



Department of Environmental Protection

Jeb Bush
Governor

Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

June 6, 2002

Mr. Daniel E. Ross, P.E.
Executive V.P. & Chief Operating Officer
Nitram, Inc
P.O. Box 2968
Tampa, FL 33601

RECEIVED

JUN 10 2002

BUREAU OF AIR REGULATION

RE: Draft Permit #0570029-007-AC
Mailed 5/29/2002

Dear Mr. Ross:

It was recently brought to our attention that a couple of pages may be missing from the Technical Evaluation and Preliminary Determination in the above mentioned draft permit. Therefore, I have enclosed a complete set for you to use to replace your existing set.

We are sorry for any inconvenience this may have caused you.

Sincerely,

Patricia A. Prickett
Senior Clerk - FDEP Air Program

pap

cc: Jerry Campbell, P.E. - EPCHC
Clair Fancy, P.E. - FDEP, DARM
✓ At Linero, P.E. - FDEP, DARM
Mr. Stephen Smallwood, P.E. - Air Quality Services
1640 Eagles Landing Blvd., Unit 103
Tallahassee, FL 32308-1560
Mr. William B. Taylor, IV, Esq. - Macfarlane, Ferguson & McMullen
400 North Tampa Street, Suite 2300
Tampa, FL 33602

Enclosure

"More Protection, Less Process"

Printed on recycled paper.

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TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION
FOR
Nitram, Inc.
Hillsborough County

Construction Permit Application Number
0570029-007-AC

Florida Department of Environmental Protection
Southwest District

May 21, 2002

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I. Project Description:

A. Applicant:

Nitram, Inc.
P.O. Box 2968
Tampa, FL 33601

Mr. Daniel E. Ross, P.E., Executive Vice President & Chief
Operating Officer

B. Engineer:

Mr. Stephen Smallwood, P.E.
Air Quality Services
1640 Eagles Landing Blvd., Unit 103
Tallahassee, FL 32308-1560

C. Project and Location:

Nitram, Inc. has requested in part, the Low Density Prill
production rate at the Ammonium Nitrate Prill Tower No. 2
and the Prill Rotary Drums be increased to 50 tons/hr. at an
Ammonium Nitrate Manufacturing facility located at 5321
Hartford Street, Tampa.

D. Process and Controls:

For the synthetic non-PSD construction modifications of an
existing permitted Title V facility that manufactures
ammonium nitrate products. The facility consists of the
following emission units:

- No. 003 - B & W Package Boiler
- No. 004 - FW Package Boiler
- No. 013 - Hurst Package Boiler
- No. 006 - Ammonium Nitrate Prill Tower No. 2
- No. 007 - Nitric Acid Plant
- No. 008 - Kaolin clay Handling and Storage (**Permanently
Shutdown**)
- No. 009 - Ammonium Nitrate Storage and Loadout System (**All
activities relating to handling and storing
ammonium nitrate coated with clay have been
permanently shutdown**)
- No. 010 - MgO Silo
- No. 011 - MgO Day Tank
- No. 012 - Prill Rotary Drums
- No. 100 - Unregulated Facility Wide Fugitive Emissions

The permittee has requested modifications to the Ammonium
Nitrate Prill Tower No. 2 (E.U. No. 006) and the Prill
Rotary Drums (E.U. No. 012). The requested modifications
are as follows:

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- A. Increase the production rate of low density prill (LDP) from 25 tons/hr. to 50 tons/hr. (based on a daily average) at the Ammonium Nitrate Prill Tower No. 2.
- B. Increase the production rate of LDP from 23 tons/hr. to 50 tons/hr. (based on a daily average) at the Prill Rotary Drums.
- C. Decrease the production rate of high density prill (HDP) from 55 tons/hr. to 50 tons/hr. (based on a daily average) at the Prill Rotary Drums.

In order for the above modifications to avoid the Prevention of Significant Deterioration (PSD) requirements of Rule 62-212.400, F.A.C., this permit limits the change in the past actual emissions (years 1999 & 2001) to future allowable emissions from the facility to not exceed the significant emission rates shown in Table 212.400-2 contained in Chapter 62-212, F.A.C.

E. Application Information:

Application received: October 2, 2001
Additional Information Requested: October 23, 2001
Additional Information Received: December 20, 2001 &
February 28, 2002
Application Complete: February 28, 2002

II. Rule Applicability (Note, the term "project" as used below means in relation to the requested modifications noted above):

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes and Chapters 62-204 through 62-297, Florida Administrative Code (F.A.C.).

The location of this project is inside the Hillsborough County particulate matter and ozone air quality maintenance area.

This project is subject to the Title V permitting requirements of Rule 62-213, F.A.C., since NO_x and PM₁₀ emissions are greater than 100 tons/yr. from this facility.

This project is not subject to the requirements of Rule 62-212.400, Prevention of Significant Deterioration, F.A.C. or Rule 62-212.500, New Source Review for Nonattainment Areas, F.A.C., since the modifications are is minor by state definition as explained in more detail below:

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Synthetic Non-PSD Analysis: Nitram Inc.'s current Title V permit 0570029-002-AV limits Low Density (LDP) and High Density Product (HDP) production as follows:

- Prill Tower: HDP to 50 tph and LDP to 25 tph.
- Prill Rotary Drums: HDP to 55 tph and LDP to 23 tph. in the Prill Tower.

Nitram Inc.'s view, expressed in more detail in their August 6, 2001 letter to the DEP, is that the separate production limit for LDP is a restriction on plant operation that has been "applied in error".

History: Prior permits for the Prill Tower starting in 1981 made no distinction between HDP and LDP. Starting with permit A029-205785 in 1992 there was recognition that the differences between the two products were significant enough to cause a distinction in permit language. The 1992 permit for the Prill Tower describes the differences in production parameters, and in the description states:

"HDP is produced at a maximum rate of 50 TPH while LDP is produced at a maximum rate of 25 TPH."

Also, the specific conditions include these requirements:

"Testing is to be done while producing the high density prill with one exception. One time during the five years of this permit, the annual compliance demonstration is to be conducted while producing the low density products Testing of emissions must be accomplished at approximately (+ or - 10%) of the permitted production rate* of 50 tph of high density prill or 25 tph of low density prill."

* emphasis added

In the 1996 Title V application and subsequent current title V permit, there was recognition by Nitram, Inc. and DEP of the distinction between the two products, in both Nitram Inc.'s application and the permit conditions which included separate limits for LDP and HDP. If Nitram, Inc. had asked at that time of processing of the Title V permit application in 1996, that the distinction between production limits for the two products be removed, the same questions being addressed presently, as to whether these are separate products, would have been asked then. Therefore, it does not seem valid to remove this distinction now, on the basis of a prior "error", without addressing the questions presently.

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LDP product is used as a base in making explosives. HDP product is used as fertilizer. Since it is dangerous for the LDP explosive base product to pick up moisture, it undergoes extra drying steps to bring its moisture content to a very low level, and a waxy coating (galoryl) is applied (only to the LDP product) to prevent any absorption of additional moisture. The differences between the two products thus include differences in production parameters, additional additives, and a difference in physical equipment used, i.e., pre-dryer drum, dryer drum, and cooler drum for LDP product vs. only the cooler drum for HDP product. The dryer/cooler drums are a significant part of the process, with a PM emission limit of 9.24 lbs./hr. for the dryer/cooler drums vs. 26.0 lbs./hr. for the prill tower.

DEP's file for the dryer/cooler drums contains detailed emission calculations (supplied by Nitram, Inc.) in the original construction application. Those calculations account for mole ratios, differences in air flows, etc., through the cyclones and scrubber (each dryer or cooler drum has its own cyclone, and there is a single common scrubber). From the calculations it can be determined that the total inlet loading to the control devices (three cyclones and one scrubber for the LDP along with two cyclones and one scrubber for the HDP) is 45% greater at 35 tph of LDP product than at 50 tph for HDP product.

Based on the above, it is believed that on balance the differences between the two products are significant enough that they should be viewed separately. As such, the question becomes, "Is the increase in LDP production a modification?" Modification is defined in Rule 62-210.200, F.A.C., as a change in the method of operation, which would result in an increase in actual emissions. Although not stated as part of the definition, an "increase in the actual emissions" is interpreted in the PSD context as "prior actual to future potential" emissions, on a calendar year basis. "Method of Operation" is not defined in the PSD rules, but the rules do state that a change in the method of operation includes an increase in a production rate under a federally enforceable permit condition (which is the case here).

"actual increase" just what it says.
"this is a net increase!"

Debottlenecking is a PSD concept that says in this case, when production of LDP is allowed to increase, associated emission increases in any pollutant from processes upstream or downstream must be addressed. Thus, in this case, NOx emission increases upstream,

1999

max + 10% incorporated into permit?
vs. max test rate 33.7 vs 36.7

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from the boilers and nitric acid production, must be limited to ≤ 40 tpy, in a "prior actual to future potential" sense.

To determine that the increase in LDP production at the Ammonium Nitrate Prill Tower No. 2 and Prill Rotary Drums will be synthetically limited to avoid PSD requirements, the actual emissions from the 1999 AOR and 2001 AOR were used. Normally, the most recent two calendar years are averaged in determining actual emissions. In this case, the year 2000 was not considered representative, and 1999 and 2001 were averaged (see Attachment 1). By comparing the 2-year average emissions per pollutant with the facility's current permitted potential emissions, the Department determined that the critical pollutants of concern regarding a significant increase per Table 62-212.400-2 were Nitrogen Oxide emissions and PM₁₀ emissions. The following attached tables (see Attachment 2) summarize this analysis.

As can be seen from the Tables, in order to meet the significant increase level for NO_x, the 3 boilers are limited to a common tpy emission limitation. To meet this limitation a maximum combined total fuel usage limitation is made a condition of permit 0570029-007-AC. Likewise, for the Ammonium Nitrate Prill Tower No. 2 and Prill Rotary Drums to meet the significant increase for PM₁₀, each emission unit is required to stack test annually each product to determine an emission factor for that product, which will be used to determine compliance with the common PM emission limitation of 29.79 tons per any consecutive 12 month period.

Note, the Nitric Acid Plant (E.U. No. 007) and the Ammonium Nitrate Prill Tower No. 2 (E.U. No. 006) are subject to PSD requirements from previous PSD permitting actions.

This project is subject to the requirements of Rule 62-212.300, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C., since the project is not exempt from general permitting requirements.

This project, for the Hurst Package Boiler and Nitric Acid Plant, is subject to the requirements of Rules 62-296.406 and 62-296.408, F.A.C., respectively, Specific Emission Limiting and Performance Standards, F.A.C.

This project is subject to the requirements of Rule 62-296.320(4), General Particulate Emission Limiting Standards, F.A.C., since it is a source of particulate matter emissions.

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This project is subject to the requirements of Rule 62-296.320, General Pollutant Emission Limiting Standards, F.A.C., since it a source of volatile organic compounds (VOC) and a source of odors.

This project, for the B & W Package Boiler, FW Package Boiler, Ammonium Nitrate Storage and Handling, and Prill Rotary Drums, is subject to the requirements of Rule 62-296.700, Reasonably Available Control Technology, F.A.C., since Rules 62-296.702, 62-296.711, and 62-296.712, F.A.C. are applicable.

This project, for the Hurst Package Boiler and the Nitric Acid Plant, is subject to the requirements of Rule 62-204.800(7), Standards of Performance for New Stationary Sources, F.A.C. regarding 40 CFR 60, since the boiler is subject to Subpart Dc and the Nitric Acid Plant is subject to Subpart G.

This project is not subject to the requirements of Rule 62-204.800(8), Emission Guidelines and Compliance Times, F.A.C. regarding 40 CFR 60, Subpart C, since there is no source category.

This project is not subject to the requirements of Rule 62-204.800(9), National Emission Standard for Hazardous Air Pollutants, F.A.C. regarding 40 CFR 61, since there is no source category.

This project is subject to the requirement of Rule 62-204.800(10), National Emission Standard for Hazardous Air Pollutants, F.A.C. regarding 40 CFR 63, since the project is not a major source of HAPs.

This project is subject to the requirements of Chapter 84-446, Laws of Florida, Chapter 1-1 and Chapter 1-3, Rules of the Environmental Protection Commission of Hillsborough County.

IV. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapter 62-296, F.A.C.

The general and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 62-297, F.A.C.

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V. Proposed Agency Action

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).

ATTACHMENT 2 (1 of 3)

CURRENT POTENTIAL EMISSIONS for NITRAM per 0570029-002-AV (tons/yr.)

E.U. No./Desc.	CO	NOx	PM	PM10	SO2	VOC
003/B&W Boiler	27.6	68.24	32.9	32.9	0.2	1.81
004/FW Boiler	18.2	45.04	21.9	21.9	0.13	1.19
013/Hurst Boiler	4.4	11.6	0.27	0.27	0.11	0.31
006/Prill Tower			114.3	114.3		
007/Nitric Acid Plant	19.5	294	1.77	1.77	0.14	1.28
008/Kaolin Clay ¹			2.6	2.6		
009/Coated Amm. Nitrate ²			9.2	9.2		
010/ MgO Silo			0.03	0.03		
011/MgO Day Tank			0.05	0.05		
012/Prill Rotary Drums			40.7	40.7		
TOTAL	69.7	419.24	223.72	223.72	0.58	4.59

Footnotes: 1 - Permanently Shutdown per 1999 AOR

2 - Activities relating to clay coating are permanently shutdown per 1999 AOR. Fugitive particulate emissions from this emission unit are reported with the Title V unregulated emission unit No. 100, which is for Facility Wide Fugitive Emissions

1999 & 2001 AOR
Actual Emissions (tons/yr)
For Nitram

ATTACHMENT 2 (2 of 3)

1999

E.U. No./ Desc.	CO	NOx	PM	PM10	SO2	VOC
003/B&W Boiler	0.397	1.59	0.03	0.03	0.007	0.032
004/FW Boiler	1.86	7.45	0.16	0.16	0.03	0.15
013/Hurst Boiler	0.378	1.512	0.032	0.032	0.006	0.03
006/Prill Tower HD			3.735	3.735		
LD			2.84 ²	2.84 ²		
007/Nitric Acid Plant		268				
010/MgO Silo			0.01	0.01		
011/MgO Day Tank			0.01	0.01		
012/Prill Rotary Drums HD			2.52 ³	2.52 ³		
LD			1.00 ⁴	1.00 ⁴		
100/Facility-Wide Fugitives			2.77	2.77		0.0015
TOTAL	2.635	278.552	13.107	13.107	0.043	0.2135

2001

E.U. No./ Desc.	CO	NOx	PM	PM10	SO2	VOC
003/B&W Boiler	0.911	1.09	0.082	0.062	0.007	0.06
004/FW Boiler	9.16	10.91	0.83	0.62	0.07	0.6
013/Hurst Boiler	0.143	0.17	0.013	0.013	0.001	0.009
006/Prill Tower HD			20.9 ¹	20.9 ¹		
LD			3.5	3.5		
007/Nitric Acid Plant		267				
010/MgO Silo			0.004	0.004		
011/MgO Day Tank			0.013	0.013		
012/Prill Rotary Drums HD			2.58	2.58		
LD			1.00	1.00		
100/Facility-Wide Fugitives			3.26	3.26		0.0013
TOTAL	10.214	279.17	32.182	31.952	0.078	0.6703

2-year avg.	6.4245	278.861	22.64	22.53	0.0605	0.4419
Plus PSD Insignificant Incr.		40		15		
Max. Allowed		318.861		37.53		

Footnotes: 1 - In 2001 the Prill Tower was tested on LDP only. Therefore, for 2001, the 2000, 1999, and 1998 stack tests for HDP were averaged to derive the factor 0.2273 lbs./ton. Attachment 3 shows the representativeness of using the years 1998, 1999, and 2000.

2 - The 1997 and 2001 stack tests for LDP were averaged to derive the factor 0.1766 lbs./ton.

3 - The December 2001 stack test for HDP was used to derive 2.52 tons/yr.

4 - The December 2001 stack test for LDP was used to derive 1.00 tons/yr.

ATTACHMENT 2 (3 of 3)

POTENTIAL EMISSIONS
for NITRAM, Inc. per
Permit 0570029-007-AC (tons/yr.)

E.U. No./Desc.	CO	NOx	PM	PM10	SO2	VOC
003/B&W Boiler	20.89	24.861	1.89	1.89	0.15	1.37
004/FW Boiler						
013/Hurst Boiler						
006/Prill Tower			29.79	29.79		
012/Prill Rotary Drums						
007/Nitric Acid Plant	19.5	294	1.77	1.77	0.14	1.28
009/Amm. Nitrate Storage and Loadout			4.0	4.0		
100/Fac.Fug. Emissions						
010/ MgO Silo			0.03	0.03		
011/MgO Day Tank			0.05	0.05		
TOTAL	40.39	318.861	37.53	37.53	0.29	2.65



Environmental Protection

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Southwest District
3804 Coconut Palm Drive
Tampa, Florida 33619

David B. Struhs
Secretary

PERMITTEE:
Nitram, Inc.
P.O. Box 2968
Tampa, FL 33601

DRAFT

Permit No.: 0570029-007-AC
County: Hillsborough
Effective Date:
Expiration Date: 06/10/2004
Project: Low Density Prill &
High Density Prill
Production Modifications

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-204 through 62-297 & 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the department and made a part hereof and specifically described as follows:

Section I. Facility Information.

For the synthetic non-PSD construction modifications of an existing permitted Title V facility that manufactures ammonium nitrate products. The facility consists of the following emission units:

- No. 003 - B & W Package Boiler
- No. 004 - FW Package Boiler
- No. 013 - Hurst Package Boiler
- No. 006 - Ammonium Nitrate Prill Tower No. 2
- No. 007 - Nitric Acid Plant
- No. 008 - Kaolin clay Handling and Storage (Permanently Shutdown)
- No. 009 - Ammonium Nitrate Storage and Loadout System (All activities relating to handling and storing ammonium nitrate coated with clay have been permanently shutdown)
- No. 010 - MgO Silo
- No. 011 - MgO Day Tank
- No. 012 - Prill Rotary Drums
- No. 100 - Unregulated Facility Wide Fugitive Emissions

The permittee has requested modifications to the Ammonium Nitrate Prill Tower No. 2 (E.U. No. 006) and the Prill Rotary Drums (E.U. No. 012). The requested modifications are as follows:

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

- A. Increase the production rate of low density prill (LDP) from 25 tons/hr. to 50 tons/hr. (based on a daily average) at the Ammonium Nitrate Prill Tower No. 2.
- B. Increase the production rate of LDP from 23 tons/hr. to 50 tons/hr. (based on a daily average) at the Prill Rotary Drums.
- C. Decrease the production rate of high density prill (HDP) from 55 tons/hr. to 50 tons/hr. (based on a daily average) at the Prill Rotary Drums.

In order for the above modifications to avoid the Prevention of Significant Deterioration (PSD) requirements of Rule 62-212.400, F.A.C., this permit limits the change in the past actual emissions (years 1999 & 2001) to future allowable emissions from the facility to not exceed the significant emission rates shown in Table 212.400-2 contained in Chapter 62-212, F.A.C.

Location: 5321 Hartford Street, Tampa

UTM: 17-362.5E 3089.0N

Facility ID: 0570029 Emission Unit ID Nos: (see above)

NOTE: Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.

Modifies Permit No.: Initial Title V Permit No. 0570029-002-AV and associated Administrative Corrections processed with Department Project Nos. 003, 004, 005, and 006.

Section II. Facility Wide Conditions

1. A part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]
2. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

3. General Particulate Emission Limiting Standards. General Visible Emissions Standard. Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). [Rule 62-296.320(4)(b)1., F.A.C.]

4. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- A. Attend to major operational upsets promptly and effectively. Stop operation, if necessary.
- B. Maintain trafficked areas clean. Limit vehicular traffic to 10 MPH or less, if necessary.
- C. Do not store or pile products in the open.
- D. Inspect conveyors and elevators for visible emissions daily. Record any problems and actions taken.
- E. Make plant personnel aware of the environmental requirements in this permit.
- F. Exercise good housekeeping practices at all times.

[Rule 62-296.320(4)(c)2., F.A.C.; Proposed by applicant in the initial Title V permit application received June 12, 1996]

5. Excess emissions resulting from startup, shutdown, or malfunction are permitted providing: (1) best operational practices to minimize emissions are adhered to and; (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. In case of excess emissions resulting from malfunctions, the permittee shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department or the Environmental Protection Commission of Hillsborough County (EPCHC).

{Permitting Note: This rule can not vary any requirement of an applicable NSPS or NESHAP provision. This condition does not

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

supercede Condition No. H.14. for the Emission Unit No. 007 -
Nitric Acid Plant.}

[Rule 62-210.700, F.A.C.]

6. The requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Chapter 62-297, F.A.C., *Stationary Sources - Emission Monitoring* and 40 CFR 60, Appendix A.

[Rule 62-297.401, F.A.C.]

7. The visible emissions test shall be conducted by a certified observer and be a minimum of thirty minutes in duration, unless otherwise specified within. The test observation period shall include the period during which the highest opacity can reasonably be expected to occur.

[Rule 62-297.310(4)(a)2, F.A.C.]

8. Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than 30 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. In no case shall the process or production rate exceed the maximum permitted process or production rate. The actual process or production rate during the test shall be included in each test report. Failure to include the actual process or production rate in the results may invalidate the test. In addition, the test results shall include any operating parameters limited or specified to be recorded in this permit, e.g., scrubber flow rate. [Rule 62-4.070(3), F.A.C.]

9. If the Department of Environmental Protection or the Environmental Protection Commission of Hillsborough County (EPCHC) has reason to believe that any applicable emission standard is being violated, then the Department of Environmental Protection or the EPCHC may require the permittee to conduct compliance tests which identify the nature and quantity of pollutant emissions and to provide a report on the results of the tests. [Rule 62-297.310(7)(b), F.A.C.]

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

10. The permittee shall notify the Air Compliance Section of the Environmental Protection Commission of Hillsborough County (EPCHC) at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the contact person who will be responsible for coordinating and having such test conducted. [Rule 62-297.310(7)(a)9, F.A.C.]

11. Where an emission unit has an air pollution control device the permittee shall comply with the following:

A. Where a numerical limit for an air pollution control parameter exists in a permit condition:

- i. Within 30 days of the operation of a pollution control device (e.g., scrubber, baghouse, etc.) lower than a minimum numerical control parameter limit specified in a condition of this permit, the permittee shall conduct a compliance test with the pollution control device operating at no higher than the lower value at which it operated, in order to demonstrate compliance; or
- ii. Within 30 days of the operation of a pollution control device (e.g., scrubber, baghouse, etc.) higher than a maximum numerical control parameter limit specified in a condition of this permit, the permittee shall conduct a compliance test with the pollution control device operating at no lower than the higher value at which it operated, in order to demonstrate compliance.

The test result(s) shall be submitted to the Air Compliance Section of this office and the EPCHC within 45 days of testing. Acceptance of the test(s) by the Department will establish the fact that the operation of the pollution control device, at the observed parameter outside the permit limit, was not a violation of this permit. Furthermore, the permittee may submit an application to amend this permit to reflect the higher or lower control parameter.

B. Where no numerical limit for an air pollution control parameter exists in a permit condition:

- i. Within 30 days of the operation of a pollution control device (e.g., scrubber, baghouse, etc.) lower than 90% of the minimum numerical control parameter determined during the most recent compliance test, the permittee shall conduct a compliance test with the pollution control

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

device operating at no higher than the lower value at which it operated, in order to demonstrate compliance.

- ii. Within 30 days of the operation of a pollution control device (e.g., scrubber, baghouse, etc.) higher than 110% of the maximum numerical control parameter determined during the most recent compliance test, the permittee shall conduct a compliance test with the pollution control device operating at no lower than the higher value at which it operated, in order to demonstrate compliance.

The test result(s) shall be submitted to the Air Compliance Section of this office and the EPCHC within 45 days of testing. Acceptance of the test(s) by the Department will establish the fact that the operation of the pollution control device, at the observed parameter, was not a violation of this permit. Furthermore, the permittee may submit an application to amend this permit to reflect the higher or lower control parameter.

{Permitting Note: Condition 11.B. does not apply to the MgO Silo and MgO Day Tank.}

[Rules 62-4.070(3), F.A.C. and 62-213.440(1), F.A.C.]

12. The permittee shall submit to the Air Compliance Section of this office and the EPCHC each calendar year, on or before March 1, a completed DEP Form 62-210.900(5), an "Annual Operating Report for Air Pollutant Emitting Facility", for the preceding calendar year. [Rule 62-210.370(3), F.A.C.]

13. Test Reports

- A. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Air Compliance Sections of this office and the EPCHC on the results of each such test.
- B. The required test report shall be filed with the Air Compliance Section of this office and the EPCHC as soon as practical but no later than 45 days after the last sampling run of each test is completed or with the operating permit application, whichever is earlier.
- C. The report shall provide sufficient detail on the emissions unit tested (at a minimum, the "Project", "Facility ID" and

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

"Point ID"), the test procedures used to allow the Department to determine if the test report was properly conducted and the test results properly computed. Testing procedures and reporting shall be consistent with the requirements of Rule 62-297.310, F.A.C.

- D. The test report, where applicable shall contain as a minimum the following information:
1. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 2. The normal operating parameters of air pollution control devices installed on each emission unit (e.g., pressure drop, scrubber liquid flow rate, scrubber liquid pressure, total current, etc.), and the operating parameters of air pollution control devices during each test run.

Failure to submit the rates and actual operating conditions in the test report may invalidate the test and fail to provide reasonable assurance of compliance. [Rules 62-297.310(8), F.A.C., and 62-213.440(1), F.A.C.]

14. Hours of Operation - Unless otherwise noted, all emission units are allowed to operate continuously, i.e., 8760 hours per year. [Rule 62-4.070(3), F.A.C.]

15. At a minimum, unless otherwise specified daily records shall be completed within 3 business days and monthly logs shall be completed by the end of the following month. The records shall be maintained at the facility for at least 5 years. The records shall be made available to the Department and the EPCHC upon request. [Rule 62-4.070(3), F.A.C.; Title V Permit No. 0570029-002-AV w/Admin. Correction No. 003]

16. An application to revise the Title V permit shall be submitted to the Air Permitting Section of this office and the EPCHC at least 90 days prior to the expiration date of this permit, but no later than 180 days after commencing operation of increasing the LDP production rate above 25 tons/hour at the Ammonium Nitrate Prill Tower No. 2 and the Prill Rotary Drums. Note, where applicable the application should address the Compliance Assurance Monitoring requirements of 40 CFR 64. [Rules 62-213.420(1)(a)2. and 62-204.800(11), F.A.C.]

DRAFT

PERMITTEE:
Nitram, Inc.

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

Section III. Emission Unit Descriptions and Conditions.

Subsection A. This section addresses the following emission unit(s).

E.U. No. 003 - B & W Package Boiler

The Babcock & Wilcox (B & W) package boiler (SG-703) has a design heat input rate of 75 MMBtu per hour (60,000 pounds per hour steam rate). The boiler is fired on natural gas or propane. The boiler flue gas duct is equipped with a continuous oxygen monitor to help maintain optimum combustion efficiency. The boiler shares a 30 foot common stack with a Foster Wheeler boiler (E.U. No. 004, see Subsection B.).

{Permitting note(s): This emissions unit is regulated under Rule 62-296.700, F.A.C., RACT Particulate Matter; and Rule 62-296.702, F.A.C., Fossil Fuel Steam Generators. Rule 62-296.406, F.A.C. - Fossil Fuel Generators with less than 250 MMBTU/hr. heat input, new and existing emission units, is not applicable since the emission unit was permitted prior to July 15, 1989.}

The following conditions apply to this emission unit listed above.

A.1. Capacity.

- A. The heat input rate for the B & W Package Boiler shall not exceed 75.0 MMBTU/hr. based on a daily average.
- B. The maximum fuel usage rate shall not exceed 75,000 ft³ per hour of natural gas based on a daily average.
- C. The maximum fuel usage rate shall not exceed 3,463 pounds per hour of propane based on a daily average. (Note, at 4.24 lbs./gallon of propane this is equivalent to 816.7 gallons/hr.)
- D. Also see Common Conditions: Subsection D.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

A.2. The B & W Package Boiler shall be fired on natural gas or propane. [Rules 62-4.160(2), 62-210.200(PTE), and 62-213.440(1), F.A.C.]

DRAFT

PERMITTEE:
Nitram, Inc.

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

A.3. Visible emissions shall not exceed 20 percent opacity except as provided for in Rule 62-210.700, F.A.C. [Rule 62-296.702(2)(b), F.A.C.]

A.4. The maximum allowable particulate emission rate for this boiler shall not exceed 0.10* pounds per million BTU of heat input. For purposes of this permit, compliance with this allowable emission rate shall be demonstrated by restricting this boiler to firing exclusively natural gas or propane as an alternative fuel.

* In order to comply with the natural gas usage limitation in Subsection D. of this permit, this value should be 0.0076 lbs./MMBTU.

[Rule 62-296.702(2)(a), F.A.C.]

A.5. In order demonstrate compliance with Condition No. A.1., the permittee shall record the following daily and maintain the records at the facility for a minimum of 5 years:

- A. Date.
- B. Type of fuel.
- C. Hours of burning each type of fuel.
- D. Quantity of each type of fuel used (cubic feet for natural gas and gallons for propane).
- E. Daily average hourly usage rate for each fuel type.

[Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

A.6. The B & W Package boiler shall be tested for visible emissions during the 8 - 12 month time period prior to the expiration date of Title V Permit 0570029-002-AV, which is August 17, 2003. [Rule 62-297.310(7)(a)3., F.A.C.]

A.7. Compliance with the visible emission limitation shall be determined using EPA Method 9 contained in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-297, F.A.C. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A. [Rule 62-296.702(3), F.A.C.]

DRAFT

PERMITTEE:
Nitram, Inc.

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

A.8. The permittee shall submit the following with each emission test report:

- A. A statement of the fuel in use during the test.
- B. A copy of the daily records for each test day as required in Condition No. A.5.

Failure to submit the above information and operating at conditions, which do not reflect the normal operating conditions, may invalidate the test and fail to provide reasonable assurance of compliance. [Rule 62-4.070(3), F.A.C.]

A.9. The following Operation and Maintenance (O & M) Plan for Particulate Matter Control pursuant to Rule 62-296.700(6), F.A.C., shall be followed:

A. Process Parameters:

1. B & W Package Boiler

- a. Model: (SG-703)
- b. Type: Water tube package boiler of "D" tube design
- c. Design Steam Production Rate: 60,000 lbs./hr.
- d. Design Steam Pressure: 230 psig
- e. Primary Fuel: Natural Gas
- f. Alternate Fuel: Propane
- g. Firing Rate: 75,000 cubic ft./hr natural gas or 3,463 lbs./hr. propane (equivalent to 816.7 gallons/hr.)

2. Common Stack (two boilers)

- a. Stack Height: 30 ft.
- b. Stack Diameter: 4 ft. 6 in.
- c. Gas Flow Rate: 33,700 ACFM
- d. Gas Exit Temperature: 450 degrees F.

B. The following observations, checks and operations apply to this emissions unit and shall be conducted on the schedule specified:

1. The air/fuel ratio is to be controlled by a continuous oxygen monitor located in the air damper.
2. The stack is periodically monitored (once per shift) for visible emissions.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

3. Boiler performance (fuel efficiency) is to be monitored on a daily basis comparing steam production to fuel consumed.
- C. Records of inspections, maintenance, and performance parameters shall be retained and shall be made available to the Department or to the Environmental Protection Commission of Hillsborough County upon request.

[Rule 62-296.700(6), F.A.C.]

Subsection B. This section addresses the following emission unit(s).

E.U. No. 004 - FW Package Boiler

The Foster Wheeler (FW) package boiler (SG-701) has a design heat input rate of 50 MMBTU per hour (40,000 pounds per hour steam rate). This boiler is fired on natural gas or propane. The boiler flue gas duct is equipped with a continuous oxygen monitor to help maintain optimum combustion efficiency. The boiler shares a 30 foot common stack with a Babcock & Wilcox boiler (E.U. No. 003, see Subsection A.).

{Permitting note(s): This emissions unit is regulated under Rule 62-296.700, F.A.C., RACT Particulate Matter; and Rule 62-296.702, F.A.C., Fossil Fuel Steam Generators. Rule 62-296.406, F.A.C. - Fossil Fuel Generators with less than 250 MMBTU/hr. heat input, new and existing emission units, is not applicable since the emission unit was permitted prior to July 15, 1989.}

The following conditions apply to this emission unit listed above.

B.1. Capacity.

- A. The heat input rate for the Foster Wheeler Package Boiler shall not exceed 50.0 MMBTU/hr. based on a daily average.
- B. The maximum fuel usage rate shall not exceed 50,000 ft³ per hour of natural gas based on a daily average.
- C. The maximum fuel usage rate shall not exceed 2,309 pounds per hour of propane based on a daily average. (Note, at 4.24 lbs./gallon of propane this is equivalent to 544.6 gallons/hr.)

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

D. Also see Common Conditions: Subsection D.

[Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]

B.2. The Foster Wheeler Package Boiler shall be fired on natural gas or propane. [Rules 62-4.160(2), 62-210.200(PTE), and 62-213.440(1), F.A.C.]

B.3. Visible emissions shall not exceed 20 percent opacity except as provided for in Rule 62-210.700, F.A.C. [Rule 62-296.702(2)(b), F.A.C.]

B.4. The maximum allowable particulate emission rate for this boiler shall not exceed 0.10* pounds per million BTU of heat input. For purposes of this permit, compliance with this allowable emission rate shall be demonstrated by restricting this boiler to firing exclusively natural gas or propane as an alternative fuel.

* In order to comply with the natural gas usage limitation in Subsection D. of this permit, this value should be 0.0076 lbs./MMBTU.

[Rule 62-296.702(2)(a), F.A.C.]

B.5. In order demonstrate compliance with Condition No. B.1., the permittee shall record the following daily and maintain the records at the facility for a minimum of 5 years:

- A. Date.
- B. Type of fuel.
- C. Hours of burning each type of fuel.
- D. Quantity of each type of fuel used (cubic feet for natural gas and gallons for propane).
- E. Daily average hourly usage rate for each fuel type.

[Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

B.6. The Foster Wheeler Package boiler shall be tested for visible emissions during the 8 - 12 time period prior to the expiration date of Title V Permit 0570029-002-AV, which is August 17, 2003. [Rule 62-297.310(7)(a)3., F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

B.7. Compliance with the visible emission limitation shall be determined using EPA Method 9 contained in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-297, F.A.C. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A. [Rule 62-296.702(3), F.A.C.]

B.8. The permittee shall submit the following with each emission test report:

- A. A statement of the fuel in use during the test.
- B. A copy of the daily records for each test day as required in Condition No. B.5.

Failure to submit the above information and operating at conditions, which do not reflect the normal operating conditions, may invalidate the test and fail to provide reasonable assurance of compliance. [Rule 62-4.070(3), F.A.C.]

B.9. The following Operation and Maintenance (O & M) Plan for Particulate Matter Control pursuant to Rule 62-296.700(6), F.A.C., shall be followed:

A. Process Parameters:

1. FW Package Boiler

- a. Model: (SG-701)
- b. Type: Water tube package boiler of "D" tube design
- c. Design Steam Production Rate: 40,000 lbs./hr.
- d. Design Steam Pressure: 230 psig
- e. Primary Fuel: Natural Gas
- f. Alternate Fuel: Propane
- g. Firing Rate: 50,000 cubic ft./hr natural gas or 2,309 lbs./hr. propane (equivalent to 544.6 gallons/hr.)

2. Common Stack (two boilers)

- a. Stack Height: 30 ft.
- b. Stack Diameter: 4 ft. 6 in.
- c. Gas Flow Rate: 33,700 ACFM
- d. Gas Exit Temperature: 450 degrees F.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

- B. The following observations, checks and operations apply to this emissions unit and shall be conducted on the schedule specified:
1. The air/fuel ratio is to be controlled by a continuous oxygen monitor located in the air damper.
 2. The stack is periodically monitored (once per shift) for visible emissions.
 3. Boiler performance (fuel efficiency) is to be monitored on a daily basis comparing steam production to fuel consumed.
- C. Records of inspections, maintenance, and performance parameters shall be retained and shall be made available to the Department or to the Environmental Protection Commission of Hillsborough County upon request.

[Rule 62-296.700(6), F.A.C.]

Subsection C. This section addresses the following emission unit(s).

EU. No. 013 - Hurst Package Boiler

The Hurst Boiler and Welding Company gas fired package boiler, Model No. S4-G-300-250 with a design heat input rate of 12.9 MMBtu per hour (10,000 pounds per hour steam rate). This boiler is fired on natural gas or propane (LP gas). Products of combustion vent directly to the atmosphere through a stack.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, which is adopted by reference in Rule 62-204.800(7)(b)4., F.A.C.; Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with less than 250 Million BTU per Hour Heat Input, New and Existing Emissions Units; This emission unit is exempt from RACT Particulate Matter per Rule 62-296.700(2)-(c), F.A.C.}

The following conditions apply to this emission unit listed above.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

C.1. Capacity.

- A. The heat input rate for the Hurst package boiler shall not exceed 12.9 MMBtu per hour based on a daily average.
- B. The maximum fuel usage rate shall not exceed 12,000 ft³ per hour of natural gas based on daily average.
- C. The maximum fuel usage rate shall not exceed 142 gallons per hour of propane based on daily average. (Note, at 4.24 lbs./gallon of propane this is equivalent to 602.1 pounds/hr.)
- D. Also see Common Conditions: Subsection D.

{Rules 62-4.160(2), 62-210.200(PTE), 62-296.700(2)(c), and 62-296.406 (attached BACT Determination dated _____, 2002), F.A.C.]

C.2. The Hurst package boiler shall be fired with natural gas or propane. [Rules 62-4.160(2) and 62-296.406 (attached BACT Determination dated _____, 2002), F.A.C. F.A.C.]

{Permitting Note: Condition Nos. C.1. and C.2. in conjunction with the BACT determination, replace Condition Nos. C.4. and C.5. in Title V permit 0570029-002-AV, which established particulate and sulfur dioxide emission limitations of 0.27 tons/yr. and 0.11 tons/yr., respectively.}

C.3. Visible emissions from the Hurst Package Boiler shall not exceed 20 percent opacity for except for one six-minute period per hour during which opacity shall not exceed 27 percent. [Rule 62-296.406(1), F.A.C.]

C.4. In order demonstrate compliance with Condition No. C.1. and 40 CFR 60, Subpart Dc, the permittee shall daily record the following and maintain the records at the facility for a minimum of 5 years:

- A. Date.
- B. Type of fuel.
- C. Hours of burning each type of fuel.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

D. Quantity of each type of fuel used (cubic feet for natural gas and gallons for propane).

E. Daily average hourly usage rate for each fuel type.

[Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.; 40 CFR 60.48(g)]

C.5. The Hurst Package boiler shall be tested for visible emissions during the 8 - 12 month time period prior to the expiration date of Title V Permit 0570029-002-AV, which is August 17, 2003. [Rule 62-297.310(7)(a)3., F.A.C.]

C.6. Compliance with the visible emission limitation shall be determined using DEP Method 9 and the test duration shall be a minimum of 60 minutes. The minimum requirements for stationary point source emission tests procedures and reporting shall be in accordance with Chapter 62-297, F.A.C. [Rule 62-297.310, F.A.C.]

C.7. The permittee shall submit the following with each emission test report:

A. A statement of the fuel in use during the test.

B. A copy of the daily records for each test day as required in Condition No. C.4.

Failure to submit the above information and operating at conditions, which do not reflect the normal operating conditions, may invalidate the test and fail to provide reasonable assurance of compliance. [Rule 62-4.070(3), F.A.C.]

C.8. The permittee shall minimize emissions at all times, including periods of startup, shutdown, and malfunction in a manner consistent with good air pollution control practice. [40 CFR 60.11(d)]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

Subsection D. Common Conditions

E.U. No. 003 - B & W Package Boiler

E.U. No. 004 - FW Package Boiler

E.U. No. 013 - Hurst Package Boiler

{Permitting Note: In order to avoid the PSD permitting requirements of Rule 62-212.400, F.A.C. and comply with the significant emission levels shown in Table 62-212.400-2, F.A.C., the 3 boilers are limited to the Conditions of this Subsection and are permitted in accordance with Rule 62-212.300, F.A.C. As part of the synthetic non-PSD analysis for this permit, in order for the facility to not exceed the significant 40 tons of NOx and 15 tons of PM₁₀ as shown in Table 62-212.400-2, these emission units were allocated a combined total of 24.861 tons of NOx emissions per year and 1.89 tons of PM₁₀ emissions per year.}

The following conditions apply to the 3 emission units listed above.

D.1. The total combined natural gas usage for the 3 boilers is 497,217,600 cubic feet for any consecutive 12 month period.

{Permitting Note: Using an emission factor of 100 lbs. of NOx emitted per million cubic feet of natural gas used is equivalent to emitting 24.861 tons of NOx in any consecutive 12 month period. Also, this amount of natural gas usage emits 1.89 tons of particulates per any consecutive 12 month period using an emission factor of 7.6 lbs. of particulate emitted per 1,000,000 cubic feet of natural gas used.}

[Rules 62-210.200(PTE) and 62-212.300, F.A.C.]

D.2. The total combined propane usage for the 3 boilers is 2,616,612 gallons per any consecutive 12 month period (equivalent to 11,090,160 lbs. per any consecutive 12 month period using 4.24 lbs./gal.).

{Permitting Note: Using an emission factor of 19 lbs. of NOx emitted per 1000 gallons of propane used is equivalent to emitting 24.861 tons of NOx in any consecutive 12 month period. Also, this amount of propane usage emits 0.78 tons of particulates per any consecutive 12 month period using an

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

emission factor of 0.6 lbs. of particulate per 1000 gallons of propane used.}

[Rules 62-210.200(PTE) and 62-212.300, F.A.C.]

D.3. In order to demonstrate compliance with Condition Nos. D.1 and D.2., the permittee shall maintain the following monthly records at the facility for at least 5 years:

- A. The quantity of natural gas used for the month, in cubic feet.
- B. The quantity of natural gas used for the most recent consecutive 12 month period, in cubic feet.
- C. The quantity of propane used for the month, in gallons.
- D. The quantity of propane used for the most recent consecutive 12 month period, in gallons.
- E. If natural gas and propane are both used during any consecutive 12 month period, then for that 12 month period the NOx and Particulate emissions shall be each calculated using the emission factors referenced in the "Permitting Notes" of Condition Nos. D.1. and D.2. to ensure 24.861 tons of NOx and 1.89 tons of particulates are not exceeded.

[Rules 62-210.200(PTE), 62-212.300, 62-4.070(3), F.A.C.]

Subsection E. This section addresses the following emission unit(s).

E.U. No. 006 - Ammonium Nitrate Prill Tower No. 2

The ammonium nitrate manufacturing plant consists of the pH Adjust Tank, Nos. 1 and 2 Product Acid Tanks, three 83% Ammonium Nitrate Storage Tanks, the Reactor Tank, two falling film evaporators, and the Prill Tower No. 2. At the nitric Acid/ammonium nitrate manufacturing plant, an 83% ammonium nitrate solution is pumped from the storage tanks to a series of falling film evaporators. In the evaporators the solution is concentrated to either a 95% to 98% solution for LDP or a 99.7% solution for HDP. Only during the manufacturing of HDP, magnesium oxide is added to the solution. From the evaporators the concentrated solution is pumped to the top of the Prill Tower

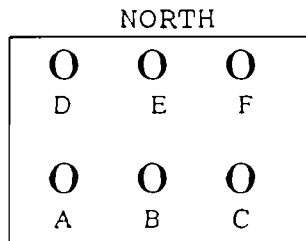
DRAFT

PERMITTEE:
Nitram, Inc.

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

No. 2 and sprayed through up to six spray bells downward through a countercurrent air stream resulting in crystallization and drying of the ammonium nitrate. Ammonium nitrate prill (HDP & LDP) is produced at a maximum rate of 50 tons/hr. based on a daily average. Only one product (HDP or LDP) can be produced by the prill tower at any given time.

Ammonium fumes, acid fumes, and particulate matter emissions from the pH Adjust Tank, Nos. 1 and 2 Product Acid Tanks, three 83% Ammonium Nitrate Tanks, and the Reactor Tank are vented into Prill Tower No. 2. Emissions from the falling film evaporators are first vented through a scrubber and then into the Prill Tower No. 2. All emissions from the Prill Tower No. 2 are controlled by the use of a BECO Duel Vortex cell scrubber divided into six cells with six separate cell vents. Each cell has an induced draft fan, which discharges to the atmosphere. The six stacks, designated as A, B, C, D, E, and F, are configured as follows:



{Permitting note(s): This emission unit is regulated under Rule 62-212.300, F.A.C., General Preconstruction Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-212.400(6), F.A.C., Best Available Control Technology (BACT) Determination, dated March 8, 1981; and Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards.}

The following conditions apply to this emission unit listed above.

E.1. The maximum production of either LDP or HDP shall not exceed 50 tons/hr., based on a daily average. [Application dated October 2, 2001; Rule 62-210.200(PTE), F.A.C.]

E.2. Only one product (LDP or HDP) can be produced by the prill tower at any given time. [Application dated October 2, 2001; Rule 62-210.200(PTE), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

E.3. The maximum particulate emission rate for this emission unit shall not exceed 26.0 pounds per hour (also see Subsection G. Common Conditions). [Construction permit AC29-39724 (May 7, 1981) and BACT determination March 8, 1981]

E.4. Visible emissions from this emission unit shall not exceed 20% opacity. [Construction permit AC29-29724 (May 7, 1981) and BACT determination March 8, 1981]

E.5. The permittee shall maintain the following records:

DAILY

- A. Date.
- B. Type of product (LDP and/or HDP).
- C. Amount of each product produced, in tons.
- D. Amount of hours of production for each product.
- E. Daily average tons/hr. for each product.

MONTHLY

- F. The most recent consecutive 12 month total hours of operation for each, LDP, HDP, and the sum of the LDP and HDP.
- G. The most recent consecutive 12 month total tons of production of each LDP, HDP, and the sum of the LDP and HDP.

The daily records shall be completed within 3 business days. Monthly records shall be completed by the 15th day of the following month. The records shall also be kept at the facility for at least 5 years and be available to the Department and the Environmental Protection Commission of Hillsborough County (EPCHC) upon request. [Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

E.6. The pollution control equipment shall be kept in service and in good repair. In the event that the control equipment is to be removed, altered, the EPCHC shall be notified of such change at least 15 days prior to the change, except in an emergency situation. In such case, the EPCHC shall be notified as soon as practical. During every outage and scheduled maintenance, the permittee shall inspect and repair any components or equipment associated with the scrubber that is found faulty or in need of repair and retain records for

PERMITTEE:
Nitram, Inc.

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

DRAFT

inspection by the Department or EPCHC. At a minimum, the inspection shall include the following:

- A. All scrubber liquid pumps and valves.
- B. All six spray bells.
- C. All demister pads.
- D. All air passages, dampers and traps that allow emissions to vent through the scrubber.

The records shall contain the appropriate date(s) and inspectors name in addition to being completed within 3 business days. The records shall also be kept at the facility for at least 5 years and be available to the Department and the EPCHC upon request. [Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

E.7. The permittee shall maintain records of the scrubber operating parameters at least once for each 8-hour shift that the emission unit is in operation. The record log shall contain at a minimum the following:

- A. Date.
- B. Operator's name.
- C. Time of the measurement
- D. Gas pressure drop across the scrubbing system, in inches of water.
- E. Volumetric liquid flow rate (fresh water and make-up water), in gpm.

The records shall be kept at the facility for at least 5 years and be available to the Department and the EPCHC upon request. [Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

E.8. The permittee shall test the emissions from the Prill Tower's scrubber annually for particulate and visible emissions (VE) on or during the 60 day period prior to February 28. The tests shall be conducted when producing each, LDP and HDP. The test results shall be submitted within 45 days of testing to the Air Compliance Section of this office and the EPCHC. The test report shall include for the testing period the following:

- A. A copy of the daily production records as required by Specific Condition No. E.5 above.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

- B. A copy of the scrubber's operating parameter records as required by Specific Condition No. E.7. above.

[Rules 62-297.310(7)(a), 62-297.310(8), 62-4.070(3), F.A.C.]

E.9. Compliance with the emission limitations shall be determined using EPA Methods 1, 2, 4, 5, and 9 contained in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-297, F.A.C. The EPA Method 9 observation period for this emission unit shall be at least 30 minutes in duration. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A. [Chapter 62-297, F.A.C.]

E.10. The permittee may request alternative test procedures (such as EPA Method 5D) for the multiple stack source. To properly address this matter, the request shall be directed to the Secretary of the Department or his/her designee in accordance with Rule 62-297.620, F.A.C. The alternative test method shall be used only after receipt of approval from the Secretary of the Department or his/her designee and after timely notification to the Air Compliance Section of this office and the EPCHC. [Rule 62-297.620, F.A.C.]

E.11. Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum permitted production rate of 50 tons/hr. (daily average) for each LDP and HDP. If it is impractical to test at the permitted capacity, then sources may be tested at less than capacity. In this case, subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than 30 consecutive days for the purposes of additional testing to regain the permitted capacity in the permit. In no cases shall the associated maximum allowable production rate be exceeded. The actual production rate during the test shall be included in each test report. Failure to include the information listed in Condition No. E.8. above may invalidate the test. [Rules 62-297.310(2) and 62-4.070(3), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

Subsection F. This section addresses the following emission unit(s).

E.U. No. 012 - Prill Rotary Drums

The three prill rotary drums (pre-dryer, dryer, cooler) are used for drying and/or cooling two grades of ammonium nitrate prills. Three drums, three wet cyclones, and three fans are in service while drying and cooling LDP. The air to the first two drums is heated with steam coils, while the third drum acts as a cooler. The LDP travels through all three drums.

Only one drum (the cooler) is operated while cooling HDP, but air is drafted with two fans through two of the three wet cyclones.

Particulate emissions generated from this operation are controlled by three wet cyclones in series with a Peabody Model SX-351 impingement scrubber. When only producing LDP, a coating designated a "Galoryl" may be added in one of the drums. The emission unit emits small amounts of ammonia.

{Permitting note(s): This emission unit is regulated under Rule 62-212.300, F.A.C., General Preconstruction Requirements; Rule 62-296.700, F.A.C., RACT Particulate Matter; Rule 62-296.712, F.A.C., Miscellaneous Manufacturing Process Operations; and Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards.}

The following conditions apply to this emission unit listed above.

F.1. The maximum production of either LDP or HDP shall not exceed 50 tons/hr. based on a daily average. [Permittee's letter dated December 18, 2001; Rule 62-210.200(PTE), F.A.C.]

F.2. Only one product (LDP or HDP) can be produced by the prill rotary drum(s) at any given time. [Application dated October 2, 2001; Rule 62-210.200(PTE), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

F.3. Particulate matter emissions from the prill rotary drums' scrubber shall not exceed any of the following:

- A. 0.03 grains/dry standard cubic foot;
- B. 9.24 pounds per hour;
- C. Also see Subsection G. Common Conditions.

[Rules 62-210.200(PTE) and 62-296.712(2), F.A.C.]

F.4. The permittee shall not cause, permit, or allow any visible emissions (five percent opacity) from the prill rotary drums' scrubber exhaust. [Rule 62-296.712(2), F.A.C.]

F.5. The permittee shall maintain the following records:

DAILY

- A. DATE.
- B. Type of product (LDP and/or HDP)
- C. Amount of each product produced, in tons.
- D. Amount of hours of production for each product.
- E. Daily average tons/hr. for each product.

MONTHLY

- F. The most recent consecutive 12 month total hours of operation for each, LDP, HDP, and the sum of the LDP and HDP.
- G. The most recent consecutive 12 month total tons of production of each, LDP, HDP, and the sum of the LDP and HDP,

The daily records shall be completed within 3 business days. Monthly records shall be completed by the 15th day of the following month. The records shall also be kept at the facility for at least 5 years and be available to the Department and the EPCHC upon request. [Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

F.6. The permittee shall maintain records of the scrubber operating parameters at least once per day that the prill rotary drums are in operation. The record log shall contain at a minimum the following:

- A. Date.
- B. Operator's name.
- C. Time of the measurement
- D. Gas pressure drop across the scrubbing system, in inches of water.
- E. Volumetric liquid flow rate (fresh water and make-up water), in gpm.

The records shall be kept at the facility for at least 5 years and be available to the Department and the EPCHC upon request. [Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

F.7. The permittee shall test the emissions from the prill rotary drums' scrubber annually for particulate and visible emissions (VE) on or during the 60 day period prior to February 28. The tests shall be conducted when producing each, LDP and HDP. The test results shall be submitted within 45 days of testing to the Air Compliance Section of this office and the EPCHC. The test report shall include for the testing period the following:

- A. A copy of the daily production records as required by Specific Condition No. F.5. above.
- B. A copy of the scrubber's operating parameter records as required by Specific Condition No. F.6. above.

[Rules 62-297.310(7)(a), 62-297.310(8), 62-4.070(3), F.A.C.]

F.8. Compliance with the emission limitations shall be determined using EPA Methods 1, 2, 4, 5, and 9 contained in 40 CFR 60, Appendix A, and adopted by reference in Chapter 62-297, F.A.C. The EPA Method 9 observation period for this emission unit shall be at least 30 minutes in duration. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A. [Chapter 62-297, F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

F.9. Testing of emissions shall be conducted with the source operating at permitted capacity. Permitted capacity is defined as 90-100% of the maximum permitted production rate of 50 tons/hr. (daily average) for each LDP and HDP. If it is impractical to test at the permitted capacity, then sources may be tested at less than capacity. In this case, subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than 30 consecutive days for the purposes of additional testing to regain the permitted capacity in the permit. In no cases shall the associated maximum allowable production rate be exceeded. The actual production rate during the test shall be included in each test report. Failure to include the information listed in Condition No. F.7. above may invalidate the test. [Rules 62-297.310(2) and 62-4.070(3), F.A.C.]

F.10. The following Operation and Maintenance (O&M) Plan for Particulate Matter Control pursuant to Rule 62-296.700(6), F.A.C., shall be followed:

A. Process Parameters:

1. Source Designators: Rotary Drum Scrubber with Wet Cyclone
2. Scrubber Manufacturer: Peabody
3. Model Name and Number: SX-351
4. Design Flow Rate: 41,700 ACFM but variable depending on prill grade production.
5. Efficiency Rating at Design Capacity: 99%
6. Gas temperature: Outlet; 105 °F
7. Stack Height/Above Ground: 35 ft.
8. Exit Diameter: 5 ft.
9. Water Vapor Content: 100% (100% Relative Humidity)
10. Process Controlled by Collection System: Drying/Cooling of Ammonium Nitrate
11. Material Process Rate: 50 tons/hr. (daily average)
12. Hours of Operation: 8,760 hrs./yr.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

- B. The following observations, checks and operations apply to this emission unit and shall be conducted on the schedule specified:

Daily

1. Observe stack.
2. Note any unusual occurrence in the process being ventilated.
3. Log the volumetric liquid flow (fresh water and make-up water) of the scrubber (gpm).

Monthly

1. Inspect fans for corrosion and material build-up.
2. Check all hoses and clamps.
3. Check all drive belts and chains for wear and tension.
4. Check housing for corrosion.

Annually

1. Open and inspect sieve trays, sprays and mist eliminators, and make any necessary repairs.
2. Check deadline circulating pump and note discharge pressure.
3. Check for leaks and repair as necessary.
4. Check level control device and make repairs as necessary.
5. Check Level gauge sight glass.

- C. Records: Records of inspections, maintenance, and performance parameters shall be retained on site for at least 5 years and made available to the Department and the EPCHC upon request.

[Rules 62-296.700(6) and 62-213.440(1)(b), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

Subsection G. Common Conditions

E.U. No. 006 - Ammonium Nitrate Prill Tower No. 2
E.U. No. 012 - Prill Rotary Drums

{Permitting Note: In order to avoid the PSD permitting requirements of Rule 62-212.400, F.A.C. and comply with the significant emission levels shown in Table 62-212.400-2; F.A.C., the Ammonium Nitrate Prill Tower No. 2 and Prill Rotary Drums are limited to the Conditions of this Subsection and are permitted in accordance with Rule 62-212.300, F.A.C. As part of the synthetic non-PSD analysis for this permit, in order for the facility to not exceed the significant PM₁₀ 15 tons as shown in Table 62-212.400-2, these emission units were allocated a combined total of 29.79 tons of PM₁₀ emissions per year.}

The following conditions apply to the 2 emission units listed above.

G.1. In order to avoid the PSD permitting requirements Rule 62-212.400, F.A.C., the total combined particulate emissions from the Ammonium Nitrate Prill Tower No. 2 and Prill Rotary Drums shall not exceed the synthetic limitation of 29.79 tons per any consecutive 12 month period.

{Permitting Note: This limitation is stricter than the allowable particulate emission rate of 114.3 tons/yr. for the Ammonium Nitrate Prill Tower No. 2 per the AC29-39724 and the BACT determination dated March 8, 1981. Additionally, this limitation is stricter than the allowable particulate rate of 40.7 tons/yr., for the Prill Rotary Drums as shown in Condition No. I.2. of Title V permit 0570029-002-AV.

[Rule 62-210.200(PTE) and 62-212.300, F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

G.2 In order to demonstrate compliance with maximum allowable 29.79 tons of particulate emissions per any consecutive 12 month period as stipulated in Condition No. G.1 and in order to properly complete the annual operating report as stipulated in Condition No. 11, the permittee shall monthly determine the actual particulate emissions for the most recent consecutive 12 month period as follows:

- A. From each compliance stack test for each emission unit, the lbs./hr. emission rate shall be divided by the actual hourly production rate (tons/hr.) determined during the test period to derive the associated (LDP or HDP) emission factor: lbs. of particulate emitted/ton of type of product produced.
- B. For each type of product (LDP or HDP) the calculated associated emission factor (lbs./ton) for each emission unit shall be used to calculate actual particulate emissions, in tons. The calculated emission factor for each product shall be used for the time period from the date (day) of the 1st run of a particulate emission test up to but not including the date (day) of the 1st run of the next particulate stack test.
- C. The calculated monthly actual emissions from LDP plus the calculated actual emissions from HDP for each emission unit shall be summed to determine:
 1. The monthly total actual particulate emissions from that emission unit, in tons.
 2. The most recent consecutive 12 month total actual particulate emissions from that emission unit, in tons.
- D. The calculated monthly actual emissions from Condition G.2.C.1 above, for each emission unit, shall be summed to determine the total combined monthly actual particulate emissions from both emission units, in tons.
- E. The monthly calculated actual emissions from Condition G.2.D. above shall be used to determine the total combined most recent consecutive 12 month total particulate emissions from both emission units, in tons.

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

The monthly records shall be completed by the 15th day of the following month. Additionally, the records shall be maintained at the facility for at least 5 years and made available to the Department and the EPCHC upon request. [Rules 62-4.070(3) and 62-213.440(1)(b), F.A.C.]

Subsection H. This section addresses the following emission unit(s).

E.U. No. 007 - Nitric Acid Plant

The 825 ton per day nitric acid (HNO_3) plant uses air, ammonia, and water as raw materials (reactants). The plant operates under pressure with two air compressors, a single heated two-stage catalyst reactor (to oxidize ammonia to nitrogen dioxide (NO_2), and two absorption towers to react NO_2 and water to form a 54% nitric acid solution. NO_x emissions are controlled by a platinum/palladium catalyzed natural gas fired (at a maximum heat input rate of 53 MMBtu/hour) combustor which exhausts through two stacks to the atmosphere.

{Permitting note(s): This emissions unit is regulated under NSPS - 40 CFR 60, Subpart G, Standards of Performance for Nitric Acid Plants, which is adopted by reference in Rule 62-204.800(7)(b)9., F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; and Rule 62-296.408, F.A.C., Nitric Acid Plants.}

The following conditions apply to this emission unit listed above.

H.1. Capacity.

- A. The maximum nitric acid production rate shall not exceed any of the following:-
1. 34.38 tons of 100% HNO_3 per hour (TPH) (*this corresponds to 825 TPD production rate*);
 2. 255,500 tons of 100% HNO_3 per 12 consecutive month period (*this corresponds to a 12 month average of 700 TPD*).

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

B. The maximum nitric acid plant natural gas usage shall not exceed a heat input rate of 53 MMBtu/hour.

[Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C.; Air Construction Permit AC29-273974]

H.2. Fuels. The catalytic combustor shall be fired with only natural gas. [Air Construction permit AC29-273974]

H.3. Nitrogen oxide (NOx) emissions from this nitric acid plant shall not exceed any of the following emission rates:

- A. 3.0 pounds per ton of 100% HNO₃ produced;
{NSPS Subpart G and Rule 62-296.408(2), F.A.C. limitations}
- B. 103.1 pounds per hour;
{based upon the maximum permitted TPH production rate of lb/ton emission rate from Condition H.1.}
- C. 294 tons per any consecutive 12 month period.
{This limit is required to avoid triggering PSD review for the 1984 modification originally permitted on AC29-089405 and for this modification 0570029-007-AC}

[Rules 62-296.408(2) and 62-204.800, F.A.C.; 40 CFR 60.72(a)(1), and Air Construction permit AC29-273974]
{Permitting Note: The permittee is required to be in compliance at all times per NSPS, Subpart G, Section 60.72(a). Also, ref. Condition No. H.14.}

H.4. Visible emissions from this nitric acid plant shall not exceed 5% opacity (i.e. no visible emissions).
[Air Construction Permit AC29-273974, Rules of the Hillsborough County Environmental Protection Commission Section 1-3.63(b)]
{Permitting note: This visible emission limitation is more restrictive than, and therefore meets the requirements of, the NSPS Subpart G 40 CFR 60.72(a)(2), and Rule 62-296.408(1), F.A.C. limitations of less than 10% opacity.}

H.5. Test the emissions from both exhaust stacks of the nitric acid plant for nitrogen oxides (NOx) and visible emissions (VE) annually on or during the 60 day period prior to February 28. The emissions from each stack shall be tested as close to "simultaneously" as feasible, but in no case over a longer interval than a five consecutive day period.
[Rules 62-297.310(7)(a)(4), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

H.6. Compliance with the visible emission limitation of Condition H.4. shall be determined using EPA Method 9 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The visible emissions test shall be conducted by a certified observer, be a minimum of thirty (30) minutes per stack in duration and conducted simultaneously with one of the NO_x test runs on that stack. The test observation period shall include the period during which the highest opacity can reasonably be expected to occur. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A. [Rule 62-297.310, F.A.C.]

H.7. Compliance with the NO_x emission limitations of Condition H.3 shall be determined in accordance with 40 CFR 60.74 using EPA Methods 7, 7A, 7B, 7C or 7D contained in 40 CFR 60, Appendix A and adopted by reference in Chapter 62-297, F.A.C. In accordance with 40 CFR 60.74(b)(4), the production rate of nitric acid during the test shall be based on daily production records and confirmed by material balance over the production system. The minimum requirements for stationary point source emissions test procedures and reporting shall be in accordance with Chapter 62-297, F.A.C. and 40 CFR 60, Appendix A. [Chapter 62-297, F.A.C. and Rule 296.800, F.A.C.; 40 CFR 60.74]

H.8. The permittee shall operate, maintain and calibrate a continuous emission monitoring (CEM) system for measuring and recording NO_x emissions. The span value for calibration checks shall be 500 ppm of NO₂. [Rule 62-296.800, F.A.C. and 40 CFR 60.73(a)]

H.9. Monitoring data shall be converted into units of the NSPS Subpart G standard (pounds/ton of 100% HNO₃) through use of an established conversion factor in accordance with 40 CFR 60.73(b). The conversion factor shall be established and reported with each annual Nox compliance stack test report. [Rule 62-204.800, F.A.C. and 40 CFR 60.73(a) and 60.74(d)]

H.10. In accordance with 40 CFR 60.7(c) and 40 CFR 60.73(e), quarterly excess emission reports shall be submitted to the Air Compliance Section of the Environmental Protection Commission of Hillsborough County. Excess emissions are defined as any 3-hour period during which the average (arithmetic average of 3 contiguous 1-hour periods) NO_x emissions, as measured by the NO_x continuous emission monitoring system, exceed the standards

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

contained in Condition Nos. H.3.A. or H.3.B. The quarterly reports shall include the following:

- A. The date and time of commencement and completion of each time period of excess emissions, the magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), and any conversion factors used.
- B. Specific identification of excess emissions that occur during startups, shutdowns, and malfunctions of the affected source. This shall include the nature and cause of any malfunctions (if known) and the corrective action taken or preventative measures adopted.
- C. The date and time identifying each period during which the NO_x continuous emission monitoring system was inoperative (not including zero and span checks), and the nature of system repairs or adjustments.
- D. When no excess emissions have occurred or the continuous emission monitoring system has not been inoperative, repaired or adjusted, such information shall be stated in the report.

[Rule 62-296.800, F.A.C.; 40 CFR 60.7(c) and 40 CFR 60.73(e)]

H.11. In order to document compliance with the requirements of Condition Nos. H.1. and H.3., the permittee shall keep daily records of the following:

- A. Nitric acid plant production rate (in tons/day of 100% HNO₃);
- B. Nitric acid plant operating hours;
- C. Natural gas usage.

Based on the above records and the conversion factor established by the most recent NO_x compliance test, the permittee shall calculate the following on a monthly basis:

- D. NO_x emissions in pounds/ton of 100% HNO₃ and in tons/month;
- E. Nitric acid production for the most recent consecutive 12 month period (tons of 100% HNO₃/12 consecutive month period);

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

F. NOx emissions for the most recent consecutive 12 month period (tons NOx/12 consecutive month period).

These records shall be recorded in a permanent form suitable for inspection by the Department or the Environmental Protection Commission of Hillsborough County upon request. [Rules 62-4.070(3) & 62-296.800, F.A.C., and 40 CFR 60.73(c)]

H.12. Source Commitments: Startup and Shutdown Plan - The nitric acid plant will be started so that the minimum autoignition temperature of the absorber tail gas stream is reached as quickly as possible. This will take 40 minutes. When the combustor reaches the minimum required autoignition temperature, natural gas will immediately be introduced into the system so that the combustor can begin to meet its design efficiency. The excess visible emissions will recede rapidly once this occurs, and NO_x emissions will abate more slowly. A shift supervisor will be standing by during startup to monitor the NO_x emissions recorded by the continuous monitor and oversee the startup procedures to ensure that these best management practices are implemented.

At shutdown, the process is vented over a period of approximately 10 minutes. At the time of shutdown, the natural gas fuel to the catalytic combustor is shutoff to prevent forming an explosive mixture, and the plant is purged with air. Visible emissions are present during this time.

[Applicant request dated June 12, 1996]

H.13. Excess Emissions - Startup, Shutdown, and Malfunctions: At all times, including periods of startup, shutdown, and malfunction, the permittee shall maintain and operate this emission unit including associated control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 40.11(d); "Start-up Procedures Plan" incorporated in the EPCHC Consent Order Case No. 99-1210CCG0029]

H.14. For this emission unit only, the excess emissions resulting from startup, shutdown, or malfunctions shall be minimized, provided best operational practices to minimize these emissions are adhered to, but shall in no case exceed two (2) hours in any 24 hour period. However, in a malfunction occurs at any time during startup, these excess emissions shall in no case exceed three (3) hours in any 24 hour period providing best operational practices to minimize these emissions are adhered to. Excess emissions which are caused entirely or in part by poor

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. In case of excess emission resulting from malfunctions, the permittee shall notify the Air Compliance Section of this office in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report (see Condition H.10.) to the Air Compliance Section of this office and the EPCHC.

{Permitting Note: This condition takes the place of Facility Wide Condition No. 4 for this emission unit only. This condition in no manner circumvents nor takes the place of the applicable requirements of NSPS, Subpart G. Therefore, it is important to note that if excess emissions, as defined in 40 CFR 60.73(e), occur in the 2-hour or 3-hour periods indicated above, then this emissions unit may be in violation of the federal requirement, NSPS, Subpart G and enforcement action may be taken by the EPCHC or the Department.}

[Rule 62-210.700, F.A.C.; 40 CFR 60.7(c); Permittee's request dated January 12, 2001.]

H.15. Reasonable Assurances: Both air compressors and absorption towers shall be in service and operating whenever the nitric acid plant production rate, expressed as 100 percent nitric acid, exceeds 16.75 tons per hour. If the nitric acid plant production rate, expressed as 100 percent nitric acid, is less than or equal to 16.75 tons per hour, then the nitric acid plant may operate with one air compressor and one absorption tower in service. The permittee shall notify the Air Compliance Section of this office and the Environmental Protection Commission of Hillsborough County prior to operating with one air compressor and absorption tower.
[Rule 62-4.070(3), F.A.C.]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

Subsection I. This section addresses the following emission unit(s).

E.U. No. 009 - Ammonium Nitrate Storage and Loadout System
E.U. No. 100 - Unregulated Facility Wide Fugitive Emissions

The Ammonium Nitrate Storage and Loadout System consists of conveyors, LDP Warehouse (North), HDP Warehouse (South), and 2 Loadout Stations. The Loadout Stations are designated as LDP Loadout Station No. 1 (North) and HDP Loadout Station No. 2 (South). LDP Loadout Station No. 1 loads railcars (south) and trucks (north) in a covered building with openings on the east and west sides. HDP Loadout Station No. 2 loads railcars on the covered north side of the HDP Warehouse and loads railcars on the covered west side of the HDP Warehouse.

LDP is coated with a coating called "Galoryl", which is initially applied to the LDP in a rotary drum. HDP is coated with a MgO coating, which is initially introduced in the process in the reactor that is part of the Ammonium Nitrate Prill Tower No. 2.

The particulate matter emissions from this system are uncontrolled. The uncontrolled fugitive particulate matter emissions are accounted for in the Annual Operating Report (DEP Form 62-621.900(5)) as part of the Unregulated Emission Unit No. 100 addressed in Title V permit 0570029-002-AV.

{Permitting Note: This emissions unit is regulated under Rule 62-296.700, F.A.C., RACT Particulate Matter; Rule 62-296.711, F.A.C., Materials Handling, Sizing, Screening, Crushing and Grinding Operations; and Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards. As part of the synthetic non-PSD analysis for this permit, in order for the facility to not exceed the significant PM₁₀ 15 tons as shown in Table 62-212.400-2, this emission unit along with unregulated E.U. No. 100 were allocated a combined total of 4 tons of PM₁₀ emissions per year.}

The following conditions apply to the emissions unit listed above:

I.1. The process/transfer rate to each railcar and the truck loading operation shall not exceed 25.0 tons per hour of ammonium nitrate (NH₄ NO₃) (daily average). [Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C., Definitions - (PTE)]

PERMITTEE:
Nitram, Inc.

DRAFT

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

I.2. The permittee shall not cause, permit, or allow any visible emissions (five percent opacity) from the conveyors, the railcar loading operations, and the truck loading operations. [Rule 62-296.711(2)(a), F.A.C., Air Construction Permit AC29-254119]

I.3. Each railcar loading operation and truck loading operation shall be tested for visible emissions annually, on or during the 60 day period prior to February 28. [Rule 62-297.310(7)(a)4., F.A.C.]

I.4. In order to document compliance with the requirements of Condition I.1., the permittee shall maintain daily records of the following:

- A. The Ammonium Nitrate Storage and Loadout operating hours.
- B. The amount of material processed/transferred to each railcar and truck loading operation (tons, ammonium nitrate).

These records shall be recorded in a permanent form and made available to the Department or the EPCHC upon request. [Rules 62-4.070(3) and 62-213.440(1), F.A.C.]

I.5. All test reports submitted to the Department shall include, at a minimum, the following information for the test period:

- A. The actual process/transfer rate to that railcar and truck loading operation during the test period (tons per hour, ammonium nitrate).
- B. A copy of the daily log for the test day, as required in Condition No. I.4.

Failure to submit the above information, or operating at conditions which do not reflect normal operating conditions may invalidate the test and fail to provide reasonable assurance of compliance. [Rules 62-4.070(3), F.A.C. and 62-213.440(1), F.A.C.]

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

Subsection J. This section addresses the following emission unit(s).

E.U. No. 010 - MgO Silo
E.U. No. 011 - MgO Day Tank

The two magnesium oxide storage silos, MgO Bin Silo (Silo No. 1) and MgO Day Tank (Silo No. 2), have a storage capacity of 530 yd³ and 33 yd³, respectively. Magnesium oxide is pneumatically unloaded from a truck to the MgO Bin Silo at a maximum rate of 12 tons per hour. As needed, the magnesium oxide is pneumatically transferred from the MgO Bin Silo to the MgO Day Tank at a maximum rate of 7.5 tons per hour. Particulate matter emissions generated during the loading of the MgO Bin Silo are controlled by a 450 ACFM Griffin Environmental, Model 24-JV-4X baghouse and the transfer of materials to the MgO Day Tank are controlled by a 550 ACFM Griffin Environmental, Model 24-J4-4X baghouse.

{Permitting note(s): These emissions units are regulated under Rule 62-296.700, F.A.C., RACT Particulate Matter; and Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards.}

The following specific conditions apply to the emissions unit(s) listed above:

J.1. Capacity.

- A. The total magnesium oxide usage rate for these emissions units shall not exceed 4,680 tons for any consecutive 12 month period.
- B. The process/throughput rate for the magnesium oxide Bin Silo (Silo No. 1) shall not exceed 12 tons per hour of magnesium oxide.
- C. The process/throughput rate for the magnesium oxide Day Tank (Silo No. 2) shall not exceed 7.5 tons per hour of magnesium oxide.

[Rule 62-4.160(2), F.A.C. and Rule 62-210.200, F.A.C.,
Definitions - (PTE), Air Construction Permit AC29-254118]

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PERMITTEE:
Nitram, Inc.

PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

J.2. Hours of Operations. The hours of operation for the MgO Bin Silo and the MgO Day Tank shall not exceed 468 hours for any consecutive 12 month period and 728 hours for any consecutive 12 month period, respectively. [Rule 62-210.200, F.A.C., Definitions - (PTE), Air Construction Permit AC29-254118]

J.3. Emission Limitations and Standards. Particulate matter emissions from the MgO Bin Silo and the MgO Day Tank shall not exceed 0.03 tons per year and 0.05 tons per year, respectively. These particulate matter emission rate limitations exempts these emission units from Particulate RACT. [Rule 62-296.700(2)(c), F.A.C., Air Construction Permit AC29-254118, and requested by applicant to avoid PM-RACT in accordance with 62-296.700(2)(c), F.A.C.]

J.4. Visible emissions from each MgO silo (Nos. 1 and 2) shall not be equal to or greater than 20% opacity. [Rule 62-296.320(4)(b), F.A.C., Air Construction Permit AC29-254118]

J.5. Test Methods and Procedures. The MgO Bin Silo baghouse exhaust and MgO Day Tank baghouse exhaust shall be tested for particulate matter* and visible emissions annually, on or during the 60 day period prior to February 28.

* These emission units are exempt from particulate testing if a visible emissions test indicating no visible emissions (less than or equal to 5% opacity) is submitted pursuant to Rule 62-297.620(4), F.A.C.

[Rules 62-297.310(7)(a)4. and 62-296.620(4), F.A.C.]

J.6. Compliance with the emission limitations of Conditions J.3 and J.4 shall be determined using EPA Methods 1, 2, 4, 5, and 9 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A. [Chapter 62-297, F.A.C.]

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

J.7. Monitoring of Operations. In order to provide reasonable assurance that the particulates emission limitations are being met, the permittee shall create and keep a record log of each baghouse's operating parameters. The record log shall contain, at a minimum:

- A. The pressure drop across each baghouse.
- B. The date and time of the measurements.
- C. The name of the person responsible for performing the measurements.

A record log entry for each baghouse shall be made at least once per day when the MgO Bin Silo and the MgO Day Tank operates. [Rules 62-4.070(3), and 62-213.440(1), F.A.C.]

J.8. Recordkeeping and Reporting Requirements. In order to document compliance with the requirements of Condition Nos J.1., J.2., J.3., and H.4., the permittee shall maintain daily records of the following:

- A. The amount of material processed/transferred to the magnesium oxide Bin Silo (Silo No. 1) and the magnesium oxide Day Tank (Silo No. 2) (tons, magnesium oxide).
- B. The total hours of operation for the MgO Bin Silo (Silo No. 1) and the MgO Day Tank (Silo No. 2).
- C. The baghouse parameters (pressure drop) (See Condition No. J.7).

These records shall be recorded in a permanent form suitable for inspection by the Department or the EPCHC upon request. [Rules 62-4.070(3), F.A.C. and 62-213.440(1), F.A.C.]

PERMITTEE:
Nitram, Inc.

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PERMIT NO.: 0570029-007-AC
PROJECT: Low Density Prill &
High Density Prill
Production Modifications

J.9. In order to document compliance with the requirements of Condition Nos. J.1., and J.2., the permittee shall maintain monthly records of the following:

- A. The total magnesium oxide usage for each rolling 12 consecutive month period (tons per 12 months).
- B. The total operating hours for the MgO Bin Silo (Silo No. 1) and MgO Day Tank (Silo No. 2) for each rolling 12 consecutive month period (hours per 12 months).

These records shall be recorded in a permanent form suitable for inspection by the Department or the EPCHC upon request. [Rule 62-4.070(3), F.A.C.]

J.10. All test reports submitted to the Department shall include, at a minimum, the following information for the test period:

- A. The process/transfer rate for the MgO Bin Silo (Silo No. 1) and MgO Day Tank (Silo No. 2) (tons per hour, magnesium oxide).
- B. Pressure drop across the MgO Bin Silo (Silo No. 1) baghouse and MgO Day Tank (Silo No. 2) baghouse.
- C. The magnesium oxide usage rate (tons per hour, magnesium oxide).

Failure to submit the above information, or operating at conditions which do not reflect normal operating conditions may invalidate the test and fail to provide reasonable assurance of compliance. [Rules 62-4.070(3) and 62-213.440(1), F.A.C.]

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Gerald J. Kissel, P.E.
Air Permitting Supervisor

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Best Available Control Technology (BACT) Determination
Nitram, Inc.
Hillsborough County

Nitram, Inc. has submitted an application dated October 1, 2001, for a construction modification permit to increase the Low Density Prill production rate in the Ammonium Nitrate Prill Tower No. 2 and the Prill Rotary Drums at 5321 Hartford Street, Tampa. In order to process this request and avoid triggering PSD requirements, the facility's emission units went through an analysis to comply with the insignificant emissions of Table 62-212.400-2 contained Chapter 62-212, F.A.C. As part of that processing the Hurst Package Boiler (E.U. No. 013) is affected. Thus, as part of that processing and reviewing the conditions applicable to the Hurst Package Boiler in Title V permit 0570029-002-AV, the Department has determined this BACT determination is applicable. The boiler is fired with natural gas or propane at a maximum heat input rate of 12.9 million BTU per hour (MMBTU/hr.), based on a daily average.

This BACT determination is required for the source as set forth in Rule 62-296.406, Florida Administrative Code - Fossil Fuel Steam Generators With Less Than 250 MMBTU/hr. Heat Input, New and Existing Sources.

BACT Determination Requested by Applicant:

Particulate matter and sulfur dioxide emissions are to be controlled by the firing of natural gas or propane per Nitram, Inc.'s construction application received by the Department on July 1, 1991.

Date of Receipt of BACT Application: July 1, 1991

BACT Determination by DEP:

The amount of particulate matter and sulfur dioxide emissions from the boiler shall be limited by the firing of natural gas or propane at the maximum following rates:

- The heat input rate for the Hurst package boiler shall not exceed 12.9 MMBtu per hour based on a daily average.
- The maximum fuel usage rate shall not exceed 12,000 ft³ per hour of natural gas based on daily average.
- The maximum fuel usage rate shall not exceed 142 gallons per hour of propane based on daily average. (Note, at 4.24 lbs./gallon of propane this is equivalent to 602.1 pounds/hr.)

BACT DETERMINATION
Nitram, Inc.
0570029-007-AC

Page 2 of 2

DRAFT

BACT Determination Rationale:

Sulfur in fuel is a primary air pollution concern, since most of the fuel's sulfur becomes sulfur dioxide. Also, particulate matter emissions from fuel burning are related to the sulfur content. The Department has performed air dispersion modelling analyses on small natural gas/oil fired boilers typical of this boiler. These analyses show that all standards and increments will be met with the use of natural gas or propane.

Details of the Air Dispersion Analysis May be Obtained by Contacting:

A. A. Linero, P.E. Supervisor, New Source Review Section
Department of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

James L. McDonald
Air Permitting Engineer

Gerald J. Kissel, P.E.
SW District Air Permitting
Supervisor

_____, 2002

_____, 2002

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ATTACHMENT - GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes (F.S.). The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. Not applicable to Air Permits.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under conditions of the permit;

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GENERAL CONDITIONS:

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonable necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. A description of and cause of noncompliance; and

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300 F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

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GENERAL CONDITIONS:

13. This permit also constitutes:

- (X) Determination of Best Available Control Technology (BACT)
- (X) Determination of Prevention of Significant Deterioration (PSD)
- (X) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used;
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

16. Not applicable to Air Permits.

17. Not applicable to Air Permits.

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TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION
FOR

Nitram, Inc.

Hillsborough County

Construction Permit Application Number

0570029-007-AC

Florida Department of Environmental Protection

Southwest District

May 21, 2002

DRAFT

I. Project Description:

A. Applicant:

Nitram, Inc.
P.O. Box 2968
Tampa, FL 33601

Mr. Daniel E. Ross, P.E., Executive Vice President & Chief
Operating Officer

B. Engineer:

Mr. Stephen Smallwood, P.E.
Air Quality Services
1640 Eagles Landing Blvd., Unit 103
Tallahassee, FL 32308-1560

C. Project and Location:

Nitram, Inc. has requested in part, the Low Density Prill
production rate at the Ammonium Nitrate Prill Tower No. 2
and the Prill Rotary Drums be increased to 50 tons/hr. at an
Ammonium Nitrate Manufacturing facility located at 5321
Hartford Street, Tampa.

D. Process and Controls:

For the synthetic non-PSD construction modifications of an
existing permitted Title V facility that manufactures
ammonium nitrate products. The facility consists of the
following emission units:

- No. 003 - B & W Package Boiler
- No. 004 - FW Package Boiler
- No. 013 - Hurst Package Boiler
- No. 006 - Ammonium Nitrate Prill Tower No. 2
- No. 007 - Nitric Acid Plant
- No. 008 - Kaolin clay Handling and Storage (Permanently
Shutdown)
- No. 009 - Ammonium Nitrate Storage and Loadout System (All
activities relating to handling and storing
ammonium nitrate coated with clay have been
permanently shutdown)
- No. 010 - MgO Silo
- No. 011 - MgO Day Tank
- No. 012 - Prill Rotary Drums
- No. 100 - Unregulated Facility Wide Fugitive Emissions

The permittee has requested modifications to the Ammonium
Nitrate Prill Tower No. 2 (E.U. No. 006) and the Prill
Rotary Drums (E.U. No. 012). The requested modifications
are as follows:

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LDP product is used as a base in making explosives. HDP product is used as fertilizer. Since it is dangerous for the LDP explosive base product to pick up moisture, it undergoes extra drying steps to bring its moisture content to a very low level, and a waxy coating (galoryl) is applied (only to the LDP product) to prevent any absorption of additional moisture. The differences between the two products thus include differences in production parameters, additional additives, and a difference in physical equipment used, i.e., pre-dryer drum, dryer drum, and cooler drum for LDP product vs. only the cooler drum for HDP product. The dryer/cooler drums are a significant part of the process, with a PM emission limit of 9.24 lbs./hr. for the dryer/cooler drums vs. 26.0 lbs./hr. for the prill tower.

DEP's file for the dryer/cooler drums contains detailed emission calculations (supplied by Nitram, Inc.) in the original construction application. Those calculations account for mole ratios, differences in air flows, etc., through the cyclones and scrubber (each dryer or cooler drum has its own cyclone, and there is a single common scrubber). From the calculations it can be determined that the total inlet loading to the control devices (three cyclones and one scrubber for the LDP along with two cyclones and one scrubber for the HDP) is 45% greater at 35 tph of LDP product than at 50 tph for HDP product.

Based on the above, it is believed that on balance the differences between the two products are significant enough that they should be viewed separately. As such, the question becomes, "Is the increase in LDP production a modification?" Modification is defined in Rule 62-210.200, F.A.C., as a change in the method of operation, which would result in an increase in actual emissions. Although not stated as part of the definition, an "increase in the actual emissions" is interpreted in the PSD context as "prior actual to future potential" emissions, on a calendar year basis. "Method of Operation" is not defined in the PSD rules, but the rules do state that a change in the method of operation includes an increase in a production rate under a federally enforceable permit condition (which is the case here).

Debottlenecking is a PSD concept that says in this case, when production of LDP is allowed to increase, associated emission increases in any pollutant from processes upstream or downstream must be addressed. Thus, in this case, NOx emission increases upstream,

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from the boilers and nitric acid production, must be limited to ≤ 40 tpy, in a "prior actual to future potential" sense.

To determine that the increase in LDP production at the Ammonium Nitrate Prill Tower No. 2 and Prill Rotary Drums will be synthetically limited to avoid PSD requirements, the actual emissions from the 1999 AOR and 2001 AOR were used. Normally, the most recent two calendar years are averaged in determining actual emissions. In this case, the year 2000 was not considered representative, and 1999 and 2001 were averaged (see Attachment 1). By comparing the 2-year average emissions per pollutant with the facility's current permitted potential emissions, the Department determined that the critical pollutants of concern regarding a significant increase per Table 62-212.400-2 were Nitrogen Oxide emissions and PM_{10} emissions. The following attached tables (see Attachment 2) summarize this analysis.

As can be seen from the Tables, in order to meet the significant increase level for NO_x , the 3 boilers are limited to a common tpy emission limitation. To meet this limitation a maximum combined total fuel usage limitation is made a condition of permit 0570029-007-AC. Likewise, for the Ammonium Nitrate Prill Tower No. 2 and Prill Rotary Drums to meet the significant increase for PM_{10} , each emission unit is required to stack test annually each product to determine an emission factor for that product, which will be used to determine compliance with the common PM emission limitation of 29.79 tons per any consecutive 12 month period.

Note, the Nitric Acid Plant (E.U. No. 007) and the Ammonium Nitrate Prill Tower No. 2 (E.U. No. 006) are subject to PSD requirements from previous PSD permitting actions.

This project is subject to the requirements of Rule 62-212.300, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C., since the project is not exempt from general permitting requirements.

This project, for the Hurst Package Boiler and Nitric Acid Plant, is subject to the requirements of Rules 62-296.406 and 62-296.408, F.A.C., respectively, Specific Emission Limiting and Performance Standards, F.A.C.

This project is subject to the requirements of Rule 62-296.320(4), General Particulate Emission Limiting Standards, F.A.C., since it is a source of particulate matter emissions.

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V. Proposed Agency Action

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).

NITRAM
ANNUAL PROJECTION \$ HOURS

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HRS

8,000
7,000
6,000
5,000

1997 1998 1999 2000 2001 2001e

NITRAM
PROJECTION →

LCQTRX4 →

TPY

250,000
200,000
150,000
100,000
50,000

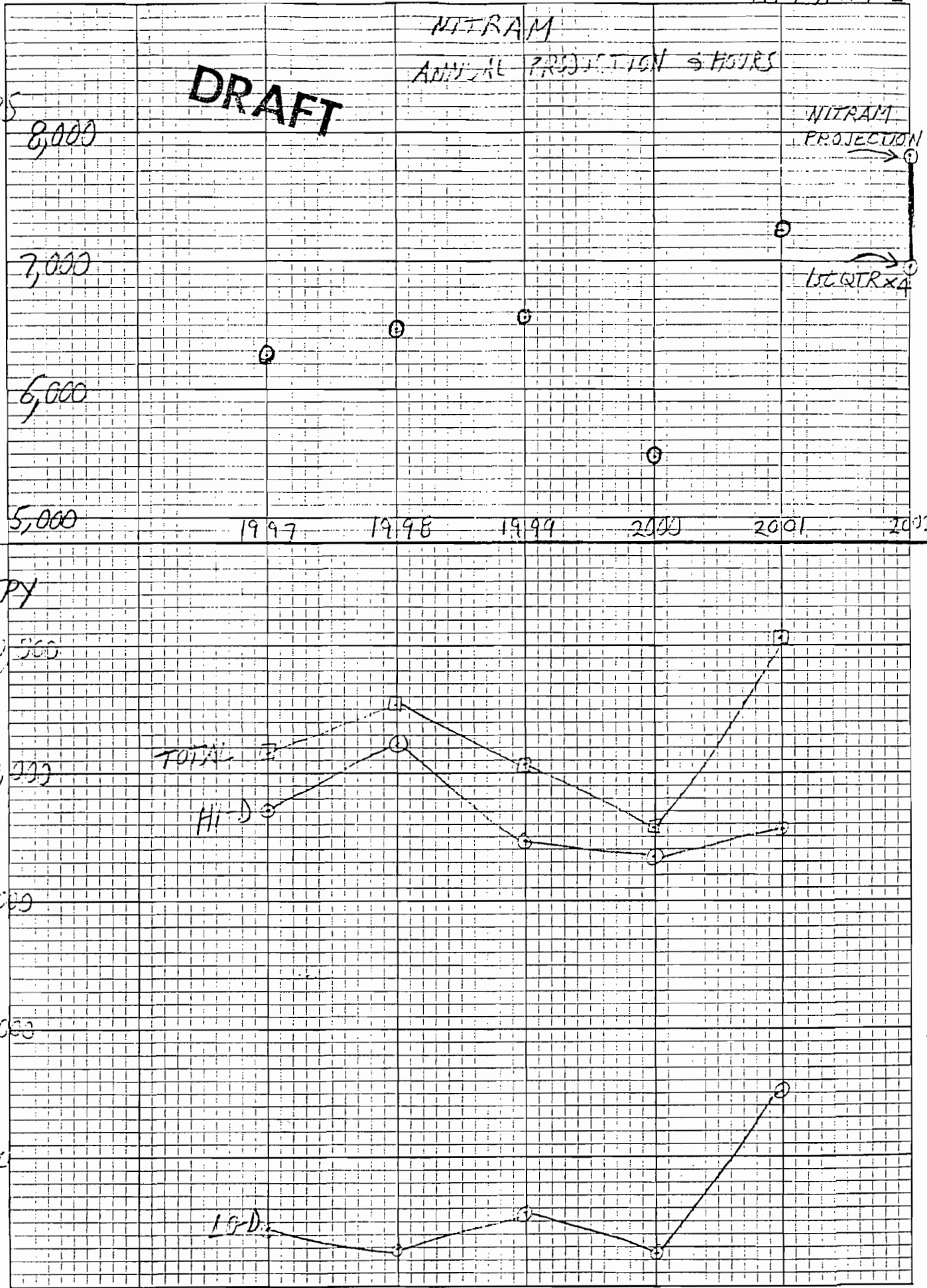
TOTAL

HI-D

LO-D

1997 1998 1999 2000 2001

JK 4/5/02



ATTACHMENT 2 (1 of 3)

CURRENT POTENTIAL
EMISSIONS for NITRAM
per 0570029-002-AV (tons/yr.)

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E.U. No./Desc.	CO	NOx	PM	PM10	SO2	VOC
003/B&W Boiler	27.6	68.24	32.9	32.9	0.2	1.81
004/FW Boiler	18.2	45.04	21.9	21.9	0.13	1.19
013/Hurst Boiler	4.4	11.6	0.27	0.27	0.11	0.31
006/Prill Tower			114.3	114.3		
007/Nitric Acid Plant	19.5	294	1.77	1.77	0.14	1.28
008/Kaolin Clay ¹			2.6	2.6		
009/Coated Amm. Nitrate ²			9.2	9.2		
010/ MgO Silo			0.03	0.03		
011/MgO Day Tank			0.05	0.05		
012/Prill Rotary Drums			40.7	40.7		
TOTAL	69.7	419.24	223.72	223.72	0.58	4.59

Footnotes: 1 - Permanently Shutdown per 1999 AOR

2 - Activities relating to clay coating are permanently shutdown per 1999 AOR. Fugitive particulate emissions from this emission unit are reported with the Title V unregulated emission unit No. 100, which is for Facility Wide Fugitive Emissions

1999 & 2001 AOR
Actual Emissions (tons/yr)
For Nitram

ATTACHMENT 2 (2 of 3)

1999

E.U. No./ Desc.	CO	NO _x	PM	PM10	SO ₂	VOC
003/B&W Boiler	0.397	1.59	0.03	0.03	0.007	0.032
004/FW Boiler	1.86	7.45	0.16	0.16	0.03	0.15
013/Hurst Boiler	0.378	1.512	0.032	0.032	0.006	0.03
006/Prill Tower HD LD			3.735 2.84 ²	3.735 2.84 ²		
007/Nitric Acid Plant		268				
010/MgO Silo			0.01	0.01		
011/MgO Day Tank			0.01	0.01		
012/Prill Rotary Drums HD LD	..		2.52 ³ 1.00 ⁴	2.52 ³ 1.00 ⁴		
100/Facility-Wide Fugitives			2.77	2.77		0.0015
TOTAL	2.635	278.552	13.107	13.107	0.043	0.2135

2001

E.U. No./ Desc.	CO	NO _x	PM	PM10	SO ₂	VOC
003/B&W Boiler	0.911	1.09	0.082	0.062	0.007	0.06
004/FW Boiler	9.16	10.91	0.83	0.62	0.07	0.6
013/Hurst Boiler	0.143	0.17	0.013	0.013	0.001	0.009
006/Prill Tower HD LD			20.9 ¹ 3.5	20.9 ¹ 3.5		
007/Nitric Acid Plant		267				
010/MgO Silo			0.004	0.004		
011/MgO Day Tank			0.013	0.013		
012/Prill Rotary Drums HD LD			2.58 1.00	2.58 1.00		
100/Facility-Wide Fugitives			3.26	3.26		0.0013
TOTAL	10.214	279.17	32.182	31.952	0.078	0.6703

2-year avg.	6.4245	278.861	22.64	22.53	0.0605	0.4419
Plus PSD Insignificant Incr.		40		15		
Max. Allowed		318.861		37.53		

Footnotes: 1 - In 2001 the Prill Tower was tested on LDP only. Therefore, for 2001, the 2000, 1999, and 1998 stack tests for HDP were averaged to derive the factor 0.2273 lbs./ton. Attachment 3 shows the representativeness of using the years 1998, 1998, and 2000.

2 - The 1997 and 2001 stack tests for LDP were averaged to derive the factor 0.1766 lbs./ton.

3 - The December 2001 stack test for HDP was used to derive 2.52 tons/yr.

4 - The December 2001 stack test for LDP was used to derive 1.00 tons/yr.

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ATTACHMENT 2 (3 of 3)

POTENTIAL EMISSIONS
for NITRAM, Inc. per
Permit 0570029-007-AC (tons/yr.)

E.U. No./Desc.	CO	NOx	PM	PM10	SO2	VOC
003/B&W Boiler	20.89	24.861	1.89	1.89	0.15	1.37
004/FW Boiler						
013/Hurst Boiler						
006/Prill Tower			29.79	29.79		
012/Prill Rotary Drums						
007/Nitric Acid Plant	19.5	294	1.77	1.77	0.14	1.28
009/Amm. Nitrate Storage and Loadout			4.0	4.0		
100/Fac.Fug. Emissions						
010/ MgO Silo			0.03	0.03		
011/MgO Day Tank			0.05	0.05		
TOTAL	40.39	318.861	37.53	37.53	0.29	2.65

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ATTACHMENT 3

This document was attached to Nitram, Inc.'s 12/18/01 letter to FDEP

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TABLE 1 - NITRAM PRILL TOWER PM EMISSIONS TEST DATA: 1985 -2001

November 4, 2001

High Density & Low Density Prill
[Including the 1998-99 Low Test Values]

Year	Product	Production Rate Tons/Hr	Test Result lbs/hr	Allowable Emission lbs/hr	Emission Factor lbs/Ton	Trend Line lbs/Ton	
Yr		PR(tpy)	TR(lb/hr)		EFa(lb/Ton)	EFc(lb/Ton)	
1985	HD	50.0	20.6	26.0	0.411	0.450	0.450
1986	HD	50.0	18.6	26.0	0.372	0.437	
1987	HD	50.0	18.6	26.0	0.372	0.423	
1988	HD	46.0	23.3	26.0	0.507	0.409	
1991	HD	46.0	25.9	26.0	0.563	0.369	
1993	HD	49.0	15.8	26.0	0.322	0.342	
1994	HD	53.0	15.6	26.0	0.294	0.328	
1995	HD	51.0	17.6	26.0	0.345	0.315	
1996	HD	49.0	14.1	26.0	0.288	0.301	
1998	HD	48.3	6.2	26.0	0.128	0.274	
1999	HD	47.4	2.0	26.0	0.042	0.261	
2000	HD	50.0	25.6	26.0	0.512	0.247	0.247
2001							
Average		49.1	17.0		0.346		
Yr		PR(tpy)	TR(lb/hr)		EF(lb/Ton)		
1997	LD	25.0	6.7	26.0	0.268		
2001	LD	25.0	2.1	26.0	0.084		
Average		26.0	4.4		0.176		

Regression Statistics

Multiple R	0.467
R Square	0.218
Adjusted R Square	0.140
Standard Error	0.141
Observations	12.000

Percentile EFa(lb/Ton)

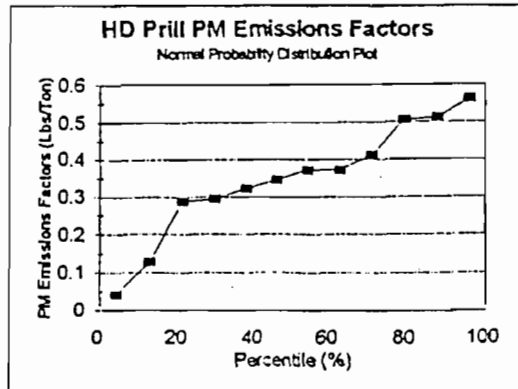
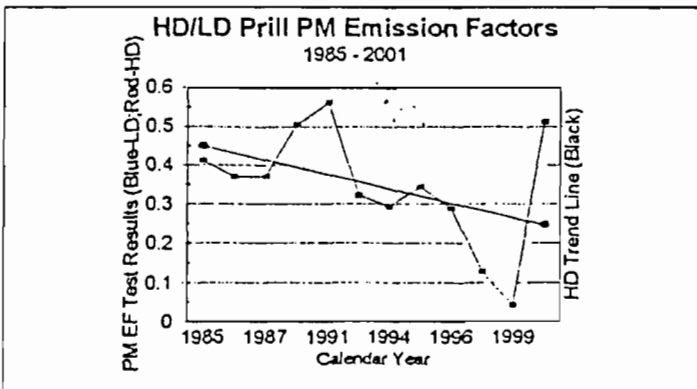
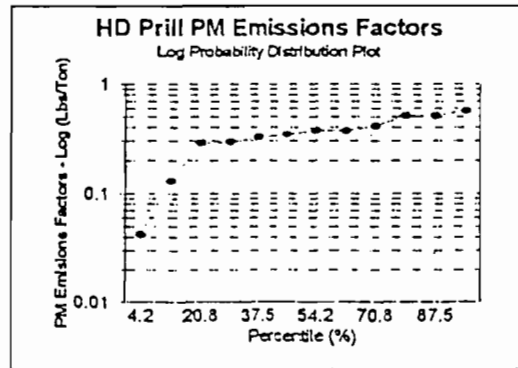
4.2	0.042
12.5	0.128
20.8	0.298
29.2	0.294
37.5	0.322
45.8	0.345
54.2	0.372
62.5	0.372
70.8	0.411
79.2	0.507
87.5	0.512
95.8	0.563

Analysis of Variance

	df	Sum of Squares	Mean Square	F	Significance F
Regression	1.000	0.055	0.055	2.797	0.126
Residual	10.000	0.198	0.020		
Total	11.000	0.253			

	Coefficients	Standard Error	t Statistic	P-value	Lower 95.00	Upper 95.00
Intercept	27.318	16.157	1.691	0.119	-8.681	63.318
Yr	-0.014	0.008	-1.669	0.123	-0.032	0.005

Observations	Predicted Y	Residuals	Stdzd Residuals
1	0.450	-0.039	-0.277
2	0.437	-0.065	-0.462
3	0.423	-0.051	-0.366
4	0.409	0.097	0.690
5	0.369	0.194	1.381
6	0.342	-0.019	-0.138
7	0.328	-0.034	-0.241
8	0.315	0.030	0.216
9	0.301	-0.013	-0.096
10	0.274	-0.146	-1.037
11	0.261	-0.219	-1.558
12	0.247	0.255	1.886



$$1.0 \frac{\text{lb}}{\text{in}^2 \cdot \text{day}} \times 400 \text{ cases} \times \frac{365}{2000} = 70 \frac{\text{lb}}{\text{day}}$$

$$0.1 \times \frac{400 \text{ lb}}{\text{day}} \times \frac{365}{2000} = 6 \text{ TPD}$$