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REVISED
COMPLIANCE ASSURANCE
MONITORING PLAN
for
CF Industries, Inc.
Plant City Phosphate Complex

Prepared For:
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1.0 EMISSION UNITS REQUIRING CAM PLANS

1.1 CAM Rule Applicability Definition

CF Industries was issued a Title V Air Operation Permit (Permit No. 0570005-007-AV) that was effective May 20, 1998 for their Plant City Phosphate Complex. The expiration date of this permit was May 20, 2003. A permit application was submitted to the Florida Department of Environmental Protection (FDEP) on November 20, 2002 to renew the permit. As part of the Title V renewal application, required through regulations adopted in Title 40, Part 64 of the Code of Federal Regulations (40 CFR 64), Compliance Assurance Monitoring (CAM) Plans must be submitted. This regulation has been incorporated by reference in Rule 62-204.800 and implemented in Rule 62-213.440.

CAM plans are required for all Title V permitted emission units using control devices to meet federally enforceable emission limits or standards with pre-control emissions greater than "major" source thresholds. The term "major" is defined as in the Title V Regulations (40 CFR 70), but applied on a source-by-source basis. For most non-hazardous pollutants, the major source threshold is 100 tons per year (TPY). For hazardous air pollutants (HAPs), the threshold is 10 TPY for an individual HAP and 25 TPY for all HAPs combined.

The CAM rules contain specific exemptions from applicability of the CAM Rule. Specifically exempted from the CAM Rule are emissions units subject to requirements under Stratospheric Ozone Regulations (40 CFR 82), the Acid Rain Program (40 CFR 72), or that are part of an emissions cap included in the Title V Permit. Also exempt are emission units subject to New Source Performance Standards (NSPS) (40 CFR 60) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR 63) promulgated after 11/15/1990, as these sources have CAM-equivalent monitoring requirements included as part of the standard. Inherent process equipment (IPE), or equipment that may have the effect of controlling emissions but is installed for the primary purpose of product recovery or raw material recovery, is also exempt from CAM (40 CFR 64.1). In addition, CAM does not apply to any emission limit or standard for which the Title V permit specifies a continuous compliance determination method [40 CFR 64.2(b)(1)(vi)].

1.2 Emissions Units Requiring CAM Plans

A review of emission units at CF Industries Plant City Phosphate Complex was conducted to determine the applicability of the CAM Rule. This evaluation was conducted for each emission unit

and pollutant. First, the existence of a "control device" as defined by the CAM Rule was determined on a source-by-source basis for each pollutant. Those emission units without control devices were eliminated from further consideration. The remaining emission units were then evaluated on a pollutant-by-pollutant basis to determine if a control device was used to meet a federally enforceable emission limit or standard.

Each pollutant without a federally enforceable emission limit or standard, emitted from a given emission unit, was eliminated from further consideration. Uncontrolled annual emissions were then calculated for each remaining source-pollutant combination. If uncontrolled emissions for a pollutant emitted from a given emission unit source were below the major source threshold as defined by the CAM Rule, that pollutant was not further considered.

A summary of the results of this evaluation process is presented in Table 1. Supporting information is presented in Tables 2 through 5. Specific exemptions to the applicability of the CAM Rule were also considered in this evaluation.

Each pollutant-specific emissions unit identified to require a CAM plan is described below.

1.2.1 "A", "B", "C", and "D" Sulfuric Acid Plants (EUs 002, 003, 007, and 008)

CF Industries operates four sulfuric acid plants (SAPs) designated "A" SAP (EU 002), "B" SAP (EU 003), "C" SAP (EU 007), and "D" SAP (EU 008). "A" and "B" SAPs have permitted production rates of 1,300 tons per day (TPD) of 100% sulfuric acid. Both are considered existing facilities under 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants (NSPS, Subpart H) for sulfur dioxide (SO₂) emissions. Sulfuric acid mist (SAM) emissions from "A" SAP are not subject to NSPS Subpart H. SAM emissions from "B" SAP are subject to NSPS, Subpart H. However, since NSPS Subpart H was promulgated prior to November 15, 1990, "B" SAP is not exempt from CAM requirements for SAM for that reason.

"A" and "B" SAPs have federally enforceable permit limits for SO₂ and SAM. "A" and "B" SAPs have separate abatement systems consisting of a two-stage ammonia scrubber to comply with SO₂ emission limits and demisters to comply with SAM emission limits. As shown in Table 2, uncontrolled SO₂ emissions from "A" and "B" SAPs are above major source thresholds. Since, for "A" and "B" SAPs, a control device is used to comply with a federally-enforceable SO₂ emission limit, and uncontrolled SO₂ emissions are above the major source threshold of 100 TPY, a

CAM plan would be required for SO₂. However, CF Industries proposes to use the CEMS on these plants to monitor for compliance; therefore, the plants will not be subject to CAM for SO₂ [reference 40 CFR 64.2(b)(1)(vi)].

Uncontrolled SAM emissions from "A" and "B" SAP are below major source thresholds. In addition, the demister pads have been determined to be IPE. Therefore, a CAM plan is not required for this pollutant.

"C" and "D" SAPs have permitted production rates of 2,600 tons per day of 100% sulfuric acid and are regulated by NSPS, Subpart H. However, as described above, this NSPS was promulgated prior to 1990, and therefore does not exempt "C" and "D" SAPs from CAM requirements. "C" and "D" SAPs have federally enforceable permit limits for SO₂, SAM, and nitrogen oxides (NO_x). However, none of the emissions are controlled using "control devices" as defined in 40 CFR 64, thus a CAM plan is not required for these pollutants. The SO₂ and SAM emissions are controlled by IPE. There is no control equipment for NO_x emissions.

1.2.2 "A" and "B" Phosphoric Acid Plants (EUs 004 and 009)

CF Industries operates two phosphoric acid plants (PAPs), designated "A" PAP (EU 004) and "B" PAP (EU 009). "A" PAP has permitted production limits of 59 tons per hour (TPH) and 1,416 TPD of 100% rock P₂O₅. "B" PAP has permitted production limits of 87.8 TPH and 2,107 TPD of 100% rock P₂O₅. Both "A" and "B" PAPs have federally enforceable emission limits for fluoride (F). Both the "A" and "B" PAPs use control devices to comply with these emission limits. Fluoride emissions from "A" PAP are controlled using a cyclonic scrubber followed by a horizontal, cross-flow packed-bed scrubber. Fluoride emissions from "B" PAP are controlled using a horizontal, cross-flow packed-bed scrubber. The DEP has determined that these units are subject to the NESHAPs from Phosphoric Acid Manufacturing Plants (40 CFR 63, Subpart AA). Consequently, a CAM plan is not required.

1.2.3 "A" DAP/MAP Plant (EU 010)

CF Industries operates four fertilizer plants capable of producing diammonium phosphate (DAP) and monoammonium (MAP). One of these plants is designated "A" DAP/MAP (EU 010). "A" DAP/MAP consists of a reactor, granulator, dryer, product coolers, mills, and screens. "A" DAP/MAP has permitted production limits of 29.53 TPH of DAP and 33.30 TPH of MAP. "A" DAP/MAP has federally enforceable emission limits for particulate matter (PM) and F. A variety of

control devices (scrubbers, fume downcomers, cyclones) are used to comply with these emission limits.

PM emissions from "A" DAP/MAP are controlled by dust cyclones and primary venturi/cyclonic scrubbers using phosphoric acid as the scrubbing media. However, these scrubbers have been determined to be IPE since their primary purpose is to recover ammonia and product and recycle it back to the process. In addition, F emissions are covered under the NESHAPs for Phosphate Fertilizers Production Plants (40 CFR 63, Subpart BB). Since the F emissions are below the major source threshold and are subject to NESHAPs and the PM emissions are controlled by IPE, a CAM Plan is not required for this unit.

1.2.4 "Z" DAP/MAP (EU 011), "X" and "Y" DAP/MAP Fertilizer Plants (EUs 012, 013)

At their Plant City Phosphate Complex, CF Industries operates three other fertilizer plants in addition to the "A" DAP/MAP. These fertilizer plants are designated "X" DAP/MAP (EU 012), "Y" DAP/MAP (EU 013), and "Z" DAP/MAP (EU 011). The "X" and "Y" Plants will not be permitted for GTSP production in the Title V renewal permit because they have not been used for GTSP production in more than 10 years. All three of these fertilizer plants have federally enforceable emission limits for PM and F and utilize cyclones and scrubbers to comply.

As shown in Table 3, uncontrolled annual PM emissions from each of these fertilizer plants are above the major source threshold of 100 TPY for all products. As in the case of the "A" DAP/MAP Plant, the dust cyclones and the primary venturi/cyclonic scrubbers have been determined to be IPE. In addition, the freshwater F abatement scrubbers are not for the control of PM. Consequently, CAM plans are required for each of these fertilizer plants for PM, and the plan addresses only operating parameters for the secondary cyclonic scrubbers. The proposed monitoring for these scrubbers is the same as proposed for 40 CFR 63, Subpart BB, alternative monitoring. The secondary cyclonic scrubbers and abatement scrubbers are subject to 40 CFR 63, Subpart BB, for F emissions. Therefore, a CAM Plan for F emissions is not required.

1.2.5 "A" and "B" DAP/MAP/GTSP Storage Buildings (EU 014)

"A" and "B" Storage Buildings (EU 014) are used to store fertilizer products. CF Industries' Title V Permit contains federally enforceable permit limits for PM and F emissions. Operation of a multistage scrubber is required only when GTSP is stored in the building. The storage buildings will

not be permitted for GTSP storage in the Title V renewal permit because they have not been used for GTSP for more than 10 years. Since there is no control device required while storing DAP or MAP, a CAM plan is not required for this unit.

1.2.6 "A" and "B" Shipping Baghouses, "B" Truck Loading, "B" Railcar Loading (EUs 015, 018, 019, and 020)

CF Industries operates "A" and "B" Shipping Baghouses (EUs 015 and 018, respectively), "B" Truck Loading (EU 019), and "B" Railcar Loading (EU 020). Both "A" and "B" Shipping operations have federally enforceable PM emission limits. Baghouses are used to comply with this limit. However, as shown in Tables 3 and 5, uncontrolled annual PM emissions from both shipping units are less than 100 TPY. Therefore, a CAM plan is not required for these sources.

The "B" Truck Loading and "B" Railcar Loading operations do not have federally enforceable emission limits or standards for any pollutants, therefore, a CAM plan is not required for these sources.

1.2.7 All Other Permitted Sources

In addition to the sources described above, CF Industries Title V Permit includes the following sources:

1. A 2,600 and 5,000 ton molten sulfur storage tank (EU 022 and EU 033)
2. Molten Sulfur Truck Pits A and B (EU 023 and EU 024)
3. Rock Unloading and Storage (EU 025)
4. Product Reclaim (EU 026)
5. "X", "Y", and "Z" Rock Bins (EU 027, EU 028, and EU 029)
6. Phosphoric Acid Cleanup (EU 032)
7. Clay Unloading (EU 034)
8. Phosphogypsum Stack (EU 100)

With the exception of the phosphoric acid cleanup operation, none of these sources require CAM plans at this time. EUs 022, 023, 024, and 033 do not have federally enforceable emission limits or control equipment. EUs 025, 026, 027, 028, 029, and 034 will not be permitted in the Title V renewal permit because they have not been used for more than 10 years. EU 100, the phosphogypsum stack, does not have federally enforceable emission limits for criteria pollutants or HAPs, and no control devices are employed.

EU 032, the Phosphoric Acid Cleanup Operation, has federally enforceable permit limits for PM and F. A scrubber is used to comply with the emission limit for F. As shown in Table 4, uncontrolled annual emissions of F are above the major source threshold, therefore a CAM Plan is required for this source. CF is requesting the removal of the PM limit from the permit because the PM source (clay) has been removed from the facility.

EU 026 and 034, Product Reclaim and Clay Unloading, have been permanently shut down. Therefore, CF Industries is requesting that these emissions units be removed from the Title V permit.

2.0 PARTICULATE EMISSIONS FROM "Z" DAP/MAP AND "X" AND "Y" DAP/MAP PLANTS

2.1 Emissions Unit Identification

"X" DAP/MAP Plant— EU 012

"Y" DAP/MAP Plant—EU 013

"Z" DAP/MAP Plant—EU 011

Note: GTSP has been removed from the above descriptions.

2.2 Applicable Regulation, Emissions Limits, and Monitoring Requirements

The "X" Plant is limited to the following maximum allowable particulate emissions rates:

<u>Production Mode</u>	<u>lb/hr</u>	<u>TPY</u>
DAP	10.62	41.88
MAP	13.75	41.88

[Rule 62-296.403, F.A.C.]

The "Y" Plant is limited to the following maximum allowable particulate emissions rates:

<u>Production Mode</u>	<u>lb/hr</u>	<u>TPY</u>
DAP	15.3	67
MAP	15.3	67

The "Z" Plant is limited to the following maximum allowable particulate emissions rates to exempt the facility from particulate RACT:

<u>Production Mode</u>	<u>lb/hr</u>	<u>TPY</u>	<u>Proposed TPY*</u>
DAP	35.56	155.75*	99
MAP	35.56	155.75*	99

[Rule 62-296.700(2)(b), F.A.C.]

*CF Industries is proposing to reduce the allowable PM emissions from this unit to less than 100 TPY.

The monitoring of the total pressure drop across each scrubber at the "X", "Y", and "Z" Plants is required. At the "X", "Y", and "Z" Plants, monitoring of mass flow of phosphorous-bearing feed material to the process is required.

2.3 Control Technology Description

Each of the three plants, X, Y, and Z, are similarly designed. Emissions from the reactor, granulator, and aging belt at each plant are controlled by a venturi/cyclonic phosphoric acid scrubber, a cyclonic process water scrubber, and a freshwater spray abatement scrubber. Emissions from the dryer at each plant are controlled by dust cyclones, a venturi/cyclonic phosphoric acid scrubber, a cyclonic process water scrubber and the abatement scrubber. Emissions from the mills and screens at each plant are controlled by dust cyclones, a venturi/cyclonic phosphoric acid scrubber, and the abatement scrubber. Emissions from the product cooler at each plant are controlled by dust cyclones, a cyclonic process water scrubber and the abatement scrubber.

The abatement scrubber mentioned in the above paragraph is a single unit for each plant. The scrubber gases from all the plant components at each plant are combined and passed through the single freshwater spray abatement scrubber at each plant. In this scrubber, the gases are contacted by the freshwater spray droplets to absorb fluorides, and the droplets are removed from the gas stream by a mist eliminator.

2.4 Monitoring Approach

The dust cyclones and acid scrubbers (venturi/cyclonic primary scrubbers) are CAM-exempt IPE. The abatement scrubbers and pond water secondary cyclonic scrubbers are subject to 40 CFR 63, Subpart BB, alternative monitoring. The abatement scrubbers are F scrubbers only. Consequently, only the secondary cyclonic scrubbers are subject to CAM for PM. The proposed monitoring for the scrubbers is the same as proposed for 40 CFR 63, Subpart BB, alternative monitoring.

Secondary Cyclonic Scrubbers

	Indicator No. 1	Indicator No. 2
Indicator	Liquid nozzle pressure.	Segment pressure drop.
Measurement Approach	The scrubber liquid pressure is measured by a pressure gauge.	Pressure drop is measured with a differential pressure transmitter.
Indicator Range	An excursion is defined as a liquid pressure outside the proposed indicator ranges shown in the table below. An excursion shall trigger an inspection, corrective action as necessary or a re-test, and a reporting requirement.	An excursion is defined as a pressure drop outside the proposed indicator ranges shown in the table below. An excursion shall trigger an inspection, corrective action as necessary or a re-test, and a reporting requirement.
Data Representativeness	The minimum accuracy of the device is $\pm 5\%$.	The minimum accuracy of the device is $\pm 5\%$.
Verification of Operational Status	NA	NA
QA/QC Practices and Criteria	The device is checked annually and replaced when questionable.	The device is calibrated quarterly.
Monitoring Frequency	The scrubber liquid pressure is monitored at 2-hour intervals.	The pressure drop is monitored continuously.
Data Collection Procedures	The liquid pressure is logged every 2-hours by the operator.	The pressure drop is logged every 2-hours by the operator.
Averaging Period	3-hour rolling average based on every 2-hour recordings (i.e., at least 2 readings per averaging period).	3-hour rolling average based on every 2-hour recordings.

Proposed Indicator Ranges (see also Tables 6 through 9)—Liquid Nozzle Pressure

Emission Unit/Control Device	Proposed Indicator Ranges (PSIG)	
	Maximum	Minimum
X DAP Plant—Fume Cyclonic	62.2	45.0
X DAP Plant—Dryer Cyclonic	60.1	45.0
X DAP Plant—Cooler Cyclonic	65.0	45.0
Y DAP Plant—Fume Cyclonic	65.1	45.0
Y DAP Plant—Dryer Cyclonic	67.1	45.0
Y DAP Plant—Cooler Cyclonic	65.7	45.0
Z DAP Plant—Fume Cyclonic	65.0	45.0
Z DAP Plant—Dryer Cyclonic	62.4	45.0
Z DAP Plant—Cooler Cyclonic	63.5	45.0

Proposed Indicator Ranges (see also Tables 6 through 9)—Segment Pressure Drop

Emission Unit/Control Device	Proposed Indicator Ranges (PSIG)	
	Maximum	Minimum
X DAP Plant—Fume Scrubber	29.0	21.0
X DAP Plant—Dryer Scrubber	29.2	21.5
X DAP Plant—Dust Scrubber	29.2	19.0
X DAP Plant—Cooler Scrubber	7.5	5.7
Y DAP Plant—Fume Scrubber	33.2	21.8
Y DAP Plant—Dryer Scrubber	29.8	22.8
Y DAP Plant—Dust Scrubber	31.6	20.9
Y DAP Plant—Cooler Scrubber	16.7	5.7
Z DAP Plant—Fume Scrubber	31.9	21.9
Z DAP Plant—Dryer Scrubber	31.2	24.0
Z DAP Plant—Dust Scrubber	31.5	15.6
Z DAP Plant—Cooler Scrubber	9.4	4.4

2.5 Justification**2.5.1 Rationale for Selection of Performance Indicators**Secondary/Cyclonic Scrubber

Liquid water nozzle pressure was selected as a performance indicator because it is an indication of proper flow and distribution of water in the scrubber. A low water pressure indicates a possible disruption of the water supply through pump malfunction, line leakage, upstream line pluggage, or the loss of spray nozzles. A high water pressure is not indicative of ineffective scrubbing due to the design of the CF Industries' pond water scrubbing system.

Pond Water Scrubber nozzle pressure is justified as an acceptable substitute for flow based on the following discussion:

- Pluggage restriction of the nozzles does not occur; therefore, high-pressure readings do not indicate a scrubbing liquid deficiency. The scrubber nozzle is designed as a single unit, which can pass large diameter particles to prevent plugging from trash or scale buildup. As further prevention from plugging, two levels of pond water filtering are provided to prevent trash from entering the pond water distribution system. The first filtering is performed by polypropylene mesh socks upstream of the pond water supply pump basin. The second filtering is performed by wire mesh screens located immediately upstream of each of the six pond water supply pumps. This two stage filtering process prevents trash from entering the supply header system. In addition to the filtering equipment discussed above, the pond water

cyclonic scrubber nozzles are removed and visually inspected for scale or damage during each 5-week turnaround.

- Low nozzle pressure could indicate a scrubber liquid deficiency caused by pump malfunction, or upstream line pluggage or rupture. The pond water pump supply system consists of six separate pumps, which feed a common plant supply header. This system provides assurance of adequate flow and pressure in the event of a mechanical problem with an individual pump. Multiple pump outages or a severe line rupture or blockage could interrupt the liquid supply to a degree that conceivably could affect the PM emissions. Such occurrences would be detected by low nozzle pressure readings and be of such an impact on the complex as a whole that the effect would be obvious. In addition, supply system pressure in the header system is monitored at two points upstream of the scrubber nozzle pressure indicator to assure adequate pressure. These two locations are at the main pond water pump station, and the common supply header that feeds the XYZ Plants. While these pressure readings are not proposed for CAM monitoring, they do provide additional assurance of good pond water supply system performance.

Scrubber Differential Pressure

Segment pressure drop (scrubber differential pressure) was selected as a performance indicator because it indicates the gas flow through the scrubbing system. A high pressure drop indicates a restriction of gas flow. A low pressure drop can be caused by a loss of water distribution in the scrubber train or a circumvention of the liquid/gas content for other reasons.

2.5.2 Rationale for Selection of Indicator Ranges

CF Industries proposes to set broader indicator parameter ranges than the ranges covered by the existing EPA Reference Method test data, as allowed by Rule 40 CFR 64.4(c)(1), "Such data may be supplemented, if desired, by engineering assessments..." and "Emission testing is not required to be conducted over the entire indicator range...." The rationale for the proposed ranges is explained below. The historical reference method tests have not been conducted with the indicator parameters at extreme levels, and therefore, the reference test data do not represent an acceptable and practicable indicator range. Ranges limited to these data would result in a multitude of excursions, re-tests, and permit revisions.

Tables 6 through 9 include a comparison of parameter ranges covered by EPA reference method testing with the indicator ranges CF Industries proposes. A significant portion of normal operating data is outside the parameter ranges covered by the reference test data. A statistical summary of historical operating data is provided in Table 11.

CF Industries asserts that the proposed indicator ranges shown in Tables 6 through 9 are justified based on the following considerations:

- The actual particulate emission rates measured by EPA Reference Method testing are consistently low. Particulate emissions measured during reference testing range from 8 to 58 percent of the allowable limits. In fact, a review of compliance test data available since 1987 shows no exceedances of particulate emissions. The factor of safety provided by this consistently good performance history justifies a broader indicator range beyond the reference testing range.
- There is no visible correlation between particulate emissions and scrubber differential pressure. This fact may seem unrelated, but when the other multiple acid and fresh water scrubbing systems are considered, it becomes evident that the variations in differential pressure should not correlate to emissions rate. The scrubber system design is redundant in nature, and over-designed to ensure that the performance of one component does not affect emission rate. Recognizing the redundancy in CF Industries' scrubber systems, the indicator range can be broadened beyond the reference test range without a risk to the emission limit.

CF Industries proposes to establish indicator ranges that represent 95 percent of the historical operating data, or two standard deviations from the mean, except where EPA reference method testing has indicated a higher maximum or lower minimum value results in compliance with the emission limit. These proposed ranges are shown in Tables 6 through 9.

3.0 FLUORIDE EMISSIONS FROM PHOSPHORIC ACID CLEANUP

3.1 Emissions Unit Identification

Phosphoric Acid Cleanup – EU 032

3.2 Applicable Regulation, Emissions Limits, and Monitoring Requirements

The phosphoric acid cleanup system is capable of processing 671 TPH of phosphoric acid. The clean-up system involves the mixing of phosphoric acid with a flocculent to remove most of the organic and gypsum. The mixture is then clarified by settling, and the clean acid is returned to the phosphoric acid plant(s) for evaporation or to the granulation plants for process feed. The solids are returned to the phosphoric acid filters.

The Phosphoric Acid Cleanup system is limited to 3.0 lb/hr and 13.1 TPY of PM emissions [permit application dated June 11, 1996, and Rule 62-296.700(2)(b), F.A.C.]. The PM source (body feed clay) has been removed from the plant. Consequently, CF Industries is requesting the deletion of the PM limit from the permit.

The Phosphoric Acid Cleanup system is limited to 0.28 lb/hr and 1.23 TPY of fluoride emissions. [Rule 62-296.403(2), F.A.C.]

3.3 Control Technology Description

Fluoride emissions are controlled by a horizontal, cross-flow, packed-bed scrubber. Fluoride emissions control is set by the effectiveness of the packed-bed scrubber. The scrubber efficiency is monitored by the scrubber pressure drop and liquid flow rate (in gpm).

3.4 Monitoring Approach

	Indicator No. 1	Indicator No. 2
Indicator	Total Gas Pressure Drop	Liquid Flow Rate
Measurement Approach	Pressure drop is measured with a differential pressure transmitter.	Liquid flow rate is monitored with a flow meter.
Indicator Range	An excursion is defined as operation outside of the proposed indicator range of 1.2 to 7.2 inches of H ₂ O (refer to Table 10). Excursions will trigger an inspection, corrective action or a re-test, and a reporting requirement.	An excursion is defined as a scrubber liquid flow rate outside of the proposed indicator range of 428 to 716 GPM (refer to Table 10). Excursions will trigger an inspection, corrective action or a re-test, and a reporting requirement.
Data Representativeness	The minimum accuracy is $\pm 5\%$.	The scrubber liquid flow rate sensor is located on the scrubber liquid recirculation line.
Verification of Operational Status	NA	NA
QA/QC Practices and Criteria	The device is calibrated quarterly.	Monitoring equipment and process downtime is recorded in a log. The flow sensor is calibrated quarterly.
Monitoring Frequency	Measured continuously.	The scrubber liquid flow is monitored continuously.
Data Collection Procedures	Recorded continuously to a computer.	The operator records the scrubber liquid flow rate once every two hours on the scrubber operating log.
Averaging Period	3-hour average.	3-hour average based on every 2-hour recordings.

3.5 Justification

3.5.1 Rationale for Selection of Performance Indicators

Pressure drop was selected as a performance indicator because it indicates the integrity of the scrubber packing and the effectiveness of water distribution to the packing in the scrubber. Maintaining an adequate water flow promotes good supply and distribution of water in the scrubber. A high pressure drop indicates plugging of the scrubber packing. A low pressure drop is caused by a loss of water in the scrubber or scrubber packing out of place.

To achieve the required emission reduction, a minimum liquid flow rate must be supplied to absorb the given amount of F in the gas stream. The liquid to gas (L/G) ratio is a key operating parameter of the scrubber. If the L/G ratio decreases below the minimum, sufficient mass transfer of the pollutant from the gas phase to the liquid phase will not occur. The minimum liquid flow rate required to maintain the proper L/G ratio at the maximum gas flow and vapor loading through the scrubber can be determined. Maintaining this minimum liquid flow, even during periods of reduced gas flow, will ensure the required L/G ratio is achieved at all times.

3.5.2 Rationale for Selection of Indicator Ranges

The maximum and minimum values of the proposed monitoring parameters shown in Table 10 are based on annual compliance tests or special EPA reference method tests and knowledge of the equipment. The test date and emission results are also shown in Table 10.

A summary of operating history for scrubber liquid flow and differential pressure is shown in the attached Table 11.

ATTACHMENT A

SUMMARY OF EMISSION FACTOR TESTS

**SUMMARY OF EMISSION
FACTOR TESTS**

**IMC-AGRICO BIG BEND TERMINAL
6/17-19/2000**

METHOD 5 TESTS AT INLET TO BAGHOUSE ON TRANSFER POINT NO. 3

Test	Mass Total PM at Baghouse Inlet (lb/hr)	Oiled Fertilizer Transfer Rate (short tons/hr)	Emission Factor (lb total PM/ton)
1	12.22	1286	0.010
2	15.47	909	0.017
3	15.47	1021	0.015
4	8.13	1141	0.007
5	4.13	1155	0.004
Avg	11.08	1102	0.010

Oiled material emission factor for a 33 ft. drop is 0.010 lb/ton. Assuming 80% control for oil, the uncontrolled (unoiiled) total PM Emission Factor is 0.050 lb/ton.

PM 10 FRACTION TESTS

Test	PM10 (Fraction of Total PM)
1A	0.28
2A	0.12
3A	0.14
Avg	0.18

Use PM10 fraction of 20% .
Uncontrolled (unoiiled) PM10 Emission Factor is 0.010 lb/short ton.

BAGHOUSE EFFICIENCY TESTS

Test	Baghouse Inlet		Baghouse Outlet	
	(lb/hr)	(gr/dscf)	(lb/hr)	(gr/dscf)
1	12.22	0.6889	0.12	0.0038
2	15.47	0.8773	0.12	0.0041
3	15.47	0.8763		
4	8.13	0.4874		
5	4.13	0.2174		
Avg	11.08	0.6294	0.12	0.0039

Efficiency (mass) = $(1 - 0.12/11.08) \times 100 = 98.9\%$

Efficiency (conc) = $(1 - 0.0039/0.6294) \times 100 = 99.4\%$

Use baghouse efficiency of 99%.

(Note: Dust loading at baghouse outlet represents dust from the major material transfer point plus two minor dust pickup points, whereas the dust loading at the inlet represents dust only from the major material transfer point. Because of this, the 99% control efficiency is conservative.)

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04375204/4.2 CAM Plan/Tables 1-5 Draft/Table 1
6/28/2004

Table 1. CAM Applicability Determination for CF Industries, Plant City, FL (Revised 12/23/03)

Emission Source	Title V EU ID	Control Equipment	Pollutants with Permitted Emission Limits	Uncontrolled Emission Rates (TPY) ^a					CAM Plan Required? (Yes/No)	Comments
				SO ₂	SAM	NO _x	PM/PM ₁₀	F		
Johnson Scotch Boiler	001	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
"A" SAP	002	Ammonia scrubber; demister ^b	SO ₂ , SAM	> 100	83	--	--	--	No	CEMS used for compliance for SO ₂ , NO _x does not have limit. SAM uncontrolled < 100 TPY.
"B" SAP	003	Ammonia scrubber; demister ^b	SO ₂ , SAM	> 100	83	--	--	--	No	CEMS used for compliance for SO ₂ , NO _x does not have limit. SAM uncontrolled < 100 TPY.
"C" SAP	007	Demister ^b	SAM, NO _x , SO ₂	--	166	--	--	--	No	SO ₂ , SAM and NO _x do not have control equipment.
"D" SAP	008	Demister ^b	SAM, NO _x , SO ₂	--	166	--	--	--	No	SO ₂ , SAM and NO _x do not have control equipment.
"A" PAP	004	Scrubbers	F	--	--	--	--	--	No	F subject to 40 CFR 63, Subpart AA.
"B" PAP	009	Scrubbers	F	--	--	--	--	--	No	F subject to 40 CFR 63, Subpart AA.
"A" DAP/MAP Plant	010	Scrubbers ^c , downcomer, cyclones	PM, F	--	--	--	--	--	No	F uncontrolled emissions < 100 TPY, and also subject to 40 CFR 63, Subpart BB. PM controlled by inherent process equipment.
"Z" DAP/MAP Plant	011	Scrubbers ^c , cyclones	PM, F	--	--	--	> 100	--	Yes	CAM required for PM. F subject to 40 CFR 63, Subpart BB.
"X" DAP/MAP	012	Scrubbers ^c , cyclones	PM, F	--	--	--	> 100	--	Yes	CAM required for PM. F subject to 40 CFR 63, Subpart BB.
"Y" DAP/MAP	013	Scrubbers ^c , cyclones	PM, F	--	--	--	2,097	--	Yes	CAM required for PM. F subject to 40 CFR 63, Subpart BB.
"A" & "B" Storage Buildings	014	none	none	--	--	--	--	--	No	GTSP authorization has been deleted from the permit. No control equipment required.
"A" Shipping Baghouse	015	Baghouse	PM	--	--	--	33	--	No	PM uncontrolled emissions < 100 TPY.
"B" Shipping Baghouse	018	Baghouse	PM	--	--	--	66	--	No	PM uncontrolled emissions < 100 TPY.
"B" Truck Loading	019	Baghouse	none	--	--	--	--	--	No	No permitted emission limits.
"B" Railcar Loading	020	Baghouse	none	--	--	--	--	--	No	No permitted emission limits.
2600 Ton Storage Tank	022	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
Truck Pit A	023	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
Truck Pit B	024	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
5000 Ton Storage Tank	033	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
Rock Unloading & Storage	025	none	none	--	--	--	--	--	No	Authorization deleted from permit.
Product Reclaim	026	none	none	--	--	--	--	--	No	PM source has been removed.
"X" Rock Bin	027	none	none	--	--	--	--	--	No	Authorization deleted from permit.
"Y" Rock Bin	028	none	none	--	--	--	--	--	No	Authorization deleted from permit.
"Z" Rock Bin	029	none	none	--	--	--	--	--	No	Authorization deleted from permit.
Phos. Acid Cleanop	032	Scrubber	PM, F	--	--	--	--	123	Yes	CAM required for F. PM source has been removed.
Clay Unloading	034	none	none	--	--	--	--	--	No	PM source has been removed.
Phosphogypsum Stack	100	none	none	--	--	--	--	--	No	Not a point source. No control equipment or emission limit.

^a Refer to Tables 2 through 4 for calculations. In the case of a source having more than one operating mode (i.e., MAP or DAP) the maximum emissions for any mode are shown for CAM applicability purposes.

^b Demister pads have been determined to be inherent process equipment.

^c Primary venturi and cyclonic scrubbers have been determined to be inherent process equipment.

Note: The major source thresholds for all pollutants shown is 100 TPY.

Table 2. Summary of Uncontrolled SO₂ and SAM Emission Calculations for Sources Subject to the CAM Plan Requirements, CF Industries, Plant City, FL

Emission Source	Title V EU ID	Production/ Process Rate	Units	Uncontrolled SO ₂ Emissions			Uncontrolled SAM Emissions		
				Emission Factor	Ref.	Emission Rate (TPY)	Emission Factor	Ref.	Emission Rate (TPY)
"A" SAP	002	1,300	TPD H ₂ SO ₄	--	(1)	> 100	0.35 lb/ton H ₂ SO ₄	(2)	83.0
"B" SAP	003	1,300	TPD H ₂ SO ₄	--	(1)	> 100	0.35 lb/ton H ₂ SO ₄	(2)	83.0
"C" SAP	007	2,600	TPD H ₂ SO ₄	--	(1)	> 100	0.35 lb/ton H ₂ SO ₄	(2)	166.1
"D" SAP	008	2,600	TPD H ₂ SO ₄	--	(1)	> 100	0.35 lb/ton H ₂ SO ₄	(2)	166.1

References:

- (1) Controlled emissions (from Permit No. 0570005-007-AV) are > 100 TPY, therefore uncontrolled emissions > 100 TPY.
- (2) Emission factor based on AP-42 Table 8.10-2 (7/93) for recovered sulfur as the raw material.

Table 3. Summary of Uncontrolled PM Emission Calculations for Sources Subject to the CAM Plan Requirements, CF Industries, Plant City, FL (Revised 4/23/04)

Emission Source	Title V EU ID	Production/ Process Rate	Units	Uncontrolled PM Emissions		
				Emission Factor	Ref.	Emission Rate (TPY)
"Z" DAP/MAP Plant--DAP mode	011	48.7	TPH P ₂ O ₅	--	(1)	> 100
--MAP mode	011	55.0	TPH P ₂ O ₅	--	(1)	> 100
"X" DAP/MAP/GTSP--DAP mode	012	48.7	TPH P ₂ O ₅	--	(1)	> 100
--MAP mode	012	55.0	TPH P ₂ O ₅	--	(1)	> 100
"Y" DAP/MAP/GTSP--DAP mode	013	48.7	TPH P ₂ O ₅	8.70 lb/ton P ₂ O ₅	(2)	1,856.7
--MAP mode	013	55.0	TPH P ₂ O ₅	8.70 lb/ton P ₂ O ₅	(2)	2,096.9
"A" Shipping Baghouse	015	250	TPH Product	0.05 lb/ton fertilizer	(3)	32.85
"B" Shipping Baghouse	018	500	TPH Product	0.05 lb/ton fertilizer	(3)	65.70

References:

- (1) Controlled emissions (from Permit No. 0570005-007-AV) are > 100 TPY, therefore uncontrolled emissions > 100 TPY.
- (2) Emission factor based on AP-42 Table 8.5.3-1 (7/93) for the controlled emissions for production of ammonium phosphates. Uncontrolled emissions calculated by using the controlled emission factor of 0.68 lb/ton product, an average control efficiency of 87.4% for PM (AP-42 page 8.5.3-4), and assuming that MAP is 62% P₂O₅ and DAP is 54% P₂O₅.
- (3) Refer to Table 5 for calculation.

Table 4. Summary of Uncontrolled F Emission Calculations for Sources Subject to the CAM Plan Requirements, CF Industries, Plant City, FL (Revised 04/22/04)

Emission Source	Title V EU ID	Production/ Process Rate	Units	Uncontrolled F Emissions		
				Emission Factor	Ref.	Emissions (TPY)
Phos. Acid Cleanup	032	671	TPH Phos. Acid	0.28 lb/hr	(1)	122.6

References:

- (1) Emissions based on the allowable fluoride emissions and measured scrubber efficiency of 99% for similar scrubbers on "A" and "B" Phosphoric Acid Plants.

Table 5. PM/PM₁₀ Emission Rate Calculation for the A and B Shipping Operations, CF Industries, Plant City, FL

Source	Fertilizer Throughput ^a		Emission Factor ^b PM/PM ₁₀ (lb/ton Fert.)	No. of Transfer Points	Control Efficiency (%)	Control Type	PM/PM ₁₀ Emission Rate	
	TPH	TPY					lb/hr	TPY
A Shipping	250	2,190,000	0.05	3	80	Coating Oil	7.50	32.85
B Shipping	500	4,380,000	0.05	3	80	Coating Oil	15.00	65.70

^a From Title V Permit No. 0570005-007-AV.

^b Based on stack test data for IMC-Agrico, Big Bend Terminal for GTSP (refer to Attachment A).

Table 6. Proposed Indicator Ranges For the X DAP Plant (EU 012) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min				
10.62	Fume Scrubber ΔP - Inches H ₂ O	None	18	29.0	21.0	28.6	21.6	29.0	21.0	3/24/98 ^{C-3 run}	3.37	3/26/03 ^{C-1 runs}	1.80
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	58	45	62.2	45.5	62.2	45.0	3/23/99 ^{C-3 run}	6.18	8/26/03 ^{SC-3 runs}	NA
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	26.0	22.0	29.2	21.5	29.2	21.5	3/23/99 ^{C-3 run}	6.18	3/26/03 ^{C-1 runs}	1.80
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	60	45	60.1	46.5	60.1	45.0	3/21/00 ^{C-3 run}	3.26	8/26/03 ^{SC-3 runs}	NA
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	25.0	19.0	29.2	19.0	29.2	19.0	3/23/99 ^{C-3 run}	6.18	3/26/03 ^{C-1 runs}	1.80
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	7.3	5.9	7.5	5.7	7.5	5.7	3/22/01 ^{C-1 run}	3.82	4/9/02 ^{C-3 runs}	6.22
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	65	45	59.1	46.5	65.0	45.0	3/24/98 ^{C-3 run}	3.37	8/26/03 ^{SC-3 runs}	NA

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Table 7. Proposed Indicator Ranges For Y DAP (EU 013) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min				
15.30	Fume Scrubber ΔP - Inches H ₂ O	None	18	29.0	25.0	33.2	21.8	33.2	21.8	4/27/01 ^{C-1 run}	5.55	7/1/03 ^{C-1 run}	6.94
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	60.0	45	65.1	48.6	65.1	45.0	5/8/02 ^{C-3 run}	7.22	7/2/03 ^{C-2 run}	5.50
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	28.0	23.0	29.8	22.8	29.8	22.8	4/27/01 ^{C-1 run}	5.55	5/8/02 ^{C-3 run}	7.22
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	58	45	67.1	47.9	67.1	45.0	5/8/02 ^{C-3 run}	7.22	7/2/03 ^{C-2 run}	5.50
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	30.0	21.0	31.6	20.9	31.6	20.9	4/27/01 ^{C-1 run}	5.55	4/6/99 ^{C-3 run}	4.09
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	13.0	7.7	16.7	5.7	16.7	5.7	7/1/03 ^{C-1 run}	6.94	4/27/01 ^{C-1 run}	5.55
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	58	45	65.7	48.4	65.7	45.0	5/8/02 ^{C-3 run}	7.22	7/2/03 ^{C-2 run}	5.50

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Table 8. Proposed Indicator Ranges For Z DAP Plant (EU 011) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min	Maximums	Minimums		
35.56 (Proposed limit = 22.6)	Fume Scrubber ΔP - Inches H ₂ O	None	18	28	22.5	31.9	21.9	31.9	21.9	3/10/98 ^{C-3 num}	1.71	3/7/00 ^{C-3 num}	0.88
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	65	45	61.2	48.3	65.0	45.0	3/7/00 ^{C-3 num}	0.88	9/ 4-5 /03 ^{SC-3 num}	NA
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	28.0	25.0	31.2	24.0	31.2	24.0	3/13/03 ^{C-3 num}	3.71	3/7/00 ^{C-3 num}	0.88
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	62	45	62.4	48.2	62.4	45.0	3/9/99 ^{C-3 num}	6.26	9/ 4-5 /03 ^{SC-3 num}	NA
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	25.5	17.0	31.5	15.6	31.5	15.6	3/10/98 ^{C-3 num}	1.71	3/12/02 ^{C-1 num}	2.36
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	9.4	5.8	8.9	4.4	9.4	4.4	3/2/04 ^{C-3 num}	3.70	3/8/01 ^{C-2 num}	3.93
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	62	45	63.5	48.3	63.5	45.0	3/13/02 ^{C-1 num}	2.92	9/ 4-5 /03 ^{SC-3 num}	NA

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)
**Maximum and minimum from either reference method testing or 95% confidence interval.

Table 9. Proposed Indicator Ranges For Y MAP Plant (EU 013) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min				
15.30	Fume Scrubber ΔP - Inches H ₂ O	None	18	31.0	25.0	See DAP	See DAP	See DAP	See DAP	4/2/02 ^{C-1 nm}	5.17	4/19/03 ^{C-3 nm}	12.86
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	60	45	See DAP	See DAP	See DAP	See DAP	4/2/02 ^{C-1 nm}	6.48	9/16/03 ^{SC-3 nm}	NA
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	29.0	24.0	See DAP	See DAP	See DAP	See DAP	5/14/98 ^{C-3 nm}	7.28	4/29/03 ^{C-1 nm}	2.10
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	64	45	See DAP	See DAP	See DAP	See DAP	4/3/01 ^{C-3 nm}	3.17	9/16/03 ^{SC-3 nm}	NA
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	29.0	20.0	See DAP	See DAP	See DAP	See DAP	4/30/03 ^{C-3 nm}	3.00	4/4/01 ^{C-2 nm}	6.20
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	14.3	6.0	See DAP	See DAP	See DAP	See DAP	4/30/03 ^{C-2 nm}	3.45	5/14/98 ^{C-3 nm}	7.28
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	60	45	See DAP	See DAP	See DAP	See DAP	5/4/99 ^{C-3 nm}	9.30	9/16/03 ^{SC-3 nm}	NA

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Note: This is the same emission unit as Y DAP (Table 7) with the same pollution control equipment, and data from both modes of operation were combined to determine the proposed indicator range.

Table 10. Proposed Indicator Ranges For ACU (EU 032) CAM Plan, CF Industries, Plant City, FL

F Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Proposed Indicator Range Based on ± 2 Standard Deviations From Average		Testing Date & Type*	Testing Results Actual Lbs F/hr	Testing Date & Type*	Testing Results Actual Lbs F/hr
		Max	Min	Max	Min	Max	Min				
0.28	ACU Scrubber PW Flow - GPM	None	110	712	450	716	428	4/29/99 ^{C-3 num}	0.14	4/17/97 ^{C-3 num}	0.23
	ACU Scrubber ΔP - Inches H ₂ O	None	None	6.8	2.9	7.2	1.2	6/24/04 ^{C-3 num}	0.25	6/27/02 ^{C-3 num}	0.09

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

Table 11. Historic Data Analysis For CAM Plan, CF Industries, Plant City, FL

ACU / X-DAP	ACU Fume Scrubber ΔP (Inches W.C.)	ACU Fume Scrubber PW Flow (GPM)	XDAP Scrubber Cooler Cyclonic PW Pres. PSIG	XDAP Scrubber Dryer Cyclonic PW Pres. PSIG	XDAP Scrubber Fume Cyclonic PW Pres. PSIG	XDAP Scrubber Cooler ΔP (Inches W.C.)	XDAP Scrubber Fume ΔP (Inches W.C.)	XDAP Scrubber Dryer ΔP (Inches W.C.)	XDAP Scrubber Dust ΔP (Inches W.C.)
Sample Rate	Every 2 Hr	Every 2 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr
Analysis Period Start	6/28/2001	6/28/2001	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000
Analysis Period End	6/24/2004	5/18/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004
Data Points	12,173	12,281	27,334	27,338	27,332	27,319	27,333	27,328	27,321
Standard Deviation	2.38	72	52.8	3.4	4.2	0.5	1.8	1.9	2.5
Average	5.99	572	52.8	53.3	53.9	6.6	25.1	25.4	24.3
Upper Limit Tested	77.2504	712.2504	65.6504	60.2504	65.5804	7.3504	29.0504	26.0504	25.0504
Lower Limit Tested	2.9	450	45	45	45	5.9	21.0	22.0	19.0
% Above Upper Limit	41.55%	1.99%	0.31%	3.77%	9.12%	6.90%	1.45%	23.08%	31.36%
% Below Lower Limit	8.72%	4.14%	0.01%	0.01%	0.01%	2.84%	0.62%	0.46%	1.75%
Average +2 STD	10.74	716	59.1	60.1	62.2	7.5	28.6	29.2	27.6
Average -2 STD	1.24	428	46.5	46.5	45.5	5.7	21.6	21.5	19.3
% Above +2 STD	0.00%	1.60%	5.97%	3.77%	3.94%	2.85%	2.61%	4.23%	2.13%
% Below -2 STD	0.04%	1.95%	0.11%	0.12%	0.11%	2.08%	2.07%	0.46%	3.06%

Y-DAP	ZDAP Scrubber Cooler Cyclonic PW Pres. PSIG	ZDAP Scrubber Dryer Cyclonic PW Pres. PSIG	ZDAP Scrubber Fume Cyclonic PW Pres. PSIG	ZDAP Scrubber Cooler ΔP (Inches W.C.)	ZDAP Scrubber Fume ΔP (Inches W.C.)	ZDAP Scrubber Dryer ΔP (Inches W.C.)	ZDAP Scrubber Dust ΔP (Inches W.C.)
Sample Rate	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr
Analysis Period Start	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000
Analysis Period End	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004
Data Points	27,628	27,632	27,635	27,579	27,616	27,627	27,614
Standard Deviation	4.3	4.8	4.1	2.7	2.9	1.7	2.7
Average	57.1	57.6	56.8	11.2	27.5	26.3	26.3
Upper Limit Tested	65.8	62.8	60.8	14.3	29.0	28.0	29.0
Lower Limit Tested	45	45	45	7.7	25.0	24.0	21.0
% Above Upper Limit	37.34%	41.72%	9.68%	13.30%	26.46%	8.79%	10.60%
% Below Lower Limit	0.00%	0.00%	0.00%	6.50%	15.23%	-4.27%	3.42%
Average +2 STD	65.7	61.8	65.7	16.7	33.2	29.8	31.6
Average -2 STD	48.4	47.9	48.6	5.7	21.8	22.8	20.9
% Above +2 STD	2.12%	4.82%	1.89%	0.19%	0.57%	3.58%	1.08%
% Below -2 STD	0.10%	0.10%	0.10%	0.15%	3.16%	1.62%	3.42%

Z-DAP	ZDAP Scrubber Cooler Cyclonic PW Pres. PSIG	ZDAP Scrubber Dryer Cyclonic PW Pres. PSIG	ZDAP Scrubber Fume Cyclonic PW Pres. PSIG	ZDAP Scrubber Cooler ΔP (Inches W.C.)	ZDAP Scrubber Fume ΔP (Inches W.C.)	ZDAP Scrubber Dryer ΔP (Inches W.C.)	ZDAP Scrubber Dust ΔP (Inches W.C.)
Sample Rate	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr
Analysis Period Start	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000
Analysis Period End	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004
Data Points	27,430	27,443	27,429	27,432	27,452	27,425	27,434
Standard Deviation	3.8	3.5	3.2	1.1	2.5	1.8	4.0
Average	55.9	55.3	54.7	6.6	26.9	27.6	23.6
Upper Limit Tested	62.8	62.8	66.5	7.4	28.0	28.0	25.5
Lower Limit Tested	45	45	45	5.8	22.5	25.0	17.0
% Above Upper Limit	3.36%	1.46%	0.17%	0.42%	18.35%	34.17%	23.33%
% Below Lower Limit	0.00%	0.01%	0.01%	15.16%	2.03%	5.37%	0.14%
Average +2 STD	63.5	62.4	61.2	8.9	31.9	31.2	31.5
Average -2 STD	48.3	48.2	48.3	4.4	21.9	24.0	15.8
% Above +2 STD	3.36%	1.46%	1.67%	4.17%	4.75%	0.72%	5.03%
% Below -2 STD	0.12%	0.12%	0.12%	0.19%	1.40%	1.42%	0.00%

Table 11. Historic Data Analysis For CAM Plan, CF Industries, Plant City, FL

ACU / X-DAP	ACU Fume Scrubber ΔP (Inches W.C.)	ACU Fume Scrubber PW Flow (GPM)	XDAP Scrubber Cooler Cyclonic PW Pres. PSIG	XDAP Scrubber Dryer Cyclonic PW Pres. PSIG	XDAP Scrubber Fume Cyclonic PW Pres. PSIG	XDAP Scrubber Cooler ΔP (Inches W.C.)	XDAP Scrubber Fume ΔP (Inches W.C.)	XDAP Scrubber Dryer ΔP (Inches W.C.)	XDAP Scrubber Dust ΔP (Inches W.C.)
Sample Rate	Every 2 Hr	Every 2 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr
Analysis Period Start	6/28/2001	6/28/2001	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000
Analysis Period End	6/24/2004	5/18/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004
Data Points	12,173	12,281	27,334	27,338	27,332	27,319	27,333	27,328	27,321
Standard Deviation	2.38	72	3.2	3.4	4.2	0.5	1.8	1.9	2.5
Average	5.99	572	52.8	53.3	53.9	6.6	25.1	25.4	24.3
Upper Limit Tested	7.2	712	65	60	58	7.3	29.0	26.0	25.0
Lower Limit Tested	2.9	450	45	45	45	5.9	21.0	22.0	19.0
% Above Upper Limit	41.55%	1.99%	0.31%	3.77%	9.12%	6.90%	1.45%	23.08%	31.36%
% Below Lower Limit	8.72%	4.14%	0.01%	0.01%	0.01%	2.84%	0.62%	0.46%	1.75%
Average +2 STD	10.74	716	59.1	60.1	62.2	7.5	28.6	29.2	29.2
Average -2 STD	1.24	428	46.5	46.5	45.5	5.7	21.6	21.5	19.3
% Above +2 STD	0.00%	1.60%	5.97%	3.77%	3.94%	2.85%	2.61%	4.23%	2.13%
% Below -2 STD	0.04%	1.95%	0.11%	0.12%	0.11%	2.08%	2.07%	0.46%	3.06%
Y-DAP			YDAP Scrubber Cooler Cyclonic PW Pres. PSIG	YDAP Scrubber Dryer Cyclonic PW Pres. PSIG	YDAP Scrubber Fume Cyclonic PW Pres. PSIG	YDAP Scrubber Cooler ΔP (Inches W.C.)	YDAP Scrubber Fume ΔP (Inches W.C.)	YDAP Scrubber Dryer ΔP (Inches W.C.)	YDAP Scrubber Dust ΔP (Inches W.C.)
Sample Rate			Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr
Analysis Period Start			9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000
Analysis Period End			5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004
Data Points			27,628	27,632	27,635	27,579	27,616	27,627	27,614
Standard Deviation			4.3	4.8	4.1	2.7	2.9	1.7	2.7
Average			57.1	57.5	56.8	11.2	27.5	26.3	26.3
Upper Limit Tested			58	58	60	14.3	29.0	28.0	29.0
Lower Limit Tested			45	45	45	7.7	25.0	24.0	21.0
% Above Upper Limit			37.34%	41.72%	9.69%	13.30%	26.46%	8.79%	10.60%
% Below Lower Limit			0.00%	0.00%	0.00%	6.50%	15.23%	4.27%	3.42%
Average +2 STD			65.7	67.1	65.1	16.7	33.2	29.8	31.6
Average -2 STD			48.4	47.9	48.6	5.7	21.8	22.8	20.9
% Above +2 STD			2.12%	4.82%	1.89%	0.19%	0.57%	3.58%	1.08%
% Below -2 STD			0.10%	0.10%	0.10%	0.15%	3.16%	1.62%	3.42%
Z-DAP			ZDAP Scrubber Cooler Cyclonic PW Pres. PSIG	ZDAP Scrubber Dryer Cyclonic PW Pres. PSIG	ZDAP Scrubber Fume Cyclonic PW Pres. PSIG	ZDAP Scrubber Cooler ΔP (Inches W.C.)	ZDAP Scrubber Fume ΔP (Inches W.C.)	ZDAP Scrubber Dryer ΔP (Inches W.C.)	ZDAP Scrubber Dust ΔP (Inches W.C.)
Sample Rate			Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr	Every 1 Hr
Analysis Period Start			9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000	9/1/2000
Analysis Period End			5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004	5/17/2004
Data Points			27,430	27,443	27,429	27,432	27,452	27,425	27,434
Standard Deviation			3.8	3.5	3.2	1.1	2.5	1.8	4.0
Average			55.9	55.3	54.7	6.6	26.9	27.6	23.6
Upper Limit Tested			62	62	65	9.4	28.0	28.0	25.5
Lower Limit Tested			45	45	45	5.8	22.5	25.0	17.0
% Above Upper Limit			3.36%	1.46%	0.17%	0.42%	18.35%	34.17%	23.33%
% Below Lower Limit			0.00%	0.01%	0.01%	15.16%	2.03%	5.37%	0.14%
Average +2 STD			63.5	62.4	61.2	8.9	31.9	31.2	31.5
Average -2 STD			48.3	48.2	48.3	4.4	21.9	24.0	15.6
% Above +2 STD			3.36%	1.46%	1.67%	4.17%	4.75%	0.72%	5.03%
% Below -2 STD			0.12%	0.12%	0.12%	0.19%	1.40%	1.42%	0.00%

Table 10. Proposed Indicator Ranges For ACU (EU 032) CAM Plan, CF Industries, Plant City, FL

F Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Proposed Indicator Range Based on ± 2 Standard Deviations From Average		Testing Date & Type*	Testing Results Actual Lbs F/hr	Testing Date & Type*	Testing Results Actual Lbs F/hr
		Max	Min	Max	Min	Max	Min				
0.28	ACU Scrubber PW Flow - GPM	None	110	712	450	716	428	4/29/99 ^{C-3 runs}	0.14	4/17/97 ^{C-3 run}	0.23
	ACU Scrubber ΔP - Inches H ₂ O	None	None	6.8	2.9	7.2	1.2	6/24/04 ^{C-3 run}	0.25	6/27/02 ^{C-3 run}	0.09

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

Table 9. Proposed Indicator Ranges For Y MAP Plant (EU 013) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min				
15.30	Fume Scrubber ΔP - Inches H ₂ O	None	18	31.0	25.0	See DAP	See DAP	See DAP	See DAP	4/2/02 ^{C-1 run}	5.17	4/19/00 ^{C-3 run}	12.86
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	60	45	See DAP	See DAP	See DAP	See DAP	4/2/02 ^{C-1 run}	6.48	9/16/03 ^{SC-3 run}	NA
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	29.0	24.0	See DAP	See DAP	See DAP	See DAP	5/14/98 ^{C-3 run}	7.28	4/29/03 ^{C-1 run}	2.10
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	64	45	See DAP	See DAP	See DAP	See DAP	4/3/01 ^{C-3 run}	3.17	9/16/03 ^{SC-3 run}	NA
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	29.0	20.0	See DAP	See DAP	See DAP	See DAP	4/30/03 ^{C-3 run}	3.00	4/4/01 ^{C-2 run}	6.20
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	14.3	6.0	See DAP	See DAP	See DAP	See DAP	4/30/03 ^{C-2 run}	3.45	5/14/98 ^{C-3 run}	7.28
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	60	45	See DAP	See DAP	See DAP	See DAP	5/4/99 ^{C-3 run}	9.30	9/16/03 ^{SC-3 run}	NA

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Note: This is the same emission unit as Y DAP (Table 7) with the same pollution control equipment, and data from both modes of operation were combined to determine the proposed indicator range.

Table 8. Proposed Indicator Ranges For Z DAP Plant (EU 011) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min				
35.56 (Proposed limit = 22.6)	Fume Scrubber ΔP - Inches H ₂ O	None	18	28	22.5	31.9	21.9	31.9	21.9	3/10/98 ^{C-3 run}	1.71	3/7/00 ^{C-3 run}	0.88
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	65	45	61.2	48.3	65.0	45.0	3/7/00 ^{C-3 run}	0.88	9/ 4-5 /03 ^{SC-3 run}	NA
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	28.0	25.0	31.2	24.0	31.2	24.0	3/13/03 ^{C-3 run}	3.71	3/7/00 ^{C-3 run}	0.88
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	62	45	62.4	48.2	62.4	45.0	3/9/99 ^{C-3 run}	6.26	9/ 4-5 /03 ^{SC-3 run}	NA
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	25.5	17.0	31.5	15.6	31.5	15.6	3/10/98 ^{C-3 run}	1.71	3/12/02 ^{C-1 run}	2.36
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	9.4	5.8	8.9	4.4	9.4	4.4	3/2/04 ^{C-3 run}	3.70	3/8/01 ^{C-2 run}	3.93
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	62	45	63.5	48.3	63.5	45.0	3/13/02 ^{C-1 run}	2.92	9/ 4-5 /03 ^{SC-3 run}	NA

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Table 7. Proposed Indicator Ranges For Y DAP (EU 013) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min	Maximums	Minimums		
15.30	Fume Scrubber ΔP - Inches H ₂ O	None	18	29.0	25.0	33.2	21.8	33.2	21.8	4/27/01 ^{C-1 run}	5.55	7/1/03 ^{C-1 run}	6.94
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	60.0	45	65.1	48.6	65.1	45.0	5/8/02 ^{C-3 run}	7.22	7/2/03 ^{C-2 run}	5.50
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	28.0	23.0	29.8	22.8	29.8	22.8	4/27/01 ^{C-1 run}	5.55	5/8/02 ^{C-3 run}	7.22
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	58	45	67.1	47.9	67.1	45.0	5/8/02 ^{C-3 run}	7.22	7/2/03 ^{C-2 run}	5.50
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	30.0	21.0	31.6	20.9	31.6	20.9	4/27/01 ^{C-1 run}	5.55	4/6/99 ^{C-3 run}	4.09
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	13.0	7.7	16.7	5.7	16.7	5.7	7/1/03 ^{C-1 run}	6.94	4/27/01 ^{C-1 run}	5.55
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	58	45	65.7	48.4	65.7	45.0	5/8/02 ^{C-3 run}	7.22	7/2/03 ^{C-2 run}	5.50

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Table 6. Proposed Indicator Ranges For the X DAP Plant (EU 012) CAM Plan, CF Industries, Plant City, FL

PM Limit lb/hr	Parameter Description	Current Permit Range		Parameters Range Tested by EPA Reference Method		Indicator Range Based on ± 2 Standard Deviations From Average		Proposed Indicator Range**		Testing Date & Type*	Testing Results Actual lb PM/hr	Testing Date & Type*	Testing Results Actual Lbs PM/hr
		Max	Min	Max	Min	Max	Min	Max	Min				
10.62	Fume Scrubber ΔP - Inches H ₂ O	None	18	29.0	21.0	28.6	21.6	29.0	21.0	3/24/98 ^{C-3 run}	3.37	3/26/03 ^{C-1 runs}	1.80
	Fume Cyclonic PW Nozzle Pressure - PSIG	None	50	58	45	62.2	45.5	62.2	45.0	3/23/99 ^{C-3 run}	6.18	8/26/03 ^{SC-3 runs}	NA
	Dryer Scrubber ΔP - Inches H ₂ O	None	18	26.0	22.0	29.2	21.5	29.2	21.5	3/23/99 ^{C-3 run}	6.18	3/26/03 ^{C-1 runs}	1.80
	Dryer Cyclonic PW Nozzle Pressure - PSIG	None	50	60	45	60.1	46.5	60.1	45.0	3/21/00 ^{C-3 run}	3.26	8/26/03 ^{SC-3 runs}	NA
	Dust Scrubber ΔP - Inches H ₂ O	None	15.3	25.0	19.0	29.2	19.0	29.2	19.0	3/23/99 ^{C-3 run}	6.18	3/26/03 ^{C-1 runs}	1.80
	Cooler Scrubber ΔP - Inches H ₂ O	None	3.6	7.3	5.9	7.5	5.7	7.5	5.7	3/22/01 ^{C-1 run}	3.82	4/9/02 ^{C-3 runs}	6.22
	Cooler Cyclonic PW Nozzle Pressure - PSIG	None	50	65	45	59.1	46.5	65.0	45.0	3/24/98 ^{C-3 run}	3.37	8/26/03 ^{SC-3 runs}	NA

*Type of testing is indicated next to date of test. (C=Annual Compliance Test, SC=Special Compliance Testing)

**Maximum and minimum from either reference method testing or 95% confidence interval.

Table 1. CAM Applicability Determination for CF Industries, Plant City, FL (Revised 12/23/03)

Emission Source	Title V EU ID	Control Equipment	Pollutants with Permitted Emission Limits	Uncontrolled Emission Rates (TPY) ^a					CAM Plan Required? (Yes/No)	Comments
				SO ₂	SAM	NO _x	PM/PM ₁₀	F		
Johnson Scotch Boiler	001	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
"A" SAP	002	Ammonia scrubber; demister ^b	SO ₂ , SAM	> 100	83	--	--	--	No	CEMS used for compliance for SO ₂ . NO _x does not have limit. SAM uncontrolled < 100 TPY.
"B" SAP	003	Ammonia scrubber; demister ^b	SO ₂ , SAM	> 100	83	--	--	--	No	CEMS used for compliance for SO ₂ . NO _x does not have limit. SAM uncontrolled < 100 TPY.
"C" SAP	007	Demister ^b	SAM, NO _x , SO ₂	--	166	--	--	--	No	SO ₂ , SAM and NO _x do not have control equipment.
"D" SAP	008	Demister ^b	SAM, NO _x , SO ₂	--	166	--	--	--	No	SO ₂ , SAM and NO _x do not have control equipment.
"A" PAP	004	Scrubbers	F	--	--	--	--	--	No	F subject to 40 CFR 63, Subpart AA.
"B" PAP	009	Scrubbers	F	--	--	--	--	--	No	F subject to 40 CFR 63, Subpart AA.
"A" DAP/MAP Plant	010	Scrubbers ^c ; downcomer, cyclones	PM, F	--	--	--	--	--	No	F uncontrolled emissions < 100 TPY, and also subject to 40 CFR 63, Subpart BB. PM controlled by inherent process equipment.
"Z" DAP/MAP Plant	011	Scrubbers ^c ; cyclones	PM, F	--	--	--	> 100	--	Yes	CAM required for PM. F subject to 40 CFR 63, Subpart BB.
"X" DAP/MAP	012	Scrubbers ^c ; cyclones	PM, F	--	--	--	> 100	--	Yes	CAM required for PM. F subject to 40 CFR 63, Subpart BB.
"Y" DAP/MAP	013	Scrubbers ^c ; cyclones	PM, F	--	--	--	2,097	--	Yes	CAM required for PM. F subject to 40 CFR 63, Subpart BB.
"A" & "B" Storage Buildings	014	none	none	--	--	--	--	--	No	GTSP authorization has been deleted from the permit. No control equipment required.
"A" Shipping Baghouse	015	Baghouse	PM	--	--	--	33	--	No	PM uncontrolled emissions < 100 TPY.
"B" Shipping Baghouse	018	Baghouse	PM	--	--	--	66	--	No	PM uncontrolled emissions < 100 TPY.
"B" Truck Loading	019	Baghouse	none	--	--	--	--	--	No	No permitted emission limits.
"B" Railcar Loading	020	Baghouse	none	--	--	--	--	--	No	No permitted emission limits.
2600 Ton Storage Tank	022	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
Truck Pit A	023	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
Truck Pit B	024	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
5000 Ton Storage Tank	033	none	none	--	--	--	--	--	No	Source has no control equipment or permitted emission limits.
Rock Unloading & Storage	025	none	none	--	--	--	--	--	No	Authorization deleted from permit.
Product Reclaim	026	none	none	--	--	--	--	--	No	PM source has been removed.
"X" Rock Bin	027	none	none	--	--	--	--	--	No	Authorization deleted from permit.
"Y" Rock Bin	028	none	none	--	--	--	--	--	No	Authorization deleted from permit.
"Z" Rock Bin	029	none	none	--	--	--	--	--	No	Authorization deleted from permit.
Phos. Acid Cleanup	032	Scrubber	PM, F	--	--	--	--	123	Yes	CAM required for F. PM source has been removed.
Clay Unloading	034	none	none	--	--	--	--	--	No	PM source has been removed.
Phosphogypsum Stack	100	none	none	--	--	--	--	--	No	Not a point source. No control equipment or emission limit.

^a Refer to Tables 2 through 4 for calculations. In the case of a source having more than one operating mode (i.e, MAP or DAP) the maximum emissions for any mode are shown for CAM applicability purposes.

^b Demister pads have been determined to be inherent process equipment.

^c Primary venturi and cyclonic scrubbers have been determined to be inherent process equipment.

Note: The major source thresholds for all pollutants shown is 100 TPY.