulate Collected (mg.)	19.5	17.6	23.6	20.2
Particulate Emissions (grains/DSCF)	0.008	0.007	0.010	0.008
Particulate Emissions (lb./hr.) Allowable Particulate Emissions (lb./hr.)	4.5	3.8	5.2	4.5 13.0

Plant Name: Cargill Fertilizer, Inc. Test Date(s): August 4, 2005 Test For: PM

Source: AFI 2 Plant

Compliance Test

	35 335	Run:19	显之 Run 2 是	Run 3	
Start Time		08/04/2005 08:28	08/04/2005 09:52	08/04/2005 11:21	AVG
End Time		08/04/2005 09:31	08/04/2005 10:56	08/04/2005 12:23	
Equipment Scrubber					
Flow	GPM	1236.0	1239.5	1243.1	1240
Pressure Drop	"H2O	12.6	12.5	12.4	13
Dryer Scubber					
Flow	GPM	1227.6	1230.5	1229.7	1229
Pressure Drop	"H2O	20.5	20.3	20.0	20
Production					14 362
AFI	TPH	23.7	23.8	23.7	24
AFI	TPD	569	570	569	569

Southern Environmental Sciences, Inc. 1204 North Wheeler Street | Plant City, Florida 33563 | (813) 752-5014, Fax (813) 752-2475

	VISIBLE EMIS	SIONS	E <u>V</u> AL	UAT	ION					Lin	روج ځل د	اگر جاست
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START 300 STOP	START 2700 STOP		14	ठ	0	<u>8</u>	$\stackrel{\circ}{\circ}$	44				
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DESCRIBE BACKGROUND	STOP V	₩ 1 <u>-</u>	20	<u></u>	2	0	<u>O</u> Õ	49 50				<u>_</u>
BACKGROUND COLOR START BILLE STOP	SKY CONDITIONS Scattered	1	21	0	0	Ó	0	51				
WIND SPEED (MPH)	WIND DIRECTION	 -	22	2	0	<u>Ō</u>	0	52				
START Z-4 STOP	START SE STOP	ll i	23	8	2	Š	0	53				
AVERAGE OPACITY FOR HIGHEST PERIOD	MIN. OZC MAX. OZO		24		2	0	0	54				
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SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street, Plant City, Florida 33566 (813)752-5014

VISIBLE EMISSIONS EVALUATION

COMPANY Caigo !!-	Tampa
UNIT Limes Tone	silo
ADDRESS VS Hwy	41 9 Riverview DV
11	icu: FL
PERMIT NO 057000	COMPLIANCE? YES X NO
AIRS NO. 0570008	EU NO. 080
PROCESS RATE	PERMITTED RATE
PROCESS EQUIPMENT LIMINGTON	e Storege Silo
CONTROL EQUIPMENT Bag	ihous e
OPERATING MODE Filling Silo W/Kailcai	AMBIENT TEMP. (°F) START 87 STOP 87
HEIGHT ABOVE GROUND LEVEL START NICO STOP april	HEIGHT REL. TO OBSERVER START LICE STOP Dume
DISTANCE FROM OBSERVER START 2300' STOP ALMIC	DIRECTION FROM OBSERVER START 280 STOP 280
EMISSION COLOR NEW E	PLUME TYPE N/H CONTIN. INTERMITTENT
WATER DROPLETS PRESENT NO YES []	IS WATER DROPLET PLUMENTA
POINT IN THE PLUME AT WHICH I	OPACITY WAS DETERMINED STOP
DESCRIBE BACKGROUND	STOP 3 Ky
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SOURCE LAYOUT SKETCH TAFLE	DRAW NORTH ARROW
Sun * Wind	Emission Point
Stack	Observer's Position
Sur/ Loca	ition Line
COMMENTS	

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 	1	'	30	45.	SEC		15	30	45
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1 -	0	12	0	0	31	┾-	-	<u> </u>	<u> </u>
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3	1		0	5	33	-	-		<u> </u>
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5	42	0	0	0	35	<u> </u>	 		
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10	0	0	0	\bigcirc	40	<u> </u>	-		
11	0	0	0	0	41		<u> </u>		<u> </u>
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13	0	0	0	0	43	_	ļļ		
14	0	3	0	0	44	<u> </u>	-		
15	Ó	0	0	Õ	45	<u> </u>			
16	2	0	0	0	46		-		
17	0	0	0	0	47				
18	\mathbb{C}^{i}	0	0	0	48	L			
19	Q	0	\mathcal{O}	0	49		 		
20	0	0	0	OC	50				
21	C	0	<u>(5)</u>	C	51				
22	0	0	\mathcal{O}	Q_{\perp}	52				
23	0	0	<u>C</u>	0	53				
24	07	<u>C</u>	0	$\frac{\mathcal{O}}{\mathcal{O}}$	54				
25	Q	0	Ç	\mathcal{C}	55				
26	2	0	C)	0	56				
27	<u>- (2)</u>	Q	0	\bigcirc	57		<u> </u>		
28	<u>()</u>	<u> </u>	۲)	\bigcirc	58				
29	(C)	<u> </u>	<u>(5)</u>	0	59		<u> </u>		
Obser	ver:	Ma	rK	G,	celd	(0			
Certif	ied by	: F1)	ıρ	Ce	ertified	at:	Tum	ρη	
Date (Certifi	ed: g	2/04	E>	cp. Dat	te:	8/0		
I certify true and	that ail	data p	rovided best o	to the f my kr	person o	condu	cting the	test wa	145
Signa	ture:	_<	عـد	P	000		۲ کخ	s at	رمر
Title:									

EPA Form Number α_{i} Page VISIBLE EMISSION OBSERVATION FORM 1 Continued on VEO Form Number Method (Stole One)
Method 9 2 2038 Observation Date 8/29/25 Time Zone End lime Company Name Mask.c EST 950 Fertiliza. 1020 Sec Facility Name 0 15 45 Comments Min RIVERIEN Street Address 8813 1 0 Hick Way 233569 Stote 0 ð 2 0 0 0 KIVERVICEN 3 0 0 $\langle \rangle$ \bigcirc Operating Mode 0 LimesTave Storge Silo \bigcirc 0 MON MICH 4 Control Equipment Operating Mode bylouse 5 0 NOFMIL 0 0 \circ 6 0 0 Describe Emission Point Sylvese Vert on 0 7 0 0 0 5.10 0 8 0 0 Helathi of Erniss. Pt. Height of Emiss. Pt. Rel. to Observer Start /CE End Sant C Direction to Eroiss, Pt. (Degrees) Stat /00 <u>5,9000 C</u> 0 0 0 0 Distance to Erress, Pt. Stor 350° Samo End Some End 10 0 0 0 6 Vertical Angle to Obs. Pt.
Stat /8 E Direction to Obs. Pt. (Degrees) Stor 350 " 11 \bigcirc \Diamond 0 Start 1/8 End Somme Start 350 C OEnd 0 12 \bigcirc 0 \bigcirc 300 _ 5 E End _ 5 4 mc 13 0 0 \bigcirc 0 Describe Emissions End 513771C 0 NONE 0 Stort 14 \bigcirc 0 Water Droplet Plume Emission Color Attached Detached None Start NONE End Samo 15 \mathcal{O} \circ \circ \circ Describe Plume Bookground Start Over love / 0 16 \circ 0 0 Some Sky Conditions 17 0 Background Color 0 0 O End SAMIC son Heckey in Same State Broken Wind Speed
Start 5 -/ 0
Ambient Temp.
Start 8 8 0 Wind Direction 15 0 0 Start South End Same. 50m2 19 <u>ena 89°</u> RH Percent 0 0 0. 0 N/A MA 0 20 0 0 0 Source Layout Sketch Draw North Assow 21 0 0 0 0 MN ☐ MN 0 22 0 0 0 23 0 \bigcirc \circ 0 24 0 0 G 0 25 0 \bigcirc 0 0 0 26 0 0 0 æ П 27 0 0 0 0 PET 0 Objerver's Position 0 26 0 0 0 0 0 29 Ó Stock With Plume σ 0 30 \mathcal{O} 0 0 Sun Sun Location Line Observer's Name (Print) ecutional Latitude Decination F1.ú7 Additional information Mosaic Date 2/16/05

1,17

PARTICULATE & FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC RIVERVIEW Source: AFI NO. 1 STACK

	Run 1	Run 2	Run 3	
Date of Run	06/23/06	06/23/06	08/23/06	
Process Rate (TPH)	00/20/00	00/20/00	00/20/00	
Start Time (24-hr. clock)	1526	1656	1822	
End Time (24-hr, clock)	1628	1758	1924	
Vol. Dry Gas Sampled Meter Cond. (DCF)	54.782	58,805	57.748	
Gas Meter Calibration Factor	0.991	0.991	0,991	
Barometric Pressure at Barom, (In. Hg.)	30.01	30.01	30.01	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52.147	55.232	53,949	
Vol. Liquid Collected Std. Cond. (SCF)	7.275	8.110	8.364	
Molsture In Stack Gas (% Vol.)	12.2	12.8	13.4	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.65	27.59	27.52	
Stack Gas Static Press. (in. H2O gauge)	-0.38	-0.27	-0.38	
Stack Gas Static Press, (in, Hg. abs.)	29.98	29.99	29.98	
Average Square Root Velocity Head	0.967	0.978	0.966	
Average Orifice Differential (in, H2O)	2.527	2.903	2.778	
Average Gas Meter Temperature ('F)	94.8	102,8	105.6	
Average Stack Gas Temperature ('F)	148.9	149.7	148.8	
Pitot Tube Coefficient	0.82	0.82	0.82	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.10	58,83	58,17	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	75,160	75,538	74,248	
Stack Gas Flow Rate Stack Cond. (ACFM)	98,567	99,795	98,684	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.249	0.249	0.249	
Percent Isokinetic	96,7	102.0	101.3	
				Average
Particulate Collected (mg.)	14.916667	18.55	14.888667	18.111111
Particulate Emissions (grains/DSCF)	0.004	0.005	0.004	0.00
Particulate Emissions (lb./hr.)	2.84	3.36	2.71	2.97
Total				
Fluoride Collected (mg.)	0.716	1.416	1.350	1.161
Fluoride Emissions (mg/DSCF)	0.014	0.026	0.025	0.021
Fluoride Emissions (lb./hr.)	0.14	0.26	0.25	0.21
Probe Wash				
Fluoride Collected (mg.)	0.037	0.014	0.018	0.023
Fluoride Emissions (mg/DSCF)	0.001	0.000	0.000	0.000
Fluoride Emissions (lb./hr.)	0.007	0.003	0.003	0.004
-				
Filter				
Fluoride Collected (mg.)	0.014	0.012	0.013	0.013
Fluoride Emissions (mg/DSCF)	0.000	0.000	0.000	0.000
Fluoride Emissions (lb./hr.)	0.003	0.002	0.002	0.002
Impingers				
Fluoride Collected (mg.)	0,6660	1.3900	1.3200	1.125
Fluoride Emissions (mg/DSCF)	0.013	0.025	0.024	0.021
Fluoride Emissions (lb./hr.)	0.127	0.251	0.240	0.208

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

1	<u> </u>	. Run 1,	Run 2	Run 3	AVG
Start Time		06/23/2006 15:26	06/23/2006 16:56	06/23/2006 18:22	
End Time	,	06/23/2006 16:28	06/23/2006 17:58	06/23/2006 19:24	
Granulation Plant Scrubb	er				
Recirc Flow	GPM	1281	1277	1276	1278
Make-up Flow	GPM	46	37	42	42
Pressure Drop	"H2O	19	18	19	19
Fan Amps	amps	112	112	111	112
Defluorination Scrubber			•		
Pondwater Flow	GPM	886	857	821	855
Demister Flow	GPM	58	73	69	67
Pressure Drop	"H2O	14	14	14	14
Fan Amps	amps	101	100	98	100
Plant Production	:	· · · · · · · · · · · · · · · · · · ·			
AFI	TPH	19.5	19.3	19.8	19.5
AFI	TPD	469	463	475	469

Production and Operating Hours

學學			200		传集技术			學等等	200	类和自己的
EU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		Jamuary	474	9115	January	517	9040	January	545	10940
¢		February	492	8635	February	382	9988	February	572	6658
		March	531	9808	March	516	9615	March	588	10809
		April	602	10472	Aprīl	613	10771	April	629	8701
		May	602	9721	May	602	11084	Мау	484	7444
		June	572	9454	June	618	10695	June	300	5635
078	deflourination	July	572	9493	July	606	10105	July	391	4902
	scrubber)	August	611	11026	August	440	7967	August	323	. 6851
		September	657	11089	September	267	5217	September	555	11114
		October	567	9119	October	542	9710	October	403	5080
		November	385	6786	November .	609	10848	November	603	11820
		December	635	10889	December	544	10766	December	611	7923
		TOTAL	6698	115607	TOTAL	6256	115806	TOTAL	6004	97877

Production and Operating Hours

经证据	ore oleo e		2003			2004			2005	
EU ID	EU Description	Month	Operating Hours	Tons Monocal/Dical Produced	Month .	Operating Hours	Tons Monocal/Dical Produced	Month	Operating Hours	Tons Monocal/Dical Produced
		January	381	6957	January	517	10303	January	628	7936
	,	February	432	6482	February	382	11408	February	640	12243
 		March	597	11296	March	605	13084	March	633	11885
		April	498	8322	April	572	11913	April	611	7050
		May	548	8739	May	681	12397	May	637	13105
		June	526	9412	June	658	13174	June	552	8506
103	AFI#2	July	522	10596	July	677	11686	July	713	11082
		August	614	10242	August	649	10804	August	692	9208
		September	580	8548	September	615	6346	September	694	12057
1		October	423	6675	October	695	9904	October	663	10276
		November	587	9709	November	690	11194	November	694	12789
-	ļ	December	541	10019	December	- 674	14803	December	651	9812
	ļ	TOTAL	6249	106997	TOTAL	7415	137016	TOTAL	7808	125949



Riverview Chemical Complex Limestone Tons Processed

- ⊢	080
	Limestone Silo
Month	Tons Processed
1	14,070
2	14,344
3	17,360
4	17,965
5	16,961
6	15,782
7	16,711
8	18,783
9	19,536
10	12,524
11	14,223
12	18,009
TOTAL TONS PROCESSED	196,268



Riverview Chemical Complex Limestone Tons Processed

	080
	Limestone Silo
Month	Tons Processed Tons Processed
1	8,812
2	9,227
3	9,192
4	9,784
5	10,549
6	10,220
7	9,301
8	7,501
9	4,600
10	9,065
11	9,289
12	10,097
TOTAL TONS PROCESSED	107,637



Riverview Chemical Complex Limestone Tons Processed

	080
Month	Limestone Sito
1 toliar	Tons Processed
1	8,260
2	10,070
3	9,533
4	7,611
5	8,936
6	5,291
7	7,042
8	5,868
9	8,443
10 .	6,527
11	9,614
12	8,264
TOTAL TONS PROCESSED	95,459

Appendix U-1, List of Unregulated Emissions Units and/or Activities.

Mosaic Fertilizer, LLC. Riverview Facility Revised Draft Permit Renewal No. 0570008-045-AV (Initial Title V Permit No.: 0570008-014-AV)

Facility ID No.: 0570008

<u>Unregulated Emissions Units and/or Activities</u>. An emissions unit which emits no "emissions-limited pollutant" and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither 'regulated emissions units' nor 'insignificant emissions units'.

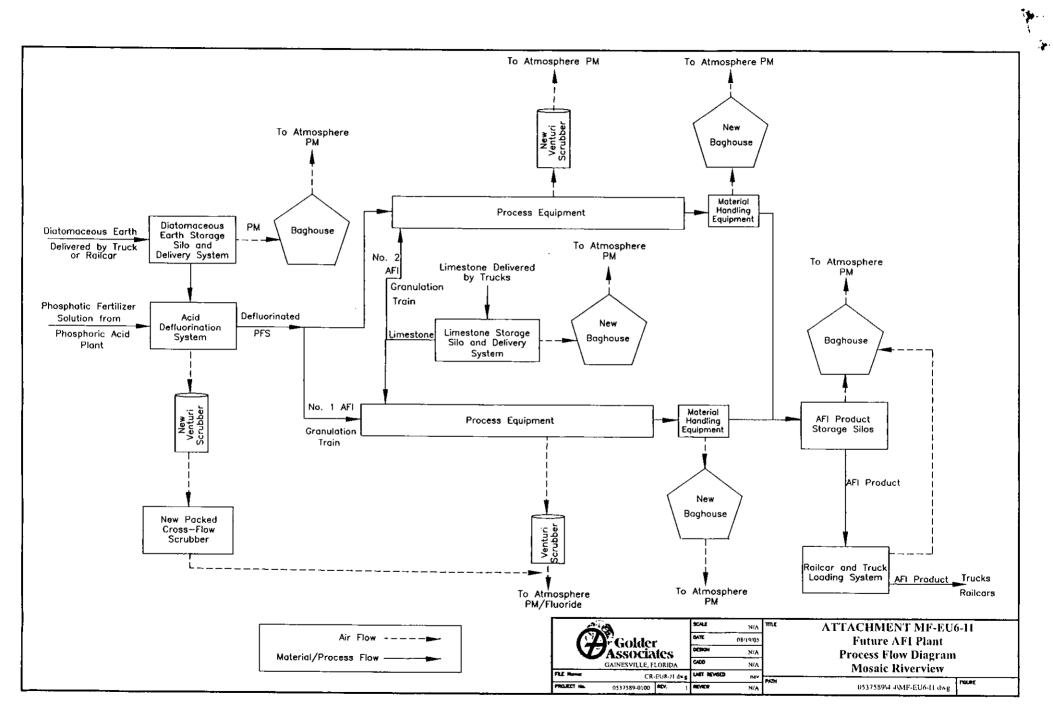
{Permitting Notes: 1. Letter dated 9/19/2005 from David Buff, P.E. of Golder Associates Inc. was received by the Department on 9/29/2005 concerning the phosphoric acid clarifier, clarifier feed tank and associated wet scrubbers and is being reviewed by the Department.

- 2. There will be no GTSP production/handling at the Riverview facility. So, GTSP handling related activities are removed from the list below except coating oil tank that may be used for dust suppression for other types of fertilizer at the facility.
- 3. Construction permit application for ammoniated phosphates storage and loadouts dated 9/27/2005 was received by the Department on 9/29/2005 and it is currently being processed.}

<u>E.U. ID</u>	
<u>No.</u>	Brief Description of Emissions Units and/or Activity
	Fertilizer Plants
-105	Coating drums (containing coating oil that is used for dust suppression)
-105	Raw material and product storage tanks, bins, and storage buildings
-105	Grinding mills, chain mills, cage mills, lump breakers
-105	Cooling tower, slurry pumps, scrubber water sumps
-105	DAP rail loading system, truck unloading
-105	Material conveyors, elevators, and screens
-105	Ammonia chillers and vaporizers
-105	Product Recovery Units
-105	Ammonia Flare
-105	Coating Oil Tank – 17,233 gallons (installed 1986)
	Material Handling System
-105	Choke feeder, covered conveyors, screening tower (fugitive only)
	Phosphoric Acid Production Facility
-105	Flash Cooler Hotwells
-105	Flash coolers, vacuum pumps, seal pumps and seal tanks
-105	Nos. 1, 2 and 3 Filters - unevacuated area (fugitive only)
-105	Centrifuges, pumps
-105	East, north, and south coolers
-105	Truck loading/unloading
-105	Clarifier and clarifier feed tank

E.U. II	
No.	Brief Description of Emissions Units and/or Activity
-105	Aging, filtrate, raw material, and product storage tanks
-105	Auxiliary power diesel generator with tank
	Molten Sulfur Handling
-105	Dock unloading/truck loading (fugitive only)
-105	Molten sulfur storage tank fires
-105	Molten Sulfur Tank # 2 – 3,104,714 gallons (installed 1990)*
	Sulfuric Acid Plants
-105	Water reuse tanks, water storage tanks, condensate tanks
-105	Economizers
-105	Sulfuric acid storage tanks
-105	Sulfuric acid truck loading/unloading
-105	Cooling towers
	Animal Feed Plant
-105	Acid heaters and dilution tank
-105	High speed mixer
-105	Diatomaceous earth weigh bin and feed splitters
-105	Limestone metering feeder and screen feed splitter
-105	Weigh bin slide gate and weighing belt
-105	Conveyors
	Ammonia Handling
-105	Bullets, pipeline, pop off valves, truck unloading
	Facilitywide
-105	Fuel tanks and dispensers
-105	Compressors, generators (6 MW, 35 MW)
-105	Wastewater treatment plant and collection system
-105	Locomotive Engines
-105	Laboratory, lime hopper, refrigerators
-105	Pressure/steam relief valves
-105	Railcar/truck unloading, conveyor belts (fugitive only)
-105	Wet rock pile, rock hoppers, rock grinding mills (fugitive only)
-105	Safety kleen solvent cleaners
-105	Sand blasters, welding equipment, supersucker
-105	Raw material and product storage tanks
-105	Minor fugitive leaks from process equipment
-105	Diesel pump at NPDES Outfall 005
-105	Diesel pump at active phosphogypsum stack Asbestos Waste and hazardous waste removal
-105 -105	
-105 -105	Refrigeration equipment < 50 lbs charge Oil-fired catalyst
-105 -105	400 hp emergency generator
-100	400 mp emergency generator

^{*} Tanks subject to 40 CFR 60, Subpart Kb, NSPS for VOC Storage Tanks.



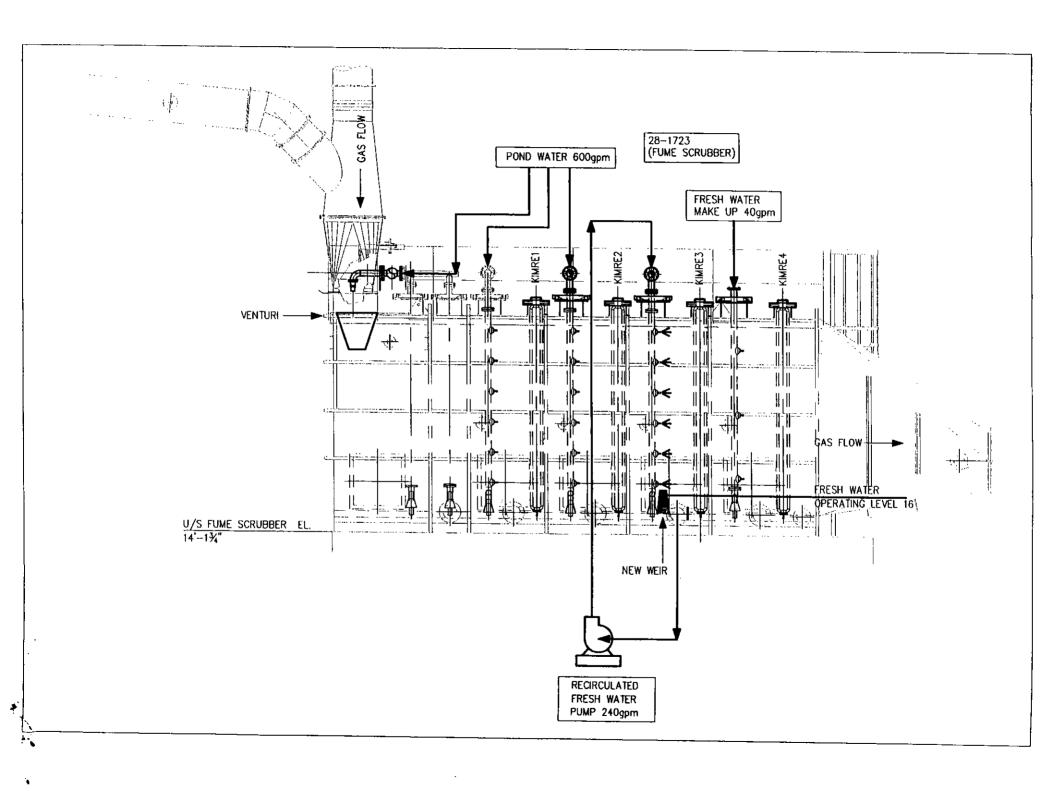


TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1

	Run 1	Run 2	Run 3	
Date of Run	5/7/03	5/7/03	5/7/03	
Process Rate (TPH)	701 √°	604 √	655 -♦	
Start Time (24-hr. clock)	0824	1056	1115	
End Time (24-hr. clock)	0928	1056	1218	
Vol. Dry Gas Sampled Meter Cond. (DCF)	47.553	44.698	43.438	
Gas Meter Calibration Factor	0.994	0.994	0.994	
Barometric Pressure at Barom. (in. Hg.)	30.09	30.09	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.122	42.429	40.642	
Vol. Liquid Collected Std. Cond. (SCF)	8.638	8.214	7.586	
Moisture in Stack Gas (% Vol.)	16.10	16.20	15.73	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.23	27.22	29.00	
Stack Gas Static Press. (in. H2O gauge)	-0.41	-0.42	-0.41	
Stack Gas Static Press. (in. Hg. abs.)	30.06	30.06	30.09	
Average Square Root Velocity Head	0.955	0.882	0.862	
Average Orifice Differential (in. H2O)	1.535	1.317	1.249	
Average Gas Meter Temperature (°F)	98.3	97.8	106.4	
Average Stack Gas Temperature (°F)	144.8	144.8	144.3	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.93	54.47	51.49	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,592	67,913	64,673	
Stack Gas Flow Rate Stack Cond. (ACFM)	99,972	92,413	87,345	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	102.9	104.8	105.4	
Postinulata Callantad ()				<u>Average</u>
Particulate Collected (mg.)	15.8	12.7	18.7	15.7
Particulate Emissions (grains/DSCF)	0.005	0.005	0.007	0.01
Particulate Emissions (lb./hr.)	3.4	2.7	3.9	3.34
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.733	1.260	1.353	1.448
Fluoride Emissions (mg/DSCF)	0.038	0.030	0.033	0.034
Fluoride Emissions (lb./hr.)	0.37	0.27	0.28	0.31
Allowable Fluoride Emissions (lb./hr.)				2.1

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	· Run 3	AVG
Start Time		05/07/2003 8:24	05/07/2003 9:53		
End Time		05/07/2003 9:28	05/07/2003 10:56	05/07/2003 12:18	
Granulation Plant Scrubber					
Recirc Flow	GPM	1171	1169	1168	1169
Make-up Flow	GPM	47	49	44	46
Pressure Drop	"H2O	24	23	23	23
Fan Amps	amps	115	115	115	115
Defluorination Scrubber	•				
Pondwater Flow	GPM	856	855	854	855
Demister Flow	GPM	82	82	79	81
Pressure Drop	"H2O	6	6	_ 6	6
Fan Amps	amps	68	68	68	68
Plant Production	· · · · · · · · · · · · · · · · · · ·				
AFI	TPD	701	604	655	653

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 1

	Run 1	Run 2	Run 3	
Date of Run	5/13/04	5/13/04	5/13/04	
Process Rate (TPH)	23.3	22.6	21.1	
Start Time (24-hr. clock)	0807	0944	1113	
End Time (24-hr. clock)	0914	1047	1216	
Vol. Dry Gas Sampled Meter Cond. (DCF)	45.876	45.424	45.210	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.12	30.12	30.12	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	45.641	44.913	44.319	
Vol. Liquid Collected Std. Cond. (SCF)	7.313	8.152	7.318	
Moisture in Stack Gas (% Vol.)	13.8	15.4	14.2	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.48	27.31	27.44	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.32	- 0.31	
Stack Gas Static Press. (in. Hg. abs.)	30.01	30.02	30.02	
Average Square Root Velocity Head	0.940	0.934	0.923	
Average Orifice Differential (in. H2O)	2.008	1.984	1.941	
Average Gas Meter Temperature (°F)	83.5	86.8	91.5	
Average Stack Gas Temperature (°F)	145.7	144.6	145.4	
Pitot Tube Coefficient	0.84	0.84	0.84	•
Stack Gas Vel. Stack Cond. (ft./sec.)	57.84	57.61	56.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	73,963	72,478	72,403	
Stack Gas Flow Rate Stack Cond. (ACFM)	98,127	97,739	96,414	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.234	0.234	0.234	
Percent Isokinetic	97.4	97.8	96.6	
, =				<u>Average</u>
Particulate Collected (mg.)	19.3	21.7	21.3	20.7
Particulate Emissions (grains/DSCF)	0.007	0.007	0.007	0.01
Particulate Emissions (lb./hr.)	4.1	4.6	4.6	4.5
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	1.9	2.5	1.7	2.0
Fluoride Emissions (mg/DSCF)	0.04	0.06	0.04	0.05
Fluoride Emissions (lb./hr.)	0.40	0.54	0.38	0.44
Allowable Fluoride Emissions (lb./hr.)				2.1

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

	the state of the state of	Run 1	Run 2 4	ere Run 3, et	,AVG /
Start Time		05/13/2004 08:07			•
End Time	· · · · · · · · · · · · · · · · · · ·	05/13/2004 09:14			.85
Granulation Plant Sci	rubber * * ,	The same of the sa			
Recirc Flow	GPM	1294	1295	1295	1294
Make-up Flow	GPM	64	61	60	63
Pressure Drop	"H2O	25	26	26	26
Fan Amps	amps	108	109	109	108
Defluorination Scrubl	ber!	gen a la respective de la company		water and the second se	· . ***
Pondwater Flow	GPM	798	798	798	798
Demister Flow	GPM	34	38	39	36
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	72	72	72	72
Plant Production : ::		Maria Carlo	ल्डा स्टब्स हाल्या व	11.10 TELESTIC	
AFI	TPH	23.3	22.6	21.1	22.3
AFI	TPD	559	543	507	536

Area Superintendent:	

TABLE 1. PARTICULATE AND FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview Source: AFI - Plant No. 1

	Run 1	Run 2	^t Run 3	
Date of Run	07/29/05	07/29/05	07/29/05	
Process Rate (TPH)	20.8	20.7	20.8	
Start Time (24-hr. clock)	1016	1133	1505	
End Time (24-hr. clock)	1119	1338	1607	
Vol. Dry Gas Sampled Meter Cond. (DCF)	55.871	48.110	58.397	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.06	30.06	30.03	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52.111	44.274	53.473	
Vol. Liquid Collected Std. Cond. (SCF)	8.855	9.675	10.562	
Moisture in Stack Gas (% Vol.)	14.5	17.9	16.5	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.40	27.03	27.19	
Stack Gas Static Press. (in. H2O gauge)	-0.52	-0.24	-0.64	
Stack Gas Static Press. (in. Hg. abs.)	30.02	30.04	29.98	
Average Square Root Velocity Head	0.949	0.961	0.952	
Average Orifice Differential (in. H2O)	2.568	2.658	2.763	
Average Gas Meter Temperature (°F)	98.6	106.3	108.7	
Average Stack Gas Temperature (°F)	150.8	151.3	154.2	•
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	55.25	56.30	55.83	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	69,500	67,983	68,137	
Stack Gas Flow Rate Stack Cond. (ACFM)	93,734	95,510	94,712	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.249	0.249	0.249	
Percent Isokinetic	104.5	90.8	109.4	
				<u>Average</u>
Particulate Collected (mg.)	38.3	35.8	44.1	39.4
Particulate Emissions (grains/DSCF)	0.011	0.012	0.013	0.01
Particulate Emissions (lb./hr.)	6.76	7.27	7.43	7.2
Allowable Particulate Emissions (lb./hr.)				13.0
Fluoride Collected (mg.)	3.325	3.691	6.331	4.449
Fluoride Emissions (mg/DSCF)	0.064	0.083	0.118	0.089
Fluoride Emissions (lb./hr.)	0.59	0.75	1.07	8.0
Allowable Fluoride Emissions (lb./hr.)				2.1

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

	4 4	Run:1	Run 2	Run:3	AVG .*
Start Time		07/29/2005 10:16	07/29/2005 11:33	07/29/2005 15:05	tal and
End Time		07/29/2005 11:19	07/29/2005 13:33	07/29/2005 16:07	
Granulation Plant Scrubber	ي ساڻ ٻواره	For the state of the state of the same	· · · · · · · · · · · · · · · · · · ·	人。 "我也被决定是我	
Recirc Flow	GPM	1237	1241	1246	1239
Make-up Flow	GPM	46	45	26	46
Pressure Drop	"H2O	20	20	20	20
Fan Amps	amps	108	108	110	108
Defluorination Scrubber	- \$44 1 m			and the second second	* y' ' ; ;
Pondwater Flow	GPM	758	756	749	757
Demister Flow	GPM	69	70	73	70
Pressure Drop	"H2O	8	8	8	8
Fan Amps	amps	83	84	82	83
Plant Production	7 1 1 1 1 m	一次, 一个	年 原語 - 聖李清太一号	· 等于图 6.69世 (新一份)	100
AFI	TPH	20.8	20.7	20.8	20.7
AFI	TPD	498	496	499	498

Area Superintendent:		
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TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview

Source: AFI - Plant No. 2

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	Run 1	Run 2	Run 3	
Date of Run	5/8/03	5/8/03	5/8/03	
Process Rate (TPH)	522	522	521	
Start Time (24-hr. clock)	0848	1029	1310	
End Time (24-hr. clock)	0952	1230	1415	
Vol. Dry Gas Sampled Meter Cond. (DCF)	31.254	31.692	31.760	
Gas Meter Calibration Factor	0.997	0.997	0.997	
Barometric Pressure at Barom. (in. Hg.)	30.11	30.11	30.12	
Elev. Diff. Manom. to Barom. (ft.)	116	116	116	
Vol. Gas Sampled Std. Cond. (DSCF)	30.120	30.517	30.100	
Vol. Liquid Collected Std. Cond. (SCF)	2.414	2.315	1.504	
Moisture in Stack Gas (% Vol.)	7.4	7.1	4.8	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	28.18	28.22	28.48	
Stack Gas Static Press. (in. H2O gauge)	-0.35	-0.42	-0.29	
Stack Gas Static Press. (in. Hg. abs.)	30.08	30.08	30.10	
Average Square Root Velocity Head	0.796	0.751	0.743	
Average Orifice Differential (in. H2O)	0.722	0.629	0.496	
Average Gas Meter Temperature (°F)	90.7	91.0	99.8	
Average Stack Gas Temperature (°F)	142.4	141.8	141.9	,
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	48.18	45.42	44.69	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	82,322	77,983	78,666	
Stack Gas Flow Rate Stack Cond. (ACFM)	100,898	95,125	93,601	
Net Time of Run (min.)	60	60	60	
Nozzle Diameter (in.)	0.195	0.195	0.195	
Percent Isokinetic	102.7	109.8	107.4	
	22.2	7.0	100	Average
Particulate Collected (mg.)	20.3	7.2	10.0	12.5
Particulate Emissions (grains/DSCF)	0.010	0.004	0.005	0.006
Particulate Emissions (lb./hr.)	7.4	2.4	3.5	4.43
Allowable Particulate Emissions (lb./hr.)				13.0

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 8, 2003 Source: EU ID No. 103 AFI 2 Plant

		Run 1	Run 2	Run 3	
Start Time		05/08/2003 8:48	05/08/2003 10:29	05/08/2003 13:10	AVG
End Time		05/08/2003 9:52	05/08/2003 12:30	05/08/2003 14:15	
Equipment Scrubber					
Flow	GPM	1083	1031	1219	1111
Pressure Drop	"H2O	14	14	15	15
Dryer Scubber					
Flow	GPM	1482	1478	1469	1476
Pressure Drop	"H2O	20	19	20	20
Fan Amps	amps	120	120	120	120
Production Rate					
AFI Product Rate	TPD	522	522	521	522
Emissions					
PM Emissions	lb/hr	7.4	2.4	3.5	4.4

Area Superintendent:

TABLE 1. PARTICULATE EMISSIONS TEST SUMMARY

Company: Cargill Crop Nutrition - Riverview Source: AFI - Plant No. 2

	Run 1	Run 2	Run 3	
Date of Run	5/20/04	5/20/04	5/20/04	
Process Rate (TPH)	25.7	25.7	25.8	
Start Time (24-hr. clock)	0802	0928	1049	
End Time (24-hr. clock)	0905	1032	1151	
Vol. Dry Gas Sampled Meter Cond. (DCF)	32.550	34.752	34.665	
Gas Meter Calibration Factor	1.015	1.015	1.015	
Barometric Pressure at Barom. (in. Hg.)	30.21	30.21	30.21	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	31.957	33.857	33.571	
Vol. Liquid Collected Std. Cond. (SCF)	6.078	7.228	6.455	
Moisture in Stack Gas (% Vol.)	16.0	17.6	16.1	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.24	27.06	27.23	
Stack Gas Static Press. (in. H2O gauge)	-0.30	-0.32	-0.34	
Stack Gas Static Press. (in. Hg. abs.)	30.07	30.09	30.10	
Average Square Root Velocity Head	0.739	0.747	0.742	
Average Orifice Differential (in. H2O)	1.152	1.117	1.106	
Average Gas Meter Temperature (°F)	90.6	95.2	98.7	
Average Stack Gas Temperature (°F)	140.7	143.2	144.7	
Pitot Tube Coefficient	0.84	0.84	0.84	
Stack Gas Vel. Stack Cond. (ft./sec.)	45.43	46.15	45.76	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	
Stack Gas Flow Rate Std. Cond. (DSCFM)	70,637	70,120	70,607	•
Stack Gas Flow Rate Stack Cond. (ACFM)	95,157	96,653	95,833	
Net Time of Run (min.)	. 60	60	60	
Nozzle Diameter (in.)	0.227	0.227	0.227	
Percent Isokinetic	93.7	100.0	98.5	
				<u>Average</u>
Particulate Collected (mg.)	14.4	20.0	18.6	17.7
Particulate Emissions (grains/DSCF)	0.007	0.009	0.009	0.008
Particulate Emissions (lb./hr.)	4.2	5.5	5.2	5.0
Allowable Particulate Emissions (lb./hr.)				13.0

Plant Name: Cargill Fertilizer, Inc. Test Date(s): May 20, 03 Test For: PM

Source: AFI 2 Plant

Compliance Test

		Run 1	Run 2 A	Run 3	Maria
Start Time	· •	5/20/04 8:02	5/20/04 9:28	5/20/04 10:49	AVG
End Time		5/20/04 9:05	5/20/04 10:32	5/20/04 11:51	
Equipment Scrubber	PER SERVE				
Flow	GPM	1480.2	1478.6	1478.6	1447
Pressure Drop	"H2O	11.7	11.7	11.7	16
Dryer Scubber ***					
Flow	GPM	1409.8	1404.7	1404.7	1544
Pressure Drop	"H2O	20.2	20.4	20.4	21
Production	438.24H				
AFI	TPH	25.7	25.7	25.8	25.7
AFI	TPD	617	617	618	617

Area Superintendent:	
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TABLE 2. PARTICULATE EMISSIONS TEST SUMMARY

Company: MOSAIC FERTILIZER, LLC - Riverview

Source: AFI - Plant No. 2

	Run 1	Run 2	Run 3	
Date of Run	8/4/05	8/4/05	8/4/05	
Process Rate (TPH)	23.7	23.8	23.7	
Start Time (24-hr. clock)	0828	0952	1121	
End Time (24-hr. clock)	0931	1056	1223	
Vol. Dry Gas Sampled Meter Cond. (DCF)	40.592	42.723	40.713	
Gas Meter Calibration Factor	0.976	0.976	0.976	
Barometric Pressure at Barom. (in. Hg.)	30.05	30.05	30.05	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	38.386	39.916	37.940	
Vol. Liquid Collected Std. Cond. (SCF)	5.031	8.133	8.723	
Moisture in Stack Gas (% Vol.)	11.6	16.9	18.7	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27.73	27.14	26.94	
Stack Gas Static Press. (in. H2O gauge)	-0.29	-0.26	-0.26	
Stack Gas Static Press. (in. Hg. abs.)	30.03	30.03	30.03	
Average Square Root Velocity Head	0.726	0.728	0.724	
Average Orifice Differential (in. H2O)	1.328	1.438	1.2 4 6	
Average Gas Meter Temperature (°F)	89.1	95.9	97.1	,
Average Stack Gas Temperature (°F)	148.5	149.0	148. 1	
Pitot Tube Coefficient	0.79	0.79	0.79	
Stack Gas Vel. Stack Cond. (ft./sec.)	41.91	42.50	42.40	
Effective Stack Area (sq. ft.)	34.91	34.91	34.91	•
Stack Gas Flow Rate Std. Cond. (DSCFM)	67,578	64,351	62,925	
Stack Gas Flow Rate Stack Cond. (ACFM)	87,770	89,018	88,801	
Net Time of Run (min.)	60.0	60.0	60.0	
Nozzle Diameter (in.)	0.246	0.246	0.246	
Percent Isokinetic	100.2	109.4	106.3	
				Average
Particulate Collected (mg.)	19.5	17.6	23.6	20.2
Particulate Emissions (grains/DSCF)	0.008	0.007	0.010	0.008
Particulate Emissions (lb./hr.)	4.5	3.8	5.2	4.5
Allowable Particulate Emissions (lb./hr.)				13.0

Plant Name: Cargill Fertilizer, Inc. Test Date(s): August 4, 2005 Test For: PM

Source: AFI 2 Plant

Compliance Test

· · · · · · · · · · · · · · · · · · ·	经 。	制产基。Run 1数等多数	Run/2	Run 3	14-14-14-14-14-14-14-14-14-14-14-14-14-1
Start Time		08/04/2005 08:28	08/04/2005 09:52	08/04/2005 11:21	AVG
End Time		08/04/2005 09:31	08/04/2005 10:56	08/04/2005 12:23	CARRET
Equipment Scrubber	West through	(表)以便食气用的运动的运动		MANAGEMENT OF THE	三十二十二十二十二
Flow	GPM	1236.0	1239.5	1243.1	1240
Pressure Drop	"H2O	12.6	12.5	12.4	13
Dryer Scubber	7		维色、最近的大型的		44-84
Flow	GPM	1227.6	1230.5	1229.7	1229
Pressure Drop	"H2O	20.5	20.3	20.0	20
Production . The state of the s	中国智能的		在此是在社会方式		
AFI	TPH	23.7	23.8	23.7	24
AFI	TPD	569	570	569	569

St.,2.7 240

Southern Environmental Sciences, Inc. 1204 North Wheeler Street | Plant City, Florida 33563 | (813) 752-5014, Fax (813) 752-2475

	VISIBLE EMIS	SIONS EVA	LUAT	TION					<u>ل</u>	روي ال	n = 5.
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OPERATING MODE	AMBIENT TEMP. (* F) START 808 STOP	10	10	0	0	8	39 40	 			
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START ~ 100 STOP	START-100 STOP	12	0	0	0	\bigcirc	42				
DISTANCE FROM OBSERVER	DIRECTION FROM OBSERVER START 1700 STOP	13_	Š	0	0	0	43				
EMISSION COLOR	PLUME TYPE NA	14	<u>0</u>	0	O	Ö	44	-		-	
None		15	$\frac{\circ}{\circ}$	0	0	0	45	-	-		
WATER DROPLETS PRESENT?	ATTACHED D DETACHED D	17	0	O	0	0	<u>46</u> 47	 			
POINT IN PLUME AT WHICH OPACITY	NAS DETERMINED	18	0	O	ð	0	48				
START Bashows Vant	STOP V	19_	0	0	0	0	49				
START S	STOP V	20_	0	0	0	Ó	50				
BACKGROUND COLOR START BILE STOP	SKY CONDITIONS Scattered	21_	00	Ŏ	<u>0</u>	0	51				
WIND SPEED (MPH)	WIND DIRECTION	22_	18	$\frac{O}{\sim}$	$\frac{\mathcal{O}}{\mathcal{O}}$	0	52		_		
STARTZ-4 STOP	START SE STOP	23 24	15	8	$\frac{\mathcal{O}}{\mathcal{O}}$	0	53 54				
AVERAGE OPACITY FOR HIGHEST PERIOD	RANGE OF OPACITY READINGS MIN. OTO MAX. OTO	25	10	0	<u> </u>	ŏ	55				
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SOUTHERN ENVIRONMENTAL SCIENCES, INC.

1204 North Wheeler Street, Plant City, Florida 33566 (813)752-5014

VISIBLE EMISSIONS EVALUATION

COMPANY Caigill-	Tampa
UNIT Limes Tone	silo.
ADDRESS US HWY	41 9 River View DV
	(w: FL
PERMIT NO. 057000	COMPLIANCE? YES NO 🗆
AIRS NO. 1570008	EU NO. 080
PROCESS RATE	PERMITTED RATE
PROCESS EQUIPMENT	e Storage Silo
CONTROL EQUIPMENT Bag	house
OPERATING MODE Filling Silo W/Kailcar	AMBIENT TEMP. (°F) START 87 STOP 87
HEIGHT ABOVE GROUND LEVEL STARTNION STOP Jame	HEIGHT REL. TO OBSERVER START 100 STOP. Some
DISTANCE FROM OBSERVER START 2300' STOP SEMIL	DIRECTION FROM OBSERVER START 280 STOP 280
EMISSION COLOR	PLUME TYPE N/H CONTIN. INTERMITTENT
WATER DROPLETS PRESENT NO YES CI	IS WATER DROPLET PLUMEN ATTACHED DETACHED DETACHED
POINT IN THE PLUME AT WHICH O STARTBAJALUSE VANT	OPACITY WAS DETERMINED STOP
DESCRIBE BACKGROUND	STOP 3 Ky
BACKGROUND COLOR START BI WAT STOP 2 2mm	SKY CONDITIONS START Scy H. STOP Sum
WIND SPEED (MPH) START 3-15 STOP Same	WIND DIRECTION START STOP S
AVERAGE OPACITY FOR CALL	RANGE OF OPAC. READINGS MIN. MAX.
SOURCE LAYOUT SKETCH TAFT	DRAW NORTH ARROW
	Emission Point
Sun * Wind Plume and Stack	Observer's Position
<u> </u>	40°
COMMENTS	
<u> </u>	

	EVALUATION OBSERVATION DATE START TIME STOP TIME OF 58								
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Date	e Certifi	ed: {	2/01		кр. Da		8/0		
I certify that all data provided to the person conducting the test was true and correct to the best of my knowledge:									
Signature: Sec Process Data									
Title:									

VISIBLE EMISSION OBSE	RVATION FORM] Form	Number	TT			Page /	a/	
Method Used (Cycle One)		Conit	V no beun	EO Form N	אברודטו	- 			
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Street Address 8813 U.S High Wo-	2 33569	2	0			0			
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Describe Emissions	217)5	13	0	0	0	0			
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Emission Color Water Day Start ベンルビ End Subm C Attached	Defoched None 🗵	15	0	0	0	0			
Describe Prume Background		16	0	0	0	0			
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Issued 5 7 Find 13 52727 Car Island N		19	0	0	0_	0			
Arribent lengo. Wes Bulb 1 Start 88 End 89 - 14A	NIA	20	0	0	0	0			
Source Layout Sketch		21	0	0	0	0	- 		
	⊠n- □mn	22	0	0	0	0			
	(7)	23	0	0	0	o l			
₹ Dogenvation Point		24	0	0	0	0	 _		
		25	0	0	0	0			
00		26	0	0	0	0			
Ley !		27	Ō	0	0	0			
Observer's Position	FEE	28	0	0	0	0			
	Sicia View	29	0	0	0	Ö			
140	Stock With Purms	30	0	0	0	0			
Sun Location Line	an 🕀					<u> </u>			
Longitude Latitude	Declination	Observed:		nt) Säxrii	£5_				
		17/	Sanature		CMI-	~	Date 5	128/05	·-
Additional information		Organizati	Mos	wic					
		Certified B		7-12			Date	16/00	

PARTICULATE & FLUORIDE EMISSIONS TEST SUMMARY

Company: MOSAIC RIVERVIEW Source: AFI NO. 1 STACK

	Run 1	Run 2	Run 3	
Date of Run	06/23/06	06/23/06	06/23/06	
Process Rate (TPH)				
Start Time (24-hr. clock)	1526	1858	1822	
End Time (24-hr. clock)	16 28	1758	1924	
Vol. Dry Gas Sampled Meter Cond. (DCF)	54,782	58,805	57.746	
Gas Meter Calibration Factor	0.991	0,991	0.991	
Barometric Pressure at Barom. (In. Hg.)	30,01	30.01	30.01	
Elev. Diff. Manom. to Barom. (ft.)	0	0	0	
Vol. Gas Sampled Std. Cond. (DSCF)	52.147	55.232	53.949	
Vol. Liquid Collected Std. Cond. (SCF)	7.275	8,110	8.364	
Molsture In Stack Gas (% Vol.)	12.2	12.8	13.4	
Molecular Weight Dry Stack Gas	29.00	29.00	29.00	
Molecular Weight Wet Stack Gas	27,65	27,59	27.52	
Steck Gas Static Press. (in. H2O gauge)	-0,38	-0.27	-0,38	
Stack Gas Static Press. (in. Hg. abs.)	29.98	29,99	29.98	
Average Square Root Velocity Head	0.987	0.978	0.966	
Average Orlfice Differential (In. H2O)	2.527	2.903	2.778	
Average Gas Meter Temperature (°F)	94.8	102.8	105.6	
Average Stack Gas Temperature ('F)	148.9	149,7	148.8	
Pitot Tube Coefficient	0.82	0.82	0.82	
Stack Gas Vel. Stack Cond. (ft./sec.)	58.10	58,83	58.17	
Effective Stack Area (sq. ft.)	28.27	28.27	28.27	
Stack Gas Flow Rate Std. Cond. (DSCFM)	75,160	75,538	74,248	
Stack Gas Flow Rate Stack Cond. (ACFM)	96,567	99,795	98,684	
Net Time of Run (min.)	60	60	60	
Nozzle Dlameter (In.)	0.249	0.249	0.249	
Percent Isokinetic	96,7	102.0	101.3	
		,,,,,,	. 0 , 10	Average
Particulate Collected (mg.)	14.916667	18.55	14.868687	18.111111
Particulate Emissions (grains/DSCF)	0.004	0.005	0.004	0.00
Particulate Emissions (lb./hr.)	2.84	3.36	2.71	2.97
,,			,	
Total				
Fluoride Collected (mg.)	0.718	1.416	1.350	1.161
Fluoride Emissions (mg/DSCF)	0.014	0.026	0.025	0.021
Fluoride Emissions (lb./hr.)	0.14	0.26	0.25	0.21
Probe Wash				
Fluoride Collected (mg.)	0.037	0.014	0.018	0.023
Fluoride Emissions (mg/DSCF)	0.001	0.000	0.000	0.000
Fluoride Emissions (Ib./hr.)	0.007	0,003	0.003	0.004
(1001100 Emissions (ib./mi)	0,007	0,000	0.000	0,004
Filter				
Fluoride Collected (mg.)	0.014	0.012	0.013	0.013
Fluoride Emissions (mg/DSCF)	0,000	0.000	0.000	0.000
Fluoride Emissions (lb./hr.)	0.003	0.002	0.002	0.002
Impingers				
Fluoride Collected (mg)	0.6650	1.3900	1.3200	1,125
Fluoride Emissions (mg/DSCF)	0.013	0.025	0.024	0.021
Fluoride Emissions (ib./hr.)	0.127	0.251	0,240	0.208
. "			21m · ¥	3,200

Plant Name: Cargill Fertilizer, Inc. Source: EU ID No. 078 AFI 1 Plant

		Run 1	Run 2	Run 3	AVG
Start Time		06/23/2006 15:26	06/23/2006 16:56	06/23/2006 18:22	
End Time		06/23/2006 16:28	06/23/2006 17:58	06/23/2006 19:24	
Granulation Plant Scrubbe	r	<u> </u>			
Recirc Flow	GPM	1281	1277	1276	1278
Make-up Flow	GPM	46	37	42	42
Pressure Drop	"H2O	19	18	19	19
Fan Amps	amps	112	112	111	112
Defluorination Scrubber			······································	·	
Pondwater Flow	GPM	886	857	821	855
Demister Flow	GPM	58	73	69	67
Pressure Drop	"H2O	14	14	14	14
Fan Amps	amps	101	100	98	100
Plant Production					
AFI	TPH	19.5	19.3	19.8	19.5
AFI	TPD	469	463	475	469

Area Superintendent:	