

INITIAL TITLE V AIR PERMIT APPLICATION REVIEW

Revised 7/12/99

APPLICANT:	SITE LOCATION:	COUNTY:	
PCS Phosphate, Inc.	Aurora	Beaufort	
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APPLICATION NUMBER:	EXISTING PERMIT NUMBER:	NEW PERMIT NUMBER:	
	04176R23	04176T24	

I. Introduction

The U.S. Environmental Protection Agency (EPA) has given final approval to North Carolina's Title V operating permits program effective on October 1, 2001. This EPA approval triggered the requirements for Title V facilities to submit permit applications to the Division of Air Quality. Title V facilities are required to obtain an operating permit which addresses all applicable regulations under the State Implementation Plan, Federal Implementation Plan, and other provisions of the Clean Air Act (CAA). The Title V Operating Permit will define all of the facility's obligations under the CAA.

This Initial Title V Air Permit application Review intends to convey all pertinent emissions data, rules, policies, and engineering assumptions used to construct the DRAFT Title V operating permit. The primary source of information used to construct the DRAFT permit is the above referenced air permit application.

II. Background Information

The DRAFT Title V operating permit replaces an existing Air Quality Construction and Operation Permit No. 04176R23 which was issued on September 24, 2003 and is currently scheduled to expire on April 30, 2005.

Pursuant to 15A NCAC 2Q .0506 PCS Phosphate submitted its initial Title V application to the Division of Air Quality on December 12, 1995. The application was considered complete for processing on February 10, 1996. The DRAFT permit is required to go to public notice pursuant to 15A NCAC 2Q .0521. The PCS Phosphate - Aurora facility is subject to Title V program due to emissions exceeding the major source as summarized below:

Carbon monoxide - 396

PM10 - 602

Nitrogen oxides - 785

Sulfur dioxide - 5419

III. Facility Description

The PCS Phosphate Company, Inc. operates a mining and production facility in Aurora, North Carolina. Phosphate rock is mined and processed with sulfuric acid to produce phosphoric acid and phosphate fertilizers. The company operates four sulfuric acid plants and purchases additional sulfuric acid .

IV. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. On its latest inspection, the facility was in compliance with all applicable requirements. The applicant has certified that the facility will be in compliance with all applicable requirements. The applicant has also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

V. Summary of Emission Sources and Control Devices

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
S-3	Double-absorption sulfuric acid plant No. 3 (1850 tons per day nominal capacity) BACT NSPS	413-336	Vertical tube mist eliminator system installed on final absorbing tower for H ₂ SO ₄ Mist; double-absorption is control for SO ₂	101
S-4	Double-absorption sulfuric acid plant No. 4 (1850 tons per day nominal capacity) BACT NSPS	414-436	Vertical tube mist eliminator system installed on final absorbing tower	102
S-5	Double-absorption sulfuric acid plant No. 5 (3600 tons per day nominal capacity) NSPS	415-934	Vertical tube mist eliminator installed on final absorbing tower	103
S-6	Double-absorption sulfuric acid plant No. 5 (3800 tons per day nominal capacity) NSPS	406-129	Mist eliminator system including two-inch layer of knitted wire mesh	104

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
BW-2	One (1) distillate oil-fired boiler (99.56 million Btu per hour nominal capacity) NSPS	N/A	N/A	110-new
BW-1	One (1) distillate oil-fired boiler (125 million Btu per hour nominal capacity)	N/A	N/A	111
417-503-462	Lime silo No. 4 at water treatment area	417-503-471	One (1) bagfilter	121
417-755-462	Lime silo No. 5 at water treatment area	417-755-471	One (1) bagfilter	122
417-756-462	Lime silo No. 6 at water treatment area	417-756-471	One (1) bagfilter	123

2. Mill Area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
339-051	One coal/coke/"off-spec" used oils, used oil sludge/used glycols/ residual oil-fired vertical fluidized bed, phosphate rock calciner unit No. 1 (113.5 tons per day feed capacity) MACT	339-381a 339-381b 339-381c 339-381d	Two (2) duplex cyclones exhausting to one (1) fixed throat venturi type wet scrubber exhausting to one (1) wet electrostatic precipitator	201
339-052	One coal/coke/"off-spec" used oils, used oil sludge/used glycols/ residual oil-fired vertical fluidized bed, phosphate rock calciner unit No. 2 (113.5 tons per day feed capacity) MACT	339-382a 339-382b 339-382c	Two (2) duplex cyclones exhausting to one (1) fixed throat venturi type wet scrubber exhausting to one (1) wet electrostatic precipitator	202
339-053	One coal/coke/"off-spec" used oils, used oil sludge/used glycols/ residual oil-fired vertical fluidized bed, phosphate rock calciner unit No. 3 (113.5 tons per day feed capacity) MACT	339-383a 339-383b 339-383c	Two (2) duplex cyclones exhausting to one (1) fixed throat venturi type wet scrubber exhausting to one (1) wet electrostatic precipitator	203
339-054	One coal/coke/"off-spec" used oils, used oil sludge/used glycols/ residual oil-fired vertical fluidized bed, phosphate rock calciner unit No. 4 (113.5 tons per day feed capacity) MACT	339-384a 339-384b 339-384c	Two (2) duplex cyclones exhausting to one (1) fixed throat venturi type wet scrubber exhausting to one (1) wet electrostatic precipitator	204
339-055	One coal/coke/"off-spec" used oils, used oil sludge/used glycols/ residual oil-fired vertical fluidized bed, phosphate rock calciner unit No. 5 (113.5 tons per day feed capacity) MACT	339-385a 339-385b 339-385c	Two (2) duplex cyclones exhausting to one (1) variable throat venturi type wet scrubber	205
339-056	One coal/coke/"off-spec" used oils, used oil sludge/used glycols/ residual oil-fired vertical fluidized bed, phosphate rock calciner unit No. 6 (113.5 tons per day feed capacity) MACT	339-386a 339-386b 339-386c	Two (2) duplex cyclones exhausting to one (1) fixed throat venturi type wet scrubber	206

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
332-120	Residual oil-fired phosphate rock dryer (250 tons per hour nominal capacity)	332-370a 332-370b	One (1) duplex cyclone and one (1) venturi type wet scrubber	210
341-300	MACT Coal/coke pulverizer and thermal dryer system (20 tons per hour nominal capacity)	341-310 341-331 341-332	One (1) single cyclone exhausted to two (2) parallel bagfilters	215
Belt 39 to 70.1	Calcined rock CTS	339-821	Enclosed transfer point	220
Belt 55 to Belt 70.1	Calcined rock CTS Baghouse	339-860	One (1) bagfilter (580 square feet of surface area)	221
Belt 21 to Belt 23 or Belt 24	Storage silo baghouse	333-180	One (1) bagfilter (360 square feet of surface area)	222
Belt 22 to Belt 23 or Belt 24	Storage silo baghouse	333-190	One (1) bagfilter (75 square feet of surface area)	222
339-809-464	Calcined/dried rock CTS	None	None	223
224	One (1) polymer storage bin	320-215-478	One (1) bagfilter (1200 square feet of surface area)	224
225	One (1) lime storage silo	315-300-478	One (1) bagfilter (3000 square feet of surface area)	225
F290	Mill Concentrator Fugitives	N/A	N/A	290 (State-only requirements)
F291	Calcliner Plant Area Fugitives	N/A	N/A	291 (State-only requirements)
F292	Surge Pond Aerator	N/A	N/A	292 (State-only requirements)
341-100	Coal/coke railcar unloader (75 tons per hour nominal capacity)	N/A	Curtains, choke feeder, and wet suppression (spray) system	294a
341-110, 341-111, 341-112, 341-120	Three (3) parallel conveyor belts which transfer to one (1) single belt conveyor		One (1) wet suppression (spray) system, conveyor skirts at transfer points, and hood covers	294b
341-140	Single belt conveyor		One (1) wet suppression (spray) system and hood covers	294c
341-130	Coal/coke crusher (75 tons per hour nominal capacity)		One (1) wet suppression (spray) system	294d
341-200 341-201	Two (2) coal/coke storage silos (1086 tons, nominal capacity each)		Two (2) filtered bin vents, one per silo	294e
341-230	One (1) conveyor belt		One (1) wet suppression (spray) system and hood covers	294f

3. Fertilizer Production Area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
504-107 504-016	Diammonium Phosphate Plant No. 1 combustion chamber and residual oil-fired dryer (Nominal maximum input rates of 618 tons fresh P ₂ O ₅ and 275 tons of product per hour)	504-012	Four (4) Buell cyclones	301
504-009 504-001 504-058 504-059 504-060 504-061 504-043 504-042 504-002	Diammonium Phosphate Plant No. 1 cooler and material sizing and handling equipment (process screen feed drag conveyor, four (4) double-decked process screens, east cage mill, west cage mill, and recycle drag conveyor)	504-013	Four (4) Buell cyclones	301
504-016 504-009	Diammonium Phosphate Plant No. 1 residual oil-fired dryer(20 million Btu per hour nominal maximum heat input) and a cooler	504-070	One (1) cyclonic/venturi type wet scrubber	301
504-030 504-032	Diammonium Phosphate Plant No. 1 reactor and granulator	504-071	One (1) cyclonic/venturi type wet scrubber	301
504-030 504-032 504-016 504-019	Diammonium Phosphate Plant No. 1 reactor, granulator, residual oil-fired dryer and cooler.	504-072-476	One (1) cyclonic-type tail gas scrubber	301
511-085 511-086 511-070	Diammonium Phosphate Plant No. 3 first stage reactor, second stage reactor, and granulator	511-107A 511-107B	One (1) saturation chamber and one (1) wet cyclonic scrubber installed in a series	302
511-032	Diammonium Phosphate Plant No. 3 residual oil-fired dryer	511-028 511-103	One (1) dryer quad cyclone scrubber and one (1) two-stage dryer wet cyclonic scrubber	302
511-008 511-009 511-010 511-011 511-016 511-017 511-038 511-039 511-041 511-093 511-094 511-095 511-096	Diammonium Phosphate Plant No. 3 process sizing and handling equipment (four (4) chain mills, screen feed drag conveyor, recycle drag conveyor, recycle elevator, dryer elevator, product elevator, and four (4) double-deck product screens)	511-030 511-104	One (1) dust dual cyclone and one (1) dust cyclonic wet scrubber installed in a series	302

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
511-025	Diammonium Phosphate Plant No. 3 cooler and other miscellaneous material handling points	511-029 511-106	One (1) cooler dual cyclone and one (1) cooler wet cyclonic scrubber	302
511-107B 511-103 511-104 511-106	Diammonium Phosphate Plant No. 3 cyclonic scrubber, the two stage dryer wet cyclonic scrubber, the dust wet cyclonic scrubber, and the cooler wet cyclonic scrubber	511-105	One (1) cyclonic tail gas scrubber	302
505-104	Diammonium Phosphate Plant No. 2 residual oil-fired dryer	505-123A 505-125 505-147	One (1) duplex cyclone; one (1) venturi wet scrubber; and one (1) packed tower tail gas scrubber with saddle-type packing and demister pads: all installed in a series	303
505-107 505-114 505-110 505-143	Diammonium Phosphate Plant No. 2 material sizing and handling equipment (eight (8) process screens, one (1) scalping screen, one (1) recycle drag conveyor, and a product bin)	505-123C	One (1) equipment cyclone	303
505-111	Diammonium Phosphate Plant No. 2 cooler	505-123B	One cooler duplex cyclone	303
505-123C 505-123B	Diammonium Phosphate Plant No. 2 equipment cyclone and cooler duplex cyclone	505-117	One (1) cooler venturi wet scrubber	303
505-103 505-121	Diammonium Phosphate Plant No. 2 granulator and reactor	505-118	One (1) reactor-granulator venturi wet scrubber	303
505-117 505-118	Diammonium Phosphate Plant No. 2 cooler venturi wet scrubber and reactor-granulator venturi wet scrubber	505-148	One (1) packed tower tail gas scrubber with saddle-type packing and demister pad	303
APP-1	Ammonium Polyphosphate Plant (APP)	454-1	One (1) mist eliminator installed on one (1) packed tower cooler	304 (state-only requirements)
AFP-1	One (1) filter press	None	None	305
511-045	Diammonium Phosphate Plant No. 3 GTSP phosphate rock silo	511-035	One (1) bagfilter operating only during rock transfer	310
PA Pilot No. 1	Phosphoric Acid Pilot Plant No. 1	116-001	Spray Tower Scrubber	315 (State-only requirements)
PA Pilot No. 2	Phosphoric Acid Pilot Plant No. 2	116-002	Venturi Scrubber	316 (State-only requirements)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
318	Technical Services Dust Collection System	CD318	One (1) bagfilter	318

4. Superphosphoric Acid Production Area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
451-418 and 451-409	Superphosphoric acid plant No. 1	451-407	One (1) educator venturi type wet scrubber	330
451-701 and 451-809	Superphosphoric acid plant No. 2	451-807	One (1) educator venturi type wet scrubber	331
451-316 and 451-308	Superphosphoric acid plant No. 3	451-315	One (1) educator venturi type wet scrubber	332
451-916 and 451-940	Superphosphoric acid plant No. 4	451-315	One (1) educator venturi type wet scrubber	332
FPR-1 FPR-2	No. 1 filter press/filter press repulp tank and No. 2 filter press/filter press repulp tank	None	None	335 and 336 (state-only requirements)
453-485	One (1) potassium permanganate silo	453-488	One (1) bagfilter	340
453-468	One (1) clay additive storage silo	453-470	One (1) bagfilter	341
DAP1WH1	Warehouse No. 1 for DAP 1	None	None	390
DAP2WH2	Warehouse No. 2 for DAP 2	None	None	390
DAP3WH3	Warehouse No. 3 for DAP 3	None	None	390

5. Phosphoric Acid Production Area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
421-201 421-000 421-325 421-324 421-327 421-326 421-223 421-232 421-218 421-330	Reactor Train No. 1; tilting pan (Bird) filter No. 1; tilting pan (Bird) filter No. 1 primary vacuum pump installed on primary vacuum separator; secondary vacuum pump installed on secondary vacuum separator; (2) barometric condensers vacuum pumps; barometric condensers hotwell; and tilting pan (Bird) filter No. 1 seal tanks.	421-225	One (1) spray cross-flow packed bed type scrubber	401
441-000	Belt filter No. 1	441-021 441-015	One (1) spray tower separator and vacuum pump	402
441-000 442-000 441-031	Belt filter No. 1, belt filter No. 2, and belt filter No. 1 seal tanks	442-061	One (1) cyclonic scrubber	403
422-201 422-000 422-325 422-324 422-327 422-326 422-223 422-232 422-218 422-330	Reactor Train No. 2; tilting pan (Bird) filter No. 2; tilting pan (Bird) filter No. 2 primary vacuum pump installed on primary vacuum separator; secondary vacuum pump installed on secondary vacuum separator; (2) barometric condensers vacuum pumps; barometric condensers hotwell; and tilting pan (Bird) filter No. 2 seal tanks.	422-225	One (1) spray cross-flow packed bed type scrubber	404
442-000	Belt filter No. 2 filtrate separator	442-021 442-015	One (1) spray tower separator and vacuum pump	405
423-201 423-000 423-325 423-324 423-327 423-326 423-223 423-232 423-218 423-330	Reactor Train No. 3; tilting pan (Bird) filter No. 3; tilting pan (Bird) filter No. 3 primary vacuum pump installed on primary vacuum separator; secondary vacuum pump installed on secondary vacuum separator; (2) barometric condensers vacuum pumps; barometric condensers hotwell; and tilting pan (Bird) filter No. 3 seal tanks.	423-225	One (1) spray cross-flow packed bed type scrubber	406
443-000	Belt filter No. 3 filtrate separator	443-021 443-015	One (1) spray tower separator and vacuum pump	407

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
443-000 444-000 444-031	Belt filter No. 3, belt filter No. 4, and belt filter No. 4 seal tanks	443-061	One (1) cyclonic scrubber	408
424-201 428-753 424-000 424-325 424-324 424-327 424-326 424-223 424-232 424-218 424-330	Reactor Train No. 4; fluosilicic acid (H ₂ SiF ₆) recycle tank; tilting pan (Bird) filter No. 4; tilting pan (Bird) filter No. 4 primary vacuum pump installed on primary vacuum separator; secondary vacuum pump installed on secondary vacuum separator; (2) barometric condensers vacuum pumps; barometric condensers hotwell; and tilting pan (Bird) filter No. 4 seal tanks.	424-225	One (1) spray cross-flow packed bed type scrubber	409
444-000	Belt filter No. 4	444-021 444-015	One (1) spray tower separator and vacuum pump	410
040 and 020	Two (2) phosphoric acid storage tanks	433-056	One (1) venturi scrubber	421 (state-only requirement)
032, 033, 034, 060, and 035	Four (4) phosphoric acid storage tanks and one (1) green acid sludge tank	433-036	One (1) venturi scrubber	422 (state-only requirements)
429-002 421-115	Two (2) phosphate rock jet conveyors on reactor train No. 1	421-103	One (1) bagfilter	430
429-005 422-115	Two (2) phosphate rock jet conveyors on reactor train No. 2	422-103	One (1) bagfilter	431
429-152 429-001 429-004 429-151	Phosphate rock storage silo No. 1 and three (3) transfer points	429-014	One (1) bagfilter	434
429-150	Phosphate rock transfer house	429-168	One (1) bagfilter	437
426-156 433-158 433-165	One (1) slurry mix tank, one (1) clarifier, and one (1) defluorinated acid pump tank	426-165	One (1) venturi scrubber Operated only during defluorinated acid production	450 (state-only requirements)
426-154	One (1) diatomaceous earth silo	426-161	One (1) bagfilter	451
ES461 ES462	One (1) phosphoric acid recirculation water cooling tower consisting of two (2) fans	None	None	461 and 462 (state-only requirements)
None	Phosphoric Acid Plant Fugitives	None	Process Controls	491
030 031 428-440 428-442 433-182	Two (2) phosphoric acid storage tanks (phosphoric acid tank farm), two (2) HFSA tanks, and one (1) carbon slurry tank	None	None	492 (state-only requirements)

6. Purified Acid Production (PAP) Area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
T24 T224 T324 T346 GC-1	Three (3) scrub acid storage tanks discharging through a seal pot to one (1) gas chiller system	S324	One (1) packed bed scrubber	501
C10 C20 C210 C220	Four (4) extraction columns under nitrogen blanket system	GC-1	One (1) gas chiller system	501
T7, T12, T13, T212, T213, T1, T201, T24, T224, T50, T40, T240, T30, T57, T324	Fifteen (15) tanks under nitrogen blanket system	GC-1	One (1) gas chiller system	501
T54, T44, T244, T34	Four (4) tanks with seal pots under nitrogen blanket system	GC-1	One (1) gas chiller system	501
T8, T15, T215, T315, T58, T346	Six (6) seal pots under nitrogen blanket system	GC-1	One (1) gas chiller system	501
S53, S43, S243, S253, S33, S5	Six (6) separators under nitrogen blanket system	GC-1	One (1) gas chiller system	501
S4	One (1) still under nitrogen blanket system	GC-1	One (1) gas chiller system	501
S42, S242, S32, S52, S54	Five (5) strippers under nitrogen blanket system	GC-1	One (1) gas chiller system	501
S324	One (1) scrubber under nitrogen blanket system	GC-1	One (1) gas chiller system	501
S88 T70	One (1) acid defluorination column and acid concentrator	S92	One (1) wet spray tower with a demister pad	502 (state-only requirements)
S118 T270	One (1) acid defluorination column and acid concentrator	S292	One (1) wet spray tower with a demister pad	502 (state-only requirements)
S288 T100	One (1) acid defluorination column and acid concentrator	S122	One (1) wet spray tower with a demister pad	502 (state-only requirements)
CT-1	Two (2) direct contact cooling tower fans	None	None	510 and 511

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
CT-2	Two (2) indirect contact cooling tower fans	None	None	512 and 513
T1024 T1324 T1346 GC-2	Two (2) scrub acid storage tanks discharging through a vent pot to one (1) gas chiller system	S1324	One (1) packed bed scrubber	503
C1010 C1020	Two (2) extraction columns under nitrogen blanket system	GC-2	One (1) gas chiller system	503
T1007, T1012, T1013, T1212, T1324, T1001, T1024, T1050, T1040, T1030, T1057	Eleven (11) tanks under nitrogen blanket system	GC-2	One (1) gas chiller system	503
T1054, T1044, T1034	Three (3) tanks with seal pots under nitrogen blanket system	GC-2	One (1) gas chiller system	503
T1008, T1015, T1215, T1315, T1058, T1346	Six (6) seal pots under nitrogen blanket system	GC-2	One (1) gas chiller system	503
S1043, S1053, S1253, S1033, S1005	Five (5) separators under nitrogen blanket system	GC-2	One (1) gas chiller system	503
S1004	One (1) still under nitrogen blanket system	GC-2	One (1) gas chiller system	503
S1042, S1032, S1052, S1054	Four (4) strippers under nitrogen blanket system	GC-2	One (1) gas chiller system	503
S1324	One (1) scrubber under nitrogen blanket system	GC-2	One (1) gas chiller system	503
S1088 T1070	One (1) acid defluorination column and acid concentrator	S1092	One (1) wet spray tower with a demister pad	504
S1118 T1100	One (1) acid defluorination column and acid concentrator	S1122	One (1) wet spray tower with a demister pad	504

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
E1180-1 E1180-2	Two (2) direct contact cooling tower fans	None	None	514 and 515
E1181-1 E1181-2	Two (2) indirect contact cooling tower fans	None	None	516 and 517
T3	One (1) feed acid storage tank in the PAP tank farm	None	None	590
T137 T1137	Two (2) product under flow acid storage tank in PAP tank farm	None	None	590
T67 T467 T267 T1067 T76 T106 T295 T1125 T276 T1106 T125 T1076 T95 T1095	Fourteen (14) carbon treated low alkali acid tanks in PAP tank farm	None	None	590
T556	DAB Hold Tank	None	None	590
T130 T131 T132 T1130 T1131	Five (5) product low alkali acid storage tanks in PAP tank farm	None	None	590
T134A T134B T113A	Three (3) product high alkali acid storage tanks in PAP tank farm	None	None	590
T300	One (1) Phosbrite/DAB mix tank (blending process)	None	None	590
T301	Dilution tank No. 1 (blending process)	None	None	590
T302	Dilution tank No. 2 (blending process)	None	None	590
T303	One (1) sulfuric acid/DAB storage tank (blending process)	None	None	590
T304	Dilution tank No. 3 (blending process)	None	None	590
T305 T306	Two (2) DAB CF mix tanks	None	None	590
T307	One (1) copper carbonate mix tank	None	None	590

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
T308 T309	Two (2) head tanks	None	None	590
T550	One (1) 88% Phosphoric acid storage tank	None	None	590
T552	One (1) 90 % Phosphoric acid storage tank	None	None	590
T554	Phosbrite hold tank	None	None	590
PAP No. 1 Tank Farm	Purified Acid Plant No. 1 Tank Farm Fugitives	None	None	591 (state-only requirements)
PAP Fugitives	Purified Acid Plant Fugitives	None	None	592 (state-only requirements)
PAP No. 2 Tank Farm	Purified Acid Plant No. 2 Tank Farm Fugitives	None	None	593 (state-only requirements)

7. Defluorinated Feed Phosphate (DFP) Area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
355-116-455 A&B	Two (2) pug mills	360-120-476	Limestone slurry wet scrubber	701
365-135-477	One (1) defluorination kiln	360-120-476	Limestone slurry wet scrubber	701
370-106-468	Grate Cooler	370-110-478	One (1) fabric filter	702
355-128-462	One (1) soda ash day bin	355-134-478	One (1) fabric filter	709
382-137-463	One (1) soda ash unloading	382-105-478	One (1) fabric filter	710
382-100-462	Limestone storage silo	382-103-478	One (1) fabric filter	711
355-154-463	Soda Ash Feeder	355-138-478	One (1) fabric filter	713
355-153-463	Limestone Feeder	355-138-478	One (1) fabric filter	713
355-112-473	Plenum Recycle Dust Discharge Conveyor	355-138-478	One (1) fabric filter	713
365-155-472	Plenum Dust Elevator	355-138-478	One (1) fabric filter	713
355-125-462	Plenum Dust Bin	355-138-478	One (1) fabric filter	713
355-129-462	Phosphate Rock Surge Bin	355-137-478	One (1) fabric filter	714
355-155-463	Phosphate Rock Feeder	355-138-478	One (1) fabric filter	714
355-156-433	Recycle Feeder	355-138-478	One (1) fabric filter	714
355-130-462	Recycle Bin	355-141-478	One (1) fabric filter	715
370-176-474	Product cooler discharge conveyor	370-120-478	One (1) fabric filter	717
370-155-472	Clinker surge bin elevator	370-120-478	One (1) fabric filter	717
370-177-463 370-174-463	Clinker reclaim conveyor Nos. 1 and 2	370-120-478	One (1) fabric filter	717
370-113-462	Clinker surge bin	370-120-478	One (1) fabric filter	717
370-156-472	Screening feed elevator	370-120-478	One (1) fabric filter	717
370-115-462	Clinker reclaim hopper	370-120-478	One (1) fabric filter	717
370-126-480	Clinker reclaim crusher	370-120-478	One (1) fabric filter	717
370-140-452	Clinker screen	370-120-478	One (1) fabric filter	717
370-156-472	Screen elevator	370-120-478	One (1) fabric filter	717
370-114-462	Abort surge bin	370-120-478	One (1) fabric filter	717
370-175-463	Crusher discharge conveyor	370-120-478	One (1) fabric filter	717
370-148-463	Product screen discharge conveyor	375-111-478	One (1) fabric filter	718
375-117-463	Product transfer conveyor	375-111-478	One (1) fabric filter	718
375-118-463	Product tripper conveyor	375-111-478	One (1) fabric filter	718
375-105-462	Product loadout hopper	375-111-478	One (1) fabric filter	718
375-132-472	Product loadout elevator	375-111-478	One (1) fabric filter	718
375-120-463	Product loadout conveyor	375-111-478	One (1) fabric filter	718
375-135-478	Product Shipping	375-135-478	One (1) fabric filter	754

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
365-136-484	Emergency Kiln Drive (Diesel)	None	None	755
365-160-523	Emergency Generator (Diesel)	None	None	756
370-196-478	Lab Fume Hood Exhaust	None	None	757

8. Shipping Operations

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
Ammonia Unloading	Ammonia Railroad Unloading	None	None	601, 602, and 603 (State-only requirements)
Ammonia Tanks	Ammonia Storage Tanks	None	None	604 and 605 (State-only requirements)
Sulfur Unloading	Sulfur Railroad Unloading	None	None	610, 611, 612, 613, and 614 (State-only requirements)
Railcar Wash 1	Railcar Wash Station No. 1	None	None	615 (State-only requirements)
T-052 T-055	Two (2) phosphoric acid storage tanks (shipping tank farm)	None	None	616 (state-only requirements)
453-458	One (1) superphosphoric acid aging tank (shipping tank farm)	None	None	616 (state-only requirements)
AT2	One (1) superphosphoric acid aging tank (shipping tank farm)	None	None	616 (state-only requirements)
497-4-105	One (1) superphosphoric acid and clay additive mix tank (shipping tank farm)	None	None	616 (state-only requirements)
453-115 453-412	No. 1 filter press feed tank No. 2 filter press feed tank and No. 3 filter press feed tank	None	None	616 (state-only requirements)
VSEP Tank	One (1) 5,000 gallon VSEP feed tank	None	None	616 (state-only requirements)
Black Lomag	One (1) 110,000 gallon Black Lomag tank	None	None	616 (state-only requirements)
Permeate Tank	One (1) 1,000 gallon permeate tank	None	None	616 (state-only requirements)
Concentrate Tank	One (1) 1,000 gallon concentrate tank	None	None	616 (state-only requirements)
552-003 552-005 552-050	Three (3) liquid sulfur storage tanks	None	None	616 (state-only requirements)
Railcar Wash 2	Railcar Wash Station No. 2	None	None	617 (State-only requirements)
F650	CTS - Grinder Rock Loadout	None	Enclosures	650
F651	CTS - Grinder Rock Loadout	None	Enclosures	651
F652	Rock Loadout Transfer Station	None	Enclosures	652
F653	CTS - Phosphate Rock Transfer Station	None	Enclosures	653
F654	Rock Tower Loadout facility	531-600	One (1) bagfilter	654
F655	Chute-Barge Rock Loadout	None	Enclosures	655
F656	Chute-Train Rock Loadout	None	Enclosures	656

9. Miscellaneous Sources

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description	Emission Point ID No.
214-613	Mine Pit Diesel Generator	None	None	801
326-800-484	Calcliner Building Diesel Generator	None	None	802
CP No. 1	Cooling Pond No. 1	None	None	910-913 (State-only requirements)
CP No. 2	Cooling Pond No. 2	None	None	914-921 (State-only requirements)
GYP Pond No. 1	Gypsum Stack Pond No. 1	None	None	930-931 (State-only requirements)
GYP Pond No. 2	Gypsum Stack Pond No. 2	None	None	932-944 (State-only requirements)
GYP Pond Nos. 5 and 6	Gypsum Stack Pond No. 5 and 6	None	None	945-950 (State-only requirements)
GYP Pond No. 3/4	Gypsum Stack Pond No. 3/4	None	None	951-954 (State-only requirements)
R1-R8	Reclaim Areas 1,2,3,4,5,6,7, and 8	None	None	

VI. Emission Source-by-Source Evaluation

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

2.1.1 SULFURIC ACID PRODUCTION AREA

2.1.1.A Sulfuric Acid Plants

one (1) glass fiber packed mist eliminator and a mesh pad installed on the final absorbing tower (ID No. 3-1) of one (1) double-absorption sulfuric acid plant No. 3 (ID No. S-3) {Source ID No. 101}

one (1) glass fiber packed mist eliminator containing 18 candles and an additional two-inch layer of knitted wire mesh installed on the final absorbing tower (ID No. 4-1) of one (1) double-absorption sulfuric acid plant No. 4 (ID No. S-4) {Source ID No. 102} BACT

one (1) glass fiber packed mist eliminator containing 18 candles and an additional two-inch layer of knitted wire mesh installed on the final absorbing tower (ID No. 5-1) of one (1) double-absorption sulfuric acid plant No. 5 (ID No. S-5) {Source ID No. 103} and

one (1) glass fiber packed mist eliminator containing 18 candles and an additional two-inch layer of knitted wire mesh installed on the final absorbing tower (ID No. 6-1) of one (1) double adsorption sulfuric acid plant No. 6 (ID No. S-6) {Source ID No. 104}

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	4 pounds per ton of sulfuric acid produced	2D .0524 (Subpart H)
	operating scenarios in section 2.2.A.1.a	2D .501(e) 2D .0530 (NAAQS modelling limit) BACT
nitrogen dioxide	5.8 pounds per ton of sulfuric acid produced	2D .0519
visible emissions	10 percent opacity	2D .0524 (Subpart H)
sulfuric acid mist	0.15 pounds per ton of sulfuric acid produced	2D .0524 (Subpart H)
	7.5 pounds per hour (calculated as a rolling average for five calendar years) (S-3)*	2D .0530 BACT
	7.5 pounds per hour (calculated as a rolling average for five calendar years) (S-4)**	2D .0530 BACT
TAPS	see 2.2	2D.1100

*Upon completion of modification submitted in application No. A0700071.99A

**Upon completion of modification submitted in application No. A0700071.02B

2.1.1.A.1 15A NCAC 2D. 0501(e) : COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

Emission Standard

- a. Sulfur dioxide emissions from sulfuric acid plants Nos. 3, 4, 5 and 6 shall comply with the limits found in 2.2.A.1.a.

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.1. A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

Monitoring/ Recordkeeping

- c. The Permittee shall measure sulfur dioxide emissions using a continuous emissions monitoring system (CEMS) as required in 2.1.1.A.3.g and h. To assure compliance with the facility operating requirements in 2.2.A.1.a, the Permittee shall maintain production records sufficient to demonstrate that the allowed combination of equipment was operating. Failure to maintain these records shall be deemed non-compliance with 15A NCAC 2D .0501(e). If the results of this monitoring show emissions in excess of the standards in a above, the Permittee shall be deemed in noncompliance with NCAC 2D .0501(e).

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0519 NITROGEN OXIDE EMISSIONS FROM SULFURIC ACID MANUFACTURING PLANTS

Emission Standard

- a. The emissions of nitrogen dioxide shall not exceed 5.8 pounds per ton of acid produced from any sulfuric acid manufacturing plant.

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1. A. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. The Permittee shall demonstrate compliance with the standard in 2.a by conducting a performance test on at least one of the sulfuric acid plants at least once per every five year permit cycle. The test shall be conducted in accordance with 40 CFR Part 60 Appendix A, Reference Method 7, or approved alternative method as described in 40 CFR 60.8(b). The results of the testing must be submitted to the Division within 45 days of the completion of the test. The Permittee shall be deemed in noncompliance with 2D .0519 if the test is not performed within the required time frame or if the results show an exceedance of the emission standard contained in 2.a above.

3. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART H

Emission Standard

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart H, including Subpart A "General Provisions." [15A NCAC 2D .0524] for each of the sulfuric acid plants.

Emission Limitations [15A NCAC 2D .0524]

- b. Sulfur dioxide emissions from these sources shall not exceed 4 pounds per ton of sulfuric acid produced per 3 hour block average.

- c. Sulfuric acid mist emissions from these sources shall not exceed 0.15 pounds per ton of sulfuric acid produced.
- d. Visible emissions shall not be more than 10 percent opacity when averaged over a six-minute period.

Testing [15A NCAC 2Q .0508 (f)]

- e. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.1.A.3.a to d above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
- f. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the sulfuric acid mist emission limit above by testing each sulfuric acid plant (**ID No. S-3 to S-6**) annually for sulfuric acid mist in accordance with a testing protocol approved by the DAQ. Further details about the testing are contained in section 4.f. If the results of this test are above the limit given in Section 2.1.1. A.3.c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- g. The Permittee shall measure sulfur dioxide emissions using a continuous emissions monitoring system (CEMS). The calibration and calculation methods shall be as described in 40 CFR Part 60.84 and approved by the division before use. The Permittee shall record in a logbook (written or electronic format) the results of the CEMS. The Permittee shall also record in the logbook the times of start up and shutdown of each sulfuric acid plant. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not kept.
- h. The Permittee shall maintain in a logbook (written or electronic format) production data sufficient to compute emission levels in the format of the emission limitations described above. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not kept.
- i. The Permittee shall calculate sulfur dioxide emissions in the format of the limit, as described in 40 CFR Part 60.84(b). The data will be in the form of three-hour block averages, as described in 40 CFR Part 60.84(e). If a three-hour block average during normal operation (not start-up or shut-down or malfunction) shows emissions exceeding the limit in Section 2.1.1.A.3.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
- j. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0524 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.1.A.3.d. above. If the demonstration in (b) above cannot be made during the monitoring period, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0524.
- k. The results of the visible emissions monitoring shall be maintained in a logbook (written

or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- i. the date and time of each recorded action;
- ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
- iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- l. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
 - i. any excess sulfur dioxide emission reports as measured by the continuous emission monitor (CEM), by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year of each calendar year for the preceding six-month period between January and June. If there are no excess emissions during the calendar quarter, the Permittee shall submit a statement indicating that no excess emissions occurred during the reporting period; and
 - ii. All instances of deviations from the requirements of this permit must be clearly identified.

Start-Up Procedures for Sulfuric Acid Plants [40 CFR Part 60 Subpart H]

- m. Only one sulfuric acid plant at a facility should be in start up mode and burning sulfur at a time. There are times when it will be acceptable for more than one sulfuric acid plant to be in the start-up mode at the same time, provided the following condition is met. It is not acceptable to initiate sulfur burning at one sulfuric acid plant when another plant at the same facility is emitting SO₂ at a rate in excess of the emission limits imposed by the permit or rule, as determined by the CEMs emission rates for the immediately preceding 20 minutes.
- n. A plant start-up must be at the lowest practicable operating rate, not to exceed 70 percent of the designed operating rate, until the SO₂ monitor indicates compliance. Because production rate is difficult to measure during start-up, if a more appropriate indicator (such as blower pressure, furnace temperature, gas strength, blower speed, number of sulfur guns operating, etc.) can be documented, tested, and validated, the Department will accept this in lieu of directly documenting the operating rate. Implementation requires the development of a suitable list of surrogate parameters to demonstrate and document the reduced operating rate on a plant-by-plant basis. Documentation that the plant is conducting start-up at the reduced rate is the responsibility of the owner or operator. After start-up has begun, the foreman may approve an increase in rate if he judges that will result in faster reduction of emissions.
- o. Sulfuric acid plants are authorized to emit excess emissions from start-up for a period of three consecutive hours provided best operational practices, in accordance with this agreement, to minimize emissions are followed. No plant shall be operated (with sulfur as

fuel) out of compliance for more than three consecutive hours. Thereafter, the plant shall be shut down. The plant shall be shut down (cease burning sulfur) if, as indicated by the continuous emission monitoring system, the plant is not in compliance within three hours of start-up. Restart may occur as soon as practicable following any needed repairs or adjustments, provided the corrective action is taken and properly documented. If the only reason for high emissions is low catalyst temperatures, the plant need not be shut down at the end of three hours as long as emissions have been decreasing.

p. i. Cold Start-Up Procedures

i. Converter

(A) The inlet and outlet temperature at the first two masses of catalyst shall be sufficiently high to provide immediate ignition when SO₂ enters the masses. In no event shall the inlet temperature to the first mass be less than 800oF or the outlet temperature to the first two masses be less than 700oF. These temperatures are the desired temperatures at the time the use of auxiliary fuel is terminated.

(B) The gas stream entering the converter shall contain SO₂ at a level less than normal, and sufficiently low to promote catalytic conversion to SO₃.

ii. Absorbing Towers

The concentration, temperature, and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent H₂SO₄.

ii. Warm Restart Procedures

i. Converter

The inlet and outlet temperatures of the first two catalyst masses should be sufficiently high to ensure conversion. One of the following three conditions must be met:

(A) The first two catalyst masses inlet and outlet temperatures must be at a minimum of 700 F; or

(B) Two of the four inlet and outlet temperatures must be greater than or equal to 780 F; or

(C) The inlet temperature of the first catalyst must be greater than or equal to 600oF and the outlet temperature greater than or equal to 800oF. Also, the inlet and outlet temperatures of the second catalyst must be greater than or equal to 700oF.

Failure to meet one of the above conditions, requires use of cold start-up procedures, unless the Superintendent (or Acting Superintendent) approves otherwise.

To allow for technological improvement of individual plant conditions, alternative conditions will be considered by the Department in

appropriate cases.

ii. Absorbing Towers

The concentration, temperature, and flow of circulating acid shall be as near to normal conditions as reasonably can be achieved. In no event shall the concentration be less than 96 percent H₂SO₄.

4. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD) BACT

Emission standard - BACT

a. For Sulfuric Acid Plant 3 (ID No. S-3) the following table shall describe the emission standards

Source	Pollutant	BACT Technology	Emission Limit
Sulfuric acid plant No. 3 (ID No. S-3) {Source ID No. 102}	Sulfur dioxide	dual adsorption catalyst	7600 pounds per day
Sulfuric acid plant No. 3 (ID No. S-3) {Source ID No. 102}	sulfuric acid mist/TSP/PM ₁₀	Vertical tube mist eliminator	7.5 pounds per hour (calculated as a rolling average for five calendar years)

b. For Sulfuric Acid Plant 4 (ID No. S-4) the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
Sulfuric acid plant No. 4 (ID No. S-4) {Source ID No. 102}	Sulfur dioxide	dual adsorption catalyst	7032 pounds per day
Sulfuric acid plant No. 4 (ID No. S-4) {Source ID No. 102}	sulfuric acid mist/TSP/PM ₁₀	Vertical tube mist eliminator	7.5 pounds per hour (calculated as a rolling average for five calendar years)

c. The emission standard contained in 4.a above shall only become effective upon the completion of the modification as submitted in A0700071.99A. This modification will become complete upon the replacement of the final absorbing tower. Upon completion of the modification the Permittee shall conduct a performance test to document the sulfur dioxide emissions as described in 4.f at an emission rate at least 90 percent of 7600 pounds per day limit or at a rate acceptable to the Division as described in General Condition JJ. Prior to the completion of the modification the sulfur dioxide emission limit will be 7032 pounds per day.

d. The emission standard contained in 4.b above shall only become effective upon the

completion of the modification as submitted in A0700071.02B.

Testing [15A NCAC 2Q .0508 (f)]

- e. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1.1.A.4.a and b., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.
- f. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits above by testing the sulfuric acid plants Nos. 3 and 4 (**ID Nos.S-3 and S-4**) annually for sulfuric acid mist in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Further details follow (Note: To allow a concise description of the and sulfuric acid testing requirements in one place the details below cover all four sulfuric acid plants and describe testing to document compliance with NCAC 2D .0524 (Subpart H), 2D .1100, as well as 2D .0530):
- i. If Sulfuric Acid Plants 3 or 4 conduct more than one test in a single calendar year, all tests shall be averaged to calculate the averaged value for that calendar year. In addition, the facility shall use the averaged annual test result to calculate a five year rolling average.
 - ii. The rolling average shall be calculated using calendar years. The facility shall use historical test data to begin reporting the rolling five year average emission rate requirement until five years of new data have been acquired.
 - iii. If any of Sulfuric Acid Plants 3, 4, 5, or 6 operate for any day at a production rate exceeding that listed for that plant in Section 1, then the production rate required during annual testing for that plant will be determined as follows. The plant shall be tested annually at an hourly production rate at least 90 percent of the highest daily rate, as documented by the production records over the last production year, divided by 24. If an annual test, at a sufficient production rate as described above, was conducted within two weeks of the date that the highest production rate occurred, then the annual test for that plant for the following year may use the normal production rate as described below.
 - iv. If any of Sulfuric Acid Plants 3, 4, 5 and 6 do not operate for any day at a production rate exceeding that listed for that plant in the Permitted Source List II.A.1 through 4, then the production rate required during annual testing for that plant will be determined as follows. The plant shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source.
 - v. The normal production rate (hourly) shall be calculated by dividing the total annual production for a given plant by the number of hours that plant was run during that year. The production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the production rate, either 90 percent of highest or normal, using the production records over the last production year. A copy of the production records must accompany the request

If the results of this test are above the limits given in Sections 2.1.1.A.4.a or b.above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- g. The Permittee shall maintain in a logbook (written or electronic format) production data sufficient to document the calculation of the normal production rate and the daily production rates for determining the appropriate production rates at which to conduct the testing described above. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.
- h. The Permittee shall measure sulfur dioxide emissions using a continuous emissions monitoring system (CEMS) as required in 2.1.1.A.3.g and h. If the results of this monitoring show emissions in excess of the standards in a and b above, the Permittee shall be deemed in noncompliance with NCAC 2D .0530.

Reporting [15A NCAC 2Q .0508 (f)]

- i. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified

STATE-ONLY REQUIREMENT:

5. **TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT** - Pursuant to 15A NCAC 2D .1100, in accordance with the approved application for an air toxic compliance demonstration and in addition to other limits described in Section 2.2.A.3 the following permit limits shall not be exceeded:

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)
Sulfuric acid Plant No. 3 (ID No. S-3)	Sulfuric acid mist	10.00 pounds per hour
Sulfuric acid Plant No. 4 (ID No. S-4)	Sulfuric acid mist	9.25 pounds per hour
Sulfuric acid Plant No. 5 (ID No. S-5)	Sulfuric acid mist	17.00 pounds per hour
Sulfuric acid Plant No. 6 (ID No. S-6)	Sulfuric acid mist	18.00 pounds per hour

[15A NCAC 2Q .0501 (c)(4)]

- a. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.1. A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1100.
- b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing each sulfuric acid plant (**ID Nos. S-3 to S-6**) annually for sulfuric acid mist in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Further testing details can be found in 4.f. If the results of this test are above the limit given in Section 2.1.1. A. 5 above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1110.

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- c. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.1.B. Auxillary Boilers

No. 2 fuel oil-fired boiler { ID No. BW-2} and No. 2 fuel oil-fired boiler {ID No. BW-1},

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Boiler (Source ID No. 110 new) 0.268 lb./million Btu Boiler (Source ID No. 111) 0.265 lb./million Btu	2D .0503
visible emissions	20 percent opacity	2D .0521** 2D .0524(Subpart Dc)*
sulfur dioxide	2.3 pounds per million Btu heat input	2D .0516
	fuel oil sulfur content limit of 0.5 percent*	2D .0524 (Subpart Dc)
	fuel oil sulfur content limit of 0.3 percent*	2Q .0317(a)(1)
	40 tons per year*	2Q .0317(a)(1)
	166.60 tons per year (rolling twelve-month total)**	2Q .0317(a)(1) [PSD Net out Limit]
	913 pounds per day**	2D .0401 [PSD modeling]
sulfuric acid mist	6.45 tons per year (rolling twelve-month total)**	2Q .0317(a)(1) [PSD Net out Limit]
TAPS	see 2.2	2D.1100

*Boiler (ID No. 110 new) only

**Boiler (ID No. 111) only

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

Emission Standard

- a. Emissions of particulate matter from the combustion of No. 2 fuel oil, that are discharged from this source into the atmosphere shall not exceed the following emission limits per million Btu heat input. [15A NCAC 2D .0503(a)]:

Source	Emission Limit(s)
Boiler (Source ID No. 110 new)	0.268 lb./million Btu
Boiler (Source ID No. 111)	0.265 lb./million Btu

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the

limit given in Section 2.1.1.B.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of No. 2 fuel oil in this source.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

Emission Standard

- a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.B.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c.. No monitoring/recordkeeping is required for sulfur dioxide emissions from No. 2 fuel oil for this source.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.B.4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas/propane/No. 2 fuel oil in this source.

4. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Dc

Emission Standard

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions." [15A NCAC 2D .0524]forthe boiler ID No. 110 new.

Emission Limitations [15A NCAC 2D .0524]

- b. The maximum sulfur content of any fuel oil received and burned in the boiler shall not exceed 0.5 percent by weight.
- c. Visible emissions from this source shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.

Testing [15A NCAC 2D .0501(c)(4)]

- d. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.B.4.1.b or c above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516

Monitoring [15A NCAC 2Q .0508(f)]

- e. Sulfur dioxide emissions shall be monitored using fuel supplier certification to demonstrate compliance as described under 40 CFR § 60.46c(e) for distillate oil.

Recordkeeping [15A NCAC 2Q .0508(f)]

- f. In addition to any other recordkeeping required by 40 CFR § 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of fuel fired during each month.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- g. In addition to any other reporting required by 40 CFR § 60.48c or notification requirements to the EPA, the Permittee is required to **NOTIFY** the DAQ in **writing** of the following:
 - i. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following fuel supplier information;
 - (A) the name of the oil supplier
 - (B) a statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c; and
 - (C) a certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semi annual period.
 - ii. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of 15A NCAC 2D .0530(g), the boiler (ID No. BW-2) shall discharge into the atmosphere less than 40 tons of sulfur dioxide per consecutive 12-month period.. [15A NCAC 2Q .0317(a)(1)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the

limit given in Section 2.1.1.B.5.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall maintain an emissions log (written or electronic form) which demonstrates that actual annual (12-month) emissions of sulfur dioxide from the above source are less than 40 tons. The following data will be measured recorded, and calculations performed to obtain actual sulfur dioxide emissions. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur dioxide emissions exceed the above limit. The log must be made available to and an authorized representative upon request.
- To assure compliance, the Permittee shall monitor the sulfur content of the fuel oil by using fuel oil supplier certification of an agglomerated sample of each shipment received per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
- i. the name of the fuel oil supplier;
 - ii. the maximum sulfur content of the fuel oil received during the quarter;
 - iii. the method used to determine the maximum sulfur content of the fuel oil; and
 - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.
- i. To ensure federal enforceability of this limit, the following restrictions shall apply:

(A) the amount of fuel oil used shall be less than 1,870,000 gallons per consecutive 12-month period; and

(B) the sulfur content of the fuel oil shall be limited to 0.3 percent by weight.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:
- i. the monthly sulfur dioxide emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months. The emissions shall be calculated as follows:

$$X = Z \times \frac{157 \text{ lbs sulfur dioxide}}{1000 \text{ gallon fuel oil}} \times S$$

Where: X is the total actual emissions of sulfur dioxide in pounds
Z is the amount of fuel oil used in the boilers in gallons
S is the percent sulfur in the fuel oil

- ii. the monthly fuel use for the previous 14 months.
- iii. All instances of deviations from the requirements of this permit must be clearly identified

6. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION BY NETTING

- a. In order to avoid applicability of 15A NCAC 2D .0530(g) by netting out with an emissions reduction, the boiler (ID No. BW-1) shall discharge into the atmosphere less than 166.60 tons of sulfur dioxide per consecutive 12-month period, less than 913 pounds per day of sulfur dioxide, and less than 6.45 tons of sulfuric acid mist per consecutive 12-month period. [15A NCAC 2Q .0317(a)(1)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.B.6.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2Q .0317.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall maintain an emissions log (written or electronic form) which demonstrates that actual emissions of sulfur dioxide and sulfuric acid mist from the above source are less than the above limits. The following data will be measured recorded, and calculations performed to obtain actual emissions. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur dioxide emissions exceed the above limit. The log must be made available to and an authorized representative upon request.

- i. To ensure federal enforceability of this limit, the following restrictions shall apply:

- (A) the amount of fuel oil used shall be less than 7,821,428 gallons per consecutive 12-month period; and

- (B) the sulfur content of the fuel oil shall be limited to 0.3 percent by weight.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:

- i. the monthly sulfur dioxide emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months. The emissions shall be calculated as follows:

Where: X is the total actual emissions of sulfur dioxide in pounds

$$X = Z \times \frac{157 \text{ lbs sulfur dioxide}}{1000 \text{ gallon fuel oil}} \times S$$

Z is the amount of fuel oil used in the boilers in gallons
 S is the percent sulfur in the fuel oil

- ii. the monthly sulfuric acid mist emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
- iii. the monthly fuel use for the previous 14 months.
- iv. All instances of deviations from the requirements of this permit must be clearly identified

2.1.1.C. Lime Storage Silos

three (3) bagfilters (ID Nos. 417-503-471, 417-755-471 and 417-756-471) installed one each on three (3) lime silos Nos. 4, 5, and 6 (water treatment area) {Source ID Nos. 121, 122, and 123}

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour and P = process weight in tons per hour	2D .0515
Visible emissions	20 percent opacity	2D .0521
TAPS	see 2.2	2D.1100

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the lime silos shall be controlled by the bagfilters. To assure

compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

- i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
- ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the lime siloss shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.C.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. The requirements for 2D .0515 shall be sufficient to meet the requirements of 2D .0521.

2.1.2. MILL AREA

2.1.2.A Calciners

Four (4) duplex cyclones exhausting two each to two (2) fixed throat venturi type wet scrubbers (430 gallons per minute minimum permitted liquid injection rate per unit when wet electrostatic precipitator is

not in operation) exhausting one each to of two modules of one (1) wet electrostatic precipitator (ID Nos. 339-381-476A and 339-381-476B) installed on two (2) coal/ coke/ "off-spec" used oils/ "off-spec" used oil sludge/ used glycols/ No. 6 fuel oil-fired vertical fluidized bed, phosphate rock calcining units Nos. 1 and 2 (54.833 million Btu per hour maximum permitted heat inpu each) {Source ID Nos. 201 and 202}

Four (4) duplex cyclones exhausting two each to two (2) fixed throat venturi type wet scrubbers (430 gallons per minute minimum permitted liquid injection rate per unit when wet elctrostatic precipitator is not in operation) exhausting to one (1) wet electrostatic precipitator installed on two (2) coal/ coke/ "off-spec" used oils/ "off-spec" used oil sludge/ used glycols/ No. 6 fuel oil-fired vertical fluidized bed, phosphate rock calcining units Nos. 3 and 4 (54.833 million Btu per hour maximum permitted heat inpu each) {Source ID Nos. 203 and 204}

two (2) duplex cyclones exhausting to a variable throat venturi type wet scrubber (250 gallons per minute minimum permitted liquid injection rate per unit) installed on a coal/ coke/ "off-spec" used oils/ "off-spec" used oil sludge/ used glycols/ No. 6 fuel oil-fired vertical fluidized bed, phosphate rock calcining unit No. 5 (54.833 million Btu per hour maximum permitted heat input each) {Source ID No. 205}

two (2) duplex cyclones exhausting to one (1) fixed throat venturi type wet scrubber (430 gallons per minute minimum permitted liquid injection rate per unit) installed on one (1) coal/ coke/ "off-spec" used oils/ "off-spec" used oil sludge/ used glycols/ No. 6 fuel oil-fired vertical fluidized bed, phosphate rock calcining unit No. 6 (54.833 million Btu per hour maximum permitted heat input each) {Source ID No. 206}

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10 MACT	0.08 grains/dscf	40 CFR 63 Subpart AA
	$E=55 \times P^{0.11}$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	2D .0515
	1992 pounds per day total from all calciners	2D .0501(e)
sulfur dioxide	0.75 pounds per million Btu	2D .0501(e)
	1026 pounds per day	2D .0501(e)
visible emissions	40 percent opacity (calciners 1, 2, 3, and 4)	2D .0521
	20 percent opacity (calciners 5 and 6)	2D .0521
TAPS	see 2.2	2D.1100

1. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of the six calciners (ID Nos. 201 to 206) shall be limited as follows: [15A NCAC 2D .0501(e)]
 - i. All calciners considered together shall be limited to 1992 pounds per day of PM10 emissions total.
 - ii. Each calciner shall be limited to 0.75 pounds of sulfur dioxide emissions per million Btu

- consumed.
- iii. All calciners considered together shall be limited to 1026 pounds per day of sulfur dioxide emissions.

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall determine the allowable ranges of baseline average values for the pressure drop, liquid injection rate and WESP as described below by annually testing the calciners (**ID Nos. 201 through 206**) for PM/ PM-10 in accordance with a testing protocol approved by the DAQ. The Permittee shall also use this testing to demonstrate compliance with the PM-10 emission limit above (1.a.i). Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The calciners shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for each calciner by the number of hours that calciner was run during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the limit given in Section 2.1 A. 1. a.i above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.
- d. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the daily sulfur dioxide emission limit above (1.a.iii) by testing one calciner (**ID Nos. 201 through 206**) annually for sulfur dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The selected calciner shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the selected calciner by the number of hours that calciner was run during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the limit given in Section 2.1 A. 1. a.ii and iii above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- e. To assure compliance with 1.a.ii above, the Permittee shall monitor the sulfur and heat content of all the coal or coke burned during the period by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
 - i. the name of the coal/coke supplier; and
 - ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
 - (A) sampling - ASTM Method D 2234;
 - (B) preparation - ASTM Method D 2013;
 - (C) gross calorific value (Btu) - ASTM Method D 5865;
 - (D) moisture content - ASTM Method D 3173; and
 - (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .001(e) if the sulfur and heat content of the coal is not monitored and recorded.

- f. To assure compliance with 1.a.ii above, the Permittee shall monitor the sulfur and heat content of all liquid fuels burned during the period by using fuel supplier certification. The results of the fuel supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
- i. the name of the fuel supplier;
 - ii. the maximum sulfur content of the fuel received during the quarter;
 - iii. the method used to determine the maximum sulfur content of the fuel oil;
 - iv. the minimum heat content of the fuel received during the quarter;
 - v. the method used to determine the minimum heat content of the fuel; and
 - vi. a certified statement signed by the responsible official that the records of fuel supplier certifications submitted represent all of the liquid fuel fired during the period in the calciners.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if the sulfur and heat content of the fuel is not monitored and recorded.

- g. The Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of coal, coke or liquid fuel shipment received per total shipment. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these records are not kept or if the results show an exceedance of the limit given in 1.a.ii above.

- h. The permittee shall ensure compliance with the PM/PM10 emission limits stated above by monitoring the following operational parameters:
- i. Pressure drop across the venturi scrubbers (ID Nos., 339-386c and 339-385c),
 - ii. Liquid injection rate of the venturi scrubbers (ID Nos. 339-386c and 339-385c),
 - iii. Mass flowrate of phosphorus-bearing feed material to the process,
 - iv. Wet electrostatic precipitators secondary current, secondary voltage and spark rate.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if these records are not kept.

- i. The Permittee shall record in a logbook (written or electronic format) the following:
- i. the pressure drop and flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages.
 - ii. the pressure drop and flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 24-hour (midnight to midnight) block averages.
 - iii. a daily record of phosphate rock feed by determining the total mass rate in short ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate.
 - iv. Wet electrostatic precipitators secondary current, secondary voltage and spark rate.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if these records are not kept or if any exceedances of the limits in Section 2. 1(a) are determined.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall follow the requirements specified in conditions 2.1.2.A.1.a.
- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR

POLLUTANTS FROM PHOSPHORIC ACID MANUFACTURING PLANTS

15a NCAC 2D .1111: Maximum Achievable Control Technology

Emission Standard

- a. Operation of the six calciners shall be limited as follows: [63.602 (d)]
 - i. No calciner (**ID Nos. 201 through 206**) shall discharge into the atmosphere gases which contain particulate matter in excess of 0.080 grains per dry standard cubic foot (gr/dscf).

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.B.2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall determine the allowable ranges of baseline average values for the pressure drop, liquid injection rate and WESP as described below by annually testing the calciners (**ID Nos. 201 through 206**) for PM/ PM-10 in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The calciners shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for each calciner by the number of hours that calciner was run during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the limit given in Section 2.1 A. 1. a.i above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The permittee shall ensure compliance with the PM/PM10 emission limits stated above by monitoring the following operational parameters:
 - i. Pressure drop across the venturi scrubbers (ID Nos. 339-381c, 339-0382c, 339-383c, 339-384c, 339-386c, and 339-385c),
 - ii. Liquid injection rate of the venturi scrubbers (ID Nos. 339-381c, 339-0382c, 339-383c, 339-384c, 339-386c, and 339-385c),
 - iii. Mass flowrate of phosphorus-bearing feed material to the process, and
 - iv. Wet electrostatic precipitators secondary current, secondary voltage and spark rate.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not kept.
- d. The Permittee shall record in a logbook (written or electronic format) the following:
 - i. the pressure drop and flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages.
 - ii. the pressure drop and flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 24-hour (midnight to midnight) block averages.
 - iii. a daily record of phosphate rock feed by determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate.
 - iv. dates, start and end times for all start-ups, shutdowns, and malfunctions.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not kept.

The Permittee has chosen to determine the allowed ranges for the above operating parameters by the method described in 40 CFR 63.605(d)(2). The Permittee has submitted the results of previous

tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

- i.
- ii.

Should the results of any subsequent annual performance test demonstrate that the allowed range is incorrect, the Permittee shall submit those new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- e. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:
 - i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
 - ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
 - iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
 - iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

3.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the quantity of dry phosphate rock processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained.
- d. Particulate matter emissions from the calciners (**ID Nos. 201 through 206**) shall be controlled by the scrubbers and WESPs as installed. To assure compliance, the Permittee shall monitor and record the pressure drops across the scrubbers, liquid flowrates to the scrubbers, and WESP parameters as described in sections 2.c and 2.d above. The permittee shall also perform inspections and maintenance as recommended by the manufacturer.
- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit the results of any maintenance performed on the control devices within 30 days of a written request by the DAQ.
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the calciners nos. 5 and 6 (**ID Nos 205 and 206**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]
- b. Visible emissions from the calciners nos.1, 2, 3, and4 (**ID Nos 201 through 204**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .0501(c)(8)]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section

2.1 A. 4.a. or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- d. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 A.3. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

2.1.2.B. Rock Dryer

one (1) duplex cyclone and one (1) venturi type wet scrubber (873 gallons per minute minimum permitted liquid injection rate) installed on one (1) No. 6 fuel oil-fired phosphate rock dryer (93 million Btu per hour maximum permitted heat input, 250 tons per hour and 4,800 tons per day maximum permitted dry rock production rates) {Source ID No. 210}

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10 MACT	0.215 pounds per ton of phosphete rock dried.	40 CFR 63 Subpart AA
	$E=55 \times P^{0.11}$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	2D .0515
sulfur dioxide	2.3 pounds per million Btu	2D .0516
	1228 pounds per day	2D .0501(e)
visible emissions	40 percent opacity	2D .0521
TAPS	see 2.2	2D.1100

1. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of the rock dryer shall be limited as follows, the rock dryer (**ID No. 210**) shall be limited to 1228 pounds per day (midnight to midnight) of sulfur dioxide emissions [15A NCAC 2D .0501(e)].

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The permittee shall ensure compliance with the emission limit stated above by monitoring the fuel use in the rock dryer on a daily basis. The permittee shall also monitor the sulfur content of

the fuel oil as described in 4.e below.

- d. The Permittee shall demonstrate compliance with the emission limit above as follows:
The use of fuel oil in the rock dryer shall be limited such that sulfur dioxide emissions shall not exceed 1228 pounds per day (midnight to midnight). Calculations shall be made daily and recorded in a logbook (written or in electronic format), according to the following formula:

$$X \cdot Z \times \frac{157 \text{ lbs sulfur dioxide}}{1000 \text{ gallon fuel oil}} \times S$$

Where: X is the total actual emissions of sulfur dioxide in pounds
Z is the amount of No. 6 fuel oil used in the boilers in gallons
S is the percent sulfur in the No. 6 fuel oil

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if the sulfur dioxide emissions exceed the above limit.

- d. The Permittee shall record in a logbook (written or electronic format) the following:
- i. the fuel oil used per day (midnight to midnight)
 - ii. the sulfur content of the fuel oil used.
 - iii. a daily record of the calculated sulfur dioxide emissions for that day (midnight to midnight).
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if these records are not kept .

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall follow the requirements specified in condition 2.1(B)(2)(e).
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified

2. 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC ACID MANUFACTURING PLANTS 15a NCAC 2D .1111:

Maximum Achievable Control Technology

Emission Standard

Operation of the rock dryer shall be limited as follows: [63.602 (d)]

- i. The rock dryer (**ID No. 210**) shall not discharge into the atmosphere gases which contain particulate matter in excess of 0.215 pounds per ton of phosphete rock dried.

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501. _____
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall determine

the allowable ranges of baseline average values for the pressure drop and liquid injection rate for the scrubber as described below by annually testing the rock dryer (**ID No. 210**) for PM/ PM-10 in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The rock dryer shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for rock dryer by the number of hours that it was run during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the limit given in Section 2.1 A. 1. a.i above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The permittee shall ensure compliance with the PM/PM10 emission limits stated above by monitoring the following operational parameters:
 - i. Pressure drop across the venturi scrubber,
 - ii. Liquid injection rate of the venturi scrubber, and
 - iii. Mass flowrate of phosphorus-bearing output material from the process.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1110 if these records are not kept.

- d. The Permittee shall record in a logbook (written or electronic format) the following:
 - i. the pressure drop and flow rate of the scrubbing liquid to the scrubber in 15-minute block averages.
 - ii. the pressure drop and flow rate of the scrubbing liquid to the scrubber in 24-hour (midnight to midnight) block averages.
 - iii. a daily record of phosphate rock output by determining the total mass rate in short ton/hour of phosphorus bearing output using a monitoring system for measuring mass flowrate.
 - iv. dates, start and end times for all start-ups, shutdowns, and malfunctions.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these records are not kept.
The Permittee has chosen to determine the allowed ranges for the above operating parameters by the method described in 40 CFR 63.605(d)(2). The Permittee has submitted the results of previous tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

- i.
- ii.

Should the results of any subsequent annual performance test demonstrate that the allowed range is incorrect, the Permittee shall submit those new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- e. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:

- i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
- ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
- iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
- iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

3.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES
Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the quantity of dry phosphate rock processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained.
- d. Particulate matter emissions from the rock dryer (**ID No. 210**) shall be controlled by the scrubbers and cyclone as installed. To assure compliance, the Permittee shall monitor and record the pressure drops across the scrubbers and the liquid flowrates to the scrubbers, as described in sections 2.c and 2.d above. The permittee shall also perform inspections and maintenance as recommended by the manufacturer. As a minimum, the inspection and maintenance program shall include an annual external inspection of the ductwork and cyclone, noting the structural integrity;

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the control devices within 30 days of a written request by the DAQ.
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The maximum sulfur content of any No. 6 fuel oil received and burned in the boiler shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit.
- e. To assure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - i. the name of the fuel oil supplier;
 - ii. the maximum sulfur content of the fuel oil received during the quarter;
 - iii. the method used to determine the maximum sulfur content of the fuel oil; and
 - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired during the period.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January

and June. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the rock dryer (**ID No. 210**) shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 4.a. or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 A.3. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

2.1.2.C PULVERIZER AND DRYER SYSTEM

two (2) parallel bagfilters (ID Nos. 341-331 and 341-332) installed on one (1) single cyclone (ID No. 341-310) installed on one coal/coke pulverizer and thermal dryer system (ID No. 341-300) (Emission Point ID No. 215)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	0.031 grains per dry standard cubic foot (dscf)	NCAC 2D .0524 (40 CFR 60 Subpart Y)
Visible Emissions	20 percent opacity	NCAC 2D .0524 (40 CFR 60 Subpart Y)
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

1. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Y

Emission Standard

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Y, including Subpart A "General Provisions." [15A NCAC 2D .0524] for the coal processing system.

Emission Limitations [15A NCAC 2D .0524]

- b. Thermal gases discharged into the atmosphere shall not contain more than 0.031 grains per dscf of particulate matter.
- c. Visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period.

Testing [15A NCAC 2Q .0501 (c)(4)]

- d. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)][40 CFR 60.253(a)]

- e. The Permittee shall measure the temperature of the gas stream at the exit of the thermal dryer on a continuous basis (CMS). The calibration and calculation methods shall be as described in 40 CFR Part 60.253 and approved by the division before use. The Permittee shall record in a logbook (written or electronic format) the results of the CEMS. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not kept.
- f. Particulate matter emissions from the coal processing system (**ID No. 341-300**) shall be controlled by 1 cyclone and 2 bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer, if any. As a minimum, the inspection and maintenance program shall include:
 - i. monthly external inspection of the ductwork, cyclones, and bagfilters noting the structural integrity; and
 - ii. annual (for each 12 month period following the initial inspection) internal inspection of the bagfilters noting the structural integrity and the condition of the filters.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the ductwork, cyclones and bagfilters and are not inspected and maintained.

Reporting [15A NCAC 2Q .0508(f)]

- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:

2.1.2.D RAILCAR HANDLING

Coal/Coke Railcar Unloader, Three Parallel Conveyor Belts, Two Single Conveyor Belts, Coal/Coke Crusher, and Two Coal/Coke Storage Silos

Emission Source ID Nos. 341-100, 341-110, 341-111, 341-112, 341-120, 341-140, 341-130, 341-200, 341-201, 341-230 (Emission Point ID Nos. 294 (a-f))

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
----------------------------	-------------------------	------------------------------

PM/PM10	$E=55 \times P^{0.11}$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
Visible Emissions	20 percent opacity	NCAC 2D .0524 (40 CFR 60 Subpart Y)
Toxic Air Pollutants	See Section 2.2 -Multiple Source	NCAC 2D .1100

1. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Y

Emission Standard

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Y, including Subpart A "General Provisions." [15A NCAC 2D .0524] for the coal handling and crushing systems.

Emission Limitations [15A NCAC 2D .0524]

- b. Visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period.

Testing [15A NCAC 2Q .0501 (c)(4)]

- c. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.D.1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)][40 CFR 60.253(a)]

- e. The Permittee shall control visible emissions from all of the sources above by wet suppression systems. The suppression systems shall not be required to operate when the coal/coke is intrinsically sufficiently moist to limit visible emissions to less than the above limit. In addition, all hood covers, conveyor belt skirts, and transfer points shall be maintained and operated in a manner to avoid visible emissions.
- f. The permittee shall perform maintenance as required, but in no case less frequently than an annual inspection of all suppression equipment (including hood covers and belt skirts. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if this

maintenance is not performed.

- g. The results of inspection and maintenance for the suppression equipment shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of maintenance performed on any control device.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

2.1.2.E TRANSFER POINTS

Calcined Rock Transfer Point - Emission Source ID Belt 39 to 70.1 (Emission Point ID No. 220)

Calcined Rock Transfer Point - Emission Source ID 223 (Emission Point ID No. 223)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	$E=55 \times P^{0.11} -40$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	2D .0515
Visible Emissions	40 percent opacity	NCAC 2D .0521
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

1.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=55 \times P^{0.11} -40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process

weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.E.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The permittee shall perform maintenance as required, but in no case less frequently than an annual inspection of all suppression equipment (including hood covers and belt skirts). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if this maintenance is not performed.
- d. The results of inspection and maintenance for the suppression equipment shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of maintenance performed on any control device.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)][40 CFR 60.253(a)]

- c. The permittee shall perform maintenance as required, but in no case less frequently than an annual inspection of all suppression equipment (including hood covers and belt skirts). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if

this maintenance is not performed.

- d. The results of inspection and maintenance for the suppression equipment shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of maintenance performed on any control device.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

2.1.2.F FABRIC FILTER CONTROLLED TRANSFER POINTS

one fabric filter (ID No. 339-680) installed on one Calcined Rock CTS Baghouse Point - Emission Source ID Belt 55 to 70.1 (Emission Point ID No. 221)
 one fabric filter (ID No. 333-180) installed on one Calcined rock Transfer Point - Emission Source ID Belt 21 to 23 or 24, or one fabric filter (ID No. 331-190) installed on one Calcined rock Transfer Point - Emission Source ID Belt 22 to 23 or 24 (Emission Point ID No. 222)
 Calcined Rock Transfer Point - Emission Source ID 223 (Emission Point ID No. 222)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	$E=55 \times P^{0.11} -40$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	2D .0515
Visible Emissions	20 percent opacity	NCAC 2D .0521
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

1.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=55 \times P^{0.11} -40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.F.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the quantity of dry phosphate rock processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained.
- d. Particulate matter emissions from the conveyor belt drop point shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)][40 CFR 60.253(a)]

- c. The permittee shall perform maintenance as required, but in no case less frequently than an annual inspection of all suppression equipment (including hood covers and belt skirts). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if this maintenance is not performed.
- d. The results of inspection and maintenance for the suppression equipment shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of maintenance performed on any control device.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

2.1.2.G STORAGE AREAS

One fabric filter (ID No. 320-215-478, nominal 1200 square feet of surface area) installed on one Polymer Storage bin – Emission Source ID 224 (Emission Point ID No. 224)
 One fabric filter (ID No. 315-300-478, nominal 3000 square feet of surface area) installed on one Lime Storage Silo – Emission Source ID 225 (Emission Point ID No. 225)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	$E=55 \times P^{0.11} -40$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	2D .0515
Visible Emissions	40 percent opacity	NCAC 2D .0521

Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100
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1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=55 \times P^{0.11} -40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 .2.G.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the silos shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.

- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)][40 CFR 60.253(a)]

- c. The permittee shall perform maintenance as required, but in no case less frequently than an annual inspection of all suppression equipment. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if this maintenance is not performed.
- d. The results of inspection and maintenance for the suppression equipment shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection; and
 - iii. the results of maintenance performed on any control device.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained

2.1.3 FERTILIZER PRODUCTION AREA

2.1.3.A Diammonium Phosphate Plant No. 1 - Emission Source ID Nos. 504-107, 504-016, 504-009, 504-001, 504-058, 504-059, 504-060, 504-061, 504-043, 504-042, 504-002, 504-016, 504-009, 504-030, 504-032, 504-030, 504-032, 504-016, 504-019 (Emission Point ID No. 301)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
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PM/PM10	152.25 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
	$E=9.377 \times P^{0.3067}$ where E = allowable emission rate in pounds per hour and P = production and recycle rate of fertilizer	2D .0507
sulfur dioxide	240 pounds per day	2D .0501(e)
	138.30 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
	2.3 pounds per million Btu	2D .0516
visible emissions	40 percent opacity	2D .0521
Total Fluorides	0.060 pounds per ton of equivalent P ₂ O ₅ feed DAP or MAP production	40 CFR 63 Subpart BB
	14.09 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
TAPS	see 2.2	2D.1100

2.1.3.A.1.. 40 CFR PART 63 SUBPART BB: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC FERTILIZER PRODUCTION PLANTS 15a NCAC 2D .1111: Maximum Achievable Control Technology - Emission Standard

- a. The Permittee shall not cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 30 grams/metric ton equivalent P₂O₅ feed (0.060 pounds/ton): [63.622 (a)]

Testing [15A NCAC 2Q .0501 (c)(4)]
- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501._____
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for the diammonium phosphate process line in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The fertilizer plant (Emission Point ID No. 301) shall be tested annually at a rate demonstrable by production records to be equal to

or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

- d. If the Permittee produces monoammonium phosphate in this fertilizer plant (Emission Point ID No. 301) during the life of this permit, then the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for that monoammonium phosphate process line in accordance with 40 CFR 63.626 while producing monoammonium phosphate. The test must be performed before the expiration date of this permit. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- e. The permittee shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ± 5 percent over its operating range. The results of the monitoring shall be recorded in a log (electronic or written form). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if this monitoring system is not maintained, calibrated, operated, and the results recorded.
- f. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in short ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (c) of this section and then by proceeding according to §40 CFR 63.626(c)(3).
- g. The permittee shall install, calibrate, maintain, and operate the following monitoring systems installed on the wet scrubbing emission control system:
 - i. A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.
 - ii. A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5

percent over its operating range.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded.

- h. The Permittee has chosen to determine the allowed ranges for the above operating parameters by the method described in 40 CFR 63.625(f)(2). The Permittee has submitted the results of previous tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

- i.

- ii.

- Should the results of any subsequent annual performance test demonstrate that the allowed range is incorrect, the Permittee shall submit those new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- i. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:

- i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
 - ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
 - iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
 - iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

Start-up, Shutdown, and Malfunction Procedures

- j. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

2. 15A NCAC 2D .0507: PARTICULATES FROM CHEMICAL FERTILIZER MANUFACTURING PLANTS

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0507]

$$E = 9.377 \times P^{0.3067} \quad \text{Where } E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour}$$

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0507.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. The monitoring, recordkeeping, and reporting requirements for demonstrating compliance given in section 2.1.3.A.1. above are deemed sufficient to demonstrate compliance with 2D .0507.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The maximum sulfur content of any fuel oil received and burned in the dryer shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit.
- e. To assure compliance, the Permittee shall monitor the sulfur content of the fuel oil by using fuel oil supplier certification per shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - i. the name of the fuel oil supplier;
 - ii. the maximum sulfur content of the fuel oil received during the quarter;
 - iii. the method used to determine the maximum sulfur content of the fuel oil; and
 - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the any emission point shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 4.a. or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 A.3. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

5. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of the dryer shall be limited as follows, the dryer (**ID No. 504-016**) shall be limited to 240 pounds per day (midnight to midnight) of sulfur dioxide emissions [15A NCAC 2D .0501(e)].

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The permittee shall ensure compliance with the emission limit stated above by monitoring the fuel use in the dryer on a daily basis. The permittee shall also monitor the sulfur content of the fuel oil as described in 3.e above.
- d. The Permittee shall demonstrate compliance with the emission limit above as follows: The use of fuel oil in the dryer shall be limited such that sulfur dioxide emissions shall not exceed 240 pounds per day (midnight to midnight). Calculations shall be made daily and recorded in a logbook (written or in electronic format), according to the following formula:

$$X \cdot Z \times \frac{157 \text{ lbs sulfur dioxide}}{1000 \text{ gallon fuel oil}} \times S$$

Where: X is the total actual emissions of sulfur dioxide in pounds
Z is the amount of fuel oil used in the boilers in gallons
S is the percent sulfur in the fuel oil

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if the sulfur dioxide emissions exceed the above limit.

- e. The Permittee shall record in a logbook (written or electronic format) the following:

- i. the fuel oil used per day (midnight to midnight)
- ii. the sulfur content of the fuel oil used.
- iii. a daily record of the calculated sulfur dioxide emissions for that day (midnight to midnight).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if these records are not kept .

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall follow the requirements specified in condition 2.12.1.3.A.3.e.
- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
 - i. The monthly sulfur dioxide and particulate matter emissions for the previous 14 months. The emissions must be calculated for each of the 12-month periods over the previous 14 months;
 - ii. The monthly quantities No. 6 fuel oil consumed for the previous 14 months; and
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

6. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION BY NETTING

- a. In order to avoid applicability of 15A NCAC 2D .0530(g) by netting out with an emissions reduction, the Diammonium Phosphate Plant No. 1 (Emission Point ID No. 301) shall discharge into the atmosphere less than:
 - i. 152.25 tons of particulate matter per year
 - ii. 138.30 tons per year of sulfur dioxide and
 - iii. 14.09 tons per year of total fluorides [15A NCAC 2Q .0317(a)(1)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 3.A. 6. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Monitoring/Recordkeeping/Calculations [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.3.A.1.d above) along with the emission factors detailed below to demonstrate compliance with emission limits in 2.1.3.A.6.a above. To insure that the yearly emission limits are not exceeded, the yearly production shall be limited to 201,875 tons P₂O₅ inut per year. If the production rate is above this limit for any consecutive 12 month period, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.
- d. In accordance with the PSD applicability analysis (letter dated November 19, 1996, received November 21, 1996) and as requested by the Permittee, the following

calculation method shall be used to determine the actual emissions on a monthly basis ("tons P₂O₅ input" refers to total P₂O₅ input, in tons, for all products during a given month):

<u>Pollutant</u>	<u>Formula</u>
SO ₂ ¹ , tons/month	= 10 ³ gal #6 Fuel Oil/month X 157(S) lb SO ₂ /10 ³ gal X 1 ton/2,000 lb. where S = fuel sulfur content, expressed as a percentage
PM ₁₀ , tons/month	= tons P ₂ O ₅ input/month X 1.508 lbs. PM ₁₀ /ton P ₂ O ₅ input X 1 ton/2,000 lb
F, tons/month	= tons P ₂ O ₅ input/month X 0.140 lbs. F/ton P ₂ O ₅ input X 1 ton/2,000 lb.

If the results of these calculations are above the limit given in Section 2.1 3.A. 6. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:
 - i. the monthly sulfur dioxide emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
 - ii. the monthly particulate matter emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
 - iii. the monthly total fluoride emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months
 - iv. the monthly P₂O₅ input for the previous 14 months.
 - v. All instances of deviations from the requirements of this permit must be clearly identified.

¹ Emission factor from AP-42 (US EPA, "Compilation of Air Pollutant Emission Factors," Section 1.3 "Fuel Oil Combustion," Table 1.3-2 "Criteria Pollutant Emission Factors for Uncontrolled Fuel Oil Combustion," January 1995).

STATE-ONLY REQUIREMENT:

7. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT

- Pursuant to 15A NCAC 2D .1100, in accordance with the approved application for an air toxic compliance demonstration and to insure that limits described in Section xxxx are not exceeded, the following operational limit shall not be exceeded:

The equivalent P₂O₅ feed rate to the Diammonium Phosphate Plant No. 1 (Emission Point ID No. 301) shall not exceed 618 tons per calander day.

[15A NCAC 2Q .0501 (c)(4)]

- a. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.3. A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1100.

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- b. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.3.A.1.e above) to document the compliance with the above requirement. Failure to maintain the production log or any instances of production rates above the above limit shall be deemed noncompliance with 2D .1100. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.3.B Diammonium Phosphate Plant No. 2 - Emission Source ID 505-104, 505-107, 505-114, 505-110, 505-143, 505-111, 505-123C, 505-123B, 505-103, 505-121, 505-117, 505-118 (Emission Point ID No. 303)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	58.15 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
	$E=9.377 \times P^{0.3067}$ where E = allowable emission rate in pounds per hour and P = production and recycle rate of fertilizer	2D .0507
sulfur dioxide	160.50 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
	2.3 pounds per million Btu	2D .0516

visible emissions	20 percent opacity	2D .0521
Total Fluorides	0.060 pounds per ton of equivalent P ₂ O ₅ feed	40 CFR 63 Subpart BB
	6.39 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
TAPS	see 2.2	2D.1100

2.1.3.B.1.. 40 CFR PART 63 SUBPART BB: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC FERTILIZER PRODUCTION PLANTS 15a NCAC 2D .1111: Maximum Achievable Control

Technology -

Emission Standard

- a. The Permittee shall not casuse to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 30 grams/metric ton equivalent P₂O₅ feed (0.060 pounds/ton): [63.622 (a)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501. _____
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for the diammonium phosphate process line in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The fertilizer plant (Emission Point ID No. 302) shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.
- d. If the Permittee produces monoammonium phosphate in this fertilizer plant (Emission Point ID No. 302) during the life of this permit, then the Permittee shall conduct a performance test to demonstrate compliance with the applicable

emission standard for that monoammonium phosphate process line in accordance with 40 CFR 63.626 while producing monoammonium phosphate. The test must be performed before the expiration date of this permit. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- e. The permittee shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ± 5 percent over its operating range. The results of the monitoring shall be recorded in a log (electronic or written form). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if this monitoring system is not maintained, calibrated, operated, and the results recorded.
- f. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in short ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (c) of this section and then by proceeding according to §40 CFR 63.626(c)(3).
- g. The permittee shall install, calibrate, maintain, and operate the following monitoring systems installed on the wet scrubbing emission control system:
 - i. A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.
 - ii. A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded.

- g. The Permittee has chosen to determine the allowed ranges for the above operating parameters by conducting performance tests as described in 40 CFR 63.625(f)(2). The Permittee has submitted the results of previous tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

- i.
- ii.

Should the results of any subsequent annual performance test demonstrate that the allowed range is incorrect, the Permittee shall submit new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any

day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- h. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:
 - i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
 - ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
 - iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
 - iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

Start-up, Shutdown, and Malfunction Procedures

- i. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the

life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

2. 15A NCAC 2D .0507: PARTICULATES FROM CHEMICAL FERTILIZER MANUFACTURING PLANTS

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0507]

$$E = 9.377 \times P^{0.3067} \quad \text{Where } E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour}$$

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0507.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. The monitoring, recordkeeping, and reporting requirements for demonstrating compliance given in section 2.1.3.B.1. above are deemed sufficient to demonstrate compliance with 2D .0507.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The maximum sulfur content of any fuel oil received and burned in the dryer shall

not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit.

- e. To assure compliance, the Permittee shall monitor the sulfur content of the fuel oil by using fuel oil supplier certification. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - i. the name of the fuel oil supplier;
 - ii. the maximum sulfur content of the fuel oil received during the quarter;
 - iii. the method used to determine the maximum sulfur content of the fuel oil; and
 - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the emission point shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 4.a. or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 A.3. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

5. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION BY NETTING

- a. In order to avoid applicability of 15A NCAC 2D .0530(g) by netting out with an emissions reduction, the Diammonium Phosphate Plant No. 2 (Emission Point ID No. 303) shall discharge into the atmosphere less than:
 - i. 58.15 tons of particulate matter per year
 - ii. 160.50 tons per year of sulfur dioxide and
 - iii. 6.39 tons per year of total fluorides [15A NCAC 2Q .0317(a)(1)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 3.B.5. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Monitoring/Recordkeeping/Calculations [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.3.B.1.e above) along with the emission factors detailed below to demonstrate compliance with emission limits in 2.1.3.B.5.a above. To insure that the yearly emission limits are not exceeded, the yearly production shall be limited to 356,250 tons P₂O₅ input per year. If the production rate is above this limit for any consecutive 12 month period, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.
- d. In accordance with the PSD applicability analysis (letter dated November 19, 1996, received November 21, 1996) and as requested by the Permittee, the following calculation method shall be used to determine the actual emissions on a monthly basis ("tons P₂O₅ input" refers to total P₂O₅ input, in tons, for all products during a given month):

<u>Pollutant</u>	<u>Formula</u>
SO ₂ ² , tons/month	= 10 ³ gal #6 Fuel Oil/month X 157(S) lb SO ₂ /10 ³ gal X 1 ton/2,000 lb. where S = fuel sulfur content, expressed as a percentage
PM ₁₀ , tons/month	= tons P ₂ O ₅ input/month X 0.326 lbs. PM ₁₀ /ton P ₂ O ₅ input X 1 ton/2,000 lb
F, tons/month	= tons P ₂ O ₅ input/month X 0.36 lbs. F/ton P ₂ O ₅ input X 1 ton/2,000 lb.

If the results of these calculations are above the limit given in Section 2.1 3.A. 6. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

² Emission factor from AP-42 (US EPA, "Compilation of Air Pollutant Emission Factors," Section 1.3 "Fuel Oil Combustion," Table 1.3-2 "Criteria Pollutant Emission Factors for Uncontrolled Fuel Oil Combustion," January 1995).

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:
 - i. the monthly sulfur dioxide emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
 - ii. the monthly particulate matter emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
 - iii. the monthly total fluoride emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months
 - iv. the monthly P₂O₅ input for the previous 14 months.
 - v. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

6. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT

- Pursuant to 15A NCAC 2D .1100, in accordance with the approved application for an air toxic compliance demonstration and to insure that limits described in Section xxxx are not exceeded, the following operational limit shall not be exceeded:

The equivalent P₂O₅ feed rate to the Diammonium Phosphate Plant No. 2 (Emission Point ID No. 302) shall not exceed 1235 tons per calander day.

[15A NCAC 2Q .0501 (c)(4)]

- a. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.3. B.6. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1100.

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- b. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.3.B.1.e above) to document the compliance with the above requirement. Failure to maintain the production log or any instances of production rates above the above limit shall be deemed noncompliance with 2D .1100. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month

period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.3.C. Diammonium Phosphate Plant No. 3 - Emission Source IDs. 511-085, 511-086, 511-070, 511-032, 5111-008, 511-009, 511-010, 511-011, 511-016, 511-017, 511-038, 511-039, 511-041, 511-093, 511-094, 511-095, 511-096, 511-025, 511-107B, 511-103, 511-104, 511-106 (Emission Point ID No. 302)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	72.0 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
	$E=9.377 \times P^{0.3067}$ where E = allowable emission rate in pounds per hour and P = production and recycle rate of fertilizer	2D .0507
sulfur dioxide	226.2 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
	2.3 pounds per million Btu	2D .0516
visible emissions	20 percent opacity	2D .0521
Total Fluorides	0.060 pounds per ton of equivalent P ₂ O ₅ feed (during DAP or MAP production)	40 CFR 63 Subpart BB
	0.150 pounds per ton of equivalent P ₂ O ₅ feed (during GTSP production)	40 CFR 63 Subpart BB
	4.34 tons per year	2Q .0317(a)(1) [PSD Net out Limit]
TAPS	see 2.2	2D.1100

2.1.3.C.1.. 40 CFR PART 63 SUBPART BB: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC FERTILIZER PRODUCTION PLANTS 15a NCAC 2D .111: Maximum Achievable Control Technology - Emission Standard

- a. The Permittee shall not casuse to be discharged into the atmosphere from any affected

source any gases which contain total fluorides in excess of:

- i. 30 grams/metric ton equivalent P_2O_5 feed (0.060 pounds/ton) during either monoammonium phosphate(MAP) or diammonium phosphate (DAP) production [63.622 (a)]
- ii. 75 grams/metric ton equivalent P_2O_5 feed (0.150 pounds/ton) during granular triple superphosphate (GTSP) production [63.622 (b)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501. _____
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for each diammonium and/or monoammonium phosphate process line in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The fertilizer plant (Emission Point ID No. 301) shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.
- d. If the Permittee produces monoammonium phosphate in this fertilizer plant (Emission Point ID No. 303) during the life of this permit, then the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for that monoammonium phosphate process line in accordance with 40 CFR 63.626 while producing monoammonium phosphate.. The test must be performed before the expiration date of this permit. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.
- e. If the Permittee produces granular triple superphosphate in this fertilizer plant (Emission Point ID No. 303) during the life of this permit, then the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for that granular triple superphosphate process line in accordance with 40 CFR 63.626 while producing granular triple superphosphate. The test must be performed before the expiration date of this permit. Details of the

emissions testing and requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- f. The permittee shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ± 5 percent over its operating range. The results of the monitoring shall be recorded in a log (electronic or written form). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if this monitoring system is not maintained, calibrated, operated, and the results recorded.

- g. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in short ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (c) of this section and then by proceeding according to §40 CFR 63.626(c)(3).

- h. The permittee shall install, calibrate, maintain, and operate the following monitoring systems installed on the wet scrubbing emission control system:
 - i. A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.
 - ii. A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded.

- i. The Permittee has chosen to determine the allowed ranges for the above operating parameters by the method described in 40 CFR 63.625(f)(2). The Permittee has submitted the results of previous tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

- i.
- ii.

Should the results of any subsequent annual performance test demonstrate that allowed range is incorrect, the Permittee shall submit those new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- j. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:
- i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
 - ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
 - iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
 - iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

Start-up, Shutdown, and Malfunction Procedures

- k. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5

years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

2. 15A NCAC 2D .0507: PARTICULATES FROM CHEMICAL FERTILIZER MANUFACTURING PLANTS

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0507]

$$E = 9.377 \times P^{0.3067} \quad \text{Where } E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour}$$

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.13C.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0507.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. The monitoring, recordkeeping, and reporting requirements for demonstrating compliance given in section 2.1.3.C.1. above are deemed sufficient to demonstrate compliance with 2D .0507.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The maximum sulfur content of any fuel oil received and burned in the dryer shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the fuel oil exceeds this limit.

- e. To assure compliance, the Permittee shall monitor the sulfur content of the fuel oil by using fuel oil supplier certification per shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
 - i. the name of the fuel oil supplier;
 - ii. the maximum sulfur content of the fuel oil received during the quarter;
 - iii. the method used to determine the maximum sulfur content of the fuel oil; and
 - iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the oil is not monitored and recorded.

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of the fuel oil supplier certifications postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the any emission point shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 4.a. or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1 A.3. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

5. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION BY NETTING

- a. In order to avoid applicability of 15A NCAC 2D .0530(g) by netting out with an

emissions reduction, the Diammonium Phosphate Plant No. 3 (Emission Point ID No. 302) shall discharge into the atmosphere less than:

- i. 72.0 tons of particulate matter per year
- ii. 226.2 tons per year of sulfur dioxide and
- iii. 4.34 tons per year of total fluorides [15A NCAC 2Q .0317(a)(1)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 3.B.5. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Monitoring/Recordkeeping/Calculations [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.3.C.1.f above) along with the emission factors detailed below to demonstrate compliance with emission limits in 2.1.3.B.5.a above. To insure that the yearly emission limits are not exceeded, the yearly production shall be limited to 240,000 tons P₂O₅ input per year. If the production rate is above this limit for any consecutive 12 month period, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.
- d. In accordance with the PSD applicability analysis (letter dated November 19, 1996, received November 21, 1996) and as requested by the Permittee, the following calculation method shall be used to determine the actual emissions on a monthly basis ("tons P₂O₅ input" refers to total P₂O₅ input, in tons, for all products during a given month):

<u>Pollutant</u>	<u>Formula</u>
SO ₂ ³ , tons/month	= 10 ³ gal #6 Fuel Oil/month X 157(S) lb SO ₂ /10 ³ gal X 1 ton/2,000 lb.
	where S = fuel sulfur content, expressed as a percentage
PM ₁₀ , tons/month	= tons P ₂ O ₅ input/month X 0.60 lbs. PM ₁₀ /ton P ₂ O ₅ input X 1 ton/2,000 lb
F, tons/month	= tons P ₂ O ₅ input/month X 0.036 lbs. F/ton P ₂ O ₅ input X 1 ton/2,000 lb.

If the results of these calculations are above the limit given in Section 2.1 3.C. 5. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities

³ Emission factor from AP-42 (US EPA, "Compilation of Air Pollutant Emission Factors," Section 1.3 "Fuel Oil Combustion," Table 1.3-2 "Criteria Pollutant Emission Factors for Uncontrolled Fuel Oil Combustion," January 1995).

within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:

- i. the monthly sulfur dioxide emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
- ii. the monthly particulate matter emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
- iii. the monthly total fluoride emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months
- iv. the monthly P_2O_5 input for the previous 14 months.
- v. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

6. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT

- Pursuant to 15A NCAC 2D .1100, in accordance with the approved application for an air toxic compliance demonstration and to insure that limits described in Section xxxx are not exceeded, the following operational limits shall not be exceeded:

The equivalent P_2O_5 feed rate to the Diammonium Phosphate Plant No. 3 (Emission Point ID No. 302) shall not exceed 714 tons per calendar day when producing GTSP. The equivalent P_2O_5 feed rate to the Diammonium Phosphate Plant No. 3 (Emission Point ID No. 302) shall not exceed 1188 tons per calendar day when producing MAP. The equivalent P_2O_5 feed rate to the Diammonium Phosphate Plant No. 3 (Emission Point ID No. 302) shall not exceed 1080 tons per calendar day when producing DAP.

[15A NCAC 2Q .0501 (c)(4)]

- a. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.1. A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1100.

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- b. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.3.C.1.f above) to document the compliance with the above requirement. Failure to maintain the production log or any instances of production rates above the above limit shall be deemed noncompliance with 2D .1100. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30

see 2.2

2D.1100

TAPS

2.1.4.B.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPHORIC ACID MANUFACTURING PLANTS
15A NCAC 2D .1111: Maximum Achievable Control Technology

Emission Standard

- a. Operation of the superphosphoric acid plants shall be limited as follows: [63.602 (b)(1)]
 - i. No superphosphoric acid plant (Emission Point ID No. 332) shall discharge into the atmosphere gases which contain total fluorides in excess of 5.0 grams per metric ton of equivalent P_2O_5 feed (0.010 pound/ton).

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.B.2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for the superphosphoric acid plant process line in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Each superphosphoric acid plant (Nos. 3 or 4 Emission Point ID No. 332) shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of

the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- d. The permittee shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ± 5 percent over its operating range. The results of the monitoring shall be recorded in a log (electronic or written form). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if this monitoring system is not maintained, calibrated, operated, and the results recorded.
- e. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (c) of this section and then by proceeding according to §40 CFR 63.626(c)(3).
- f. The permittee shall install, calibrate, maintain, and operate the following monitoring systems installed on the wet scrubbing emission control system:
 - i. A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.
 - ii. A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded.
- g. The Permittee has chosen to determine the allowed ranges for the above operating parameters by the method described in 40 CFR 63.605(d)(2). The Permittee has submitted the results of previous tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

i.

ii.

Should the results of any subsequent annual performance test demonstrate that the allowed range is incorrect, the Permittee shall submit those new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- h. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:
- i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
 - ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
 - iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
 - iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

Start-up, Shutdown, and Malfunction Procedures

- i. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

2. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART U

Emission Standard

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart U, including Subpart A "General Provisions." [15A NCAC 2D .0524] for Plant No. 4.

Emission Limitations [15A NCAC 2D .0524]

- b. Operation of the superphosphoric acid plant No. 4 shall be limited as follows:
[60.212]
 - i. No superphosphoric acid plant (Emission Point ID No. 332) shall discharge into the atmosphere gases which contain particulate matter in excess of 5.0 grams per metric ton of equivalent P_2O_5 feed (0.010 pound/ton).

Monitoring/Recordkeeping/Reporting

- c. Satisfying the requirements of **2. 1.4.B.1** above will be considered sufficient to demonstrate compliance with 2D .0524.

3. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of the superphosphoric acid plants Nos. 3 and 4 (Emission Point ID No. 332) shall be limited as follows:
 - i. superphosphoric acid plant No. 3 (Emission Point ID No. 332) shall be limited to 30 pounds per calendar day of sulfur dioxide emissions (total in combination with superphosphoric acid plant No. 4 (Emission Point ID No. 332))
[15A NCAC 2D .0501(e)].

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits above by testing each superphosphoric acid plant (Emission Point ID No. 332) annually for sulfur dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC

2D .0501(e).

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.4.C SPA Filter Press No. 1 and No. 2 - Emission Source ID FPR-1 and FPR-2
Emission Point ID Nos. 335 and 336

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
TAPS	see 2.2	2D.1100

2.1.4.D Potassium Permanganate Storage Silo - Emission Source ID 453-485 (Emission Point ID No. 340)
Clay Additive Storage Silo - Emission Source ID 453-470 (Emission Point ID No. 341)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour and P = process weight in tons per hour	2D .0515
	20 percent opacity	2D .0521
TAPS	see 2.2	2D.1100

2.1.4.D.1 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

P = process weight in tons per hour

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.4.D.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the silo shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from the silos shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any

24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.C.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. Satisfying the requirements for 2D .0515 shall be sufficient to meet the requirements of 2D .0521.

2.1.4.E Fertilizer Warehouse Fugitives: Warehouse No. 1 and No. 2 - Emission Source ID DAP1WH1 and DAP2WH2 (Emission Point ID No. 390)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
TAPS	see 2.2	2D.1100

2.1.4.F Fertilizer Warehouse Fugitives: Warehouse No. 3 - Emission Source ID DAP3WH3 (Emission Point ID No. 390)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
total Fluorides	0.0005 lb/hr/ton P ₂ O ₅ cured or stored for GTSP production	40 CFR 63 Subpart BB (MACT)
TAPS	see 2.2	2D.1100

2.1.4.F.1 40 CFR PART 63 SUBPART BB: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC FERTILIZER PRODUCTION PLANTS 15a NCAC 2D .1111: Maximum Achievable Control Technology - Emission Standard

- a. The Permittee shall not cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of .0250 grams/hr/metric ton equivalent P₂O₅ stored (0.0005 pounds/hr/ton stored) [63.622 (c)(1)]

Operating Standard

- b. The Permittee shall not ship fresh granular triple superphosphate (GTSP) from any warehouse[63.622 (b)].

Testing [15A NCAC 2Q .0501 (c)(4)]

- c. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501._____
- d. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for the warehouse in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The warehouse (Emission Point ID No. 390) shall be tested annually. If no GTSP production has occurred during the year, then the only requirement is to state that no production has occurred on any report. Upon resumption of GTSP production, the Permittee shall conduct the performance tests only when the total GTSP is at least 10 percent of the building capacity, fresh GTSP is at least 6 percent of the total amount of GTSP, or if the previous parameters exceed production capabilities of fresh GTSP, then fresh GTSP is equal to at least 5 days maximum production. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- f. The Permittee shall maintain an accurate account of granular triple superphosphate in storage to permit the determination of the amount of equivalent P₂O₅ stored. The Permittee shall maintain a daily record of total equivalent P₂O₅ stored by multiplying the percentage P₂O₅ content, as determined by § 63.626(d)(3), times the total mass of granular triple superphosphate stored. The Permittee shall develop for approval by the Administrator a site-specific methodology including sufficient recordkeeping for the purposes of demonstrating compliance with § 63.622(c)(2) or § 63.623(c)(2), as applicable.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not maintained, or if the site specific methodology is not submitted.

Reporting [15A NCAC 2Q .0508(f)]

- j. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:
 - i. Performance test report. As required by §63.10, the owner or operator shall

report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9. No report is required if no production of GTSP has occurred during the year.

2.1.5 PHOSPHORIC ACID PRODUCTION AREA

- 2.1.5.A Phosphoric Acid Train No. 1** - Emission Source ID 421-201, 421-000, 421-325, 421-324, 421-327, 421-326, 421-223, 421-232, 421-232, 421- 218, 421-330 - (Emission Point ID 401)
 Emission Source ID 441-000 - (Emission Point ID 402)
 Emission Source ID 441-000, 442-000, 441-031 - (Emission Point ID 403)
Phosphoric Acid Train No. 2 - Emission Source ID 422-201, 422-000, 422-325, 422-324, 422-327, 422-326, 422-223, 422-232, 422-232, 422- 218, 422-330 - (Emission Point ID 404)
 Emission Source ID 442-000 - (Emission Point ID 405)
Phosphoric Acid Train No. 3 - Emission Source ID 423-201, 423-000, 423-325, 423-324, 423-327, 423-326, 423-223, 423-232, 423-232, 423- 218, 423-330 - (Emission Point ID 406)
 Emission Source ID 443-000 - (Emission Point ID 407)
 Emission Source ID 443-000, 444-000, 444-031 - (Emission Point ID 408)
Phosphoric Acid Train No. 4 - Emission Source ID 424-201, 428-753, 424-000, 424-325, 424-324, 424-327, 424-326, 424-223, 424-232, 424-232, 424- 218, 424-330 - (Emission Point ID 409)
 Emission Source ID 444-000 - (Emission Point ID 410)
 Phosphoric Acid Plant Fugitives - Emission Point ID No. 491

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	486 pounds per day (Train No. 1 - measured at crossflow scrubber stacks)	2D .0501(e)
	486 pounds per day (Train No. 2 - measured at crossflow scrubber stacks)	2D .0501(e)
	960 pounds per day (Train No. 3 - measured at crossflow scrubber stacks)	2D .0501(e)
	960 pounds per day (Train No. 4 - measured at crossflow scrubber stacks)	2D .0501(e)
	102.6 tons per year (Train No. 4 processing uncalcined rock)	2Q .0317(a)(1) PSD Avoidance limit

Total Reduced Sulfur	2207.61 tons per year (Trains 1, 2, 3 and 4)	2Q .0317(a)(1) PSD Avoidance limit
	1773.1 tons per year (Trains 1 and 2)	2Q .0317(a)(1) PSD Avoidance limit
	27.4 tons per year (Train 4 processing uncalcined rock)	2Q .0317(a)(1) PSD Avoidance limit
Particulate Matter	E = 4.10 x P ^{0.67} Where E = allowable emission rate in pounds per hour and P = process weight in tons per hour (for P < 30 tons per hour) or E=55 x P ^{0.11} - 40 (for P > 30 tons per hour)	2D .0515
Total Fluorides	4.49 tons per year (only Train No. 4 processing uncalcined rock)	2Q .0317(a)(1) PSD Avoidance limit
	10.0 gram/metric feed per ton of equivalent P ₂ O ₅ feed (0.020 lb/ton)	2D .1111 (all trains) [MACT Subpart AA] 2D .0524 [NSPS Subpart T] 2D .0530 (Trains 1 and 2 only) [BACT]
TAPS	see 2.2	2D.1100

2.1.5.A.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPHORIC ACID MANUFACTURING PLANTS
15A NCAC 2D .1111: Maximum Achievable Control Technology

Emission Standard

- a. Operation of the phosphoric acid trains shall be limited as follows:
- i. no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 10.0 gram/metric ton of equivalent P₂O₅ feed (0.020 lb/ton). [63.602 (a)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.B.2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee

shall conduct a performance test to demonstrate compliance with the applicable emission standard for the phosphoric acid plant process line in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Each phosphoric acid train shall be tested annually at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111. The results of this testing shall be saved for possible inclusion in future determinations of operating parameter ranges.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- d. The permittee shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ± 5 percent over its operating range. The results of the monitoring shall be recorded in a log (electronic or written form). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if this monitoring system is not maintained, calibrated, operated, and the results recorded.
- e. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (c) of this section and then by proceeding according to §40 CFR 63.626(c)(3).
- f. The permittee shall install, calibrate, maintain, and operate the following monitoring systems installed on the wet scrubbing emission control system:
 - i. A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.
 - ii. A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of ± 5 percent over its operating range.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded.
- g. The Permittee has chosen to determine the allowed ranges for the above operating parameters by the method described in 40 CFR 63.605(d)(2). The Permittee has submitted the results of previous tests to demonstrate allowed ranges for the parameter values listed above in (f). The allowed ranges are:

- i.
- ii.

Should the results of any subsequent annual performance test demonstrate that the allowed range is incorrect, the Permittee shall submit those new ranges to the Division of Air Quality for inclusion in this permit. If the daily averages (for any day for which there are 24 hours of normal (not startup, shutdown or malfunction) operation) of the pressure drop or flowrate to the scrubber exceeds the allowable range an exceedance will have occurred. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 for each exceedance.

Reporting [15A NCAC 2Q .0508(f)]

- h. If the following reports are not submitted the permittee shall be deemed in non-compliance with 15A NCAC 2D .1111:
 - i. Performance test report. As required by §63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in §63.9.
 - ii. Excess emissions report. As required by §63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in §63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in §63.10.
 - iii. Summary report. If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in §63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.
 - iv. If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

Start-up, Shutdown, and Malfunction Procedures

- i. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels

required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

2. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of the phosphoric acid trains shall be limited as follows:
 - i. phosphoric acid train No. 1 shall be limited to 486 pounds per calendar day of sulfur dioxide emissions
 - ii. phosphoric acid train No. 2 shall be limited to 486 pounds per calendar day of sulfur dioxide emissions
 - iii. phosphoric acid train No. 3 shall be limited to 960 pounds per calendar day of sulfur dioxide emissions (Emission Point ID No. 332)
 - iv. phosphoric acid train No. 4 shall be limited to 960 pounds per calendar day of sulfur dioxide emissions (Emission Point ID No. 332)

[15A NCAC 2D .0501(e)].

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits above by testing one phosphoric acid train producing acid from calcined rock (a “green” acid train) and one phosphoric acid train producing acid from uncalcined rock (an “amber” acid train) annually for sulfur dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD) BACT

Emission standard - BACT

- a. For the identified Phosphoric Acid trains the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
Phosphoric Acid (PA) Train No. 1 (ID No.401, 402, 403)	Total Fluorides	crossflow packed scrubber	0.020 pound per ton P ₂ O ₅ feed
PA Train No. 2 (ID No. 403, 404, 405)	Total Fluorides	crossflow packed scrubber	0.020 pounds per ton P ₂ O ₅ feed

Testing/Monitoring/Reporting/Recordkeeping

- b. The requirements for testing/Monitoring/Reporting/Recordkeeping given in 2.1.5.A.1 above will be sufficient to demonstrate compliance with 2D .0530.

4. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART U

Emission Standard

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart U, including Subpart A "General Provisions." [15A NCAC 2D .0524]for the phosphoric acid trains.

Emission Limitations [15A NCAC 2D .0524]

- b. Operation of the phosphoric acid trains shall be limited as follows: [60.202]
 - i. No phosphoric acid train shall discharge into the atmosphere gases which contain particulate matter in excess of 10.0 grams per metric ton of equivalent P₂O₅ feed (0.020 pound/ton).

Testing/Monitoring/Recordkeeping/Reporting

- c. The requirements for testing/Monitoring/Reporting/Recordkeeping given in 2.1.5.A.1 above will be sufficient to demonstrate compliance with 2D .0524.

5. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of 15A NCAC 2D .0530(g), the Phosphoric Acid trains shall discharge into the atmosphere less than:
 - i. 2207.61 tons of Total Reduced Sulfur (TRS) per year from all four trains total,
 - ii. 1773.1 tons per year of TRS from trains 1,2, or 4 total, when processing calcined rock,
 - iii. 27.4 tons per year of TRS from train 4 processing uncalcined rock,
 - iv. 4.49 tons per year of total fluoride from train 4 processing uncalcined rock, and
 - v. 102.6 tons per year of sulfur dioxide from train 4 processing uncalcined rock.[15A NCAC 2Q .0317(a)(1)]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 3.A. 6. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.
- c. In order to verify the accuracy of the average emission factor listed in Specific Condition III.A.5.b.i., the Permittee shall test for TRS emissions from the cross flow scrubber stack of one green acid train at least once during the five year permit term. In addition, subsequent to the first time that the normal production rate (defined below) at any green acid train exceeds 1350 tons per day, a test of TRS emissions will be required. A test triggered by exceeding 1350 tons per day will satisfy the once per five year permit term testing requirement.

Testing shall be performed in accordance with 40 CFR Part 60 Appendix A, Reference Method 16A (Determination of TRS Emissions from Stationary Sources) or an approved alternative method as described in 40 CFR §60.8(b) and as approved by the DAQ. The performance test shall be performed at production rates equal to or greater than the normal production rate. The normal production rate shall be determined by dividing the total annual production from the most recent production year by the number of hours operated during the previous 12 months. The normal production rate to be achieved during the performance test must be approved by the DAQ Regional Supervisor prior to the performance test. The test results must be submitted to the Regional Supervisor, Division of Air Quality, in accordance with the approved procedures of the Environmental Management Commission within 30 days of test completion.

Monitoring/Recordkeeping/Calculations [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.5.A.1.d above) along with the emission factors detailed below to demonstrate compliance with emission limits in 2.1.5.A.5.a above. To insure that the yearly emission limits are not exceeded, the yearly production shall be limited as follows
 - i. the production of phosphoric acid from calcined rock shall be limited to a P_2O_5

input rate of 815,217 tons per year, calculated each month for the previous twelve (12) months,

- ii. the production of phosphoric acid from uncalcined rock at Trains 3 and 4 shall be limited to a P_2O_5 input rate of 981,120 tons per year, calculated each month for the previous twelve (12) months,
- iii. the production of phosphoric acid from uncalcined rock at Train 4 shall be limited to a P_2O_5 input rate of 449,000 tons per year, calculated each month for the previous twelve (12) months(Note: This limit based on 2002 PSD avoidance analysis and is based on total fluoride emissions).

If a production rate is above these limits for any consecutive 12 month period, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

- d. To calculate emissions to determine if the emission limits above are exceeded, the permittee shall use the following emission factors to determine if the emission limits above are exceeded (all emissions per ton of P_2O_5 feed):
 - i. for TRS emissions from trains processing calcined rock - 4.35 pounds,
 - ii. for TRS emissions from Trains 3 and 4 processing uncalcined rock - 0.117 pounds (uncalcined rock emission factor developed from the source test dated October 6, 1987, by Entropy and a memo dated December 16, 1987, from Robert Wooten of the Division of Environmental Management)
 - iii. for total fluoride emissions from Train 4 processing uncalcined rock - 0.02 pounds, and
 - iv. for SO_2 emissions from Train 4 processing uncalcined rock - 0.457 pounds.If the results of the above calculations show emissions above any of the limits in 5.a above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:
 - i. for each train, the monthly TRS emissions for the previous fourteen (14) months and the annual total TRS emissions for each of the three 12-month periods over the previous 14 months (calculations must be included).
 - ii. the monthly P_2O_5 input rates for calcined and uncalcined rock for the previous fourteen (14) months and the annual totals for calcined and uncalcined P_2O_5 input rates for each of the three 12-month periods over the previous 14 months,
 - iii. the daily P_2O_5 input rate for calcined and uncalcined rock for the previous quarter, and
 - iv. the monthly total fluoride and sulfur dioxide emissions from Train 4 processing

uncalcined rock for the previous twelve (12) months and the annual total emissions for each of the three 12-month periods over the previous 14 months (calculations must be included).

STATE-ONLY REQUIREMENT:

6. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT

- Pursuant to 15A NCAC 2D .1100, in accordance with the approved application for an air toxic compliance demonstration and to insure that limits described in Section xxxx are not exceeded, the following operational limits shall not be exceeded:

- i. Only two trains (of trains 1, 2, or 4 which are the three trains capable of processing calcined rock) may process calcined rock at any given time. Only trains 3 and 4 may process uncalcined rock at any given time,
- ii. All four (4) trains of the phosphoric acid plant may manufacture phosphoric acid solely by the wet process operating in the dihydrate mode.
- iii. The phosphoric acid plant may use phosphate ore from Morocco in the manufacture of “green acid.” The maximum Moroccan ore content shall either be less than or equal to 20 percent by weight or shall be determined by a compliant source test using ore with a Moroccan ore content higher than the previous highest compliant source test to date. To be a compliant source test, it must be submitted and accepted by the division. The Permittee shall notify the division 30 days before any test that is anticipated to be used as a compliant source test to change the maximum allowable Moroccan ore content as defined above. The Permittee shall only use the higher Moroccan ore content for testing and shall not use a new higher Moroccan ore content for normal production until notified in writing by the division. The division’s letter will be kept on site attached to the current Air Permit. Compliance with this provision will be demonstrated based on a monthly average of daily records.
- iv. The phosphoric acid plant may use phosphate ore from sources other than PCS Phosphate Aurora (outside ore) in the manufacture of “amber acid.” During any given day, however, the ore used in the manufacture of “amber acid” may only come from two separate places including Aurora ore. The maximum outside ore content shall be determined by a compliant source test for fluoride or other pollutants as deemed necessary by the division. To be a compliant source test, it must be submitted and accepted in writing by the division. The Permittee shall notify the division 30 days before any test that is anticipated to be used as a compliant source test to change the maximum allowable outside ore content as defined above; ore from each different mine or area will be tested separately. The Permittee shall only use the higher outside ore content for testing and shall not use a new higher outside ore content for normal production until notified in writing by the division. The division’s letter will be kept on site attached to the current Air Permit. Compliance with this provision will be demonstrated based on a monthly average of daily records. The use of 20 percent by weight Florida ore has been approved.

[15A NCAC 2Q .0501 (c)(4)]

- a. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.3. A. 1. a., the Permittee shall be deemed in

noncompliance with 15A NCAC 2D .1100.

- b. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the hydrogen fluoride emission standard for the phosphoric acid plant process line in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The wet process phosphoric acid plant shall be tested as specified below within 60 days of using Moroccan ore while producing “green acid” with 20 percent Moroccan phosphate ore at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. The analysis shall estimate hydrogen fluoride by determining the total fluoride and silicon tetrafluoride emissions and defining the hydrogen fluoride as the remainder from the total. A copy of the production records must accompany the request. If the results of this test are above the emission standard, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1100.
- c. Under the provisions of North Carolina General Statutes 143-215.108 the wet process phosphoric acid plant no. 4 shall be allowed to operate for 30 days using a three-filter operation from one phosphoric acid attack system. During those 30 days testing will be conducted to demonstrate that compliance with all emission standards can be maintained during 3-filter operation. The testing shall be conducted at a production rate equivalent to at least 1530 tons per day. At least 45 days prior to performing the required emissions testing, the Permittee must submit a testing protocol to the Regional Supervisor, DAQ for review and approval. (Prior protocol removal shall not be required if the testing will be identical to testing on phosphoric acid plant stacks that the facility routinely performs. Protocols for these routine tests have already been approved by the Division.) All testing protocols must be approved by the DAQ prior to performing such tests. To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall PROVIDE the Regional Office, in WRITING, at least 30 days notice of the required performance test(s). The test results must be submitted to the Regional Supervisor, Division of Air Quality, in accordance with the approved procedures of the Environmental Management Commission within 60 days of test completion. Phosphoric Acid Plant No. 4 may only resume operation in three-filter mode once Division approved results demonstrate compliance.

Monitoring/Recordkeeping /Reporting [15A NCAC 2Q .0508(f)]

- d.. The Permittee shall use the production log (written or electronic form) (as mandated in 2.1.5.A.1. above) and other production records to document the compliance with the above operational practices limits. Failure to maintain the production log or any instances of production practices differing from the above restrictions shall be deemed noncompliance with 2D .1100. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on

or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

- 2.1.5.B Two Phosphoric Acid Storage Tanks** - Emission Source ID 040 and 020(Emission Point ID No. 421)
Four Phosphoric Acid Storage Tanks and One Green Acid Sludge Tank - Emission Source ID 032, 033, 034, 060, and 035 - (Emission Point ID No. 422)
One Slurry Mix Tank, One Clarifier, and One Defluorinated Acid Pump Tank - Emission Source ID 426-156, 433-158, and 433-165 - Emission Point ID No. 450
Two Phosphoric Acid Storage Tanks (Phosphoric Acid Tank Farm - Emission Source ID 030 and 031 - Emission Point ID No. 492)
Two HFSA Tanks (Phosphoric Acid Tank Farm - Emission Source ID 428-440 and 428-442) - Emission Point ID No. 492
One Carbon Slurry Tank (Phosphoric Acid Tank Farm - Emission Source ID 433-182) - Emission Point ID No. 492

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
TAPS	see 2.2	2D.1100

- 2.1.5.C Phosphate Rock Transfer Points** - Emission Source ID 429-002, 421-115 and 422-107 Emission Point ID No. 430
Phosphate Rock Transfer Points - Emission Source ID 429-005, 422-115 and 422-107 Emission Point ID No. 431

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	$E=55 \times P^{0.11} - 40$ where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
	10.7 pounds per day	NCAC 2D .0530 BACT
Total Fluoride	0.0178 pounds per hour	NCAC 2D .0530 BACT

Visible Emissions	20 percent opacity	NCAC 2D .0521
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

2.1.5.C.1.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=55 \times P^{0.11} - 40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the conveyor belt drop point shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.5.C. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The results of these observations shall be recorded in a logbook (written or electronic form). The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.5.C.2. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

BACT

Emission standard - BACT

- a. For the identified Phosphoric Acid trains the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
PA No. 1 Rock Transfer Point (conveyor GS-103 and PA Train 1 transfer point) (ID No. 430)	Total Fluorides	enclosure and fabric filtration	1.78 x 10 ⁻² pound per hour
PA No. 1 Rock Transfer Point (conveyor GS-103 and PA Train 1 transfer point) (ID No. 430)	PM ₁₀	enclosure and fabric filtration	10.7 pounds per day
PA No. 2 Rock Transfer Point (conveyor GS-203 and PA Train 2 transfer point) (ID No. 431)	Total Fluorides	enclosure and fabric filtration	1.78 x 10 ⁻² pound per hour
PA No. 2 Rock Transfer Point (conveyor GS-203 and PA Train 2 transfer point) (ID No. 431)	PM ₁₀	enclosure and fabric filtration	10.7 pounds per day

Testing/Monitoring/Reporting/Recordkeeping

- b. The requirements for testing/Monitoring/Reporting/Recordkeeping given in 2.1.5.C.1 and 2 above will be sufficient to demonstrate compliance with 2D .0530.

2.1.5.D Phosphate Rock Storage Silo No. 1 and Three Transfer Points - Emission
Source ID 429-152, 429-001, 429-004, and 429-151 Emission Point ID No. 434

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	E=55 x P ^{0.11} - 40 where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
	8.74 pounds per day	NCAC 2D .0530 BACT
Total Fluoride	0.0146 pounds per hour	NCAC 2D .0530 BACT

Visible Emissions	20 percent opacity	NCAC 2D .0521
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

2.1.5.D.1.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=55 \times P^{0.11} - 40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the conveyor belt drop point shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.5.C. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The results of these observations shall be recorded in a logbook (written or electronic form). The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.5.C.2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

BACT

Emission standard - BACT

- a. For the identified Phosphoric Acid trains the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
PA Rock Transfer Points (conveyor 70-1 and 70-2 transfer point) (ID No. 434)	Total Fluorides	enclosure and fabric filtration	1.46 x 10 ⁻² pound per hour
PA Rock Transfer Points (conveyor 70-1 and 70-2 transfer point) (ID No. 434)	PM ₁₀	enclosure and fabric filtration	8.74 pounds per day

Testing/Monitoring/Reporting/Recordkeeping

- b. The requirements for testing/Monitoring/Reporting/Recordkeeping given in 2.1.5.D.1 and 2 above will be sufficient to demonstrate compliance with 2D .0530.

2.1.5.E Phosphate Rock Transfer House - Emission Source ID 429-150 Emission Point ID No. 437

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	E=55 x P ^{0.11} - 40 where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
	6.58 pounds per day	NCAC 2D .0530 BACT
Total Fluoride	0.0110 pounds per hour	NCAC 2D .0530 BACT
Visible Emissions	20 percent opacity	NCAC 2D .0524
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

2.1.5.E.1.. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable

emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=55 \times P^{0.11} - 40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the conveyor belt drop point shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.5.C. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The results of these observations shall be recorded in a logbook (written or electronic form). The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.5.C.2. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**3. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD)
BACT**

Emission standard - BACT

- a. For the identified Phosphoric Acid trains the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
PA Rock Transfer Point (conveyor 70-2 transfer point) (ID No. 437)	Total Fluorides	enclosure and fabric filtration	1.10 x 10 ⁻² pound per hour
PA Rock Transfer Point (conveyor 70-2 transfer point) (ID No. 437)	PM ₁₀	enclosure and fabric filtration	6.58 pounds per day

Testing/Monitoring/Reporting/Recordkeeping

- b. The requirements for testing/Monitoring/Reporting/Recordkeeping given in 2.1.5.E.1 and 2 above will be sufficient to demonstrate compliance with 2D .0530.

2.1.5.F One Diatomaceous Earth Silo - Emission Source ID 426-154 Emission Point ID No. 451

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	E= 4.10 x P ^{0.67} where E = allowable emissin rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
Visible Emissions	20 percent opacity	NCAC 2D .0521
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

2.1.5.F.1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from the conveyor belt drop point shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection

unit for leaks; and
ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.
[15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.5.C. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The results of these observations shall be recorded in a logbook (written or electronic form). The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance

with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.5.C.2. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.5.G One Phosphoric Acid Recirculation Water Cooling Tower Consisting of Two Fans - Emission Source ID ES461, ES462 - Emission Point ID No. 461 and 462

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

2.1.5.G.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC ACID MANUFACTURING PLANTS
15A NCAC 2D .1111: Maximum Achievable Control Technology

- a. Operation of the cooling tower shall be limited as follows: No introduction of any liquid effluent from any wet scrubbing device installed to control emissions from process equipment into any evaporative cooling tower shall be allowed. Compliance with this requirement shall be shown during inspections by the DAQ and by certification by the permittee. [40 CFR PART 63 SUBPART AA - 63.603(e)]

2.1.6 Purified Acid Area

2.1.6.A Purified Acid Area Storage Tanks T1, T201, T12, T212, T30, and T50 - Emission Point ID No. 501

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
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No applicable requirement	Recordkeeping	15A NCAC 2D. 0524 (40 CFR 60, Subpart Kb)
Toxic Air Pollutants	- State Only Requirement (See Section 2.2 Multiple Emissions Sources)	15A NCAC 2D .1100

2.1.6.A.1 15A NCAC 2D. 0524 (40 CFR 60, Subpart Kb) - VOLATILE ORGANIC LIQUID STORAGE TANKS

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Kb, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Monitoring and Recordkeeping [15A NCAC 2Q .0508(f)]

- b. The owner or operator of the storage vessel shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.16b(b)]
- c. The owner or operator of the storage vessel with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

2.1.6.B Purified Acid Plant No. 1

Three (3) Scrub Acid Storage Tanks Discharging through One (1) Seal Pot to One (1) Gas Chiller (T24, T224, T324, T346, GC-1),
Four (4) Extraction Columns Under Nitrogen Blanket System (C10, C20, C210, C220),
Fifteen (15) Tanks Under Nitrogen Blanket System (T7, T12, T13, T212, T213, T1, T201, T24, T224 T50, T40, T240, T30, T57, T324),
Four (4) tanks with Seal Pots Under Nitrogen Blanket System (T54, T44, T244, T34),
Six (6) Seal Pots Under Nitrogen Blanket System (T8, T15, T215, T315, T58, T346),
Six (6) Separators Under Nitrogen Blanket System (S53, S43, S243, S253, S33, S5),
One (1) Still Under Nitrogen Blanket System (S4),
Five (5) Strippers Under Nitrogen Blanket System (S42, S242, S32, S52, S54),
and
One (1) Scrubber Under Nitrogen Blanket System (S324).
(Emission Point ID No. 501)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Methyl Isobutyl Ketone (MIBK)	twenty parts per million in each product acid stream (thirty day average)	2D .1111 40 CFR 63 Subpart AA
	thirty parts per million in each raffinate stream (thirty day average)	2D .1111 40 CFR 63 Subpart AA
	chiller gas steam exit temperature less than or equal to 50 Fahrenheit	2D .1111 40 CFR 63 Subpart AA
	removal efficiency of 85 percent	2D .0958
	See section 2.3 multiple sources	2D .1111 40 CFR 63 Subpart H
TAPS	see 2.2	2D.1100

2.1.6.B.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSFORIC ACID MANUFACTURING PLANTS 15A NCAC 2D .1111: Maximum Achievable Control Technology

Emission Standard

- a. Operation of the Purified Acid Plant No. 1 shall be limited to not exceed any of the following:
 - i. A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of twenty parts per million for each product acid stream.
 - ii. A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of thirty parts per million for each raffinate stream.
 - iii. A daily average chiller stack exit gas stream temperature less than or equal to fifty degrees Fahrenheit. [63.602 (f)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.B.2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall:
 1. Install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the stack gas exit temperature for each chiller stack.

2. Measure and record the concentration of methyl isobutyl ketone in each product acid stream and each raffinate stream once daily.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems any exceedances of the standards given in section a. above.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

Start-up, Shutdown, and Malfunction Procedures

- e. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

STATE ENFORCEABLE ONLY

2. **Work Practices for Sources of Volatile Organic Compounds 2D .0958(e)**
As required by 15A NCAC 2D .0958(e), the permittee shall maintain a minimum recovery efficiency of 85 percent for all sources of MIBK at the plant site.

- 2.1.6.C **Three (3) Acid Defluorination Columns and Concentrators** - Emission Source ID S88, T70, S288, T100, S118, and T270 Emission Point ID No. 502

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatil Organic Compounds	See section 2.3 multiple sources	2D .0958
TAPS	see 2.2	2D.1100

2.1.6.D PAP No. 1 Direct Cooling Tower and PAP Indirect Cooling Tower Consisting of Two Fans Each - Emission Source ID CT-1 and CT-2 Emission Point ID No. 510/511 and 512/513

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	See Section 2.3 -State Enforceable Only	NCAC 2D .1100

2.1.6.D.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC ACID MANUFACTURING PLANTS
15A NCAC 2D .1111: Maximum Achievable Control Technology

- a. Operation of the cooling towers shall be limited as follows: No introduction of any liquid effluent from any wet scrubbing device installed to control emissions from process equipment into any evaporative cooling tower shall be allowed. Compliance with this requirement shall be shown during inspections by the DAQ and by certification by the permittee. [40 CFR PART 63 SUBPART AA - 63.603(e)]

2.1.6.E Purified Acid Area Storage Tanks T1001, T1201, T1012, T1212, T1030, and T1050 - Emission Point ID No. 503

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
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Volatile Organic Compounds	See section 2.3 multiple sources	2D .0958
No applicable requirement	Recordkeeping	2D .0524 NSPS Subpart Kb
TAPS	see 2.2	2D.1100

2.1.6.E.1 15A NCAC 2D. 0524 (40 CFR 60, Subpart Kb) - VOLATILE ORGANIC LIQUID STORAGE TANKS

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, , recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Kb, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Monitoring and Recordkeeping [15A NCAC 2Q .0508(f)]

- b. The owner or operator of the storage vessel shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.[40 CFR 60.16b(b)]
- c. The owner or operator of the storage vessel with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

2.1.6.F Purified Acid Plant No. 2

Two (2) Scrub Acid Storage Tanks Discharging through One (1) Seal Pot to One (1) Gas Chiller (T1024, T1324, T1346, GC-2),
Two (2) Extraction Columns Under Nitrogen Blanket System (C1010, C1020),
Eleven (11) Tanks Under Nitrogen Blanket System (T1007, T1012, T1013, T1212, T1324, T1001, T1024, T1050, T1040, T1030, T1057),
Three (3) tanks with Seal Pots Under Nitrogen Blanket System (T1054, T1044, T1034),
Six (6) Seal Pots Under Nitrogen Blanket System (T1008, T1015, T1215, T1315, T1058, T1346),
Five (5) Separators Under Nitrogen Blanket System (S1043, S1053, S1253, S1033, S1005),
One (1) Still Under Nitrogen Blanket System (S1004),
Four (4) Strippers Under Nitrogen Blanket System (S1042, S1032, S1052, S1054),
One (1) Scrubber Under Nitrogen Blanket System (S1324).
(Emission Point ID No. 503)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Methyl Isobutyl Ketone (MIBK)	twenty parts per million in each product acid stream (thirty day average)	2D .1111 40 CFR 63 Subpart AA
	thirty parts per million in each raffinate stream (thirty day average)	2D .1111 40 CFR 63 Subpart AA
	chiller gas steam exit temperature less than or equal to 50 Fahrenheit	2D .1111 40 CFR 63 Subpart AA 2D.0530 BACT
Total Fluorides	0.0152 pounds per hour	2D .0530 BACT
VOC	see 2.3 multiple Sources	2D .0958
	See section 2.3 multiple sources	2D .1111 40 CFR 63 Subpart H
TAPS	see 2.2	2D.1100

2.1.6.F.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSFORIC ACID MANUFACTURING PLANTS

15A NCAC 2D .1111: Maximum Achievable Control Technology

Emission Standard

- a. Operation of the Purified Acid Plant No. 1 shall be limited to not exceed any of the following:
 - i. A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of twenty parts per million for each product acid stream.
 - ii. A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of thirty parts per million for each raffinate stream.
 - iii. A daily average chiller stack exit gas stream temperature less than or equal to fifty degrees Fahrenheit. [63.602 (f)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.6.F.1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall:

1. Install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the stack gas exit temperature for each chiller stack.
2. Measure and record the concentration of methyl isobutyl ketone in each product acid stream and each raffinate stream once daily.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems are not maintained, calibrated, operated, and the results recorded. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these monitoring systems any exceedances of the standards given in section a. above.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

Start-up, Shutdown, and Malfunction Procedures

- e. PCS Phosphate must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, PCS Phosphate shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

PCS Phosphate shall keep the written SSM plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the affected source is no longer subject to the provisions of this part. In addition, if SSM plan is revised, PCS Phosphate shall keep previous (i.e., superseded) versions of the SSM plan on record, to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time it was developed, PCS Phosphate shall revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment. (40 CFR 63 Subpart A)

**2. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD)
BACT**

Emission standard - BACT

- a. For Purified Acid Plant (ID No. 503) the following table shall describe the emission

standards:

Source	Pollutant	BACT Technology	Emission Limit
Purified Acid Plant (PAP) No. 2 Chiller Stack (ID No. 503)	VOC	Chiller	Maintain a daily average chiller stack exit gas stream temperature less than or equal to 50F
PAP No. 2 Chiller Stack (ID No. 503)	Total Fluorides	Chiller	1.52 x 10 ⁻² pounds per hour

Testing/Monitoring/Reporting/Recordkeeping

- b. The requirements for testing/Monitoring/Reporting/Recordkeeping given in 2.1.6.F.1 above will be sufficient to demonstrate compliance with 2D .0530 for the chiller stack temperature requirement.

Testing

- c. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.6.F.2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.
- d. Under the provisions of NCGS 143-215.108, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for the purified phosphoric acid plant chiller stack. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The chiller stack shall be tested once per five-year permit period at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

All instances of deviations from the requirements of this permit must be clearly identified.

2.1.6.G One (1) Acid Defluorination Columns and Concentrators - Emission Source ID S1088, T1070, S1118, and T1100 Emission Point ID No. 504

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Total Fluorides	0.0688 pounds per hour	2D .0530 BACT
VOC	see 2.3 multiple Sources	2D .0958
TAPS	see 2.2	2D.1100

2.1.6.G.1 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD) BACT

Emission standard - BACT

- a. For the Acid Defluorination and Concentrators the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
PAP No. 2 Scrubber Stack (ID No.504)	Total Fluorides	Scrubbers	6.88 x 10 ⁻² pounds per hour

Testing

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.6.G.1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.
- c. Under the provisions of NCGS 143-215.108, the Permittee shall conduct a performance test to demonstrate compliance with the applicable emission standard for Emission Point 504. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The chiller stack shall be tested once per five-year permit period at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant

by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- d. The Permittee shall install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the pond liquid injection rate for each wet spray tower scrubber. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these monitoring systems are not maintained, calibrated, operated, and the results recorded.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.6.H PAP No. 2 Direct Cooling Tower Consisting of Two Fans - Emission Source ID E1180-1 and E1180-2 Emission Point ID No. 514/515

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Total Fluorides	0.072 pounds per hour	2D .0530 BACT
Particulates	0.11 pounds per hour	2D .0530 BACT
VOC	see 2.3 multiple Sources	2D .0958
TAPS	see 2.2	2D.1100

2.1.6.H.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC ACID MANUFACTURING PLANTS
15A NCAC 2D .111: Maximum Achievable Control Technology

- a. Operation of the cooling towers shall be limited as follows: No introduction of any liquid effluent from any wet scrubbing device installed to control emissions from process equipment into any evaporative cooling tower shall be allowed. Compliance with this

requirement shall be shown during inspections by the DAQ and by certification by the permittee. [40 CFR PART 63 SUBPART AA - 63.603(e)]

2. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD) BACT

Emission standard - BACT

a. For the Concentrators the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
PAP No. 2 Cooling Tower No. 1 Fans 1 and 2 (ID Nos. 514 and 515)	PM ₁₀	Drift Elimination System	0.11 pounds per hour
PAP No. 2 Cooling Tower No. 1 Fans 1 and 2 (ID Nos. 514 and 515)	Total Fluorides	Drift Elimination System	7.2 x 10 ⁻² pounds per hour

Testing

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.6.G.1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

d. The Permittee shall maintain records to demonstrate the operation of the efficient drift elimination. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

e. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.6.I PAP No. 2 Indirect Cooling Tower Consisting of Two Fans - Emission Source ID E1181-1 and E1181-2 Emission Point ID No. 516/517

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
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Total Fluorides		2D .0530 BACT
Particulates	0.0058 pounds per hour	2D .0530 BACT
VOC	see 2.3 multiple Sources	2D .0958
TAPS	see 2.2	2D.1100

2.1.6.I.1 40 CFR PART 63 SUBPART AA: NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM PHOSPORIC ACID MANUFACTURING PLANTS

15A NCAC 2D .1111: Maximum Achievable Control Technology

- a. Operation of the cooling towers shall be limited as follows: No introduction of any liquid effluent from any wet scrubbing device installed to control emissions from process equipment into any evaporative cooling tower shall be allowed. Compliance with this requirement shall be shown during inspections by the DAQ and by certification by the permittee. [40 CFR PART 63 SUBPART AA - 63.603(e)]

2. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD) BACT

Emission standard - BACT

- a. For the Acid Defluorination and Concentrators the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Emission Limit
PAP No. 2 Cooling Tower No. 1 Fans 1 and 2 (ID Nos. 514 and 515)	PM ₁₀	Drift Elimination System	0.0058 pounds per hour
PAP No. 2 Cooling Tower No. 1 Fans 1 and 2 (ID Nos. 514 and 515)	Total Fluorides	Drift Elimination System	

Testing

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.6.G.1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Monitoring/Recordkeeping /Reporting[15A NCAC 2Q .0508 (f)]

- d. No monitoring, recordkeeping or reporting is required to show compliance with this standard.

2.1.6.J Purified Acid Plant No. 1 and No. 2 Tank Farm Fugitives and Storage Tank Fugitives –Emission Point ID No. 590, 591, 592, and 593

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	See section 2.3 multiple sources	2D .0958
	recordkeeping	2D .0524 NSPS Subpart Kb
TAPS	see 2.2	2D.1100

2.1.6.J.1 15A NCAC 2D. 0524 (40 CFR 60, Subpart Kb) - VOLATILE ORGANIC LIQUID STORAGE TANKS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Kb, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Monitoring and Recordkeeping [15A NCAC 2Q .0508(f)]

b.

The owner or operator of the storage vessel shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.16b(b)]

c.

The owner or operator of the storage vessel with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

2.1.7 Defluorinated Feed Phosphate Production Area

2.1.7.A Two (2) Pug Mills and One (1) Defluorination Kiln - Emission Source ID 355-116-455A, 355-116-455B and 365-135-477 (Emission Point DFP Kiln Stack - ID No. 701)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	41.2 pounds per hour 329.2 pounds per day	2D .0501(e)

	39.5 tons per year	2Q .0317(a)(1) PSD Avoidance limit
	2.3 pounds per million Btu	2D .0516
Carbon Monoxide	117.52 pounds per hour	2D .0530 BACT
Sulfuric Acid Mist	6.57 pounds per hour	2D .0530 BACT
NO _x	210 pounds per hour	2D .0530 BACT
	562.5 tons per year	2D .0501(e)
Particulates	727.2 pounds per 3 hour block 132.7 tons per year	2D .0501(e)
	25.0 pounds per hour (filterable)	2D .0530 BACT
	$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour and P = process weight in tons per hour (for P < 30 tons per hour)	2D .0515
TAPS	see 2.2	2D.1100

2.1.7.A.1. 15A NCAC 2D. 0501(e) : COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

Emission Standard

- a. Sulfur dioxide emissions from the kiln shall not exceed:
 - i. 41.2 pounds per hour, and
 - ii. 329.2 pounds per day
- b. Nitrogen oxide (NO_x) emissions from the kiln shall not exceed 562.5 tons per year.
- c. Particulate matter emissions limits from the Pug Mill and Kiln are found in the multiple source section 2.2.B.1.A.

Testing [15A NCAC 2Q .0501 (c)(4)]

- e. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1.1. A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

- f. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits for sulfur dioxide above by testing the kiln (**ID No. 365-135-477**) once per five year permit period for sulfur dioxide in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Further testing details can be found in 4.f. If the results of this test are above the limit given in Section 2.1.7. A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).
- g. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits for NOx above by testing the kiln (**ID No. 365-135-477**) once per five year permit period for NOx in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. Further testing details can be found in 4.f. If the results of this test are above the limit given in Section 2.1.7. A. 1. b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- h. To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance (I&M) as recommended by the manufacturer plus any additional I&M as listed below. The results of all inspections and any variance from manufacturer’s recommendations or from those given in this permit shall be investigated with corrections made and the dates of all actions recorded in a logbook. Records of all maintenance and monitoring activities shall be recorded on the logbook. The logbook (in written or electronic form) shall be kept on site and made available to DAQ personnel upon request. Failure to maintain this logbook will be deemed noncompliance with 15A NCAC 2D .0501(e).

Reporting [15A NCAC 2Q .0508(f)]

- i. The Permittee shall submit a summary report of testing monitoring, and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (PSD) BACT

Emission standard - BACT

- a. For the Pug Mills and Defluorination Kiln (Emission Point DFP Kiln Stack - ID No. 701) the following table shall describe the emission standards:

Source	Pollutant	BACT Technology	Required Removal Efficiency	Emission Limit

Pugmill, Defluorination Kiln (ID Nos. 355-116-455A+B, 365-135-477)	Particulate (filterable particulate)	2 Jet Scrubber	98.31%	25 lb/hr
	Sulfuric Acid mist	2 Jet Scrubber	20.8%	6.57 lb/hr
	carbon monoxide	good combustion practices	not applicable	117.52 lb/hr
	nitrogen oxides	good combustion practices	not applicable	210.0 lb/hr

1. Removal Efficiency required to be met at all times at any operational rate.
2. Emission Limit is maximum allowable, not to be exceeded as determined by the compliance method.

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0530 and General Condition JJ. If the results of this test are above the limit given in Section 2.1.1. A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).
- c. Under the provisions of NCGS 143-215.108 and per 40 CFR 63.606, the Permittee shall conduct a performance test to demonstrate compliance with the applicable particulate and sulfuric acid mist emission standards for the Pug Mills and Defluorination Kiln (Emission Point DFP Kiln Stack - ID No. 701) in accordance with 40 CFR 63.626. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ. The sources shall be tested once per five-year permit period at a rate demonstrable by production records to be equal to or greater than the normal production rate of the source. The normal production rate (hourly) shall be calculated by dividing the total annual production for the plant by the number of hours that plant was operated during that year. The normal production rate for the source test must be approved by the Division of Air Quality in advance of the test. The facility shall establish the normal production rate using the production records over the last production year. A copy of the production records must accompany the request. If the results of this test are above the emission standard given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Inspection/Recordkeeping

- d. The permittee shall ensure compliance with the PM/PM10 emission limits stated above by monitoring the following operational parameters and performing the required Inspection and Maintenance procedures:

Source	Control Device	Inspection and Maintenance	Monitoring		
			Parameter	Range	Frequency
DFP Pugmill and Kiln (ID Nos. 355-116-455A+B & 365-135-477)	Limestone Slurry Scrubber (ID No. 360-120-476)	Perform periodic inspections and maintenance (I&M) as recommended by the manufacturer.	Recycle liquid flow rate	Set during compliance test	Daily

			Liquid make up flow rate	Set during compliance test	Daily
			Pressure drop across scrubber	55 to 65 inches of water	Daily
			pH	Set during compliance test	Daily

Operation of the kiln while any of the scrubber parameters are outside of the ranges above shall be deemed non-compliance with 15A NCAC 2D .0530.

- e. The results of all inspections and any variance from manufacturer’s recommendations or from those given in this permit shall be investigated with corrections made and the dates of all actions recorded in a logbook. Records of all maintenance and monitoring activities shall be recorded on the logbook. The logbook (in written or electronic form) shall be kept on site and made available to DAQ personnel upon request. Failure to maintain this logbook will be deemed noncompliance with 15A NCAC 2D .0501(e).

Reporting [15A NCAC 2Q .0508(f)]

- f. The Permittee shall submit a summary report of testing monitoring, and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

- c. Compliance with the requirements of stipulation 2.1.7.A.2 shall be sufficient to comply with 2D .0515.

4. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of 15A NCAC 2D .0530(g), the defluorination kiln (Emission Point DFP Kiln Stack - ID No. 701) shall discharge into the atmosphere less than 39.50 tons per year of sulfur dioxide.[15A NCAC 2Q .0317(a)(1)]
- b. In insure compliance with the emission limit above, annual production of defluorinated feed phosphate shall be limited to 175,000 tons per year.

Testing [15A NCAC 2D .0501(c)(4)]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 3.B.5. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Monitoring/Recordkeeping/Calculations [15A NCAC 2Q .0508 (f)]

- c. The Permittee shall maintain a production log (written or electronic form) to demonstrate compliance with the production limit in 2.1.7.A.4.b above. If the production rate shown in the production log is above the limit in 4.b above for any consecutive 12 month period, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.
- d. The monitoring and recordkeeping required in 2.1.2.A.1.e, f and g shall be used in determining compliance with 2.1.7.A.4.a. In addition fuel use in the defluorination kiln shall be recorded in a logbook. From these records the mass of sulfur contained in the fuels burned in the kiln shall be determined. The mass of sulfur dioxide emitted from the kiln shall be twice the mass of sulfur introduced into the kiln in the fuels. If the results of these calculations are above the limit given in Section 2.1 7.A. 4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2Q .0317.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:

- i the monthly sulfur dioxide emissions for the previous 14 months. The emissions must be calculated for each of the three 12-month periods over the previous 14 months.
- ii. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

Emission Standard

- a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .0501(c)(4)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.B.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c.. No monitoring/recordkeeping is required for sulfur dioxide emissions from No. 2 fuel oil for this source.

2.1.7.B Materials Handling Sources

Grate Cooler - Emission Source ID 370-106-468 - (Emission Point ID No. 702)

Soda Ash Day Bin and Soda Ash Unloading - Emission Source ID 355-128-462 and 382-137-463 (Emission Point ID No. 709 and 710)

Limestone Storage Silo - Emission Source 382-100-462 (Emission Point ID No. 711)

Soda Ash Feeder, Limestone Feeder, Plenum Recycle Dust Discharge Conveyor, Plenum Dust Elevator, and Plenum Dust Bin - Emission Source ID 355-154-463, 355-153-463, 355-112-473, 365-155-472, and 355-125-462 (Emission Point ID No. 713)

Phosphate Rock Surge Bin, Phosphate Rock Feeder, and Recycle Feeder - Emission Source ID No. 355-129-462, 355-155-463 and 355-156-463 (Emission Point ID No. 714)

Recycle Bin - Emission Source ID 355-130-462 (Emission Source ID No. 715)

Product Cooler Discharge Conveyor, Clinker Surge Bin Elevator, Clinker

Reclaim Conveyors 1 and 2, Clinker Surge Bin, Screening Feed Elevator, Clinker Reclaim Hopper, Clinker Reclaim Crusher, Clinker Screen, Screen Elevator, Abort Surge Bin, Crusher Discharge Conveyor - Emission Source ID No. 370-176-474, 370-155-472, 370-177-463, 370-174-463, 370-113-463, 370-156-472, 370-115-462, 370-126-480, 370-140-432, 370-150-472, 370-114-462 and 370-175-463 (Emission Point ID No. 717)

Product Screen Discharge Conveyor, Product Transfer Conveyor, Product Tripper Conveyor, Product Loadout Hopper, Product Loadout Elevator, Product Loadout Elevator and Product Loadout Conveyor - Emission Source ID 370-148-463, 375-117-463, 375-118-463, 375-103-462, 375-132-472 and 375-120-463 (Emission Point ID No. 718)

Product Shipping Emission Source ID 375-135-478 (Emission Point ID 754)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	E= 55.0 x P ^{0.11} -40 where E = allowable emission rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
Visible Emissions	20 percent opacity	NCAC 2D .0521
PM/PM10	See Section 2.2 -Multiple Source	NCAC 2D .530

2.1.7.B.1 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E=4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the

Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from these sources shall be controlled by bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

[15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.7.B. 2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The results of these observations shall be recorded in a logbook (written or electronic form). The Permittee shall establish “normal” for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.5.C.2. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.1.8 Shipping and Miscellaneous Operations

2.1.8.A Rail Car Operations

- Ammonia Railroad Unloading - Emission Point ID Nos. 601, 602, and 603
- Ammonia Storage Tanks - Emission Point ID Nos. 604 and 605
- Sulfur Railroad Unloading - Emission Point ID Nos. 610, 611, 612, 613, and 614
- Railcar Wash Station No. 1 - Emission Point ID No. 615
- Tank Farm Fugitives - Emission Point ID No. 616
- Railcar Wash Station No. 2 - Emission Point ID No. 617

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	See Section 2.2 -Multiple Source	NCAC 2D .1100

2.1.8.B Rock Tower Barge Loadout - Emission Point ID No. 650, 651, 652, and 653

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM/PM10	E= 55.0 x P ^{0.11} -40 where E = allowable emission rate in pounds per hour and P = rock throughput in tons per hour	NCAC 2D .0515
Visible Emissions	20 percent opacity	NCAC 2D .0521

2.1.8.B.1 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

Emission Standard

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 55.0 \times P^{0.11} - 40 \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .0501 (c)(3)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from these sources shall be controlled by enclosures. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system enclosures unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the enclosure's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the

enclosure is not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the enclosures; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the enclosures within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

Emission Standard

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.7.B. 2. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The results of these observations shall be recorded in a logbook (written or electronic form). The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the

Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) is below the limit given in Section 2.1.5.C.2. a. above. If the demonstration in (b) above cannot be made during the month, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**2.1.8.C Mine Pit Diesel Generator - Emission Point ID Nos. 801
Calcliner Building Diesel Generator - Emission Point ID Nos. 802**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	20 percent opacity (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 2D .0535) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period	15A NCAC 2D .0521
NOx	39.3 tons per year	2Q.0317(a)(1)

2.1.8.C.1. 15A NCAC 2D .0516: “SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES”

- a. Emissions of sulfur dioxide from this source shall not exceed **2.3 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source shall not be more than **20 percent opacity** (except during startup, shutdowns, and malfunctions approved as such according to procedures approved under 15A NCAC 2D .0535) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .0501(c)(8)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8).

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a day, when the generators are operating, the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. The Permittee shall establish "normal" for the source in the first 30 days that the source operates following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8) for 30 minutes is below the limit given in Section 2.1 I.3.a above.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2Q.0317(a)(1): AVOIDANCE OF PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of 15A NCAC 2D .0530(g), the generators (Emission Point ID Nos. 801 and 802) shall each discharge into the atmosphere less than 40 tons of nitrogen oxides per consecutive 12-month period. [15A NCAC 2Q .0317(a)(1)]
- b. To ensure compliance with the emission limit above total fuel usage in each generator shall be limited to 223,000 gallons of diesel fuel per consecutive 12 month period.

Testing [15A NCAC 2D .0501(c)(4)]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A

NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.1.B.5.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC Q .0317.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

- d. The Permittee shall maintain fuel usage log (written or electronic form) which demonstrates that actual annual (12-month) consumption of diesel fuel from the above sources are each less than 223,000 gallons. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the fuel usage exceeds the above limit. The log must be made available to and an authorized representative upon request.

Reporting Requirements [15A NCAC 2Q .0508 (f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The report shall contain the monthly fuel use for the previous 14 months. All instances of deviations from the requirements of this permit must be clearly identified.

2.2- Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility wide

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	see tables below	2D .0501(e)

1. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of all equipment at the facility shall be limited as follows: [15A NCAC 2D .0501(e)]
 - i. With the exception of the equipment listed below, all equipment can run at full capacity
 - ii. Scenario 1: the equipment shall operate as described in the following table.

two boilers (ID Nos. 110new and 111)	Sulfuric Acid (SA) Plant No. 3 (ID No. 101)	SA Plant No. 4 (ID No. 102)	SA Plant No. 5 (ID No. 103)	SA Plant No. 6 (ID No. 104)
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shut down	7600 pounds per day of sulfur dioxide emissions	7032 pounds per day of sulfur dioxide emissions	12920 pounds per day of sulfur dioxide emissions	13680 pounds per day of sulfur dioxide emissions
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iii. Scenario 2: the equipment shall operate as described in the following table with the additional restriction that one of the sulfuric plants must be shutdown.

two boilers (ID Nos. 110new and 111)	Sulfuric Acid (SA) Plant No. 3 (ID No. 101)	SA Plant No. 4 (ID No. 102)	SA Plant No. 5 (ID No. 103)	SA Plant No. 6 (ID No. 104)
full capacity	7600 pounds per day of sulfur dioxide emissions	7032 pounds per day of sulfur dioxide emissions	13680 pounds per day of sulfur dioxide emissions	14440 pounds per day of sulfur dioxide emissions

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508 (f)]

- c. The monitoring, recordkeeping, and reporting requirements contained 2.1.1.A.1.c and d will be sufficient to demonstrate compliance with this requirement.

2. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

a. Pursuant to 15A NCAC 2D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:

- (1) store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
- (2) clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
- (3) store wipe rags containing volatile organic compounds in closed containers,
- (4) not clean sponges, fabric, wood, paper products, and other absorbent materials with

- volatile organic compounds,
- (5) transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - (6) clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
- (1) flush parts in the freeboard area,
 - (2) take precautions to reduce the pooling of solvent on and in the parts,
 - (3) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - (4) not fill cleaning machines above the fill line,
 - (5) not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. No inspection is required in any area that has not utilized volatile organic compounds during the previous month. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed.

If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

3. **TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT** - Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)

- a. To ensure compliance with the above limits, the following restrictions shall apply:
 - i. The Permittee shall maintain records of production rates, material feed rates and other process operational information as is necessary to determine compliance with the process operating limitations cited above and the corresponding toxic pollutant emission limits contained in the Table in this section.
 - ii. For the processes/sources described in the Tables above whose emissions are abated by control devices or enclosures an inspection, maintenance and monitoring program shall be provided for each item of equipment to ensure that maximum control efficiency is maintained. The Permittee shall maintain on site a comprehensive program which details by control device the scheduled maintenance and monitoring activities as recommended by the equipment manufacturer. The defined activities will be performed per a set schedule (weekly, monthly, quarterly, annually) with a method of tracking and recording the completion of each activity. Both the monitoring and maintenance activities will be specific. The monitoring activities will be quantifiable and will be compared against design parameters with dated actions noted to correct out of specification operations. A centralized recording keeping system shall be utilized to define the activities and record actions as a demonstration of compliance.
 - iii. The air toxic model submitted as part of your most recent application is considered part of the binding limits and conditions of this permit. Your application specified certain parameters for modeling compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants." A new permit is required prior to changing any of these parameters.
Changes in equipment of operations that affect stack exhaust temperature or the stack gas exit velocity, or changes in facilities such as location of new buildings or structures in close proximity to the modeled stack, that could significantly increase the modeled emissions, would require an amended permit application.
- b. For compliance purposes, within 30 days after each calendar year quarter the following shall be reported to the Regional Supervisor, DAQ:
 - i. A certification that all actual measured production and material feed rates cited in NCAC 2D .1100 stipulations throughout this permit were all within the permit limitations over the past quarter. If exceedences occur, identify source, limitation, date, and corrective actions taken to bring into compliance.
 - ii. A certification that all scheduled maintenance and monitoring activities required in NCAC 2D .1100 stipulations throughout this permit were completed as scheduled. Provide also, the total number of monitoring events performed over the quarter and total number found within their defined design range.

B. DFP Area, Pug Mill, Kiln, and Materials Handling Sources (Section 2.1.7.B)

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation

PM-10	727.2 pounds per 24 hours 137.2 tons per year	2D .0501(e)
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1. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation the equipment listed above shall be limited as follows: [15A NCAC 2D .0501(e)]
 - i. emissions of PM-10 from all of the sources considered together shall not exceed 727.2 pounds per 24 hours (midnight to midnight).
 - ii. emissions of PM-10 from all of the sources considered together shall not exceed 137.2 tons per year.

Testing/Monitoring/Recordkeeping/Reporting

- b. Fulfilment of the requirements in 2.1.7.A.2, 2.1.7.B.1, and 2.1.7.B.2 shall be sufficient to demonstrate compliance with this requirement.

VII. Multiple Emission Source Limits

A. Facility wide

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	see tables below	2D .0501(e)

1. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation of all equipment at the facility shall be limited as follows: [15A NCAC 2D .0501(e)]
 - i. With the exception of the equipment listed below, all equipment can run at full capacity
 - ii. Scenario 1: the equipment shall operate as described in the following table.

two boilers (ID Nos. 110new and 111)	Sulfuric Acid (SA) Plant No. 3 (ID No. 101)	SA Plant No. 4 (ID No. 102)	SA Plant No. 5 (ID No. 103)	SA Plant No. 6 (ID No. 104)
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shut down	7600 pounds per day of sulfur dioxide emissions	7032 pounds per day of sulfur dioxide emissions	12920 pounds per day of sulfur dioxide emissions	13680 pounds per day of sulfur dioxide emissions
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iii. Scenario 2: the equipment shall operate as described in the following table with the additional restriction that one of the sulfuric plants must be shutdown.

two boilers (ID Nos. 110new and 111)	Sulfuric Acid (SA) Plant No. 3 (ID No. 101)	SA Plant No. 4 (ID No. 102)	SA Plant No. 5 (ID No. 103)	SA Plant No. 6 (ID No. 104)
full capacity	7600 pounds per day of sulfur dioxide emissions	7032 pounds per day of sulfur dioxide emissions	13680 pounds per day of sulfur dioxide emissions	14440 pounds per day of sulfur dioxide emissions

Testing [15A NCAC 2Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.2.A. 1. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508 (f)]

- c. The monitoring, recordkeeping, and reporting requirements contained 2.1.1.A.1.c and d will be sufficient to demonstrate compliance with this requirement.

2. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
 - (1) store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - (2) clean up spills of volatile organic compounds as soon as possible following

- proper safety procedures,
- (3) store wipe rags containing volatile organic compounds in closed containers,
 - (4) not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - (5) transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - (6) clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
- (1) flush parts in the freeboard area,
 - (2) take precautions to reduce the pooling of solvent on and in the parts,
 - (3) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - (4) not fill cleaning machines above the fill line,
 - (5) not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. No inspection is required in any area that has not utilized volatile organic compounds during the previous month. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed.

If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

- 3. **TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REQUIREMENT**
- Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)

- a. To ensure compliance with the above limits, the following restrictions shall apply:
 - i. The Permittee shall maintain records of production rates, material feed rates and other process operational information as is necessary to determine compliance with the process operating limitations cited above and the corresponding toxic pollutant emission limits contained in the Table in this section.
 - ii. For the processes/sources described in the Tables above whose emissions are abated by control devices or enclosures an inspection, maintenance and monitoring program shall be provided for each item of equipment to ensure that maximum control efficiency is maintained. The Permittee shall maintain on site a comprehensive program which details by control device the scheduled maintenance and monitoring activities as recommended by the equipment manufacturer. The defined activities will be performed per a set schedule (weekly, monthly, quarterly, annually) with a method of tracking and recording the completion of each activity. Both the monitoring and maintenance activities will be specific. The monitoring activities will be quantifiable and will be compared against design parameters with dated actions noted to correct out of specification operations. A centralized recording keeping system shall be utilized to define the activities and record actions as a demonstration of compliance.
 - iii. The air toxic model submitted as part of your most recent application is considered part of the binding limits and conditions of this permit. Your application specified certain parameters for modeling compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants." A new permit is required prior to changing any of these parameters.
Changes in equipment of operations that affect stack exhaust

temperature or the stack gas exit velocity, or changes in facilities such as location of new buildings or structures in close proximity to the modeled stack, that could significantly increase the modeled emissions, would require an amended permit application.

- b. For compliance purposes, within 30 days after each calendar year quarter the following shall be reported to the Regional Supervisor, DAQ:
 - i. A certification that all actual measured production and material feed rates cited in NCAC 2D .1100 stipulations throughout this permit were all within the permit limitations over the past quarter. If exceedences occur, identify source, limitation, date, and corrective actions taken to bring into compliance.
 - ii. A certification that all scheduled maintenance and monitoring activities required in NCAC 2D .1100 stipulations throughout this permit were completed as scheduled. Provide also, the total number of monitoring events performed over the quarter and total number found within their defined design range.

B. DFP Area, Pug Mill, Kiln, and Materials Handling Sources (Section 2.1.7.B)

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM-10	727.2 pounds per 24 hours 137.2 tons per year	2D .0501(e)

1. 15A NCAC 2D. 0501(e): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Operation the equipment listed above shall be limited as follows: [15A NCAC 2D .0501(e)]
 - i. emissions of PM-10 from all of the sources considered together shall not exceed 727.2 pounds per 24 hours (midnight to midnight).
 - ii. emissions of PM-10 from all of the sources considered together shall not exceed 137.2 tons per year.

Testing/Monitoring/Recordkeeping/Reporting

- b. Fulfilment of the requirements in 2.1.7.A.2, 2.1.7.B.1, and 2.1.7.B.2 shall be sufficient to demonstrate compliance with this requirement.

VIII. MACT Applicability and Requirements

(*OPTIONAL: delete if not necessary) Based on a review of the facility's current operations and emission sources, the facility is not subject to an promulgated or proposed MACT standards.

IX. Permit Shield (including non-applicable requirements)

In accordance with 2Q .0512 the permit will contain a provision stating that compliance with the terms, conditions, and limitations of the Title V permit shall be deemed in compliance with applicable requirements specifically identified in the permit, as of the date of permit issuance. If the permit does not expressly state that a permit shield exists then it shall be presumed not to provide such a shield.

(* Discuss request for permit shield for non-applicable requirements here if necessary)

X. Other Applicable Requirements

A. Short term or temporary emission unit(s)

B. Other

XI. General Conditions

The "General Conditions" section of the Title V Operating Permits lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit renewal and expiration, transfer of ownership or operation, property rights, submission of documents, inspections and entry procedures, reopen for cause, and severability.

XII. Insignificant Activities

The insignificant activities listed in the application have been reviewed and verified. Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.

XIII. Public Notice

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30 day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list, the following affected states _____, _____, and EPA.

XIV. Recommendations

The initial Title V application for _____ has been reviewed by the DAQ to determine compliance with all procedures and requirements under 15A NCAC 2Q .0500 and 40 CFR Part 70. The DAQ has made a preliminary determination that the facility is complying or will achieve compliance as specified in the draft permit with all applicable requirements. Therefore, the DAQ is proposing to issue the Title V Operating Permit upon completion of the public comment period and the EPA review.